

## Social media use among U.S. college students attending a midwestern university

Cebail Karayigit<sup>a\*</sup> , Jose Parlade<sup>b</sup> 

<sup>a</sup> Texas Christian University, United States.

<sup>b</sup> Pittsburg State University, United States.

Suggested citation: Karayigit, C. & Parlade, J. (2023). Social media use among U.S. college students attending a midwestern university. *Journal of Educational Technology & Online Learning*, 6(2), 329-341.

### Highlights

- This study explores whether average spent on social media, social media addiction, and social media satisfaction are related to various factors (age, academic major, level of education) among college students.
- The findings generally support the notion that frequent use of particular social media platform (e.g., TikTok, Snapchat) and increased time on social media are related to social media addiction.
- This study provides insights into whether/how social media addiction is related to particular social media platform.

### Abstract

Social media use is a topic of importance to many people, especially college students. Using a sample of college students (N=446), this quantitative research study examined social media preferences and addiction, time spent on social media, and satisfaction with social media. Findings indicated that college students who use TikTok and Snapchat more often than other forms of social media are more likely to experience social media addiction than those who use Instagram and YouTube more often. Findings also indicated that participants majoring in technology were less likely to experience social media addiction than those majoring in psychology/counseling, teaching, and nursing. Furthermore, our findings suggested that social media addiction and time spent on social media vary based on students' age group and level of education. While older students (ages 25-29) were less likely to experience social media addiction than younger students (ages 18-20 and ages 21-24), freshman college students were more likely to experience social media addiction than graduate students. The implications of this study for practitioners are discussed in the context of the four research questions that guided this research.

**Article Info:** Research Article

**Keywords:** *Social media addiction, social media satisfaction, college students, TikTok*

## 1. Introduction

Social distancing and quarantines during the COVID-19 pandemic brought about a new predicament: many individuals were forced to restrict their direct contact with others. Social media suddenly gained new importance for some, providing them with ways to communicate, interact, and share in ways that were becoming increasingly out-of-reach. In light of this, the usage of social media and what can be considered healthy or unhealthy usage have been and continue to be topics of interest.

Social media is a term used to describe services, applications, and websites that allow individuals to create and share content and opinions through the Internet (Dewing, 2010). There are numerous social media sites, but some of the most well-known include Facebook, Twitter, Instagram, YouTube, Snapchat, and TikTok. The use of some of these sites has risen and continues to rise. Facebook, for example, has experienced a 7% increase in daily active users year-over-year with almost 1.9 billion daily active users and 2.9 monthly

\* Corresponding author. Department of Counseling, Societal Change, and Inquiry (CSIN), Texas Christian University, United States.  
e-mail address: [c.karayigit@tcu.edu](mailto:c.karayigit@tcu.edu)

active users in June 2021 (Facebook, 2021). Snapchat has reported 293 million daily active users, indicating a 23% increase year-over-year (Snapchat, 2021).

While the average time spent on social media has increased (Statista, 2021), a recent study found that problematic social media usage during the COVID-19 pandemic was significantly associated with anxiety among university students (Jiang, 2021). Although the extant literature has examined the negative impacts associated with social media use (Brunborg & Burdzovic Andreas, 2019; Choi & Noh, 2019; Chatterjee, 2020; Kircaburun et al., 2020; Jiang, 2021; Ostic et al., 2021; Yilmazsoy et al., 2020), very few studies have examined how different factors (age, academic major, level of education) are related to the time spent on social media, social media addiction, and social media satisfaction among college students. Similarly, many studies have focused on social media addiction (Andreassen et al., 2016; Balcerowska et al., 2020; Özsat et al., 2022) but the relationship between social media addiction and the particular social media platform used is limited. Therefore, this study also attempts to address the gap in the literature by exploring whether frequent use of particular social media platforms is related to social media addiction.

## 2. Literature Review

### 2.1. Use of Social Media Among College Students

Social media use has become especially prevalent among college students. According to a Pew Research Center survey (Auxier & Anderson, 2021), the highest percentage of adults reporting they ever use social media (84%) are aged 18 to 29. This percentage is followed by adults aged 30 to 49 (81%), aged 50 to 64 (73%), and 65 and older (45%) (Auxier & Anderson, 2021). Among 18- to 24-year-olds, 76% report they use Instagram, 75% report they use Snapchat, and 55% report they use TikTok (Auxier & Anderson, 2021). While college students use a variety of social media sites, differences in the use of social media have also been observed among college students of academic level classification (freshmen, sophomores, juniors, and seniors). A study by Romero et al. (2020) investigated levels of active participation in participants' preferred social media sites or applications. Active participation was defined as the self-reported frequency of sharing views or opinions, requesting information or social engagement, or interacting with others via social media. Statistically significant differences were found between freshmen and sophomores in this study in that sophomores reported greater levels of active participation with their most used social media site or application. In another study, seniors reported significantly more positive views of social media compared with sophomores (Lewis & Nichols, 2016).

