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Exploring the Effects of Social Media Use on the Mental Health of Young Adults

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EXPLORING THE EFFECTS OF SOCIAL MEDIA USE ON THE
MENTAL HEALTH OF YOUNG ADULTS

by

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A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Advertising and Public Relations
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Thesis Chair: Sherry Holladay, Ph.D.

Abstract

The intent of this thesis is to explore the relationship between social media use and mental health in the young adult population. Current research indicates that there is a connection between increased social media use and deteriorated mental health. Unfortunately, young adults, the most active social media users, have a predominantly high risk for developing mental health issues, making this connection particularly concerning. At present, it is unclear how social media and mental health are connected; therefore this thesis explores the individual and social theories that may give reason for this connection. Theories that are discussed include: the impact of sedentary behaviors on mental health, displaced behavior, sleep interruption due to blue light exposure, social media's effects on romantic relationships, and social media's effects on platonic relationships.

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Introduction

There has been a growing concern over the past couple of decades regarding the link between social media use and mental health issues. Although research findings identify a connection between increased social media use in the young adult population and increased mental health problems in the same population, it is unclear how social media use may be associated with these changes.

The purpose of this thesis is to explore how social media use is related to the mental health of young adults. To accomplish this goal, the researcher reviews and synthesizes the existing literature pertaining to characteristics of social media, general young adult mental health, and the current social- and individual-level theories that may help explain the relationship between social media use by young adults and their mental health.

Social Media: An Overview

According to Merriam-Webster (2014), social media is defined as “forms of electronic communication (as Web sites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos).” Although the first known use of the term was in 2004, social media use has skyrocketed in the past several years. This decade-old phrase is now a household term. Whether live-tweeting bridal showers or making Facebook profiles for their cats, it seems that people are more connected than ever before. About 73% of online adults now use a social networking site of some kind (Smith, 2013).

The top five most popular social networking sites are Facebook, LinkedIn, Pinterest, Twitter, and Instagram. Facebook leads the pack, boasting 71% of online adults as users (Smith, 2013). Facebook’s users are not only numerous, but extremely active and engaged: 63% of Facebook users visit the site at least once a day, with 40% doing so multiple times throughout the day (Smith, 2013). This continuous social media usage might stem from increased mobile usage of social networking sites. As smartphones and tablets increase in popularity, many social media users rely on their mobile apps to access their favorite sites. In the last year, 300 million Facebook users were mobile-only users (DeSilver, 2014).

Although social media is accessible to nearly anyone, young adults are the most active users. Smith (2013) found that 84% of 18-29 year olds are on Facebook, more than any other age group. They are also the fastest-growing age demographic, growing from only 9% usage in 2004.

Given that social media is becoming increasingly prominent in young adults' lives, it is important to understand how this usage may affect them.

Motivations for Social Media Use

It is undeniable that social media is extraordinarily popular, but why do so many people use it? Recent neuropsychological research could hold one answer: the self-disclosure one would engage in on social media activates the intrinsic reward system of the brain in much the same way as powerful primary rewards such as food and sex (Tamir & Mitchell, 2012). Nadkarni and Hofmann (2012) purport that people are motivated to use Facebook for two primary reasons: a need to belong and a need for self-presentation. In their analysis, Toma and Hancock (2013) found that Facebook profiles help satisfy individuals' need for self-worth and self-integrity. Alternatively, a Pew Research Center project found that the most popular reasons for using social media included staying in touch with current friends and family, although other reasons emerged as well: making new friends, reading comments by celebrities and politicians, and finding potential romantic partners (Smith, 2011).

This research also shed light on how different age groups use social media. Middle aged and older adults reported a greater emphasis on using social media to connect with others with common interests and hobbies, while young adults did not rank that as a popular reason to use social media. In contrast, younger adults (younger than 30) kept their focus on connecting with those already present in their lives, such as current friends and family members (Smith, 2011).

Effects of Social Media Use: Current Research and Speculations

Numerous studies identify connections between social media use and negative outcomes such as increased depression, anxiety, compulsive behavior, loneliness, and narcissism. The burgeoning use of social media by young adults raises concerns about these possible negative effects of its use. If social media use can be linked to negative outcomes, researchers need to devote more attention to understanding factors associated with negative mental health outcomes and how to assuage these outcomes.

The idea that Internet use may have a negative effect on one's wellbeing is not new. In 1995, The HomeNet Project provided Internet access and a computer to 93 households that had no previous Internet experience and tracked their psychological health over several years (Kraut et al., 2002). After the initial year of Internet use the researchers concluded that greater use of the Internet was associated with more signs of loneliness and depression. In 2012, Rosen, Cheever, and Carrier coined the term "iDisorder," defined as the negative relationship between technology usage and psychological health. More recently, researchers have turned towards social media, seeking to determine if it has deleterious effects on mental health. In 2013, Rosen et al. studied the Facebook usage of 1,143 college-age students. The researchers found that major depressive disorder, dysthymia, bipolar-mania, narcissism, antisocial personality disorder, and compulsive behavior were predicted by one or more Facebook usage variables (general use, number of friends, use for image management).

Social Media and Depression

A Croatian study (Pantic et al., 2012) found that time spent on Facebook by high school students was positively correlated with depression. These findings were mirrored by Rosen et al. (2013), who found that participants who spent more time online and those who performed more Facebook image management evidenced more clinical symptoms of major depression. A study of American university students found that more intense Facebook use predicted increased loneliness (Lou et al., 2012). Also, according to Kalpidou et al. (2011), college students who reported having higher numbers of Facebook friends experienced lower emotional adjustment to college life. Further, the same study found that college students who spent more time on Facebook reported having lower self-esteem than those who spent less time.

