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COLLEGE STUDENTS' SOCIAL MEDIA USES AND AFFECTIVE CORRELATES

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College Students' Social Media Uses and Affective Correlates

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Given the high prevalence of mental health conditions such as depression and anxiety among college students, research on social media use, a salient feature of the modern college experience, is increasingly warranted. While research documents a link between negative psychological symptomology and social media use, few studies have examined what specific patterns of use may be more or less harmful than others. Therefore, the present study investigated whether specific types of social media use (socially oriented uses, information seeking uses, and entertainment uses) are more or less strongly associated with affective variables (depression, anxiety, positive affect, and negative affect). Utilizing four hierarchical linear regression models, we examined the degree to which the different types of social media use account for the variance in our four affective criterion variables. Contrary to our hypotheses, none of the three types of use were significant predictors of depression, anxiety, or positive affect (ps>.05). However, both social and information seeking use were found to be significant predictors of negative affect, such that higher social use predicted lower negative affect (B= -.218, t(197) = -2.198, $p < .05$) and higher information seeking use predicted higher negative affect (B= .240, t(197) = 2.706, $p < .01$). These results suggest that while these three types of social media use may not have differential relationships with specific symptoms of psychopathology, social and information seeking use do seem related to more global experiences of negative affect. Further, while the link between information seeking and negative affect reflects findings in other research on news exposure, our findings on social use and lower negative affect were unexpected given prior documentation of a link between socially oriented uses and increased psychological distress and depression symptoms. Our findings suggest that the relationship between socially oriented use of social media and negative affect is likely more complex than previously suggested, with the possibility for both harmful and beneficial impacts of interacting with others online. Implications of these findings and directions for future research will be discussed.

Types of Social Media Use and Psychological Impacts in College Students

The high prevalence of mental health difficulties among college students is a major cause for concern that warrants research on causal factors. Mirroring the general population, anxiety disorders are the most prevalent mental health concern among students (The Association for University and College Counseling Center Directors Annual Survey, 2016; Blanco et al., 2008; Gallagher & Taylor, 2014). The Association for University and College Counseling Center Directors (AUCCCD) international annual survey (2016) found anxiety to be a presenting concern for 50.6% of college students utilizing counseling centers. In the 2017 National College Health Assessment Survey, 21.8% of students reported that they had been diagnosed with--or had received treatment for--anxiety in the last 12 months, an increase of nearly 12% from the 2008 survey (ACHA-NCHA, 2008; ACHA-NCHA, 2017).

Depression, the next most common mental health concern among college students, was a presenting concern for 41.2% of students utilizing campus counseling centers in 2016 (AUCCCD Survey, 2016). In 2017, the National College Health Assessment Survey indicated that 18.2% of students reported a diagnosis of or treatment for depression within the last 12 months (ACHA-NCHA, 2017). The proportion of students affected by depression has also risen since 2008, when only 10.3% of students reported a depression diagnosis or treatment (ACHA-NCHA, 2008). While the pervasiveness of anxiety and depression among college students is certainly a cause for concern, the rise in prevalence within the last decade warrants additional attention.

A comparison of the data from the 2008 and 2017 National College Health Assessment Surveys also reveals that a greater proportion of college students in 2017 reported feelings of hopelessness, sadness, sleep difficulties, "tremendous stress" levels, "overwhelming anxiety,"

depression that hindered functioning, suicidal thoughts, and suicide attempts (ACHA-NCHA, 2008, p. 14; ACHA-NCHA, 2017, p. 14). Notably, more students also reported that anxiety, depression, and stress negatively impacted their academic performance in 2017 than in 2008, with a greater proportion of students reporting that they had received a lower exam grade, a lower course grade, or withdrew from a class due to these mental health concerns (ACHA-NCHA, 2008; ACHA-NCHA, 2017).

Further evidence of a rise in mental health concerns among college students can be found in the 2014 National Survey of College Counseling Centers. This survey found that 94% of counseling center directors reported seeing an increase in the prevalence of severe mental health problems on campus (Gallagher & Taylor, 2014). Eighty-nine percent of these directors reported an increase in anxiety disorders within the last five years, and 58% reported increases in clinically significant depression.

While the data concerning the prevalence of anxiety and depression on college campuses point to a troubling upward trend, these data tell a complicated story. For instance, while many college health center directors report increased anxiety and depression, it is difficult to know whether actual rates of anxiety disorders and depression are increasing, or whether directors' perceptions stem from increased help seeking among college students (Gallagher & Taylor, 2014). Likewise, while the drastic increase in self-reports of depression, anxiety, and stress symptoms seen in the National College Health Assessment supports the hypothesis of increasing prevalence, these data could also reflect changing stigma about mental health concerns and treatment seeking, with more students now aware and willing to disclose their mental health experiences than in previous years. Another potential explanation for the apparent increase could be the refinement of psychotherapies and psychopharmacological interventions (Antony, 2011;

Holtzheimer & Nemeroff, 2006; Ravindran & Stein, 2010; Stein, 2006). Perhaps individuals who in the past would have been unable to attend college due to mental health concerns are now able to manage them in a way that allows them to pursue further education. This could potentially be increasing the prevalence of mental health concerns on campus.

While it is difficult to determine if the apparent increase of mental health conditions shown in the data is an actual trend or merely a product of increasing help seeking behaviors, lessening stigma, or improved treatment methods, the fact remains that mental health concerns are a major issue amongst the college population. The presence of significant anxiety symptoms can often result in a student taking a leave of absence or even dropping out of school before graduating (Van Ameringen, Mancini, & Farvolden, 2003). In fact, mental health issues have been found to be the reason behind approximately 50% of annual withdrawals from college (Meilman, Manley, Gaylor, & Turco, 1992). Researchers have also demonstrated that anxiety disorders, especially in the presence of co-occurring depression, have a significant negative impact on a student's grade point average (Eisenberg, Golberstein, & Hunt, 2009). Hysenbegasi, Hass, and Rowland (2005) also found that depressed students missed more classes, assignments, exams, and social activities than did peers who were not depressed.

Thus, even if the prevalence of mental health concerns amongst college students is holding steady, anxiety disorders and depression exact significantly adverse effects on numerous individuals. Further research should aim to untangle the truth in the apparent change in prevalence, and it should also elucidate factors that precipitate mental health concerns among the college population to inform prevention efforts and improve treatment.

Factors Contributing to Mental Health Conditions

For most students, the shift between high school and college represents a major life transition, one involving separation from family and friends, relocation to an unfamiliar environment, new academic pressures, complex social interactions, and a heightened need for self-reliance (Towbes & Cohen, 1996). The typical college experience exposes students to a large number of stressors that may precipitate mental health concerns in this population. Towbes and Cohen sought to gain more insight on these stressors through the development and implementation of the Chronic College Life Stress Survey (CCLSS). A sample of students indicated which experiences from the 54-item survey made them "feel stressed, upset, or worried on a regular basis, that is, at least two or three times a week for the past month" (Towbes & Cohen, 1996, p. 204). The most commonly reported stressors fell into six areas of the college experience, including "academic performance, peer relations, family relations, romantic relationships, lifestyle, and physical appearance and health" (Towbes & Cohen, 1996, p. 201).

While Towbes and Cohen's work helps demonstrate what stressors are relevant to college students, it is important to note that these findings were reported in 1996, and that the contemporary college experience may confer entirely different stressors. Further, the sample utilized in this study was also largely composed of Caucasian middle-class students, and thus the commonly reported stressors may not generalize to more contemporary and/or diverse student bodies.

In another attempt to examine college student stressors, Ross, Neibling, and Heckert (1999) gathered data from university students using the Student Stress Survey. This survey presents students with 40 potentially stressful situations, consisting of interpersonal, intrapersonal, academic, and environmental experiences. Students identified which of the potential stressors they had experienced during some point in the current school year. The most commonly reported

stressors were "change in sleeping habits" (89% of the sample), "vacations/breaks" (82%), "change in eating habits" (74%), "new responsibilities" (73%), and "increased class workload" (73%). Other stressful situations that were sanctioned by a large percentage of the students included "financial difficulties" (71%) and "change in social activities" (71%).

While Ross et al.'s work clarifies potential stressors that occur often among this population, no data were collected to determine the degree to which college students perceived these situations as impacting their levels of distress. While some stressors are identified as increasing the risk for anxiety and depression, (American Psychological Association, 2013), the presence of the risk factor alone does not necessarily mean the student will experience anxiety or depression. Citing Moore, Burrows, and Dalziel (1992), Ross and colleagues (1999) point out that potentially stressful situations, such as the ones included in the Student Stress Survey, may help students via increased motivation and better performance.

In summary, work with the Chronic College Life Stress Survey and the Student Stress Survey identifies common stressors among college students. Both studies inform development of stress reduction efforts and mental health initiatives on college campuses (Towbes & Cohen, 1996; Ross et al., 1999). Certainly, if college-based counseling centers and other campus resources know which stressors are most often reported by students, they can better prioritize services to meet students' needs.

