

University of Tennessee at Chattanooga

UTC Scholar

---

Honors Theses

Student Research, Creative Works, and  
Publications

---

5-2022

## The effects of the COVID-19 pandemic on the fear of missing out, anxiety, and loneliness

Hannah Turner

University of Tennessee at Chattanooga, [rzm394@mocs.utc.edu](mailto:rzm394@mocs.utc.edu)

Follow this and additional works at: <https://scholar.utc.edu/honors-theses>

---

### Recommended Citation

Turner, Hannah, "The effects of the COVID-19 pandemic on the fear of missing out, anxiety, and loneliness" (2022). *Honors Theses*.

This Theses is brought to you for free and open access by the Student Research, Creative Works, and Publications at UTC Scholar. It has been accepted for inclusion in Honors Theses by an authorized administrator of UTC Scholar. For more information, please contact [scholar@utc.edu](mailto:scholar@utc.edu).

The Effects of the COVID-19 Pandemic on the Fear of Missing Out, Anxiety, and Loneliness

Hannah Turner

Departmental Honors Thesis

Examination Date: November 5<sup>th</sup>, 2021

The University of Tennessee at Chattanooga, Psychology

Kevin Doyle, PhD

Assistant Professor of Counseling

Thesis Director

Ashely Howell, PhD

Assistant Professor of Psychology

Departmental Examiner

Table of Contents

Abstract.....3

Background.....4

    The COVID-19 Pandemic.....4

    Social Media.....6

    Fear of Missing Out.....8

    Loneliness.....9

    Anxiety.....11

Methods.....13

    Procedure.....13

    Measures.....13

    Participants.....15

    Data Analysis.....15

Results.....16

Discussion.....18

Conclusion.....22

References.....24

    Appendix A.....30

### **Abstract**

The unprecedented nature of the COVID-19 pandemic implores consideration for how the psychopathological constructs the fear of missing out, anxiety, and loneliness are affected within this context (Liverant et al., 2004; Rajkumar, 2020). These mental well-being variables also all appear in association with social media (Hunt et al., 2018; Caplan, 2007). While previous research has explored the initial impacts of the pandemic on mental well-being (Wang, Pan et al., 2020; Bu et al., 2020), this research further examines the effect on college students' mental well-being in the pandemic alongside social media usage. I hypothesize that levels of the fear of missing out, anxiety, and loneliness in college students will be higher during the COVID-19 pandemic than previous historical samples. I hypothesize that there will be a significant relationship between social media and these variables. I hypothesize that social media usage explains the variance in levels of the fear of missing out, anxiety, and loneliness in college students. Results of this study found increased levels of the fear of missing out, anxiety, and loneliness in college students. These variables also were strongly correlated between each other and social media. Social media usage only explained 11.8% of the variance in the fear of missing out and less for loneliness and anxiety, 7.1% and 4.8% respectively ( $p < 0.05$ ). Social media is contributing to the issue, but the pandemic poses a much larger issue that might be weighing more heavily on students.

## **The Effects of the COVID-19 Pandemic on the Fear of Missing Out, Anxiety, and Loneliness**

The COVID-19 pandemic, a respiratory disease that has spread worldwide, poses a unique threat to mental wellbeing. Challenges posed by the pandemic have led many people to experience new life events and changes to everyday life. Social distancing and isolation policies that have been put in place in response to the COVID-19 pandemic leads to some negative mental health impacts (Wang, Pan et al., 2020; Bu et al., 2020). This thesis will explore the psychopathological constructs of the fear of missing out, anxiety, and loneliness within the COVID-19 pandemic along with the relationship of negative well-being and social media.

In a literature review covering some of the current research involving the COVID-19 pandemic and its effects on mental health, research concluded that subsyndromal mental health symptoms and concerns have risen due to the pandemic (Rajkumar, 2020). Results of a study assessing levels of depression, anxiety, and stress symptoms during the initial stages of the COVID-19 outbreak in China showed that 16.5% expressed moderate to severe depressive symptoms, 28.8% expressed moderate to severe anxiety, and 8.1% were showing moderate to severe stress with female gender, students, and people with specific physical symptoms being disproportionately affected (Wang, Pan et al., 2020).

Chen, Sun, and Feng (2020) evaluated seven aspects of mental health for adolescents (mental status, behavioral patterns, knowledge of stress management, perceived risk, academic stress, family and peer relationships) and found that isolation had the largest negative impact on stress and depression symptoms. In a study examining the prevalence of anxiety and depression symptoms in college students during the COVID-19 epidemic stage in China, the results showed that the risk of anxiety and depression symptoms were associated with COVID-epidemic related

factors, and the risk of depression symptoms were higher in students whose family members had suspected cases (Wang, Yang et al., 2020). The findings from these studies point towards increased negative mental health symptoms with students and adolescents as being more likely to experience negative mental health impacts during the pandemic.

Zhao et al. (2020) assessed the relationships between social capital, a measure of trust, belonging, and participation in social settings, with anxiety and stress as well as how it would affect sleep quality. There seemed to be a negative correlation between social capital and anxiety and stress levels. Thus, isolation due to the pandemic resulted in higher levels of anxiety and stress from decreased social capital. The positive effects of social capital on sleep quality were also reduced due to the combination of increased anxiety and stress levels. Studies such as this implore further inquiry into the psychological consequences of the COVID-19 pandemic on college students and call for possible interventions (Zhao et al., 2020).