Other research has pointed to differences in attitudes toward social media by academic majors. One study found that students majoring in public relations and advertising reported views toward social media that were significantly more positive when compared with the views of students majoring in other disciplines (Lewis, 2010). Karakoyun and Lindberg (2021) found that the pre-service teachers perceived social media mostly as a tool for communication and access to information. Another study on the use of social media as a means of acquiring information found that, compared with students in the social sciences, students with backgrounds in engineering more frequently used wikis (Kim et al., 2014). Wikis, such as Wikipedia, are online sources of information compiled and modified by multiple individuals (Parker & Chao, 2007). The same study found that students with humanities backgrounds more frequently used media-sharing sites, such as YouTube, than those with science backgrounds (Kim et al., 2014).

These differences by academic level classification and major in whether social media is perceived positively or negatively point to an important consideration, which is that of satisfaction with social media. It should be noted that high use of social media does not necessarily imply satisfaction with the social media itself. With social media being so often a tool for education and social interaction (among other purposes), it is important to consider individuals' levels of satisfaction with it as well.

## 2.2. *Social Media Addiction and Satisfaction*

Social media addiction has been gaining increasing attention in the literature. Previous studies indicated that social media addiction was negatively associated with college students' mental health and academic performance (Hou et al., 2019; Yilmazsoy et al., 2020). In another study, Błachnio et al. (2016) found that social media addiction was positively related to lower self-esteem. Although not explicitly focused on social media addiction, another study found a strong correlation between internet addiction and academic procrastination (Aznar-Díaz et al., 2020). Other studies found that social media addiction was positively associated with social interaction, social recognition, and social connectedness (Andreassen et al., 2016; Karayigit et al., 2021). These studies also found that females were more likely to experience social media addiction than males.

Furthermore, addiction to the use of Facebook predicted fear of being negatively evaluated by others (Muench et al., 2015). Despite these negative characteristics associated with social media addiction, other studies have not found direct evidence. Research by Coyne et al. (2020) set out to examine if time spent on social media might cause mental health concerns and found no causal relationships. Perhaps no direct relationship was found in this research, but some studies have pointed to a relationship between decreased life satisfaction and social media use (Ellison et al., 2007; Valenzuela et al., 2009; Longstreet & Brooks, 2017).

A study by Krishen et al. (2016) investigated levels of satisfaction among different generations through the scope of self-determination theory, which posits that individuals can prosper and stay motivated through the fulfillment of three central needs. This study found that, among millennials, the need for relatedness was met through social media, providing a sense of belonging and allowing for the communication of social and informational information. Previous studies have posited that communicating personal and important matters, participating in communal activities, feeling acknowledged and respected, and participating in enjoyable activities all contribute to feelings of relatedness (Reis et al., 2000). A typology of social media behaviors by Zhu and Chen (2015) indicated that these behaviors are specifically achievable through social media use.

However, the use of social media is not always without its drawbacks. Özsat et al. (2022) found that university students who used social media for a long time had higher levels of social media addiction than other participants. Another research has found that daily adolescent use of social media for greater than 3 hours is, when compared to no use, significantly associated with internalizing problems and comorbid internalizing and externalizing problems (Riehm et al., 2019). Social media use has more specifically been associated with depression, even when accounting for environmental and personal factors that might indirectly influence the onset of depressive symptoms (Lin et al., 2016).

These troubling relationships and inconsistencies in research findings indicate that social media use and addiction merit deeper investigation. In many studies, differences in the use of social media have been explored. However, these studies provided limited knowledge of the relationship between different types of social media use and social media addiction. To help address this gap, this study explores whether college students' average time spent on social media, social media satisfaction, and social media addiction are related to different social media platforms used, age, academic major, and level of education. Therefore, this study provides several contributions. First, it adds to the existing literature regarding college students' social media usage (average time spent, social media platform used most) and its relationship with age, academic major, and level of education. Second, this study provides insights into whether/how social media addiction is related to particular social media platforms. Overall, the article offers valuable insights for academics, college and university student affairs professionals, and society in general.

### 2.3. Present Study

This study aims to better understand social media use among a sample of college students. More specifically, this study examined whether different factors (social media platforms, age, major/field of study, and academic level classification) are related to social media addiction, the time spent on social media, and satisfaction with social media. To these ends, the present study addresses the following four research questions:

1. Is there a significant difference among emerging adults who use various social media sites (Facebook, Twitter, Instagram, YouTube, Snapchat, and TikTok) in their levels of time spent on social media, satisfaction with social media, and social media addiction?
2. Is there a significant difference among college students in different age groups (between 18-20, between 21-24, and between 25-29) in their levels of time spent on social media, satisfaction with social media, and social media addiction?
3. Is there a significant difference among college students of different academic majors (psychology/counseling, teaching, physical education, nursing, business, technology, arts, and sciences) in their levels of time spent on social media, satisfaction with social media, and social media addiction?
4. Is there a significant difference among different academic level classifications (freshmen, sophomore, junior, senior, and graduate students) in their levels of time spent on social media, satisfaction with social media, and social media addiction?

