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Online Social Networking and Its Effects on Young Adults

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Abstract

This paper analyzes the relationship between the excessive use of social networking sites and physical and mental well-being of young adults. The first part of the paper discusses the physical and mental health concerns resulting in the excessive use of social networking sites. The second part of the paper uncovers the reasons why health is negatively impacted by the excessive use of these social platforms. The third part of the paper addresses the possible solutions to minimize the negative health effects from the excessive use of social networking sites.

Keywords: online social networking, physical health, perceived level of social isolation, life satisfaction, social comparison, envy



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Online Social Networking and Its Effects on Young Adults

Online social networking is the social relational connection among individuals or groups of people—with the purpose to connect, interact, and build relationships through the use of internet sites (Voss, 2013). According to the statistics provided by the Pew Research Center, 88% of young adults aged 18-32 years in the U.S. surveyed, use at least a form of social networking platform (Smith and Anderson, 2018). However, in a study conducted by the University of Pittsburgh School of Medicine, Primack et al. (2017) found that young adults who use social networking sites have higher levels of perceived social isolation when compared to the young adults who do not (Primack et al., 2017). Perceived social isolation, in Primack et al.'s study (2017), is defined as subjective social isolation, or “the feeling of a lack of engagement with others” (Primack et al., 2017). Despite the purpose of social networking platforms to establish relationships, the use of these web-based sites appears to have negative impacts on the mental health of young adults. Based on these findings, excessive use of social networking platforms damages the physical and mental well-being of young adults, yet there are possible solutions that includes having software developers incorporate safety features on social networking platforms to increase young adults' awareness of the potential hazards resulting from heavy usage.

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Physical and Mental Health Concerns

Increase in the Perceived Level of Social Isolation (PSI)

The amount of time and frequency young adults use social networking platforms is positively correlated with the perceived level of social isolation (PSI), or “the feeling of lack of engagement with others” (Primack et al., 2017). The study by Primack et al., published in 2017, assessed the connection between PSI and online social media usage, in which they recruited a sample of 1,787 U.S. adults ages 19-32 years old for a cross-sectional survey assessing the relationship between the length of time spent on and the frequency of the use of eleven types of the most popular social networking platforms, such as Facebook, Instagram, Snapchat, etc. (Primack et al., 2017). In the study, Primack found that 22.3% of young adults who use social media for no more than thirty minutes a day report to have high PSI, or the perception of feeling extremely socially isolated and lonely, and 31.9% of young adults who use social media for more than two hours a day report to have high PSI (Table 1). Additionally, 18.2% of young adults who make no more than 8 social media visits report to have high PSI, and 36.4% of young adults who make 58 or more visits report to have high PSI (Table 1). From the statistics in the study, it is concluded that the more time and the more frequently young adults spend time on social networking platforms, the higher their PSI is. What this means is that although people are

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interacting with other people on social networking platforms, they still believe themselves to be socially isolated and experience loneliness. However, since cross-sectional studies are descriptive research, this study is observational in nature and only indicates correlation and not causation between the use of social networking platforms and PSI. Therefore, an increase in the amount of time and frequency young adults spend on social networking platforms is related to an increase in PSI, or the increase in the perception of feeling socially isolated and lonely.

Impact on Physical Health. The more time and more frequently young adults spend on social networking platforms, the more negative impacts they have on their physical health. Those with higher amounts of PSI, or those with the perception of higher social isolation and loneliness, are found to have increased morbidity and mortality with symptoms such as an increase in cortisol levels, which can “disrupt sleep, immune function, and cognition” and ultimately lead to an earlier death (Primack et al., 2017). Therefore, young adults who use online social networking more often are more likely to have higher levels of PSI, which puts them at risk of increase in morbidity and mortality, meaning that they are more susceptible to having a shorter life expectancy and a higher chance of premature death.

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Table 1

Social Media Use and Sociodemographic Characteristics According to Perceived Social Isolation: 2014 U.S. Survey

Independent variables	Whole sample, column % ^a	Low PSI, column % ^a (n=699)	Medium PSI, column % ^a (n=549)	High PSI, column % ^a (n=537)	p-value ^b
Social media use					
Time, minutes/day					0.002
Quartile 1 (0–30)	29.8	35.4	28.2	22.3	
Quartile 2 (31–60)	20.8	21.8	23.2	16.3	
Quartile 3 (61–120)	24.0	22.8	21.0	29.6	
Quartile 4 (≥121)	25.5	20.1	27.6	31.9	
Frequency, visits per week^{c,d}					<0.001
Quartile 1 (0–8)	28.3	37.7	23.8	18.2	
Quartile 2 (9–30)	25.1	23.6	30.1	21.3	
Quartile 3 (31–57)	24.1	22.3	26.5	24.1	
Quartile 4 (≥58)	22.5	16.4	19.6	36.4	

Note: Table 1 from its original source contains sociodemographic information that are not used in the analysis of this paper. Those additional data have been cropped out with the intent to not confuse the audience of this paper. Table 1 in this paper only contains parts of the original table that are relevant to the focus of this paper.

