THE ASSOCIATION BETWEEN ATTACHMENT STYLES AND SOCIAL MEDIA BEHAVIOR

by

Genesis Hernandez, B.A.

A thesis submitted to the Graduate Council of
Texas State University in partial fulfillment
of the requirements for the degree of
Master of Arts
with a Major in Psychological Research
December 2021

Committee Members:

Krista Howard, Chair

Kelly Haskard-Zolnierek

Mildred Cordaro

FAIR USE AND AUTHOR'S PERMISSION STATEMENT

Fair Use

Duplication Permission

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my committee chair, Dr. Krista Howard, for the continuous patience and support of my study. The completion of my study could have not been accomplished without Dr. Howard and my committee: Dr. Kelly Haskard-Zolnierek and Dr. Mildred Cordaro's immense knowledge and guidance. I offer my sincere appreciation for the learning opportunities provided by my community. Lastly, I offer my regards and blessings to all of those who supported me in any respect during the completion of the thesis.

TABLE OF CONTENTS

Page

LIST OF TABLES

Table **Page**

I. INTRODUCTION

Social networking sites (SNSs) are compelling platforms individuals can use to present themselves authentically and in a positive light (Yin et al., 2019). Relationship maintenance is important for health purposes and an individual's well-being. However, individuals often use social media as a means to create a favorable persona of themselves. Pryzybylski et al. (2013) noted social media provides various forms of information through online activities, events, and conversations. Despite the benefits of using such platforms, issues have been raised regarding the adverse outcomes associated with excessive use of and potential addiction to SNSs (Liu & Ma, 2018). For instance, Blakely and Dziadosz (2015) believed perception of the self is a reflection of how one perceives others and their intentions. That is, self-perception depends on the trust and security individuals perceive in themselves and others, highlighting the foundation of interpersonal communication. The current study seeks to examine the relationship between attachment styles and specific social media behaviors. Fear of missing out (FoMO) is the fear of missing out on something when peers are involved in rewarding experiences during one's absence. Social media often invokes the feeling of FoMO through shared content in users' feed and status updates (Pryzybylski et al., 2013). Upward and downward social comparisons are methods of self-evaluation practiced by individuals to cope with self-image concerns and victimization (Gibbons & Gerrard, 1989). The researchers defined upward social comparison as an upward drive in assessing one's abilities with those who are thought to be better in different aspects of life (e.g.

beauty, intelligence, personality). On the contrary, downward social comparison is the downward drive perspective of perceiving others as less than or not as appealing as they are (Gibbons & Gerrard, 1989). Both upward and downward social comparison behaviors are practiced online through social media engagement. Individuals who have online social support are likely to develop a fear of missing out on experiences resulting in a stronger addiction to SNS (Liu & Ma, 2018). Additionally, high levels of social media activity derive a need for social media engagement. In the social skill model, Lee-Won et al. (2015) noted online interaction gives users the opportunity to display a strategic and self-selective presentation, given that communication is text-based rather than face-to-face interaction. The authors suggested individuals deficient in social skills are prone to develop a need for social media; such platforms are preferred communication channels to minimize social risks associated with self-presentation. Therefore, self-perception potentially influences social media behaviors such as FoMO, social comparison, addiction, and need for social media. The listed social media behaviors are discussed in the current study to explain the association between attachment styles and social media use. Attachment styles are typically employed in clinical settings and have never been investigated in relation to social media behaviors.

Bowlby's Attachment Theory

Bowlby suggested a child's attachment to the mother within the first year of life is due to instinctual responses that develop and influence the mother-child bond. During this period, instinct responses (i.e., smiling, crying, clinging) activate attachment systems (Bowlby 1973) independently and during the second 6 months instincts become increasingly integrated in the mother's responses and engagement (Bretherton, 1992).

Similarly, Ainsworth and colleagues (1977) noted mothers who are warm and joyful toward their children during face-to-face interaction received a joyful and engaged response from the child. On the other hand, mothers who presented unsmiling and indifferent expressions led to a short and muted response from the child (Blehar et al., 1977). Bowlby's attachment theory explained the development of attachment styles during childhood that influence social and emotional maturity in adulthood. Individuals' experiences with a caregiver activate an attachment orientation during childhood which influences non-familial relationship foundations later in adulthood (Bowlby, 1973). A person's attachment style develops through relationship expectations, emotions, and behaviors derived from a unique attachment history pattern (Mikulincer & Shaver, 2019. That is, the level of security during childhood will influence the level of comfort and confidence an individual has toward others throughout adulthood. Bowlby defined attachment behavior as the product of an evolutionary function between a child's security and the attachment figure's sensitivity and engagement (Bretherton, 1992). Thus, Ainsworth and Witting (1969) focused on the effects of interactions between mother and infant during the first year of life, highlighting the emergence of attachment behavior during infancy (See Veer et al., 2015). Likewise, Bowlby suggested proximity and affection are a transaction appraised and enjoyed by both parties, whereas distance and rejection are perceived as disagreeable or painful (Bretherton, 1992; see Bowlby, 1969). The interchange belief of proximity and sentiments stem from relationship quality, deriving attitudes such as rejection, anxiety, affection, unhappiness, etc. For instance, children's awareness and sensitivity to a mother figure's presence and proximity influences the attachment behavior during reunion in the manner of ambivalent,

indifferent, or hostile feelings (Bretherton, 1992). Similarly, Ainsworth's ideas of children's response to an attachment figure's departure and return aligns with Bowlby's outlook on proximity and affection.

Ainsworth extended the main premise of attachment theory and conducted the Strange Situation Procedure (SSP) study. She worked alongside Bowlby to develop a measurement and classification system of children's attachment to their caregiver. In fact, the Strange Situation Procedure supported and expanded Bowlby's ideas through empirical evidence of attachment. As such, Bretherton (1992) noted Bowlby's supposed "proximity-promoting signals" of primary caregivers affected children's security and confidence based on levels of engagement and sensitivity (p. 766). Therefore, children's confidence and ability to perceive attachment figures as a safe haven depend on responsiveness and social interaction quality during childhood. Bowlby added the presence of culture clues to danger and the absence of attachment also elicit fear in children (Bretherton, 1992). Children learn and identify danger through learned behavioral responses and customs in their environment or home. Therefore, Bowlby (1977) suggested individuals' psychological and behavioral differences vary by the quality of response, reliability, and sensitivity an attachment figure provided during times of children's distress. Thus, through the lens of attachment, the quality of security, self-efficacy (Curran et al., 2019 ;Bandura 1977), and willingness to explore unknown environments (Ainsworth & Witting, 1969) curiously and confidently is reflected in adulthood development (Mikulincer & Shaver, 2019).

Correspondingly, Ainsworth developed a 20-minute observation tool for attachment behavior in children while accounting for parent-child interactions; whereas,

previous studies employed lengthy periods of observation to analyze caregiver-child patterns (Veer et al., 2015; see Holmes, 1993). Specifically, the Strange Situation study enhanced methods of attachment classification and increased the acceptance of attachment theory. Veer et al. (2015) noted Bowlby believed separation from mother or caregiver was detrimental to a child's development.

Children need stability and support from their attachment figure to prevent or lessen the uncertainty of personal lovability and others' motives and intentions. According to attachment theory, nearly all children will become attached, but the quality of attachment will differ.

