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The Relationship Between Resilience, Coping, and Social Media

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The Relationship Between Resilience, Coping, and Social Media

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Abstract

This study was designed to explore relationships between measures of resilience, coping strategies, social media usage, and depression. Resilience refers to one's ability to endure and recover from adversity. Many theories about what contributes to the development resilience have been explored without a clear consensus. Taormina (2015) argued that adult personal resilience is comprised of four dimensions – determination, endurance, adapatability, and recuperability. Coping, a construct related to resilience, is the process of regulating emotions, cognition, behavior, physiological responses, and the environment in response to stressful events. Past research indicated those with poorer mental health have the tendency to use maladaptive coping strategies in response to stress and are less resilient. The present study also considered how social media addiction may influence resilience and maladaptive coping. Two-hundred and ten participants were recruited to participate in the study and responded to questions assessing the aforementioned concepts. As predicted, results confirmed that greater resilience was associated with problem-focused and emotion-focused coping strategies compared to avoidant coping strategies. Furthermore, those who reported higher levels of depression were less resilient and engaged in more avoidant coping strategies, while those who employed more problem-focused coping strategies reported less depression. Results also indicated that those who were addicted to social media were more depressed. With regard to coping strategies and social media addiction, those who used mental disengagement and behavioral disengagement as coping strategies reported more problematic social media use. Possible explanations for the results of this study, including limitations and recommendations for the future, and clinical implications of the results are discussed.

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The Relationship Between Resilience, Coping, and Social Media

Research has attempted to differentiate between those who are able to avoid the consequences of adversity and those who remain challenged by circumstance. Most people will endure at least one traumatic experience at some point in their life (Ozer, Best, Lipsey, & Weiss, 2008). Abusive relationships, war, terrorism, and the death of a loved one are a few examples of challenges one may face. Curiously, people respond and cope differently to these events. For instance, experiencing stressors or hassles in life determines the likelihood one is to experience psychological symptoms as a result (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982). On the contrary, some individuals who experience traumatic events continue to lead emotionally positive lives in spite of adversity (Bonnano, 2008). Several theorists think that resilient people are rare and perhaps have pathological or dysfunctional forms of absent grief; however, resilience is a common, prevalent phenomenon that occurs from ordinary human adaptive processes (Bonnano, 2004; Masten, 2001). Similarly, Bernard (1991) and Taormina (2015) concluded that everyone has the power to be resilient and to bounce back from adversity.

Resilience has been described as an interactive phenomenon in which some individuals are able to do well in spite of having experienced serious difficulties (Rutter, 2013). Decades of research on the psychology behind resilience has disagreed on how to define this construct, however. Many theories have emerged throughout the years with a common theme: most researchers agree that resilience is a dynamic process that changes over time. Most researchers also acknowledge that within the dynamic process of resilience, the interaction of a wide range of factors determine one's resilience (Fletcher & Sarkar, 2013). Connor and Davidson (2003), the developers behind the

Connor-Davidson Resilience Scale (CD-RISC), for example, defined resilience as "the personal qualities that enable one to thrive in the face of adversity" (p. 76). Luthar, Ciccheti, and Becker (2000) described resilience as a dynamic process in which one displays positive adaptation regardless of experiences of significant adversity or trauma. Bonanno (2004) related resilience to loss and trauma as "the ability of adults in otherwise normal circumstances who are exposed to an isolated and potentially highly disruptive event ... to maintain relatively stable, healthy levels of psychological and physical functioning" (p. 102). He argued that resilience is not the absence of psychopathology but the ability to maintain a stable balance. For example, a resilient individual may experience restless sleep in response to a traumatic event yet exhibit a steady trajectory of healthy functioning over time in which they have the capacity to live a productive life and experience positive emotions (Bonanno, Papa, & O'Neill, 2001). In sum, much of the literature suggests resilience occurs after a traumatizing event wherein one faces some form of adversity or trauma and is the process of coping or cultivating a healthy level of functioning after the event (Mancini & Bonnano, 2009; Masten, 2001).

According to Trompetter, de Kleine, and Bohlmeijer (2016) exactly how and why one is able to be resilient is unknown. Bernard (1991) concluded that when one has certain protective factors, such as family characteristics, individual personality attributes or dispositions, and environmental supports in place, they have the optimal environment for resiliency to develop. Masten (2001) posited that threats to the development of adaptive processes such as brain development, cognition, and emotion and behavior regulation, for example, may impact one's resilience. Unlike others who claim to know which variables equate to resilience, Hoge, Austin, and Pollack (2007) concluded that

there is not a definitive set of protective factors for resilience - confirming that it is as difficult to define resilience as it is to determine which risk factors contribute to resilience. In fact, Luthar et al., (2000) posed that some individuals, even in highly stressful circumstances, believe they are relatively well off. In other words, what constitutes resilience may be unique to the individual.

Focus on Adult Personal Resilience

Taormina (2015) makes a distinction in the definition of personal resilience as "the ability of a person to endure and recover from difficulties," (p. 36). The components of Taormina's (2015) theory are all internal factors rather than external. For instance, receiving social support is important in recovering from adversity, but it is external to the person and therefore does not contribute to personal resilience. He demonstrated this idea with a medical example. If one is diagnosed with a coronary disease – an internal heart condition - the medications a doctor prescribes to alleviate chest pain – an external drug - would not be included in the definition of heart disease. To draw a parallel to this example, in past attempts to study and define resilience, although it is helpful to one recovering from difficulties, social support is an external factor that does not contribute to *personal* resilience. Dumont and Provost (1999), for example, suggested that resilience stems from social support given to children. Noting this weakness from past studies, Taormina (2015) aimed to focus on personal resilience as the internal influences and characteristics within a person.

Another weakness in resilience research is the emphasis of resilience in children (Bernard, 1991; Masten, 2001; Ungar, 2005). Luthar et al., (2000) assert that resilience should be studied throughout different points in human development because one can

have resilience at any point in their life; therefore, it is necessary to research and understand resilience in adults.

Given that definitions generally vary, it is first necessary to operationally define this construct. Adult personal resilience (APR), according to Taormina (2015), is "a person's determination and ability to endure, adapt, and recover from adversity" (p. 36). Determination, the willpower a person possesses, and the decision to persevere and/or succeed, reflects the cognitive aspect of personal resilience the author expressed had not been accounted for by previous research. Endurance could reflect both cognitive and physical dimensions of resilience and is the "personal strength and fortitude that one possesses to withstand unpleasant or difficult situations without giving up" (Taormina, 2015, p. 37). Adaptability is one's ability to adjust and cope with adverse environments and to be responsive to changing conditions. Finally, recuperability is one's ability to recover both in a cognitive and physical sense from various setbacks or difficulties to return to and reestablish one's condition. Bearing these constructs in mind, the Determination, Endurance, Adaptability, and Recuperability (DEAR) measure of adult personal resilience consisting of the four aforementioned dimensions was developed.

Several researchers in the past have attempted to create scales that assessed resilience, but admittedly, they had some drawbacks. For example, some earlier measures did not assess the four dimensions of adult personal resilience. The CD-RISC 10 only measures a characteristic that differentiates those who are functioning well after facing adversity compared to those who are not (Campbell-Sills & Stein, 2007). Other issues, as cited by Taormina (2015) include using other measures as a substitute for resilience. For instance, Bonnano et al., (2005) examined how well individuals who experienced the

attack on the World Trade Center on September 11, 2011 adjusted. The study was actually a measure post-traumatic stress disorder rather than resilience.