While many of the stressors identified in these studies are likely to exact ongoing effects on modern college students, society has changed since these data were collected. Thus, existing work may not be an accurate or complete reflection of the stressors college students encounter today. In order to determine what may be leading to the increase of mental health conditions on modern college campuses, it is vital that we look to new features of young adults' lives.

The Changing College Experience

    Tremendous technological advances, including the development of the internet, have drastically changed the modern college experience. A 2018 survey of U.S. teen technology use indicated that 45% of individuals use the internet "almost constantly" (Pew Research Center, 2018). When the same survey was distributed in 2015, only 24% of individuals described their use as almost constant, demonstrating just how rapidly internet use has grown (Pew Research Center, 2018). One of the major contributing factors to this rise in internet use has been the development and popularization of "smartphones". Indeed, a 2018 Pew Research Center survey reported that 94% of young adults, age 18 to 29, currently own smartphones. These devices allow users to maintain internet connections throughout their days, even when they are away from computers.

    Constant connectivity has supported the growing use of social media sites such as Facebook, Twitter, Instagram, and Snapchat, with about 88% of young adults age 18 to 29 reporting use of at least one social media platform (Pew Research Center, 2018). Students have the ability to "check in" on these platforms via their smartphones throughout their entire days, making social media a salient part of college students' daily lives. Attempts to determine the contemporary factors that contribute to growing mental health concerns in this population must account for this new aspect of the college experience.

Social Media and Psychological Distress

Frequency of Social Media Use

    While there is much room for growth in understanding the relationship between social media use and mental health concerns, recent research efforts have begun to explore this relationship. Much of the early work in this area has examined the connection between social media use

frequency and the degree to which students experience psychological distress. In one study from 2017, Vannucci, Flannery, and Ohannessian examined the relationship between social media use and anxiety among emerging adults. Based on self-report survey results drawn from a nationally representative sample, Vannucci and colleagues observed that increased time spent on social media was significantly related to greater dispositional anxiety. Previous research has also discovered a link between high frequency social media use and depression, with several studies demonstrating that high frequency social media users were significantly more likely to have depression than low frequency users (Lin et al., 2016; Shensa et al., 2017).

Several other studies have found connections between frequent social media use and other markers of psychological distress. Woods and Scott (2016) found that adolescents who used social media often experienced more depression, anxiety, poorer quality of sleep, and lower self-esteem than less frequent users. Chen and Lee (2013) and Jan, Soomro, and Ahmad (2017) observed a similar link between greater social media use and decreased self-esteem.

Research also suggests that the longer an individual is active on social media within one sitting, the more negative psychological consequences they will experience. Sagioglou and Greitemeyer (2014) administered a measure of affect to participants after they had spent varying amounts of time on Facebook. They found that the amount of time individuals had spent engaging with the site was negatively correlated with positive mood.

Multiple Platform Use

Research on the psychological impact of social media use has also explored the effects of using multiple platforms. According to a 2017 survey of internet users, individuals from North America have 6.6 social media accounts on average (GlobalWebIndex, 2017). Research has shown that in comparison to young adults who used between zero and two platforms, those

individuals who used between seven and eleven platforms had a significantly higher likelihood of experiencing anxiety and depression (Primack, Shensa, Escobar-Viera, Barrett, Sidani, Colditz, & Everette, 2017). Other studies have examined the impact of "media multitasking", which refers to a pattern of use in which individuals switch back and forth between multiple electronic media forms, including social media platforms as well as "television, computer-based video, music, nonmusical audio, video or computer games, telephone and mobile phone, instant messaging, SMS (text messaging), email, web surfing, and other computer-based applications" (Becker, Alzahabi, & Hopwood, 2013, p. 133). These studies have found that media multitasking is associated with symptoms of depression and social anxiety (Becker, Alzahabi, & Hopwood, 2013; Yang & Zhu, 2014).

Types of Social Media Use

Undoubtedly, people use social media in diverse ways. For instance, individuals may use these platforms to message and connect with friends, access news stories, post pictures, follow celebrities, and find entertaining content. Studies have utilized the uses and gratification theory in order to parse out the ways in which individuals utilize social media. This theory, which was originally used to examine other types of media use, follows the assumption that individuals actively use media sources in a way that will satisfy their needs (Whiting & Williams, 2013). Within this theoretical framework, researchers have identified seven different categories under which the various uses of social media fall. These uses include social interaction, information seeking, passing time, entertainment, relaxation, communicatory utility ("finding things to talk about with others"), and convenience utility (Whiting & Williams, 2013, p. 365). Whiting and Williams (2013) found that 88% of sampled individuals attested to using social media for social

interaction, 80% for information seeking, 76% to pass time, 64% for entertainment, 60% for relaxation, 56% for communicatory utility, and 52% for convenience utility.

While the data collected by Whiting and Williams (2013) are recent, it is important to note that social media use has undergone rapid change, even over the last few years (GlobalWebIndex, 2017; Pew Research Center, 2018). In order to evaluate whether the data collected by Whiting and William reflect current social media use, it is helpful to compare their findings to more recent research. In a similar survey of social media use conducted in 2017, participants described the reasons for which they utilize social media. Although this survey did not specifically follow the categories derived from uses and gratification research, many of the survey items were closely in line with this work. Survey results indicated that the top motivators for social media use included staying in touch with friends, staying up to date with news and current events, filling time, and finding entertaining content (GlobalWebIndex, 2017). Based on the results of this survey, it seems the top reasons for use found by Whiting and Williams (2013) —social interaction, information seeking, passing time, and entertainment—remain applicable today.

While studies like these have begun to investigate why people use social media, little has been done to parse out the psychological impacts associated with the different types of use and activities. For the sake of the present study, we chose to focus on some of the most common reasons why individuals report using social media according to the previously mentioned research, including social, information seeking, and entertainment use.

Social Use

Much of the research on social media that has delved deeper into specific types or patterns of use has focused on socially oriented uses. While we often consider social interaction to be

associated with positive psychological well-being, several studies have demonstrated that online social interaction can be more harmful than beneficial. For instance, a 2018 study conducted by the research firm YPulse surveyed over 2,000 social media users to determine whether different social media platforms affect individuals differently. This study determined that platforms that were more geared toward social uses, such as Facebook, Instagram, and Tumblr, decreased users' moods more so than sites that were used for entertainment purposes (YPulse, 2018).

Chen and Lee (2013) also demonstrated that frequent social use of Facebook for activities such as commenting, 'liking', and sharing posts, was associated with psychological distress, and that this relationship was also influenced by communication overload and reduced self-esteem. Utilizing a sample of college students, Chen and Lee surveyed participants about their Facebook interactions in the past 30 days and measured participants' self-esteem and level of psychological distress. They also asked participants to complete measures of communication overload, which is a situation that occurs when "people feel overloaded by a vast amount of complex communication input from diverse sources, multiple channels, with rapid turnaround time" (Chen & Lee, 2013, p. 729). Chen and Lee cite Misra and Stokols (2012)'s determination that communication overload can lead to stress and depression. The results of this study demonstrate that frequent Facebook interaction is related to increased psychological distress. Chen and Lee also found that the relationship between frequent Facebook interactions and increased psychological distress is mediated by lower self-esteem and increased communication overload.

In another study, Smith et al. (2017) examined the impacts of social media site posting frequency, another activity that falls within the realm of social uses. Researchers installed a "plug-in" app on participants' Facebook accounts, which allowed researchers to extract the number of status updates each participant posted within the last six months prior to the study.

Researchers found that individuals who screened positive for depression on a brief depression screener posted significantly more times within the past six months than participants who screened negative for depression.

Other studies that have focused on social uses of social media platforms have examined the influence of social comparison, a phenomenon in which "people automatically contrast themselves with others on abilities or attributes they deem important" (Steers, Wickham, & Acitelli, 2014, p. 703). Steers et al. conducted two studies in order to investigate how social comparison on Facebook impacted users' psychological wellbeing. In the first study, they examined the relationship between the amount of time individuals spent on Facebook each day, their tendency to make social comparisons (upward, downward, and nondirectional), and their degree of depressive symptoms. The results of this first study revealed that for both men and women, the time spent on Facebook was positively associated with depressive symptoms. In a second study, participants documented number of times they logged into Facebook and how long they spent on Facebook each day over a two week period. The daily documentation form also included a measure of social comparison and depressive symptomology. The results of study two revealed that the amount of time individuals spent on Facebook and their degree of depression was mediated by all three types of social comparisons, suggesting that individuals often feel more depressed after spending more time on Facebook and that this mood decrement is associated with the social comparisons they make while engaging with this platform.

In another study, researchers investigated the role that rumination plays in the relationship between social comparison and depressive symptoms (Feinstein, Hershenberg, Bhatia, Latack, Meuwly, & Davila, 2013). A sample of undergraduate students completed a questionnaire that assessed for downward comparison while using Facebook and within their daily lives. They also

completed measures of rumination and depressive symptomology. The results of this study determined that Facebook and general downward social comparisons were significantly and positively associated with rumination and depression. The researchers also conducted a path analysis on their hypothesized model, in which they predicted that downward social comparison on Facebook would be related to increased rumination, which would then be related to greater depressive symptomology. They found the mediation effect of their model to be significant, suggesting that spending time negatively comparing oneself to others on Facebook may increase rumination and increase users' risk of depression. Based on these findings, it appears likely that the act of comparing one's self to others online can have harmful impacts on one's mood and psychological health.