The COVID-19 pandemic measures were expected to bring increased loneliness levels; however, Luchetti and colleagues (2020) found that loneliness levels did not change over the course of the first couple months of the pandemic and even reported higher levels of support during the initial phases of the outbreak. In comparison to younger age groups, older adults reported less loneliness overall except for the acute phase of the outbreak (Luchetti et al., 2020). The lack of a significant increase in loneliness could point to resilience factors; however, other research studies have revealed contradictory findings with regard to loneliness in the pandemic. Younger populations and college students are targeted for greater impacts from the COVID-19 pandemic as Bu et. al. (2020) found that students and young adults aged 18-30 experienced higher risk for loneliness during the pandemic. The contradictory results thus require further inquiry (Luchetti et al., 2020; Bu et al.,2020). It is important to consider that much of the

previous literature assessed the levels of psychopathological constructs during the initial stages of the pandemic (Luchetti et al., 2020; Wang, Pan et al. 2020; Bu et al.,2020); consequently, this implores examination of longer term effects on mental health as pandemic measures continue.

### **Social Media**

Social media is a popular means to interact virtually with other people to share ideas, information, and interests. This form of technology is prevalent among the young adult population due to it being relatively recent. However, there are some concerns about the possible negative mental health impacts associated with excessive social media use. When analyzing the relations between social anxiety, loneliness, and problematic internet use, Caplan (2007) found that social anxiety acts as a confounding variable for loneliness and online social interaction. In a study focusing on the relationship between college student's well-being and social media usage, researchers found a positive relationship between "social" type social networking sites, and users' subjective well-being while "entertainment" type social networking sites were not (Wang et al., 2014). This suggests that student's well-being increases with their involvement on "social" sites such as Facebook and could possibly be related to their connectedness and lack of loneliness (Ryan et al., 2017). The findings of these studies might not be as generalizable and implores stronger evidence for the type of relationships between variables.

Social media use may have a role in other negative mental wellbeing impacts as well. In relation to social media usage, Hunt et. al. (2018) evaluated seven well-being constructs: social support, the fear of missing out, loneliness, anxiety, depression, self-esteem, and autonomy/self-acceptance. The results of their research showed decreased fear of missing out and anxiety when social media use was limited as well as reductions of depression and loneliness (Hunt, et al., 2018). However, Ryan and colleague's (2017) review of previous literature associations between

social media use and connectedness show contradictory results in effects on loneliness. It should be further examined how exactly social media affects loneliness.

Further, it should be noted that social media use has been closely tied to the fear of missing out in multiple studies (Wolniewicz et al., 2018; Reer et al., 2019). By examining students' interactions with social media and the fear of missing out in the context of problematic Facebook use (PFU), Dempsey and colleagues (2019) found that the relationship between social anxiety and the severity of PFU was mediated by the fear of missing out. Although social media and its specific forms have a noted association with wellbeing, it is also important to consider the implications of smartphone use alongside indicators of wellbeing. The frequency and ultimately problematic use of smartphones as related to fear of missing out and need for touch was inversely related to depression, along with anxiety symptoms being associated with smartphone usage (Elhai et al., 2016). The implications of social media on the fear of missing out and especially need for touch may become more apparent during the COVID-19 pandemic.

The previous research indicating the possible consequences of social media have negative impacts (Elhai et al., 2016; Hunt et al., 2018; Caplan, 2007) may become more apparent as the COVID-19 pandemic measures affect how people interact with each other. The pandemic measures result in new implications for the role of social media in mental wellbeing. As more time is spent at home and socially distanced, social media may play a bigger role in feeling connected.

### **Fear of Missing Out**

A psychopathological construct commonly found in association with social media is the fear of missing out (Wolniewicz et al., 2018; Reer et al., 2019; Dempsey et al., 2019). The fear of missing out (FoMO), a relatively recent phenomenon, is “defined as a pervasive apprehension

that others might be having rewarding experiences from which one is absent,” and “characterized by the desire to stay continually connected with what others are doing.” (Przybylski et al., 2013, p.1841). The fear of missing out has gained more attention within recent years as it seems to be tied to many mental health conditions. Casale and Flett (2020) mention that “there is initial evidence that FOMO is a promising construct to explain some human experiences and behaviors derived from the unmet need of relatedness”(p.90). In a study evaluating anxiety attachment, boredom proneness, and fear of missing out, researchers found that boredom proneness mediated anxiety and depression severity with FoMO while also showing that anxiety attachment can cause boredom proneness to predict levels of FoMO (Holte & Ferraro, 2020). This is significant because it suggests a tie between FoMO and other mental health constructs.

The fear of missing out appears to be highly associated with social media. Baker, Krieger, and LeRoy (2016) found an association between the fear of missing out and the amount of time college students spent on social media. In a study performed by Wolniewicz and colleagues (2018), the results showed that out of all the psychopathology-related variables proposed, FoMO appeared to have the strongest relationship with problematic smartphone use and social media usage. The results of research produced by Przybylski et. al. (2013) showed that higher levels of FoMO were found in younger people, which could be related to the prevalence of social media use in younger populations.