In addition to substituting resilience for other concepts, another limitation was that researchers had taken a one-dimensional approach. According to Ungar (2005), however, resilience is not an individual trait. He proposed it should be studied as a multidimensional concept. Although he focused on children, Ungar (2005) asserted that resilience is dependent on the "promotion of healthy human development resulting from child, peer, family, and social factors in each child's social ecology" (p. 33).

Wei and Taormina (2014) attempted to create a valid and reliable measure of APR assessing the four dimensions. This measure consisted of 40 items based on the operational definitions of the dimensions and the literature. The researchers used the "known-groups" method of concurrent validity to compare the two groups of participants known to be high and low in resilience. The group of 35 army hospital workers often exposed to illness and disease but remained strong was considered the high resilience group, whereas 35 long-term unemployed people who had abandoned hope on finding employment to improve their lives were the low resilience group. Results indicated that the high resilience group means were above the low resilience group means on all four dimensions. For example, the high resilience group mean yielded 4.36 (SD = .032) on the determination scale whereas the low resilience group mean yielded 3.07 (SD = 0.23). The high resilience group for recuperability was 4.46 (SD = 0.24) and the low resilience group was 3.05 (SD = 0.24). Wei and Taormina (2014) reported that independent sample t-tests showed all differences were highly significant (all p values < 0.001). On a different sample, the alpha levels measuring internal consistency for each of the subscales ranged

from .74 - .78.

Feedback from participants stating that the original measure was too long prompted Taormina (2015) to reduce the item pool while ensuring this new scale would be an accurate measure of APR. As with the previous study, participants were divided based on their levels of resilience - one group who possessed resilient traits as indicated by succeeding in a stressful job, and one group who did not possess resilient traits as indicated by individuals who gave up searching for a career. Each group was comprised of 30 subjects – 15 males and 15 females. The group considered high in resilience was medical workers who had been exposed to a variety of diseases and illnesses but were still successful in their line of work. The low resilience group were subjects from rural villages who never attempted to establish a career, relied on government welfare programs, and were not seeking employment. The results of t-tests indicated that subjects deemed successful in their career scored higher than those who were unemployed on all four measures of resilience with all values significant at the $p < 0.001$ level. As was the case with the initial study, the means of those in the high resilience groups were higher than the means of those in the low resilience groups. For example, the high resilience group's mean for determination yielded 4.31 (SD = 0.37), while the low resilience group's mean yielded 2.77 (SD = 0.34).

Coping

According to Carver, Scheier, and Weintraub (1989), research on coping originated from Lazarus' (1966) conceptual analysis of stress and coping and established the theoretical foundation for future researchers to investigate the ways people cope. The most prominent and widely accepted definition of coping is defined by Lazarus and

Folkman (1984) as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p.141). In other words, coping incorporates both cognitive and behavioral efforts in attempt to manage stress (Lazarus, 1993).

Lazarus and Folkman (1987) discussed their Transactional Model of Stress and Coping in terms of how major life events and daily stressors influence emotions based on cognitive appraisal and coping with stress. The theory proposes that there is an ongoing relationship between a person and their environment that is reciprocal in nature in that each affects and is affected by the other (Folkman & Lazarus, 1980). They suggested there are two types of appraisal: primary and secondary. Primary appraisal refers to the significance of an event and can take one of three forms: harm-loss (damage one has already experienced), threat (anticipated harm), and challenge (the potential for mastery or gain). Secondary appraisal is a judgment of the benefits and consequences of the actions taken to improve the person-environment relationship and the coping strategies one can use (Folkman & Lazarus, 1980; Lazarus & Folkman, 1987).

Coping was divided into two major functions: problem-focused coping and emotion-focused coping (Lazarus, 1993). Problem-focused coping directly deals with the source of stress, while emotion-focused coping is the regulation of emotions that are the result of stress (Folkman & Lazarus, 1980). The "Ways of Coping" checklist by Folkman and Lazarus (1980) was developed to identify strategies people use to cope, like defensive coping (i.e., avoidance, isolation), problem-solving, information-seeking, direct action, and magical thinking.

The Ways of Coping Checklist followed previous research and divided coping into the two categories mentioned: problem-focused and emotion-focused. The items in the problem-focused coping category describe cognitive problem-solving efforts as well as behavioral strategies to manage or alter the root of the problem (i.e.: "Stood your ground and fought for what you wanted"). The items in the emotion-focused category describe cognitive and behavioral efforts aimed at lowering or managing distressing emotions (i.e., "Accepted sympathy and understanding from someone") (Folkman & Lazarus, 1980, p. 224-225).

Following the development of the original Ways of Coping Checklist, research broadened to include coping styles beyond problem-focused and emotion-focused and added scales like wishful thinking and help-seeking/avoidance (Coyne, Aldwin, & Lazarus, 1981). The scale was also modified to include more items in some studies (Folkman & Lazarus, 1985; Scheier, Weintraub, & Carver, 1986).

After studying existing measures, Carver et al., (1989) created a new measure of coping based on a model of behavioral self-regulation and Lazarus' model of stress, as well as research findings from other coping measures known as the COPE Inventory. Their proposed measure initially consisted of 13 subscales based on functional and potentially less functional coping strategies and included both problem-focused and emotion-focused coping in addition to coping tendencies they considered dysfunctional or avoidant (i.e., focusing on and venting of emotions, behavioral disengagement, and mental disengagement). Carver et al., (1989) later expanded their research to include humor and substance use.

Coping Strategies

Lazarus and Folkman (1984) argued that coping strategies are neither good nor bad and that a certain strategy, while effective in one circumstance may be ineffective in another. Additionally, coping is a process that changes over time and in relation to the context of a situation. Whether or not a coping strategy is adaptive or not is dependent on the individual, the situation, length of time, and the outcome modality in question – i.e., morale, social functioning, or somatic health. A coping strategy is adaptive if it improves one's ability to adjust to a situation (Lazarus, 1993). Research indicated that in stressful situations, people use both problem-focused and emotion-focused coping (Folkman & Lazarus, 1980; Lazarus & Folkman, 1987). In general, however, problem-focused coping strategies are reported to have better adjustment outcomes (Compas, Connor-Smith, Saltzman, Harding-Thomsen, & Wadsworth, 2001).

Avoidant coping. One has the ability to cope if they can regulate their emotions, cognition, behavior, physiological responses, and the environment around them in response to stressful events (Compas et al., 2001). However, not everyone possesses the resources to adaptively cope. Avoidant coping strategies draw attention away from the source of stress or psychological and/or somatic responses to the stressor (Suls & Fletcher, 1985). Denial, distraction, repression, and suppression are strategies that encompass avoidant coping. It is important to note that avoidance is a form of adapting to stressful situations; nevertheless, it is a positive adaptive strategy only in the short term (Suls & Fletcher, 1985). Coping responses such as self-blame, escapism, wishful thinking, self-distraction or mental disengagement, obvious attempts to deny the

stressor's reality or giving up on goals are various coping responses that have been studied and have shown dysfunctional outcomes (Carver & Scheier, 1994).

Aldwin and Revenson (1987) concluded that those with poorer mental health not only have an increased likelihood to experience more stressful life events; they may use maladaptive coping strategies in response. Evidence also suggests that the higher one's initial level of emotional distress and severity of problems, the more probable it is that one will use maladaptive coping, which in turn increases emotional distress and potential problems in the future.