In sum, studies that have focused on social aspects of social media platforms reveal a connection between this type of use and negative psychological impacts (Feinstein et al., 2013; Steers et al., 2014). More specifically, this research demonstrates that the social nature of these platforms may specifically be related to increased depressive symptoms (Feinstein et al., 2013; Steers et al., 2014).

Entertainment Use

According to the GlobalWebIndex (2017), one of the primary reasons people use social media is "to find funny or entertaining content" (p. 6). While several studies have now demonstrated the link between social media use and negative psychological outcomes, it is difficult to imagine that watching humorous videos or viewing popular "memes" and "gifs" could drive these negative effects. Rather, it may be the case that this type of social media use in particular has positive mood benefits for users. In one study, researchers evaluated the role that entertainment media plays in psychological wellbeing (Rieger, Reinecke, Frischlich, & Bente, 2014). The

authors tested whether entertaining content increased psychological well-being through the process of recovery, wherein "mental and physical capacities that have been demanded during a stressful event or experience return to their pre-stress levels" (Rieger et al., 2014, p. 457). Rieger et al. (2014) further categorized entertaining content based on whether it is "hedonic", meaning it is used for "the purpose of experiencing pleasure", or "eudaimonic," meaning that the content evokes "feelings of meaningfulness and the experience of moral and intellectual virtues" (Rieger et al., 2014, p. 456-457). While both types resulted in recovery, purely pleasurable content aided in "relaxation and psychological detachment," and more meaningful content contributed to positive feelings of mastery (Rieger et al., 2014).

Other studies have also found evidence of positive psychological correlates of entertainment uses of social media sites. For instance, while the YPulse (2018) study found that more socially-oriented sites generated more negative affect, sites more oriented to entertainment-- Pinterest, Imgur, Youtube, and Spotify-- are linked to increased positive mood. Another study considered the current trend of viewing 'cat-related media', such as humorous videos and pictures, on social media platforms, hypothesizing that this carefree, positive type of entertainment would have positive psychological benefits (Myrick, 2015). In order to test this hypothesis, Myrick conducted an online survey utilizing individuals who self-identified as having viewed cat-related media online previously. Data revealed that individuals who viewed this content displayed increased positive emotion and higher levels of hope, happiness, and contentment. Notably, this sample only contained individuals who had viewed this type of media previously, and thus the sample cannot be generalized to all social media users. It is important to consider that individuals who have a more negative mood or more depressive symptoms may not actively seek out this type of media. Thus, the improvements in mood found within this sample may not be reflective

of the effect 'cat-media' would have on a more diverse sample of individuals. However, Myrick also found in their survey data that only about 25% of their participants reported purposely seeking out this type of entertainment, meaning that the majority of individuals are simply happening upon this content while engaging with social media platforms. Perhaps, then, the increase in positive mood associated with this type of entertaining content may, in fact, impact all social media users.

Information Seeking Use

Beyond the social and entertainment aspects of social media usage, seeking information and keeping up with news are additional prominent motivations behind individuals' social media use (GlobalWebIndex, 2017). In fact, a 2017 survey reported that 78% of US adults below the age of 50 utilize social media sites to access news (Pew Research Center, 2017). Facebook was found to be the most commonly used social media outlet for news consumption, with 45% of US adults getting news from this site. Youtube, Twitter, Instagram, Snapchat, and LinkedIn were also common sources of news (Pew Research Center, 2017).

Despite the salience of the many distressing events currently plaguing our society, it is important to note that past generations faced their own societal hardships and were also exposed to frequent negative news stories. The current generation of college students is not the first to be tasked with managing academic pressures and other stressors amidst a backdrop of political tension, war and violence, racial divide, recession, natural disasters, and ominous unemployment rates. Thus, while news of such events may contribute to college students' psychological symptoms, this factor may fall short in accounting for the potential upward trend of mental health conditions in this population. Notably, what has not remained constant with earlier generations are the ways in which contemporary college students consume news of such events.

While past generations may have encountered troubling news periodically during their average day, via newspapers, television, and radio reports, the current generation of young people largely consumes news via social media outlets. As such empirical data are needed to examine the impact of these more contemporary news outlets.

As previously discussed, the ubiquity of smartphone ownership allows individuals to view news stories on social media platforms throughout their day. This tendency to check one's phone throughout the day is referred to as "habit checking", which is defined by Oulasvirta (2012) as the "brief, repetitive inspection of dynamic content quickly accessible on the device" (p. 105). With habit checking, people automatically check their phones without a conscious goal or task in mind, but merely as a way to fill time during gaps in their day (Molyneux, 2017). The frequency with which individuals check social media sites is further heightened by the automated notification systems smartphone-based applications utilize (Molyneux, 2017). The ability to check social media sites for news at any time and in any place results in frequent short news consumption sessions several times throughout the day (Molyneux, 2017).

Several researchers note that this constant access to ever changing news information may increase feelings of anxiety and stress (Alanazi, 2014; Holton & Chyi, 2012). Research has also demonstrated that individuals who are exposed to large amounts of news, a common characteristic of news consumption through social media, report feelings of overload (Alanazi, 2014; Holton & Chyi, 2012). Holton and Chyi (2012) describe this overload as a circumstance that occurs "when the amount of available content becomes difficult for an individual to process, often causing negative feelings on the end of the consumer" (p. 620). Alanazi (2014) found that 64.1% of respondents felt overwhelmed by the abundance of news they encounter through the use of their smartphone. Holton and Chyi (2012) also found that utilizing computers and

Facebook as a means for consuming news results in the strongest feelings of overload compared to other news sources.

Thus, the way in which individuals, and young adults in particular, consume news has changed drastically in recent years. While future research is needed to clarify the psychological impacts of accessing news on social media platforms, much more research has been done with more traditional media sources, such as print, TV, and radio. While news consumption via social media introduces new variables into the relationship between news media and psychological distress, it can still be informative to consider the findings from these other media sources.

In one such study, McNaughton-Cassil (2001) focused on the impact of news media exposure via TV, print, and radio on levels of anxiety and depression. Drawing from the theory of Conservation of Resources developed by Hobfoll (1989), McHaughton-Cassil notes that an event does not have to be experienced directly by an individual to be stressful. Instead stress can "result from either the actual or threatened loss of resources" (McNaughton-Cassil, 2001, p.194). In the context of Hobfoll's work, "resources" are defined broadly to include physical goods, as well as opportunities, employment status, relationships, time, and. In this way, news media may contribute to psychological distress by posing a potential and perceived threat to individuals' resources. The researchers also proposed that the impact of news exposure on anxiety and depression may be moderated by cognitive factors. In particular, they were interested in the effects of irrational beliefs, or "cognitions of a rigid, inflexible nature," as well as pessimism (McNaughton-Cassil, 2001, p. 196).

McNaughton-Cassil (2001) utilized a sample of college students and collected self-report questionnaire data on news media exposure. They tested specifically whether participants' levels of depression, state and trait anxiety, irrational beliefs, and degree of pessimism varied with

news media exposure. Ultimately, they found that news media exposure was significantly related to anxiety at low levels of optimism and at low levels of irrationality.

While the findings from this study are useful, one limitation is the lack of a direct exposure technique, especially in light of the researcher's interest in both longstanding trait and time sensitive state anxiety. Research utilizing a direct exposure to negative news media could provide a better understanding of an individual's acute response to news consumption.

In one study that did utilize a direct exposure method, researchers studied the impact of exposure to disaster media on children (Ortiz, Silverman, Jaccard, & La Greca, 2011). Utilizing a sample of elementary school students, researchers exposed some students to disaster media cues pertaining to a hurricane, while a control group viewed a neutral weather film. Participants who viewed the disaster news coverage displayed significantly higher levels of state anxiety after the exposure in comparison to the individuals who viewed the neutral story.

Szabo and Hopkinson (2007) also used a direct exposure method to determine the impact of television news media on psychological distress. Researchers measured levels of state anxiety, total mood disturbance, positive affect, and negative affect before and after having a sample of college students view a fifteen-minute television news clip. Results indicated that students displayed increased state anxiety and total mood disturbance, as well a decrease in positive affect. Researchers also had one group of students engage in a progressive muscle relaxation exercise after viewing the news clip, and while this group returned to their pre-news viewing levels of anxiety and mood, a control group who listened to a lecture did not.

The direct media exposure work conducted by Ortiz (2011) and Szabo (2007) demonstrates the impact negative news media can have on an individual's state anxiety levels. Further, it demonstrates that individuals do not need to experience an event or stressor directly for the

events to cause distress (Ortiz et al., 2011). Szabo (2007) also showed that this psychological distress did not subside in the presence of a control attention-diverting activity, and that a more direct psychological intervention, such as a progressive relaxation exercise, was necessary to mitigate this acute negative response to media exposure.