## 3. Methodology

### 3.1. Participants

The present study included a sample of N=446 college students enrolled in a higher education institution from the Midwestern United States. Data were collected in the Fall of 2020. Participants were recruited using convenience sampling. A link was sent to students who were enrolled in psychology courses. The sample was 71% female, with 30% being first-year students. While the mean age of participants in this study was 20.5 years (SD = 2.6, range 18–29), the majority of participants (60%) were between the ages of 18-20.

**Table 1.**

Demographic data of the study population

Variable	Frequency	Percent
Academic Level		
Freshman/First Year	135	30.3
Sophomore	80	17.9
Junior	83	18.6
Senior	75	16.8
Graduate Students	73	16.4
Major/Field of Study*		
Psychology & Counseling	97	21.8
Teaching	64	14.4
Physical Education/Exercise	25	5.6
Nursing	55	12.4
Business	41	9.2
Technology	53	11.9
Arts and Sciences	110	24.7
Age		
18-20	269	60.3

	21-24	137	30.7
	25-29	40	9.0
Gender**	Female	313	70.2
	Male	130	29.1
Total		446 <sup>a</sup>	100.0

<sup>a</sup>Three respondents chose “prefer to self-describe”

\*\*Two respondents did not describe their major/field of study

### 3.2. Measures

The online survey program Qualtrics was used to create an electronic version of the survey, which contains the demographic questions and the Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2016). The survey was distributed online to all potential graduate student participants. It included such questions as, “On a regular day, which of the following social media websites do you use most often?” and “Overall, how satisfied are you with social media in what it does in providing you with the things you are seeking?” (on a scale of 1 for not at all to 10 for very satisfied). Lastly, participants were asked to estimate their estimated total time per day spent on social media.

**Table 2.**

On a regular day, which of the following social websites do you use most often?

Social Media Platform	Frequency	Percent
Facebook	48	10.8
Instagram	63	14.1
Snapchat	165	37.0
Twitter	34	7.6
YouTube	66	14.8
TikTok	52	11.7
Other	18	4.0
Total	446	100.0

\*Other: Pinterest, Tumblr, Reddit, and Bitchute

Participants rated the Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2016), which assesses at-risk social media addiction. All items of this scale are rated using a 7-point Likert scale from “Almost never true” (1) to “Almost always true” (7). An example of an item from this scale is “How often during the last year have you used social media to forget about personal problems?” BSMAS represents a modified version of the Bergen Facebook Addiction Scale (BFAS; Andreassen et al., 2012); however, BSMAS and BFAS have been used interchangeably in previous studies (Andreassen et al., 2017; Balcerowska et al., 2020). *Several studies have shown good psychometric properties with high reliability and construct validity* of the BFAS/BSMAS (Andreassen et al., 2012; Andreassen et al., 2013; Andreassen et al., 2016; Balcerowska et al., 2020). Internal consistency and reliability were measured using Cronbach’s alpha coefficients. Results showed that the scale has an acceptably *high Cronbach’s alpha* value,  $\alpha=0.82$ .

### 3.3. Data Collection and Analysis

In this quantitative study, survey design was employed as the main method of collecting data from a sample of *college students* in the *Midwestern U.S.* In the fall of 2020, both undergraduate and graduate students were invited to complete an online survey in return for a chance to win a US \$50 gift certificate. The provided link to the survey included a consent form, the demographic questionnaire, and six items from a social media addiction scale. Using SPSS software (version 24), frequencies and a set of one-way ANOVAs were conducted to analyze potential mean differences in social media addiction, time spent on social media, and satisfaction with social media. These were analyzed by social media platform, age group, major/field of study, and academic level classification. In addition, Tukey’s post hoc tests were conducted to test for group mean differences in each pairwise comparison.

Whereas different statistical analyses (e.g., MANOVAs) could be applied, researchers elected to run separate ANOVAs. This was carried out for multiple reasons. Firstly, the focus of this study was not on omnibus effects across dependent variables but instead on the relationships with the individual dependent variables. The use of MANOVA is discouraged when dependent variables are not related. Additionally, even when there are meaningful univariate differences, overall MANOVAs may still show non-significant results. To this end, it was justified to run several one-way ANOVAs to allow for a maximum opportunity to discover statistically significant results.

Before running one-way ANOVAs, it was important to check the assumption of homogeneity and the normality assumption. The test for normality, examining standardized skewness and the Shapiro-Wilks test, indicated the data was statistically normal. The *Levene's F* test revealed that the homogeneity of variance assumption was met for social media addiction ( $p = .767, p = .582, p = .805, p = .947$ ) and satisfaction with social media ( $p = .305, p = .938, p = .414, p = .781$ ) in all four ANOVAs (social media platforms, age groups, majors/fields of study, and academic level classification). While the homogeneity of variance assumption was also met for time spent on social media in age groups and majors/fields of study ( $p = .058; p = .070$ ), the variances for time spent on social media ( $F(6, 439) = 3.21, p = .004$ ), and academic level classification ( $F(4, 441) = 2.48, p = .043$ ) were not equal. On the other hand, the test for normality (examining standardized skewness and the Shapiro-Wilks test) indicated social media addiction, time spent on social media, and satisfaction with social media scores were statistically non-normal ( $p < .001$  for each).