Ainsworth's goal for SPP was to assess the child's willingness to explore unfamiliar surroundings while using the mother as a secure base. She also examined children's responses to strangers, mother's departure, and return to unfamiliar settings. The SSP is an eight-episode (steps) instrument to identify, differentiate, and classify attachment relationships between caregiver and child. In episodes 1 through 3, the child is in a strange environment (a playroom), and the stranger (research assistant) then enters the room. In the fourth episode, the caregiver leaves the room, while in the fifth episode, the mother returns as the stranger exits the room. The caregiver leaves the room again in Episode 6, and the child is alone in the room. In Episode 7, the stranger returns, followed by Episode 8 where the caregiver also returns. Upon project completion, researchers ask the caregiver not to initiate a conversation with the child and respond only if necessary. Ainsworth explained children's attachment to their mother can be categorized as "secure (B), insecure avoidant (A), insecure ambivalent (C), or disorganized (D)" (Veer et al., 2015). The attachment classification was determined based on children's response in

caregiver's departure and return, including the extent of sought contact, avoidance, and mood fluctuation.

Veer et al. (2015) stated Ainsworth's instrument was reliable, and SSP observations provided explanations from an evolutionary standpoint followed by her contribution to Bowlby's original attachment theory. Ainsworth was one of the few researchers to study parent-child relationships rather than focusing solely on child behavior. The SSP revealed socio-emotional developmental differences between children and allowed researchers to classify children's attachment relationship with their caregiver through laboratory observations of behavior.

Styles of Attachment Behavior

The styles of attachment behavior are defined by patterns of needs, expectations, emotions, and social behaviors that are derived from attachment experiences (Blakely & Dziadosz, 2015). Thus, Bowlby (1979) noted the template of later relationships, including environmental control and management during adulthood, reflects the mental representation of one's relationship with their primary caregiver, known as the internal working model. Attachment styles in adults are presented in the context of platonic and romantic relationships through interpersonal behaviors that are expressed via emotions, social behaviors, needs, and expectations of a relationship. The intensity of each factor depends on the need and expectation one has toward others. Self-concept greatly impacts the approach one has in maintaining interpersonal relationships. Social information processing is the interpretation of the feedback one receives after inducing a specific reaction from individuals (see Bartholomew & Horowitz, 1991; Caspi & Elder, 1988; Swann, 1983). Thus, the perspective individuals have of themselves and others affect

feedback interpretation and reaction during communication. Communication is the standard form of social interaction with others ranging from networking to mingling to personal purposes.

Aberrant behavior and inadequate relational functioning are likely to develop when there is a lack of support, sensitivity, and nurturance from a caregiver during childhood (Veer et al., 2015). The degree to which an infant perceives a caregiver as a security base greatly depends on maternal behavior (i.e., caregiving system). Children view caregivers as problem solvers and saviors during uncomfortable situations. Correspondingly, the attachment system is activated during uncomfortable encounters or threats to obtain protection and support from an attachment figure in proximity (Gillath et al., 2006). Bowlby believed the proximity of a caregiver and child influences the type of attachment the child would develop toward their caregiver. However, other researchers viewed the system as a reflection of security between the child and caregiver which, in turn, encouraged exploration from the child (Ainsworth et al., 1978; Bartholomew & Horowitz, 1991; Sroufe & Walters, 1977). The quality of the emotional bond and closeness of a caregiver influences the confidence in children to pursue unfamiliar and challenging tasks. The degree of attachment encourages children to explore independently or limit their exploring due to uncertainty and discomfort with their surroundings.

Thus, attachment styles influence one's self-image and feedback interpretation in social settings. For instance, social media is a place where people have the opportunity to enhance individuality, explore trends, meet new people, and share content. Social media platforms provide individuals with opportunities to deepen their relationships with others

through electronic communication. However, social network sites can also dampen relationships through expectations, emotions, and needs that are not being fulfilled. Radkiewicz (2014) believed the ability to initiate and maintain interpersonal relations are essential qualities for individual well-being. Attachment styles play a major role in the quality of one's engagement with interpersonal relationships and group affiliation, including favorable behaviors that lead to acceptance (Skarzynska & Radkiewicz, 2014). Specifically, one's internal working model perspective of the self and other influences behavior to gain acceptance and maintain interpersonal relationships as well as group affiliations.

A Proposed Model for Attachment Styles in Adulthood

Bartholomew and Horowitz (1991) proposed a four-category model focusing on four exemplary descriptions of attachment styles: secure, dismissive, preoccupied, and fearful. Bartholomew and Horowitz's model predicted adult attachment is founded on two concepts: avoidance and anxiety. Avoidance is related to the image of the other and can be high or low; anxiety is related to the image of the self and can also be high or low (Bartholomew & Horowitz, 1991). A person's abstract image of the self is categorized as either positive or negative (i.e., they either perceive themselves as worthy of support and love or they do not), and the person's abstract image of the other is either classified as positive or negative (i.e., they perceive others as either available and trustworthy or as rejecting and unreliable), thus creating four attachment patterns that are derived from the combination of these two dimensions. The first dimension is the perception of others as being trustworthy, reliable, and available or untrustworthy, rejecting, and unavailable.

The second dimension is the perception of the self as someone who does or doesn't deserve to be the object of others' interests, understanding, affection, and support.

Attachment Styles

Skarzynska and Radkiewicz (2014) used the Bartholomew and Horowitz's (1991) four-category model as a frame of reference to create their four theoretical categories of attachment styles in adults. The first category is the *secure* style that encompasses a high level of self-acceptance, the belief that one deserves to be loved and to be the object of interest and support and anticipates that they will be accepted by others and have their needs fulfilled. Individuals with a *dismissive* attachment also have a high level of self-acceptance and know they deserve to be loved (Skarzynska & Radkiewicz, 2014). However, individuals with this attachment style have a preconceived cynical viewpoint of others' intentions and expectations which hinders intimacy and trust in relationships. Thus, they avoid close contact as a means of self-protection, strive to be independent, and engage in activities that do not require intimacy in relationships. On the other hand, the *preoccupied* attachment style is expressed by low self-acceptance but hold others' in high regard (Skarzynska & Radkiewicz, 2014). The stance of their self-esteem depends largely on the acceptance from and interests shown by others. Individuals with this attachment style invest time and effort in maintaining close relations and are very emotionally expressive. Lastly, Skarzynska & Radkiewicz (2014) defined *fearful* attachment style as low self-acceptance and carry a negative view of others. Individuals who have this style perceive others as untrustworthy, unreceptive or unwelcoming.

Social Media Behaviors

Upward and Downward Social Comparisons

Skarzynska and Radkiewics (2014) conducted a large, cross-sectional representative study on the effects of adult attachment styles and the level of negativism manifested in individuals' beliefs about the social world. The Bartholomew and Horowitz (1991) theoretical model was implemented in the study to classify participants in either the low or high anxiety category in respect to self-image and low versus high avoidance concerning other's image. The researchers explored whether both dimensions of attachment styles contributed significantly to the explanation of social negativism. The study found an interaction between avoidance and anxiety, which resulted as an antagonist pattern in the dismissive attachment style (Skarzynska & Radkiewics, 2014). Highly avoidant individuals tend to create a negative social worldview especially when they possess a positive image of the self. The identified antagonist pattern is similar to one of the social comparisons that will be examined in the current study. Gibbons and Gerrard (1989) defined downward comparisons as occurring when individuals compare themselves to others who they believe are less accomplished or captivating than they are. This perspective is maintained to enhance the outlook of oneself when one feels socially inadequate about their online appearance. On the other hand, Gibbons and Gerrard (1989) defined upward comparisons as the process of individuals comparing themselves to others who they believe are better off or more proficient than they are. Both types of social comparison behaviors are perspectives that shape an individual's experiences on social media (Skarzynska & Radkiewics, 2014)

Comparably, Buglass et al. (2016) used data from online surveys to examine the relationship between SNS use, FoMO, self-promoting behaviors, psychological well-being, and online vulnerability. Online promoting behaviors evoke social comparison behavior in social media users by comparing themselves to others' images with a positive or negative outlook. The researchers noted individuals who possessed high levels of online vulnerability were likely to have low self-esteem due to downward comparison behavior. Specifically, online social comparison attitudes made individuals prone to psychological vulnerability. Therefore, individuals who have an online support system are more likely to have a positive outlook of themselves and are less likely to view themselves as less than others.