In a more recent meta-analytic study, Hopwood and Schutte (2017) examined psychological reactions to disaster-related media and media depictions of large-scale violence. Eighteen experimental studies were included in the meta-analysis. Across studies, these media stories were related to negative psychological outcomes, with an effect size of Hedges' g of 1.61. In particular, this meta-analysis revealed that among the different types of psychological outcomes, anxiety reactions were the most significantly related to disaster or violence media exposure. Researchers also found significant effects of community sensitization, noting that greater psychological distress was observed when the type of event or disaster being detailed in the news story was similar to a recent, actual event within the community.

This meta-analysis, along with the previously mentioned research, helps to illuminate the role that exposure to news media can play in increasing psychological distress. In particular this research demonstrates that using media to seek out information and stay informed may be specifically be related to increased anxiety symptoms (Alanazi, 2014; Holton & Chyi, 2012; Hopwood & Schutte, 2017; McNaughton-Cassil, 2001; Ortiz et al., 2011; Szabo & Hopkinson, 2007). Further research is needed to determine whether using social media specifically to access news may be exacerbating the relationship between news consumption and anxiety and contributing to the increasing prevalence of anxiety disorders.

Differentiating Depression and Anxiety

In order to understand why social uses of social media may be more related to depression while information seeking uses may be more related to anxiety, it is important to differentiate between the constructs of anxiety and depression. Certainly, there is significant covariance between the constructs and symptoms. Clark and Watson (1991) developed the Tripartite Model of Anxiety and Depression in order to clarify both the shared variance between anxiety and depression, as well as the specific factors for both conditions. They proposed that both depression and anxiety share the common feature of high negative affect, and that the unique feature of anxiety is the presence of anxious arousal, while the unique feature of depression is low positive affect.

The Tripartite Model of Anxiety and Depression helps to provide rationale for the relationships between social uses and depression versus information seeking uses and anxiety shown in the literature. Information seeking activities serve to keep an individual informed about what is going on in the world. It is reasonable to assume that an individual who experiences anxious arousal may be more likely to consume news in order to remain vigilant about events and potential threats happening around them. As demonstrated in the literature, social uses of social media are related to increased social comparisons and decreased self-esteem, which may account for decrements in positive affect.

Other researchers have highlighted the respective temporal foci in depression and anxiety in order to differentiate between these two constructs. According to Michael Eysenck (2017), depression and anxiety can be distinguished by different temporal orientations, with depression related to a past focus on unmet goals and losses and anxiety related to a future focus on potential threats. This theory has been supported by several studies (Eysenck, Payne, & Santos, 2006; Finlay-Jones & Brown, 1981; Grupe & Nitschke, 2013; Pomerantz & Rose, 2014; Rinaldi, Locati, Parolin, & Girelli, 2017) and provides further clarity on the different relationships

between social media uses and psychological impacts. Viewing news stories on social media platforms can serve the function of gaining awareness of potential impending threats in one's environment. This type of use is more future oriented, and based on Eysenck's framework, would have a stronger relationship with anxiety symptoms. Social uses, on the other hand, may be more closely linked to a past orientation and depression symptoms, given this theory. When comparing oneself with others' pictures, posts, or number of friends, for instance, the individual may be reminded of the social gatherings they missed, the friendships they have failed to form, and the milestones and accomplishments they have not achieved. This focus on missed opportunities and past failures likely evoked by social uses relates closely to Eysenck's conceptualization of depression.

Thus, the Tripartite Model of Anxiety and Depression, as well as Eysenck's and others' theory of temporal orientation differences, help distinguish between the closely related constructs of anxiety and depression. These theories also provide support for the proposed relationship between depression and social uses of social media and between anxiety and information seeking uses.

Overview and Current Study

The prevalence of mental health concerns, and anxiety and depression in particular, within the college student population is a major cause for concern. With recent evidence pointing to a possible upswing of these concerns on campus, research efforts are needed in order to gain clarity on the factors that may be playing a role. While previous research has focused on the psychological impact of factors related to the college experience, such as academic workload and interpersonal relationships, we must consider new aspects of the modern college student's

experience in order to understand what may be contributing to the increasing prevalence of mental health concerns.

One salient and relatively new feature of young adults' lives is the presence of social media. With the majority of young adults using social media frequently in their daily lives, research has begun to evaluate the psychological impact these platforms can have. Although research that illuminates the negative impacts of general social media use is helpful, the impacts of these studies may be limited. Considering the current ubiquity of social media use in this population, as well as the frequency with which individuals use social media platforms, advocating for an overall decrease in use may or may not be helpful. It is possible, after all, that some patterns and purposes of use promote positive emotional health, while other use patterns impact users negatively. Further research is needed to tease apart the specific ways in which individuals are using social media and to investigate the psychological impacts of these uses. With this information, mental health advocates, peers, and mental health providers could encourage social media users to amend their use rather than decrease or cease use all together. This may be a more plausible approach that still minimizes the negative psychological impacts individuals are experiencing.

Existing research reveals that social interaction, information seeking, and entertainment are three of the most common types of social media use. While no study to date has compared the psychological impacts of these uses concurrently within a single study, some have delved into one type of use considered in isolation from others. The studies that have examined social uses of social media platforms often demonstrate a link between social use and increased depressive symptoms, while the studies that have focused on news consumption and other information seeking uses tend to be related to increased anxiety symptoms. Studies of entertainment uses of

social media demonstrate that consuming lighthearted, pleasurable content is often related to higher positive emotions. A concurrent comparison of social, information seeking, and entertainment use of social media is needed to gain a more definitive understanding of the relationship between different uses and different psychological symptoms.

Because so few studies have used a direct social media exposure design to observe individuals' acute responses to social media use, it is difficult to know the causal relationship between various social media uses and psychological symptoms. The relationships between depression and anxiety and social media use found in previous literature could reflect a direct symptomatic response from engaging with a platform. However, it is also possible that individuals who have a more depressed or anxious personality disposition may simply gravitate to social or information seeking uses of social media. Further research is needed to explore the directional relationship between depression and anxiety symptoms and social media uses.

In sum, the status of the literature on the psychological impacts of social media use suggests that two important questions remain: do different types of social media use relate to different mood symptoms, and if so, does social media use have a direct, causal impact on mood? The present study focused on the first question and investigated the existence of relationships between use types and mood symptoms. A future study, informed by the results of this work, will investigate the causal nature of these relationships.

The present study utilized cross sectional self-report data to concurrently investigate the relationship between social, information seeking, and entertainment uses of social media and anxiety, depression, and positive affect. Based on previous research findings, as well as the theoretical framework of the Tripartite Model and Eysenck's temporal orientation theory, we expected social use of social media to be a significant predictor for depression, information

seeking use to be a significant predictor of anxiety, and entertainment use to be a significant

predictor of positive affect.

Method

Overview

College student participants completed a cross sectional survey via Qualtrics. This survey

included a questionnaire about social, information seeking, and entertainment use of social media

platforms, as well as a brief demographic questionnaire. Participants also completed measures of

depression, anxiety, and positive affect.

Participants

To answer this study's research questions, we utilized a sample of undergraduate students from

the University of Montana. Student participants were obtained through the use of the University

of Montana's SONA online research sign up system, and they received course credit for their

participation. A power analysis was conducted to determine the approximate sample size needed,

with an effect size of .07 as seen in the literature, $\alpha = .05$, and 80% power. Based on these

parameters, the target sample size for the present study was 202 participants.

Measures

Measure of Depression

The Patient Health Questionnaire-8 (PHQ-8: See Appendix A) is an eight-item measure of

depression severity that mirrors the DSM-IV criterion for Major Depressive Episode, without the

criterion of suicidality. The PHQ-9, which includes an item assessing suicidal ideation and

thoughts about self-harm, and was found to be a reliable measure of depression with a

Cronbach's alpha of .89 (Kroenke, Spitzer, & Williams, 2001). Utilizing a sample of primary

care patients, Corson, Gerrity, and Dobscha (2004) found the PHQ-8 to be highly comparable to

the PHQ-9. While the PHQ-9 was originally designed for use in primary care settings, Kroenke and Spitzer (2002) note that the PHQ-8 is a useful and commonly used measure of depression severity in nonclinical, research contexts.

For each item on the PHQ-8, individuals indicate the frequency (0="not at all", 1="several days", 2="more than half the days", 3="nearly everyday") with which they have experienced each criterion in the past two weeks. Ratings across the items are summed for a total score, which ranges from 0-24; higher scores indicate worse depressive symptomatology. Within the present study, the PHQ-8 sum measured depression severity of participants.

Measure of Anxiety

The 7-item Generalized Anxiety Disorder Scale (GAD-7: See Appendix B) is a brief self-report measure of anxiety symptoms. Although the GAD-7 was designed as a screener for generalized anxiety disorder, it has been found to be useful for detecting other anxiety disorders, including panic disorder, social anxiety, and post-traumatic stress disorder (Kroenke, Spitzer, & Williams, 2007). While this measure was originally developed for use in primary care settings, it has been found to be useful for measuring anxiety in the general population, with a Cronbach's alpha of .89 (Löwe, Decker, Müller, Brähler, Schellberg, Herzog, & Herzberg, 2008).

