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Correlation of Social Media Use and Symptoms of Anxiety and Depression Among College Students

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Graduate Committee Approval

The graduate committee of April Johnson, Christy Burns, Dylan Gunter, Jasmine Ivy, an Ramona Turner hereby approves this research project as meeting partial fulfillment of the requirements for the Degree of Master of Science in Nursing

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Dedication

I want to dedicate my research to multiple people. Firstly, my husband who supported me and believed in me. I cannot express how thankful I am for you to have been my lifeline in a time of transformation. To my three sons, who were able to see how hard work and determination can help you reach your goals. I would like to acknowledge my research group; throughout this project, we faced many trials as a team, thus succeeding in our research project. Finally, I would like to thank my advisor, Dr. Davidson. I am grateful to have your guidance through a time of growth. You have provided tools that I will hold dear throughout my professional career.

-Ramona Turner, BSN, RN

I would like to dedicate this research to several different people. First, I dedicate this research to my family who has supported me throughout my career and academic journey. Second, I dedicate this research to my friends who have also been there for me through the good and the bad throughout my journey, and to my research group, who have motivated me to stay positive and to work hard throughout this research. Lastly, to my advisor, Dr. Davidson, thank you for believing in me and our research group and pushing us to become our best.

-Clint Dylan Gunter, BSN, RN

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-Christy Burns, BSN, RN

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-Jasmine D. Murphy BSN, RN

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-April Johnson BSN, RN

Correlation of Social Media Use and Symptoms of Anxiety and Depression Among College Students

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Abstract

There is a new epidemic on the rise affecting college students. Social media use in college students is correlated to increased symptoms of anxiety and depression (Lippold, 2020). Studies show that prolonged symptoms of anxiety and depression can lead to hopelessness, which may make adolescents more prone to committing suicide (Tartakovsky, 2022). The Center of Disease Control and Prevention (CDC) reports that the second leading cause of death in young adults is suicide (Centers for Disease Control and Prevention, 2023). Therefore, the present study was conducted through a quantitative correlational research design using a survey to evaluate social media use and its correlation to symptoms of anxiety and depression among college students. Pender's Health Promotion Model was used to guide this study. This research can bring awareness to the correlation between anxiety and depression and social media use.

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CHAPTER I

Introduction: Dimension of the Problem

There is a new epidemic on the rise affecting college students. A correlation has been noted between symptoms of anxiety and depression and college students through social media use (Lippold, 2020). College stressors are one of the many factors considered for negative psychological symptoms. Examples of college stressors include exams, social media, financial status, and newfound independence from family. Stress can negatively impact a college student's judgment, causing chemical changes in the body, sleep deprivation, and feelings of hopelessness. One of the coping mechanisms that our research group was particularly interested in was the coping mechanism of social media use. Our literature review uncovered a vast numbers of studies regarding self-camparsion to others portrayed on social media, such as wealth, travel, and the portrayal of perfection in one's life. Stress is high among college students, leading to symptoms of anxiety and depression (Tartakovsky, 2022).. The Centers for Disease Control and Prevention reports that the second leading cause of death in young adults is suicide (CDC, 2023). A review was conducted on college students in over one hundred colleges with the following report by the students: 44 % suffered from symptoms of depression and 37% suffered from anxiety (Cook, 2023). Further investigation found that 15% of students considered suicide (Cook, 2023). The 15% that considered suicide set a historical record for the highest percentage gathered in research to date (Cook, 2023).

With this collection of data, one could hypothesize a possible correlation between college students' use of social media and symptoms of anxiety and depression. Symptoms of anxiety and depression could lead to an increased risk of suicide in this population (Cook, 2023). It is essential to determine if symptoms of anxiety and depression in college students could be related

to environmental stressors, such as social media. The CDC notes strategies for the prevention of suicide, such as forms of coping and identification (CDC, 2023). Identifying that there is an epidemic concerning anxiety, depression, and social media use, college students and healthcare providers can be aware of this correlation and take preventive measures, such as assisting in recognizing these symptoms and providing education for preventative purposes. This pressing concern can raise awareness of anxiety symptoms and lead to prevention and management. This study will mainly focus on how social media use correlates with reported symptoms of anxiety and depression among college students.

Problem Statement

There has been a significant increase in depression and anxiety symptoms in college students related to factors such as social media use/addiction (Cook, 2023). Furthermore, college students with these symptoms have considered suicide. Research performed by Cook (2023) noted that out of 96,000 college students, 15% reported consideration of suicide, the highest reported in history. The problem addressed in the current study was how social media use correlates with symptoms of anxiety and depression.

Statement of Purpose

The purpose of this study was to evaluate college students' social media use and its correlation to symptoms of anxiety and depression. The current researchers were particularly interested in college-age students due to the high rates of suicide in this age group.

Significance of the Study

This study highlighted the correlation of social media use with anxiety and depression symptoms among college students. This study was also helpful to the general population regarding the adverse effects of social media. Disease is more than physical; it is also mental.

College students are at increased risk of experiencing anxiety and depression due to high social media use. Most college students are 18 years old and older. The CDC states that the second leading cause of death is suicide in young adults. This study sought to bring awareness to medical professionals, the general population, and users of social media of the potential increase in anxiety and depression symptoms in college students and its correlation with social media use.

Conceptual Framework

Nola Pender's Health Promotion Model guided this research project. Penders Health Promotion Model gives examples of health-promoting behaviors, including eating a healthy diet, exercising regularly, managing stress, and gaining adequate rest (Polit & Beck, 2021). The current researchers sought to evaluate college students managing stress behaviors focused on social media use and its correlation with symptoms of anxiety and depression. Identifying the dangers can lead to behavioral changes in college students to promote health and seek help. Nola Penders's health promotion model allowed a framework for analyzing this phenomenon. Analysis was performed on the individual's behavior and coping style. This study evaluated college students' knowledge of symptoms of anxiety and depression and identified adverse effects associated with symptoms associated with social media use.

Research Question(s)

The following research questions were the focus of this study:

1) Are college students utilizing social media to cope with symptoms of anxiety and depression?

2) Are college students experiencing symptoms of anxiety and depression?

3) Is there a correlation between symptoms of anxiety, depression, and social media in college students?

Definition of Terms

Anxiety

Theoretical: Anxiety is an emotion characterized by feelings of tension and worried thoughts. Feelings of anxiety often result in an apprehensive mood, increased arousal, and vigilance, which can persist for long periods. (American Psychological Association, 2022).

Operational: For this study, the term anxiety is defined as specific symptomatology from the Generalized Anxiety Disorder 7-item scale (GAD-7) that correlates with symptoms of anxiety. A score of (0-4) means a patient has minimal anxiety, a score (of 5-9) means a patient has mild anxiety, and a score (of 10-14) means a patient has severe anxiety (*GAD-7 Anxiety*, n.d.)

Depression

Theoretical: Webster (2024) defines depression as "a mood disorder that is marked by varying degrees of sadness, despair, and loneliness and that is typically accompanied by inactivity, guilt, loss of concentration, social withdrawal, sleep disturbances, and sometimes suicidal tendencies."

Operational: For this study, the term depression was defined as items included in the tool to evaluate symptoms by pulling out specific symptomatology from the Patient Health Questionnaire depression scale (PHQ-8) that correlate with symptoms of depression. A patient's total score is determined by adding scores of each of the four items from the scale. Scores are rated as normal (0-2), mild (3-5), moderate (6-8), and severe (9-12). A total score of ≥3 for the first two questions suggests depression (*The Eight-Item Patient Health Questionnaire for Depression (PHQ-8), n.d.).*

Social Media

Theoretical: Webster (2024) defines social media as “forms of electronic communication (such as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (such as videos).”

Operational: For this study, social media was defined as TikTok, Facebook, Twitter, Instagram, and Snapchat.

College Students

Theoretical: Collins Dictionary (2024) defines a college student as a student at a university or college.

Operational: Eighteen-year-old individuals or older enrolled in a university in Northeast Mississippi.

Assumptions

Assumptions in this study included the following:

1. College students may have symptoms of anxiety and depression due to environmental stressors.
2. Social Media use may promote the symptoms of anxiety and depression in college students.
3. The researchers correctly interpreted the data collection
4. The researchers adhered to all information on the data collection tool while collecting data.
5. Nola Pender's health promotion model can assist in identifying college student's risks associated with social media and how college students utilize social media in coping with symptoms of anxiety and depression.

Limitations

The limitations of this study included the following:

1. Only a small sample population of 109 students completed the surveys.
2. The sample population was only obtained from one college campus, limiting diversity.
3. It is unknown if the sample previously suffered from forms of mental illness or if it was genetic.
4. It is inconclusive if social media is the main factor causing symptoms of anxiety and depression or if it is a combination of the sample's environment.
5. Results were obtained under a limited time frame, limiting data collection.

Summary

This research sought to identify a correlation between social media use and symptoms of anxiety and depression among college students. Research can be collected and analyzed using the Nola Pender Health Promotion Model, which focuses on self-efficacy and the behaviors needed to enhance one's health throughout life. This model focuses not only on the individuals but also on the environment surrounding them regarding their health. Identification of college students' social media habbits could garner widespread knowledge for the public. This research has led to increased awareness of this epidemic in hopes of lowering symptoms of anxiety and depression in college students through screening and, subsequently, suicide risk among college students. Furthermore, it could lead to ways of finding healthier recreational activities for college students and decrease social media use.

CHAPTER II

Review of Literature

In the rapidly evolving landscape of higher education, the pervasive integration of social media platforms has become a hallmark of contemporary college life. This research project delves into the intricate relationship between social media use and the manifestation of symptoms related to anxiety and depression among college students. This study adopts Nola Pender's Health Promotion Model as the theoretical framework to unravel the complexities of this phenomenon. Pender's model, grounded in the belief that individuals strive to optimize their health through a series of proactive behaviors, offers a comprehensive lens through which to examine the potential influence of social media engagement on college students' mental well-being.

By synthesizing existing literature through the lens of Pender's framework, this review aims to contribute valuable insights into the intricate interplay between social media use and mental health outcomes, paving the way for a nuanced understanding of the challenges faced by today's collegiate population. The following review of the literature aims to support the hypotheses presented in the current research that increased social media use leads to symptoms associated with depression and anxiety.

Conceptual Framework

Nola Pender's health promotion theory has gained significance in nursing and healthcare. Pender developed this theory to support other health promotion models and theories. Pender's health promotion theory defines *health* as a positive dynamic state. Nola Pender's Health Promotion Model is often utilized to guide healthcare providers in the care they deliver to

patients. Health promotion primarily plays a role in preventing certain diseases simply by educating the patient. Healthcare providers have an opportunity to provide education on each patient’s encounter. Pender's Health Care Model also recognizes that environmental exposure and behaviors affect an individual's health outcomes (Pender, 2011). Petiprin (2023) states, "Pender's model focuses on three areas: individual characteristics and experiences, behavior-specific cognitions and affect, and behavioral outcomes.." Nola Pender's Health Promotion Model can be used to assist healthcare providers in helping patients successfully take control of their health and matain it. Unlike other theories, Pender's health promotion theory does not see health as the absence of disease. Therefore, this theory ensures that patients attain optimal well-being (Pender, 2011).