Thus, the quality of the social interaction individuals evoke and receive shapes their social media experience. Valkenburg et al. (2006) gathered data through an online survey of 881 Dutch adolescents between the ages of 10 and 19 years old. The tone of reactions in the social media account varied significantly among participants. Of the participants who reported having received responses to the social media account, 5.6% of the participants indicated that their profile reactions have always been negative; 1.6% reported their online profiles have predominantly been negative; 10.1% participants reported they have received negative and positive reactions; 5.6% indicated that these reactions had always been positive; 1.6% that they had predominantly been positive; 49.3% stated the reactions have been predominantly positive; and 28.4% stated they had always been positive. However, 35% of the participants reported they have established friendships through social media and 8.4% stated they have formed romantic relationships. These results inferred adolescents' self-esteem was affected solely by the

tone of reactions participants received on social media accounts. For instance, positive feedback enhances self-image whereas negative feedback is associated with a troubled self-image. Students who typically received positive feedback indicated they used social media as a self-esteem booster (Valkenburg et al., 2006). On the other hand, participants who mostly received negative feedback reported lower levels of self-esteem. This study highlights social networking sites bringing people closer but also resulting in problematic factors in well-being in the future. Thus, the continuous feedback individuals receive on social media affects the perception of self-image and confidence. Consequently, social media brings forward individuality through content and trends resulting in social comparison, which regulates self-image and status.

Social Media Addiction

Social media engagement is part of many people's everyday life due to networking, staying in touch with family and friends, and finding entertaining content to fill up spare time. A portion of people limit their online activity while others spend an extended amount of time online to escape offline problems (Brailovskaia & Teichert, 2020; see Twenge et al., 2019)

Unfortunately, efforts in avoiding offline issues foster intensive use of social media, leading to addictive tendencies. Social media addiction is a behavioral addiction described as an uncontrollable urge for social media engagement, excessive time online, and overly worried about social media use impairing daily functioning (Hillard, 2020).

While there is not sufficient data to establish diagnostic criteria and clinical descriptions on behavioral addictions, the DSM-V included gambling disorders as a "Non-Substance-Related Disorder" (American Psychiatric Association, 2013). The DSM-

V characterizes the disorder as a persistent maladaptive behavior that interferes with personal, family, and professional responsibilities (American Psychiatric Association, 2013), similarly to the etiology of social media addiction (Potenza, 2014). Brailovskaia and Teichert (2020) conducted an experimental study of 145 social media users to explore the effects of social media-related flow, implicit associations and addictive tendencies. The participants were surveyed from various scales to measure the effects of implicit associations with social media. The researchers explored implicit associations with social media and social media flow effects with addictive tendencies. Beard (2014) noted Csikszentimihalyi (1975) defined flow theory as an integrated sensation that individuals' experience deep contentment when fully focused and absorbed with a task or objective as to lose track of time. That is, flow is inherently rewarding and fostered during high levels of pleasure and enjoyment during a specific activity such as gardening, hiking, or painting. Implicit associations of social media are users' curiosity, enjoyment, time-distortion, and focused attention during a social media engagement (Kwak et al., 2014). The findings indicated addictive social media use stems from repetitive and excessive online activity caused by the implicit associations with social platforms. In other words, implicit associations heighten users' activity during online positive experiences, increasing the likelihood of additive tendencies with social media. Brailovskaia and Teichert (2020) suggest social media flow mediated the relationship between implicit associations with social media and social media addiction. Thus, flow experiences influence online implicit associations, creating the likelihood of social media addiction. Individuals develop an emotional bond to social platforms through positive experiences, which, in turn, foster excessive social media use and the development of

addictive tendencies (Brailovskaia & Teichert, 2020). As mentioned earlier, positive experiences distract users from offline problems, and in return, social media platforms become a coping resource and a pathway for social media addiction.

Similarly, Feld and Shusterman (2015) assessed different coping behaviors for stress reduction by measuring a correlation between student-reported stress and behavioral, psychological, and physiological indicators. The authors reported descriptive statistics on each measure (i.e., self-reported stress, physical symptoms of stress, sleep, eating, and exercise behaviors, and life satisfaction) and two correlations (for stress coping purposes and in general) between coping behaviors and stress indicators. The researchers found 62.4% of the participants reported that they prefer to talk to a friend during distress, and 45.5% preferred talking to their parents. This finding is important because individuals who rely on peers for emotional support are likely to experience high levels of FoMO. Similarly, Liu and Ma (2018) suggested online social support has a significant association with social media addiction. Researchers found FoMO and problematic phone use to be moderators between online social support and SNS addiction. This means high levels of social support are strongly associated with levels of fear of missing things which leads to a stronger addiction of SNS (Liu & Ma, 2018). Individuals' social media engagement may increase to make new connections with others, to strengthen existing ones, and to mitigate feelings of FoMO resulting in social media addiction.

Fear of Missing Out

Over the years, the progression of technology has increasingly made it easier for SNS users to easily remain connected with others through social media. Online platforms

allow users to express individuality and share experiences through photos, clips, and live videos, creating a FoMO pathway in the online world. FoMO is defined as a pervasive uneasiness caused by one's awareness of others having rewarding experiences during their absence (Przybylski et al., 2013). FoMO is categorized by the desire to stay persistently connected with others' whereabouts and experiences. However, the research on FoMO is rather sparse with a small line of emerging research in student retention (see Alt, 2018) and work productivity (see Rozgonjuk et al., 2020) as topics that have been explored while accounting for the effects of FoMO. Some of the research on FoMO has focused on psychological features, including Skarzynska and Radkiewics's (2014) work on attachment styles. The researchers' explanation of attachment styles brought forward a seeming amount of variability in negative social beliefs while accounting for socio-demographic styles. For instance, attachment styles influence a variety of negative responses in social beliefs such as interpersonal distrust, social darwinism, antagonist views: conflicts of interest, egoism and rivalry, while considering the effects of age, sex, and level of education. Thus, adult attachment styles are likely to have implications in broader social beliefs. Social network sites influence both social beliefs and behaviors because online platforms are places people communicate and share content regularly. Because of this sort of online activity, researchers conducted an experimental study of the phenomenon known as FoMO. Wortham (2011) suggested FoMO may be a source of negative or depressed feelings because the fear evokes insecurity upon life choices and status. Individuals who experience high levels of FoMO develop a sense of social inadequacy leading to feelings of despair and meagerness. The traits of FoMO manifest

in maladaptive habits such as self-doubt, social comparisons, and excessive SNS use to mitigate negative emotions that derived from outcast positions.