For each item on the GAD-7, responders are asked to indicate the frequency (0="not at all", 1="several days", 2="more than half the days", 3="nearly everyday") with which they have experienced each criterion in the past two weeks. Items are summed for a total score, ranging from 0-21, with higher scores indicating higher anxiety symptomology. In the present study, this measure was used to assess the anxiety severity of participants.

Measure of Positive Affect

The Positive and Negative Affect Schedule (PANAS: See Appendix C), developed by Watson, Clark and Tellegen (1988) is a measure of affect containing two ten-item scales. One scale measures positive affect, or the "extent to which a person feels enthusiastic, active, and alert," while the other measures negative affect, or the "subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness" (Watson et al., 1988, p. 1063). Within each scale, participants are presented with ten terms related either to positive or negative emotions, and they are asked to indicate how applicable each term is to their affect using a 5-point scale, with response options ranging from "very slightly or not at all" to "extremely." According to Watson et. al (1988), the wording of the instructions can be modified to assess a person's emotions generally, within a certain period of time, or at the present moment.

Watson, Clark, and Tellegen (1988) determined that the test-retest correlations for the positive affect scale ranged from 0.47 to 0.68 and for the negative affect scale ranged from 0.39 to 0.71. They also reported that the Cronbach alpha coefficient for the positive affect scale ranged from 0.86 to 0.90, and from 0.84 to 0.87 for the negative affect scale. The PANAS has also demonstrated evidence of strong convergent and discriminant validity. Within the present study, both the positive and negative affect scales of the PANAS were administered to measure positive and negative affect, using the instructions to consider emotions over the last two weeks.

Measure of Social Media Use

The social media use questionnaire (see Appendix D) asked participants about their typical social media use. This questionnaire has been adapted from the Social Media Usage Aims Scale (SMUAS) utilized by Kircaburun, Alhabash, Tosuntas, and Griffiths (2018). The SMUAS, formerly the Facebook Usage Aims Scale (FUAS), was originally developed by Horzum (2016)

to measure social media uses in Turkish college students. The original scale did not include any items that were specifically relevant to Facebook usage, and the scale was amended in Kircaburun et al.'s work to measure social media use more broadly among university students. The SMUAS comprises 30 items assessed on a five-point Likert scale, ranging from strongly disagree to strongly agree. The items measure seven categories of social media use, including maintaining existing relationships (MER); meeting new people and socializing (MNPS); making, expressing, or presenting a more popular version of oneself (MEPO); passing time (PT); task management (ATMT), entertainment (ENT); and informational and educational use (IAE). Cronbach's alpha was .91 for the original FUAS (Horzum, 2016) and .89 for the adapted SMUAS (Kircaburun et al., 2018). The Cronbach's alphas for the subscales of the SMUAS were MER=76, MNPS=.72, MEPO=.64, PT=.82, ATMT=.78, ENT=.64, and IAE= .81 (Kircaburun et al., 2018). As the present study was interested exclusively in social, entertainment, and information seeking uses, only adapted versions of the MER, ENT, and IAE subscales were used in this questionnaire. Further, as the present study was interested in understanding how the frequency of each type of use influences symptomology, we utilized adapted Likert scales to measure frequency of use (0=0-6 times per week, 1=1-5 times per day, 2=6-10 times a day, 3=11-15 times a day, 4=more than 15 times per day) Scores on each item were used to calculate a mean for each type of use, with higher scores indicating more frequent use.

Demographics

The participant demographic questionnaire (see Appendix E) included items on age, race/ethnicity, and gender identity.

Results

A total of 219 participants responded to the survey. Thirteen students were excluded from the analysis due to a failure to accurately respond to validity check items. Participants that failed the validity items did not differ significantly from the rest of the sample in demographic characteristics, affective characteristics, or in terms of their social, information seeking, and entertainment based social media use. As shown in Table 1, the 206 participants included in the analysis were mostly White (83%) cisgender women (72.3%), with an average age of 22.3 years. Table 1 also presents the characteristics of the sample based on their responses to the main outcome measures included in the survey. The mean score on the PHQ-9 was 6.6 (SD=5.9), while the GAD-7 mean was 6.4 (SD=5.8), the PANAS-P mean was 30.4 (SD=9), and the PANAS-N mean was 20.2 (SD=8.1),.

In order to investigate the relationships between social media use types and affective variables, we built four hierarchical multiple regression models, distinguished by the four different criterion variables, depression (PHQ-8), anxiety (GAD-7), positive affect (PANAS-P), and negative affect (PANAS-N). The results of these regression are presented in Table 3. In order to determine which demographic covariates would be included in each model, we first analyzed the bivariate relationships between the demographic variables and the outcome variables. Due to the small sample size of minority individuals, ethnicity was dichotomized as White versus Nonwhite and gender was dichotomized as female versus male. No demographic variables were significantly correlated to depression (PHQ-8), anxiety (GAD-7), and positive affect (PANAS-P), ps>.05. Ethnicity and negative affect (PANAS-N) were significantly correlated, $r(200)=-.142$, $p=.044$. As a result, Ethnicity was included as a covariate on step 1 of the regression model for negative affect.

In order to test our main hypotheses, the three types of social media use—social, information seeking, and entertainment—were entered simultaneously as separate predictor variables in step 1 of the models of depression (PHQ-8), anxiety (GAD-7), and positive affect (PANAS-P), and in step 2 on the model of negative affect (PANAS-N). The three use type variables consisted of the mean scores from the survey items pertaining to each type of use. The social media use variables were centered before analysis in order to minimize the introduction of multicollinearity (Aiken & West, 1991).

In the model that examines depression (PHQ-8), we hypothesized that social use but not entertainment or information seeking uses would be a significant predictor. The overall model was not significant, and the three predictor variables accounted for 1.8% of the variance in depression (R^2 =.018, F(3,201)=1.24, p=.295). As expected, neither information seeking (B=.081, t(201) =.893, p =.373) nor entertainment use (B= .127, t(201) = 1.301, p =.195) was a significant predictor of depression. Contrary to our hypothesis, however, social use was also not a significant predictor of depression (B= -.094, t(201) = -.93, p=.373).

The second regression model tested the relationships between the social media use types and anxiety (GAD-7). For this model, we hypothesized that information seeking use but not entertainment or social uses would be a significant predictor. The overall model evidenced a trend toward significance, accounting for 3.4% of the variance in anxiety (R^2 =.034, F(3,201)=2.37, p=.071). While both social use (B= -.216, t(201) = -2.165, p=.032) and information seeking use (B=.190, t(201) =2.1, p=.037) were found to be statistically significant, these effects were quite small, as the model accounted for a minimal portion of the overall variance in anxiety.

In the model that examines positive affect (PANAS-P), we hypothesized that entertainment use but not social or information seeking uses would be a significant predictor. The overall model was not significant, and the three predictor variables accounted for 2.7% of the variance in positive affect (R^2 =.027, F(3,201)=1.831, p=.143). Consistent with our hypothesis, neither social (B=.129, t(201) =1.284, p=.201) nor information seeking use (B= .118, t(201) = 1.299, p=.195) was a significant predictor of positive affect. However, in contrast to our hypothesis, we also found that entertainment use was also not a significant predictor of positive affect, (B= -.189, t(201) = -1.94, p=.054).

While we did not originally hypothesize about the relationship between the three use types and negative affect, in an exploratory analysis tested a predictive model of negative affect. This analysis examined how the use types relate to a more global experience of dispositional negative affect rather than more specific symptoms of anxiety and depression. The results of this analysis are summarized in Table 5. In step 1 of this model, ethnicity was found to be a significant predictor, (B= .142, t(200) = 2.03, p=.044), suggesting that nonwhite participants reported higher levels of dispositional negative affect. After controlling for ethnicity, both social, (B= -.218, t(197) = -2.198, p=.029) and information seeking use, (B=.240, t(197) = 2.706, p=.007) were found to be significant predictors of negative affect in step 2. These findings suggested that dispositional negative affect trended lower for participants who reported higher levels of use of social media for social purposes and trended higher for those who reported higher levels of information seeking use. In the third step, we entered three interaction terms (Social Use x Ethnicity, Entertainment Use x Ethnicity, and Information Seeking Use x Ethnicity) to determine if the relationships between social media use and dispositional negative affect were modified by

ethnicity. None of the interaction terms was found to be significant predictors of negative affect, (ps>.05).

Discussion

This study examined whether three different types of social media use—social, information seeking, and entertainment use— related differentially to anxiety, depression, and positive and negative affect within the college student population. While previous studies have documented a link between mental health symptoms and social media use, this study adds to the existing literature by parsing out and concurrently comparing three of the most common ways in which individuals utilize social media platforms. This allows for a more nuanced understanding of the relationship between social media use and mental health.