Selfhout et al. (2009) explored the idea that the quality of social media interactions was a better predictor of mental wellness than general social media use. They found that adolescents who reported low friendship quality and high frequencies of social use of online media (talking to friends, messaging, etc) at Time 1 were less likely to be depressed at Time 2. Conversely, those with low friendship quality who used social media primarily for passive use at Time 1 were more likely to be depressed and socially anxious at Time 2. Davila (2012) also explored this idea: In examining the social networking behaviors of 334 undergraduate students, he found that more negative and less positive interactions on social networking sites were associated with greater depressive symptoms. Kraut et al. (1998) and Shaw and Gant (2002) also gave evidence for an inverse association between Internet use and depression, suggesting that possibly more social forms of Internet use like chatting and gaming reduce the risk of depression.

Social Media and Narcissism

In a special case, Rosen (2013) found that for people with high levels of narcissism, high levels of Facebook activity were associated with lower levels of depression. Although lower levels of depression were found, this still can't be counted as a positive effect. According to the DSM-IV-TR (American Psychiatric Association, 2000), narcissistic personality disorder is marked by a grandiose sense of self-importance, fantasies of unlimited power, self-promotion, vanity, and superficial relationships. Furthermore, according to Rosen et al. (2013), many studies show that social networking sites exacerbate narcissism. The researchers themselves found that more time spent on Facebook and a higher frequency of checking Facebook predicted higher narcissism scores.

Social Media and Anxiety

There are also several studies linking social media to anxiety and compulsive behavior. A recent research study found that 45% of British adults indicated they feel worried or uncomfortable when they cannot access their email or social network sites (Anxiety UK, 2012). Rosen et al. (2013) found that younger generations (particularly the iGeneration and Net Generation) are checking in very often (defined as every hour, every 15 minutes, or all the time) with their messages and social networks. Also, younger generations were scored as consistently more anxious than older generations when they were unable to check their social networks and texts. A new medical term has been created out of this constant connectivity: Phantom vibration syndrome, defined as perceived vibration from a cell phone that is not vibrating, has been reported to occur with large numbers of people (Drouin et al., 2012; Rothberg et al., 2010).

Phantom vibration syndrome may reflect a manifestation of the anxiety that cell phones elicit in those who are obsessed with checking in on their social media and messages.

Young Adults: A Population at Risk?

Coupled with the idea that young adults are such avid users of social media, it is alarming to realize that the young adult population is particularly prone to experiencing mental illness. According to Grant and Potenza (2010), young adults are defined as being aged 18 to 29 years. It is well evidenced that young adults experience severe mental health issues compared to the rest of the population: Grant and Potenza (2010) state that one in four young adults experience a depressive state between 18 and 24 years of age. It is also believed that most major psychiatric problems develop during early adulthood (Grant & Potenza, 2010). What is even more shocking is that the number of cases is on the rise. General hospital discharges involving serious mental illness of adults aged 18-24 years of age has increased from 19,900 in 1995 to 42,300 in 2002 (Zarate, 2010).

Developmental Task Theory and Emerging Adulthood

There are several concepts that help explain why young adulthood is commonly complicated by mental health difficulties. Developmental task theory holds that societies create a series of graded expectations that vary by age and are used to judge whether an individual is successful (Havighurst, 1972). Developmental tasks reflect both human development and the values of the surrounding culture. For example, as an adolescent, a person would be expected to do well in school and create close friendships; as an adult the developmental tasks change to developing romantic relationships, starting families, gainful employment, and civic engagement (Havighurst, 1972). In the past, the common pattern was that a person went straight from their

adolescent phase into their adulthood phase. However, in 2000, Arnett postulated that changes in post-modern societies had resulted in a new era of development he called “emerging adulthood.”

Emerging adulthood is difficult to navigate because a person in this developmental phase has adopted the developmental tasks of adulthood but still keeps some of those from adolescence. Arnett (2000) explains that this task retention and adoption is due to a recent cultural change: in many cultures, young people experience an extended timeframe for education, exploratory work, and travel, delaying the timing of traditional adult roles such as marriage and parenthood. Therefore, many people in the emerging adulthood phase experience the pressure of a higher number of developmental tasks than they have previously dealt with and more than their caregivers ever experienced at one time (Burt & Masten, 2010). For example, one person may retain the adolescent tasks of academic achievement (in the form of college or graduate school) and forming social bonds (as they make more friends and exit family life), adopt the psychological tasks of creating autonomy and an identity separate from one’s family, and take on the adulthood tasks of finding employment, forming romantic bonds, starting a family, and civic engagement. In short: young adults experience many more developmental tasks than any other point in a person’s life.

Continued Brain Development in Emerging Adulthood

It is also important to note that some of the difficulties experienced in young adult life are due to brain development. According to Burt and Masten (2010), the neurobiological changes in brain structure and function that occur in adolescents make them more sensitive to changes in their larger environment, sometimes resulting in problems with emotional and behavioral

regulation. However, the neurobiological changes experienced during adolescence do not cease once a person turns 18, rather, notable gains in executive function, planning, and decision-making skills extend well into the twenties. While the environment of adolescence is typically well structured, young adults are left struggling within a highly flexible time in their lives.