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Decrease in Life Satisfaction

The more time and frequency young adults spend on the social networking sites, Facebook in particular, the less they are satisfied with their lives, which can expose them to developing symptoms of mental illness, such as signs of depression, loneliness, and lower self-esteem. The study by Kross et al. (2013) tested the hypothesis that Facebook use will lead to a decline in mental well-being in young adults. Before the experiment, the participants filled out surveys that measured depression, self-esteem, and provisions of social relationships. In the study, the researchers text messaged 82 young adults five times per day in a two-week period. Each text message included a link to an online survey with questions aimed to measure how the use of Facebook affects the psychological states of young adults. The questions were measured on scale of 0 to 100 and were stated as follows:

(1) How do you feel right now? (very positive [0] to very negative [100];

$M=37.47$, $SD=25.88$)

(2) How worried are you right now? (not at all [0] to a lot [100]; $M=44.04$,

$SD=30.42$)

(3) How lonely do you feel right now? (not at all [0] to a lot [100]; $M=$

27.61 , $SD=26.13$)

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(4) How much have you used Facebook since the last time we asked?

(not at all [0] to a lot [100]; $M=33.90$, $SD=30.48$)

(5) How much have you interacted with other people “directly” since the last time we asked? (not at all [0] to a lot [100]; $M=64.26$, $SD=31.11$). (Kross et al., 2013)

The researchers combined the results of the study in a zero-order correlation chart, which indicates the relationship between life satisfaction and Facebook usage (Kross et al., 2013). The values of zero-order correlations range between the values of -1 to 1: 1 indicates the perfect positive relationship between the pre-study life satisfaction and the use of Facebook, -1 indicates the perfect negative relationship between the pre-study life satisfaction and the use of Facebook, and 0 indicates the perfect absence of the relationship between positive emotions and the use of Facebook (“The Correlation Coefficient”).

The correlation between the pre-study life satisfaction and Facebook was -0.05, and the correlation between the post-study life satisfaction and Facebook was -0.15, which indicates a 0.10 increase in the negative relationship between the pre-study life satisfaction and the post-study life satisfaction, meaning that throughout the experiment, the more people use Facebook, the less satisfied they are with their life (see Table 2). When a person’s satisfaction with life

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decreases, the more unstable their emotional well-being becomes, which makes them more susceptible to showing signs of depression, loneliness, and lower self-esteem. Therefore, the more time and frequency young adults spend on Facebook, the less satisfied they are with their life, which makes them more vulnerable to negative mental health due to an unstable psychological state.

Table 2

Within-Person and Between-Person Zero-Order Correlations

	Experience-sampled variables					Pre/post experience sampling	
	Affect	Worry	Loneliness	Facebook use	Direct contact	Pre life satisfaction	Post life satisfaction
Affect	–	.53 ^{***}	.50 ^{***}	.14 ^{***}	–.29 ^{***}	–	–
Worry	.77 ^{***}	–	.37 ^{***}	.17 ^{***}	–.23 ^{***}	–	–
Loneliness	.68 ^{***}	.66 ^{***}	–	.22 ^{***}	–.40 ^{***}	–	–
Facebook Use	.07	.13	.22 [*]	–	–.24 ^{***}	–	–
Direct Contact	–.28 [*]	–.09	–.39 ^{***}	.26 [*]	–	–	–
Pre Life Satisfaction	–.55 ^{***}	–.41 ^{***}	–.40 ^{***}	–.05	.29 ^{**}	–	–
Post Life Satisfaction	–.66 ^{***}	–.51 ^{***}	–.48 ^{***}	–.18	.23 [*]	.86 ^{***}	–

Note: Table 2 consists of the participants' responses from the survey they filled out before the experiment was conducted and the responses from the text messages survey during the experiment, which measures the association between the participants' psychological well-being and Facebook usage.

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The Cause of Negative Health Associations

Social Comparisons and Depression

Social comparison, when people compare the qualities in their lives to other people's lives (Steers et al., 2014), is part of the reason why social networking platforms may make people feel socially isolated or feel less satisfied about their lives. To track how depressive symptoms stem from people making social comparisons on social networking platforms, study 2 conducted by Steers et al. (2014), the researchers had the participants—154 individuals from a large southwestern university ages 18 to 42 years—record a 14-day diary (Steers et al., 2014). The participants were required to record the number and the amount of time they were on Facebook, the social comparison directions they had, and measure their depressive symptoms using CES-D (Steers et al., 2014), a twenty-item test that asks the participants to rate their experience of depression-associated symptoms, ranging from 0-3 for each item, with high score having greater depressive symptoms ("Center for Epidemiological Studies-Depression," n.d.). Social comparison is measured by the upward, downward, and non-directional directions: upward direction is when people have lower self-esteem, downward direction is when people have higher self-esteem, and non-directional is when there is no change in people's self-esteem (Steers et al., 2014). Essentially, people feel worse and have lower self-esteem when they

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compare themselves to someone who is better off than them (upward social comparison), and they feel better and have higher self-esteem when they are compared to someone who is worse off than them (downward social comparison).