#### 4. Results

1. *Is there a significant difference among emerging adults who use various social media sites (Facebook, Twitter, Instagram, YouTube, Snapchat, and TikTok) in their levels of time spent on social media, satisfaction with social media, and social media addiction?*

With regard to the first research question, participants reported using Snapchat (37%), YouTube (15%), Instagram (14%), TikTok (12%), Facebook (11%), Twitter (8%), and other social media platforms (Pinterest, Tumblr, Reddit, and Bitchute; 4%) most often. ANOVA results indicated that group means were different to a statistically significant degree in their levels of social media addiction,  $F(6, 439) = 6.75, p = 0.00$ , and in their levels of time spent on social media,  $F(6, 439) = 8.56, p = 0.00$ . However, group means were not different to a statistically significant degree for satisfaction with social media,  $F(6, 439) = 2.12, p = 0.50$ . Tukey's post hoc tests were conducted to test for group mean differences in each pairwise comparison in their levels of social media addiction and time spent on social media. These analyses revealed that the mean differences between students that use Instagram ( $M = 2.61, SD = 1.06$ ) versus TikTok ( $M = 3.40, SD = 1.08$ ), Snapchat ( $M = 3.25, SD = 1.26$ ) versus YouTube ( $M = 2.41, SD = 1.07$ ), and TikTok versus YouTube most often were statistically significant ( $p = .04; p = .00; p = .00$ ) for social media addiction. However, no other group differences were statistically significant for social media addiction. Tukey's post hoc tests also revealed that the mean differences between students who use Facebook ( $M = 2.83, SD = .86$ ) versus Snapchat ( $M = 3.72, SD = 1.31$ ), Facebook versus TikTok ( $M = 4.27, SD = 1.24$ ), Instagram ( $M = 2.90, SD = 1.29$ ) versus Snapchat, and Instagram versus TikTok were statistically significant ( $p = .01; p = .00; p = .01; p = .00$ ) for time spent on social media. Further, Tukey's post hoc tests revealed a marginally statistically significant ( $p = 0.09$ ) but strongly practically significant (Cohen's  $d = .63$ ) mean difference between students who use TikTok ( $M = 4.27, SD = 1.24$ ) versus YouTube ( $M = 3.42, SD = 1.46$ ) for time spent on social media. No other group differences were statistically significant for time spent on social media.

**Table 3.**

One-way ANOVAs for various SM platforms

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
SM_Addiction	Between Groups	54.742	6	9.124	6.751	.00
	Within Groups	593.286	439	1.351		

Time_Spent	Total	648.028	445			
	Between Groups	85.442	6	14.237	8.563	.00
	Within Groups	729.896	439	1.663		
SM_Satisfaction	Total	815.318	445			
	Between Groups	23.379	6	3.896	2.123	.50
	Within Groups	805.789	439	1.836		
	Total	829.168	445			

Note. SM\_Addiction = Social Media addiction, Time\_Spent = Total time spent on Social Media per day, SM Satisfaction = Satisfaction with Social Media

2. *Is there a significant difference among college students in different age groups (between 18-20, between 21-24, and between 25-29) in their levels of time spent on social media, satisfaction with social media, and social media addiction?*

To address the second research question, participants were classified into three groups: students aged 18 to 20 (n = 269), students aged 21 to 24 (n = 137), and students aged 25 to 29 years old (n = 40). The ANOVA results showed that the group means were different to a statistically significant degree in their levels of social media addiction ( $F(2, 443) = 16.99, p = 0.00$ ) and in their levels of time spent on social media ( $F(2, 443) = 14.51, p = 0.00$ ). However, the group means were not different to a statistically significant degree for satisfaction with social media. Tukey’s post hoc revealed that students 18-20 years of age ( $M = 3.42, SD = 1.16$ ) were more likely to experience social media addiction compared with students 21-24 years of age ( $M = 2.99, SD = 1.21, p = .02$ ). Similarly, students who were 18-20 years of age were more likely to experience social media addiction compared with students 25-29 years of age ( $M = 2.99, SD = 1.21, p = .02$ ). Further, a marginally statistically significant ( $p = 0.09$ ) difference was found between students 21-24 and 25-29 years of age for social media addiction. Tukey’s post hoc also tests revealed that the mean difference between students 18-20 years of age ( $M = 3.77, SD = 1.37$ ) and students 21-24 years of age ( $M = 3.24, SD = 1.24$ ), as well as the mean difference between students 18-20 years of age and students 25-29 years of age ( $M = 2.78, SD = 1.16$ ) were statistically significant ( $p = .00; p = .00$ ) for time spent on social media.