Effects of Young Adult Mental Health on Lifelong Health

Early onset of psychiatric problems is concerning because it predicts a more severe, chronic, and recurrent form of the issue (Zarate, 2010). For example, individuals with Major Depressive Disorder in young adulthood spend an average of a decade of their lives with the illness. Besides heightening the likelihood of lifelong illness, young adult mental health issues also affect brain development and function. Early onset depression (age 17-23) is linked to abnormal brain development, resulting in a reduced volume of the prefrontal cortex, an enlarged amygdala, and a reduced hippocampus (Zarate, 2010). In addition, Burt and Masten (2010) noted that mental illness at the critical period of emerging adulthood can lead to lifelong disability by eroding the individual's ability to develop socially, occupationally, and educationally. The mental health risks faced by young adults point to the importance of examining variables that could contribute to these mental health concerns.

How Social Media Affects Mental Health: Theories

The literature review up to this point demonstrates that young adults operate at a vulnerable precipice: as a population, young adults are at a high risk of developing mental health problems as they experience emerging adulthood. These same young adults are the most active users of social media, which has a distinct connection with mental health problems.

This precarious situation demands more understanding: knowing that social media and mental health are related is merely a jumping off point. Understanding how and why social media might be affecting young adult mental health is the next step to illuminating the connections at play between young adults, their environments, their health, and the role of social media.

A number of theories that may help explain why social media shows a connection to mental health will now be discussed. Although many of these theories offer an intriguing perspective on how social media could be affecting mental health in the young adult population, none of them provide definitive proof that social media use causes a decline in mental health. The purpose of this discussion is to explore the possible causes of the connection between social media and mental health.

The discussion of theoretical perspectives is divided into two sections: individual theories and social theories. Individual theories seek to account for how social media affects people due to individual behaviors and personality traits, ignoring social media's effects on the person's social relationships. The second set of theories can be classified as social theories, or theories

that look at how social media use affects people as they relate to each other and their larger environment. These two theoretical perspectives are not mutually exclusive; it is likely that a combination of these theories impact the relationship between mental health and social media use in young adults.

Individual theories

The first set of theories that the researcher will explore are classified as individual theories. These theories seek to account for how social media affects people due to individual personality traits and behaviors. The researcher will discuss the effects of sedentary behaviors, like those encouraged by social media, and displaced behavior theory, which purports that these sedentary behaviors offset face-to-face interaction and physical activity. The effects of sleep interruption due to the blue light present in the screens of mobile devices and computer screens will be explored, as will the effects of multitasking.

The Impact of Sedentary Behaviors on Mental Health

Sedentary behaviors are activities that involve sitting or lying down and are characterized by a low Metabolic Equivalent Total (MET) energy expenditure (Ainsworth et al., 2000). Sedentary behaviors are performed at or slightly above the resting metabolic rate (1–1.5 METS) and encompass a range of activities such as television viewing, computer use, playing video games, and passive recreation (Owen et al., 2000). These sedentary behaviors are pervasive in our society: American adults spend an average of 28 hrs a week watching TV (Nielson Media Research, 2000).

Social media further encourages these sorts of sedentary behaviors. Typically, a person uses social media on their computer or mobile device while passing the time during a sedentary activity: sitting on the train or bus, waiting in line, etc. However, more than that, social media often operates as an activity in and of itself – as in a person can sit down during leisure time

specifically to check their social media sites, creating sedentary behavior rather than simply taking advantage of it.

Sedentary behaviors, like those encouraged by social media use, have been linked to physical health risks. Increased risk of type II diabetes (Hu et al., 2003), obesity (Cameron et al., 2003), cardiovascular disease (Kronenberg et al., 2000), high blood pressure (Jakes et al., 2003), and metabolic syndrome (Ford et al., 2005) are all associated with sedentary behavior. However, less is known about the effects of sedentary behavior (e.g., TV viewing, computer use, and overall sitting time) on the risk of mental health problems.

According to Sanchez-Villegas et al. (2008) and Demyttenaere et al. (2004), reducing sedentary behaviors might be an important intervention in treatment and prevention of depressive and anxiety disorders. This postulation is consistent with research connecting sedentary behavior to increased risk of experiencing mental health problems. Several studies provide evidence that people with high levels of sedentary behavior (for example, TV watching and computer use) have an increased risk of developing a depressive and/or anxiety disorder. Sanchez-Villegas et al. (2008) conducted a longitudinal study that examined the relationship between combined self-reported TV viewing and computer use and risk of a mental disorder such as depression. The study found that participants with the highest levels of sedentary habits at baseline were 31% more likely to be at risk of a mental disorder (depression, bipolar, anxiety, or stress) at follow-up than those who reported low levels of sedentary behavior at baseline.

De Wit et al. (2010) found that persons with a major depressive disorder and panic disorder spend more leisure time using the computer and watching TV than controls. In another

study that assessed the relationship between overall sedentary time and risk of depression, the researchers used accelerometers to measure time spent sedentary in 394 overweight and obese women. This study found that those who reported greater amounts of overall sedentary time had higher odds of depressive symptoms (Sanchez et al., 2008).

While there is a connection between sedentary behaviors and mental health risks, it is unclear which one follows the other. It may be possible that people with mental health problems fall into sedentary behaviors as a result of their disorders. Conversely, it is possible that sedentary behaviors increase one's risk of developing mental health issues.

Displaced Behavior Theory

One idea that may explain how the sedentary behaviors encouraged by social media affect mental health is that of displacement. People who spend more time in sedentary behaviors (like social media use) have less time for face-to-face social interaction and physical activity, both of which have been proven to be protective against mental disorders (Martinsen, 2008; Teychenne et al., 2008). According to displacement theory, it is not the social media use in and of itself that has deleterious effects on mental health, but rather the absence of other activities.