Multiple studies have examined FoMO acting as a mediator between depression and anxiety in the context of problematic smartphone use (Elhai et al., 2020; Wolniewicz et al., 2020). Meanwhile, other researchers have looked at the fear of missing out as a mediator between depression, anxiety, and loneliness as decreased mental well-being indicators in the context of social media engagement (Reer et al., 2019). However, it is still yet to be understood

about the directionality of the relationships between the psychopathological variables FoMO, anxiety, and loneliness.

Rifkin and colleagues (2015) concluded that the fear of missing out can cause one to enjoy the current event they are experiencing less and therefore miss out on that event in the process. In the study, FoMO was triggered by seeing social media photos of missed social events even when attending an event considered more enjoyable; furthermore, this alludes to the implications of social media and mental well-being (Rifkin, et al., 2015). It may be interesting to see the role FoMO plays in the relationship between social media and social connectedness (Ryan et al., 2017). The COVID-19 pandemic poses a unique situation for feelings of missing out as people encounter new challenges and unmet needs of connectedness. Due to the unexpected and dynamic nature of a pandemic, there is a lack of research on the levels of FoMO experienced by college students during the COVID-19 pandemic.

### **Loneliness**

Loneliness is an emotional stressor among many predictors of mental wellbeing. Loneliness is experienced across all age groups with some age groups being of particular interest due to their specific differences. In a study examining different measures of social disconnectedness in older adults, results showed that subjective loneliness and network quality were the best predictors for mental health with subjective loneliness being the strongest (Beller & Wagner, 2018). Since younger age groups typically experience different settings, further research should explore the implications of loneliness as a predictor of mental wellbeing for young adults in the university setting. Clayton et. al. (2013) examined college students' connections with others through social media and found that loneliness and anxiety were predictors for connections with others through Facebook use. This study also alludes to the role

of social media in loneliness and connecting with others and adds to the compilation of mixed results in the relationship between social media and loneliness (Clayton et al., 2013; Ryan et. al., 2017).

There has been much debate over whether individuals experiencing loneliness seek out social media to resolve feelings of loneliness or whether social media exacerbates feelings of loneliness. In a study examining the causal relationship between social media use and negative indicators of well-being, results showed that loneliness and depression significantly reduced in the group with limited social media use (Hunt et al., 2018). It is important to understand that loneliness not only stems from a lack of connections but also is a byproduct of other factors including personal situations, isolation, or social anxiety (Ryan et al., 2017). Treating symptoms of social anxiety reduces feelings of loneliness as Lim et. al. (2016) found that social anxiety was a predictor for future loneliness. Although social anxiety predicts future levels of loneliness, loneliness also has been found to predict higher levels of depression, social anxiety symptoms, and paranoia (Lim et al., 2016).

Loneliness' effects on biological health must also be taken into consideration as results have shown that loneliness and social isolation leads to many negative health behaviors and consequences (Shankar et al., 2011). It is important to take into consideration these findings with the implications of social distancing during the pandemic. The COVID-19 pandemic has posed the major implication for loneliness due to social distancing procedures and how people adapt to loss of in person connections.

### **Anxiety**

College student populations face many problems due to aspects of negative well-being with anxiety being one of them. Anxiety in college students is found to be a significant predictor

for connections with others through social media (Clayton et al., 2013). Clayton et. al. (2013) examined college students' need for connectedness through Facebook use and found that anxiousness along with alcohol and marijuana use predicted emotional attachment to Facebook with anxiousness being a significant predictor. Elhai et. al (2016) also found that problematic smartphone use is associated with depression and anxiety and can be mediated by behavioral changes or positive alternative responses to avoidance. FoMO might also be tied to the association between problematic smartphone use and anxiety (Elhai et al., 2016). The fear of missing out is another variable that should be considered alongside anxiety. In a study where participants were required to limit social media, researchers found that there were significant declines in anxiety and fear of missing out symptoms (Hunt et al., 2018).

Social media poses as a situation in which individuals can interact socially, and research has shown that most individuals will experience anxiety symptoms surrounding social situations at some point or another (Purdon et al., 2001). Purdon et al. (2001) found that individuals with higher levels of social anxiety were more likely to judge and be less attracted to others who appear anxious. This leads one to consider how social anxiety interacts with indicators of mental well-being. Social anxiety and loneliness share a relationship that suggests they are predictors for future mental health issues as social anxiety levels earlier in life predict future loneliness (Lim, 2016).

Unprecedented events also pose a unique impact to anxiety levels, as seen through the event of 9-11 (Liverant et al., 2004). Liverant et. al. (2004) found that the unprecedented societal impact of 9-11 affected anxiety levels in college students, but the decay of the impact over time speaks to the resilience of college students. With the Covid-19 pandemic being so

unprecedented, researchers should continue to monitor how the societal impacts of the pandemic impacts the general population's anxiety as a whole.