Although Lazarus and Folkman (1984) emphasized that particular coping strategies were not inherently good or bad, nor should they be labeled as such, evidence perhaps suggests otherwise. Research supporting the association between avoidant coping strategies and distress are plentiful in comparison to evidence on the benefits of avoidant coping (Carver & Scheier, 1994). For example, Chao (2011) concluded that avoidant coping negatively affected well-being and stress. Aldwin and Revenson (1987) demonstrated that escapism was used more frequently by those who had poorer mental health. Moreover, in patients with cancer, the use of avoidant coping strategies was a predictor of cancer progression (Epping-Jordan, Compas, & Howell, 1994). Avoidant coping was linked to more chronic and acute stressors after four years, which was associated with increased depressive symptoms (Holahan, Holahan, Moos, Brennan, & Schutte, 2005). Furthermore, the use of avoidant coping increased depressive symptoms in a study that spanned over 10 years. A study on soldiers found that higher unit cohesion was correlated with reduced avoidant coping strategies after deployment and better mental health later on (McAndrew, Markowitz, Lu, Borders, Rothman, & Quigley, 2017).

Resilience, coping, and mental health. Mental health, as defined by Keyes (2002), is a "syndrome" by which one flourishes through the presence of positive feelings and positive functioning (which equates to having mental health) or one languishes, by which the absence of positive feelings and functioning equate to a lack of mental health (p. 208). Evidence suggests that positive mental health or resilience buffer against the development of psychopathology (Grant, Guille, & Sen 2013; Keyes, Dhingra, & Simoes 2010; Trompetter et al., 2016; Gloria & Steinhardt, 2016). For example, Keyes et al. (2010) concluded that higher levels of positive mental health protect against future mental illness and suggested that promoting and protecting mental health can reduce incidences of mental illness. Likewise, those who are resilient are less depressed, less anxious, and have fewer somatic symptoms (Beutel et al., 2017).

According to Glennie (2010), coping and resilience are related constructs, yet both are distinct from one another. She states that coping requires a skillset and purposeful responses to stress, whereas resilience is the result of successfully applying those skills.

Trompetter et al. (2016) suggested that those who possess high levels of positive mental health have self-compassion skills that nurture resilience against psychopathology. This may function as an adaptive emotion regulation strategy that helps with positive cognitive reappraisal and acceptance of negative emotions. Mayordorrno, Vigeur, Sales, Salntores, and Meléndez (2016) defined resilience as positive and effective coping in reaction to adversity. They used a structural model to determine the effects of coping and resilience on wellbeing and found that problem-focused coping predicted resilience. Furthermore, a study on adverse childhood experiences defined resilient

coping as "a coping pattern based on tenacity, optimism, active problem solving and active extraction of positive growth" (p. 9) and included the Childhood Trauma Questionnaire, the Brief Resilience Coping Scale, and scales that measured distress and somatoform symptoms. They found that those with adverse childhood experiences had lower resilient coping ability and perceived lower social support over their lifespan in a sample from Germany ranging between ages 14-92 (Beutel et al., 2017). They also found that the ability to seek help was compromised in adulthood.

Gloria and Steinhardt (2016) expanded on the broaden-and-build theory of positive emotions to determine if positive emotions enhance one's resilience against stress in postdoctoral research fellows. This theory suggests that positive emotions can widen the range of potential coping mechanisms when experiencing stressful situations. They found that positive emotions increased resilience and vice versa; resilience increased positive emotions. Likewise, resilience, as defined by one's ability to recover from stressful situations, was indirectly impacted through the use of adaptive coping strategies. As stress levels in postdocs increased, high levels of resilience buffered against increased depressive symptoms. Also in line with the broaden-and-build theory of positive emotions, women diagnosed with gynecological cancers who reported higher levels of resilience, as defined as an individual's ability to utilize and develop skills and resources to manage stressors that promote positive adaptation, experienced a higher quality of life (Manne et al., 2015). They concluded that specific coping skills (i.e., positive reinterpretation and growth) promoted better psychological adaptation.

Social Media

We have a vast amount of information at our fingertips due to the advancement of technology that allows us to have personal computers in our pockets. Around the world, our reliance on technology and social networking sites (SNS) has increased over the years; some would even argue that many are addicted, especially to social media (Koc & Gulyaci, 2013). People are so attached to their phones that 79% of smartphone owners have their phone with them for all but two hours per day. According to the International Data Corporation, within 15 minutes of waking up in the morning almost 80% of people check their phones (IDC, 2013). The use of social media has changed work, politics, and the way people connect to and communicate around the world. It has affected how society consumes and shares news and information, how people date, and levels of stress.

For well over a decade, researchers have been interested in measuring the usage of SNS. In 2005, Pew Research Center began tracking social media usage by analyzing surveys and interviews from a general sample of adults as well as adult internet users. At the time, 58% of American adults reportedly used social networking. In 2015, 65% used SNS (Perrin, 2015). Today, 69% of the public uses some type of social media with the most popular being Facebook and Instagram (Greenwood, Perrin, & Duggan, 2016; Pew Research Center, 2017).

Clinical Implications of Social Media

Several studies have considered the clinical implications of using social media with mixed results. For example, Ellison et al., (2007) examined the connection between Facebook use and social capital, or the resources accrued through one's actual or virtual network of relationships. They found a strong correlation between the use of Facebook

and three types of social capital – bridging, bonding, and maintaining relationships, with the strongest correlation between Facebook use and social bridging capital. In other words, Facebook use was reported to help maintain and create connections with people.

Surprisingly, a related study that analyzed SNS usage and social capital found individuals who consume more online content reported lower social bridging and bonding capital and greater feelings of loneliness (Burke et al., 2010). Results from Ellison et al., (2007) also implied that Facebook may have a positive impact on self-esteem and life satisfaction. For instance, high self-esteem, life satisfaction, and intense Facebook use predicted social bonding capital compared to those with low self-esteem who reported lower bridging capital. Participants who reported high life satisfaction and self-esteem showed little difference in bridging social capital compared to those with low life satisfaction who reported lower bridging social capital. In contrast, a study by Vogel, Rose, Roberts, and Eckles, (2014) looked at the effects of social media-based social comparison on self-esteem. The researchers measured the frequency of Facebook use, self-esteem, and the extent to which the participants focused on people who are better and worse off than they are (upward and downward social comparison). It was reported that those who used Facebook frequently had lower self-esteem.

Researchers have also investigated the impact SNS have on mental disorders like depression and anxiety. Baek, Bae, and Jang (2013) surveyed people in South Korea to determine the effect SNS had on loneliness, interpersonal trust, and SNS addiction. A SNS user's awareness of a celebrity's activities which forms the illusion of a face-to-face relationship without the celebrity being aware of the person (parasocial SNS relationships) was related to loneliness and distrust. Reliance on social relationships

(reciprocity between a user and his/her friends), however, was negatively associated with loneliness and trust. Baek et al., (2013) also found that higher dependencies on both social and parasocial relationships were linked to SNS addiction.

Although the availability of information about health may be a benefit to using the internet, researchers disagree with using websites like WebMD and Medline rather than visiting a doctor. In fact, using the Internet for health-related purposes has been linked to increases of depression, perhaps explained by rumination, greater attention to health problems, and unnecessary alarm caused by minor problems (Bessière, Pressman, Kiesler, & Kraut, 2010).

