

California State University, San Bernardino **CSUSB ScholarWorks**

Electronic Theses, Projects, and Dissertations

Office of Graduate Studies

5-2023

THE IMPACT OF SOCIAL MEDIA USE ON SOCIAL ISOLATION AND MENTAL HEALTH AMONG YOUNG ADULTS

MARIANA ROMO

Follow this and additional works at: https://scholarworks.lib.csusb.edu/etd



Part of the Counseling Commons, and the Psychology Commons

Recommended Citation

ROMO, MARIANA, "THE IMPACT OF SOCIAL MEDIA USE ON SOCIAL ISOLATION AND MENTAL HEALTH AMONG YOUNG ADULTS" (2023). Electronic Theses, Projects, and Dissertations. 1682. https://scholarworks.lib.csusb.edu/etd/1682

This Thesis is brought to you for free and open access by the Office of Graduate Studies at CSUSB ScholarWorks. It has been accepted for inclusion in Electronic Theses, Projects, and Dissertations by an authorized administrator of CSUSB ScholarWorks. For more information, please contact scholarworks@csusb.edu.

THE IMPACT OF SOCIAL MEDIA USE ON SOCIAL ISOLATION AND MENTAL HEALTH AMONG YOUNG ADULTS

A Project

Presented to the

Faculty of

California State University,

San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by

Mariana Romo

May 2023

THE IMPACT OF SOCIAL MEDIA USE ON SOCIAL ISOLATION AND MENTAL HEALTH AMONG YOUNG ADULTS

A Project

Presented to the

Faculty of

California State University,

San Bernardino

by

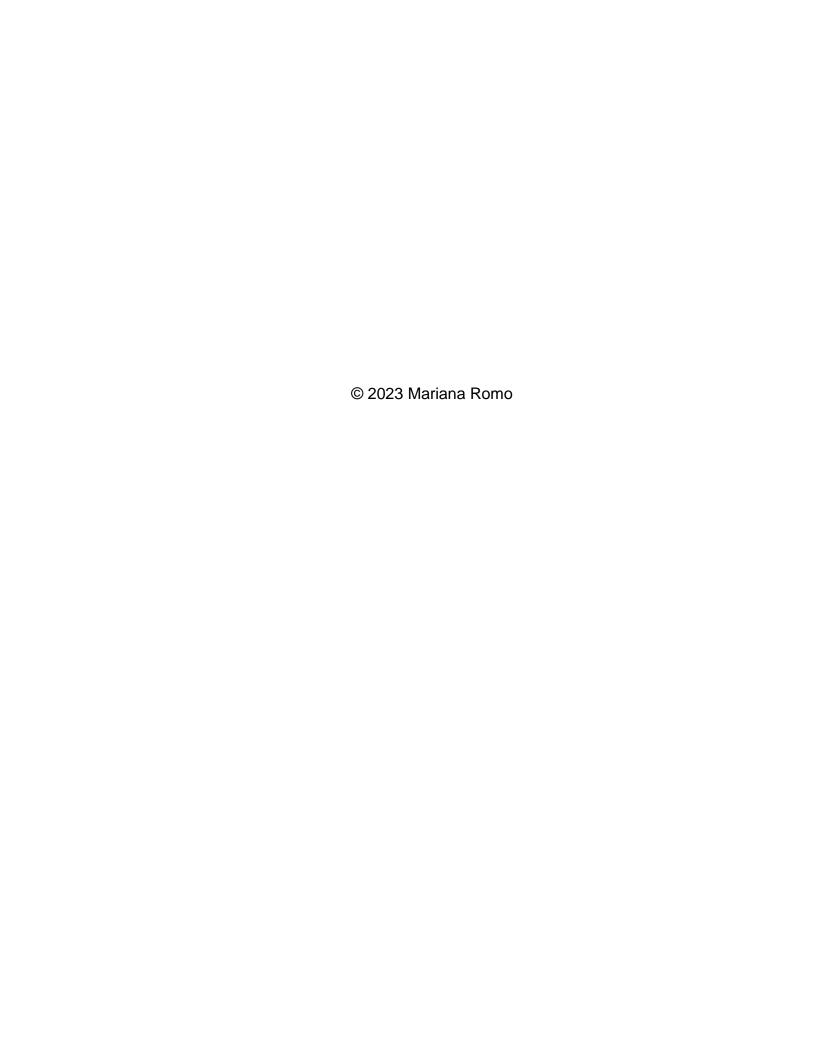
Mariana Romo

May 2023

Approved by:

Erik Schott, Research Supervisor, Social Work

Yawen Li, M.S.W. Research Coordinator



ABSTRACT

Social media use has become part of the everyday routines of society. It is very common to see people, especially young adults, be involved in more than one social media platform. It is also known that because of the features of social media less in-person interactions are required, which brings up the question of whether people feel more lonely or socially isolated with the increased use of social media platforms. Due to this increasing attachment to the use of social media and its possible relationship with social isolation and loneliness it is important to understand if there are any implications that are caused by its excessive use. This research looks into the possible implications that social media could have on young adult's mental health, with social isolation as a mediator. The research from this project showed that there is no direct relationship between social media use and the mental health of young adults, and that, likewise, social isolation is not a mediator leading increase social media to negatively affect the mental health of young adults. Research in this project did show, however, that there is a strong relationship between social isolation and mental health, as social isolation increased in young adults so did stress, anxiety, and depression.

TABLE OF CONTENTS

ABST	RACT	iii
LIST	OF TABLES	vi
LIST	OF FIGURES	vii
CHAP	PTER ONE: PROBLEM FORMULATION	1
CHAP	PTER TWO: LITERATURE REVIEW	6
	Introduction	6
	Social Media and Young Adults	6
	Depression	7
	Anxiety, Stress and Other Mental Health Issues	8
	Social Isolation on Young Adults	8
	Depression and Anxiety	9
	Depression and Suicide	10
	Social Media Use and Social Isolation	10
	Critical literature Review	11
	Limitations	11
	Conflicting Findings	12
	Theories Guiding Conceptualization	13
	Summary	14
CHAF	PTER THREE: METHODS	16
	Introduction	16
	Study Design	16
	Sampling	18
	Data Collection and Instruments	18

Procedures	21
Protection of Human Subjects	21
Data Analysis	22
Summary	23
CHAPTER FOUR: RESULTS	24
Demographics	24
Interpreting Results	26
Conclusion	31
CHAPTER FIVE: DISCUSSION	32
Introduction	32
Discussion	32
Social Media Use and Mental Health	33
Social Isolation and Mental Health	33
Social Media Use and Social Isolation	34
Limitations	34
Recommendations for Social Work Practice, Policy, and Research	35
Conclusion	36
APPENDIX A DATA COLLECTION TOOLS	37
APPENDIX B IRB-APPROVED INFORMED CONSENT	41
APPENDIX C IRB APPROVAL LETTER	44
REFERENCES	46