The mental wellbeing variables loneliness, anxiety, and the fear of missing out all appear within the context of social media (Hunt et al., 2018; Caplan, 2007). The COVID-19 pandemic poses a curious question as to how the variables might be affected in the face of an unprecedented experience (Liverant et al., 2004; Rajkumar, 2020). The research questions posed are as follows: How has the COVID-19 pandemic affected the severity of the decreased mental wellbeing indicators, the fear of missing out, anxiety, and loneliness, in college students? What is the relationship between the prevalence of social media use and the levels of anxiety, loneliness, and the fear of missing out during the pandemic? How much variance in these mental health indicators in college students can be explained by social media usage? I hypothesize that levels of the fear of missing out, anxiety, and loneliness in college students will be higher during the COVID-19 pandemic than previously shown in historical data. I hypothesize that there will be a significant relationship between social media and these variables. Also, I hypothesize that social media usage explains the variance in levels of the fear of missing out, anxiety, and loneliness in college students.

## **Methods**

### **Procedure**

The World Health Organization (WHO) declared the COVID-19 virus a pandemic in spring of 2020 (WHO, 2020). Shortly after the United States declared a state of emergency and began implementing new protocols for managing the spread of the virus to include isolation, social distancing, and mask mandates. About 8 months after COVID-19 was declared a

pandemic, the online survey questionnaire was composed to assess how the COVID-19 pandemic might have affected student wellbeing. Shortly after receiving IRB approval, the online survey questionnaire was posted on SONA, an online research study recruitment tool, to allow students to take part in the study. Students who chose to fill out the survey through SONA were granted extra credit to apply towards their psychology course. Emails were also set out to students through university programs so that they could have access to the online survey and volunteer to participate. The survey took about 5 minutes to complete. Students who started the survey were able to drop out at any time.

### **Measures**

In the online survey, participants completed three scaled questionnaires, a sum of their time spent on social media, and their personal demographics. The students were asked to fill out demographic information for providing a description of the sample. The following survey measures were used to assess social media use, the fear of missing out, anxiety, and loneliness levels.

#### ***Social Media Usage***

Social media usage was measured by having the students self-report the average amount of time they spent on social media (i.e. Instagram, Facebook, Twitter, etc.) each day.

#### ***The Fear of Missing Out***

The Fear of Missing Out Scale (FoMOs) (Przybylski et al., 2013) is used to assess levels of distress a person feels from missing out on a social experience. The FoMOs is a 10-item scale that asks the participants to rate each statement item using a 5-point Likert scale ranging from 1 (Not true of me at all) to 5 (Extremely true of me). Scores were computed by averaging across

the responses to all ten items for each participant. This scale has shown good internal consistency with  $\alpha = .90$ .

### ***Anxiety***

The Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) was used to measure severity of anxiety by having participants answer a 21-item scaled response with three distinct subscales. The three subscales of the DASS-21 measure depression, anxiety, and stress, and each consist of 7-item scaled responses taken from the full version of the DASS. Each of the subscales have good internal consistencies with  $\alpha = .88$  for the Depression scale,  $\alpha = .82$  for the Anxiety scale, and  $\alpha = .90$  for the Stress scale with an  $\alpha = .93$  for the Total scale (Henry & Crawford, 2005).

### ***Loneliness***

The Revised UCLA Loneliness Scale (Russell et al., 1980) assesses one's perception of their own social isolation and feelings of loneliness. It is a 20-item self-report measure where participants are asked to rate each statement on a scale from 1 (Never) to 4 (Often). The measure was revised to make 10 of the 20 items reverse scored along with revisions to simplify the wording. The UCLA Loneliness Scale is known to be highly reliable with regard to internal consistency ( $\alpha = .89-.94$ ) and test-retest reliability over 1 year ( $r = .73$ ). Both construct and convergent validity showed significant correlations with other measures of loneliness. There is also support for construct validity through measures of wellbeing and an individual's interpersonal relationships (Russell, 1996).

### **Participants**

The population of focus in this study was college students at a mid-sized, Southeastern university. A sample size of 111 participants was collected; and, according to a G\*power

analysis calculating a power of .8 and moderate effect size, there was reported a need of 55 participants to receive valid results (Faul et. al., 2007). An online survey was made available to the student population through SONA, an online research participant recruiting page, and via email notification. In order to take the survey, participants had to be a student at the university and 18 years or older. The student's participation in this study was completely confidential and voluntary after being informed of what the study entails. The survey went live on SONA on February 5th, 2021 and closed on May 1st, 2021. The sample size collected was a population of 111 participants, 17 male, 92 female, 2 non-binary. Of the collected population, 83 were white, 7 black, 6 asian, 4 hispanic/latino, and 11 mixed race, which were any individuals who mark more than one race. Majority of the students were juniors, comprising 36.0% of the collected sample. The mean age for the sample was 20.98, ranging from 18 to 47. Of the 111 participants, 109 reported their social media use with the average time spent on social media at 3.45 hours.

### **Data Analysis**

At the close of the survey, there were a total of 131 participants. Twenty participants were removed from the study for incomplete data sets. Participants reported social media time in hours and minutes, while others reported ranges; all minutes were converted to decimals and the ranges were converted to the midpoint. The reported social media time was standardized in the sample to hours. The data received from the survey was then compared to historical data for each of the variables using one sample t-tests to see if levels of FoMO, anxiety, and loneliness are significantly higher during the COVID-19 pandemic. Correlation was used to analyze the variables social media usage, fear of missing out, anxiety, and loneliness. This was then followed by a series of three separate regression equations to examine how social media usage explains changes in the dependent variables.