Primack et al., (2017) assessed how the number of social media platforms used affects symptoms of anxiety and depression in young adults 19-32 years of age. They found that those who used 7 to 11 SNS had a higher chance of experiencing symptoms of anxiety and depression compared to those who used 0 to 2 SNS. Moreover, one study found that Facebook users generally had increased anxiety about not checking in enough online compared to nonusers (Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013).

Another study analyzed Twitter users who reported a diagnosis of clinical depression to determine if SNS usage could detect and lead to a diagnosis of major depressive disorder (De Choudhury, Gamon, Counts, & Horvitz, 2013). They measured behavioral attributes relating to social engagement, emotion, language, linguistic styles, ego network, and characterizations of depressive behavior a year prior to the onset of depression. For example, Twitter engagement was measured by number of posts, replies, retweets, links shared, and question-centric posts per day made by a user, as well as one's posting pattern during a 24-hour time period (i.e., whether posts were made during the

day or night). This method determined characteristics such as level of social interaction with other users, how one engages with other users, and the tendency to seek information from the online platform. Among their findings, those with depression had lower social activity, more negative emotion, increased relational and medicinal concerns, high focus on self, and an increased expression of thoughts relating to religion. They argued these characteristics are potentially useful for characterizing the onset of depression in social media users. In fact, De Choudhury et al., (2013) were able to predict the likelihood of depression in individuals with about 70% accuracy.

When considering the connection between social media and depression, examining the coping style(s) used by an individual has produced interesting results. Sriwilai and Charoensukmongkol (2015) analyzed the influence of mindfulness and coping strategies on social media addiction, as well as the consequences of emotional exhaustion. Among their findings, they concluded that those who were addicted to social media used emotion-focused coping strategies more than those who were not addicted. In this study, emotion-focused coping was defined as a maladaptive attempt to redirect attention from the source of stress.

Another area of interest is the impact of social media on resilience and coping. Hou et al., (2017) examined the relationship between resilience, perceived stressed, and problematic SNS use. To measure resilience, the CD-RISC was administered. Participants reported stress levels during the last month using the Perceived Stress Scale (PSS), which asks questions such as, "In the last month, how often have you felt that things were going your way?" (p. 63). To assess problematic SNS use, the participants were given a modified version of the Facebook Intrusion Questionnaire (FIQ), consisting

of statements such as, "I often think about Weibo (a Chinese social networking site) when I am not using it". Results indicated that those who had high levels of perceived stress were more likely to engage in problematic SNS use compared to those with low levels of perceived stress. A possible explanation for this finding is that SNS may be used as an escape from stressors. Furthermore, resilience was negatively associated with problematic SNS use. A possible explanation for this finding is that those who were resilient were more capable of coping with stressful situations and therefore engaged in positive, nonproblematic behaviors.

Measures of Social Media

As noted by Rosen et al., (2013) studies have attempted to measure social media usage, particularly Facebook, by the amount of time spent on the site, number of times logging in, and counting activities and friends to assess addiction among other consequences of social networking (Andreassen, Torsheim, Brunborg, & Palleson, 2012; Burke, Marlo, & Lento, 2010; Frison & Eggermont, 2016; Junco, 2012; Kittinger, Correia, & Irons, 2012; Koc & Gulyaci, 2013; Sriwilai & Charoensukmongkol, 2015).

In 2007, the Facebook Intensity Scale was created to measure Facebook usage and included two self-report assessments of Facebook behavior. The scale analyzed engagement by the number of Facebook friends and the typical amount of time spent daily on the website (Ellison, Steinfield, & Lampe, 2007). A series of six questions were also created to assess emotional connectedness to Facebook and the social media network's integration into daily activities. Cronbach's alpha level for the scale yielded .83. Consequently, several studies over the years have used the scale to evaluate Facebook usage (Blachnio, Przepiorka, & Pantic, 2016; Clayton, Osborne, Miller, &

Oberle, 2013; Glynn, Huge, & Hoffman, 2012; Lampe, Wohn, Vitak, Ellison, & Wash, 2011; Przepiorka, Blachnio, & Díaz-Morales, 2016; Srivastav & Gupta, 2017; Steinfield, Ellison, Lampe, 2008).

The Addictive Tendencies Scale was developed based on previous research by Walsh, White, and Young (2007) and Ehrenberg, Juckes, White, and Walsh, (2008) and assesses level of SNS use, as well as addictive tendencies towards the use of these sites (Wilson, Fornasier, & White, 2010). The scale consists of three items measuring one's level of salience to - how often the activity dominates thoughts or behaviors, loss of control - involvement in the activity more than intended, and withdrawal from Facebook use – the negative physiological or psychological response as a result of not engaging in the activity. Cronbach's alpha in the study by Andreassen et al., (2012) was .72.

Andreassen et al., (2012) created a measure known as the Bergen Facebook Addiction Scale (BFAS) to reflect six core features of addiction that were not previously accounted for by Wilson et al., (2010). According to Griffiths (2005), the six core features of addiction are: salience, mood modification (effect of the activity on mood), tolerance (increasing amount of activity required to achieve former effects), withdrawal, conflict (problems between the person addicted and personal relationships, work/education, and other social or recreational activities), and relapse (reverting to earlier patterns of the activity after abstinence or control). The initial measure consisted of 18 items and was later reduced to 6. Items included questions like, "Spent a lot of time thinking about Facebook or planned use of Facebook?" and "Felt an urge to use Facebook more and more?" based on a 5-point Likert scale, with higher scores indicating potential Facebook addiction. One of the limitations of the scale, however, was that it did

not examine a specific cutoff for problems with Facebook addiction and instead suggested both liberal and conservative approaches to cutoff scores.

The BFAS has been criticized for its focus on Facebook rather than social networking in general (Griffiths, 2012). In response, the scale was later renamed the Bergen Social Media Addiction Scale (BSMAS) and modified to include "social media" defined as "Facebook, Twitter, Instagram, and the like" rather than just "Facebook" in the items (Andreassen et al., 2016; Andreassen et al., 2017). Internal consistency was acceptable in both studies (Cronbach's alpha = .88). Across studies, the BFAS/BSMAS has been translated into several languages and has shown acceptable psychometric properties in the assessment of problematic social media use (Andreassen et al., 2016; Andreassen, Pallesen, & Griffiths, 2017; Bányai et al., 2017; Monacis, de Palo, Griffiths, & Sinatra, 2017; Phanasathit, Manwong, Hanpreathet, Khumsri, Yingyeun, 2015).

Hypotheses

The present study explored which particular coping strategies correlate with adult personal resilience. It was hypothesized that adaptive coping strategies would be closely associated with the dimensions of resilience. Specifically, those who employed more problem-focused coping strategies and emotion-focused coping strategies compared to avoidant strategies would demonstrate greater resilience. Avoidant coping was predicted to negatively correlate with resilience.

In addition to exploring the relationship between coping and resilience, the literature indicates that resilience and coping skills buffer against psychopathology. For this reason, it was predicted that those who were more resilient would report lower levels

of depression. Furthermore, it was expected that those who used more adaptive coping skills would also report lower levels of depression.

Although social media is widely used, it is unclear exactly how it relates to resilience. In line with the aforementioned studies by Sriwilai and Charoensukmongkol (2015) and Hou et al., (2017), it was speculated that those who use mental disengagement (avoidant coping) as indicated by their social media addiction scores would have overall lower resilience scores. Likewise, it was expected that those who report higher levels of social media addiction would be more depressed.