LIST OF TABLES

Table 1. Age Breakdown
Table 2. Race/Ethnicity Breakdown
Table 3a. Linear Regression between Social Media Use and Stress27
Table 3b. Linear Regression between Social Media Use and Anxiety27
Table 3c. Linear Regression between Social Media Use and Depression 27
Table 4. Linear Regression between Social Media Use and Social Isolation 28
Table 5. Regression Analysis through PROCESS, focus on Social Isolation and Stress
Table 6. Regression Analysis through PROCESS, focus on Social Isolation and Anxiety
Table 7. Regression Analysis through PROCESS, focus on Social Isolation and Depression

LIST OF FIGURES

Figure 1. The Relationship between social media, social isolation and mental	
health being observed by this research	. 25

CHAPTER ONE:

PROBLEM FORMULATION

The use of social media is so embedded into society's daily life that it has almost become a bare necessity. It is so prevalent that one seldom meets a child, or an adult, that does not belong to at least one social media platform: Facebook, Snapchat, Instagram, Tik Tok, YouTube, etc. While social media has proven useful in allowing people to communicate from any location around the world, its excessive use (especially among younger generations) may be associated with social isolation and mental health problems. It is important for the practice of social work to understand whether social isolation acts as a mediator between the relationship of social media use and mental health, especially when it may be affecting young individuals. At a micro level, knowing what might be affecting the mental health of clients, or what might be driving them to socially isolate or feel lonely, will be beneficial in providing the correct type of treatment. At the same time, understanding the relationship between social media use, social isolation, and its effects on mental health, will help macro social workers promote social change by advocating against a source of mental health problems.

Social isolation, in this paper, refers to the lack of social connection and the feelings of loneliness (Centers for disease control and prevention, 2021).

According to Cigna (2020), the number of people reporting feelings of loneliness

has increased in the last few years. In 2019, 61% of the American population reported feelings of loneliness, while in 2018, only 54% of the population reported the same feelings (Cigna, 2020). This shows a 7% increase between 2018 and 2019. At the outset of the COVID-19 pandemic, the number of people reporting feelings of loneliness increased dramatically (Sander, 2020). About 75% of Americans reported to feel sometimes, often, or always lonely due to the pandemic, and from this 75% of people, young adults were the most afflicted by these feelings (Sander, 2020). Specifically, 61% of young adults between the ages of 18 to 39 showed prominent feelings of social isolation and loneliness compared to 42% of people between the ages of 40 and 75 (Sander, 2020).

As social isolation continues to increase throughout the years, and at the onset of COVID-19, it is important to understand its effects on people's mental health. In fact, studies have shown that there is a close association between social isolation and mental health problems (Wang, et al., 2017). For instance, an increase in loneliness in an individual's life is associated with an increase of depressive symptoms (Cacioppo et al., 2006). From the implications of different studies, it appears that social isolation is associated with problems such as depression, delusions, suicidal ideation, psychosis, other mental illnesses, and a higher mortality rate (Wang et al., 2017; Holt-Lunstad et al., 2015). Recognizing that COVID-19 increased the number of people reporting feelings of loneliness, and that loneliness is associated with mental health decline, it may indicate that mental health problems may have increased or changed post-COVID-19.

This study speculates that excessive social media use may be associated with the increase of social isolation leading to an increase in mental health problems. For this reason, it is important to understand the relationship social media has with social isolation and mental health. Social media use, worldwide, has increased from 2.9 billion people in 2017, to 4.2 billion people in 2021 (Statista, 2021). Statista (2021) predicts a continuous increase of social media use throughout the next few years. This continuous rise of social media use is concerning if its excessive use does lead to mental health problems. About 90% of American young adults engage in at least one social media platform, with the numbers of young adults using social media platforms increasing throughout the years (Lin et al., 2016).

As young adults spend many hours of their day navigating on social media through their phones (Andrews et al., 2015), the number of young adults experiencing depression increases as well (Lin et al., 2016). Research has shown that young adults that tend to spend more time using social media platforms tend to show more symptoms of depression than those who use social media less frequently (Rideout, Fox, & Well Being Trust, 2018). Similarly, frequent social media users tend to be at higher risks of developing other mental health problems such as stress, anxiety, and eating disorders (Vannucci, Flannery, & Ohannessan, 2017; Zenni et al., 2018). Overall, research supports a relationship between social media use and mental health.

Continuously, during the COVID-19 quarantine, social media use increased as a popular source of communication between schools, jobs, and families (Liu et al., 2021). Coincidentally, social isolation also increased during this period, (Sander 2020). Provided that social media use affects young adult's mental health (Liu et al. 2021) and social isolation affects about 61% young adults (Sander, 2020), and both show increases during the COVID-19 quarantine, there is a possibility of social isolation being the mediator between social media use and the mental health of young adults. However, such a relationship has yet to be determined.

On their own, social media use and social isolation are associated with mental health problems with both affecting younger adults at a greater extent. If there were a connection between social media use and social isolation, its association could also be considered a social problem at both a micro and macro level. It is important to understand the risks that such relationships may bring to a community, to a family, or to an individual. On one hand, it can be beneficial to understand what led or is leading to the mental health deprivation of a client in order to assist them in getting better. On the other hand, while social media use increases worldwide, it can be inferred that an association with social isolation may not be occurring in the United States alone but around the world as well, meaning that macro social change is needed across the world.

As of now, there seems to be little information on the linkage of social media use, social isolation, and mental health. Which is why there is a lack of

resources or policies that can address the problem as a whole. If this study were to show a mediator relationship of social isolation between social media use and mental health, Social Workers would then have to educate themselves on the impacts of such relationships. Then they would need to educate communities on the possible risks and suggest effective strategies that will help prevent mental health problems.

The purpose of this paper is to establish whether social isolation acts as a mediator between social media use, and mental health among young adults. Now, at the end of the COVID-19 pandemic when social isolation is no longer forced among those that are healthy and vaccinated, findings about social isolation and social media use might be different than they were before the pandemic. Gathering and analyzing data on the association of social media use and social isolation may help the social work practice identify whether young adults are at higher risk of mental health problems. This project hypothesizes that social media addiction leads to isolation which can also lead to mental health implications. After identifying a problem with media usage, social workers would be able to determine methods to prevent or at least decrease the problem. For this reason, this research project aims to provide an answer to the following research question:

Does social isolation mediate the relationship between social media use and mental health outcomes among young adults between 18 to 39 years old?

CHAPTER TWO:

LITERATURE REVIEW

Introduction

In this chapter, research about social media use, social isolation, and their relationship with mental health among young adults (18-39 years old) will be synthesized and reviewed. Two sections will analyze how young adults are affected by either social media or social isolation, and the effects they have on mental health. A different section will analyze research on a possible association between social media use and social isolation among young adults. Then, the critical literature review will discuss gaps, limitations, and conflicting literature. The last section will examine the theoretical perspective of this study and review the theories being used in this research.