This study resulted in several unexpected findings. Based on prior literature, we expected social use to be related to depression, information seeking use to be related to anxiety, and entertainment use to be related to positive affect. Contrary to these hypothesized relationships, none of the three types of use concurrently predicted depression, anxiety, or positive affect (ps>.05). However, both social and information seeking use did concurrently predict negative affect, a more global indicator of distress than the measures used to index anxiety and depression. These findings suggested that higher social use predicted lower dispositional negative affect and higher information seeking use predicted higher dispositional negative affect. These results suggest that while these three types of social media use may not have differential relationships with specific symptoms of psychopathology, social and information seeking use do seem related to more global experiences of negative affect.

Our findings that information seeking uses of social media, such as consuming news via these platforms, is related to negative affect expands upon the existing literature on both social media

use and news exposure more broadly. As previously noted, several studies document the harmful impacts of exposure to news via more traditional sources, such as television, print, or radio (Hopwood & Schutte, 2017; Ortiz et al., 2011; Szabo & Hopkinson, 2007; McNaughton-Cassil, 2001). To our knowledge, no prior published studies have examined the relationship between *social media* news consumption and mental health. Given that the majority of young adults report accessing news through social media, investigating news exposure through social media specifically has become increasingly warranted (Pew Research, 2018). Our study helps to demonstrate that exposure to news through this new and ever-growing online source appears to relate to the experience of negative affect in a similar manner as exposure to news through other sources.

The field would benefit from further research directly comparing the psychological impacts of news exposure via social media and traditional sources. For instance, the high volume of news encountered through social media, as compared to other sources, may be compounding mental health consequences, consistent with the research on the consequences of information overload (Alanazi, 2014; Holton & Chyi, 2012). Researchers have also begun to consider the implications of incidental news exposure, noting that while encountering news on social media is a common occurrence, most users are not intentionally seeking it out (Park & Kaye, 2020). Mirroring the findings from Fletcher and Nielsen (2017), we found that only 24% of our participants indicated that they commonly ("fairly often" or "very often") access social media with the intention of consuming news. In comparison, 67% of our participants endorsed intentionally accessing social media for entertainment purposes, and 48% reported that they commonly access social media for social purposes. While the existing studies on incidental news exposure have not focused on psychological impacts of encountering news unexpectedly, it seems reasonable to suggest that

individuals intending to be entertained online may find negative news stories more distressing than those who intentionally seek out news from television and print sources. In a study examining the impact of priming on attention to online negative news stories, Kaspar, Gameiro, and König (2015) found that individuals who were primed with positive stimuli were subsequently more attentive to negative news and displayed a greater recall of the content than individuals who were primed with negative stimuli. Thus, because the majority of individuals may be initially seeking out positive, entertaining content on social media, unintentionally encountering negative news may then be particularly salient. Further research on the unique impacts of social media news consumption is warranted, and such information could help to shed light on the high rates of mental health conditions among the current generation of young adults.

While our finding on the relationship between information seeking and negative affect was consistent with relevant literature, our finding on social uses appears to contradict past research. As previously noted, several past studies have examined socially-oriented uses of social media (e.g., commenting on or "liking" others' posts) and have reported a link between social uses and psychological distress (Chen & Lee, 2013; Feinstein et al., 2013; Smith et al., 2017; Steers et al., 2014). Thus, our finding that higher social use was related to lower negative affect was unexpected.

One potential explanation for our unanticipated results may stem from the positive nature of items included in our measure of social use. For instance, our social use survey items, adapted from Kircaburun's (2018) Social Media Usage Aims Scale (SMUAS), asked participants to note how often they used social media for the purpose of meeting new friends, keeping in touch with friends and relatives, and maintaining relationships with people they do not get to see often. Conversely, the studies that documented harmful impacts of socially oriented uses of social

media focused on more negative constructs, such as communication overload, social comparisons, and rumination, which may not have been captured in our measure of social uses (Chen & Lee, 2013; Feinstein et al., 2013; Steers et al., 2014). Notably, two items included in our survey for exploratory purposes asked participants to indicate how often they made social comparisons on the basis of physical appearance and accomplishments. Both of these items were positively correlated with depression (PHQ-8), anxiety (GAD-7) and negative affect (PANAS-N), ps<.01. Thus, while some aspects of online social interactions may indeed be related to mental health concerns, other social uses may relate to psychological wellbeing. Our findings highlight the possibility that the relationship between social use of social media and mental health may be more nuanced than previously suggested.

Notably, the cross-sectional nature of this project limits our ability to infer causal relationships. While more research is needed to investigate the direction of the relationship between high social use and low negative affect revealed in our findings, there is a *possibility* that this relationship may reflect direct, causal benefits from engaging with others online, echoing the well documented benefits that in-person social support offers (e.g. Cohen & Wills, 1985). Recent research examining the relationship between online social support and mental health offers support for this notion. For instance, in a systematic review, Gilmour, Machin, Brownlow, and Jeffries (2019) described several studies that found that social support via social media related to psychological wellbeing and lower levels of depression and anxiety. In one study described in this review, Indian and Grieve (2014) found that Facebook-based social support significantly predicted better psychological wellbeing for individuals high in social anxiety but not for individuals with low social anxiety. This demonstrated that social media may

be a particularly useful avenue for social support for individuals who struggle with social interactions.

Social media may also be an important source of social support for individuals of minority or marginalized identities, for whom in-person social support from other 'in-group' members may be limited. For instance, Harper, Serrano, Bruce, and Bauermeister (2016) found that LGBT youth commonly utilized social media to connect with other sexual minority individuals for social support as a way to explore and find acceptance of their identity, learn about the LGBT community, and find support during the coming out process. Given Hatzenbuehler's (2011) finding that social support is the primary protective factor against mental health difficulties in LGBT youth, social media may provide crucial psychological benefits for these persons.

Thus, our findings that social uses of social media were related to lower negative affect may in part reflect some of the benefits from engaging with others online documented in other studies. As previously noted, our study does not explain the direction of the relationship between social use and negative affect. Moreover, our findings may stem from a pattern in which individuals who are already lower in negative affect may simply be more inclined to reach out and communicate with others online than individuals who are experiencing higher levels of distress. While future research is needed to confirm the direction of the relationship between higher social use and lower negative affect, our findings join existing literature to highlight the possibility that utilizing social media for interacting with others may be related to both harmful and beneficial impacts.

Finally, considering widespread assertions within both research and popular media that social media use contributes to mental health problems, it is important to consider the implications of our null findings regarding the relationships between the three use types and depression and

anxiety. Early research that investigated the relationship between social media use and mental health highlighted the potential negative consequences of social media use in a way that more recent studies suggest may have been unwarranted (Jelenchick, Eickhoff, & Moreno, 2013). For instance, O'Keeffe and Clarke-Pearson's (2011) clinical report published by the American Academy of Pediatrics (AAP) utilized the term "Facebook depression" and encouraged providers and parents to watch for this phenomenon among adolescents. However, later work, such as Jelenchick, Eickhoff, and Moreno (2013), found no associations between depression and social media use and asserted that the AAP's recommendation was premature. In 2016, the AAP revised their statement to remove any mention of "Facebook depression" (AAP Council on Communications and Media, 2016). A recent metanalysis of social media use and adolescent mental health noted the high degree of inconsistencies among research findings, which consist of small positive, negative, and null associations (Odgers & Jensen, 2020). Odgers and Jensen (2020) suggest that moving forward, researchers should utilize measures to capture other risk factors for mental health problems, such as family history, in order to separate the impacts of preexisting risk from social media use. Thus, while future research on the relationship between social media use and mental health is needed, it appears that early concerns may have overestimated the risk of social media use and overlooked the potential benefits of use.

Limitations

There are a few important limitations to note within this study. First, our data were obtained through a self-report survey, introducing the possibility that participants did not thoroughly read or accurately respond to all items. However, our use of 'validity check' questions helped assess participant attentiveness; those who responded incorrectly to these questions were excluded from the analysis. Further, by positioning our mental health and social media use types measures at the

start of our survey, we hoped to maximize accurate and complete responding for our primary variables.

Further, the nature of our sample also introduces some limitations. While we were interested in the social media use patterns of undergraduate students, it is important to consider that our participants were obtained from only one university and may not accurately reflect the characteristics of all US college students. Further, all of our participants were volunteers from psychology courses, and, thus, our sample may also fail to represent the social media use of students across other academic disciplines. Notwithstanding these possibilities, the majority of our participants were obtained through the university's Introduction to Psychology course, which typically includes students from several majors. It is also important to note that the majority of our participants identified as white and cisgender. It is possible that the three types of social media use considered in this study may be differentially related to affective variables in ethnic and gender minorities compared to majority groups. Future research should aim to further assess the patterns of social media use among minority individuals and the affective correlates of this use.

Finally, as noted previously, it is important to emphasize that the cross-sectional nature of this study allows us to only gain insight into the relationship between social media use and affective variables and does not allow us to consider the direction of this relationships. Our findings highlight a relationship between negative affect and both social and information seeking uses of social media. Further research is needed to investigate whether engaging in these types of social media use directly impacts negative affect, or whether individuals who are experiencing negative affective states are more or less likely to engage in these types of use.