Pender's Health Promotion Theory allows the patient to recognize a healthy or unhealthy environment or behavior, equipping the patient with the education needed to make proper changes to preserve and promote healthy behaviors. Therefore, this research utilizies Nola Penders’s Health Promotion Model. This study aims to identify symptoms of anxiety and depression and the relationship with repetitive use of social media platforms such as Instagram, Facebook, TikTok, and Snapchat. Limiting social media use promotes mental health by reducing symptoms of anxiety and depression. Nola Pender's Health Promotion Model will assist in identifying the environmental cause or behavior believed to be excessive use of social media platforms, causing symptoms of increased anxiety and depression among college students.

The following entry seeks to review this theory. It first discusses this theory in extant nursing literature in the following section. The second section examines how other researchers have utilized Pender's health promotion model in their studies. The last section discusses how Pender's Health Promotion Mode guided the research study.

Literature Review

As stated earlier, this theory has become more prevalent in nursing and many other career fields. Due to this, various researchers have utilized or examined it within their studies. However, before reviewing how different researchers have applied this theory in their studies, it is crucial to review how its original publisher, Nola Pender, used it in her studies. One article by this theorist is a 2011 article titled "The Health Promotion Model," This article primarily serves as a manual and walkthrough for Pender's health promotion model. According to Pender (2011), the primary purpose of health promtion theory is to "Assist nurses in understanding the major determinants of health behaviors as a basis for behavioral counseling to promote healthy lifestyles" (p.2). In developing this theory, Pender (2011) argues that identifying background factors impacting health behaviors is the best way to promote positive health and well-being. Another article published by Pender & Pender (1980) states, "Since it has been estimated that more than one-half of the deaths in this nation are due to unhealthy behavior or inappropriate lifestyle, significant improvements in the health status of Americans can be made through illness prevention and health promotion efforts." Pender & Pender propose that the Nurse Practitioner is crucial in developing and promoting health programs. Pender & Pender also mention possible benefits of long-term health promotion, such as enhancement of quality of life, longevity of life, and a reduction in healthcare costs, all of which are positive outcomes of patient care. As such, Pender developed this theory on the premise that it should help nurses identify background factors affecting patient health behaviors (Pender &Pender, 1980).

It is worth noting that Pender's health promotion theory is relatively diverse and extensively covers various concepts and issues. For example, this theory makes several

assumptions. One of its assumptions is that people often seek to regulate their behaviors actively (Pender, 2011). This theory also assumes that people create positive environments that can foster their unique human health potential (Pender, 2011). In addition to these assumptions, Pender's theory also makes various theoretical propositions. One of its propositions is that "Persons are more likely to commit to and engage in health-promoting behaviors when significant others model the behavior, expect the behavior to occur, and provide assistance and support to enable the behavior" (Pender, 2011, p.5). This article is helpful since it offers crucial definitions of key concepts in Pender's health promotion theory.

Due to this theory's prevalence in nursing, other researchers have also examined it in their research studies. One such article is a 2016 empirical study titled "Predictive Ability of Pender's Health Promotion Model for Physical Activity and Exercise in People with Spinal Cord Injuries: A Hierarchical Regression Analysis" by John P. Keegan et al. This study used Pender's health promotion theory to determine and predict its ability to motivate people with spinal cord injuries to engage in physical activity self-management . This study used a descriptive study design. The authors also adopted a hierarchical regression analysis to analyze their data (Keegan et al., 2016) Keegan et al.'s (2016) study sample population comprised 126 patients with spinal cord injuries One of the most notable findings from this study was that Pender's theory of health promotion is effective in predicting determinants of motivation among persons with spinal cord injuries. According to Keegan et al. (2016), perceived benefits, perceived self-efficacy, and family/friend support are integral determinants of whether a person with spinal cord injury would adhere to their training or physical exercise regime. This study primarily implies that Pender's health promotion model can be used to determine the health behaviors that promote better physical activity self-management among persons with spinal cord injuries. With its capabilities, this

theory can be used to design health promotion behavioral interventions for people with spinal cord injuries (Keegan et al., 2016).

Other studies have also applied Pender's health promotion model and had similar findings. According to Lima et al. (2020), "The conception of quality of life is complex and lacks consensual definition; it involves individual and subjective perceptions related to what each person understands as health." The quality of an individual's life is directly affected by the choices that the individual makes and the conditions in which they live and work. Lima et al. (2020) studied a group of nursing college students and their current situations. One of the major viewpoints outlined in this study was the significant life changes the college students experienced due to the transition to college life. Such experiences include "the adaptation to academic life, anxiety to meet social and family expectations, and the stress with many academic activities and commitments in the course of the studies" (Lima et al., 2020, p.2). Nola Pender's Health Promotion Model was utilized by Lima et al. (2020) due to the focus on health promotion and the ability to predict specific health-promoting lifestyles and behaviors. Students were asked to define their understanding of what it is to have quality of life. The students were also asked to identify what type of lifestyle habits interfered with their quality of life. The authors found that low self-esteem, stress, and anxiety related to academic routine were contributory factors. The health promotion model helped assess behavioral outcomes and the need for intervention. Lima et al. (2020) determined that Pender's Model aided in recognizing healthy or unhealthy lifestyle behaviors in college students and measures that can be made to promote health.

These findings are critical for several reasons. First, these two articles reaffirm Pender's health promotion model's capabilities to predict health promotion behaviors. Secondly, these studies amplify this theory's significance by helping to design better behavioral interventions to promote

health and well-being. These studies have vast implications for anyone seeking to use or apply Pender's health promotion theory.

Describing Advising Group Use of the Health Promotion Model

The previous section has illustrated how other researchers have used Pender's health promotion theory. The study by Keegen et al. (2016) examined whether this model could predict determinants of physical exercise self-management among persons with spinal cord injuries. Lima et al. (2020) efficiently identified healthy or unhealthy lifestyle behaviors in college students and adjustments that can be made to promote health.

This research study seeks to examine whether excessive social media use exacerbates the symptoms of depression and anxiety among college-going students. Based on existing evidence, there is enough reason to believe that excessive social media use leads to adverse mental health outcomes. Depression and anxiety are the two most prevalent mental health issues associated with increased social media use among college students. This research study will use the health promotion model to examine how social media use contributes to adverse mental health outcomes like depression and anxiety. At the same time, use this theory as a threshold for determining the health promotion behaviors that can alleviate depression and anxiety symptoms arising from college students' increased social media use. The goal of this research study is to provide the information needed to make those who have symptoms of anxiety and depression aware that the issue could be an environment that they can control. The findings will help identify and enhance health-promoting behaviors to mitigate the adverse mental health effects of social media use among college students.

Review of Related Literature

Mobile Phone Use and Sleep Quality

White et al. (2018) conducted a study to determine the impact of mobile phone use on college students' sleep quality and length. The researchers recognized that college students represent a significant population that is sleep-deprived and likely to register a remarkable usage of modern technology. College students are likely to register addictive habits and behaviors when it comes to the use of mobile devices. Most college students embrace mobile phone usage in a manner that corresponds to their newly found freedom with minimal parental supervision. Mobile phones are becoming essential devices that foster different levels of communication and access to social networking sites. College students engage in multiple activities on their mobile phones, explaining why most of them are likely to develop addictive behaviors. For college students with addictive behaviors, the increased mobile phone usage is expected to register multiple adverse effects on their overall well-being. White et al. (2018) sought to establish how mobile phone usage contributes to compromised sleep length and quality among college students. The researchers did not provide a theoretical framework that governed their study.

White et al. (2018) formulated specific research questions and hypotheses for this study. The main research question sought to establish the relationship between mobile phone use and college students' sleep quality and length. The first hypothesis predicted that mobile phone use could result in compromised sleep length, translating to sleeping for only a few hours instead of the recommended eight or nine hours. The second hypothesis predicted a negative relationship between mobile phone use and sleep quality among college students. The third hypothesis highlighted that addictive text messaging could compromise sleep length and quality. The fourth hypothesis indicated that individuals engaging in pathological text messaging have a higher

likelihood of reduced sleep length and poor sleep quality. The fifth hypothesis predicted the existence of a negative relationship between problem text messaging and the associated quality and length of sleep. Hypothesis six highlighted that problematic mobile phone use compromises sleep length and quality. In contrast, the seventh hypothesis predicted that addictive text messaging and mobile phone use would translate to significant sleep length and quality predictors. The eighth hypothesis predicted that extraversion positively correlates with mobile phone usage and addictive text messaging.

The study adopted a quantitative approach and involved 350 introductory psychology students. The procedures in the study included the provision of a brief overview of the study design and purpose to the participants, signing consent forms, and verifying that the participants understood the risks and benefits associated with the study. The participants also ascertained that their participation was voluntary, while the researcher reassured them of high levels of confidentiality. The researchers then introduced the participants to the questionnaire and provided brief guidelines on completing each questionnaire. The participants further completed and returned the survey packets to the researchers. For the data analysis process, the researchers used different models to interpret the data collected in the questionnaires.

White et al. (2018) revealed that many college students have embraced mobile phone usage, which can affect their sleep quality and length. The participants registered 7.5 hours of sleep and moderate sleep quality, with 5 hours a day dedicated to mobile phone use. The use of Pearson correlation demonstrated an insignificant relationship between sleep length and the use of mobile phones, with r being equal to -.01. A similar insignificant correlation was reported between mobile phone use and sleep quality. The study established a significant relationship between addictive text messaging and sleep quality, where r was .15. Pathological texting also

affected sleep quality because the correlation r was .18. The other significant correlation was between problem mobile phone use and sleep quality, with r being .17. The study ascertained a correlation between mobile phone use and sleep quality. Most college students experience poor sleep quality due to problems with mobile phone use, problem texting, and pathological texting. The study showed that many college students experience compromised sleep quality due to the distractions from mobile phone use. The obsession with mobile phones and the fear of missing out explain why mobile phone use can lead to compromised sleep quality. The study also supported other hypotheses that predicted the relationship between extraversion and mobile phone usage.

The limitations of this study included highly subjective data due to the use of self-reports and the lack of advanced methods to examine sleep quality. A defining strength of the study is that it provided reliable and valid findings regarding the association between mobile phone usage and sleep quality. The article offers insight into a significant issue in modern society, which provides an important starting point for the current research as the group attempts to determine the direct correlation that the lack of sleep has on the academic performance and overall health of college students.

College Students and Risk of Anxiety

Lopes et al. (2017) performed a cross-sectional study on college students concerning anxiety using the backward method. Lopes et al. (2017) noted, "The challenges that they face during college can facilitate the risk of developing mental disease and precipitate the appearance or reoccurrence of a psychological disorder." The researchers used an evaluation tool to gather data on anxiety. The screening tool used was STAI, and it had a numerical format with a final score to determine the overall severity of anxiety. Students (n=812) in multiple college programs

were included in the study. Multiple symptoms associated with anxiety were used to interpret the findings, such as sleep issues and fatigue. The research was guided by "variables predictive of anxiety" and STAI. No theatrical framework was used to guide this study.

Lopes et al. (2017) hypothesized that there are predictive anxiety variables. The authors state their objective was to "investigate the the relationship between anxiety and the profile of their predictive variables in college students" (Lopes et al., 2017, pp. 1-3). Through this objective, the researchers wished to determine a correlation between mental issues such as anxiety and relate this to college. Lopes et al. (2017) used the following methodology to research college students: a Cross-sectional study and STAI. The setting was more than one university located in Brazil. The sample population was college students, with 812 participants. Study two was conducted between 2012 and 2014. The cross-sectional portions used anxiety symptoms to measure the students and included other factors such as age. In STAI, a "four-point scale system" questionnaire was used to determine the severity and presence of anxiety. This study's dependent variables were anxiety symptoms, including sleep disorders, restlessness, fatigue, and constant headaches. The independent variables were age, gender, and multiple majors (Lopes et al., 2017).