Steers et al.'s study (2014) found that when people "[spend] more time on Facebook, they tended to report engaging in more nondirectional and upward Facebook social comparisons and fewer downward social comparisons" (Steers et al., 2014) and these behaviors result in "greater daily depressive symptoms (regardless of gender)" (Steers et al., 2014). In other words, when people make upward social comparisons while using social networking platforms, they develop negative mental health effects such as depression. Therefore, the more time and frequency people devote to social networking platforms, the more they make nondirectional and upward social comparisons, which lowers their self-esteem and leads to symptoms of depression.

Envy, Surveillance, and their Links to Depression

In the study conducted by Tandoc, Ferrucci, & Duffy (2015), they found college students with symptoms of depression from using social networking platforms is associated with feelings of envy, meaning young adults who use Facebook for surveillance, or the act of consuming others' personal information, leads to envy which further leads to depression. The results of this study are also

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applicable to other social networking sites, besides Facebook, that can be used to consume social information about others (Tandoc et al., 2015). Envy occurs “when someone else has something we want but cannot have” that can lead to “numerous personal vices as well as volatile and hostile actions toward the target of envy,” which should not be confused with jealousy, or the feeling of “losing something to a rival” (Tandoc et al., 2015). Tandoc et al. (2015) asked the 736 college students from a large Midwestern University to report the number of hours they use Facebook per day to answer a few questions on a five-point scale. They were asked to record how often they use Facebook to update their own profiles and view other people’s activities (surveillance) on a scale of 5 (very frequently) to 1 (never). They were also asked to answer how much they agree with statements that show envy to measure their amount of envy towards others on a scale of 5 (extremely agree) to 1 (extremely disagree). Finally, they were asked to complete the CES-D test to measure the number of depressive symptoms they acquired (Tandoc et al., 2015).

Tandoc et al. (2015) found that depression symptoms appear when consuming positive information about others, and young adults who use Facebook more frequently have higher levels of envy compared to the young adults who are light Facebook users. This study found that using Facebook alone does not have any direct association to depression, but symptoms of depression are

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found when feelings of envy are present, which can lead to the assumption that using Facebook for surveillance predicts depression (Tandoc et al., 2015).

Feelings of envy stem from young adults consuming positive information of other people, and the more information they consume, the more they are to experience feelings of envy, which leads to symptoms of depression.

Proof that Social Comparison Predicts Envy

In the study conducted by White, Langer, Yariv, & Welch (2006), the researchers found that the frequency of social comparisons positively predicted destructive emotions and behaviors, such as envy, guilt, lying to protect one's self, and to protect others' feelings, etc. White et al. (2006) surveyed 64 adults ages 18-52, which measured how often they noticed that they compared themselves with others, the types of positive and destructive emotions and behaviors resulting from the comparison, and their level of self-esteem. To prevent an unreliable measure of social comparison, the respondents were not asked to identify their resulting emotions and behaviors from social comparison as upward or downward (White et al., 2006). Although the results of the study drew a clear positive relationship between frequency of social comparisons and destructive emotions and behaviors, positive emotions and behaviors were not predicted by the frequency of social comparisons—they were predicted by self-esteem instead, meaning that the higher the level of self-esteem people have,

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the more likely they will present positive emotions and behaviors, and self-esteem did not predict negative emotions and behaviors (White et al., 2006).

Summary of the Cause

Young adults who have used Facebook or other types of social networking platforms for surveillance and consumed positive information about others, leads to young adults making upward social comparisons, which leads to envy, and ultimately results in young adults showing signs of depression. The study conducted by Tandoc et al. (2015) found that when people consume positive information about others, feelings of envy occur, and results in people having depression. Steers et al. (2014) found that when people make social comparisons, or the act of comparing themselves with other people, while they are on social networking sites, they are more vulnerable to having signs of depression. In White et al.'s study (2006), they found that social comparisons positively predicted destructive emotions and behaviors. Therefore, we can conclude that when young adults consume positive information about others on social networking platforms, they make upward social comparisons, leading in envy, and resulting in them being more prone to showing signs of depression.