According to Ipsos Open Thinking Exchange (2013), Americans aged 18-64 who use social networks report that they spend an average of 3.2 hours a day doing so. This number is even higher for young adults: 18-34-year-olds report using social media an average of 3.8 hours per day, with 1 in 5 users aged 18-34 reporting that they are on social networking sites 6 or more hours per day. NBC News reports that in July 2012 alone, Americans spent a combined 230,060 years on social media sites. About 20% of the time Americans use their personal computers, they

are on social media; 30% of the time they are on their mobile devices they are doing the same (Popkin, 2012).

Unsurprisingly, several studies have found an inverse association between sedentary behavior and physical activity (Sugiyama et al., 2007; Sugiyama et al., 2008). These studies' findings identify that sedentary behavior does indeed displace physical activity and exercise, and the benefits that can be reaped by such activity.

Although it is true that physical exercise can help stave off certain physical ailments, recent research has focused on the potential role of physical activity in the prevention and management of depression and depressive symptoms (Paluska & Schwenk, 2000). Thirlaway and Benton (1992) found that as little as one hour of physical activity per week was associated with reduced depression in patients. Wise et al. (2006) mirrored these results when they found that between one and seven hours of physical activity per week was associated with a reduced likelihood of depression. Furthermore, a lack of physical exercise is associated with both lifetime depressive disorders and lifetime comorbid anxiety and depressive disorders (Strine et al., 2008).

A number of researchers have hypothesized that physical activity reduces risk of depression through physiological pathways. For instance, exercise may activate endorphin secretion, which reduces pain and produces a euphoric sensation (Paluska & Schwenk, 2000). Another theory concerning why exercise is helpful in combating mental illness suggests that exercise may alleviate symptoms of mental illness rather than the illness itself. For example, some depressive symptoms are somatic in nature (e.g. disturbed sleep, general fatigue, diminished appetite); therefore, improvements in depressive symptoms might reflect the general

benefits of exercise rather than the exercise having any direct impact on the depression itself.

Whatever the cause, physical exercise is well documented to bolster mental health. The risks of replacing physical activities with any sort of sedentary behavior, including social media use, must be considered as a possible factor when discussing the effects of social media use on mental health.

Face-to-face social interaction also plays a role in displaced behavior theory. Like exercise, it reduces the risk of developing mental health issues and helps alleviate mental health issues that already exist. For example, Ono et al. (2011) found that the amount of face-to-face social interaction was positively correlated to improved individual mental health. The ‘social interaction’ hypothesis discussed by Ransford (1982) suggests that the improvements in mental health following exercise are at least partly related to the mutual support and social relationships that are provided when participating in physical activity with others.

The displaced behavior theory argues that sedentary behaviors such as social media use could be displacing this face-to-face interaction and the benefits it offers. The social withdrawal hypothesis is one mechanism of explaining the association between increasing sedentary behaviors and increasing risk of depression (Krout, 1998; Lewinsohn, 1974). This hypothesis proposes that the more frequently people watch TV or use the computer/internet, the further they remove themselves from social interaction, which in turn increases their risk of depression.

Krout (2002) expanded this theory with his social isolation hypothesis, proposing that prolonged engagement in sedentary behaviors, such as TV viewing or computer use, not only

removes the user from social interaction, but also leads to the breakdown of social support or communication networks which may lead to increased risk of psychological ill–health.

Sleep Interruption Due to Blue Light

Wright et al. (2013) found that people who spent a week camping in the Rocky Mountains, exposed to only natural light and no electronic devices, had their circadian clocks synchronized with the rise and fall of the sun. However, these natural circadian rhythms are hardly the norm in today’s fast-paced and busy world. Our natural sleep cycles are being interrupted by an unlikely bedfellow: our laptops and smartphones.

The mobile devices and computer screens used to view social media sites all have one thing in common: hidden within their glow, they emit high levels of blue light. This artificial light disrupts healthy sleep cycles (Czeisler, 2013; Holzman, 2010; Santhi et al., 2011). Santhi et al. (2011) showed that nighttime exposure to artificial light disrupts the body’s circadian rhythm, or the 24-hour biological clock that controls our sleep cycle. According to Czeisler (2013), “[Artificial] light exposure after sunset signals ‘daytime’ to our [brain], shifting the clock later... As a result, many people are still checking email, doing homework, or watching TV at midnight, with hardly a clue that it is the middle of the solar night. Technology has effectively decoupled us from the 24-hour day to which our bodies evolved” (p. S13).

How does this artificial light disrupt sleep? According to Holzman (2010), the blue light included in artificial light is the most harmful to humans. Blue light suppresses melatonin, or the brain’s “sleepy chemical,” production more vigorously than other wavelengths. Blue light suppresses melatonin through one of the sensors in our eye: the intrinsically photosensitive

retinal ganglion cells, or ipRGCs (Graham, 2011). These sensors take in ambient light information from the environment and send it to the brain. The information sent to the brain by the ipRGCs causes the pineal gland to start and stop the secretion of melatonin (Sargis, 2014). The ipRGCs are most sensitive to blue light; therefore, it only takes a small amount of blue light for the brain to signal the pineal gland to stop sending out melatonin, making it difficult to get to sleep. This melatonin suppressing blue light is present in our TVs, computer screens and mobile devices. Browsing social media before bed is not just distracting from sleep, it can quite literally stop you from being sleepy at all.

The theory that blue light is a culprit in disrupting sleep is supported by several studies that saw sleep improvement with reduced blue light exposure. Burkhart and Phelps (2009) had 20 adults wear either blue-light blocking or ultraviolet-light blocking glasses three hours before they went to sleep. The study found that sleep quality improved among those in the group who wore blue-light blocking glasses compared to the ultraviolet-light blocking group. Another study had nightshift workers wear blue-light blocking glasses near the end of their overnight shifts for a month. At the end of the month, the subjects saw increases in overall sleep amount and sleep efficiency (Sasseville et al., 2009).