The outcomes of this study concluded that college students are found to be at a higher risk for anxiety (Lopes et al., 2017). One-way statistical findings were noted through p-values with predictive variables such as restlessness 0.04, sleep disorders <0.001, and fatigue 0.02. Through p-values numerically findings, it strongly correlated a relationship between college students and anxiety. The authors identified that the implications of these findings negatively impact college students through learning and "quality of life." One recommendation for future

research is to broaden the research tools used and provide research on how to combat anxiety in college students.

The performance analysis noted that the article had strengths and weaknesses. Strengths included a non-biased review, broad test subjects in the target population, and more than one research tool. The article supported a correlation between anxiety and college students. The following weaknesses were noted: the language of the article did not flow well and needed more details on how the overall target population was studied. One example is that it is not clear how often these college students were contacted. Even though there were some weaknesses in the article, this study showed statistical proof of its hypothesis.

This research will set an excellent foundation to investigate anxiety in college students furthur and broaden the research topic to include depression and social media. This study helps find correlations between symptoms of anxiety in college students. The p-values concluded with the following variables: restlessness 0.04, sleep disorders <0.001, and fatigue 0.02 (Lopes et al., 2017). This study used STAI to gather data and could be used in future studies to help gather needed data about college students with symptoms of anxiety.

Social Media Addiction and Mental Health Symptomology

Watson et al. (2022) performed a quantitative study to determine the effects of mattering, social media addiction, and school connectedness on adolescents' mental health symptomology. Poor mental health in adolescents can be linked to various adverse outcomes, including social media addiction, low self-esteem, depression, anxiety, and poor educational attainment. Fifty percent of mental health concerns in adolescents begin by age fourteen, with suicide being the second leading cause of death among that population. Therefore, Watson et al. (2022) sought to

determine the correlation between mental health symptomology, social media addiction, school connectedness, and mattering. No theoretical framework was identified in the study.

Watson et al. (2022) formulated specific research questions and a hypothesis for this study. The first question the researchers sought to answer was the "levels of social media use, school connectedness, mattering, and anxiety/depressive symptomatology among adolescents in the U.S." The next question the researchers included was determining the "relationship between social media addiction, school connectedness, mattering, and anxiety/depression symptomology among U.S. adolescents." The final question the researchers included was, "What the difference in anxiety/depressive symptomology would be after controlling the age, gender, the average number of hours spent online daily, social media addiction, and perceptions of school connectedness." The researchers hypothesized factors of social media addiction, school connectedness, and mattering have been linked to adolescent's mental health symptomatology (Watson et al., 2022)

The researchers used a quantitative approach for their study, which consisted of 440 U.S. adolescent participants. The main procedures involved in this study were four survey questionnaires sent via email to U.S. adolescents. The first surveys were sent to a select few individuals to determine the estimated response rate. The second survey comprised a broad range of individuals between 13 and 19 (Watson et al., 2022). The first questionnaire used The Bergen Social Media Addiction Scale to assess social media use and its correlation to addiction. The following scale used in the survey was the Psychological Sense of School Membership scale to assess the adolescents' involvement with the school. The third scale was the General Mattering Scale, used to determine the participants' self-esteem. The final scale included a Patient Health Questionnaire to assess for anxiety and depression among the participants. For data analysis, the

study used the stratified sampling method, which consisted of participants of different ages, races, genders, and from different geographical locations, answering questions on the survey received via email (Watson et al., 2022).

Following the analysis, the researchers determined that girls were more addicted to social media than boys. They also concluded in their research that adolescents experiencing anxiety and depression symptoms were related to social media addiction (r=.32, *p*=<.001). The research also found a correlation between school connectedness and higher self-esteem (r=.11, *p*=.027). For the third research question, they found that adolescents with higher levels of social media addiction (*p*<.001) had an association with higher anxiety and depression symptoms *(p*<.0010). In conclusion, the researchers found higher levels of mattering, such as high self-esteem, were associated with less anxiety and depression symptoms (*P*<.001) (Watson et al., 2022).

The main limitation of this study included subjective data due to self-reports of social media use, school connectedness, mattering, and anxiety and depression from participants. A strength of this study is that it provided a justifiable correlation between social media use and increased anxiety and depression symptoms. The article offers insight into a growing concern among adolescents. It will help provide a good foundation for our research group to determine the direct correlation between social media use and anxiety and depression symptoms among college students.

Association Between Social Media Use and Adolescents Admitted Inpatient for Suicide Risk

Weinstein et al. (2021) performed a qualitative study to determine the associations between social media use and adolescents admitted to the hospital for suicide risk. Suicide is a growing concern in the adolescent population, and there is one common link that is contributing

to increased numbers of suicides and suicide hospitalizations. Eighty percent of adolescents have smartphones and report using social media apps daily. Weinstein et al. (2021) sought to determine the correlation between social technology and social media app use among adolescents hospitalized for suicide risk. No theoretical framework was used in this study.

Weinstein et al. (2021) formulated specific research questions for this study. The first question the researchers sought to answer was, "What negative and positive experiences do adolescents with current suicidality report related to their uses of social media technologies?" The next question the researchers included was, "How do adolescents describe the break from routine social technology use during hospitalization and their views on a subsequent return post discharge?" The researchers did not test a specific hypothesis in this study (Weinstein et al., 2021).

The researchers used a qualitative approach for their study, which consisted of thirty adolescents hospitalized for a suicide attempt or suicidal ideations in an inpatient psychiatry unit. The interview consisted of questions about past, current, and future use of social media. The questions asked during the interview were geared towards the patients' "general experience with social media, perception of benefits and challenges associated with social media use, perceived influences on mental health, the experience of a break during hospitalization, and attitudes about post-hospitalization digital reentry." For the data analysis, the study conducted interviews with hospitalized adolescents with suicidal ideations and used coded transcripts using a thematic analysis.

Following the analysis, the researchers determined that patients hospitalized for suicide or suicide ideations reported both positive and negative experiences with social media. The negative experiences the patients experienced with social media were "trouble regulating use, stress related

to social media metrics, encounters with triggering content, hostility and meanness, self-denigrating comparisons, and burdensome friendship expectations" (Weinstein et al., 2021, p. 63-73). The researchers also concluded from their interviews that the patients had positive benefits from social media, including "social connection, social support, affect-enhancing content, shared interests, and resources for mental health and coping" (Weinstein et al., 202, p. 63-73).

The main limitation of this study included a sample that consisted only of suicidal adolescents who are currently receiving inpatient treatment Another limitation of the study was the sample size. A larger sample size would provide more supporting data to determine the positive and negative effects of social media on suicidal adolescents. One of the main strengths of this study is that it provided information on the positive and negative experiences of social media use in suicidal adolescents. This article addresses a growing concern among the adolescent population. Suicide rates and ideations are on the rise, and this article will help provide support for our research as we determine the correlation between social media use and anxiety and depression among college students.

Association Between Anxiety, Stress, Depression, and Social Media Use

Malaeb et al. (2021) performed a cross-sectional study to compare the association between anxiety, depression, stress, and insomnia to social media use. Increased depression, insomnia, and anxiety were associated with increased social media use. No theoretical framework was identified in this study. Several published studies have investigated the relationship between social media use and the development of psychiatric problems, including depression, anxiety, insomnia, and low self-esteem (Malaeb et al., 2021). Social media use has tremendously increased, with 90% of people using Instagram, Twitter, and Facebook daily for

local and international news and entertainment, making personal posts, and connecting with peers. Evidence reveals that the use of social media can cause adverse and psychological reactions. Depression has increased due to the impact of social media use (Malaeb et al., 2021). People who spent a more significant amount of time than others on social media showed increased symptoms of severe anxiety.

The following hypothesis was identified for this study: the use of social media causes adversative/psychological reactions. The second hypothesis is that there is a relationship between social media use and anxiety, insomnia, stress, and depression.

This study included a sample of young Lebanese adults with a mean age of 27.29. The study was completed between January and May of 2019. Out of 600 adults, only 466 (78%) completed the questionnaire. Participants were selected for this study with random sampling. No similar studies have been conducted in Lebanon previously; therefore, a hypothetical medium effect size was used (r=.3) (Malaeb et al., 2021). The questionnaire written in Lebanon's language included gender, level of education, age, children, civil status, and income. The social media use disorder was also measured. It measured the dependence of social media by using twenty-seven items. Hamilton depression and anxiety scales rated depressive and anxiety symptoms. The higher the scores, the higher the depression and anxiety. A perceived scale for stress was another test used to evaluate stress levels. The Lebanese insomnia scale detected insomnia by answering eighteen questions on a 5-point Likert scale. Increased scores revealed severe insomnia. The social media disorder scale and perceived stress test results were translated from English to Arabic.

Statistical Package for the Social Sciences (SPSS) software version was used to analyze the data (Malaeb et al., 2021). Reliability was assessed through a value of Cronbach. They used

the Kruskal-Wallis and Marri-Whitney test. Three regression coefficients were used in SPSS to calculate the three pathways. The first pathway was problematic social media use and stress (Pathway A). The second pathway was the association between stress, anxiety, insomnia, depression, and social media use (Pathway B). The third pathway was the direct effect of social media use on anxiety, depression, and insomnia (Pathway C). Results revealed that $P<.05$ was significant. The study revealed that 23.7% of individuals met the criteria for problematic social media use. The authors recommend additional research on psychological disorders and the use of problematic social media. It should also review the relationship between mental health and social media. Further research would clarify why social media was helpful to some individuals and increased others' risks of obtaining mental disorders.

Several weaknesses were identified during the study. The study was limited and conducted using only a self-report questionnaire as a survey. Casualty could not be determined because the study was cross-sectional. The study did not include every one of the Lebanese population. Lastly, the perceived stress test and use of social media were not validated in Lebanon. The positive results of the study were that it showed that anxiety, insomnia, and depression are associated with problematic social media use. It also confirmed that stress was not associated with the use of social media. Stress is a mediator between mental health and the use of social media.

This article provides a solid foundation to build upon during research because it tells that social media use is a problem that is associated with insomnia, anxiety, and depression. This study revealed that social media should be considered when identifying increased risk for psychological disorders.

Social Media Usage and Affective Variables of Depression and Anxiety

Lippold (2020) conducted research that embarked on an exploration into the intricate connections between various social media usage forms and affective variables like depression, anxiety, and both positive and negative effects amongst college students. The study addressed the prevalent mental health issues within the college student population and navigated through the complexities that social media, a staple of modern college life, brings into their mental and emotional well-being. Lippold's study is rooted in several theoretical models, including the Tripartite Model and Eysenck's temporal orientation theory, while also referencing past frameworks like the Uses and Gratification Theory. Through these lenses, it investigates the multifaceted and possibly bidirectional relationships between social media use and affective experiences. This in-depth analysis highlights that higher social use might correlate with lower negative affect and illuminates the importance of future research to unravel these intricate relationships further.

