

ABSTRACT

Title of Thesis: THE IMPACT OF SMARTPHONE
TECHNOLOGY ON PARENTAL MONITORING
AND COLLEGE STUDENT BEHAVIOR

Skylar Johnson, Bachelor of Arts, 2021

Thesis directed by: Associate Professor, Bianca Bersani, Department of
Criminology and Criminal Justice

Major increases in both the prevalence of smartphone ownership, as well as the types of apps available have changed the way many people interact with one another. One of these interactions is the parent-child interaction. Parents can now follow their children on social media platforms, share locations real-time, and call and text their children at any moment, no matter where their child is. Even though college has traditionally been a time for students to move away and experience living on their own for the first time, this technology has the potential to keep college students feeling like their parents are always watching. This project seeks to find out whether or not these feelings of being constantly watched exist among the college student population, how interactions through smartphone technology impact that perception, and if these feelings impact behavior. A robust literature finds that parental monitoring is beneficial in reducing the risk of involvement in problematic behavior in adolescents (Smetana, Campione-Barr, and Metzger 2006), but little is known how this influence may change as these adolescents grow into emerging adults, and how technology may play a role.

This project involves surveying students about their experiences as they relate to parental monitoring through the use of technology and if this technology impacts their behavior. The survey was anonymous and electronically distributed to ensure COVID-19 safety/compliance. Individuals had the opportunity to respond to questions regarding their residential status (whether

they live on/off campus or at home), their technology ownership/usage, their app ownership/usage, their parent's app ownership/usage, and their behaviors. These questions were in a yes/no, "select all that apply," and likert scale format. They were then analyzed using quantitative measures to look for trends and potential correlation. Though there was no clear correlation found between the measures for parental monitoring or interaction through technology and reduction in the behaviors measured in this study, the data indicates that close monitoring while students are away at college could leave them feel that parents are overbearing. This has implications for how parents may choose to interact with their college student while they are away to promote independence, while still offering support.

THE IMPACT OF SMARTPHONE TECHNOLOGY ON PARENTAL MONITORING
AND COLLEGE STUDENT BEHAVIOR

By

Skylar Johnson

Thesis submitted to the Department of Criminology and Criminal Justice at the
University of Maryland, College Park, in partial fulfillment of the requirements for the degree of

Bachelor of Arts

2021

© Copyright by
Skylar Johnson
2021

Acknowledgements

There are so many people I owe enormous thanks to for helping me complete this work. To Dr. Bersani, thank you for never letting me “go it alone,” and for all of your support over the past two years. Working with you in this program has been an incredible experience that I am so grateful for. To Kristin, thank you for reading and rereading my work, and for reminding us that this was doable. To Rebecca, Bryan, Ellie, Jordan, Kate, Shuran, and Zoe, thank you for helping to build a community that I feel lucky to be a part of. Each of you is not only incredibly intelligent, but so very kind and I appreciate all of the help and encouragement throughout this process. To Mom, Dad, Noah, and Ava, thank you for listening to me vent about every tiny inconvenience as I worked toward completing this, and for all of the hugs along the way. To Amanda, Emily, and Holly, thank you for your unconditional support, even when I procrastinated. To Breece, there is no better all-night study partner. Thank you for never making me work alone. To Aiden, I couldn’t have done it without you. Thank you for everything. I am so grateful to have had such incredible support from so many incredible individuals.

Table of Contents

ACKNOWLEDGEMENTS	V
TABLE OF CONTENTS.....	VI
LIST OF TABLES.....	VII
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: LITERATURE REVIEW	3
CHAPTER 3: DATA AND METHOD	12
CHAPTER 4. RESULTS.....	17
CHAPTER 5. DISCUSSION AND CONCLUSION.....	19
REFERENCES	24
TABLES.....	27
APPENDICES.....	38

List of Tables

Table 1. Demographic Breakdown of Respondents	28
Table 2. Current Living Situation at Time of Survey	29
Table 3. Coded Values	30
Table 4. Descriptive Statistics	31
Table 5. Correlation Between Parental Interaction Through Social Media and Student's Perceived Parental Monitoring	32
Table 6. Correlation Between Parental Approval of Alcohol/Drug Use and Behaviors	33
Table 7. Correlation Between Perceived Parental Monitoring and Engagement in Alcohol and Drug Related Behaviors	35
Table 8. Correlation Between Parental Interaction Through Social Media and Engagement in Alcohol and Drug Related Behaviors	37

Chapter 1: Introduction

Parenting has an enormous impact on outcomes for young people. Parenting can impact whether or not an adolescent engages in delinquent behavior, and neglectful parenting can be the difference between serious delinquency and non-delinquent acts (Hoeve et al. 2008). In research on the link of substance use in adolescence and parenting style, it was found that parenting style can be impactful on the extent of the substance use (Coombs and Landsverk 1998). Even beyond formal parenting, a parent's own actions can impact adolescent behaviors. In a study about alcohol use, it was found that even a mother's own use of alcohol can unintentionally normalize alcohol use for their children, increasing the likelihood they will use it as well (Mahedy et al. 2018). Clearly, parenting can play a big role in behaviors of their adolescents, especially behaviors such as drug and alcohol use and delinquency.