Similarly, Milyavskaya et al. (2018) conducted a multimethod empirical study of FoMO. Study 1 employed experience sampling measures (ESM) to assess FoMO experiences. The authors assessed nightly diaries and end-of-semester well-being measures to evaluate long- and short-term consequences of FoMO. A total of 151 participants partially completed the daily entries, deriving a 68% response rate of ESM surveys and 90% response rate of 955 nightly surveys. The findings demonstrated that students are likely to experience FoMO later in the day, later in the week, and while working on required tasks such as studying or working. Additionally, recurrent FoMO experiences were associated with negative outcomes both daily and over the course of the semester. Participants also reported increased levels of fatigue, stress, negative affect, physical symptoms, and a decrease in sleep while experiencing FoMO. Therefore, the effects of FoMO caused great distress in students, and these effects heightened throughout the day and week. The second experimental study explored the mediating role of FoMO between its association with social media and general self-regulation. A subject pool of 304 participants were presented with a prompt asking them to imagine themselves in a scenario comprised of two parts: a planned activity and an alternate activity. The researchers probed comfort levels of participants through subjective questionnaires and measures concerning FoMO, focus, and distraction. The findings indicated that planned activity causes FoMO to the same extent regardless of the activity (assignment versus reading versus hanging out with friends). Likewise, alternate activities affected FoMO similarly across all three planned activities. In other words, planned and alternate

activities did not cause FoMO in individuals. The study also revealed an alternative view of the current study by suggesting FoMO occurs regardless of social media use. That is, the method of notifications does not influence FoMO; rather it is the access and frequency of reminders through social media that creates greater FoMO. Lastly, Milyavskaya et al. (2018) noted alternate activities that are social in nature heighten the effects of FoMO and lessen during engagement with others, deriving a social phenomenon perception in FoMO. That is, FoMO occurs regardless of the social engagement individuals partake in. Specifically, individuals experience FoMO while being alone, in company, and especially during social engagement with others. The results of the study highlighted ways FoMO is associated with social media and how it can lead to needing social media for visibility and communication.

Need for Social Media and FoMO

Addictive tendencies of social media derived from intensive use, online positive experiences, and a method of escaping offline problems (Brailovskaia & Teichert, 2020). In fact, social media allows users to find social support, feelings of belonging, mood improvement, including a space to escape from responsibilities, resulting in high levels of social media engagement. Casale et al. (2018), conducted a study of 579 undergraduates in Italy to investigate the contribution of FoMO to excessive use of SNSs while accounting for the fear of being negatively perceived and for low self-presentational skills. The students were probed with measures of FoMO, SNS use, and fear of negative evaluation. The researchers also assessed the mediating role of positive metacognitions between FoMO and social media use. Metacognitions are the beliefs of one's knowledge about factors that influence the regulation and awareness of the current state of cognition

(Wells, 1995; see Tajrishi et al., 2011). The researchers suggested that FoMO predicts metacognitions of social media usefulness to regulate the fear that others might be having a rewarding experience from which one is absent. In detail, the metacognition of individuals increases SNS activity to mitigate negative beliefs caused by FoMO. This finding highlights the relevance and effects of SNS use in FOMO experiences. Additionally, the association between problematic SNSs and fear of being negatively evaluated was mediated by positive metacognitions in male participants. That is, males' fear of being negatively evaluated derives an increase of social media due to self-judgment. On the other hand, female participants reported lower levels of self-presentation skills than males; hence females are more socially conscientious. Therefore, Casale et al. (2018) suggested females' problematic SNS use was greatly influenced by the opportunities of identity manipulation and self-presentation in social network sites. In consequence, the researchers believed metacognitions concerning FoMO need to be investigated in the future, as they were contributing factors of excessive use of social media and self-presentation concerns.

Correspondingly, Lee-Won et al. (2015) investigated how social anxiety and need for social assurance (NSA) influenced problematic use of Facebook. Researchers at a midwestern university assessed 243 college students through an online survey consisting of measures assessing social anxiety, personality traits, social need assurance and amount of Facebook use. The results indicated individuals who possessed high and low levels of NSA, including high levels of social anxiety, were likely to use Facebook excessively. The researchers noted online audiences have a great influence on self-presentational concerns of individuals who have high levels of NSA. Lee-Won et al. (2015) further

explained self-presentational concerns occur when socially anxious users' content is evaluated by their audience. However, self-presentational concerns do not carry the same effects online, as socially anxious individuals do not use social media platforms uncontrollably and excessively due to low levels of NSA. In sum, the study highlights the effects of social anxiety and NSA on social media use. The problematic use of social media platforms enables audiences to evaluate users' content, resulting in self-presentation concerns, social comparison, FoMO, need, and addiction in social network sites.

Current Study and Hypotheses

The current study explores the association between multiple online social media behaviors (i.e., social media addiction, need for social media, FoMO, and social comparison) with attachment styles. It is hypothesized that individuals who indicate the fearful attachment styles will exhibit more negative social media behaviors. In contrast, it is hypothesized that individuals with secure and preoccupied attachment styles will exhibit healthier social media behaviors.

Hypotheses

H1: Individuals with fearful attachment style will present greater scores of social media addiction.

H2: Individuals with fearful attachment style will exhibit greater need for social media.

H3: Individuals with fearful attachment style will demonstrate higher scores of FoMO.

H4: Individuals with fearful attachment style will exhibit higher scores of upward comparison behavior.

H5: Individuals with preoccupied attachment style will present low levels of social media addiction.

H6: Individuals with preoccupied attachment style will exhibit lower need for social media.

H7: Individuals with preoccupied attachment style will demonstrate lower scores of FoMO.

H8: Individuals with preoccupied attachment style will exhibit greater scores of downward comparison behavior.

H9: Individuals with secure attachment style will demonstrate lower scores of social media addiction.

H10: Individuals with secure attachment style will present lower need for social media.

H11: Individuals with secure attachment style will demonstrate lower scores of FoMO.

H12: Individuals with secure attachment style will exhibit greater scores of downward comparison behavior.

II. METHODS

Participants and Procedure

Participants were Texas State University undergraduate students enrolled in classes in the psychology department. Participants received course credit for their participation. Inclusion criteria for participation was: 1) 18 years of age or older, and 2) an active user of at least one interactive social media platform (Facebook, Twitter, Instagram, or Snapchat).

The survey was developed in Qualtrics and will took approximately 30 minutes to complete. A total of 384 participants were recruited from the SONA human subjects pool for the current study.

All participants were asked to provide consent before taking the survey and were advised that they could skip any questions that they were uncomfortable answering. This study was approved by the Texas State University Institutional Review Board.

Design

A correlational design was used to study the relationship between attachment styles and social media behaviors in college students. The survey battery used several psychometrically validated questionnaires previously documented in the literature. The survey aimed to examine the relationship between predictors such as the following attachment styles: secure, dismissive, fearful, and preoccupied. However, dismissive scores were omitted during the analyses as only a few students reported high scores in the dismissive category. The scores of students who classified in the dismissive attachment style were included with the fearful attachment group. The outcome variables assessed

social media behaviors, including social media addiction, need for social media, social comparison and FoMO.

Measures

Demographics

The demographic variables collected for this study included gender (female, male), age, race/ethnicity (White, Black or African-American, Hispanic/Latino, Other (Asian-American, Polynesian/Pacific Islander, Native American, Multi-racial, etc.)), education (less than high school, high school, some college, associate's degree, bachelor's degree, master's degree, doctoral or professional degree), employment status (full time, part time, unemployed), relationship status (single, in a relationship but not married, married), etc.

Social Media Addiction

Social media addictive behaviors were assessed by the administration of the Bergan Social Media Addiction Scale (BSMAS), which is a 6-item measurement, including a $r = 3.45$; $M = 4.35$; $SD = 5.36$ and $\alpha = .82$ (Andreassen et al., 2016). This scale measured participants' frequent use of social media (urges, negative effects, maladaptive strategies). The items in the assessment are measured on a 6-point Likert scale ranging from 1 (*very rarely*) to 6 (*very often*). Higher scores represent higher frequency use of social media. An example question is: *"*How often during the last year have you: tried to cut down on the use of social media without success?"