**Table 4.**

One-way ANOVAs for different age groups

		SS	df	MS	F	p
SM_Addiction	Between Groups	46.171	2	23.085	16.992	.00
	Within Groups	601.857	443	1.359		
	Total	648.028	445			
Time_Spent	Between Groups	50.125	2	25.063	14.510	.00
	Within Groups	765.193	443	1.727		
	Total	815.319	445			
SM_Satisfaction	Between Groups	4.209	2	2.105	1.130	.32
	Within Groups	824.959	443	1.862		
	Total	829.169	445			

Note. SM\_Addiction = Social Media addiction, Time\_Spent = Total time spent on Social Media per day, SM Satisfaction = Satisfaction with Social Media

3. *Is there a significant difference among college students of different academic majors (psychology/counseling, teaching, physical education, nursing, business, technology, arts, and sciences) in their levels of time spent on social media, satisfaction with social media, and social media addiction?*

Another one-way ANOVA was employed to determine if there were any significant differences between the responses of college students with different majors (psychology/counseling, teaching, physical education, nursing, business, technology, and arts and sciences) with regard to social media addiction, time spent on social media, and satisfaction with social media. As shown in Table 5, the group means were not statistically significantly different in their levels of time spent on social media and satisfaction with social

media. However, ANOVA results indicated one statistically significant difference, suggesting social media addiction differed somewhat between the seven groups. Tukey's post hoc tests were conducted to test for group mean differences in each pairwise comparison in social media addiction. These analyses revealed that students majoring in technology ( $M = 2.51$ ,  $SD = 1.16$ ) were less likely to experience social media addiction compared with students majoring in psychology/counseling, teaching, and nursing, ( $p = 0.01$ ;  $p = 0.04$ ;  $p = 0.00$ ). However, no other group differences were statistically significant.

**Table 5.**

One-way ANOVAs for different majors

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
SM_Addiction	Between Groups	37.041	6	6.173	4.426	.00
	Within Groups	610.950	438	1.395		
	Total	647.991	444			
Time_Spent	Between Groups	11.991	6	1.995	1.088	.36
	Within Groups	803.076	438	1.834		
	Total	815.047	444			
SM_Satisfaction	Between Groups	12.473	6	2.079	1.115	.35
	Within Groups	816.682	438	1.865		
	Total	829.155	444			

*Note.* SM\_Addiction = Social Media addiction, Time\_Spent = Total time spent on Social Media per day, SM Satisfaction = Satisfaction with Social Media

4. *Is there a significant difference among different academic level classifications (freshmen, sophomore, junior, senior, and graduate students) in their levels of time spent on social media, satisfaction with social media, and social media addiction?*

To address the last research question, a one-way ANOVA was employed to determine if there were any significant differences between the responses of college students with academic level classification (freshmen, sophomores, juniors, seniors, and graduate students) regarding social media addiction, time spent on social media, and satisfaction with social media. As shown in Table 6, group means were different to a statistically significant degree in their levels of social media addiction ( $F(4, 441) = 4.85$ ,  $p = 0.01$ ) and time spent on social media ( $F(4, 441) = 4.99$ ,  $p = 0.01$ ). However, ANOVA results indicated a non-significant difference, suggesting satisfaction with social media did not differ between the five groups. Tukey's post hoc tests were conducted to test for group mean differences in each pairwise comparison in social media addiction and time spent on social media. These analyses revealed that the mean difference between graduate students ( $M = 2.82$ ,  $SD = 1.14$ ) and freshmen ( $M = 3.48$ ,  $SD = 1.22$ ) was statistically significant ( $p = 0.01$ ) for social media addiction and as well as the mean difference between graduate students ( $M = 3.07$ ,  $SD = 1.16$ ) and freshmen ( $M = 3.83$ ,  $SD = 1.43$ ,  $p = 0.01$ ) for time spent on social media. No other group differences were statistically significant.

**Table 6.**

One-way ANOVAs for academic level classification

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
SM_Addiction	Between Groups	27.299	4	6.825	4.849	.01
	Within Groups	620.729	441	1.408		
	Total	648.028	445			
Time_Spent	Between Groups	35.300	4	8.825	4.989	.01
	Within Groups	780.018	441	1.769		
	Total	815.318	445			
SM_Satisfaction	Between Groups	9.952	4	2.488	1.339	.25
	Within Groups	819.216	441	1.858		
	Total	829.168	445			

*Note.* SM\_Addiction = Social Media addiction, Time\_Spent = Total time spent on Social Media per day, SM Satisfaction = Satisfaction with Social Media



## 5. Discussion

The findings of this study have provided insights into college students' social media use concerning age, major, social media platform used, and level of education. One major finding was that college students who use TikTok more often than other forms of social media are more likely to experience social media addiction than those who use Instagram and YouTube more often. The negative experiences with social media addiction have been studied previously (e.g., poor mental health, lower self-esteem; Błachnio et al., 2016; Hou et al., 2019), and the findings of this study showed that using TikTok and social media addiction are not independent experiences in many cases but instead relate to one another. Another major finding was that students who use TikTok more often also spend significantly more time on social media than students who use Instagram and Facebook more often. Similarly, students who use Snapchat more often spend more time on social media than those who use Facebook and Instagram. Since increased time on social media was also related to negative outcomes (e.g., depression; Brunborg & Andreas, 2019), college students' use of TikTok and Snapchat could be related to negative outcomes (poor mental health, lower self-esteem, depression) among college students. However, these results do not directly indicate that the use of specific social media platforms leads to negative outcomes. Other factors such as age, gender, race, or other behavioral and social factors may contribute to negative or positive outcomes.