Lippold's article frames its inquiry through specific research questions, and hypotheses focused on the multifaceted nature of social media use and its potential relationship with varied mood symptoms. It investigates two primary research questions and their related hypotheses regarding the impact of social media usage on mood symptoms among college students. The first research question seeks to determine whether there is a correlation between different types of social media use and distinct mood symptoms in this demographic. Concurrently, the initial hypothesis proposes that social use of social media predicts depression symptoms. At the same time, a second anticipates that both social and information-seeking uses will be indicative of anxiety symptoms, and a third supposes that the entertainment use of social media might be a predictor for positive affect symptoms. Additionally, the second research question explores whether social media use exerts a direct and causal impact on the mood of college students,

albeit a comprehensive examination and affirmation of causality are earmarked for future research endeavors.

For this study, a cross-sectional survey was administered to college students through Qualtrics, with the University of Montana serving as the local and its undergraduate students being the exclusive participants. They were rewarded with course credit for their involvement. A analysis aimed to enroll around 202 students, with the final survey exploring participants' social, information-seeking, and entertainment use of social media platforms, in addition to investigating demographic aspects and assessing their levels of depression, anxiety, and positive affect through established tools like the PHQ-8, GAD-7, and PANAS.

A total of 219 participants were surveyed. 13 participants were excluded due to invalid responses, leaving 206 participants, predominantly white (83%) cisgender women (72.3%), with an average age of 22.3 years. The exploration into potential relationships between different types of social media usage (social, information-seeking, and entertainment) and various affective variables utilized four hierarchical multiple regression models, focusing on depression (PHQ-8), anxiety (GAD-7), positive affect (PANAS-P), and negative affect (PANAS-N) as criterion variables (Lippold, 2020).

The initial hypothesis for depression posited that social use, excluding entertainment or information-seeking uses, would be a significant predictor. However, the findings refuted this, showing no significant prediction ($R^2 = 0.018$, $F(3,201) = 1.24$, $p = 0.295$). The anxiety model hypothesized and found that while both social use and information-seeking use were statistically significant, they accounted for a modest 3.4% of the variance in anxiety ($R^2 = 0.034$, $F(3,201) = 2.37$, $p = 0.071$), thus providing limited practical significance. The hypothesis that entertainment use, exclusive of social or information-seeking uses, would predict positive affect was not

supported (R^2 = 0.027, F (3,201) = 1.831, p = 0.143). Additionally, an exploratory model for negative affect was conducted without a predefined hypothesis, discovering that nonwhite participants reported higher levels of dispositional negative affect and that social and information-seeking uses were significant predictors, albeit the interpretation of these findings is restrained by the absence of hypothesized expectations.

This study's nuanced and unexpected findings underscore the complexity inherent in understanding the psychological impacts of varied social media uses and invite a reevaluation of straightforward narratives concerning digital behavior's affective repercussions. While limited by its demographic skew towards white, cisgender women and necessitating cautious interpretation in broader contexts, this study provides a foundational step towards more intricate explorations of digital interactions and mental health. Future research endeavors could enhance demographic diversity, adopt longitudinal designs, incorporate additional variables (e.g., qualitative interaction aspects and contextual factors), and conduct detailed analyses of digital behaviors and interactions to uncover the multifaceted dynamics linking online and offline worlds, thus promoting a rich, contextually embedded understanding of our digital lives and their psychological connotations.

Lippold's (2020) findings invited a reevaluation of the simplistic narratives regarding digital behavior's emotional and psychological repercussions due to their nuanced and somewhat unexpected nature. Even though the study is limited by its demographic bias towards white, cisgender women, it lays a foundation for further research into the impacts of digital interactions on mental health. Enhancing demographic diversity and incorporating additional variables in future research could offer more thorough insights into the connections between online and

offline worlds, fostering a deeper understanding of our digital lives and their psychological implications.

When scrutinized through the lens of the critiquing guidelines provided by Polit & Beck (2012), the research merits praise for articulating the problem and providing straightforward research questions and hypotheses. However, it could enhance its impact through a more pronounced justification for the study's significance and better alignment with the literature review and conceptual framework. The methodology demonstrates a robust effort by utilizing hierarchical multiple regression models and detailed demographic characterizations. Further detailing and justification of the research design, clearer ethical considerations, and methodological transparency would significantly enhance its academic and practical worth.

In addition to its empirical and methodological framework, this article becomes a beneficial resource for further research into the influence of social media usage on affective variables. Its substantial foundation enables comparison and contrast with further research outcomes, while the employment of established scales like PHQ-8, GAD-7, and PANAS provide a methodological guide. The article not only furnishes a comparative and extensive study point but also aids in identifying gaps or limitations that can be addressed in future research, offering pathways for justifying and ensuring the embedding of new research in ongoing academic discourse. This article’s interplay of research questions, hypotheses, and empirical work provides a fertile environment for contrasting findings and extending research narratives in future endeavors. This ensures conceptually robust, methodologically aligned contributions to the existing body of knowledge concerning social media usage's impact on mental health.

The main limitations of this study include the demographic skew towards white, cisgender women, limiting the generalizability of the findings to broader and more diverse

populations. Moreover, adopting a cross-sectional research design constrains the ability to decipher causality in the observed relationships between social media use and affective variables. An omission of detailed validation for survey items related to social media use types also slightly undermines the reliability of the findings. A defining strength is the comprehensive utilization of established scales such as PHQ-8, GAD-7, and PANAS, enhancing the accuracy and reliability in measuring affective variables. The article provides valuable insight into the nuanced relationships between various forms of social media use and psychological states, particularly amid a demographic widely engaged in digital interactions. Thus, despite its limitations, the study adds a vital layer of understanding to the domain of digital psychology and can, therefore, help anchor future research, potentially steering it towards explorations that incorporate demographic diversity and longitudinal perspectives to unpack further the intricate dynamics between social media use and mental health outcomes among college students.

Engaging with this article allows for calibrating the number of research questions and hypotheses, especially ensuring they are sharp, relevant, and founded on existing empirical work. If any of the esearch questions align with those explored in the article, it provides a fertile ground for juxtaposition of findings, potential meta-analysis, or a complementary extension of the research narrative. With its empirical insights, methodological framework, and thematic relevance, we can say that this article furnishes a valuable resource, ensuring that our research is conceptually robust, methodologically aligned, and contributes meaningfully to the existing body of knowledge on the impact of social media usage on mental health.

Impact of Exercise on Controlling Anxiety Symptoms

Patterson et al. (2019) performed a longitudinal study to evaluate the relationship between group exercise membership, social network characteristics, and general state of anxiety in a sample of college students. Anxiety is common among college students in the U.S. An alarming 41.6 % of college students report that general state anxiety is a top concern, and 11.9 % of college students have been diagnosed with anxiety disorder. Since 2000, the American College Health Association has reported a 14.2% increase in general state anxiety in college students and 26.2% report that anxiety interferes with their academic status. Moreover, the effects of anxiety on academic status are not the only concern. The mere feeling of anxiety also affects personal aspects of these college students' lives, such as struggles with interpersonal relationships. Health concerns such as sleep problems and increased physical sickness are also affected by anxiety, creating a crucial issue for primary healthcare providers. Network theory guided this study, specifically social network analysis and egocentric network analysis. Social network analysis suggests that the relationships and connections between others impact their source of support, behaviors, and beliefs. Egocentric network analysis suggests that an individual's ego is influenced by the people they are connected to; each connection may elicit a different ego or alter ego. Egocentric network analysis measures the relationships between such alter egos.

Patterson et al. (2019) intended to achieve the following: evaluate correlations between group exercise membership and general state anxiety while controlling for individual health and network variables such as individual exercise and overall well-being and exercise habits of alters. Also, this study aimed to determine if any ego network variables, such as the relationship to the alter and how often the alter exercises are meaningful in explaining general state anxiety among

college students. Patterson et al. (2019) anticipate that egocentric network properties will impact anxiety levels within the sample. The egocentric network properties also include exercise homophily and network composition.

The study recruited 490 undergraduate students from an on-campus exercise program and general health classes at a private university in the southern United States. Data was collected between October 2017 and November 2017. Initially, the study collected data from group exercise members. However, it later included those students enrolled in general health classes, allowing for the inclusion of those students who were not enrolled in the group exercise program, thus expanding the study population size. Students were asked to take the survey only once to ensure that the recruited students were distinct from each category. Students must be at least 18 years old and enrolled in at least 12 credit hours of undergraduate coursework to be eligible for this study. Fifty weekly classes, including indoor cycling, yoga, dance fitness classes, boxing, and boot camp, were available to those students enrolled in the on-campus group exercise. Patterson et al. (2019) found that the students enrolled (n=100) in the on-campus group exercise had full access to all classes. The Institutional Review Board approved this study. Before the study, all participants were made aware of the study's purpose, risks, benefits, and the ability to depart from the study at any time. A software link, Qualtrics, was used to complete the online survey. Directions for software use were provided to the participants. Consent was obtained from participants via electronic signature before completion of the survey was permitted. Upon completing the survey, participants were entered into a drawing for free gym membership the following semester. Those participants enrolled in general health classes were given five extra credit points in their class. Participants provided their date of birth, classification (freshman, sophomore), race or ethnicity, and whether they were members of the group exercise program.

Participants included 345 females and 131 males; 109 were freshmen, 129 were sophomores, 96 were juniors, and 156 were seniors. In Patterson et al.'s (2019) study, the participants were comprised of 341 white college students and 143 nonwhite or multiracial students. This study used various instruments to screen for anxiety, overall well-being, physical activity, and egocentric network data. Anxiety data was gathered from a subscale derived from the Stress Scale or DASS. DASS consists of 21 questions that are graded on a 4-point scale. Totals are categorized into 0-7 as normal, 8-9 as mild, 10-14 as moderate, 15-19 as severe, and 20+ as extremely severe. The flourishing scale was used to measure overall well-being. The flourishing scale consists of 8 items on a 7-point Likert scale with 1 = strongly disagree and 7 = strongly agree.

The eight items were totaled for a sum score. A higher score suggests a more positive overall well-being. The Godin-Shepard Leisure Time Exercise Questionnaire or Godin LTEQ measured physical activity. The Godin LTEQ is a 4-item scale that measures the intensity and duration of physical activity over seven days. In order to create a sum, strenuous activity was multiplied by 9, moderate exercise was multiplied by 5, and mild exercise was multiplied by 3. Those products were combined to make one score. A score between 14 and 23 is associated with the individual receiving some health benefit. Scores 24 and above mean substantial health benefits were gained (Patterson et al., 2019).

To collect egocentric network data, each participant was instructed to provide the initials of up to five people they felt closest to at their institutions, allowing the participants to identify their egos as they answered questions. Ego network variables were created using the statistical program E-Net. Such variables included compositional network variables and homophily. SPSS version 24 was used for descriptive statistics, independent samples t-tests, and hierarchical linear

regression analysis predicting anxiety on demographic, health, and egocentric networks (Patterson et al., 2019).

A hierarchical linear regression analysis was conducted to distinguish which variables caused participant anxiety score changes in three models (Patterson et al.,2019). The first model included demographic variables such as gender, age, and race/ethnicity ($p = .002$). The second model included individual and health-related variables such as flourishing, group exercise membership status, physical activity scores, and demographic factors ($p < .0001$). The final model added egocentric network variables that were classified as a friend, significant other, roommate - or if they were female, how often exercise was performed - and if the ego was known for less than a year. and homophily between ego alter and exercise ($p < .0001$). Group exercise membership ($p = .034$) and flourishing scores ($p < .0001$) correlated with lower anxiety scores, while being a racial/ethnic minority student ($p = .036$) and alters who exercise often ($p = .025$) was related to higher anxiety scores in the final mode.