Social Media and Young Adults

Researchers have shown the statistical increase of social media use across the years, yet even without the use of research it is difficult to miss the increasing impacts social media has on people. For instance, nowadays younger people are more likely to share their Facebook, Instagram, or Tik Tok accounts rather than their cell phone numbers. In fact, young adults ages 18-29 tend to use social media platforms more often than older people (Auxier & Anderson, 2021). From data collected in 2021, about 84% of young adults used social

media compared to only 81% of those ages 30-49 (Auxier & Anderson, 2021). The problem is that as more young adults become more involved with social media the number of them reporting mental health problems such as depression, anxiety, body image, eating disorders, etc., also increases (Lin et al., 2016; Rideout, Fox, & Well Being Trust, 2018; Vannucci, Flannery, & Ohannessan, 2017; Zenni et al., 2018)

Depression

Depression is one of the greatest concerns America and other first-world countries confront nowadays. It is predicted that by 2030 depression will "become the leading cause of disability" among first-world countries (Lin et al. 2016, p. 324). Similarly, a second warning of an association between depression and social media use is issued among young adults who use social media excessively. The higher frequency of social media used the higher risks of depression (Lin et al. 2016). In other words, as depression cripples first-world countries, young adults that tend to use social media more than others are at higher risk of depression. Research shows a big gap between the frequent social media users presenting with depressive symptoms compared to those that do not. In a study assessing the impact of social media on young adults that are frequent social media users, about 18% of young adults with depressive symptoms reported feeling left out when using social media compared to 1% of those without depressive symptoms (Rideout, Fox, & Well Being Trust, 2018). Likewise, 32% of these young adults with depressive symptoms feel like other

people are better than them compared to the 7% of people without depressive symptoms (Rideout, Fox, & Well Being Trust, 2018). With this data in can be inferred that there is an association between social media use and depression.

Anxiety, Stress and Other Mental Health Issues

Similar to depression, those who tend to spend greater time on social media platforms are at higher risk of suffering from anxiety and stress (Vannucci, Flannery, & Ohannessan, 2017). As a matter of fact, research suggests that the greater time spent on social media, the greater the symptoms, or risk of symptoms, an individual will have for dispositional anxiety, stress, depression, body image dissatisfaction, and eating disorders (Vannucci, Flannery, & Ohannessan, 2017; Zenni et al., 2018). Additionally, the anxiety of being separated from a device can create the same effect on mental health as does being separated from social media for long periods of time (Zenni et al., 2018). In the short term, it appears that to enjoy a good mental health state many individuals feel like they need to use social media platforms, when really, in the long term, their excessive use could affect their mental health significantly.

Social Isolation on Young Adults

Throughout the years, social isolation has remained consistent in affecting the younger generations more than the older ones (Sander, 2020; Cigna 2020). In 2018, people belonging to generation Z (18-22 years-old) and millennials (23-37 years-old) experienced higher percentages of loneliness with a 48.3% and a

45.3%, consecutively, compared to compared to generation X (ages 38-51) and boomers (ages 52-71) with a 45.1% and a 42.4% (Cigna, 2020). The following year, generation Z and millennials took the lead again with higher percentages: 49.9% and 47.7%, consecutively, compared to 47% and 43.2% of generation X and boomers (Cigna, 2020). The numbers clearly increase among all generations, but they increase at a higher rate among those 18-to-37-year-olds. As social isolation continues to increase, research suggests a correlation between social isolation and mental health (Wang et al.,2017). People exhibiting loneliness and social isolation report mental health problems such as depression, anxiety, suicide ideation, among others (Wang et al., 2017).

Depression and Anxiety

Social isolation, or the feeling of loneliness has led people towards depression and anxiety (Matthews et al., 2016). Research has found that anxiety has grown rapidly among young adults between 18-to-25-years-old that had been reporting loneliness throughout a 10-year span (Goodwin et al. 2020) Likewise, young adults who tend to be lonely also appear to have a relationship with depression, as it is believed that the same genes involved in loneliness affect depression (Matthews et al., 2016). During the COVID-19 pandemic, with people being confined to their homes stress levels rose, and more and more people found themselves experiencing loneliness (Okruszek et al., 2020). Okruszek et al. (2020) found that the higher the loneliness people experience the more prone they are to have symptoms of depression and anxiety.

Depression and Suicide

In a qualitative study, taking the statements of bachelor Social Work students, young adults were able to express that they believe social isolation and loneliness are determinants of depression and suicidal ideation (Testoni, Piol, & De Leo, 2021). Likewise, multiple studies agree that there is an association between loneliness, depression, and suicidal ideations. In a study conducted in 2019, where the majority of the participants consisted of young adults (57.7%), a correlation between social isolation and suicide attempts was identified (Calati et al. 2019). In a different study in 2020, the same determination was made about young adults, loneliness predicts depression and suicide (Helm et al., 2020). Additionally, the idea that one is solely responsible for the life one lives, known as existential isolation, plus loneliness are together known to be predictors of a greater depression (Helm et al., 2020). Hence, a relationship between social isolation and mental health.

Social Media Use and Social Isolation

The relationship that social media use has with social isolation comes from the fact that people who spend more time on social media tend to replace real, face-to-face, relationships with virtual experiences (Primack et al., 2017). In 2017, Primack et al intended to see if social media use offered positive mental health support for young adults (19-37 years old). Instead, the study came to the finding that young adults with high social media use could predict higher social

isolation compared to those who used less social media (Primack et al., 2017). However, not all social media appears to be negatively affiliated with social isolation. Individuals with negative experiences with social media tend to report higher social isolation, compared to those with positive experiences (Primack et al., 2019) Thus, inferring an association between a negative experience of social media use and social isolation.

Critical literature Review

<u>Limitations</u>

The methodological limitations found in the literature gathered in this paper focuses on either the relationship between social media or the relationship of social isolation and their effects on young adult's mental health. While some literature did infer a possible linkage between a negative experience of social media use and social isolation (Primack et al., 2017; Primack et al., 2019), not a lot of information was found about a direct association between social media use, social isolation, and its effect on young adult's mental health. Additionally, a lot of the research found was pre-pandemic and with the COVID-19 pandemic inciting the need of social media platforms a lot of the statistics gathered could have drastically changed and may no longer be accurate. For this reason, new research on this topic is at hand.

Conflicting Findings

One big portion of this paper reflects on social media use and the negative effects it has on young adult's mental health, yet there exists a lot of controversy about the positive and negative effects that social media may have on mental health. A lot of research suggests that social media serves as a positive tool for people suffering social isolation and struggling to regain mental health stability (Robb et al., 2020; Choi & Noh, 2019). In fact, social media has become an essential tool during and after the pandemic for people seeking support from a therapist, doctor, family member, or friend through the comfort a social media platform can provide (Robb et al., 2020). Be it as a safety precaution or as a comfort, social media has made it easy to communicate with anybody via a platform, for professional reasons or simply to feel less lonely. Most importantly, research suggests social media can be a "protective tool" for suicide awareness and suicide prevention (Choi & Noh, 2019). Choi & Noh (2019) suggest that social media as a protective tool can reduce the risk of suicide by positively affecting people experiencing social isolation and offering the connectivity and open communication features social media has.