The vast majority of research examining the effect of parenting on youth risky behavior is focused on adolescence often involving children spanning ages of 9 to 19 (see e.g., Coombs and Landsverk, 1998; Hoeve et al, 2018). Less is known about whether parenting also accounts for youth behavior among the traditionally aged college student population. Though an individual could be starting college at age 17-19, this would certainly not cover the majority of college students, nor would the study be focused mainly on these ages. The majority of the research available on these topics is based on adolescents, which often fails to fully cover all college students. Beyond the formal age cutoff, college students are also entering a different phase of their life, which has been coined emerging adulthood (Arnett 2000). In this stage, individuals are beginning to gain independence, but still may require some support from parents and family (Arnett 2000). This is distinct from adolescence when individuals are typically still very reliant

on their parents for support. Thus, the monitoring requirements cannot be assumed to be the same for these two distinct stages in an individual's life.

Parenting college students meets a natural intersection with technology. With the vast majority of people in the United States owning smartphones, it is impossible to not address their potential implications for parenting (Pew Research Center 2019). This is especially true when college students may not be living with their parents anymore, or even in the same state or country.

This research seeks to examine whether the rise of smartphone technology and availability impacts parental monitoring of college students. Previous research shows a positive impact of monitoring for adolescents, such as decreased likelihood of delinquency, and some support for this positivity in college students as well (Fletcher, Steinberg, and Williams-Wheeler 2004; Smetana, Campione-Barr, and Metzger 2006; Kaynak et al. 2013; Napper and Hummer 2015). Previous research also discusses both positive and negative impacts of technology use for parents and their college students maintaining bonds (Lepp, Li, and Barkley 2016). There is little work done looking at the intersection of monitoring and technology use. This intersection is important because it can inform proper parental monitoring behaviors for a population that hasn't gotten as much attention in the research up to this point. In addition, technology will only continue to advance, and it is crucial that there is an understanding of how it impacts this issue.

Chapter 2: Literature Review

Parental Monitoring

The element of parenting most relevant to the focus of this research is that of parental monitoring. Parental monitoring is defined as “a set of correlated parenting behaviors involving attention to and tracking of the child’s whereabouts, activities, and adaptations” (Dishion and McMahon 1998:61). It can also be referred to as parental supervision, and is referenced this way in some criminology texts (Flanagan, Auty, and Farrinton 2019). However, for the purpose of this study the term “parental monitoring” will be used throughout to maintain consistency.

Parental monitoring has been broken down into both direct/active monitoring, which means actively checking in on the child’s current activities, as well as children choosing to tell their parents about their activities (Hoeve et al. 2008). It can also be broken down into solicitation, which involves asking the child about their activities, and control, which involves requiring steps to participate in activities, such as asking permission (Crocetti et al. 2016). In previous studies, this has been measured by using a likert scale and asking about parental knowledge of friends and peers (Singer et al. 2004), for example. Studies may also ask if a child needs to ask permission to participate in certain activities (Crocetti et al. 2016). In this study, solicitation is focused on more than control, as parents are not able to exhibit the same control over a young adult not living at home as they are over an adolescent who is still living at home. Both direct/active monitoring as well as volunteering of information is measured.

The measuring of parental monitoring can also change as an individual grows, develops more independence, and their activities begin to change (Dishion and McMahon 1998). This idea of knowing about where the child is and what they are up to also has a whole new meaning in the age of technology. With phone applications that allow parents to track their child’s screen time,

location, and even the speed of their car, the idea of monitoring has a whole new meaning (See Appendix A).

It is important to note that there is no one definition of what constitutes poor or proper parental monitoring (Flanagan et al. 2019). For example, one study scored parents on a scale of strict, intermediate, or lax in terms of their monitoring, and found that lax monitoring was most likely to be linked to delinquent behaviors among their children (Wilson 1980). The criteria for measuring monitoring in this case was mainly focused on spending time alone outside and being able to come and go as the child pleases (Wilson 1980). In another study, behavioral control was used as the overarching term, with parental supervision, monitoring, and rules as subsets of this main parenting element (McKee et al. 2008). This lack of one common definition can make comparisons of studies and making of recommendations difficult (Flanagan et al. 2019). However, even with the lack of one clear definition, many studies have found a clear link between a lack of quality parental monitoring and higher risk of problematic behaviors (Flanagan et al. 2019).