## Results

### Hypothesis 1

A one-sample t-test was run to determine whether levels of fear of missing out, loneliness, and anxiety in the recruited subjects differed from those of historical data. In the one-sample t-test ran for levels of FOMO. The mean FOMO score ( $M=2.75$ ,  $SD= 0.83$ ) was higher than the historical score, with a statistically significant mean difference of 0.86, 95% CI [0.70 to 1.02]  $t(110) = 10.905$ ,  $p < .05$  (.000). The historical data was defined as a score of 1.89 (Przybylski, et al., 2013). The historical data represented the general population cohort with ages ranging from 22 to 65. This data shows that in the spring of 2021 college students were experiencing significantly higher levels of FOMO.

For the one-sample t-test ran to assess levels of loneliness, the mean loneliness score for the sample ( $M = 43.44$ ,  $SD = 10.20$ ) was higher than the historical score, showing a statistically significant mean difference of 3.36, 95% CI [1.44 to 5.28],  $t(110)= 3.473$ ,  $p < .05$  (.001). The collected sample was compared against the historical data of a college student cohort, defined as 40.08 (Russell, 1996).

For the one-sample t-test that compared the levels of anxiety within the recruited sample to a robust sample with a wide range of ages, the mean anxiety score for the recruited sample ( $M= 6.63$ ,  $SD= 5.31$ ) was higher than the historical score, with a statistically significant mean difference of 4.75, 95% CI [3.75 to 5.75],  $t(110)= 9.422$ ,  $p < .05$  (.000). The historical score used was 1.88 (Henry & Crawford, 2005). Some of the differences between samples might be accounted for by age as the historical sample encompassed a large age range while the recruited sample was a college student population.

## Hypothesis 2

A Pearson product-moment correlation was run to determine the relationship between social media usage and the variables fear of missing out, loneliness, and anxiety. Of the 111 participants, two did not report their social media usage and were not included in the correlations. There was a medium, positive correlation between social media usage and the fear of missing out, which was statistically significant ( $r = .343, n = 109, p = .000$ ). There also was a small, positive correlation between social media use and loneliness which was statistically significant as well as a small, positive correlation between social media use and anxiety that was significant ( $r = .218, n = 109, p = .023$ ). Certain variables proved to be more intercorrelated as results showed a significant positive correlation between loneliness and anxiety ( $r = .618, n = 111, p = .000$ ). The fear of missing out also had positive correlations with anxiety ( $r = .493, n = 111, p = .000$ ) and loneliness ( $r = .339, n = 111, p = .000$ ).

## Hypothesis 3

After running separate regression analyses, results showed that 11.8% of the variance in the fear of missing out can be explained by social media usage ( $R^2 = .118, F(109) = 14.273, p < .000$ ). The regression analyses also revealed that time spent on social media can only explain 7.1% of the loneliness experienced by our collected sample ( $R^2 = .071, F(109) = 8.125, p < .005$ ). The results of the regression analyses revealed that time spent on social media explained anxiety the least, accounting for only 4.8% ( $R^2 = .048, F(109) = 5.360, p < .023$ ).

## Discussion

In an attempt to explore the psychopathological constructs of the fear of missing out, anxiety, and loneliness during the COVID-19 pandemic, a research study assessed a sample of

111 students from a Southeastern university. The self-report survey assessed the levels of the fear of missing out, anxiety, and loneliness. The relationship between social media usage and the psychopathological variables was investigated as well. Through the self-report survey, the students demonstrated significantly higher levels of fear of missing out during the Spring 2021 semester as compared to historical data (Przybylski et al., 2013). The findings of this study also showed significantly higher levels of loneliness and anxiety in college students in the Spring 2021 semester as compared to the historical samples respectively (Russell, 1996; Henry & Crawford, 2005). These findings suggest that the COVID-19 pandemic had a significant impact on the mental wellbeing of college students, overall increasing feelings of anxiety, loneliness, and the fear of missing out. This study contributes to the argument that negative mental health indicators that are typically higher for the college student population have gotten even worse through the COVID-19 pandemic. Previous research indicated initial concerns about the COVID-19 pandemic along with a rise in negative mental health symptoms (Rajkumar, 2020). The findings of this research shows that these concerns have lasting effects for the college student population. Upon examination of the correlations between the variables, the analyses revealed strong alignment between the psychopathological constructs the fear of missing out, anxiety, and loneliness as well as these variables' relationship with social media (see Appendix A).

Another important finding from this study was uncovered through the regression analyses of social media usage, the fear of missing out, anxiety, and loneliness. Social media usage is able to explain some of the psychopathological constructs but not all. It is important to note that social media usage only accounts for 11.8% of the variance in the fear of missing out and even less for the variables loneliness and anxiety, 7.1% and 4.8% respectively ( $p < 0.05$ ). The amount

of variance unexplained by social media on mental wellbeing variables is an important finding from this study. This finding alludes to the idea that social media is not the only construct that is negatively affecting the students' wellbeing, especially since social media explains less with loneliness and anxiety than the fear of missing out. This research study did not explore causality between social media and the mental wellbeing variables. It is important to consider that people experiencing higher levels of the fear of missing out could lead them to engage more in social media (Baker et al., 2016). College students could be using social media as an outlet to relieve some of these negative mental health symptoms (Ryan et al., 2017). Social media might be part of the problem, but the pandemic poses a much larger issue and other unexplained variables might be weighing more heavily on students.