Following analysis, the researchers determined that the overall samples reported low anxiety levels and over half of the participants scored in the normal range. The sample mean for anxiety was comparable to the mean scores from previous studies. About 10% of the sample was classified into severe and extremely severe anxiety categories; this was comparable to the 11.9% of American college students diagnosed with anxiety disorder. Results concluded that group exercise participation was correlated with lower anxiety scores; however, relationships with those who exercised correlated with higher anxiety scores. Individual physical activity scores did not correlate to anxiety scores in the study sample; however, being in a group exercise program was significantly related to reduced anxiety scores when controlling for individual-level and network-level scores. This study concluded that a lack of belonging is related to increased stress

and anxiety (Patterson et al., 2019). To verify this finding, this study conducted a post hoc analysis to compare group exercise members' moderate and strenuous exercise scores versus those not involved in the program. Findings suggest that group exercise members' exercise score was slightly higher than that of nonmembers, means were not significantly different from one another ($p = .120$). Being in a group positively affects anxiety levels in students who exercise. This study cannot be sure of the relationship beyond that because this was a cross-sectional study. It is possible that those with less anxiety were more willing to join the group. Network variables provided a significantly slight variance to the model explaining anxiety in college students. For example, higher anxiety levels were observed in those whose egos exercised more often, and this could be due to pressure felt to exercise as often as their egos. High anxiety levels could also be due to shame or guilt from not exercising as much as their ego, which leads to compulsive exercise. Rather than improving health, compulsive exercise can be driven by trying to look a certain way or weighing a certain amount. Homophily had no relationship with anxiety in this model. Exercise homophily may affect people differently. For some, it could provide a sense of well-being; for others, it could cause anxiety due to unhealthy comparisons.

Patterson et al. considered some differences significant between group exercise members' networks and nonmembers. Group exercise participants may have reported new relationships to meet new people or friend groups through group exercise. These new connections may have provided new or additional sources of support, granting social advantage over those who were not involved. The idea that group exercise could provide social benefits was also supported. Another finding of this study was that individual physical activity scores were not statistically significantly related to anxiety in the sample. It may be because regular exercise is linked to lower anxiety, but it is also recommended to alleviate anxiety. Flourishing scores

were the strongest positive predictor of anxiety in this sample. No change was observed in flourishing scores after network variables were added, which suggests an independent effect of flourishing on anxiety scores. Results of this study found a correlation between being a racial and or ethnic minority college student and anxiety; this could be due to microaggressions and other past negative experiences. This could impact students' persistence and success in college (Patterson et al., 2019).

Patterson et al. (2019) identified several weaknesses of the study. First, the cross-sectional design limited specific results. The time series or a comparison group design would have been more appropriate, offering researchers more confidence in the results. Likewise, the time frame from October to November 2017 may have weakened this study. Another limitation was that the researchers restricted the number of egos nominated at five. This limitation omits possible vital relationships from the ego's network, specifically those relationships that may be negatively impacting the ego's anxiety levels.

Additionally, data was collected by self-support measures, increasing the risk of obtaining inaccurate data compared to more objective measures. The sample size of 490 college students strengthened this study. Other strengths also noted in this study are the use of various screening tools to measure anxiety by use of DASS separately, measuring overall well-being by use of FS, collection of physical activity data by use of Godin LTEQ, and programs such as E-Net to create egocentric network variables. The researchers determined that this study recognizes that social connections impact behavior and health outcomes. This finding supports the fact that specific social ties can have a positive or a negative effect on the mental health of college students. However, the researchers determined that a more in-depth analysis to measure networks within group exercises might uncover additional relational variables that could be important for

holistic well-being in college students. The researchers also suggested a longitudinal or experimental design for future research (Patterson et al., 2019). This would provide clarification of the correlation between physical activity and mental health outcomes among college students. This study provides some essential points that are beneficial to healthcare professionals. Flourishing was a critical factor in lower anxiety scores in the sample. This helped the researchers determine that programming that assists students in reaching goals, remaining positive, and being connected with a support system and mentors will most likely decrease anxiety. The researchers also determined that this study showed positive effects of being involved in group exercise due to group exercise membership. This study also revealed that 90% of group exercise members were white. This statistic may indicate a further need to focus on making sure that all college students, including minorities, are fully aware of campus benefits such as health care services and campus exercise programs available to all college students (Patterson et al., 2019).

The study is relevant to the current study for several reasons. The basis of this study is to evaluate the relationship between group exercise membership, social network characteristics, and general state anxiety among college students. Results of this study revealed multiple factors that cause anxiety among college students, as well as the importance of exercise behaviors to student mental health. Also noted within the study was that key points were identified that could be beneficial for healthcare professionals to assist in reducing anxiety among college students. These findings allow healthcare professionals to provide proper support to promote healthy behaviors in college students that will aid in the reduction of anxiety. Previous researchers mentioned that using a more rigorous design, such as a time series or a comparison group design, could reduce the risk of inferences from results. The current researchers will consider the

recommendation for future research by further examining the various types of design models and utilizing a more appropriate design.

The above literature review has provided a foundation on the hypotheses presented in the current research of symptoms of depression and anxiety being attributed to an increase in social media use and lack of social connection. A few takeaways would be the limitations in the above studies, which would be the limited demographic population and lack of diversity as many participants were cis-gendered Caucasian females. For the purpose of the current research, an attempt will be made to reach a broader population that could lead to diversity in which an adequate deduction can be made regarding social media use and its impact on the development of anxiety and depression symptoms.

Anxiety, sleep & coping: A survey on college students.

A recent study was conducted by Davison and Diez (2022) to investigate the correlation between anxiety, sleep, and coping in college students. In this study, a correlation was confirmed between anxiety and sleep. Davison and Diez (2022) stated that over half of the population of college students suffer from anxiety. The study could not confirm if coping styles affected the management of anxiety and sleep in college students. No theoretical framework was noted in this study. Multiple tools were used in the study, including Brief-COPE, GAD-7, and PSQI (Davison and Diez, 2022).

Davison and Diez (2022) hypothesized that college stressors can lower sleep quality and increase anxiety. Furthermore, it was suggested that coping could lead to improved sleep and decreased anxiety. Believed it mattered what form of coping styles the college students had, with the belief that avoidance could lead to a decline in sleep and an increase in anxiety.

Davison and Diez (2022) used college participants over eighteen using an online survey tool and other online methods such as social media. Of the one hundred and fifteen participants, only seventy-five completed the survey. Most participants were women, seniors, and Caucasians in college. Performed two surveys reviewing anxiety and sleep. Another method of evaluating the participants was a coping scale, looking at the coping style. Three of fourteen coping styles were examined: problem-focused, avoidant, and emotion-focused. Other factors incorporated into the study included screen time, caffeine, and class standing. It is stated that caffeine can increase anxiety and decrease sleep. Screen time was noted because of behavioral changes such as anxiety and a decline in sleep quality. When looking at screen time, participants were asked how much time was spent a day on-screen use, ranging from one hour to ten hours. (Davison & Diez, 2022).

Davison & Diez (2022) concluded that there is a correlation between anxiety and sleep disturbances. Statistically there was a p-value of 0.018 for sleep quality in correlation to anxiety. Davison and Diaz's findings indicate that when caffeine and screen time were managed, sleep improved, and anxiety decreased. In the form of coping skills, the following p-values were reported: emotion-focused 0.143, avoidant coping 0.29, and problem-focused 0.50. Davison and Diazexpected that avoidant management leads to worsening symptoms of anxiety and quality of sleep. It was expected that the following coping mechanisms of problem-focused and emotion-focused would lead to better control of anxiety and sleep. It was concluded that there was no proof that any style of coping improved sleep quality and anxiety and that further investigation was needed. Davison and Diaz (2022) recommended using nuanced categorization for future research. Using all fourteen categories of Brief Cope instead of just a few was also suggested by Davison and Diaz (2022).

Davison and Diaz (2022) identified several weaknesses in this study. One weakness is that the primary group reviewed were Caucasian and female and if the participants had a history of mental illness. Furthermore, only a tiny population was assessed. There is a vast population of college students; less than one hundred participants were studied to gather results. There was no mention of where the sample population went to college or what areas they lived in. Screen time was looked at, but not the screen time findings. One strength of the paper was that it included an unbiased opinion by the researchers. A correlation between anxiety and sleep quality was also confirmed. Another strength was that Davison and Diez (2022) found a link between increased anxiety, decreased quality of sleep, and screen time.

The researchers found that Davison and Diaz's (2022) study is beneficial in the current study. The basis of the study focuses on college students' correlations between anxiety and sleep quality. Davison and Diaz (2022) took note that social media can negatively impact sleep quality and lead to symptoms of anxiety. Decreased screen time led to reduced anxiety and improved sleep quality. The research also sought to find how coping can assist with managing sleep quality and anxiety. This article has helped support that anxiety is present in our college students and that screen time does contribute to this. This allows a foundation to further our research in the assessment of symptoms of anxiety in college students and how social media is linked to these symptoms. The current study can utilize the Brief Cope assessment and all fourteen categories.

Effects of Social Media Use and Academic Performance

Barton et al. (2021) explore the predictive relationship between social media usage and academic performance in undergraduate and graduate students. The authors also examine whether the regulation of time/study environment and effort regulation moderate the relationship between social media usage and academic performance. The widespread use of social media

among students and concerns about its impact on learning outcomes provide the background and significance for this study. The theoretical framework is not explicitly stated, but the study draws on theories of self-regulated learning, which emphasize students' ability to control their cognition, motivation, and behavior in academic settings. The research builds on prior studies showing mixed evidence for the effects of social media usage on student achievement.

Barton et al. (2021) formulated specific research questions for this study. The research questions are as follows: 1) What is the predictive relationship between social media usage and academic performance? 2) Do regulation of time/study environment and effort regulation moderate the relationship between social media usage and academic performance? Although the authors do not state explicit hypotheses, they were implied and are as follows: 1) Higher social media usage will predict lower academic performance. 2) The relationship between social media usage and academic performance will be weaker when the regulation of time/study environment and effort regulation are higher.

Barton et al. (2021) used a quantitative study approach a cross-sectional survey design. The setting was a public university in the Southeastern United States. A sample of 717 undergraduate and graduate students completed an online survey between January and March of 2017. After removing incomplete responses, the final sample used in the analyses was 659 students. The sample was 78% female and 53.9% Caucasian. Other gender and race categories completed the remaining percentages. The independent variable was social media usage, measured using the Social Media Usage Questionnaire. The dependent variable was academic performance, measured by self-reported GPA. The moderators were regulation of time and study environment and effort regulation, assessed using the Motivated Strategies for Learning Questionnaire (MSLQ) subscales.

Barton et al. (2021) utilized several methodological strengths in their study: they had a relatively large sample size of 659 students, which helped improve the reliability and generalizabilty of the results. The sample also contained diversity in terms of demographics like gender, race, and education level. The study employed validated instruments like Social Media Usage Questionnaire to measure key variables. Barton et al. (2021) also controlled for demographic factors like gender and race when testing the relationship between social media usage and GPA. This isolates teh predictive effect of social media usage specifically. Examining moderators goes beyond just testing direct effects by probing the conditional nature of the relationship between the predictor and outcome.