Methods

Participants

Students enrolled in undergraduate psychology courses at Eastern Illinois University during spring 2018 were recruited for the study through an online participant pool. Participants from EIU received course credit for participating. To obtain more participants and access a broader population, participants were recruited through Amazon Mechanical Turk (MTurk). Workers were compensated 20 cents for their participation. All participants were required to be from United States to prevent cross-cultural or language barriers.

In sum, 223 participants took part in the study. Thirty-seven were recruited from SONA; 186 were from MTurk. Of all completed surveys, nine participants were excluded due to unusually short response times that were less than four minutes. Two were excluded due to inappropriate responses (i.e., answering every question with the same response). Two were removed due to incomplete data. Of all participants, 210 completed the survey appropriately.

The sample consisted of 65.2% females, 33.8% males, .5% transgender, and .5% preferred not to disclose their gender. Participants were between the ages of 18 – 30 (47.1%), 31 – 42 (30.5%), 43 – 54 (13.8%), and 55 years or older (8.6%). The sample was comprised of (72.4%) white, non-Hispanic participants, 8.6% Asian American, 8.6% black/African American, 4.8% Hispanic, 3.3% multi-ethnic participants, 1.4% Native American, and 1% of participants indicated they were of other ethnicities.

Amazon Mechanical Turk

MTurk is a diverse online participant pool that employs workers 18 years or older to complete human intelligence tasks (HITs) created by researchers for monetary compensation. The workers can browse through and choose HITs according to compensation amount, time to complete study, keywords, and date posted. Workers can be paid as low as two cents for their participation (Johnson & Borden, 2012).

The use of MTurk as a reliable and valid participant pool has been called into question as this method of recruiting has gained popularity. Johnson and Borden (2012) collected data from a laboratory, as well as from MTurk. The research protocols were identical for all participants to determine differences between the samples. They reported MTurk participants were similar to traditional samples and therefore recommended the use of this participant pool due to its reliability, efficiency of data collection, low cost, and greater sample diversity. These results were similar to the findings of Buhrmester, Kwang, and Gosling (2011). They also reported greater diversity in the MTurk sample in addition to efficient, inexpensive data collection. Interestingly, they reported that compensation amount did not affect the quality of the data. The data also met or exceeded

psychometric standards. These findings have been shown in other studies as well (Paolacci, Chandler, & Ipeirotis, 2010; Rand, 2012).

Measures

Demographics form. A demographics form was used to assess age range, ethnic background, and gender.

Bergen Social Media Addiction Scale (BSMAS). The BSMAS is an adaptation of the Bergen Facebook Addiction Scale (Andreassen et al., 2012) and reflects six core features of addiction: salience, mood, modification, tolerance, withdrawal, conflict, and relapse (Griffiths, 2005). The scale consists of 6 items and yielded acceptable psychometric properties with a root mean square error of approximation (RMSEA) of .046 and comparative fit index (CFI) of .99 in the original study. Additionally, the coefficient alpha was .83, and the test-retest reliability coefficient was .82. Items included questions like, "Spent a lot of time thinking about Facebook or planned use of Facebook?" and "Felt an urge to use Facebook more and more?" The modified scale replaces the word "Facebook" with "social media" and includes "Facebook, Twitter, Instagram, and the like" in the instructions (Andreassen et al., 2016; Andreassen et al., 2017). Internal consistency was acceptable in the more recent studies as well (Cronbach's alpha = .88). The scale is based on a 5-point Likert scale ranging from "Very Rarely" to "Very often". High scores on the measure indicate stronger addictions to social media.

DEAR Measure of Personal Resilience. The DEAR (Taormina, 2015) is a multifaceted scale intended to measure the four dimensions of personal resilience. Respondents will be asked to think about how well an item describes them. Their responses will be recorded on a 5-point Likert scale ranging from 1 "Strongly disagree"

to 5 "Strongly agree." The DEAR has four subscales representative of the dimensions of personal resilience. Each subscale consists of 5 items, and the entire scale consists of 20 items. Taormina (2015) tested the reliabilities of the four subscales by the Cronbach alpha measure and yielded results ranging from .76 to .83.

The four subscales are: determination ("Once I set a goal, I am determined to achieve it"), endurance ("I am able to live through difficult times"), adaptability ("I have the ability to adapt to difficult situations"), and recuperability ("I recuperate even from things that hit me hard").

All the subscales were scored individually; a higher score represents greater personal resilience.

COPE Scale. The COPE (Carver et al., 1989) is designed to measure the manner in which people deal with stress. The COPE consists of 15 subscales, each representative of various coping strategies used to deal with stress. Each subscale has 4 items, and the entire scale consists of 60 items. According to Carver et al. (1989), Cronbach's alpha reliability coefficients for each scale were shown to be higher than .6, except for mental disengagement with .45. Test-retest reliabilities ranged from .46 to .86, indicating relative stability of the COPE scale. Humor and alcohol-drug disengagement were not included in test-retest reliabilities.

Each subscale is broken up between the aforementioned scales. Problem-focused coping is composed of active coping, planning, suppression of activities, restraint coping, and seeking social support for instrumental reasons. Emotion-focused coping is comprised of seeking social support for emotional reasons, positive reinterpretation and growth, acceptance, denial, turning to religion, and humor. Finally, avoidant coping

includes focusing on and venting of emotions, behavioral disengagement, mental disengagement, and substance use (Carver et al., 1989; Litman, 2006).

Responses from participants were recorded on a 4-point Likert scale ranging from 1 "I usually don't do this at all" to 4 "I usually do this a lot". Respondents rated how often they engage in each coping strategy. A high score is indicative that a participant often uses that coping strategy.

Center for Epidemiologic Studies Depression Scale (CES-D). The CES-D consists of 20 items designed to assess current levels of depressive symptomology with an emphasis on depressed mood (Radloff, 1977). Respondents were asked about the depressive symptoms they have experienced over the course of the past week on a 4-point Likert scale that ranges from 0 "Rarely or none of the time (less than 1 day)" to 3 "Most or all of the time (5-7 days)". Scores range from 0 to 60, with higher scores indicating more symptoms of depression. Questions include "I felt depressed", "I had crying spells", and "I felt that people dislike me" (Radloff, 1977). The measure had high internal consistency in the general population (.85) and in the psychiatric patient population (.90). Test-retest reliabilities fell within an acceptable range between .45 to .70 (Radloff, 1977).

Procedure

A description of the study was posted on Eastern Illinois University's online participant pool, SONA, as well as on Amazon Mechanical Turk. Participants accessed the survey through the online data collection system, Qualtrics. After reading and agreeing to the informed consent, participants completed a demographic questionnaire regarding age, gender, and ethnicity. Participants then completed the survey and were

debriefed and thanked for their time. Finally, participants received course credit through SONA or monetary compensation through MTurk for their participation.

Results

Descriptive Statistics

The DEAR measure of resilience scores ranged from 5 to 30. The overall resilience score ranged from 20 to 100. The means and standard deviations for each dimension, as well as the overall score of resilience were as follows: determination (M = 20.20, SD = 3.41), endurance (M = 20.60, SD = 3.31), adaptability (M = 19.78, SD = 3.44), recuperability (M = 19.62, SD = 3.51), and overall resilience (M = 80.19, SD = 11.65).