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Solutions

Although we may suggest that the solution to eliminate the negative effects online social networking brings is to stop using these platforms, people actually experience similar effects to those who have terminated their use of depressant substances (Reed et al., 2015). The study conducted by Reed et al. (2015) examined the relationship between problematic internet use (PIU) of one hundred and fifty-six students at Swansea University, and the physiological effects they have when each participant were forced to not use online social networking platforms in a two-hour individual teaching session. PIU, or internet addiction, is the compulsive overuse of anything on the internet that features “loss of control, increased tolerance and typical addictive withdrawal symptoms on deprivation” (“Internet Addiction”). Before the experiment, the students were asked how much time they spend on the internet and their purposes for being on the internet, and then based on the participants’ response the researchers categorized them into two different groups: a group who have higher PIU and a group who have lower PIU. The participants were initially placed in a two-hour-long individual teaching session in small experiment cubicles without access to any devices that can connect to the internet. The participants then took several tests to measure the condition of their mental well-being. The participants later had a fifteen-minute period where they can go on

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the internet and browse whatever they would like; their blood-pressure and heart rate were also taken both immediately before and after the fifteen-minute period (Reed et al., 2015).

The study conducted by Reed et al. discovered that those with higher self-reported PIU are found to have higher blood pressure, greater heart rate, and increase in state of anxiety and negative mood compared to those with lower self-reported PIU after the two-hour session; 40% of the people in the lower PIU group and 43% of those in the higher PIU group spend their time on social networking platforms, which makes them the most popular choice among both groups (Reed et al., 2015). The researchers also found that those who have PIU use online social networking as a way to relieve stress or reduce anxiety, and the removal of access to the internet causes them to experience greater amount of stress and anxiety, in which these symptoms are the withdrawal effects that are similar to the ones found after the termination of depressants (Reed et al., 2015). Therefore, the immediate termination of online social networking is not a solution to reduce the negative effects from these sites since it brings additional harm to the physiological well-being of young adults.

One way to limit the negative impacts social networking sites bring to young adults, under the condition that these users are willing to be mentally healthy, would be for the developers of online social networking sites to add in

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the amount of time and how frequently users are spending on the site to remind users that they should take a break. The studies conducted by Primack et al. and Kross et al. both concluded that the more time and more frequency young adults spend on online social networking, they have higher PSI and feel less satisfied with their lives. Therefore, if developers of social networking sites were to add in alerts to remind users to take a break from the site with explanation of why it would be beneficial for the users to take a break, it would spread the awareness of the potential hazards resulting in heavy usage of these social platforms to young adults, and possibly reducing young adults' time on these social sites, under the assumption that they would prioritize their health over online social networking. To avoid the withdrawal effects of social networking sites, the platform should gradually reduce the user's amount of time spent on the site. Therefore, setting a clock and adding in alerts for the users to enable it would be a solution to limit the negative impacts online social networking brings to young adults.

Validity of the Researches Mentioned

The validity of these studies is proved through the repetition of how the increase in the usage of online social networking is associated with negative mental health effects in all of the studies mentioned: Primack et al. (2017), Kross et al. (2013), Steers et al. (2014), Tandoc et al. (2015). Primack et al.'s study



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(2017) found that the more time and the more frequently adults spend on social networking platforms, the higher their PSI (perceived level or social isolation) is, which means they are at risk of an increase in morbidity and mortality. The Kross et al. study (2013) found that the more time and more frequently young adults spend on social networking platforms, the more their satisfaction with life decreases, leaving them to be in a more unstable psychological state, which makes them more vulnerable to negative mental health effects. In Steers et al.'s research (2014), they found that the more time and frequency people spend on social networking platforms, the more social comparisons are made, which puts them in jeopardy of developing symptoms of depression. Tandoc et al.'s study (2015) found that the more people having feelings of envy when they consume positive information about others, which leads to the development of depression. The amount of time and frequency young adults spend on social networking is a consistent factor in all of these studies, which ultimately proves the validity of how the more time and more frequently young adults spend on social networking, the more they are exposed to negative health effects.

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Conclusion

Online social networking platforms are still new and growing at a rapid pace, and research that examines the relationship between these sites and the mental wellness of young adults are limited. Although Facebook was the primary social networking platform among young adults ages 18 to 24 years in 2012, 78% say they use Snapchat and 71% say they use Instagram while 80% still use Facebook in 2018 (Smith and Anderson, 2018). Because of the recent rise in popularity among other types of social networking platforms, the studies used in this paper mainly focused on Facebook and its relationship with young adults. Despite that, the studies conducted by Primack and Reed included other types of social networking sites besides Facebook, and it is concluded that an increase in the amount of time and frequency of social networking usage is related to an increase in negative mental health among young adults. Thus, to limit and reduce the negative effects social networking sites have on mental health, the developers of these platforms should add in clock and alerts for the users to better track of their physical and mental well-being.

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