Barton et al. (2021) utilized a hierarchical multiple regression analysis to examine the predictive relationship between social media usage and academic performance. This allowed them to test if social media usage could significantly predict students' GPAs while controlling for the influence of demographic factors like gender, race, and age. After establishing the main effect, the authors conducted a moderation analysis. The goal was to determine if the two variables of regulation of time/study environment and effort regulation moderated or affected the strength and direction of the relationship between social media usage and GPA. Specifically, they tested whether having higher or lower levels of these two self-regulatory abilities changed the nature of the association between the predictor and outcome variables. Using moderation analysis enabled the researchers to probe deeper into the conditional nature of the relationship between social media usage and academic achievement (Barton et al., 2021).

Barton et al. (2021) showed that social media usage significantly predicted lower GPA when controlling for demographic factors, supporting the first hypothesis. Specifically, the statistical analysis revealed that social media usage was a significant negative predictor of self-

reported GPA while controlling demographic factors like gender, ethnicity, and age. These results supported the first hypothesis that higher social media usage would be associated with poorer academic performance as measured by GPA. The authors found that higher Social Media Usage Questionnaire scores predicted lower GPAs, as evidenced by the beta coefficient of -.233, which was statistically significant at the $p < .001$ level. This indicates that for every 1 standard deviation increase in social media usage, GPA decreased by -.233 standard deviations on average. The highly significant p-value provides confidence that this negative predictive relationship between the two key variables of interest is unlikely due to chance alone within the sample. The moderation hypotheses were partially supported. Regulation of time/study environment significantly moderated the relationship between social media usage and GPA (interaction $\beta = .092$, $p = .026$), but effort regulation did not (interaction $\beta = .070$, $p = .057$). The relationship between social media usage and GPA was weaker when students reported a higher ability to regulate their study environment and time.

Consequently, the authors conclude that social media usage negatively affects academic performance, but students' ability to regulate their study time and environment can buffer this effect. Barton et al. (2021) concluded that social media usage, attention, and motivation all impact academic performance. They recommended interventions to strengthen students' attentional control and motivational regulation to facilitate academic success. More research is needed on how these variables interact over time.

However, some weaknesses should be noted. The cross-sectional survey design means causality cannot be definitively determined between social media usage and academic performance. The reliance on self-report measures for the variables may also introduce response biases, such as social desirability bias. The study did not directly measure the time spent on

social media or the specific activities students engaged in online. The sample from only one university reduces the generalizability of the findings to the broader student population. Finally, potential confounding variables like personality traits were not accounted for, which could influence both social media use and academic outcomes. Nevertheless, the authors used reasonable methods, given the preliminary nature of this research area.

CHAPTER III

Design and Methodology

Purpose

The purpose of this study was to evaluate social media use and its correlation to symptoms of anxiety and depression among college students. The survey extracted information regarding college students' experience with symptoms of anxiety and depression and social media use. This study was designed to evaluate whether social media correlated with adverse effects of anxiety and depression. Lastly, this study made participants knowledgeable of resources available if experiencing symptoms of anxiety and depression, including the suicide hotline number.

Design

The design of the study was conducted using a quantitative correlational research design survey. The researchers designed the survey for the study utilizing certain specific questions from the Generalized Anxiety Disorder 7-item scale (GAD-7) tool, the Patient Health Questionnaire-8 (PHQ) tool, and the Bergen Social Media Addiction Scale. The survey contained twenty-five questions: five demographic questions that included age, race, and gender; two questions developed by the researchers to evaluate the participant's employment status; four questions focused on social media addiction taken from the Bergen Social Media Addiction Scale to determine if there was a substantial amount of social media use; three questions formulated by the researchers aimed to evaluate symptoms of anxiety related to heightened social media usage and frequent inclination to engage with social media platforms defined by the researchers as Twitter, Facebook, Snapchat, and Instagram; six questions to address patterns of social media usage and sleep habits among participants with some of the questions utilized by

the Generalized Anxiety Disorder 7-item scale (GAD-7) tool to identify symptoms of anxiety; and five questions related to depression from the Patient Health Questionnaire-8 (PHQ) to recognize symptoms of depression.

Setting

The study was conducted during the spring semester at a coeducational public university in Northeast Mississippi. The Southern Association of Colleges and Schools accredited the university to award associate degrees, baccalaureate degrees, master's degrees, and doctoral degrees, with more than 70 outstanding majors.

Population and Sample

The target population for this study was college students 18 years of age and older, male and female, enrolled in a university in Northeast Mississippi with current access to social media. The accessible population was male and female college students ages 18 years and older enrolled at a university in Northeast Mississippi with social media access. A convenience sample was used for this study, and surveys were distributed to those who met the study requirements. The data was collected by using a QR code on flyers distributed throughout the university campus and posted in classrooms. The researchers also hand-delivered surveys across the campus in high-volume areas such as the library, classrooms, and the cafeteria.

Methods of Data Collection

Approval was obtained from a Northeast Mississippi University institutional review board before data collection. The data collection plan included using formal scales to measure symptoms of anxiety and depression and social media use. The survey contained one statement verifying that the participant gave consent by completing the survey. The consent allowed the researchers to utilize and share completed surveys in the research study. The survey was

available to college students for several weeks. No personal information was requested to maintain confidentiality. Data collected remained confidential and in the sole possession of the researchers. Data was gathered, organized, and entered on a spreadsheet for analysis. No incentives were offered to participants in this study. After the study, all forms of data collection were shredded and permanently erased by the researchers.

Methods of Data Analysis

The researchers created a data collection worksheet for review. Information in the worksheet included age, gender, race, the types of devices used to access social media, how often social media was used for coping, how much time was spent on social media use, symptoms of anxiety, and symptoms of depression. After data collection, the results were given to a statistician for interpretation and analysis. The Chi-Square was used to determine if a correlation occurred between social media use and symptoms of anxiety and depression. The results of this study are reported in the following chapters.

Chapter IV

Presentation of Findings

The purpose of this study was to evaluate the correlation of social media use and symptoms of anxiety and depression among college students. Left untreated, symptoms of anxiety and depression pose significant risks, potentially leading to severe outcomes such as suicide, which is the second leading cause of death among adolescents according to the CDC. In a comprehensive survey spanning over one hundred colleges, students reported alarming statistics 44% experienced symptoms of depression, and 37% reported suffering from anxiety (Cook, 2023).

This chapter contains the analysis of a study conducted at a college in Northeast Mississippi. The study aimed to investigate the correlation of social media use and symptoms of anxiety and depression among college students. A total of 109 participants completed the questionnaire, distributed via the institutional email system, surveys, and QR code distribution on campus. The target demographic for participants were anyone enrolled at the university over the age of 18, with exclusions applied to individuals under the age of 18. All majors offered at the university were included in the study and informed consent was obtained from all participants prior to participation.

Participant Profile

- **Demographics:** The demographic profile of participants included various age groups, genders, ethnicities, and educational backgrounds. The demographics of the survey respondents are shown in Table 1. Most respondents were aged 18-24 years (52.3%), female (82.6), Caucasian (59.6%), and were currently employed (63.3%).

  Table. 1.

  Demographics

	Frequency (n=109)	Percent
Age		
18-24	57	52.3%
25-31	24	22.0%
32-49	24	22.0%
50 years or older	4	3.7%
Gender		
Female	90	82.6%
Male	19	17.4%
Race		
African American	39	35.8%
Asian	1	0.9%
Caucasian/White	65	59.6%
Hispanic	2	1.8%
Other	2	1.8%
Currently Employed		
Yes	69	63.3%
No	40	36.7%
Employment Status		
Full-time	29	26.6%
Part-time	40	36.7%
Not applicable	40	36.7%

Data Collection Procedures

- **Recruitment**: Participants were recruited through a combination of surveys, email invitations, and QR code distribution throughout campus. The multi-modal strategy ensured extensive reach and inclusivity within the university.
- **Consent process:** Prior to answering the questionnaire, all participants were provided with informed consent which outlined the purpose of the study and assurances of confidentiality. Participants were required to select "I agree" or "I disagree" to this consent to indicate their voluntary consent to participate.

Data Analysis

- **Survey Responses:** In this section, we investigate responses obtained from respondents. The questions presented on the tool were designed to assess the correlation of social media use

and symptoms of anxiety and depression, providing valuable insight. After gathering demographic information, the subsequent questions shifted focus to symptoms directly associated with depression, encompassing difficulties in concentration, low energy levels, and little interest in doing things. Five survey questions were focused on depression, taken from the PHQ-8 survey. Responses to those five questions are shown in the following table.

Table 2.

Questions 8-12

	Frequency (n=109)	**Percent**
Q8: Little interest or pleasure in doing things?		
Not at all	35	32.1%
Several days	32	29.4%
More than half of the days	29	26.6%
Nearly every day	13	11.9%
Q9: Feeling down, depressed, irritable, or hopeless?		
Not at all	32	29.4%
Several days	32	29.4%
More than half of the days	37	33.9%
Nearly every day	8	7.3%
Q10: Trouble falling or staying asleep or sleeping too much?		
Not at all	28	25.7%
Several days	30	27.5%
More than half of the days	25	22.9%
Nearly every day	26	23.9%
Q11: Feeling tired or having little energy?		
Not at all	11	10.1%
Several days	34	31.2%
More than half of the days	33	30.3%
Nearly every day	31	28.4%
Q12: Trouble concentrating on things such as school work, reading or watching?		
Not at all	19	17.4%
Several days	40	36.7%
More than half of the days	27	24.8%
Nearly every day	23	21.1%

The next set of questions directly addressed the patterns of social media usage and sleep habits among participants. These inquires assessed their daily duration of social media

engagement, peak usage times (day or night), and average nightly hours of sleep. Respondent answers to social media survey questions not used elsewhere are shown in the following table. Most respondents reported spending 1-3 hours (40.4%) or 3-6 hours (45.0%) of time on social media daily. Most respondents reported using social media more at night 77.1% including when they could not sleep (79.8%).

Table 3.

Survey questions 13-20

	Frequency (n=109)	**Percent**
Q13: How much time do you spend on social media daily?		
1-3 hours	44	40.4%
3-6 hours	49	45.0%
6-8 hours	13	11.9%
More than 8 hours	3	2.8%
Q14: Do you use social media more at night or in the morning?		
Morning	25	22.9%
Night	84	77.1%
Q15: Do you get on social media when you cannot sleep?		
No	22	20.2%
Yes	87	79.8%
Q16: How many hours do you sleep at night?		
3-5 hours	27	24.8%
6-8 hours	71	65.1%
8-10 hours	11	10.1%
More than 10 hours	0	0.0%
Q17: Do you get on social media when you feel nervous, hopeless, or depressed?		
Very Rarely	30	27.5%
Rarely	20	18.3%
Sometimes	36	33.0%
Often	14	12.8%
Very Often	9	8.3%
Q20: Do you feel anxious when you are not on social media?		
Very Rarely	59	54.1%
Rarely	18	16.5%
Sometimes	18	16.5%
Often	11	10.1%
Very Often	3	2.8%

The next set of questions examined the specific symptoms of anxiety which attempted to bridge the link between the use of social media as a coping mechanism or if social media precipitated the emergence of anxiety symptoms. Four survey questions were focused on social media addiction, taken from the Bergen Social Media Addiction Scale. Responses to those four questions are shown in the following table.