The loss of sleep perpetrated by the blue light found in the screens that accompany day-to-day life can have a negative effect on one's mental health. The National Sleep Foundation (2012) recommends that adults receive 7-9 hours of sleep per night; however, the average American sleeps less than seven hours. In a sleep-deficient society, it is important to understand the risks associated with this lack of sleep.

A connection between sleep and mental health is well documented. It has been shown that people who suffer from anxiety tend to spend less time in deep sleep than those without anxiety (Monti & Monti, 2000). Poor sleep can also make people less receptive to positive emotions by limiting their ability to correctly process certain neurotransmitters in the brain (Woodson, 2006), making them feel more sad or discontent. A history of insomnia has been shown to increase the risk of developing depression (Cole & Dendukuri, 2003; Riemann & Vodeihoizer. 2005).

Li et al. (2013) found a connection between disrupted circadian rhythms and depression in their study of 12,000 gene transcripts obtained from donated brain tissue from depressed and mentally healthy people. They found that several hundred genes in each of six brain regions displayed rhythmic patterns of expression over the 24-hour cycle, including many genes essential to the body's circadian machinery. "There really was a moment of discovery when we realized that many of the genes that we saw expressed in the normal individuals were well-known circadian rhythm genes – and when we saw that the people with depression were not synchronized to the usual solar day in terms of this gene activity," (p. 113) said Jun Li. Besides the genetic link discovered by Li et al. between depression and circadian rhythm disruption, changes in circadian rhythms might also trigger bipolar disorder (Kupfer et al., 1988).

Robotham (2011) put it best when he said, "good sleep is fundamental to good mental health, just as good mental health is fundamental to good sleep," (p. 21). The research cited above is in line with the idea that sleep and mental health seem to each effect the other in an endless cycle. This cycle, when healthy, is beneficial: good sleep leads to good mental health, and a calm and healthy mind in turn leads to good sleep. However, the research findings suggest

that the opposite may also be true: poor sleep and poor mental health go hand-in-hand. The blue light taken in by the brain during the 3.8 hours that young adults spend on social media each day could be one factor affecting this cycle.

Multitasking: Effects on Mental Health

Rapid task switching (also known as multitasking), encouraged by social media, may be one root cause of depression (Rosen et al., 2013). Rosen et al. (2013) states that “while multitasking is inherently a human trait, technology has perhaps overly encouraged and promoted it by our multi-window computer environments, multi-app smartphone screens and the wide-ranging sensory stimulation (and distraction) offered by high definition, customizable visual and auditory signals coupled with tactile stimulation through vibrations,” (p. 1245). With numerous social media sites at our fingertips every second of every day, multitasking has become many people’s modes of operation, rather than an occasional necessity.

Social Theories

Armed with an understanding of the individual theories that contribute to an understanding of the connection between social media use and mental health, social theories will now be discussed. These social theories look at how social media use affects people as they relate to each other and their larger environment. From the perspective of social theories, social media use affects mental health by influencing how people view, maintain, and interact with their social network.

This discussion of social theories illuminates how social media use affects mental health by first exploring how social relationships affect mental health in a broad sense. Then several theories will be discussed concerning how social media use may be affecting these social relationships and in turn, the effects of those social relationships on mental health.

How do Social Relationships Affect Mental Health?

Umberson and Montez (2010) note that throughout history, captors have used social isolation to torture prisoners of war—to drastic effect. Social isolation of otherwise healthy, well-functioning individuals results in psychological and physical disintegration, and even death. Adults who are more socially connected are healthier and live longer than their more isolated peers (Umberson & Montez, 2010).

According to the Mental Health Foundation, friendship is a crucial element in protecting our mental health. Both the quantity and quality of social relationships affect mental health, health behavior, physical health, and mortality risk (Umberson & Montez, 2010). Studies

demonstrate that social support can ward off hopelessness (Johnson et al., 2001), quell loneliness (Schneider et al., 1991), discourage avoidant coping (Weaver et al., 2005), and reinforce positive states of mind (Gonzalez et al., 2004). On the other hand, social isolation and negative social interactions are associated with depression (Chou et al., 2011; Schuster et al., 1990) and suicide (Holma et al., 2010).

Adults with no friends are the worst off psychologically. There are significant health costs associated with social isolation (Economic & Social Research Council, 2013). Social isolation has long been known as a key trigger for mental illness, while supportive relationships with friends, family and neighbors are beneficial to the mental health of individuals and the population. Other forms of social interaction such as volunteering are also known to boost wellbeing. People with supportive friends and family generally have better mental and physical health than those who lack these networks. The same is true for those who take part in churches, clubs and voluntary organizations (Economic & Social Research Council, 2013). Reich et al. (2010) also confirmed the idea that social support is connected with better mental health.

It is clear that social relationships play an important role in bolstering mental health. But how do they do it? There is disagreement among researchers concerning what aspects of social relationships have an effect on mental health. Umberson & Montez (2010) suggested that three aspects of social relationships affect health: *Social integration* refers to overall level of involvement with informal social relationships, such as having friends or a spouse, and with formal social relationships, such as those with religious institutions and volunteer organizations. *Quality of relationships* includes positive aspects of relationships, such as emotional support

provided by significant others, and strained aspects of relationships, such as conflict and stress. *Social networks* refer to the web of social relationships surrounding an individual, in particular, structural features, such as the type and strength of each social relationship. Umberson and Montez purport that one must have all three aspects balanced to experience the benefits of positive social outcomes.