The COPE was divided into the three major coping strategies: emotion-focused coping, problem-focused coping, and avoidant coping. Emotion-focused coping (M = 58.39, SD = 10.17) had a higher mean compared to problem-focused coping (M = 54.69, SD = 9.53) and avoidant coping (M = 28.39, SD = 8.03). Emotion-focused coping scores ranged from 20 to 80. Problem-focused coping had a range from 24 to 96. Avoidant coping ranged from 16 to 64. The Bergen Social Media Addiction Scale (BSMAS) had a mean of 15.10 and a standard deviation of 5.28 with a score range of 6 to 30. Depression scores ranged from 20 to 60 on the CESD-D. The mean for depression was 16.35 with a standard deviation of 11.70. With all measures, higher scores indicate greater use of the variable.

Resilience and Coping

Resilience scores (DEAR) were computed using the four dimensions of adult personal resilience – determination, endurance, adaptability, and recuperability

(Taormina, 2015). The COPE is comprised of 15 subscales that were grouped into problem-focused coping, emotion-focused coping, and avoidant coping (Carver et al., 1989; Litman, 2006).

A total score of the DEAR was computed and showed a positive correlation between problem-focused coping, $r(208) = .44, p < .001$, as well as a positive correlation with emotion-focused coping, $r = .21, p < .001$. The total DEAR had a negative correlation with avoidant coping, $r = -.46, p < .001$.

A Pearson product-moment correlation coefficient was computed to assess the relationship between the individual scales of resilience and coping style (see Table 1). A positive correlation was found between determination and problem-focused coping, $r(208) = .46$, $p < .001$. Emotion-focused coping also had a positive correlation with determination, $r(208) = .20, p = .003$. Avoidant coping, however, had a negative relationship with determination, $r(208) = -.47, p < .001$.

Additional relationships between the dimensions of resilience and coping strategies were found. Endurance had a positive correlation with problem-focused coping, $r(208) = .33, p < .001$ and emotion-focused coping, $r(208) = .14, p < .05$. Avoidant coping was found to have a negative correlation with endurance, $r = -.36, p < .001$. Adaptability was positively correlated with problem-focused coping, $r(208) = .31$, $p < .001$ and negatively correlated with avoidant coping, $r(208) = -.39, p < .01$. Recuperability had positive correlations with problem-focused coping, $r(208) = .38$, $p < .001$ and emotion-focused coping $r(208) = .27, p < .001$ but was negatively correlated with avoidant coping, $r(208) = -.33, p < .001$.

Table 1
Correlations between Resilience and Coping

Variables	D	E	A	R	DEAR	PF	EF	AV
D	--							
E	.56**	--						
A	.50**	.76**	--					
R	.50**	.79**	.72**	--				
DEAR	.75**	.91**	.87**	.88**	--			
PF	.46**	.33**	.31**	.38**	.45**	--		
EF	.20**	.14*	.12	.27**	.21**	.69**	--	
AV	-.47**	-.36**	-.39**	-.33**	-.46**	-.06	.14*	--

* $p < .05$, ** $p < .01$
Note: D = Determination, E = Endurance, A = Adaptability, R = Recuperability, DEAR = Combined DEAR Totals, PF = Problem-Focused, EF = Emotion-Focused, AV = Avoidant

Resilience and Depression

Previous research indicated a connection between resilience and depression. To assess the nature of this relationship, correlations were run between the dimensions of resilience and a measure of depression. As expected, there was a negative relationship between depression and total DEAR scores, $r(208) = -.37, p < .001$. When broken down into the resilience subscales, depression was found to have negative correlations with determination, $r(208) = -.37, p < .001$, endurance, $r(208) = -.28, p < .001$, adaptability, $r(208) = -.31, p < .001$, and recuperability, $r(208) = -.31, p < .001$. See Table 2.

Table 2
Correlations between Resilience, Social Media Addiction, and Depression

Variable	D	E	A	R	DEAR	DEP	SM
D	--						
E	.56**	--					
A	.50**	.76**	--				
R	.50**	.79**	.72**	--			
DEAR	.75**	.91**	.87**	.88**	--		
DEP	-.37**	-.28**	-.31**	-.31**	-.37**	--	
SM	-.18**	-.04	-.45	-.02	-.08	.38**	--

* $p < .05$, ** $p < .01$
Note: D = Determination, E = Endurance, A = Adaptability, R = Recuperability, DEAR = Combined DEAR Totals, DEP = Depression, SM = Social Media

Coping and Depression

In addition to the association between resilience and depression, past research indicated a relationship between coping strategies and psychological adaptation (Manne et al., 2015). In the present study, there was a negative relationship between problem-focused coping and depression, $r(208) = -.18, p = .011$ and a positive relationship between avoidant coping and depression, $r(208) = .56, p < .001$. See Table 3.

Table 3
Correlations between Coping, Social Media Addiction, and Depression

Variable	PF	EF	AV	DEP	SM
PF	--				
EF	.69**	--			
AV	-.07	.14*	--		
DEP	-.18*	-.07	.56**	--	
SM	.08	.20**	.38**	.38**	--

* $p < .05$, ** $p < .01$
Note: PF = Problem-Focused, EF = Emotion-Focused, AV = Avoidant , DEP = Depression, SM = Social Media

Social Media Addiction, Resilience, Coping, and Depression

Research has demonstrated that people who are addicted to social media have an increased risk of depression, engage in more emotion-focused or avoidant coping strategies, and are less resilient. This study found a positive relationship between depression and social media addiction, $r(208) = .38$, $p < .001$. Statistical analyses also indicated positive correlations between problematic social media use and emotion-focused coping, $r(208) = .20, p = .003$ and avoidant coping, $r(208) = .39, p < .001$. Social media addiction was not significantly correlated with resilience overall, but problematic social media use did have a negative relationship with determination, $r(208) = -.18$ $p < .001$. Refer to Tables 2 and 3.

A multiple regression analysis was also conducted to examine whether coping strategies, resilience, or depression could significantly predict social media addiction. The results of the regression indicated that the model explained 24% of the variance and that the model was a significant predictor of problematic social media use, $F(8, 201) = 7.96, p < .001$. It was found that depression significantly predicted social media addiction ($\beta = .30. p < .001$), accounting for 9% of the variance in depression. Higher levels of depression were significantly associated with higher levels of social media addiction. Avoidant coping was also a significant predictor of problematic social media use ($\beta = .21, p = .02$). Emotion-focused coping was a marginally significant predictor of problematic social media use ($\beta = .17, p = .06$). A summary of the results of the multiple regression analysis is found in Table 5.

Table 5
Summary of Multiple Regression Analysis for Variables Predicting Social Media Addiction
(N = 210)

Predictor	*B*	*SE B*	*β*	*t*	*p*
Emotion-Focused Coping	.09	.05	.17	1.90	.56*
Problem-Focused Coping	.01	.05	.02	.17	.90
Avoidant Coping	.14	.06	.21	2.44	.02*
Determination	-.16	.13	-.10	-1.17	.25
Endurance	.56	.19	.04	.31	.76
Adaptability	.13	.15	.08	.82	.42
Recuperability	.08	.16	.06	.51	.61
Depression	.14	.03	.30	3.92	.00*

* $p < .05$
Note. $R^2 = .24$; adjusted $R^2 = .21$

Avoidant Coping and Social Media Addiction

Given the strong correlation between problematic social media use and avoidant coping, the present study examined which particular avoidant coping strategies were related to greater social media addiction. Avoidant coping consists of four subscales from the COPE: focus on and venting of emotions, behavioral disengagement, mental disengagement, and substance use. Results found positive relationships between social media addiction and all avoidant coping strategies: focus on and venting of emotions, $r(208) = .29, p < .001$, behavioral disengagement, $r(208) = .30, p = < .001$, mental disengagement, $r(208) = .30, p < .001$, and substance use, $r(208) = .22, p = .002$. Refer to Table 4.