Table. 4

Questions 18-25

	Frequency (n=109)	**Percent**
Q18: Do you use social media in order to forget about personal problems?		
Very Rarely	29	26.6%
Rarely	27	24.8%
Sometimes	23	21.1%
Often	21	19.3%
Very Often	9	8.3%
Q22: Do you feel an urge to check your social media more and more?		
Very Rarely	34	31.2%
Rarely	22	20.2%
Sometimes	28	25.7%
Often	19	17.4%
Very Often	6	5.5%
Q24: Have you tried to cut down on the use of social media without success?		
Very Rarely	39	35.8%
Rarely	28	25.7%
Sometimes	22	20.2%
Often	7	6.4%
Very Often	13	11.9%
Q25: Do you use social media so much that it has had a negative impact on your job/studies?		
Very Rarely	59	54.1%
Rarely	26	23.9%
Sometimes	9	8.3%
Often	8	7.3%
Very Often	7	6.4%

The following three graphs illustrate questions formulated by the researchers exclusively for this study's data analysis section. These questions used a 1-5 grading scale: 1 for very rare, 2

for rare, 3 for occasional, 4 for frequent, and 5 for very frequent responses. They aimed to evaluate anxiety related to heightened social media usage and the frequent inclination to engage with social media platforms defined by the researchers as Twitter, Facebook, Snapchat, and Instagram.

Figure 1.

Question 19: Do you feel an urge to use social media more and more?

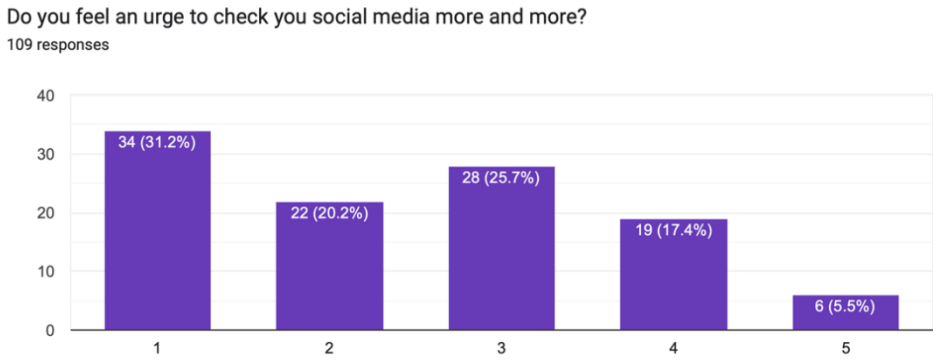


Figure 2.

Question 21: Have you tried to cut down on the use of social media without success?

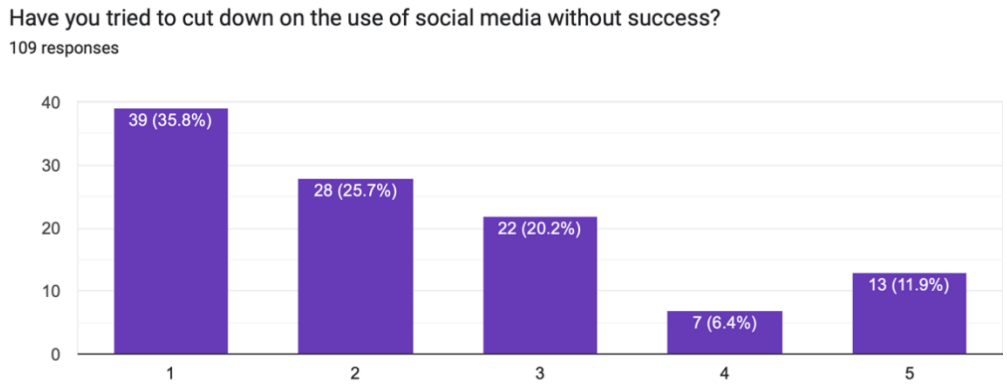
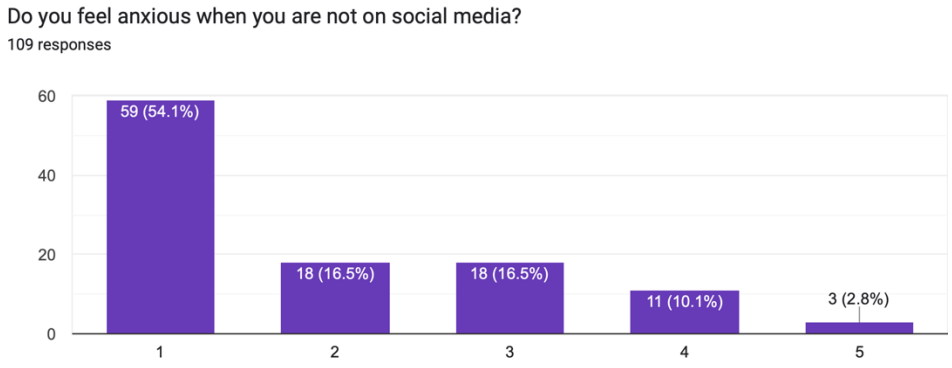


Figure 3.

Question 23: Do you feel anxious when you are not on social media?



In the graphs provided, most respondents opted for option 1, indicating a very low frequency of social media addiction and symptoms of anxiety. This suggests a negative relationship regarding feelings of anxiety when not using social media, the difficulty in reducing social media usage successfully, and the urge to engage with social media. While there was a positive correlation between increased social media usage and symptoms of anxiety and depression, no correlation was found concerning feelings of anxiety when not using social media. This absence of correlation further underscores the findings on students potentially exhibiting signs of social media addiction.

The researchers additionally evaluated the participants' employment status, utilizing questions six and seven for this assessment. The following graphs depict the results provided by participants. Most participants indicated they were employed part-time. The categories of part-time employment and unemployment were identical in frequency

Figure 4.

Question 6: Are You currently employed?

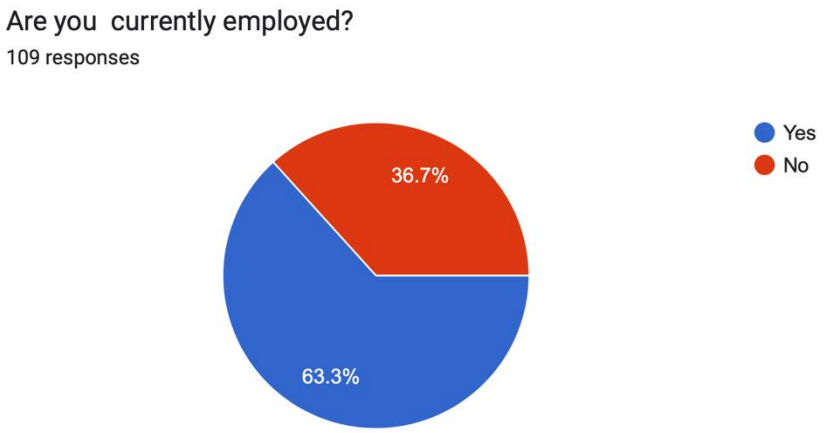
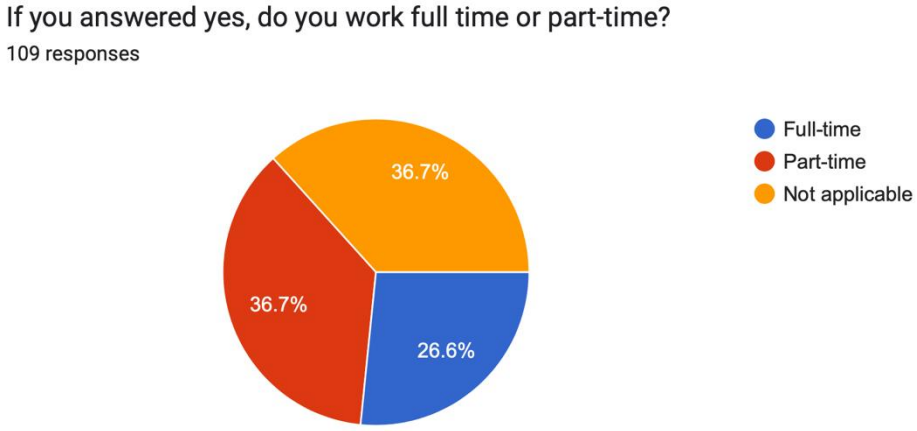


Figure 5.

Question 7: If you answered yes, do you work full time or part-time?



FINDINGS

The total sample population included 109 respondents. All respondents met the survey requirement guidelines of 18 years of age and older and enrolled in the Northeast Mississippi college.

Research Question 1: 1) Are college students utilizing social media to cope with symptoms of anxiety and/or depression? The results are somewhat conflicting regarding college students very rarely

Question 17 asked respondents: "Do you get on social media when you feel nervous, hopeless, or depressed?" In response to this question, a majority answered favorable (54.1%), indicating that they get on social media in these situations sometimes (33.0%), often (12.8%), or very often (8.3%).

Research Question 2: Are college students experiencing symptoms of anxiety and/or depression? Yes

Anxiety scores for the n=109 respondents ranged from 3 to 15. The average score was 8.44, with a standard deviation of 3.267. Levels of anxiety of the respondents were categorized as minimal (n=9, 8.3%), mild (n=25, 22.9%), moderate (n=41, 37.6%), and severe (n=34, 31.2%).

Depression indicator scores for the n=109 respondents ranged from 0 to 15. The average score was 7.09, with a standard deviation of 4.013. More than half (56.9%) of respondents were flagged as having the depression indicator (score above 6.25), with the other 43.1% having scores below the cutoff.

Research Question 3: Is there a correlation between symptoms of anxiety, depression, and social media use in college students? Yes.

The Pearson Correlation of the three scaled scores were calculated. Depression (PHQ Score) and Anxiety (GAD Score) had a strong positive correlation (r (109) = .60, p < .001). Depression (PHQ Score) and Social Media Addiction (BSMAS Score) had a moderate positive correlation (r (109) = .45, p < .001). Anxiety (GAD Score) and Social Media Addiction (BSMAS Score) has a strong positive correlation (r (109) = .59, p < .001). All three of these correlations were statistically significant at the .001 level.

CONCLUSION

In conclusion, this research sheds light on the critical correlation between social media use and symptoms of anxiety and depression among college students. Left untreated, these symptoms can escalate to severe mental health issues, as evidenced by the CDC's alarming statistic that suicide is the second leading cause of death among adolescents. This study, conducted at a college in Northeast Mississippi with 109 participants, revealed significant findings regarding the prevalence of anxiety and depression symptoms among college students. Our analysis uncovered a strong positive correlation between symptoms of anxiety, depression, and social media addiction, highlighting the detrimental impact of excessive social media use on mental well-being. The Pearson correlation coefficients demonstrated statistically significant relationships between depression, anxiety, and social media addiction at the .001 level. These findings underscore the urgent need for targeted interventions and support systems to address mental health issues exacerbated by social media use among college students. At the end of the survey tool, participants were provided with contact information for the student health center and suicide hotline. By raising awareness and implementing evidence-based strategies, we can work towards fostering a healthier digital environment and promoting overall well-being among young adults.