Maulik et al. (2011) prefers to distinguish only between social networks and social support:

“Social networks are the number of social contacts that one has and the frequency of interaction with them. As such, social networks are objective and quantifiable. It is through such contacts and the ties or bonds that a person has with his/her friends or relatives that one receives the help that he/she needs in times of crises. In contrast, social support is the perception that those in the network are concerned for the welfare of the individual. As a result, social support is more subjective and slightly less quantifiable. Social support acts as a coping resource and also reflects certain aspects of social and personality development. Social support is based on one’s social network and is conceptually related to it” (p. 32).

However, many researchers believe that only social support affects mental health. Social support refers to the emotionally sustaining qualities of relationships, including a sense that one is loved, cared for, and listened to, positive relationships, encouragement, and emotional support that is often provided by a network of family, friends, colleagues, and other. Many studies establish that social support benefits mental and physical health (Cohen, 2004; Uchino, 2004).

The emotional support provided by social ties enhances psychological well-being, which, in turn, may reduce the risk of unhealthy behaviors and poor physical health (Kiecolt-Glaser et al., 2002; Thoits, 2004; Uchino, 2004). Social support is closely tied to effective coping (Willet et al., 2012). Also, social support may reduce the impact of stress and fostering a sense of meaning and purpose in life (Cohen 2004; Thoits, 1995). Maulik et al. (2011) found that those with increased social support from friends and relatives suffered less from mental health issues after a traumatic life event due to the stress-reduction function of this social support.

However many aspects of relationships affect mental health, there are a number of possible mechanisms that facilitate these effects. One possible explanation for how social relationships influence mental health is that they influence, or “control,” a person’s health habits (Umberson et al., 2010). For example, a spouse may monitor, inhibit, regulate, or facilitate health behaviors in ways that promote a partner’s health (Waite, 1995). Another explanation cites personal control. *Personal control* refers to individuals’ beliefs that they can control their life outcomes through their own actions. Social ties may enhance personal control (perhaps through social support), and, in turn, personal control is advantageous for health habits, mental health, and physical health (Mirowsky & Ross, 2003; Thoits, 2006). On a conceptual level, social relationships may influence mental health outcomes through multiple mechanisms including influence on health-related behaviors, engagement in social activities, transfer and exchange of social support, and access to material resources (Berkman & Glass, 2000; Kawachi & Berkman, 2001).

In a more fundamental way, greater social connection may foster a sense of “coherence” or meaning and purpose in life, which, in turn, enhances mental health, physiological processes, and physical health (Antonovsky, 1987). Some health outcomes can “spread” widely through social networks. For example, obesity increases substantially for those who have an obese spouse or friends (Christakis & Fowler, 2007) and happiness appears to spread through social networks as well (Fowler & Christakis, 2008). In this way, the mental health of one’s social network can be catching.

The mantra that quality is more important than quantity appears to have some support in the effect of social relationships on depression (Teo et al., 2013). Teo et al. completed an observational study of a large nationally representative community cohort that demonstrated that the quality of social relationships – even after accounting for baseline depression and other important potential confounders – predicted future depression. Remarkably, this effect appeared to be very durable, predicting development of clinically significant depression ten years later. Teo et al. estimates that one in seven adults who have social relationships in the bottom decile of relationship quality will develop major depression years later, whereas, just one in fifteen of those with the highest quality of social relationships will develop depression (Teo et al., 2013). Ingram et al. (1999) also reported that well-being was a function of satisfaction with social support, but not with the number of support network members.

It is important to note that the direction of causality between social relationships and mental health is not always clear (Teo et al., 2013). It is only by analyzing people’s lives over time within a structural, social and cultural context that we can establish whether social

relationships really do contribute to better health and increased wellbeing – or whether better health and more energy in the first place enable people to invest in relationships with family and friends (Economic & Social Research Council, 2013). However, the importance of friendships and family networks is not affected by education, employment or marital/cohabiting status (Economic & Social Research Council, 2013).

Having established the connection between social relationships and good mental health, it is now to review the avenues through which social media may be affecting the social relationships of young adults, and therefore their mental health as well.

How Social Media Use Affects Social Relationships

According to Sherry Turkle (2012), social media is so seductive because it allows for the illusion of companionship without the demands of friendship. Certainly, social media has had a profound effect on how people interact with their social networks. But how? How does social media affect the quality and positive mental health effects of social relationships? There are many avenues through which social media may be affecting how young adults interact with their social networks. In this section, the researcher will discuss several: how social media use affects relationship privacy, constant connectivity and fear of missing out, and social comparison.

One way that social media is changing how young adults interact with their networks of relationships is by changing the privacy of these relationships. The relationships people have with others on Facebook are visible to many, often resulting in a loss of privacy within personal relationships (Muscanell, 2013). Although being able to keep up with information about a friend's life via social media may be viewed as a way to remain close, this lack of privacy may

actually backfire. It has been shown that monitoring others' activities on social media can lead to negative relationship outcomes such as online and offline relational intrusion (Lyndon et al., 2011).

According to David Schwartz, Oakland University Counseling Center director, social media can be problematic because it can create and exacerbate relationship problems that would be better handled off-line.

“The difficult thing is that it’s hard to express yourself the same way you would in person. Often times, things can get misrepresented or misconstrued by the person who is reading it when it’s been posted, which can cause relationship problems, too... (You see online) a lot of the same problems you see outside of social media, but they tend to get magnified more or exacerbated because of it, and can be a breeding ground for some unhealthy communication styles” (p. A1).

He’s seen many situations where social media has magnified problems, including stress from defriending and blocking, or students catching their significant other cheating online. Bullying also occurs (Sokol, 2013).