The findings also indicated that the average time spent on social media was significantly greater, and social media addiction was significantly higher for younger college students (aged 18-20) compared with those 21-24 and 25-29 years of age. Another significant finding was that graduate students are less likely to experience social media addiction and spend fewer hours on social media than freshmen students. This supports a recent study that states that younger adults are more likely to exhibit social media addiction, particularly TikTok addiction, than older adults (Auxier & Anderson, 2021). These findings are also consistent with Saiphoo & Vahedi's (2019) study indicating that younger people are more vulnerable to social media. This suggests that younger people's use of social media can potentially lead to negative outcomes in their academic experience. In this concept, a recent study that shows students who are addicted to social media are more likely to have lower grades than those who are not addicted to social media (Moreno-Guerrero et al., 2020). Although no previous studies explored the differences between graduate and undergraduate students use of social media, the difference can be attributed to their ages and more specialized career path.

Interestingly, findings indicated that students studying technology were less likely to experience social media addiction than students studying psychology/counseling, teaching, and nursing. These differences by major/field of study in social media addiction represent a starting point in this promising line of inquiry. One possible explanation for this finding is that the technology students' level of digital literacy and technological skills make them more savvy users of social media compared to students in helping professions (teaching, counseling, nursing). This suggests that students in helping professions should be better equipped to engage with and utilize social media platforms, so the negative effect of social media use and social media addiction can be reduced. This may potentially allow students to succeed academically, socially, and professionally.

### 5.1. Practical Contributions

These findings are significant for student affairs professionals, particularly those interested in learning about the possible relationship between social media addiction and various factors (age, academic major, level of education). Although social media use is generally associated with negative outcomes, an awareness of different social media platforms and how they are related to social media addiction can lessen the potential negative impacts of social media use among college students. Student affairs professionals can help students to better understand how the use of particular social media sites (e.g., TikTok and Snapchat) is related to various troubling factors, like social media addiction. Since the use of social media can also

have a lot of benefits for college students, such as meeting the need for relatedness and a sense of belonging (Krishen et al., 2016; Reis et al., 2000), practitioners must help students form healthy social media habits. While the use of Instagram, Snapchat, and TikTok is widespread among adults under 30 (Auxier & Anderson, 2021), practitioners can also utilize cognitive behavioral therapy for the internet addiction model (CBT-IA). This form of treatment was found to be effective at improving symptoms related to internet addiction (Young, 2013).

### 5.2. Limitations and Direction for Future Studies

This study has attempted to advance our knowledge of college students' social media use and provide findings relevant to practitioners working with the college student population. However, this study has some limitations. First, participants were recruited through psychology courses. The sample sizes were relatively small, especially when comparing different majors and academic level classifications, limiting the generalizability of the findings. Future studies can include more diverse and larger samples to increase external validity. Future investigation is also needed to better understand college students' social media use from a broader perspective by utilizing an alternative data collection method and refining the research design. For example, in addition to the quantitative aspect of this study, an interventional study design could be adopted with a subsample of the respondents to explore their social media use in a more in-depth manner. Another major limitation of this study was the characteristics of design or methodology that impacted the interpretation of the findings. Future studies should consider using experimental design to investigate social media use among college students. In order to be able to generalize the findings to all college students, such limitations related to sampling, data collection, and research design should be addressed in future research studies.

Despite these limitations, the present study has provided important insights into college students' social media use, and how/whether different factors (social media platform, age, major, and level of education) are related to their social media addiction, time spent on social media, and social media satisfaction. The findings generally support the notion that frequent use of particular social media platforms (e.g., TikTok, Snapchat) and increased time on social media are related to social media addiction. The presence of a few statistically significant findings also suggests that social media addiction and time spent on social media vary based on students' majors and level of education. These findings provide a preliminary basis for future research in this area. Future studies should continue to investigate how/whether students' majors or fields of study contribute to social media attitudes as well as other factors, such as social media addiction and time spent on social media. This study's findings also revealed that being younger and using particular social media platforms (TikTok and Snapchat) is related to social addiction and time spent on social media. Therefore, future studies should investigate whether using particular social media platforms (TikTok and Snapchat) is related to negative outcomes among younger college students. Future studies should also investigate whether setting limits on daily social media use and understanding their motivations to use particular social media platforms can effectively reduce social media addiction.