Overall, this proposes that social media use can be beneficial for people already experiencing a mental health decline by offering different ways to reach a mental health provider, friend, or family member. While social media may be beneficial by allowing resources to be easily accessible it still does not stop excessive use of social media from negatively affecting mental health as

previously mentioned research suggests (Lin et al., 2016; Rideout, Fox, & Well Being Trust, 2018; Vannucci, Flannery, & Ohannessan, 2017; Zenni et al., 2018).

Theories Guiding Conceptualization

The theoretical perspectives guiding literature about the effects of social media are very conflicting. As previously mentioned, while there is a lot of research about the negative effects of social media use on mental health there is also research highlighting the positive effects of social media on mental health. The literature collected in this paper specifically focuses on the negative effects of social media taking a negativity bias perspective. The concept of negativity bias implies that regardless of the positive outcomes social media can bring, its negative outcomes outweigh the positive ones (Primack et al. 2019). If the findings of this paper show social media is associated with social isolation and such association affects young adult's mental health, the negativity bias perspective will be proven correct in this study. In other words, the negative effects of the association of social media with social isolation on mental health will outweigh the benefits social media may have on mental health.

A theory this paper recognizes is the ecological systems theory, which takes a look at the relationship formation of individuals confronting different environmental obstacles (Primack et al.,2017). One large environmental factor this paper intends to recognize is the rise of the COVID-19 pandemic and how it may have affected people's social media use, mental health problems, and their

feelings of loneliness. A lot of the research found in this paper belongs to studies conducted pre-pandemic. Now, post-pandemic, a lot of things have changed for people and that may include their social media use, their feelings of isolation, and their mental health status.

This study proposes to see if an association exists with social media use and social isolation. If an association does exist, this study plans on weighing a balance between the positive and negative effects of this association with the mental health of young adults. This means that, although this paper predicts that the relationship between social media use and social isolation predicts negative mental health problems among young adults, the study will remain open to the idea that this may not be the case.

Summary

This study will attempt to identify whether social isolation acts as a mediator between social media use and the mental health of young adults. If such a relationship is found in this study, this research can provide the field of Social Work with additional factors contributing to mental health problems among the young adult population. Overall, pre-pandemic research suggests that mental health is affected by its relationship with either social media use or social isolation; both affecting young adults separately. Research connecting, both, social media use and social isolation is limited and not up to date. Since post-pandemic times have brought many changes world-wide, specifically the United

States, research on how young adult's mental health may be affected by a possible association between social media use and social isolation, would be beneficial for mental health providers and the population at risk.

CHAPTER THREE:

METHODS

Introduction

The study proposed by this paper aims to explain whether social isolation acts as a mediator between the excessive use of social media and the mental health decline of young adults' (between 18 to 39 years old). The collection of this chapter will clarify the details on how the study intends to respond to this research question through the following sections: study design, sampling, data collection and instruments, procedures, protection of human subjects, and data analysis.

Study Design

This study proposes a quantitative design that will be centered on a young adult representative sample population of 18 to 39 years of age. The study will use a mediation analysis to understand the relationship that social isolation has between the amount of social media use and the mental health of young adults. The purpose of this study is to identify patterns in the relationship of social isolation and mental health when social media is controlled. This finding will provide the field of social work with additional information about the possible negative effects that the excess of social media use may have on the mental health of young adults. Additionally, this type of finding may help in the individual

treatment of young adults' mental health and in the advocacy of mental wellbeing.

The research method that will be used in this study is a cross-sectional design, as data will be collected through an online survey. Utilizing a survey to collect data is very effective in a cross-sectional design due to it being convenient for both, the researcher, and the participants. Given a timeframe, participants are able to answer the survey at their available time and convenient space. Similarly, conducting an online survey allows researchers to be able to reach a larger number of participants due to its remote features, while it is also easy to create, easy to administer and very cost effective. The particular survey this research will provide will collect data on the participants' feelings of social isolation, mental health, and their social media use. Along with it, the survey will collect data on the gender, age, and ethnicity/race of the sample population.

On the other hand, using a survey can have a few disadvantages. For instance, a researcher will never know when participants' answers are biased or when the participants do not feel like providing answers that are not favorable to their present state, or feelings. Another example of a disadvantage is that the data collected in a survey through a cross-sectional approach cannot determine cause and effect. Therefore, this study cannot determine whether excessive use of social media, in fact, causes social isolation which leads to mental health declines. Instead, the study will investigate the possible mediation effect of social isolation on social media use, and mental health.

Sampling

The representative sample will constitute a convenient sample of young adults between 18 to 39 years of age, living in the United States. These individuals will be recruited from many different channels including CSUSB college students and different social media platforms: Facebook, Instagram, and LinkedIn. The inclusion criteria for this study involves people between the ages of 18 to 39 and participants must reside in the United States, regardless of their racial or cultural background. The data collected from this sample is meant to represent young adults in the United States. This means that the exclusion criteria of this study refer to people that are younger than 18 years old, people that are older than 39 years old, and people who do not live in the United States.

Allowing participants to respond through social media platforms will allow for easy access, and a predictable larger number of participants. A convenient sample was chosen for two reasons, to meet the sample size of 100 participants and because gathering participants from a social media platform will really provide beneficial data to this study. It is important to note that in this study "young adults" refers to people between 18 to 39 years of age, representing Generation Z and millennials.

Data Collection and Instruments

The quantitative data will be collected through a self-administered questionnaire or survey that will contain questions on three different domains:

social media use, social isolation/loneliness, and mental health. Beside the three domains, the survey will also gather demographic information such as: gender, age, ethnicity, and whether they reside in the U.S. or not.

The independent variable of this study is social media use. Social media use is defined as the opening, visiting, downloading of common social media platforms, as are Facebook, Instagram, Snapchat, Tik Tok, YouTube, LinkedIn, and other platforms. Social media use will be measured utilizing the Social Media Use Integration Scale (SMUIS) (Jenkins-Guarnieri, Wright & Johnson, 2013). This scale intends to measure social media use in three different aspects: its integration to daily use, the social behavior of users, and the emotional connection users form with social media. Participants will be asked 10 questions where they will be allowed to give one of six responses, 1=Strongly disagree, 2= disagree, 3= somewhat disagree, 4=somewhat agree, 5=agree, 6=strongly agree. The SMUIS is formed of two subscales. The first subscale is called Social Integration and Emotional Connection (SIEC), which has six questions. The second subscale is formed of four questions and is called the Integration Social Routines (ISR). The Cronbach score of the whole scale is α =0.914 (Jenkins-Guarnieri, Wright & Johnson, 2013).

The mediator variable of the study is Social Isolation. For the purpose of this study Social Isolation and Ioneliness go hand-to-hand. They are defined as the lack of social connection and the feeling of being Ionely (Centers for Disease Control and Prevention, 2021). Social Isolation will be measured using the UCLA

3-Item Loneliness Scale (Hughes et al., 2004). The Scale consists of three negatively worded questions that measure connectedness and perceived isolation: "How often do you feel that you lack companionship?", "How often do you feel left out?", "How often do you feel isolated from others?". Each question has three possible responses: 1=hardly ever, 2=some of the time, and 3 =often. The Cronbach score of this scale is α =0.72 (Hughes et al., 2004).