### **Implications**

The findings from this research pose significant implications for what this means for college students as they are experiencing higher levels of the fear of missing out, anxiety, and loneliness. The pandemic is a new contributor to mental health issues as it offers different concerns than those already typically experienced by college students. The success of college students is liable to be hindered by mental health issues, so it is crucial for colleges to evaluate the wellbeing of their students and create programs that engage with the needs of their students (Beiter et al., 2015). Previous research has suggested that the majority of college students experience anxiety symptoms periodically (Purdon et al., 2001). As social distancing procedures were placed during the pandemic and many courses moved to virtual environments, college students could gain more anxiety surrounding in-person social interactions. The increased levels of anxiety in college students might be influenced by the risks associated with the COVID-19 virus, and previous research found that the risk of anxiety and depression symptoms were

associated with pandemic related factors especially when it concerned the health of family members (Wang, Yang et al., 2020). It is important for institutions to find new ways to connect and engage college students while they are experiencing these elevated levels of anxiety, loneliness, and the fear of missing out.

It is also important to consider how the COVID-19 pandemic impacts these facets of mental health should unprecedented events of the same gravity happen again. Similar to the distress occurring from displacement due to disasters such as Hurricane Katrina, the COVID-19 pandemic poses existential threats that contribute to the increased levels of the fear of missing out, anxiety, and loneliness in college students (Davis et al., 2010). Research has shown that the initial effects of unprecedented disasters on mental wellbeing fades with time, but maladaptive coping strategies can lead to longer term effects of negative well-being (Liverant et al., 2007). This implores outreach and interventions from universities and college counselors to assist students in managing the elevated levels of negative mental health symptoms.

The COVID-19 pandemic brought on the unique circumstances of widespread isolation and social distancing procedures, producing the implication of how people will connect and keep up with each other through sources such as social media. It is also important to consider the role social media plays in negative mental well-being with its associations with the fear of missing out, anxiety, and loneliness. Previous research has shown that when social media use is limited, there are reductions in the fear of missing out, anxiety, and loneliness (Hunt et al., 2018). However, the lack of an explanation for the variance in the psychopathological constructs alludes to the duality of the role social media plays in the relationship with these variables. The findings of this research implies how institutions may use social media to reach out to students and create interventions to reduce negative well-being aspects such as loneliness. It is important to consider

that social media had the largest role in explaining the variance of the fear of missing out, and the two variables' association has been noted in other studies (Wolniewicz et al., 2018; Reer et al., 2019). This further implies that while social media use limitations may be best suited to relieve some of the distress felt by the fear of missing out, it will not relieve the distress of other factors experienced by college students.

### **Limitations and Future Research Directions**

It is important to note the limitations within this particular study. While the collected sample surpassed the necessary sample size to receive valid results, the homogeneity of the sample limits the generalizability of the findings to some degree. This study surveyed a population from a single mid-sized, Southeastern university collecting a sample that was primarily white and female. It is recommended for future studies to evaluate the mental health effects of the pandemic on more diverse samples in order to generalize the results, and also consider evaluating marginalized populations as well.

There is also the limitation of testing the historical values against the collected values with regard to age. The amount of significance in the differences between the historical data and the current study's values could be partially accounted for by the differences in age range. The historical samples for the anxiety and the fear of missing out encompassed a larger age range while the recruited sample was a college student population. The college student population has unique characteristics separate from that of the general population and typically results in a much younger sample. For future replications of this study it would be recommended to compare the collected values to other college student population values. The findings of this study are valuable and implore future researchers to consider how the levels of anxiety, the fear of missing

out, and loneliness in college students compare to those of the general population during the pandemic.

Other areas for future research could include consideration for how much the variables anxiety, loneliness, and the fear of missing can predict social media usage. Replication studies should consider categorically assessing social media usage or find more precise ways to collect social media data. Direction for follow up studies should consider other variables such as the news' role in displaying unprecedented events in social media and how it affects negative mental wellbeing factors such as anxiety.

### **Conclusion**

The new challenges that people have faced since the start of the COVID-19 pandemic has lead to some negative mental health impacts (Wang, Pan et al., 2020; Bu et al., 2020). College students are likely to be majorly affected by the pandemic due to isolation and social distancing procedures put in place. The results of this study suggest that the COVID-19 pandemic overall increased feelings of anxiety, loneliness, and the fear of missing out, having a significant impact on the mental wellbeing of college students. These mental health indicators are all seen in association with social media (Hunt et al., 2018; Caplan, 2007). The results of this study further supports the relationship between these variables while also alluding to a lack of explanation from social media for the variance within the mental health indicators. Universities and college counselors should be aware of how the COVID-19 pandemic affects students in the long term and should consider putting procedures in place for dealing with these increase levels of negative well-being. Social media usage can contribute to the levels of negative mental health aspects, but it is important to consider other variables may be contributing further within the context of the COVID-19 pandemic. Researchers should also further explore how social media contributes to

aspects of mental well-being.