Need for Social Media Scale

The need for social media involvement was measured by the Need for Participation in Social Media Measurement (NFPSM), a 6-item measurement (Park et al.,

2009). The scale demonstrated a r = 3.45, M = 4.35, SD =10.91 and α = .82.The measure assessed subjective aims and motives for social media engagement. The items in the assessment are measured on a 6-point Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*). An example question is: "I use social media (Facebook & Twitter): To feel like I belong to a community.*"*

Social Comparison

Social comparison behavior was assessed by the administration of Social Comparison on Social Media, a two one-item subscales (upward social comparison and downward social comparison) that examines the extent of self-perspective and other perspectives on social media (Vogel et al., 2014). The item in each evaluation measured on 5-point Likert scale from 1 (*Not at All*) to 5 *a great deal*). The scales presented a r = .76, M = 2.48, SD =1.92 and α = .61. A positive outlook of the self determined downward social comparison score while a negative outlook of the self represented upward social comparison scores. A higher mean score demonstrated higher engagement in the type of social comparison behavior. An example question is: "When comparing yourself to others on social media, to what extent do you focus on people who are better off than you?"

Fear of Missing Out

Experiences of feelings of missing out were assessed by the administration of the Fear of Missing Out (FoMO) scale. The measure is a 10-item assessment (Pryzybylski et al., 2013); it evaluates subjective experiences and opinions of other's experiences publicized on social media. The items are scored on a 5-point Likert scale with response anchors ranging from "*Not at all true*" to "*Extremely true of me.*" The scale includes a r

=1.25, *M* = 2.70, *SD* =. 88 and α = .87. Higher scores in the measurement indicate greater levels of FoMO experiences when using social media. An example question is: "I fear others have more rewarding experiences than me?"

Attachment Styles

Attachment styles were assessed by the administration of Skarżyńska and Radkiewicz's (2014) four multi-item subscales (secure, dismissive, preoccupied, and fearful) titled Negative Beliefs about Social Life scale. The measure was created with a similar criterion and understanding of both Bartholomew and Horowitz's (1991) attachment styles scale. The Cronbach's alpha amounted to the following for the subscales: .66 for secure (*r* = 1.58; *M* = 4.14; *SD* = 0.60), .73 for dismissive (*r* =.93; *M* = 2.84; *SD*=0.43), .78 for preoccupied (*r* = .86; *M* = 3.06; *SD* = 0.36), and .90 for fearful (*r* = .42; *M* = 3.33; *SD* = 0.21). Participants rated their interpersonal behavior on all measures of negative social beliefs. The measure used a 6-point scale ranging from 1 being "*strongly disagree"* to 6 being "*strongly agree*." Higher scores indicated a stronger attachment profile for each participant. An example question is*: "*In my relation with other people I often think that it's no use getting involved because I'll be rejected anyway."

Statistical Analysis

Participants self-reported the style of attachment that they predominantly exhibit in interpersonal relationships. The attachment styles were secure, dismissive, preoccupied, and fearful. Attachment styles were evaluated by identifying respondents' high attachment profile scores. Participants met criteria for either of the following attachment styles: preoccupied (group 1, *n*=8), secure (group 2; *n*=206), dismissive

(group 3; *n*=3), and fearful (group 4; *n*=90). The listed attachment styles were condensed to three classifications as only three participants identified in the dismissive group. A one-way ANOVA was conducted to assess the significant differences between each attachment style for each of the social media behaviors (i.e., social media addiction, need for social media, social comparison, and FoMO). A chi-square was used to examine differences between categorical variables (i.e., demographics: gender, race, year classification, age). Pairwise deletion was used for random missing data. The significance level was set at $p = .05$ for comparisons. All analyses were conducted using SPSS version 27 (IBM Inc.).

III. RESULTS

A total of 384 participants completed the survey for the current study. Participants who had an excessive amount of missing data were eliminated from the analyses. A total of 55 survey responses were excluded due to incomplete data and 22 students had missing attachment style data during the initial analyses, resulting in a total of 307 participants. Furthermore, only three of the participants in the study had their highest score in the dismissive group, and their next highest score (within 1-2 points) in the fearful group, so they were moved into the fearful group instead of being removed from the study. Therefore, all subsequent analyses conducted were only comparing participants on the three attachment styles: preoccupied, secure, and fearful.

The pool sample included 233 females (75.9%), 68 males (22.1%), 5 gender nonconforming (1.6%), and 1 preferred to not respond (1.3%). The participants' mean age was 19.15 (SD = 1.86). Of the participants who reported their ethnicity, 218 were White (72.2%), 31 were Black or African American (10.3%), 143 were Hispanic/Latino (46.6%), 4 were American Indian or Alaska Native (1.3%), 9 were Asian (3.0%), 2 were Native Hawaiian or Pacific Islander (0.7%), 25 identified with two or more races (8.3%) and 13 individuals classified themselves as Other (4.3%). Regarding sexual orientation, 229 identified as heterosexual (74.8%), 14 identified as gay (4.6), 25 identified as lesbian (8.2%), 27 identified as bisexual (8.8%), 4 identified as queer (1.3%), 3 individuals classified themselves as other (1.0%), and 4 individuals preferred not answering this question (1.3%). A total of 225 participants reported single, not in a relationship (83.1%) as their marital status, 48 reported as single, in a relationship (15.6%), 3 reported as married (1.0%), and 1 individual reported as separated or divorced (0.3%). Finally, regarding the

participants' employment status, 16 participants worked full-time hours (5.2%), 85 worked part-time hours (27.7%), 9 had a seasonal occupation (46.6%), 16 were not currently working (5.2%), and 3 individuals reported as other (1.0%).

Once data cleaning was completed, the remaining data was analyzed. A univariate analysis was performed to evaluate the measured traits based on styles of attachment (secure, preoccupied, and fearful). The categories of the univariate analyses were participants' age and social media behaviors such as social media need, social comparison, social media addiction, and FoMO. Thus, the analyses assessed the extent to which attachment style was related to likelihood of using social media excessively, leading to impairments when carrying out daily tasks and negative online experiences.

Demographics Comparisons

Table 1. Analysis Evaluating Demographics Associated With Attachment Styles

Variables	Fearful N=93	Preoccupied N = 8	Secure N= 206	Pearson Chi-Square *p* value
Age: % Mean (SD)	19.00 (1.24)	18.86 (1.07)	19.23 (2.10)	*p* = .562
Gender: %				
Female	84.9%	75.0%	71.8%	*p* =.284
Male	12.9%	25.0%	26.2%	
Gender Nonconforming	0.0%	0.0%	1.5%	
Prefer not to respond	0.0%	0.0%	0.5%	
Race: %				
White	65.2%	75.0%	75.2%	
African American	10.9%	12.5%	9.9%	
American Indian or Alaska	2.2%	0.0%	1.0%	*p* =.952
Native	4.3%	0.0%	2.5%	
Asian	1.1%	0.0%	0.5%	

Native Hawaiian or Pacific Islander	10.9%	12.5%	6.9%	
2 or more races	5.4%	0.0%	4.0%	
Other				
Ethnicity: %				
Hispanic	39.8%	37.5%	50.0%	$p = .228$
Not Hispanic	60.2%	62.5%	50.0%	
Sexual Orientation: %				
Heterosexual	71.0%	62.5%	77.1%	
Gay	2.2%	0.0%	5.9%	
Lesbian	12.9%	0.0%	6.3%	$p < .001$
Bisexual	11.8%	12.5%	7.3%	
Queer	0.0%	0.0%	2.0%	
Other	0.0%	0.0%	1.5%	
Prefer Not to Answer	2.2%	25.0%	0.0%	
Marital Status: %				
Single, not in a relationship	83.9%	100.0%	82.0%	
Single, in a relationship	15.1%	0.0%	16.5%	$p = .895$
Married	1.1%	0.0%	1.0%	
Separated/Divorced	0.0%	0.0%	0.5%	
Employment Status: %				
Part-time	34.4%	25.0%	24.8%	
Full-time	6.5%	0.0%	4.9%	
Seasonal	4.3%	0.0%	2.4%	$p = .543$
Student	48.4%	62.5%	62.1%	
Not Currently Working	6.5%	12.5%	4.4%	
Other	0.0%	0.0%	1.5%	

Table 1 displays the column percentages for each measured demographic according to participants' attachment style. Comparisons showed no significant differences between the three attachment style groups based on age, gender, race/ethnicity, marital status, and employment status (all $p > .05$). There was a significant difference between the groups

based on sexual orientation, such that higher rates of individuals identifying as lesbian or bisexual were classified within the fearful attachment styles, and higher rates of bisexual orientation and those who preferred not to disclose their sexual orientation were classified within the preoccupied attachment style, $\chi^2(2, N=307) = 49.412$, $p < .01$. Participants' sexual orientation was significantly associated with attachment styles.