Lastly, the dependent variable of the study is mental health. Mental health will be measured on the three main mental health outcomes of social isolation and social media use, depression anxiety and stress (Goodwin et al. 2020; Helm et al., 2020; Lin et al. 2016; Matthews et al., 2016; Okruszek et al., 2020; Rideout, Fox, & Trust, 2018; Testoni, Piol, & De Leo, 2021; Vannucci, Flannery, & Ohannessan, 2017; Zenni et al., 2018). For this purpose, a short version of the Depression Anxiety Stress Scale (DASS) (Lovibond &Lovibond, 1995) will be used, the DASS-21 (Henry & Crawford, 2005). The DASS-21 is a 21-item questionnaire that is conformed of three subscales which divide the questions into each mental health category (depression, anxiety, and stress). Participants will be asked whether they have felt a certain way over the past week. Examples of these questions are: "I tend to over-react to situations" (from the stress subscale), "I experience trembling" (from the anxiety subscale), and "I felt that I had nothing to look forward to" (from the depression subscale). Each question has four possible responses, 0= "Did not apply to me at all", 1= "Applied to me to some degree or some of the time", 2= "Applied to me to a considerable degree,

or a good part of time", 3= "Applied to me very much, or much of the time". The Cronbach score a α = 0.93 (Henry & Crawford, 2005).

Procedures

An online version of a flier will be created giving general information of the study, the timeline of the study, what the study is about, the anonymity of the study, and how participation will benefit the field of Social Work. In this flier a link to the survey will be attached. The survey will be created through Qualtrics, and it should not take more than 15 minutes to complete. When participants click on the link that will direct them to the survey, a page providing details on informed consent, a detailed description of the study, and the benefits of participants' contribution to the field of Social Work will be provided. The survey will be open during the summer of 2022 and data will be collected in Qualtrics from the beginning of July to the end of August 2022.

Protection of Human Subjects

The survey will be self-administered, meaning that participants will answer the questionnaire on their own between the time period of July 1st to August 31st, 2022. Before the start of the survey participants will be provided with an informed consent statement where consent will be given before they proceed to the questions. Participant's identity will not be asked throughout the survey, instead demographic information will be collected. The confidentiality of the participants

will also be maintained by keeping all of the collected data safely stored through CSUSB Virtual Private Network with CSUSB MFA (Duo) access. The double protection will protect participant's information and prevent any data collected from being used for any other purpose that is not for the benefit of this specific study. At the conclusion of this study, when data is no longer needed, data will be destroyed by deleting all the collected data.

Data Analysis

All the collected data from the surveys will be inputted into an SPSS sheet where the data will be analyzed at the end of the survey period. This study hypothesizes that the excess of social media use has a negative impact on the mental health of individuals and that social isolation mediates this relationship. Therefore, this study will take three steps according to Baron and Kenny (1986), to analyze the mediator effect. First the main effect of social media use on mental health will be analyzed. Then the relationship between social media use and social isolation will also be analyzed (without this second step social isolation cannot be a mediator between social media use and mental health decline). The last step requires social isolation to be a significant predictor of mental health problems. Overall, the relationship being examined is how social isolation will predict mental health when controlling social media use.

The statistical measures this mediation analyses will use are two: regression analyses and multiple regression analyses. Out of the three

mentioned steps, the first two steps will use regression analyses to find the significant predictor of the independent variable (social media use) to the dependent variable (mental health) and to the mediator (social isolation). The third step will be the only one using multiple regression analyses as all three variables are involved.

Summary

This quantitative study will examine whether social isolation serves as a mediator between the relationship of social media use and mental health. The study defines young adults as individuals between 18 to 39 years of age. A self-administered survey, asking questions about social media use, self-perceived social isolation, and mental health, will be provided to young adults attending CSUSB and to young adults using different social media platforms. Data will be collected, stored safely, and destroyed when no longer needed. When the data is analyzed a mediation analysis will be ran to assess whether social isolation acts or not as a mediator between the relationship of social media use and mental health.

CHAPTER FOUR:

RESULTS

Demographics

For this research, 105 participants took an online survey in a span of 36 days, from November 1st to December 6th, 2022. All participants consented to being over 18 years of age, see Table 1 for age breakdown. Of the 105 participants, 81% of the participants identified as female, 18% identified as male, and 1% preferred not to say. The survey was able to reach participants of different racial and ethnic backgrounds with the majority being Hispanic and Caucasian or White, see Table 2 for visual. The Quantitative data was collected through Qualtrics and transferred to SPSS for interpretation. Participants were asked questions in regard to their social media use, their feelings of isolation or loneliness, and their mental health (focusing on stress, anxiety, and depression). The intention of these questions was to see the effect of social media use on mental health with social isolation serving as a mediator, see Figure 1 for visual.

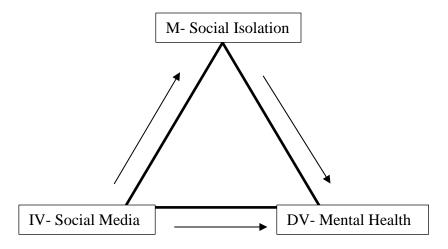


Figure 1. The Relationship between social media, social isolation and mental health being observed by this research

Table 1. Age Breakdown

Age	Percentage	
18-25	39%	
26-39	61%	

Table 2. Race/Ethnicity Breakdown

Race/Ethnicity	Percentage	
White or Caucasian	25%	
Native American or Alaskan Native	0%	
Multiracial or Biracial	6%	
Hispanic or Latino	58%	
Black or African American	3%	
Asian or Pacific Islander	6%	
A race/ethnicity not listed here	2%	

Interpreting Results

In order to interpret the results, a mediation analysis was conducted following Baron and Kenny's (1986) three step strategy. First a linear regression was conducted to estimate the total effect between social media use and mental health (assessing stress, anxiety, and depression separately). Table 3a, 3b, and 3c summarize the descriptive statistics and results. Table 3a shows that higher social media usage does not have a significant effect on stress, r(105) = .019, P .851. Similarly, Table 3b and 3c show that social media usage does not have a significant effect on anxiety, r(105) = .016, P .873, nor depression, r(105) = .001, P .989.

Table 3a. Linear Regression between Social Media Use and Stress

Model	Unstandardized Coefficient B	Unstandardized Coefficient Std. Error	Standardize Coefficient Beta	t	Sig.
(Constant)	1.811	.272		6.653	<.001
Media	.015	.081	.019	.188	.851

Table 3b. Linear Regression between Social Media Use and Anxiety

Model	Unstandardized Coefficient B	Unstandardized Coefficient Std. Error	Standardize Coefficient Beta	t	Sig.
(Constant)	1.500	.286		5.247	<.001
Media	.014	.085	.016	.160	.873

Table 3c. Linear Regression between Social Media Use and Depression

Model	Unstandardized Coefficient B	Unstandardized Coefficient Std. Error	Standardize Coefficient Beta	t	Sig.
(Constant)	1.615	.301		5.373	<.001
Media	.001	.090	.001	.014	.989

Due to there being no significant effect between social media use and mental health, step two and three of Baron and Kenny's (1986) three step strategy were not necessary to run. Being that there is no significant total effect between both dependent and independent variables, there will not be any effect with the mediator either (Baron and Kenny, 1986). Regardless, for the purpose of understanding whether an effect exists between social media use and social isolation, step two of running a bivariate regression between social media use and social isolation was still conducted in order to see the relationship between the independent variable and the mediator. The descriptive statistics and results are displayed on Table 4. As shown, a linear regression was conducted and the results reflect that there was no significant effect between social media use and social isolation, r(105) = .133, P.196.