### Works Cited

- Baker, Z. G., Krieger, H., & LeRoy, A. S. (2016). Fear of missing out: relationships with depression, mindfulness, and physical symptoms. *Translational Issues in Psychological Science*, 2(3), 275-282. doi:10.1037/tps0000075
- Beiter, R., Nash, R., McCrady, M., Rhoades, D., Linscomb, M., Clarahan, M., & Sammut, S. (2015). The prevalence and correlates of depression, anxiety, and stress in a sample of college students. *Journal of Affective Disorders*, 173, 90-96. doi:10.1016/j.jad.2014.10.054
- Beller, J., & Wagner, A. (2018). Disentangling loneliness: Differential effects of subjective loneliness, network quality, network size, and living alone on physical, mental, and cognitive health. *Journal of Aging and Health*, 30(4), 521-539. doi:http://dx.doi.org.proxy.lib.utc.edu/10.1177/0898264316685843
- Bu, F., Steptoe, A., & Fancourt, D. (2020). Who is lonely in lockdown? Cross-cohort analyses of predictors of loneliness before and during the COVID-19 pandemic. *Public Health*, 186, 31–34. doi: 10.1016/j.puhe.2020.06.036
- Caplan, S. E. (2007). Relations among loneliness, social anxiety, and problematic internet use. *CyberPsychology & Behavior*, 10(2), 234-242. doi:10.1089/cpb.2006.9963
- Casale, S., & Flett, G. L. (2020). Interpersonally-based fears during the COVID-19 pandemic: Reflections on the fear of missing out and the fear of not mattering constructs. *Clinical Neuropsychiatry: Journal of Treatment Evaluation*, 17(2), 88-93. doi:10.36131/CN20200211

- Chen, B., Sun, J., & Feng, Y. (2020). How have COVID-19 isolation policies affected young people's mental health? - Evidence from chinese college students. *Frontiers in Psychology, 11*, 1529. doi:10.3389/fpsyg.2020.01529
- Clayton, R. B., Osborne, R. E., Miller, B. K., & Oberle, C. D. (2013). Loneliness, anxiousness, and substance use as predictors of facebook use. *Computers in Human Behavior, 29*, 687-693. <https://doi.org/10.1016/j.chb.2012.12.002>
- Davis, T. E., Grills-Taquechel, A. E., & Ollendick, T. H. (2010). The psychological impact from hurricane katrina: Effects of displacement and trauma exposure on university students, *Behavior Therapy, 41*(3), 340-349. doi:10.1016/j.beth.2009.09.004
- Dempsey, A. E., O'Brien, K. D., Tiamiyu, M. F., & Elhai, J. D. (2019). Fear of missing out (FoMO) and rumination mediate relations between social anxiety and problematic facebook use. *Addictive Behaviors Reports, 9*, 1–7. doi:10.1016/j.abrep.2018.100150.
- Elhai, J. D., Gallinari, E. F., Rozgonjuk, D., & Yang, H. (2020). Depression, anxiety and fear of missing out as correlates of social, non-social and problematic smartphone use. *Addictive Behaviors, 105*, 7. doi:10.1016/j.addbeh.2020.106335
- Elhai, J. D., Levine, J. C., Dvorak, R. D., & Hall, B. J. (2016). Fear of missing out, need for touch, anxiety and depression are related to problematic smartphone use. *Computers in Human Behavior, 63*, 509–516. <https://doi.org/10.1016/j.chb.2016.05.079>.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non-clinical

sample. *The British Journal of Clinical Psychology*, 44, 227-39.

<https://proxy.lib.utc.edu/login?url=https://www-proquest-com.proxy.lib.utc.edu/scholarly-journals/short-form-version-depression-anxiety-stress/docview/218632664/se-2?accountid=14767>

Holte, A. J., & Ferraro, F. R. (2020). Anxious, bored, and (maybe) missing out: Evaluation of anxiety attachment, boredom proneness, and fear of missing out (FoMO). *Computers in Human Behavior*, 112, 12

doi:<http://dx.doi.org.proxy.lib.utc.edu/10.1016/j.chb.2020.106465>

Hunt, M. G., Marx, R., Lipson, C., & Young, J. (2018). No more FOMO: Limiting social media decreases loneliness and depression. *Journal of Social and Clinical Psychology*, 37(10), 751. doi:10.1521/jscp.2018.37.10.751

Lim, M. H., Rodebaugh, T. L., Zyphur, M. J., & Gleeson, J. F. M. (2016). Loneliness over time: The crucial role of social anxiety. *Journal of Abnormal Psychology*, 125(5), 620-630.

doi:<http://dx.doi.org.proxy.lib.utc.edu/10.1037/abn0000162>

Liverant, G., Hofmann, S., & Litz, B. (2004). Coping and anxiety in college students after the September 11<sup>th</sup> terrorist attacks. *Anxiety, Stress & Coping*, 17(2), 127-139. doi: 10.1080/0003379042000221412

Luchetti, M., Lee, J. H., Aschwanden, D., Sesker, A., Strickhouser, J. E., Terracciano, A., & Sutin, A. R. (2020). The trajectory of loneliness in response to covid-19. *American Psychologist*, 75(7), 897–908. doi:10.1037/amp0000690