Another social phenomena being exacerbated by social media is what researchers are calling a fear of missing out. This refers to the blend of anxiety, inadequacy and irritation that can flare up while skimming social media like Facebook, Twitter, and Instagram. Billions of Twitter messages, status updates and photographs provide thrilling glimpses of the daily lives and activities of friends, co-workers, and peers (Wortham, 2011). Grohol (2013) noted that the fear of missing out on something or someone more interesting, exciting or better than what we’re currently doing is so strong that teens and adults text while driving, because the possibility of a

social connection is more important to them than their own safety. According to Ariely (2009), the worry that the fear of missing out signals in the mind is set off by the fear of regret. He says people have become afraid that they've made the wrong decision about how to spend our time.

Fear of missing out is not new. It has been induced throughout history by such triggers as newspaper society pages, party pictures, and annual holiday letters depicting people at their festive best. But now, instead of receiving occasional polite updates, we get reminders around the clock, mainlined via the device of our choosing (Wortham, 2011).

However, not all of this information is necessarily desired: according to Zuo (2014), this fear of missing out translates very quickly into social comparison with one's friends via social media.

“Facebook users are often exposed to details about their peers' lives that were not actively sought out. This exposure to other people's social activities can lead to users' comparing their own social lives with that of their peers, and subsequently, may have harmful effects. For example, a college student might scroll through her Instagram feed and see pictures her friends have posted of the delicious foods they ate, fun trips they went on, and new shoes they bought – without her. These pictures may lead her to socially compare herself to others and ask questions such as: ‘Is my life as exciting as my friends' lives? Am I happy with the way my life is? Why didn't they invite me?’” (p. 2).

Although researchers have expressed concern about the potential effects of these types of questions on an individual's self-esteem and mental health, little empirical evidence has tested this issue directly.

This fear of missing out impacts young adults by changing how they view their social relationships. First, this fear exacerbates constant connectivity and makes it difficult for young adults to step away from compulsively checking their devices. They are afraid of what they might miss if they disconnect. Fear of missing out also keeps people from being able to relax and be contented with their particular circumstance, because they are bombarded with the interesting activities of their friends. Fear of missing out can also foster a feeling of victimization and exclusion in young adults: through social media, young adults can clearly see if their friends are hanging out without them.

The act of social comparison also poses a threat to young adult social media users. Use of the Internet and social media has been linked in a handful of studies to increased social comparison and diminished self-esteem and self-image. Haferkamp and Karmer (2011) investigated the effects of online social media profiles in two studies. The first study found that participants had a more negative body image after being shown profile pictures of physically attractive individuals than those who had been shown profile pictures of less physically attractive individuals. The second study found that male participants who were shown profiles of more successful men reported a higher perceived divergence between their current career status and their ideal career status when compared with male participants who were shown profiles of less successful individuals. Chou and Edge (2012) collected survey data from undergraduates with questions about their Facebook use. Their findings indicated that individuals who had been using Facebook for a longer period of time perceived that others were happier and that life was not fair. Participants who spent more time on Facebook weekly reported that they felt others were happier and had better lives. Zuo (2014) showed a direct link between Facebook use per day and level of

social comparison: individuals who used Facebook more daily tended to make more social comparisons. Zuo also found that making social comparisons was associated with lower self-esteem and more negative health outcomes and that Facebook use is predictive of lower self-esteem and more negative mental health outcomes.

It seems that people cannot help but compare themselves to those around them; this practice can have particularly deleterious effects in a social media climate, where other people can censor their profiles to only show a “highlight reel” of their life. If a person has a full view of their own life, but only sees others’ highlights, this social comparison can be understandably discouraging.

Social Media’s Effects on Romantic Relationships

Another important way that social media affects its users’ network of relationships is through how it affects romantic relationships. Recent research findings have shown that Facebook can be damaging to romantic relationships due to increased jealousy, partner surveillance, and compulsive Internet use, (Kerkhof, 2011; Muise, 2009; Papp, 2012; Tokunaga, 2011; Utz, 2011). And unfortunately, not getting along with one’s spouse was related to more psychiatric disorders than not getting along with relatives or friends (Whisman, 2000).

Internet use in general, not just social media use, has been shown to influence romantic relationship quality negatively. Kerkhof et al. (2011) found that compulsive Internet users reported greater conflict with their partners, more feelings of exclusion and concealment in addition to lower commitment, lower feelings of passion and intimacy, and less disclosure.

Jealousy within romantic relationships stems from real or imagined third-party threats to the integrity of the relationship (Sharpsteen, 1995). Situations resulting in jealousy within a romantic relationship range from a partner revealing interest in someone else, having an interaction with a past partner, or obtaining attention from an individual outside of the relationship (Sheets, 1997). However, this jealousy can occur in online contexts as well as in offline ones (Guadagno, 2010).

Muise et al. (2009) explored the relationship between Facebook use and jealousy and found that individuals who spent more time on Facebook reported more jealousy within romantic relationships and increased monitoring of their romantic partner's Facebook profile. Research by Elphinston et al. (2011) also indicates that individuals who use Facebook more often report feelings of jealousy and surveillance of their romantic partner's profile. These results support the notion that Facebook use may produce or exacerbate jealousy within romantic relationships.

One possible reason for this jealousy was found by Muise et al. (2009): The researchers found that increased time spent on Facebook may lead to increased exposure to ambiguous information about a romantic partner (for example, a nondescript post from a stranger or a photo with a member of the opposite sex). According to the researchers, exposure to such information without context may lead to increased jealousy. Considering the research by Muise et al., it may be possible that Facebook induced jealousy serves as a feedback loop in which a romantic partner uses Facebook excessively to uncover additional information about their partner in order to reduce ambiguity in the information they have already uncovered (Clayton et al., 2013).