Table 4. Linear Regression between Social Media Use and Social Isolation

Model	Unstandardized Coefficient B	Unstandardized Coefficient Std. Error	Standardize Coefficient Beta	t	Sig.
(Constant)	1.375	.282		4.875	<.001
Media	.110	.084	.133	1.303	.196

Further analysis to see the overall relationship of the three factors, social media, social isolation, and mental health, was conducted utilizing the PROCESS

Procedure for SPSS Version 4.2 beta (Hayes, 2022). With this tool it is easier to see and interpret the effects that each factor has on each other. From the mediation analysis completed utilizing Baron and Kenny's three step strategy the results indicated no significance between social media and mental health, similarly there was no significance between social media and social isolation. The last relationship to interpret is that of the social isolation (the mediator) and mental health (the dependent variable). PROCESS (Hayes, 2022) allows for the interpretation of this last relationship. The regression analysis through PROCESS was conducted and the results picked up a significant relationship between social isolation and stress, anxiety, and depression, r(105) = .220 (Table 4), P.026; r(105) = .280 (Table 5), P.007; r(105) = .456, P.000 (Table 6).

Table 5. Regression Analysis through PROCESS, focus on Social Isolation and Stress

Model Summary						
R	R-sq	MSE	F	df1	df2	р
.2282	.0523	.2526	2.5684	2.0000	93.0000	.0821

Model						
	Coeff.	se	t	р	LLCI	ULCI
Constant	1.5087	.2983	5.0578	.0000	.9163	2.1010
Social Media	0088	.0803	1102	.9125	1683	.1506
Loneliness	.2200	.0974	2.2583	.0263	.0265	.4135

Table 6. Regression Analysis through PROCESS, focus on Social Isolation and Anxiety

Model Summary						
R	R-sq	MSE	F	df1	df2	р
.2767	.0766	.2715	3.8554	2.0000	93.0000	.0246

Model						
	Coeff.	se	t	р	LLCI	ULCI
Constant	1.1150	.3092	3.6061	.0005	.5010	1.7291
Social Media	0171	.0832	2055	.8376	1824	.1482
Loneliness	.2800	.1010	2.7719	.0067	.0794	.4805

Table 7. Regression Analysis through PROCESS, focus on Social Isolation and Depression

Model Summary						
R	R-sq	MSE	F	df1	df2	р
.4282	.1833	.2652	10.439 0	2.0000	93.0000	.0001

Model						
	Coeff.	se	t	р	LLCI	ULCI
Constant	.9872	.3056	3.2303	.0017	.3803	1.5941
Social Media	0488	.0823	5931	.5545	2121	.1146
Loneliness	.4561	.099	4.5692	.0000	.2579	.6544

Conclusion

This research hypothesized that social media use would lead American young adults to socially isolate or feel lonely, which in turn would lead to mental health problems. Data collected from 105 participants illustrate that there is no mediation effect from social isolation or loneliness between social media use and mental health. In fact, the data shows that there is no significant effect between social media use and mental health at all. Similarly, data also displayed that there is no relationship or effect between social media use and social isolation. On the other side, the data collected do show that there is a significant relationship between social isolation and mental health. When social isolation increases, data shows that mental health as stress, anxiety, and depression also increase.

CHAPTER FIVE:

DISCUSSION

Introduction

This chapter focuses on the results of the study and how they relate to the research question. This chapter also discusses the recommendations for Social Work Practice, further research, and conclusion.

Discussion

The research question hypothesized a mediator effect from social isolation of young adults on social media use and mental health. In other words, the research hypothesized that social media use would lead young Americans to confront mental health problems due to the effects of social isolation. The survey asked a total of 105 young adults questions related to their mental health, feelings of social isolation and loneliness, and their social media usage. The data collected from these surveys demonstrated no mediation effect from social isolation between social media and mental health. In fact, the results read that there was no relationship between social media use and mental health problems among the young adults who took the survey.

Nevertheless, it is important to note that the results did show some significance between the mediator, social isolation, and the dependent variable, mental health. Mental health was assessed utilizing the DASS-21 (Henry &

Crawford, 2005), which assess mental health in three categories, depression, anxiety, and stress separately. Separately, all three categories had a significant relationship between social isolation and themselves. Similarly, between all three categories, as social isolation increases so did the mental health problem assessed. However, there was no relationship in this research suggesting that social media has an effect on mental health directly, or indirectly through social isolation.

Social Media Use and Mental Health

The research gathered in the literature review on the possible relationship between social media use and the mental health say that there is a direct relationship between the both. Research indicates a relationship where social media use increases and so do the risks of depression, anxiety, stress, and other mental health problems (Lin et al. 2016; Vannucci, Flannery, & Ohannessan, 2017; Zenni et al., 2018). The findings of this study are not supported by this research, as the findings gathered that there is no direct relationship between depression, anxiety, or stress and social media use.

Social Isolation and Mental Health

The significance found between the relationship of social isolation and mental health is supported by the previous research cited in the literature review. Statistics gathered from previous research indicates that social isolation has been increasing throughout the years (Cigna, 2020). Along with the increasing feelings of loneliness and isolation, the feelings of depression, stress, and

anxiety also increase among the young adult population (Goodwin et al. 2020, Okruszek et al., 2020). The higher the feelings of isolation and loneliness the higher the risk of becoming depressed, anxious, or stressed (Okruszek et al., 2020). The overall findings of this study do show that the higher rate of social isolation gathered from the UCLA 3-item Loneliness Scale (Hughes et al., 2004) on this study the higher the mental health problem being assessed, (depression, anxiety, or stress).

Social Media Use and Social Isolation

Research from the literature review also indicated that there was a relationship between social media use and social isolation. Research suggested that the higher levels of social media use predicted higher social isolation when compared to those with lower levels of social media use (Primack et al. 2017). The study presented in this paper, however, did not find support this theory. This research suggested that there is no significant relationship between social media use and social isolation.

<u>Limitations</u>

Some of the limitations to this research was to reach more of an inclusive and coed population. While the survey was open to all young American adults between 18-39 years of age, the great majority were Hispanic and female (with consecutive percentages of 58 and 81). Another limitation was that the survey was posted on social media platforms that were private and while family and friends were invited to repost or spread the word of the survey, most of the

population reached were mostly Hispanic. These limitations may affect the validity of the study, as the sample population, while it does represent young American adults, it does not represent a very inclusive population of young adults.