Przybylski, A. K., Murayama, K., Dehaan, C. R., & Gladwell, V. (2013). Motivational, emotional, and behavioral correlates of fear of missing out. *Computers in Human Behavior*, 29(4), 1841-1848. doi:10.1016/J.CHB.2013.02.014

- Purdon, C., Antony, M., Monteiro, S., & Swinson, R. P. (2001). Social anxiety in college students. *Journal of Anxiety Disorders, 15*(3), 203-215.  
[http://dx.doi.org.proxy.lib.utc.edu/10.1016/S0887-6185\(01\)00059-7](http://dx.doi.org.proxy.lib.utc.edu/10.1016/S0887-6185(01)00059-7)
- Rajkumar, R. (2020). COVID-19 and mental health: a review of the existing literature. *Asian Journal of Psychiatry, 52*, 102066. doi:10.1016/j.ajp.2020.102066.
- Reer, F., Tang, W. Y., & Quandt, T. (2019). Psychosocial well-being and social media engagement: The mediating roles of social comparison orientation and fear of missing out. *New Media & Society, 21*(7), 1486-1505. doi:10.1177/1461444818823719
- Rifkin, J., Cindy, C., & Kahn, B. (2015). FoMO: How the fear of missing out leads to missing out. *Association for Consumer Research, 43*, 244–248 <http://www.acrw.ebsite.org/volumes/1019794/volumes/v43/NA-43>.
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology, 39*, 472–480. doi:10.1037/0022-3514.39.3.472
- Russell, D. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment, 66*, 20-40.
- Ryan, T., Allen, K. A., Gray, D. L., & McInerney, D. M. (2017). How social are social media? A review of online social behaviour and connectedness. *Journal of Relationships Research, 8*, 8. <http://dx.doi.org.proxy.lib.utc.edu/10.1017/jrr.2017.13>
- Shankar, A., McMunn, A., Banks, J., & Steptoe, A. (2011). Loneliness, social isolation, and behavioral and biological health indicators in older adults. *Health Psychology, 30*(4), 377-385. doi: 10.1037/a0022826

- Wang, J. L., Jackson, L. A., Gaskin, J., & Wang, H. Z. (2014). The effects of social networking site (SNS) use on college students' friendship and well-being. *Computers in Human Behavior, 37*, 229–236. doi: 10.1016/j.chb.2014.04.051
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in china. *International Journal of Environmental Research and Public Health, 17*(5), 1729. doi:10.3390/ijerph17051729
- Wang, Z. H., Yang, H. L., Yang, Y. Q., Liu, D., Li, Z. H., Zhang, X. R., Zhang, Y. J., Shen, D., Chen, P. L., Song, W. Q., Wang, X. M., Wu, X. B., Yang, X. F., & Mao, C. (2020). Prevalence of anxiety and depression symptom, and the demands for psychological knowledge and interventions in college students during COVID-19 epidemic: A large cross-sectional study. *Journal of affective disorders, 275*, 188–193. doi:10.1016/j.jad.2020.06.034
- Wolniewicz, C. A., Rozgonjuk, D., & Elhai, J. D. (2020). Boredom proneness and fear of missing out mediate relations between depression and anxiety with problematic smartphone use. *Human Behavior and Emerging Technologies, 2*(1), 61-70. doi:10.1002/hbe2.159
- Wolniewicz, C. A., Tiamiyu, M. F., Weeks, J. W., & Elhai, J. D. (2018). Problematic smartphone use and relations with negative affect, fear of missing out, and fear of negative and positive evaluation. *Psychiatry Research, 262*, 618-623. doi:10.1016/j.psychres.2017.09.058

World Health Organization. (2020, June 29). *Timeline of WHO's response to COVID-19*. World

Health Organization. <https://www.who.int/news-room/detail/29-06-2020-covidtimeline>

Xiao, H., Zhang, Y., Kong, D., Li, S., & Yang, N. (2020). Social capital and sleep quality in

individuals who self-isolated for 14 days during the coronavirus disease 2019 (COVID-

19) outbreak in january 2020 in china. *Medical Science Monitor: International Medical*

*Journal of Experimental and Clinical Research*, 26, e923921.

<https://doi.org/10.12659/MSM.923921>

**Appendix A**

Table 1 (*FoMO, anxiety, loneliness, and social media usage correlations*)

	Social Media Usage	FoMO	Loneliness	Anxiety
Social Media Usage	r = 1			
FoMO	r = .343, ** p = .000	r = 1	r = .339 p = .000	r = .493 p = .000
Loneliness	r = .266** p = .005	r = .339** p = .000	r = 1	r = .618 p = .000
Anxiety	r = .218* p = .023	r = .493** p = .000	r = .618** p = .000	r = 1

Note: n = 111

\*\* p < .01

\* p < .05

Table 2 (*Regression analysis for social media usage and mental health indicators*)

Effect	R	R <sup>2</sup>	F	Sig.	t
FoMO	.343	.118**	14.273	.000	3.778
Loneliness	.266	.071**	8.125	.005	2.851
Anxiety	.218	.048*	5.360	.023	2.315

Notes: n = 109

\*\* p < .01

\* p < .05