Table 4
Correlations between Avoidant Coping and Social Media

Variable	SM	FV	BD	MD	SUB
SM	-				
FV	.29**	--			
BD	.30**	.26**	--		
MD	.30**	.26**	1.00**	--	
SUB	.22**	.10	.38**	.38**	--

* $p < .05$, ** $p < .01$
Note: SM = Social Media, FV = Focus on and Venting of Emotions, BD = Behavioral Disengagement, MD = Mental Disengagement, SUB = Substance Use

Discussion

Resilience and Coping

This study attempted to explore what contributes to resilience by examining correlations between measures of resilience, coping, problematic social media usage, and depression. Compas et al., (2001) stated that resilience occurs as a result of action (i.e., effective coping) in response to stressful experiences. Lazarus and Folkman (1984) concluded that coping strategies were neither good nor bad, but rather depend on a

variety of factors including the person and the situation. Compas et al., (2001) asserted otherwise. They reported those who used avoidant coping and emotion-focused coping strategies adjusted more poorly in response to stressful situations in comparison to those who employed problem-focused coping strategies.

As hypothesized in the present study, those who reported higher levels of resilience engaged in more problem-focused and emotion-focused coping strategies compared to those with lower resilience scores who used avoidant coping strategies in response to stressful situations. The results of the study indicated a positive correlation between all four dimensions of resilience and problem-focused coping, which suggested the more resilient one was, the more they engaged in problem-focused coping strategies.

Emotion-focused coping had a significant positive correlation with only three of the dimensions - determination, endurance, and recuperability. Although these relationships were weaker in comparison to problem-focused coping, results indicated that those who were more resilient also engaged in problem-focused coping but to a lesser extent. Finally, avoidant coping was negatively correlated with all four dimensions of adult personal resilience, which indicated that the less resilient one was, the more they engaged in avoidant coping strategies.

Resilience, Coping and Depression

As previously discussed, past research concluded that coping and resilience are safeguards against depression (Beutel et al., 2017; Grant, Guille, & Sen 2013; Keyes, Dhingra, & Simoes 2010; Trompetter et al., 2016; Gloria & Steinhardt, 2016.) The present study confirmed the hypothesis that those who were more resilient were less depressed. Furthermore, those who reported higher levels of depression engaged in more

avoidant coping strategies. Results also indicated a negative relationship between depression and problem-focused coping, which suggested that those with higher levels of depression used problem-focused coping strategies less than they used avoidant coping.

Social Media Addiction, Resilience, Coping, and Depression

Those who reported greater addiction to social media had higher levels of depression and employed more emotion-focused and avoidant coping strategies in response to stress. The multiple regression further indicated that depression was the greatest predictor of problematic social media use followed by avoidant and emotion-focused coping. The findings in the present study were consistent with the results from Sriwilai and Charoensukmongkol (2015), as they concluded that emotion-focused coping strategies were used more by people who were addicted to social media. Their study varied from the present study in that they included avoidant coping strategies in what they defined as emotion-focused coping, while this study made a distinction between the two. Social media addiction was not significantly correlated with resilience overall, although greater social media addiction was related to lower levels of determination.

Avoidant Coping and Social Media Addiction

McNicol and Thorsteinsson (2017) defined Internet addiction as excessive preoccupation, urges, or behaviors to use the Internet that causes distress or impairment in functioning. They concluded that Internet addiction, which included the use of social media, may be related to avoidant coping strategies. The present study found that greater social media addiction was associated with the use of all four coping subscales that consist of avoidant coping strategies. Behavioral and mental disengagement, as well as

focus on and venting emotions were more closely related to social media addiction in comparison to substance use which varied slightly from the other scores.

Conclusions

The findings from the present study provide some insight into what contributes to resilience and highlights the importance of using coping strategies that focus on dealing with sources of stress directly (problem-focused coping), as this equates to greater resilience. Past research has indicated links between coping, resilience, and mental health. This study confirmed this relationship and found that adaptive coping strategies may lead to greater resilience, which in turn may lead to less depression.

Determining which coping strategies are related to resilience contributes to the greater understanding of the differences between those who thrive in the face of adversity and those who do not. Understanding the coping strategies used by people who are resilient versus those who are not is clinically relevant as it shows where a client may need to make changes in order to have better psychological adjustment in response to distress. Future research should also consider methods to change one's level of resilience and adjust coping mechanisms effectively.

Although the results of the study did not indicate a significant relationship between all of the dimensions of resilience and social media addiction, there were significant correlations between all four avoidant coping strategies and social media addiction. Mental disengagement occurs by engaging in activities like daydreaming, sleeping, or any other attempt by which someone uses distractions to escape from a stressor (Carver et al., 1989). In the case of the present study, mental disengagement includes the use of social media. With the prevalence of social media usage, it is

unsurprising that participants who reported greater social media addiction mentally disengage in response to stressors. Hou et al., (2017) also speculated that problematic use of social media was associated with escaping from stress. Although it is unclear whether or not social media use causes avoidant coping or avoidant coping causes the abuse of social media, it is clear that social media use is a method of avoidant coping.

Behavioral disengagement, often associated with helplessness, involves giving up on dealing with the source of the problem. Social media allows people to showcase the highlights of their lives and enables other users to judge the posts they see based on comparing and contrasting their own lives. We can speculate that those who behaviorally disengage are more likely to compare themselves to other users online and feel helpless in making improvements in their own, which may lead to more depressive symptomology. The study by Vogel et al., (2014) found that people who used Facebook more often evaluated themselves more negatively than those who reported less frequent Facebook use. Furthermore, Facebook users engaged in more upward social comparison (comparing one's self to others he/she believes is better than him/her) than downward social comparison (comparing oneself to others viewed as inferior). Given the findings in the present study, perhaps those who are more resilient spend less time comparing themselves negatively to others online, while those who are less resilient engage in more upward social comparison, resulting in a negative self-image that prevents them from thriving.

Focus on and venting of emotions is the process of constantly thinking about a stressor and expressing one's feelings about it – a platform social media provides. The instant gratification one receives from likes, comments, and shares may encourage people

to post their frustrations online and receive support from other users. It is avoidant in nature given that venting frustrations does not equate to problem-solving.

Drinking, smoking, and/or using drugs to cope with stress can be problematic for those who use these substances to avoid thinking about stressful situations. The link between social media addiction and substance use is interesting because of social media's influence on behavior. Social media culture is particularly saturated with messages about drinking, whether through advertising by brands or users posting pictures, hashtags, and memes that promote alcohol use. One study found that people who were exposed to alcohol ads were more likely to indulge in alcoholic beverages compared to those who were shown ads featuring bottled water. Although it was argued that the exposure alone will not likely have this same impact, the research indicated that exposure to alcohol-related content online can affect one's consumption of alcohol (Alhabash et al., 2016). It is possible that problematic social media usage may contribute to more avoidant coping skills (i.e., drinking) as a result of constant exposure to drinking alcohol online. As the study by Alhabash et al., (2016) focused on drinking, it is difficult to determine if this is the case for those who engage in problematic social media use as well as substance use since the COPE does not differentiate between alcohol and drug use.