Recommendations for Social Work Practice, Policy, and Research
There is still a lot to unravel between the effects of technology use on the
mental health of the American population. This research focused solely on the
effects of social media use on the mental health of young adults. Similar research
can be conducted on younger or older generations, or even the whole population.
Additionally, similar research can be conducted on different forms of technology
use. For instance, as to foresee a relationship between mental health and
videogame use, or popular streaming services (such as Netflix, Hulu, HBO, etc.).
There is so much to learn about the positive and negative effects of technology
use among the American people. This research can also be redone to increase
its validity, but that would only be the tip of the iceberg of how much more
research can find on technology's effects.

It is important for the social work practice to understand and anticipate behavior as to be prepared to service people confronting very serious problems resulting from mental health. It is also recommended to do more research on the subject not only as to identify ways for social workers to be prepared and

competent to assist individuals, but also to learn how to prevent further negative effects of technology in the population.

Conclusion

The overall findings of this study indicated no significant relationship between social media use and the mental health of young adults through the direction of social isolation. Similarly, the findings also indicated that there was no direct relationship between social media use and mental health at all. The research, however, did indicate that there was a relationship between social isolation and mental health. As social isolation increases, so do symptoms of depression, stress, and anxiety. Further research is recommended to obtain a stronger sample size that is more inclusive of gender and ethnicity or race.

APPENDIX A DATA COLLECTION TOOLS

The Social Media Use Integration Scale (SMUIS)

By Jenkins-Guarnieri, Wright & Johnson (2013)

All 10 statements were given with the options of answering with a "strongly disagree", "disagree", "somewhat disagree", "somewhat agree", "agree", or "strongly agree".

- 1. I feel disconnected from friends when I have not logged into social media.
- 2. I would like it id everyone used social media to communicate.
- 3. I would be disappointed if I could not use social media at all.
- 4. I get upset when I can't log on to social media.
- 5. I prefer to communicate with others mainly through social media.
- 6. Social media plays an important role in my social relationships.
- 7. I enjoy checking my social media account.
- 8. I don't like to use social media.
- 9. Using social media is part of my everyday routine.
- 10. I respond to content that others share using social media.

The UCLA 3-Item Loneliness Scale

By Hughes et al. (2004)

Participants were able to choose a response from 1=hardly ever, 2=some of the time, and 3 =often.

- 1. How often do you feel that you lack companionship?
- 2. How often do you feel left out?

3. How often do you feel isolated from others?

The Depression Anxiety Stress Scale (DASS) Version DASS-21

The DASS is originally by Lovibond &Lovibond (1995) but the updated version

DASS-21 is by Henry & Crawford (2005).

Participants were given 21 statements with the following possible responses: 0= "Did not apply to me at all", 1= "Applied to me so some degree or some of the time", 2= "Applied to me to a considerable degree, or a good part of time", 3= "Applied to me very much, or much of the time".

- 1. I found it hard to wind down.
- 2. I was aware of dryness of my mouth.
- 3. I couldn't seem to experience any positive feeling at all.
- 4. I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion).
- 5. I found it difficult to work up the initiative to do things.
- 6. I tended to over-react to situations.
- 7. I experienced trembling (eg, in the hands).
- 8. I felt that I was using a lot of nervous energy.
- I was worried about situations in which I might panic and make a fool of myself.
- 10. I felt that I had nothing to look forward to.
- 11. I found myself getting agitated.
- 12. I found it difficult to relax.

- 13. I felt down-hearted and blue.
- 14. I was intolerant of anything that kept me from getting on with what I was doing.
- 15. I felt I was close to panic.
- 16. I was unable to become enthusiastic about anything.
- 17. I felt I wasn't worth much as a person.
- 18. I felt that I was touchy.
- 19.I was aware of the action of my heart in the absence of physical exertion (eg. Sense of heart rate increase, heart missing a beat).
- 20. I felt scared without any good reason.
- 21. I felt that life was meaningless.

APPENDIX B IRB-APPROVED INFORMED CONSENT



WE DEFINE THE Future

School of Social Work

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO 5500 University Parkway, San Bernardino, CA 92407 909.537.5501 | fax: 909.537.7029 http://socialwork.csusb.edu

INFORMED CONSENT

The study in which you are asked to participate is designed to examine the mediator relationship of social isolation between social media use and mental health of young adults in the United States, ages 18 to 39. The study is being conducted by Mariana Romo, a graduate student, under the supervision of Dr. Erik Schott, Assistant Professor of the School of Social Work at California State University, San Bernardino (CSUSB). The study has been approved by the California State University, San Bernardino Institutional Review Board.

PURPOSE: The purpose of the study is to examine the mediator relationship that social isolation has between social media use and mental health of young adults (18 to 39 years of age).

DESCRIPTION: Participants will be asked a few questions about their social media use, about how they feel about certain aspects of their life or themselves, and about some demographics.

PARTICIPATION: Your participation in the study is totally voluntary. You can refuse to participate in the study or discontinue your participation at any time without any consequences.

CONFIDENTIALITY: Your responses will remain confidential, and data will be reported in group form only.

DURATION: It will take no more than 15 minutes to complete the survey.

RISKS: Although not anticipated, there may be some discomfort in answering some of the questions. You are not required to answer and can skip the question or end your participation.

BENEFITS: There will not be any direct benefits to the participants. However, findings from the study will contribute to our knowledge in this area of research.

CONTACT: If you have any questions about this study, please feel free to contact Dr. Schott at erik.schott@csusb.edu or student researcher Mariana Romo at 007724685@covote.csusb.edu

	RESULTS : Results of the study can be obtained from the Pfau Library ScholarWorks database
	(http://scholarworks.lib.csusb.edu/) at California State University, San Bernardino after July 2023.

	I understand that I must be 18 years of age or older to participate in your study, have read and understand the consent document and agree to participate in your study.
0	I consent
0	I do not consent

APPENDIX C IRB APPROVAL LETTER

IRB #: IRB-FY2022-233

Title: THE IMPACT OF SOCIAL MEDIA USE ON SOCIAL ISOLATION AND MENTAL HEALTH AMONG YOUNG

ADULTS

Creation Date: 2-9-2022

End Date: Status: Approved

Principal Investigator: Erik Schott

Review Board: Main IRB Designated Reviewers for School of Social Work

Sponsor:

Study History

Submission Type Initial	Review Type Exempt	Decision Exempt	
-------------------------	--------------------	-----------------	--

Key Study Contacts

Member Mariana Romo	Role Co-Principal Investigator	Contact mariana.romo4685@coyote.csusb.edu
Member Erik Schott	Role Principal Investigator	Contact Erik.Schott@csusb.edu
Member Erik Schott	Role Primary Contact	Contact Erik.Schott@csusb.edu

REFERENCES

- Andrews, S., Ellis, D. A., Shaw, H., & Piwek, L. (2015). Beyond Self-Report:

 Tools to Compare Estimated and Real-World Smartphone Use. *PLOS ONE*, *10*(10), e0139004. https://doi.org/10.1371/journal.pone.0139004
- Auxier, B., & Anderson, M. (2021, April 7). Social Media Use in 2021. Pew Research Center: Internet, Science & Tech.

 https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173. Retrieved from http://libproxy.lib.csusb.edu/login?url=https://www-proquest-com.libproxy.lib.csusb.edu/scholarly-journals/moderator-mediator-variable-distinction-social/docview/209826464/se-2
- Cacioppo, J. T., Hughes, M. E., Waite, L. J., Hawkley, L. C., & Thisted, R. A.
 (2006). Loneliness as a specific risk factor for depressive symptoms:
 Cross-sectional and longitudinal analyses. *Psychology and Aging*, 21(1), 140–151. https://doi.org/10.1037/0882-7974.21.1.140
- Calati, R., Ferrari, C., Brittner, M., Oasi, O., Olié, E., Carvalho, A. F., & Courtet,
 P. (2018, November 7). Suicidal thoughts and behaviors and social isolation: A narrative review of the literature. Journal of Affective Disorders. https://doi.org/10.1016/j.jad.2018.11.022.