### References

- Andreassen, C. S., Billieux, J., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (2016). The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, 30(2), 252-262. <https://doi.org/10.1037/adb0000160>
- Andreassen, C. S., Griffiths, M. D., Gjertsen, S. R., Krossbakken, E., Kvam, S., & Pallesen, S. (2013). The relationships between behavioral addictions and the five-factor model of personality. *Journal of Behavioral Addictions*, 2(2), 90-99. <https://doi.org/10.1556/JBA.2.2013.003>

- Andreassen, C. S., Pallesen, S., & Griffiths, M. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287-293. <https://doi.org/10.1016/j.addbeh.2016.03.006>
- Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook Addiction Scale. *Psychological Reports*, 110(2), 501–517. <https://doi.org/10.2466/02.09.18.PR0.110.2.501-517>
- Auxier, B., & Anderson, M. (2021, April 7). *Social media use in 2021*. Pew Research Center. <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>
- Aznar-Díaz, I., Romero-Rodríguez, J. M., García-González, A., & Ramírez-Montoya, M. S. (2020). Mexican and Spanish university students' Internet addiction and academic procrastination: Correlation and potential factors. *PloS One*, 15(5), e0233655. <https://doi.org/10.1371/journal.pone.0233655>
- Balcerowska, J. M., Bereznowski, P., Biernatowska, A., Atroszko, P., Pallesen, S., & Andreassen, C. S. (2020). Is it meaningful to distinguish between Facebook addiction and social networking sites addiction? Psychometric analysis of Facebook addiction and social networking sites addiction scales. *Current Psychology*, 41, 949-962. <https://doi.org/10.1007/s12144-020-00625-3>
- Błachnio, A., Przepiórka, A., & Pantic, I. (2016). Association between Facebook addiction, self-esteem and life satisfaction: A cross-sectional study. *Computers in Human Behavior*, 55, 701-705. <https://doi.org/10.1016/j.chb.2015.10.026>
- Brunborg, G. S., & Burdzovic Andreas, J. (2019). Increase in time spent on social media is associated with modest increase in depression, conduct problems, and episodic heavy drinking. *Journal of Adolescence*, 74, 201–209. <https://doi.org/10.1016/j.adolescence.2019.06.013>
- Chatterjee, S. (2020). Antecedents of phubbing: from technological and psychological perspectives. *Journal of Systems and Information Technology*, 22, 161–118. <https://doi:10.1108/JSIT-05-2019-0089>
- Choi, D., & Noh, G. (2020). The influence of social media use on attitude toward suicide through psychological well-being, social isolation, and social support. *Information, Communication & Society*, 23, 1427-1443. <https://doi.org/10.1080/1369118X.2019.1574860>
- Coyne, S. M., Rogers, A. A., Zurcher, J. D., Stockdale, L., & Booth, M. (2020). Does time spent using social media impact mental health?: An eight-year longitudinal study. *Computers in Human Behavior*, 104, 106160. <https://doi.org/10.1016/j.chb.2019.106160>
- Dewing, M. (2010). *Social media: An introduction* (Vol. 1). Ottawa: Library of Parliament.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends:” Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143-1168. <http://doi.wiley.com/10.1111/j.1083-6101.2007.00367.x>
- Facebook. (2021, July 18). Facebook Reports Second Quarter 2021 Results [Press release]. <https://investor.fb.com/investor-news/press-release-details/2021/Facebook-Reports-Second-Quarter-2021-Results/default.aspx>
- Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 13(1), Article 4. <https://doi.org/10.5817/CP2019-1-4>