Chapter V

Implications

Introduction

The purpose of this study was to evaluate the correlation of social media use and symptoms of anxiety and depression among college students. Social media use in college students has been linked to increased symptoms of anxiety and depression (Lippold, J. 2020). Increased symptoms of anxiety and depression make adolescents more prone to committing suicide. The CDC reports that the second leading cause of death in young adults is suicide (Centers for Disease, 2023). Therefore, the researchers evaluated the impact of social media use and its correlation to symptoms of anxiety and depression among college students.

Discussion of the Findings

Our research showed that anxiety and depression play a major part among college students due to the increased use of social media in today's society---make sure findings correlate. A link was found between anxiety, depression, and college students through use of social media (Lippold, J. 2020). In previous research, a review was conducted on college students in over one hundred colleges, with the following report by the students: 44 % suffered from symptoms of depression, and 37% suffered from anxiety (Cook,2023). In our current research, the majority of the respondents said they used social media every day for one to three hours (40.4%) or three to six hours (45%). Additionally, 77.1% of them admitted to utilizing social media more at night, even when they were not able to sleep (79.8%). The n=109 respondents' scores on social media addiction varied from 4 to 20. The average score was 9.25, and the standard deviation was 3.914. The respondents' levels of addiction to social media were divided into three categories: low (n =86, 78.9%), moderate (n =20, 18.3%), and high (n =3, 2.8%). The n=109 respondents' depression

indicator ratings varied from 0 to 15. The average score was 7.09, while the standard deviation was 4.013. The depression indication was present in more than half (56.9%) of the respondents (score above 6.25), with scores in the remaining 43.1% of respondents. The 109 respondents' anxiety scores varied from 3 to 15. The standard deviation was 3.267 and the average score was 8.44. The respondents were divided into four categories based on their level of anxiety: minimal (n = 9, 8.3%), mild (n = 25, 22.9%), moderate (n = 41, 37.6%), and severe (n = 34, 31.2%). In conclusion, the literature from our research supported our results. There was a significant positive association between anxiety (GAD Score) and depression (PHQ Score) ($r(109) = .60$, $p < .001$). There was a somewhat positive link between social media addiction (BSMAS Score) and depression (PHQ Score) ($r(109) = .45$, $p < .001$). There was a significant positive link between social media addiction (BSMAS Score) and anxiety (GAD Score) ($r(109) = .59$, $p < .001$).

Limitations

Multiple limitations were noted in this study. A projection of 500 students was made, and only 109 participants yielded. The reduction of the projected sample size did not allow for a robust data collection. Of the participants, 82.6% were women, reducing diversity. the study was limited to one University in eastern Mississippi and only inclusive to those 18 years and older enrolled at the university. The study also did not offer a question regarding a current mental health illness, which could have interfered with the way that the participant responded to questions in the survey and made it unclear if the participant's environment and mental state may be contributing to symptoms of anxiety and depression. The study also suffered from time constraints of less than a one-year period, limiting the collection of data.

Implications

There has been a significant increase in depression and anxiety symptoms in college students related to factors such as social media use addiction (Cook, 2023). Over one hundred colleges had the following reported by the students: 44% suffered from symptoms of depression, and 37% suffered from anxiety (Cook, 2023). Research has found that out of 96,000 college students, 15% reported consideration of suicide, the highest reported in history (Cook, 2023). The purpose of the study was to bring awareness to the correlation between social media use and symptoms of anxiety and depression among college students. Through research, it assists in setting a foundation by obtaining evidence to gear toward evidence-based practice for nurses nationwide. Pender's Health Promotion Model was utilized to garner data to assist in bringing factual evidence to the patient to recognize the unhealthy correlation between social media use and symptoms of anxiety and depression needed to make proper changes to preserve and promote healthy behaviors with social media use. This study aimed to identify symptoms of anxiety, depression, and the relationship with repetitive use of social media platforms. Pender's Health Promotion Model was utilized to educate on the importance of limiting social media use to promote mental health by reducing symptoms of anxiety and depression. In conclusion, Pender’s Health Promotion model benefited the study by bringing evidence to the at-risk population and healthcare workers for utilization in their care for the patient. Future research can utilize this research as a bases to further build on a wider net of schools which can lead to more diverse set of subjects to garner further support that there is a correlation between social media use and symptoms of anxiety and depression.

Recommendations

Recommendations for this study include broadening the sample population. This research project was limited to one college in Northeastern Mississippi. The researchers had less than a year to gather data on the correlation of social media use and symptoms of anxiety and depression in colleges students. There should be at least two years set aside to gather adequate data. Including college campuses across the country on campus and online can provide a wealth of knowledge to study. This would allow for more conclusive data and more time to get the questionnaire to the targeted population. Another element that could be achieved with more time allowed for this study is an adequate solution to the concern at hand. An updated survey can be developed to assess participants' current mental state and if they have a history of mental illnesses. Therefore results could be affected if the samples already suffered from mental health concerns hindering data.

Summary

This study set forth to analyze the correlation of social media use and symptoms of anxiety and depression among college students by utilizing surveys containing QR codes. The surveys were distributed via email and distributed throughout the campus at a university in Northeast Mississippi. Previous studies conducted among college students determined that those students who suffered from symptoms of anxiety and depression may have been related through social media use. The study did not offer any questions regarding previous mental health conditions, making it unknown whether previous mental health conditions interfered with how the participants responded to the survey questions; this is a limitation in the study that can be improved upon. This study provides a significant amount of evidence that there is a correlation

of social media use and symptoms of anxiety and depression among college students. Further research will aid in solidifying the findings of this study assisting in recognition of unhealthy habits. These unhealthy habits, if left untreated, pose significant risks such as suicide as listed by the CDC as the second leading cause of death among adolescents.

References

American Psychological Association. (2022). Anxiety.https://www.apa.org/topics/anxiety

Centers for Disease. (2023, May). Facts about suicide | suicide | CDC - Centers for Disease Control and Preventing Suicide. https://www.cdc.gov/suicide/facts/index.html

Chand, S. P., & Arif, H. (2021). Depression. PubMed; StatPearls Publishing. https://www.ncbi.nlm.nih.gov/books/NBK430847/#:~:text=Introduction-

Davison, C., & Diez, E. (2022). *Anxiety, sleep & coping: A survey on college students*. ScholarWorks @ SeattleU. *Psychology Student Scholarship*. https://scholarworks.seattleu.edu/psychology-stdt/3

Tartakovsky, M. (2022, April). Psych Central. https://psychcentral.com/depression/depression-and-anxiety-among-college-students#symptoms

Destiny, C. (2023, March 9). *College students' anxiety, depression higher than ever, but so are efforts to receive care: News: University of Michigan School of Public Health: Mental Health: Healthy Minds Study*. College Students' Anxiety, Depression Higher Than Ever, but So Are Efforts to Receive Care | News | University of Michigan School of Public Health | Mental Health | Healthy Minds Study |. https://sph.umich.edu/news/2023posts/college-students-anxiety-depression-higher-than-ever-but-so-are-efforts-to-receive-care.html#:~:text=Associate%20Professor%20of%20Health%20Behavior%20and%20Health%20Education&text=It%20found%20that%2044%25%20of,15%2Dyear%2Dold%20survey.

Farlex. (n.d.-b). *Wordnet*. The Free Dictionary. https://www.thefreedictionary.com/wordnet

GAD-7 Anxiety. (n.d.). https://adaa.org/sites/default/files/GAD-7_Anxiety-updated_0.pdf

Keegan, J. P., Chan, F., Ditchman, N., & Chiu, C. Y. (2016). Predictive ability of Pender's health promotion model for physical activity and exercise in people with spinal cord injuries: A hierarchical regression analysis. *Rehabilitation Counseling Bulletin*, *56*(1), 34–47. https://doi.org/10.1177/0034355212440732

Legal Information Institute. (n.d.-b). *Welcome to LII*. Legal Information Institute. https://www.law.cornell.edu

Lippold, Jennifer L., "College Students' Social Media Uses and Affective Correlates" (2020). Graduate Student Theses, Dissertations, & Professional Papers. 11625. https://scholarworks.umt.edu/etd/11625

Lopes Chaves, E. de C., Iunes, D. H., Moura, C. de C., Carvalho, L. C., Nogueira, D. A., Silva, A. M., Salgado Souza, V. H., Miranda, T. P. S., & Carvalho, E. C. de. (2017). Predictors of anxiety in college students. *Nursing Care Open Access Journal*, 3(6), 1-3. https://doi.org/10.15406/ncoaj.2017.03.00089

lutkevich, B. (2021, September). *What is Social Media?* WhatIs.com. https://www.techtarget.com/whatis/definition/social-media#:~:text=Social%20media%20is%20a%20collective

Malaeb, D., Salameh, P., Barbar, S., Awad, E., Haddad, C., Hallit, R., Sacre, H., Akel, M., Obeid, S., Hallit, S. (2021). Problematic Social Media Use and Mental Health (depression, anxiety, and insomnia) among Lebanese adults: Any mediating effect of stress? Core Nursing; Nursing; Peer Reviewed, 57(2), 539-549. doi:10.1111/ppc.125

McCullagh, M., Lusk, S. L., & Ronis, D. L. (2002). Factors influencing use of hearing protection among farmers: A test of the Pender health promotion model. *Nursing Research*, *51*(1), 33–39. DOI: 10.1097/00006199-200201000-00006

Patterson, M. S., Gagnon, L. R., Vukelich, A., Brown, S. E., Nelon, J. L., & Prochnow, T. (2021). Social networks, group exercise, and anxiety among college students. *Journal of American College Health*, 69(4), 361–369. https://doiorg.libprxy.muw.edu/10.1080/07448481.2019.1679150

Pender NJ, & Pender AR. (1980). Illness prevention and health promotion services provided by nurse practitioners: predicting potential consumers... a northern Illinois county. *American Journal of Public Health*, *70*(8), 798–803. https://doi-org.libprxy.muw.edu/10.2105/AJPH.70.8.798

Pender, N. (2011). The health promotion model. *University of Michigan*. https://deepblue.lib.umich.edu/bitstream/handle/2027.42/85350/HEALTH_PROMOTION_MANUAL_Rev_5-2011.pdf

Petiprin, A. (2023) *Pender's Health Promotion Model*, *Nursing Theory*. Available at: https://nursing-theory.org/theories-and-models/pender-health-promotion-model.php#:~:text=Pender's%20model%20focuses%20on%20three,experiences%20that%20affect%20subsequent%20actions.

Polit, D. F., & Beck, C. T. (2021). *Nursing Research Generating and Assessing Evidence for Nursing Practice* (11th ed., pp. 117-118). Wolters Kluwer.

Polit, D., & Beck, C. (2012). *Quantitative health research*. Wolters Kluwer Health.

The Eight-Item Patient Health Questionnaire for Depression (PHQ-8). (n.d.). Retrieved November 11, 2023, from https://www.recoveryanswers.org/assets/phq-8.pdf

Weinstein, E., Kleiman, E. M., Franz, P. J., Joyce, V. W., Nash, C. C., Buonopane, R. J., & Nock, M. K. (2021). Positive and negative uses of social media among adolescents

hospitalized for suicidal behavior. *Journal of Adolescence*, *87*(1), 63–73. https://doi.org/10.1016/j.adolescence.2020.12.003

White, A., Buboltz, W., & Igou, F. (2018). Mobile phone use and sleep quality and length in college students. *International Journal of Humanities and Social Science*, 1(18) 1-3, https://www.researchgate.net/publication/265741578_Mobile_Phone_Use_and_Sleep_Ququality_and_Length_in_College_Students