Univariate Analyses

Table 2. Univariate Analyses Evaluating the Association Between Social Media Behaviors and Attachment Styles

Variables	Fearful N= 93 Mean (SD)	Preoccupied N= 8 Mean (SD)	Secure N = 206 Mean (SD)	Statistical Comparison *P* value
Social Media Need	50.62 (11.48)	50.63(12.75)	52.99(10.55)	*p = .204*
Downward Social Comparison	2.44 (1.19)	1.75 (0.71)	1.97 (0.97)	*p = .001*
Upward Social Comparison	3.12 (1.21)	2.88 (0.99)	2.75 (1.19)	*p = .050*
Social Media Addiction	16.85 (5.57)	16.86 (4.30)	15.60 (5.10)	*p = .161*
Fear of Missing Out	2.76 (0.92)	2.89 (1.19)	2.65 (0.82)	*p = .500*

*Participants in the fearful group presented higher upward social comparison scores than the secure group.
*Participants in the secure group reported lower scores of social downward comparisons than the fearful group.

Social Media Behaviors

The current study examined the association between attachment styles and four types of social media behaviors. The social media behaviors evaluated in relationship to attachment styles are displayed in Table 2. A one-way ANOVA was conducted to determine if there was a significant association between attachment styles and social media behaviors. First, a one-way ANOVA revealed a significant difference in the means of

downward social comparisons between the three attachment style groups, $F(2, 304) = 7.19$, $p < 0.05$. Since, the Levene statistic was significant, equal variances were not assumed. Therefore, individual differences between groups post-hoc comparisons were evaluated using the Dunnett's test. The test indicated that the mean score for participants with a fearful attachment style (M=2.44, SD=1.19) was significantly different from students with a secure attachment style. Participants with a secure attachment style (M=1.97, SD=.970) had significantly lower downward social comparisons compared to participants with a fearful attachment style. Therefore, Hypothesis 12 was supported as students with secure attachment styles exhibited significantly lower downward comparison scores on measures of social comparisons. In addition, a significant difference was identified in the means of upward social comparisons between secure, preoccupied and fearful scores, $F(2,304) = 3.03$, $p < 0.05$. The Dunnett's test determined participants with a fearful attachment style (M=3.12, SD= 1.21) presented higher scores than participants in the secure attachment group (M =2.75, SD= 1.19). Therefore, Hypothesis 4 was supported as students with fearful attachment styles demonstrated significantly higher scores on measures of upward social comparison. Furthermore, significant differences were not identified between the fearful, dismissive and secure group. In detail, hypotheses 1, 2 and 3 indicate the fearful attachment group would report higher scores in social media addiction (H1), need for social media (H2), and FoMO (H3). Hypotheses 5, 6 and 7 indicated the preoccupied attachment group would report lower scores in social media addiction (H5), need for social media (H6), and FoMO (H7), as opposed to Hypothesis 8, which suggested higher scores of social downward comparison in the preoccupied group. Lastly, hypotheses 9, 10, and 11 assumed lower scores in the secure attachment group for social media addiction (H9), need for social

media (H10), and FoMO (H11). See table 3 for futher details of the not supported hypotheses.

Table 3. Hypotheses Not Supported

Hypotheses	Mean (SD)	*F* Value	Statistical Comparison *p* value
H1	16.90(5.60)	*F* (2,304) =7.19	*p* = .242
H2	50.62(11.48)	*F* (2,304) =1.60	*p* = .350
H3	2.78(0.93)	*F* (2,304) =.700	*p* = .497
H5	15.88(4.85)	*F* (2,304) =1.43	*p* = .242
H6	50.63(12.75)	*F* (2,304) = 1.60	*p* = .204
H7	2.86(1.10)	*F* (2,304) = .700	*p* = .497
H8	1.75(0.71)	*F* (2,304) = 7.19	*p* = .093
H9	15.78(5.26)	*F* (2,304) = 1.43	*p* = .242
H10	52.99(10.55)	*F* (2,304) = 1.60	*p* = .204
H11	2.66(0.84)	*F* (2,304) = .700	*p* = .497

IV. DISCUSSION

The goal of the current study was to identify a significant relationship between attachment styles and social media behavior with a sample of college students attending a university in Texas. The central finding in the study suggested social comparisons based on social media vary significantly by attachment styles such as secure and insecure behavior. Thus, self-perception and other perceptions elicit by attachment behavior influence online social comparison attitudes.

The significant results for the study at the univariate level was the relationship between attachment styles and social comparisons on social media. The relationship between social comparison and online behavior was explored by Gomez et al. (2021), discovering students who met the criteria for a high frequency of upward online social comparisons presented greater levels of addiction to social media, negative self-perceptions, and maladaptive social media behaviors. Specifically, individuals who practice upward online social comparison behavior are likely to adopt unhealthy social media behaviors, including negative beliefs of oneself to cope with underlining beliefs of inadequacy and inferiority. This indication is further supported by Feinstein et al.'s (2013) findings, suggesting social comparison attitudes increased rumination. Moreover, rumination serves as a behavioral explanation for why the intensity of social media addiction is high when depression is present (Mitra et al., 2019). Future research should explore the role of rumination among those who use excessive social media in making the user prone to social comparison behaviors and maladaptive coping habits. Although self-schemas and online social comparisons are two contributing factors to social media

addiction, exploring the intensity of rumination linked to social comparison attitudes is an important start toward learning the effects of rumination on social media addiction.

Moreover, findings from a previous study indicated intense comparison to other individuals might be the driving factor of how users view others and personal attributes (Gomez et al., 2021), which partly supports the current findings as self-perception is highly involved in attachment behavior. Researchers suggested participants who practice high upward social comparison reported lower levels of social support due to seeking feedback and validation online. This finding could mean that online content, comments, and reactions from other users are held in higher regard, which, in turn, influence individuals' social comparison behavior, social media addiction, depressive symptoms, social support, and FoMO levels. These findings partly align with the current findings as social comparison behavior significantly related to preoccupied and fearful attachment behavior, whereas FoMO was not significantly related to any of the measured attachment styles. Although this study did not examine social support and depressive symptoms, it is important to note the rising effects of excessive use of social media, heightening depressive symptoms and furthering maladaptive social media behaviors. Future research should evaluate distinguished factors of individuals who practice online social comparison behaviors as it is important to also be aware of the underlying psychological mechanism of attachment behavior and maladaptive social media behaviors.