Conclusion

In sum, our findings that information seeking and social uses of social media relate to negative affect expand upon the existing literature regarding social media use and mental health among the college student population. Our research sets the stage for further investigation on the direction of these relationships. Given the ubiquity of social media use among this population, it is likely more feasible to advocate for individuals to amend their use rather than decrease their use altogether. If future research efforts specify the direction of the relationships found in this study, we may be able to inform students on how to revise their current social media habits in order to decrease the psychological toll and make better use of the beneficial aspects of this technology. Given the high rates of both mental health conditions and online activity among this population, it is vital that efforts to investigate the psychological impacts of social media use among college students continue to be a prominent research focus.

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Table 1

Characteristics of sample (N=206)

Characteristic	Sample
Age: m (SD)	22.3 (6.1)
Gender: n (%)	
Female	149 (72.3)
Male	51 (24.8)
Genderqueer/ Gender non-conforming/Gender Flux/ Other	3 (1.5)
Missing	3 (1.5)
Ethnicity: n (%)	
White	171 (83.0)
African-American/Black	3 (1.5)
Asian	8 (3.9)
Pacific Islander/Native Hawaiian	1 (.5)
American Indian/Native American/Alaska Native	9 (4.4)
Other/Multi-ethnicity/unknown	11 (5.3)
Missing	3 (1.5)
Hispanic	
Hispanic	11 (5.3)
Non-Hispanic	191 (92.7)
Missing	4 (1.9)
Year in School	
Freshman (Year 1)	60 (29.1)
Sophomore (Year 2)	46 (22.3)
Junior (Year 3)	39 (18.9)
Senior (Year 4 and up)	52 (25.2)
Post Baccalaureate	6 (2.9)
Missing	3 (1.5)
Depression (PHQ-8): m (SD)	6.6 (5.9)
Anxiety (GAD-7): m (SD)	6.4 (5.8)
Positive Affect (PANAS-P): m (SD)	30.4 (9)
Negative Affect (PANAS-N): m (SD)	20.2 (8.1)

Table 2

Correlation Analyses Results

	GAD-7	PANAS-P	PANAS-N	Age	Ethnicity	Gender
PHQ-8	.742***	-.488***	.718***	-.057	-.129	.075
GAD-7		-.374***	.824***	-.039	-.066	.093
PANAS-P			-.399***	.121	.118	-.122
PANAS-N				-.047	-.142*	.089
Age					.047	-.072
Ethnicity						.098

Note: PHQ-8= Patient Health Questionnaire-8; GAD-7= Generalized Anxiety Disorder Scale-7; PANAS-P=Positive and Negative Affect Schedule-Positive Affect Scale; PANAS-N= Positive and Negative Affect Schedule-Negative Affect Scale *p < .05; **p < .01; ***p < .001
.

Table 3

Regression Analyses Results

Variables entered	sr	B	SE B	β
Analysis #1: Criterion = PHQ-8 [a]				
Step 1 (ΔR2 =.018, p=.295)				
Social Use	-.065	-.440	.473	-.094
Entertainment Use	.091	.527	.405	.127
Information Seeking Use	.062	.340	.381	.081
Analysis #2: Criterion = GAD-7 [b]				
Step 1 (ΔR2 =.034, p=.071)				
Social Use	-.150	-.994	.459	-.216*
Entertainment Use	.059	.336	.393	.083
Information Seeking Use	.146	.776	.369	.190*
Analysis #3: Criterion = PANAS-P [c]				
Step 1 (ΔR2 =.027, p=.143)				
Social Use	.089	.920	.717	.129
Entertainment Use	-.135	-1.190	.613	-.189
Information Seeking Use	.090	.749	.576	.118
Analysis #3: Criterion = PANAS-N [d]				
Step 1 (ΔR2 =.020, p=.044*)				
Ethnicity	-.142	-3.159	1.556	-.142*
Step 2 (ΔR2 =.055, p=.01**)				
Social Use	-.151	-1.408	.640	-.218*
Entertainment Use	.087	.698	.547	.122
Information Seeking Use	.185	1.381	.510	.240**
Step 3 (ΔR2 =.022, p=.2)				
Ethnicity x Social	-.041	-.842	1.406	-.113
Ethnicity x Entertainment	-.043	-1.042	1.636	-.165
Ethnicity x Information	-.042	-1.031	1.678	-.167

Note: PHQ-8= Patient Health Questionnaire-8; GAD-7= Generalized Anxiety Disorder Scale-7; PANAS-P=Positive and Negative Affect Schedule-Positive Affect Scale; PANAS-N= Positive and Negative Affect Schedule-Negative Affect Scale *$p < .05$; **$p < .01$; ***$p < .001$

[a] Degrees of freedom for F tests of ΔR^2: Step 1 (3, 201)
[b] Degrees of freedom for F tests of ΔR^2: Step 1 (3, 201)
[c] Degrees of freedom for F tests of ΔR^2: Step 1 (3, 201)
[d] Degrees of freedom for F tests of ΔR^2: Step 1 (1, 200); Step 2 (3, 197); Step 3 (3, 194)

Appendix A. PHQ-8

Please read each of the items carefully. Select your response by circling the number that best

describes over the <u>last 2 weeks,</u> how often you have been bothered by each of the following

problems:

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself, or feeling that you are a failure or have let yourself or your family down.	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television.	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual.	0	1	2	3

IF YOU CHECKED OFF ANY PROBLEMS, HOW *DIFFICULT* HAVE THESE PROBLEMS MADE IT
FOR YOU TO DO YOUR WORK, TAKE CARE OF THINGS AT HOME, OR GET ALONG WITH
OTHER PEOPLE?

Not difficult at all   Somewhat Difficult   Very Difficult   Extremely Difficult

☐   ☐   ☐   ☐

Appendix B. GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems? *(Use "✔" to indicate your answer"*	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Appendix C. PANAS

Appendix D: Social Media Use Questionnaire

Please indicate how often you engage in the following socially oriented social media activities. **ONLY** consider your activity of **social media platforms** (e.g. Facebook, Twitter, Snapchat, Instagram) and **DO NOT** include your general internet, computer, or mobile phone activities.

Social Activities I use social media to…	0-6 times per week	1-5 times per day	6-10 times a day	11-15 times a day	More than 15 times per day
1. Stay in touch with friends or people I know.					
2. Find out what acquaintances or friends are doing.					
3. Maintain relationships with people I may not get to see very often.					
4. Keep in touch with relatives.					
5. Meet new friends.					
6. Comment or "like" my friends' posts (statuses, pictures, videos)					
7. Post my own statuses, pictures, and videos					
8. Check to see who has "liked" or commented on my own posts.					
9. Directly message others.					

10. Overall, how important is it to you to use social media for these *social purposes*?
   - ❑ Not at all important
   - ❑ Somewhat important
   - ❑ Neither important or unimportant
   - ❑ Somewhat unimportant
   - ❑ Very unimportant

11. On average, how much time per day would you estimate that you spend on social media for these *social purposes*
   - ❑ 0-5 minutes
   - ❑ 6-10 minutes
   - ❑ 11-30 minutes
   - ❑ 31-60 minutes
   - ❑ 1-2 hours

- ❑ 2-3 hours
- ❑ 3-4 hours
- ❑ 4-5 hours
- ❑ More than 5 hours

Please indicate how often you engage in the following *entertainment oriented* social media activities. **ONLY** consider your activity of **social media platforms** (e.g. Facebook, Twitter, Snapchat) and **DO NOT** include your general internet, computer, or mobile phone activities.

Entertainment Activities I use social media to…	0-6 times per week	1-5 times a day	6-10 times a day	11-15 times a day	More than 15 times per day
12. Play games.					
13. Listen to music and/or watch music videos.					
14. Read funny text (memes, posts, etc.)					
15. View entertaining videos and images (not including those featuring personal acquaintances)					

16. Overall, how important is it to you to use social media for these *entertainment purposes?*
- ❑ Not at all important
- ❑ Somewhat important
- ❑ Neither important or unimportant
- ❑ Somewhat unimportant
- ❑ Very unimportant

17. On average, how much time per day would you estimate that you spend on social media for these *social purposes*
- ❑ 0-5 minutes
- ❑ 6-10 minutes
- ❑ 11-30 minutes
- ❑ 31-60 minutes
- ❑ 1-2 hours
- ❑ 2-3 hours
- ❑ 3-4 hours
- ❑ 4-5 hours
- ❑ More than 5 hours

Please indicate how often you engage in the following *information oriented* social media activities. **ONLY** consider your activity of **social media platforms** (e.g. Facebook, Twitter, Snapchat) and **DO NOT** include your general internet, computer, or mobile phone activities.

Informational Activities I use social media to…	0-6 times per week	1-5 times a day	6-10 times a day	11-15 times a day	More than 15 times per day
18. Find or share information.					
19. Keep up with current events.					
20. Follow politics.					
21. Access content for educational purposes.					