Although excessive ambiguous information on Facebook may fuel negative emotions for couples, it may also be the case that use of privacy settings could also produce negative emotions

(Muscanell et al., 2013). That is, when individuals set many parts of their profile to private, this may lead to increased suspicion on a romantic partner's behalf. Muscanell et al. argued that this could lead to negative emotions in two ways. An individual may interpret this as a sign that his romantic partner does not publicly acknowledge their relationship. It could also indicate that one's partner is hiding evidence of interactions with other potential romantic interests.

Muscanell et al. (2013) studied this theory by asking several subjects who were in romantic relationships to imagine different scenarios while observing their significant other's Facebook page. Participants were more jealous, angry, disgusted, and hurt when they imagined that their romantic partner had no photos of them as a couple present on Facebook. The researchers postulated that this was because it indicates that one's romantic partner either does not acknowledge being in a relationship, or may be attempting to hide their current relationship. Similarly, participants reported feeling negative emotions when they imagined discovering that their romantic partner had their photos set to private as opposed to being viewable by others on Facebook. Again, the researchers believed that this may be an indication (to participants) that their romantic partner is attempting to hide a current relationship, or hide evidence that may indicate interest in other potential romantic partners.

Beyond extraneous information and privacy settings, Elphinston and Noller (2011) discovered that Facebook intrusion, by means of surveillance behaviors and jealous cognitions, was associated with relationship dissatisfaction for undergraduate college students who were currently in romantic relationships. In short, participants viewed "stalker" behavior by significant others to be a turn off.

Clayton et al. (2013) offered other theories as to why social media might be affecting romantic relationships: Individuals who are on Facebook may often be indirectly neglecting their partner, directly neglecting their partner by communication with former partners, and developing Facebook-related jealousy or constant partner monitoring, which may lead to future relationship conflict or separation. Also, the researchers argue that high levels of Facebook use may serve as an indirect temptation for physical or emotional cheating.

Clayton et al. (2013) found that individuals who are currently in a relationship of three years or less are more likely to experience negative relationship outcomes as a result of Facebook-related conflict. This is alarming in regards to this thesis because this indicates that young adults, who are typically engaged in shorter romantic relationships, are particularly susceptible to social media's effects on romantic relationships. The degradation of romantic relationships by social media is just one way that social media affects young adult social relationships. This degradation should be considered as a potential pathway in the connection between social media use mental health.

Conclusion

This review of the research on the connection between social media use and degraded mental health demonstrates the importance of the topic: the potential harmful effects surrounding social media use have profound consequences for young adults. As previously noted, the mental health problems developed in young adulthood can plague a person throughout their lifespan. The importance of continued research and exploration on this topic cannot be overstated.

The theories reviewed in the previous section offer explanatory value in the relationship between social media and mental health. By focusing on several individual- and social- level theories, this thesis was able to illuminate how complex this relationship is. The theories discussed seem to offer insight into the complex connections between social media use and mental health, implying that several of the social and individual theories discussed may play a role in creating the connection between young adult mental health and social media use.

It is important to note that this thesis could not cover every theory that could explain how social media use connects to mental health. For example, there is a growing body of research on the topic of cyber bullying and the effects this activity has on the self-image of young people. Given that young adults tend to be highly influenced by peers, this online bullying could have an effect on mental health. Similarly, the body image of young people, particularly girls and young women, seems to be affected through consumption of online media. The shortcoming of this thesis, and the current research at large, lies in the inability to examine all factors that may contribute to the relationship between social media use and mental health simultaneously. Social

media research is a relatively new topic; most of the existing literature is exploratory. Given the complex nature of this relationship, it is challenging to address the connection thoroughly while controlling for confounding variables. It is important to note that causality has not been proven, and that many of the topics and theories presented in this thesis are merely potential explanations for an observed connection.

Recommendations

Given the importance of this topic as demonstrated by the review of the research, increasing public awareness of the connection between mental health and social media should be prioritized. Although social media is a powerful tool and is certainly here to stay, it is important that people understand that nothing exists without negative side effects. As long as people are aware of the potential negative consequences that can be caused by their actions, they can make more educated choices about their behaviors. If young adults and their caregivers are aware of the potential deleterious effects of social media use, they can create healthy social media habits to guard against these potential effects.

Pragmatic recommendations from this thesis are given to mental health practitioners, young adults, and parents. The exploration of theories presented in this thesis suggests that practitioners need to understand social media use as a potential cause or outcome of mental health problems. It is important that mental health practitioners and health care providers are aware of the potential threats that social media use can pose to young adults so that they can provide young adults with proper recommendations and guidance. Young adults should be informed of the risks they face, both in general mental health maintenance and in social media use. Only through understanding that social media poses certain risks to their mental wellbeing can they self-monitor their behavior on social media. It is recommended that young adults have an awareness of what online activities make them feel anxious or sad, or when those online activities might be getting in the way of other activities that improve their health. Parents should also be aware of the threats to mental health that their children face. By understanding how

social media can effect the mental health of their children, parents can talk to their children about healthy social media habits and balancing their time on social media and help protect their children from experiencing mental health issues later in life.

The challenge for future research is to continue to explore the connection between mental health and social media use. More research is needed to understand exactly why the connection exists so that people can guard against it. Longitudinal research is lacking from the current research; more is needed to explore this connection over time and to understand the long-term affects of social media use. However, research on this topic is difficult to conduct due to numerous potential confounds. Ideally, future research should provide more recommendations for mental health practitioners, young adults, and parents.

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