As shown in the results, there was a significant difference in sexual orientation between the fearful and preoccupied attachment styles. The findings indicated that persons identifying as either lesbian or bisexual reported higher levels of fearful attachment behavior. The inference is supported by the findings of another study

evaluating different sexual orientation groups and social media engagement (Kaiser et al., 2019). The findings determined sexual minority groups that identify with the LGBQT community displayed higher risk levels for downward social comparison online, lower self-esteem, and lower life satisfaction. Social comparison tendencies affect individuals' general wellness as the behavior is linked to a higher frequency of negative mood states (Skarzynska et al., 2014), fearful behavior (Bartholomew et al., 1991), and social media addiction (Dailey, 2020). Thus, individuals with fearful attachment styles are vulnerable to negative online experiences such as FoMO (Buglass et al., 2017), negative feedback, and troubled self-image (Valkenburg et al., 2016) leading to increased levels of online social comparison behavior. The current study also demonstrated that individuals who identified as bisexual and those who preferred not to disclose their sexual orientation reported higher preoccupied attachment style scores. In line with the attachment style findings (Bartholomew et al., 1991), proposed self-concept and views of others are linked to attachment behavior such as low self-acceptance while simultaneously viewing others in higher regard. Although the researchers evaluated attachment based on anxiety and avoidant behavior, the findings suggest that individuals who are reserved about their sexual orientation or reported as bisexual are likely to exhibit preoccupied behavior patterns to cope with social negativism.

Furthermore, the other social media behaviors evaluated in the current study did not have a significant difference with the measured attachment styles. The findings differed considerably from the mainstream research of this field as Demircioglu and Goncu 2020) determined individuals with preoccupied and fearful attachment styles were most likely to develop social media addiction. The researchers also noted individuals who

were classified in the preoccupied attachment style were likely to have low levels of self-esteem, leading to a possibility of developing social media addiction. Moreover, early attachment experiences develop attachment styles that later influence the ability to function within social relationships during adulthood. That is, previous findings suggest attachment behavior affects information interpretation and social interactions whether it's online or face-to-face communication (Bartholomew & Horowitz, 1991; Caspi & Elder, 1988; Swann, 1983). Further research is needed to reveal the mediating factors in the relationship of attachment styles to maladaptive habits on social media.

Furthermore, other empirical studies evaluating the effects of self-image on social media behavior and use presented different results from the findings. For instance, Kaiser et al. (2019) examined factors influencing social media addiction to capture the intensity of users' emotional investment in social media, leading to becoming part of their identity. Researchers explaining social identity theory have suggested excessive social media use is associated with identity through negative and positive comparisons. The current study contributes to the literature by highlighting a significant link between social comparison attitudes and attachment behavior. Furthermore, centering empirical attention on social comparison paves the way to explore the negative effect caused by online self-presentation, self-perception, and other perceptions.

Limitations

The current study involves several limitations. First, the study did not focus on specific social media platforms to assess different activity and intensity levels between social media platforms. Research has shown that online engagement methods differ based on social media networks, given such platforms display features to promote motivators

for improvement, rankings, and attainment of goals, which, in turn, heighten impression management and personal appeal (Gomez et al., 2021). The second limitation of the study is the likelihood of response bias in data collection as survey responses are based on subjective information. For instance, self-reported attachment behaviors were not accounted for response bias, increasing the likelihood of inherent bias in the present data. In addition, there is a possibility participants reported answers for a particular survey outcome or to expedite the duration of the survey. Future studies should conduct interviews to strengthen the validity of measurement outcomes. The third limitation of the study is the sample only reflects a small age range between 18 and 30 as all the participants were undergraduates, so the data did not represent a wide-ranging sample in terms of age. Considering self-esteem and attachment styles are ongoing factors in early ages (adolescence through young adulthood), attachment behavior and self-esteem levels could be related to social media behavior (Demircioglu et al., 2020; Bowlby et al., 1988; Rosenberg et al., 1965). Lastly, self-awareness of social media behaviors was not evaluated. The limitation is considered as certain social groups are likely to involve censorship to reduce peer rejection and judgment, including online impression maintenance (Gomez et al., 2021). Thus, the reader should review the results with caution as social desirability was not accounted in the present study. Other factors may mediate attachment styles and social media usage include self-esteem, social anxiety, and self-efficacy. Future research should explore a comprehensive sample to examine the underlying mechanisms of self-esteem concerning self-efficacy with social media engagement.

Conclusion

The overall findings explained how self and other perception, which is associated with attachment behavior is related to social media behaviors to cope with negative online experiences. As mentioned earlier, social media users who have a positive image of the self are likely to have a negative worldview of society (Skarynska et al., 2014) and users who have a negative image of the self are likely to seek validation and reassurance through positive feedback. Hence, students with fearful attachment styles would have significantly higher scores on measures of upward social comparisons; students with secure attachment styles exhibited significantly lower downward scores of social comparisons. This finding underlies the notion that receiving online acceptance instead of rejection is likely to relieve a negative image of the self and vice versa. In addition, a relationship between attachment styles and sexual orientation was identified. Bisexuals identified most with fearful and preoccupied attachment styles, lesbians reported higher levels of fearful attachment, and those who preferred not to reveal their sexual orientation presented higher rates of preoccupied attachment behavior. Therefore, the present study is a modest attempt in revealing fearful and preoccupied attachment styles effects on users' self-image and online behavior.

With the increasing psychological concerns of excessive social media use, mental health intervention strategies should be developed to increase awareness of the origins and course of social media addiction to promote healthy social media usage. This is important considering excessive social media use is a growing problem across multiple cultural structures in which attachment behavior is likely to contribute to the mechanism of social media behaviors and activity.

REFERENCES

Ainsworth, M. D., & Wittig, B. A. (1969). Attachment and exploratory behavior of one-year-olds in a strange situation. In B. M. Foss (Ed.), *Determinants of infant behavior* (pp. 113-136). Methuen.

Alt, D. (2015). College students' academic motivation, media engagement and fear of missingout. *Computers in Human Behavior*, *49*, 111–119. https://doi.org/10.1016/j.chb.2015.02.057

American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). https://doi.org/10.1176/appi.books.9780890425596

Bandura, A. (1977). *Social learning theory*. General Learning Press.

Bartholomew, K., Horowitz, L. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226 244. Beard, K. S. (2015). Theoretically speaking: An interview with Mihaly Csikszentmihalyi on flow theory development and its usefulness in addressing contemporary challenges in education. *Educational Psychology Review*, *27*(2), 353–364. https://doi-org/10.1007/s10648-014-9291-1

Blakely, T. J., & Dziadosz, G. M. (2015). The application of attachment theory in clinical social work. *Health & Social Work*, *40*(4), 283–289. https://doi.org/10.1093/hsw/hlv059

Blehar, M., Lieberman, A., & Ainsworth, M. (1977). Early face-to-face interaction and its relation to later infant-mother attachment. *Child Development, 48*, 182-194.

Bowlby J. (1988) *Secure Base: Parent-Child Attachment and Healthy Human Development*. Basic Books.

Bowlby, J. (1973) *Attachment and loss: Vol. 2. Separation*. Basic Books.

Brailovskaia, J., & Teichert, T. (2020). "I like it" and "I need it": Relationship between implicit associations, flow, and addictive social media use. *Computers in Human Behavior, 113.* https://doi.org/10.1016/j.chb.2020.106509

Buglass, S. L., Binder, J. F., Betts, L. R., & Underwood, J. D. M. (2017). Motivators of online vulnerability: The impact of social network site use and FOMO. *Computers in Human Behavior, 66*, 248–255. https://doi.org/10.1016/j.chb.2016.09.055

Casale, S., Rugai, L., & Fioravanti, G. (2018). Exploring the role of positive metacognitions in explaining the association between the fear of missing out and social media addiction. *Addictive Behaviors, 85*, 83–87. https://doi.org/10.1016/j.addbeh.2018.05.020

Curran, T., Meter, D., Janovec, A., Brown, E., & Caban, S. (2019). Maternal adult attachment styles and mother–child transmissions of social skills and self-esteem. *Journal of Family Studies*. https://doi-org/10.1080/13229400.2019.1637365

Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. Jossey-Bass Publishers.