22. Overall, how important is it to you to use social media for these informational purposes?
   - ❑ Not at all important
   - ❑ Somewhat important
   - ❑ Neither important or unimportant
   - ❑ Somewhat unimportant
   - ❑ Very unimportant

23. On average, how much time per day would you estimate that you spend on social media for these *social purposes*
   - ❑ 1-5 minutes
   - ❑ 6-10 minutes
   - ❑ 11-30 minutes
   - ❑ 31-60 minutes
   - ❑ 1-2 hours
   - ❑ 2-3 hours
   - ❑ 3-4 hours
   - ❑ 4-5 hours
   - ❑ More than 5 hours

   Please answer the following questions about your typical social media use.
24. Which social media sites do you use? (Select all that apply)
   - ❑ Facebook
   - ❑ Instagram
   - ❑ Snapchat
   - ❑ Twitter
   - ❑ LinkedIn
   - ❑ Pinterest
   - ❑ Youtube
   - ❑ WhatsApp
   - ❑ Reddit
   - ❑ Tumblr
   - ❑ Tik Tok
   - ❑ Google+
   - ❑ Flickr

❏ Kik
❏ Other (Specify _____)

25. Of the social media platforms that you use, which do you use most often? (Select only one)
    ❏ Facebook
    ❏ Instagram
    ❏ Snapchat
    ❏ Twitter
    ❏ LinkedIn
    ❏ Pinterest
    ❏ Youtube
    ❏ WhatsApp
    ❏ Reddit
    ❏ Tumblr
    ❏ Tik Tok
    ❏ Google +
    ❏ Flickr
    ❏ Kik
    ❏ Other (Specifiy ____)

26. How often do you access social media platforms?
    ❏ 0-6 times a week
    ❏ 1 time per day
    ❏ 2-5 times per day
    ❏ 6-10 times per day
    ❏ 10-20 times per day
    ❏ More than 20 times per day

27. When you log on to a particular social media platform, how long do you usually spend on that site?
    ❏ 0-5 minutes
    ❏ 6-10 minutes
    ❏ 11-30 minutes
    ❏ 31-60 minutes
    ❏ 1-2 hours
    ❏ 2-3 hours
    ❏ 3-4 hours
    ❏ 4-5 hours
    ❏ More than 5 hours

28. Which of the following devices do you use to access social media platforms? (Select all that apply)
    ❏ Public computer (e.g. library or school computer)
    ❏ Shared family computer

- ❑ Personal computer
- ❑ Tablet (e.g., iPad)
- ❑ Smartphone

29. Which of the following devices do you use MOST OFTEN to access social media platforms? (Select only one)
- ❑ Public computer (e.g. library or school computer)
- ❑ Shared family computer
- ❑ Personal computer
- ❑ Tablet (e.g., iPad)
- ❑ Smartphone

30. For which of the following reasons do you use social media? (Select all that apply)
- ❑ To interact and connect with others
- ❑ To learn about what's going on in the world
- ❑ To pass time
- ❑ To be entertained
- ❑ To relax
- ❑ To find topics to talk to others about
- ❑ Because it's easy to access
- ❑ To help manage my mood (e.g., to make me feel better when I'm sad, stressed, or lonely)
- ❑ To help keep distressing thoughts out of mind
- ❑ To take a quick break during my day
- ❑ To procrastinate/ avoid other responsibilities
- ❑ To express myself

31. When accessing social media sites, how often do you have a specific purpose in mind (e.g., to look up a specific topic, to check the current news, to view a friend's profile, to message an individual)
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

32. When accessing social media sites, how often do you NOT have a specific purpose in mind (for example, you're simply browsing through content).
- ❑ Very often
- ❑ Fairly often

- ❑ Sometimes
- ❑ Rarely
- ❑ Never

33. How often do you access social media platforms with the INTENTION of connecting with others or checking in to see what others are doing?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

34. How often do you access social media platforms with the INTENTION of looking for news, seeing what's going on in the world, or learning new information?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

35. How often do you access social media platforms with the INTENTION of being entertained or seeking entertaining content?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

36. What times of day do you use social media (select all that apply).
- ❑ Immediately after waking up
- ❑ Morning (before noon)
- ❑ Afternoon (noon to 4:00pm)
- ❑ Evening (4:00pm to 8:00pm)
- ❑ Night (8:00-12:00AM)
- ❑ Late Night (after 12:00AM)
- ❑ Right before going to bed

37. How often do you leave your social media notification **sounds** on during the day?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

38. How often do you leave your social media notification **sounds** on at night while you are sleeping?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

39. How often do wake up during the night and check your social media notifications or accounts?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

40. How often do you access social media to avoid doing other work (academic, household, professional, etc.)?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

41. How often do you access social media to avoid interacting with others?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

42. How often do you access social media to avoid negative emotions or thoughts?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

43. How often do you access social media because you are feeling…

	Never	Rarely	Sometimes	Fairly Often	Very Often
Bored					
Sad/down					
Lonely					
Angry					
Happy					
Stressed					
Relaxed					
Anxious					
Curious					
Guilty					

44. Compared to how you feel *before* using social media sites, *after* using social media sites, does your mood generally feel…
- ❑ Much worse
- ❑ A little worse
- ❑ The same
- ❑ A little better
- ❑ Much better

45. After engaging with social media, how do you generally feel? (Select all that apply)

	Never	Rarely	Sometimes	Fairly Often	Very Often
Bored					
Sad/down					
Lonely					
Angry					
Happy					
Stressed					
Relaxed					
Anxious					
Curious					
Guilty					

46. When engaging with social media, how often do you compare your accomplishments with those of others?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

47. When engaging with social media, how often do you compare the number of "friends" or "followers" you have to the amount that other individuals have?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

48. When engaging with social media, how often do you compare your physical appearance with that of others?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

49. While engaging with social media, how often do you encounter ads featuring products aimed at enhancing physical appearance (e.g. makeup, clothing, diet products, fitness products)?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

50. How often do you feel like the amount of news or information you are exposed to on social media is overwhelming?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

51. On average, how many "likes" do you get on the pictures, videos, or posts that you share on your social media account?
- ❑ 0-5
- ❑ 6-10
- ❑ 11-15
- ❑ 16-20
- ❑ 20-30
- ❑ 31-50
- ❑ 51-100
- ❑ 101-150
- ❑ 151-200
- ❑ Over 200

52. How many "likes" would you need to get on the pictures, videos, or posts that you share on a social media account in order for you to think the post was a *good* one?
- ❑ 0-5
- ❑ 6-10
- ❑ 11-15
- ❑ 16-20
- ❑ 20-30
- ❑ 31-50
- ❑ 51-100
- ❑ 101-150
- ❑ 151-200
- ❑ Over 200

53. On average, how many "likes" do you think the majority of your friends get on the pictures, videos, or posts that they share on their social media account?
- ❑ 0-5
- ❑ 6-10
- ❑ 11-15
- ❑ 16-20
- ❑ 20-30
- ❑ 31-50
- ❑ 51-100
- ❑ 101-150
- ❑ 151-200
- ❑ Over 200

54. If a picture, video, or post you shared on your social media account does not get the number of "likes" or comments that you had anticipated it would, how often do you remove the post from your account?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

55. How upset do you generally feel if a particular person you care about (e.g. best friend, partner) does not "like" or comment on something you have posted on your social media account?
- ❑ Very upset
- ❑ Moderately upset
- ❑ A little upset
- ❑ Not at all upset

56. After engaging with social media, how often do you feel guilty or as if you have wasted time?
- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

57. Please consider the impact that your current social media use has on the following aspects of your life and indicate how harmful or beneficial you think that impact is.

My current social media use is _____ (type of impact) to…	Very Harmful	Somewhat harmful	Not related	Somewhat beneficial	Very beneficial
My overall mood					
My self esteem					
My academic/ professional work					
My relationships					
My mental health					

For questions 58-63, please indicate how frequently each statement is true concerning your social media use.

58. You spend a lot of time thinking about social media or planning how to use it.

- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

59. You feel an urge to use social media more and more.

- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

60. You use social media in order to forget about personal problems.

- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

61. You have tried to cut down on the use of social media without success.

- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

62. You become restless or troubled if you are prohibited from using social media.

- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

63. You use social media so much that it has had a negative impact on your job/studies.

- ❑ Very often
- ❑ Fairly often
- ❑ Sometimes
- ❑ Rarely
- ❑ Never

Appendix E: Demographic Questionnaire

> ***Demographic questionnaire: Please answer the following questions about you.***

1. Age _____

2A. What is your current gender identity?

- ❑ Male
- ❑ Female
- ❑ Trans male/Trans man
- ❑ Trans female/Trans woman
- ❑ Genderqueer/ Gender non-conforming
- ❑ Different identity (please specify):_____

2B. What sex were you assigned at birth, meaning on your original birth certificate?

- ❑ Male
- ❑ Female

3. What best describes your ethnic background?

a. Hispanic / Latino

- ❑ No
- ❑ Yes

b. Additionally, do you identify as:

- ❑ African-American / Black
- ❑ Asian
- ❑ Pacific Islander/Native Hawaiian
- ❑ White
- ❑ American Indian/Alaska Native
- ❑ More than one ethnic group
- ❑ Other:_____
- ❑ Not known