- Centers for Disease Control and Prevention. (2020, May 26). *Loneliness and Social Isolation Linked to Serious Health Conditions*. Www.cdc.gov; CDC. https://www.cdc.gov/aging/publications/features/lonely-older-adults.html
- Choi, D.-H., & Noh, G.-Y. (2019). The influence of social media use on attitude toward suicide through psychological well-being, social isolation, and social support. Taylor & Francis. https://doi.org/10.1080/1369118X.2019.1574860
- Cigna. (2020, January). Loneliness and the Workplace.

 https://www.cigna.com/static/www-cigna-com/docs/aboutus/newsroom/studies-and-reports/combatting-loneliness/cigna-2020loneliness-report.pdf
- Goodwin, R. D., Weinberger, A. H., Kim, J. H., Wu, M., & Galea, S. (2020, August 21). *Trends in anxiety among adults in the United States, 2008–2018: Rapid increases among young adults.* Journal of Psychiatric Research. https://doi.org/10.1016/j.jpsychires.2020.08.014
- Hayes, A. F., Ph.D. (2022). PROCESS Procedure for SPSS Version 4.2 beta https://afhayes.com/index.html
- Helm, P. J., Medrano, M. R., Allen, J. J. B., & Greenberg, J. (2020, December 1).

 Existential isolation, loneliness, depression, and suicide ideation in young

 adults. University of Arizona. https://doi.org/10.1521/jscp.2020.39.8.641

- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): construct validity and normative data in a large non-clinical sample. *The British Journal of Clinical Psychology*, 44(2), 227–239. https://doi.org/10.1348/014466505X29657
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015).
 Loneliness and Social Isolation as Risk Factors for Mortality. *Perspectives on Psychological Science*, 10(2), 227–237.
 https://doi.org/10.1177/1745691614568352
- Jenkins-Guarnieri, M. A., Wright, S. L., & Johnson, B. (2013). Development and validation of a social media use integration scale. *Psychology of Popular Media Culture*, *2*(1), 38–50. https://doi.org/10.1037/a0030277
- Lin, L. yi, Sidani, J. E., Shensa, A., Radovic, A., Miller, E., Colditz, J. B., Hoffman,
 B. L., Giles, L. M., & Primack, B. A. (2016, January 19). Association
 between social media use and depression among U.S. young adults. Wiley
 Online Library. https://doi.org/10.1002/da.22466
- Liu, H., Liu, W., Yoganathan, V., & Osburg, V.-S. (2021, January 14). *Covid-19 information overload and generation Z's social media discontinuance intention during the pandemic lockdown*. Technological Forecasting and Social Change. https://doi.org/10.1016/j.techfore.2021.120600
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with

- the Beck Depression and Anxiety Inventories. Behaviour Research and Therapy, 33(3), 335–343. https://doi.org/10.1016/0005-7967(94)00075-u
- Matthews, T., Danese, A., Wertz, J., Odgers, C. L., Ambler, A., Moffitt, T. E., & Arseneault, L. (2016). Social isolation, loneliness and depression in young adulthood: a behavioral genetic analysis. Retrieved December 10, 2021, from DOI 10.1007/s00127-016-1178-7.
- Okruszek, Ł., Aniszewska-Stańczuk, A., Piejka, A., Wiśniewska, M., & Żurek, K. (2020, December 4). Safe but lonely? loneliness, anxiety, and depression symptoms and COVID-19. Frontiers. https://doi.org/10.3389/fpsyg.2020.579181
- Primack, B. A., Karim, S. A., Shensa, A., Bowman, N., Knight, J., & Sidani, J. E. (2019, January 21). Positive and negative experiences on social media and perceived social isolation. SAGE Journals. https://journals.sagepub.com/doi/abs/10.1177/0890117118824196.
- Primack, B. A., Shensa, A., Sidani, J. E., Whaite, E. O., Lin, L. yi, Rosen, D., Colditz, J. B., Radovic, A., & Miller, E. (2017, March 6). Social media use and perceived social isolation among young adults in the U.S. American Journal of Preventive Medicine.
 https://doi.org/10.1016/j.amepre.2017.01.010
- Rideout, V., Fox, S., & Well Being Trust (2018). Digital Health Practices, social media use, and mental well-being among teens and young adults in the

- U.S. Providence St. Joseph Health Digital Commons.https://digitalcommons.psjhealth.org/publications/1093/.
- Robb, C. E., de Jager, C. A., Ahmadi-Abhari, S., Giannakopoulou, P., Udeh-Momoh, C., McKeand, J., Price, G., Car, J., Majeed, A., Ward, H., & Middleton, L. (2020). Associations of Social Isolation with Anxiety and Depression During the Early COVID-19 Pandemic: A Survey of Older Adults in London, UK. *Frontiers in Psychiatry*, 11.
 https://doi.org/10.3389/fpsyt.2020.591120
- Sander V., SocialPro. (2020, April). Report: Loneliness and Anxiety During

 Lockdown. https://socialpronow.com/loneliness-corona/
- Statista Research Department, & 10, S. (2021, September 10). *Number of social media users 2025*. Statista.

 https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/.
- Testoni, I., Piol, S., & De Leo, D. (2021, July 29). Suicide prevention: University students' narratives on their reasons for living and for dying. https://doi.org/10.3390/ijerph18158029
- Vannucci, A., Flannery, K. M., & Ohannessian, C. M. C. (2016, October 3). *Social media use and anxiety in emerging adults*. Journal of Affective Disorders. https://doi.org/10.1016/j.jad.2016.08.040
- Wang, J., Lloyd-Evans, B., Giacco, D., Forsyth, R., Nebo, C., Mann, F., & Johnson, S. (2017). Social isolation in mental health: a conceptual and

methodological review. Social Psychiatry and Psychiatric Epidemiology, 52(12), 1451–1461. https://doi.org/10.1007/s00127-017-1446-1

Zeeni, N., Doumit, R., Kharma, J. A., & Sanchez-Ruiz, M.-J. (2018, May 15).

Media, technology use, and attitudes: Associations with physical and mental well-being in youth with implications for evidence-based practice. Sigma Theta Tau International. https://doi.org/10.1111/wvn.12298