Dailey, S. L., Howard, K., Roming, S. M. P., Ceballos, N., & Grimes, T. (2020). A biopsychosocial approach to understanding social media addiction. *Human Behavior and Emerging Technologies*, *2*(2), 158–167. https://doi-org./10.1002/hbe2.182

Demircioglu, Z. I., & Goncu Kose, A. (2020). Mediating effects of self-esteem in the relationship between attachment styles and social media addiction among

university students. *Düşünen Adam: Journal of Psychiatry and Neurological Sciences,* 33(1), 8–18. https://doi.org/10.14744/DAJPNS.2019.00056

Feinstein, B. A., Hershenberg, R., Bhatia, V., Latack, J. A., Meuwly, N., & Davila, J. (2013). Negative social comparison on Facebook and depressive symptoms: Rumination as a mechanism. *Psychology of Popular Media Culture, 2(*3), 161–170. https://doi.org/10.1037/a0033111

Feld, L. D., & Shusterman, A. (2015). Into the pressure cooker: Student stress in college preparatory high schools. *Journal Of Adolescence*, *41*, 31–42. https://doi.org/10.1016/j.adolescence.2015.02.003

Gibbons, F. X., & Gerrard, M. (1989). Effects of upward and downward social comparison on mood states. *Journal of Social and Clinical Psychology*, *8*(1), 14–31. https://doi.org/10.1521/jscp.1989.8.1.14

Gillath, O., Mikulincer, M., Fitzsimons, G. M., Shaver, P. R., Schachner, D. A., & Bargh, J. A. (2006). Automatic activation of attachment-related goals. *Personality & Social Psychology Bulletin*, *32*(10), 1375–1388. https://doi.org/10.1177/0146167206290339

Gomez, M., Klare, D., Ceballos, N., Dailey, S., Kaiser, S., & Howard, K. (2021). Do you dare to compare?: The key characteristics of social media users who frequently make online upward social comparisons. *International Journal of Human-Computer Interaction*. https://doi-org./10.1080/10447318.2021.1976510

Hefner, J., & Eisenberg, D. (2009). Social support and mental health among college students. *American Journal of Orthopsychiatry, 79*(4), 491-499. https://doi.org/10.1037/a0016918

Hillard, J. (2020, November 20). *Social Media Addiction.* Addiction Center. Retrieved from https://www.addictioncenter.com/drugs/social-media-addiction/

Holmes, J., & Holmes, J. (2014). John Bowlby and Attachment Theory (2nd ed.). Routledge. https://doi.org/10.4324/9781315879772

Kaiser, S., & Klare, D., Gomez, M., Ceballos, N., Dailey, S., & Howard, K. (2021). A comparison of social media behaviors between sexual minorities and heterosexual individuals. *Computers in Human Behavior*,*116*(106638). https://doi.org/10.1016/j.chb.2020.106638

Kwak, K. T., Choi, S. K., & Lee, B. G. (2014). SNS flow, SNS self-disclosure and post hoc interpersonal relations change: Focused on Korean Facebook user. *Computers in Human Behavior*, *31*, 294–304. https://doi.org/10.1016/j.chb.2013.10.046.

Lee-Won, R. J., Herzog, L., & Park, S. G. (2015). Hooked on Facebook: The role of social anxiety and need for social assurance in problematic use of Facebook. *Cyberpsychology, Behavior, and Social Networking*, *18*(10), 567–574. https://doi.org/10.1089/cyber.2015.0002

Liu, C., & Ma, J. (2018). Social support through online social networking sites and addiction among college students: The mediating roles of fear of missing out and problematic smartphone use. *Current Psychology*, 1-8. https://doi.org/10.1007/s12144-018-0075-5

Milyavskaya, M., Saffran, M., Hope, N., & Koestner, R. (2018). Fear of missing out: Prevalence, dynamics, and consequences of experiencing FOMO. *Motivation and Emotion*, *42*(5), 725–737. https://doi.org/10.1007/s11031-018-9683-5

Mikulincer, M., & Shaver, P. R. (2019). Attachment orientations and emotion

regulation. *Current Opinion in Psychology*, *25*, 6–10. https://doi.org/10.1016/j.copsyc.2018.02.006

Mitra, R., & Rangaswamy, M. (2019). Excessive social media use and its association with depression and rumination in an Indian young adult population: A mediation model. *Journal of Psychosocial Research*, *14*(1), 223–231. https://doi-org/10.32381/JPR.2019.14.01.24

Potenza M. N. (2014). Non-substance addictive behaviors in the context of DSM-5. *Addictive behaviors*, *39*(1), 1–2. https://doi.org/10.1016/j.addbeh.2013.09.004

Przybylski, A. K., Murayama, K., DeHaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, *29*(4), 1841–1848. https://doi.org/10.1016/j.chb.2013.02.014

Rosenberg, M. (1965). *Rosenberg Self-Esteem Scale (RSES)* [Database record]. APA PsycTests. https://doi.org/10.1037/t01038-000

Rozgonjuk, D., Sindermann, C., Elhai, J. D., & Montag, C. (2020). Fear of Missing Out (FoMO) and social media's impact on daily-life and productivity at work: Do WhatsApp, Facebook, Instagram, and Snapchat Use Disorders mediate that association? *Addictive Behaviors*, *110*. https://doi.org/10.1016/j.addbeh.2020.106487

Skarżyńska, K., & Radkiewicz, P. (2014). Adult attachment styles and negativistic beliefs about the social world: The role of self-image and other-image. *Polish Psychological Bulletin*, *45*(4), 511–520. https://doi.org/10.2478/ppb-2014-0061

Tajrishi, K. , Mohammadkhani, S., & Jadidi, F. (2011). Metacognitive Beliefs and

Negative Emotions. *Procedia – Social and Behavioral Sciences, 30*. https://doi-org/10.1016/j.sbspro.2011.10.103

Twenge, J. M., Martin, G. N., & Spitzberg, B. H. (2019). Trends in US Adolescents' media use, 1976–2016: The rise of digital media, the decline of TV, and the (near) demise of print. *Psychology of Popular Media Culture, 8*(4), 329–345. https://doi.org/10.1037/ppm0000203

Valkenburg, P. M., Peter, J., & Schouten, A. P. (2006). Friend networking sites and their relationship to adolescents' well-being and social self-esteem. *CyberPsychology & Behavior, 9*(5), 584-590.

Van Rosmalen, L., Van der Veer, R., & Van der Horst, F. (2015). Ainsworth's Strange Situation Procedure: The origin of an instrument. *Journal of the history of the behavioral sciences, 51*(3), 261–284. https://doi.org/10.1002/jhbs.21729

Wang, X., Cai, L., Qian, J., & Peng, J. (2014). Social support moderates stress effects on depression. *International journal of mental health systems, 8*(1), 41. https://doi.org/10.1186/1752-4458-8-41

Wortham, J. (2011, April 9). *Feel like a wallflower? Maybe it's your Facebook Wall*. The New York Times. Retrieved from http://www.nytimes.com/2011/04/10/business/10ping.html?src=recg&_r=1&

Yin, L., Wang, P., Nie, J., Guo, J., Feng, J., & Lei, L. (2019). Social networking sites addiction and fomo: The mediating role of envy and the moderating role of need to belong. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*. https://doi.org/10.1007/s12144-019-00344-4