Limitations

This study relied entirely on self-report measures which may affect the quality of the results. Respondents may be more likely to give untruthful responses due to social desirability or unconscientious responses (i.e., responding before thinking about the question or skipping through questions).

Access to participants was another limitation of this study. Eastern Illinois University's participant pool was initially considered to be the main source of recruitment, but the small participant pool made it difficult to achieve the desired sample size. To increase the sample size, participants were recruited from Amazon Mechanical Turk in additional to the university's participant pool. Although some responses were excluded from the final sample, 37 participants received credit for an undergraduate course, while 185 received monetary compensation through MTurk for their participation. Although the data was received from two sources, research indicates that MTurk is a reliable, low cost, efficient method for data collection (Johnson & Borden, 2012; Burhmester et al., 2011; Paolacci et al., 2010; Rand, 2012).

Finally, this study is based on correlational data, meaning it is difficult to discern the nature of these relationships. It is unknown if coping strategies cause one to be more or less resilient, depressed, or to experience greater addiction to social media, as the same could be stated for any combination of these variables. Future research should consider an approach that establishes the cause of these relationships. Furthermore, to confirm the results of this study's data, replication is necessary.

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Appendix A

Bergen Social Media Addiction Scale

Instructions: Below you will find some questions about your relationship to and use of social media (Facebook, Twitter, Instagram, and the like). Choose the response for each question that best describes you.

1 = Very rarely 2 = Rarely 3 = Sometimes 4 = Often 5 = Very often

1. How often during the last year have you spent a lot of time thinking about social media or planned use of social media? _____
2. How often during the last year have you felt an urge to use social media more and more?
3. How often during the last year have you used social media in order to forget about personal problems? _____
4. How often during the last year have you tried to cut down on the use of social media without success? _____
5. How often during the last year have you become restless or troubled if you have been prohibited from using social media? _____
6. How often during the last year have you used social media so much that it has had a negative impact on your job/studies? _____

Appendix B

DEAR (Adult Personal Resilience Scale)

Instructions: Choose the response that best indicates how much you agree or disagree with a statement.

Determination

1. Once I set a goal, I am determined to achieve it. _____
2. I persevere at the things I decide, despite difficulties. _____
3. Being determined is an important part of my character. _____
4. I keep trying for the things I want until I reach them. _____
5. It is in my nature to be persevering. _____

Endurance

1. I am able to live through difficult times. _____
2. I can withstand difficult situations. _____
3. I can endure the problems that life brings. _____
4. I can survive even the hardest of times. _____
5. I can endure even when I am attacked. _____

Adaptability

1. I have the ability to adapt to difficult situations. _____
2. I can change to fit into many kinds of circumstances. _____
3. I can find ways to adapt to unexpected conditions. _____
4. I am well able to adjust to problems that confront me. _____
5. I am very flexible when my environment changes. _____

Recuperability

1. I recuperate even from things that hit me hard. _____
2. I recover from any misfortune that happens to me. _____
3. I am able to bounce back from any kind of adversity. _____
4. I always resume my life regardless of the type of setback. _____
5. I can recover from any type of problem. _____

Appendix C

COPE Scale

We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress.

Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

1 = I usually don't do this at all
2 = I usually do this a little bit
3 = I usually do this a medium amount
4 = I usually do this a lot

1) I try to grow as a person as a result of the experience.
2) I turn to work on other substitute activities to take my mind off things.
3) I get upset and let my emotions out.
4) I try to get advice from someone about what to do.
5) I concentrate my efforts on doing something about it.
6) I say to myself "this isn't real".
7) I put my trust in God.
8) I laugh about the situation.
9) I admit to myself that I can't deal with it, and quit trying.
10) I restrain myself from doing anything too quickly.
11) I discuss my feelings with someone.
12) I use alcohol or drugs to make myself feel better.
13) I get used to the idea that it happened.
14) I talk to someone to find out more about the situation.
15) I keep myself from getting distracted by other thoughts or activities.
16) I daydream about things other than this.

17) I get upset, and am really aware of it.
18) I seek God's help.
19) I make a plan of action.
20) I make jokes about it.
21) I accept that this has happened and that it can't be changed.
22) I hold off doing anything about it until the situation permits.
23) I try to get emotional support from friends or relatives.
24) I just give up trying to reach my goal.
25) I take additional action to try to get rid of the problem.
26) I try to lose myself for a while by drinking alcohol or taking drugs.
27) I refuse to believe that it happened.
28) I let my feelings out.
29) I try to see it in a different light, to make it seem more positive.
30) I talk to someone who could do something concrete about the problem.
31) I sleep more than usual.
32) I try to come up with a strategy about what to do.
33) I focus on dealing with this problem, and if necessary let other things slide a little.
34) I get sympathy and understanding from someone.
35) I drink alcohol or take drugs, in order to think about it less.
36) I kid around about it.
37) I give up the attempt to get what I want.
38) I look for something good in what is happening.
39) I think about how I might best handle the problem.
40) I pretend that it hasn't really happened.
41) I make sure not to make matters worse by acting too soon.
42) I try hard to prevent other things from interfering with my efforts at dealing with this.
43) I go to movies or watch TV, to think about it less.
44) I accept the reality of the fact that it happened.
45) I ask people who have had similar experiences what they did.

46) I feel a lot of emotional distress and I find myself expressing those feelings a lot.

47) I take direct action to get around the problem.

48) I try to find comfort in my religion.

49) I force myself to wait for the right time to do something.

50) I make fun of the situation.

51) I reduce the amount of effort I'm putting into solving the problem.

52) I talk to someone about how I feel.

53) I use alcohol or drugs to help me get through it.

54) I learn to live with it.

55) I put aside other activities in order to concentrate on this.

56) I think hard about what steps to take.

57) I act as though it hasn't even happened.

58) I do what has to be done, one step at a time.

59) I learn something from the experience.

60) I pray more than usual.

Scales (sum items listed, with no reversals of coding):
Positive reinterpretation and growth: 1, 29, 38, 59
Mental disengagement: 2, 16, 31, 43
Focus on and venting of emotions: 3, 17, 28, 46
Use of instrumental social support: 4, 14, 30, 45
Active coping: 5, 25, 47, 58
Denial: 6, 27, 40, 57
Turning to religion: 7, 18, 48, 60
Humor: 8, 20, 36, 50
Behavioral disengagement: 9, 24, 37, 51
Restraint coping: 10, 22, 41, 49
Use of emotional support: 11, 23, 34, 52
Substance use: 12, 26, 35, 53
Acceptance: 13, 21, 44, 54
Suppression of competing activities: 15, 33 42, 55
Planning: 19, 32, 39, 56

Appendix D

Center for Epidemiologic Studies Depression Scale (CES-D)

Instructions: Below is a list of the ways you might have felt or behaved. Please respond with how often you have felt this way during the past week.

0: Rarely or none of the time (less than 1 day)
1: Some or a little of the time (1-2 days)
2: Occasionally or a moderate amount of time (3-4 days)
3: Most or all of the time (5-7 days)

1. I was bothered by things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from my family or friends.
4. I felt I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get "going."

SCORING: zero for answers in the first column, 1 for answers in the second column, 2 for answers in the third column, 3 for answers in the fourth column. The scoring of positive items is reversed (4, 8, 12, 16). Possible range of scores is zero to 60, with the higher scores indicating the presence of more symptomatology.