- Jiang Y. (2021). Problematic social media usage and anxiety among university students during the COVID-19 pandemic: The mediating role of psychological capital and the moderating role of academic burnout. *Frontiers in Psychology, 12*, 1-12. <https://doi.org/10.3389/fpsyg.2021.612007>
- Karakoyun, F. & Lindberg, O. J. (2021). Pre-service teachers' perceptions of social media – A qualitative survey study in Turkey and Sweden. *Journal of Educational Technology and Online Learning, 4*(2), 334-348. <https://doi.org/10.31681/jetol.929304>
- Karayigit, C., Groter, A. & Thompson, M. (2021). Addictive use of social media and motivations for social media use among emerging adult university students. *Journal of Dependence, 22*(3), 266-274. <https://doi.org/10.51982/bagimli.897708>
- Kircaburun, K., Alhabash, S., Tosuntaş, Ş. B., & Griffiths, M. D. (2020). Uses and gratifications of problematic social media use among university students: A simultaneous examination of the big five of personality traits, social media platforms, and social media use motives. *International Journal of Mental Health and Addiction, 18*(3), 525–547. <https://doi.org/10.1007/s11469-018-9940-6>
- Kim, K. S., Sin, S. C. J., & Tsai, T. I. (2014). Individual differences in social media use for information seeking. *The Journal of Academic Librarianship, 40*(2), 171-178. <https://doi.org/10.1016/j.acalib.2014.03.001>
- Krishen, A. S., Berezan, O., Agarwal, S., & Kachroo, P. (2016). The generation of virtual needs: Recipes for satisfaction in social media networking. *Journal of Business Research, 69*(11), 5248-5254. <https://doi.org/10.1016/j.jbusres.2016.04.120>
- Lewis, B. K. (2010). Social media and strategic communication: Attitudes and perceptions among college students. *Public Relations Journal, 4*, 1-23. <http://www.dl.edu-info.ir/Social%20Media%20and%20Strategic,Communication%20Attitudes%20and%20Perceptions%20Among%20College%20Students.pdf>
- Lewis, B. K., & Nichols, C. (2016). Social media and strategic communication: A three-year study of attitudes and perceptions about social media among college students. *Public Relations Journal, 10*(1), 1-23. <https://apps.prsa.org/intelligence/prjournal/past-editions/vol10/no1/lewis.pdf>
- Lin, L. Y., Sidani, J. E., Shensa, A., Radovic, A., Miller, E., Colditz, J. B., ... & Primack, B. A. (2016). Association between social media use and depression among US young adults. *Depression and Anxiety, 33*(4), 323-331. <https://doi.org/10.1002/da.22466>
- Longstreet, P., & Brooks, S. (2017). Life satisfaction: A key to managing internet & social media addiction. *Technology in Society, 50*, 73-77. <https://doi.org/10.1016/j.techsoc.2017.05.003>
- Moreno-Guerrero, A. J., Gómez-García, G., López-Belmonte, J., & Rodríguez-Jiménez, C. (2020). Internet Addiction in the Web of Science Database: A Review of the Literature with Scientific Mapping. *International Journal of Environmental Research and Public Health, 17*(8), 2753. <https://doi.org/10.3390/ijerph17082753>
- Muench, F., Hayes, M., Kuerbis, A., & Shao, S. (2015). The independent relationship between trouble controlling Facebook use, time spent on the site and distress. *Journal of Behavioral Addictions, 4*(3), 163-169. <https://doi.org/10.1556/2006.4.2015.013>
- Ostic, D., Qalati, S. A., Barbosa, B., Shah, S. M. M., Galvan Vela, E., Herzallah, A. M., & Liu, F. (2021). Effects of Social Media Use on Psychological Well-Being: A Mediated Model. *Frontiers in Psychology, 12*, 678766. <https://doi.org/10.3389/fpsyg.2021.678766>
- Özsat, K., Işıktaş, S. & Şenol, H. (2022). Investigation of the effect of social media addiction levels of university students on virtual environment loneliness levels. *Journal of Educational Technology*

- and Online Learning, ICETOL 2022 Special Issue, 5(4), 1030-1040.*  
<https://doi.org/10.31681/jetol.1148704>
- Parker, K., & Chao, J. (2007). Wiki as a teaching tool. *Interdisciplinary Journal of e-learning and Learning Objects, 3(1), 57-72.* <https://www.learntechlib.org/p/44798/>
- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. *Personality and Social Psychology Bulletin, 26(4), 419-435.* <https://doi.org/10.1177/0146167200266002>
- Riehm, K. E., Feder, K. A., Tormohlen, K. N., Crum, R. M., Young, A. S., Green, K. M., Pacek, L. R., La Flair, L. N., & Mojtabai, R. (2019). Associations between time spent using social media and internalizing and externalizing problems among US youth. *JAMA Psychiatry, 76(12), 1266–1273.* <https://doi.org/10.1001/jamapsychiatry.2019.2325>
- Romero-Hall, E., Petersen, E., Sindjic, R., & Li, L. (2020). Most versus least used social media: undergraduate students' preferences, participation, lurking, and motivational factors. *International Journal of Social Media and Interactive Learning Environments, 6(3), 244-266.* <https://doi.org/10.1504/IJSMILE.2020.109266>
- Saiphoo, A. N., & Vahedi, Z. (2019). A meta-analytic review of the relationship between social media use and body image disturbance. *Computers in Human Behavior, 101, 259–275.* <https://doi.org/10.1016/j.chb.2019.07.028>
- Snapchat. (2021, July 22). *Snap Inc. Announces Second Quarter 2021 Financial Results.* [Press release]. <https://investor.snap.com/news/news-details/2021/Snap-Inc.-Announces-Second-Quarter-2021-Financial-Results/default.aspx>
- Statista. (2021, May). *Social media use during COVID-19 worldwide-statistics & facts.* <https://www.statista.com/topics/7863/social-media-use-during-coronavirus-covid-19-worldwide/#dossierKeyfigures>
- Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site?: Facebook use and college students' life satisfaction, trust, and participation. *Journal of Computer-Mediated Communication, 14(4), 875-901.* <http://dx.doi.org/10.1111/j.1083-6101.2009.01474.x>
- Yılmazsoy, B., Kahraman, M. & Köse, U. (2020). Negative Aspects of Using Social Networks in Education: A Brief Review on WhatsApp Example. *Journal of Educational Technology and Online Learning, 3(1), 69-90.* <https://doi.org/10.31681/jetol.662746>
- Young K. S. (2013). Treatment outcomes using CBT-IA with internet-addicted patients. *Journal of Behavioral Addictions, 2(4), 209–215.* <https://doi.org/10.1556/JBA.2.2013.4.3>
- Zhu, Y. Q., & Chen, H. G. (2015). Social media and human need satisfaction: Implications for social media marketing. *Business Horizons, 58(3), 335-345.* <https://doi.org/10.1016/j.bushor.2015.01.006>