Parental Monitoring and Problematic Behaviors

Parental monitoring is associated with better outcomes for adolescents, and a lack of parental monitoring can result in a higher likelihood for problematic behaviors (Smetana et al. 2006). In a study on high schoolers, research found that parental monitoring, in addition to parental control and parental warmth, was effective in deterring adolescents from engaging in problematic behaviors (Fletcher et al. 2004). Problematic behaviors could include underage or over consumption of alcohol, usage of drugs, and risky sexual behaviors (DiClemente et al. 2001). Parental monitoring has also been shown to impact the likelihood of delinquency, with proper monitoring resulting in a decreased likelihood of delinquency and improper or poor

monitoring resulting in an increased likelihood (Hoeve et al. 2009). There are also health concerns associated with poor parental monitoring. Adolescents who perceived that their parents weren't monitoring their behavior as closely were more likely to engage in risky sexual behaviors, and alcohol and drug use (DiClemente et al. 2001). It is clear, then, that parental monitoring is important in preventing delinquency and problematic behaviors (DiClemente et al. 2001; Fletcher et al. 2004; Hoeve et al. 2009; Smetana et al. 2006). Research has shown that these impacts can extend into young adulthood (Harris-McKoy and Cui 2013). Likelihood of offending has been repeatedly linked to parental monitoring, asserting that "poor parental supervision is a causal risk factor for offending (Flanagan et al. 2019:216)." Ensuring that adolescents and young adults have the proper amount of parental control, then, can impact whether or not they engage in criminal behaviors (Harris-McKoy and Cui 2013).

Parental monitoring can also play a big role in decision making, even if the child is away at college. In a study conducted about the impacts of parental monitoring and usage of marijuana by college students, it was found that when students felt that their parents were closely monitoring their behavior, they were more likely to take their parents feelings of approval or disapproval into account when deciding whether or not to use marijuana (Napper and Hummer 2015). Though another study did not find a relationship between marijuana dependence risk and parental monitoring, they did find a relationship between risk of alcohol dependence and parental monitoring (Kaynak et al. 2013). In both instances, parental monitoring has positive impacts on whether or not students engage in risky, substance-related behaviors (Kaynak et al. 2013; Napper and Hummer 2015).

Preventing these behaviors is not only important for individual health, but also for preventing later delinquent and criminal behaviors (French and Maclean 2006; Maldonado-

Molina, Reingle, and Jennings 2011). Underage drinking has not only been linked to criminal activity (French and Maclean 2006), but also to violence (Maldonado-Molina et al. 2011). Another substance related behavior, marijuana use, is also related to criminal activity (Brook et al. 2011). Individuals who regularly used marijuana were found to be more likely to engage in criminal behaviors during their life course than those who used minimally or didn't use at all after using trajectory groups to model the outcomes (Brook et al. 2011). This was especially true for what the study coined as "chronic users," which included individuals who reported using marijuana several times in a month as they grew older (Brook et al. 2011). This change in their marijuana usage increased with their age, peaking at around 23.5 and then gradually declined with increasing age until the end of the study, which was age 29 (Brook et al. 2011). This is very interesting to note for the purposes of this study, as students are often preparing to graduate college right before or around the age of 23. This supports the idea that parents still have a very real impact on their children's lives even once they are well into emerging adulthood. If students are considering their parents' opinions on marijuana use before deciding to use it even after graduating college (Napper and Hummer 2015), it is important that parents properly monitor their students and express concerns to potentially prevent the continued use and negative outcomes demonstrated in this study (Brook et al. 2011).

It is important, however, that parents do not cross the line from appropriate levels of parental monitoring to "overly intrusive parental control" (Smetana et al. 2006: 262) because this level of control can result in issues in an adolescent's development (Smetana et al. 2006). As students transition to college, this line can become even more blurry. This is because individuals are entering a transitional period in their lives, in which they are not yet fully independent, but often do not desire or require complete dependence on the adults in their lives (Arnett 2000).

Research even suggests that the relationship between parent and their emerging adult may be more positive for both parties if a degree of independence for the emerging adult is observed (Johnson et al. 2011).

Development of Technology

Technology has grown significantly more popular, with 96% of individuals in the United States between ages 18-29 reporting that they own a smartphone (Pew Research Center 2019). Smartphones enable individuals to take photos and videos, access the internet, and download applications that they find beneficial or entertaining. There are two types of apps most pertinent to this research: social media apps and location tracking apps. Social media allows individuals to post thoughts and opinions, photos, and videos. Some popular social media platforms include Instagram, Twitter, Facebook, and Snapchat (See Appendix A). Within these apps, there is the ability to seek out other people's profiles and look at their content. Sometimes this content is available to all viewers, and sometimes you need permission to view by the profile owner. Parents and guardians could potentially monitor their child's social media by logging on and viewing their profiles, or even keeping their passwords so they can log into their child's profile and restrict what is posted. Logging in would also allow them to view things not visible to the public on the profile, such as private and direct messages. Location tracking apps allow users to share their location with other individuals who have the app. Two of the most common are Find My Friends and Life360, although many social media platforms have location tracking features embedded in them (e.g. "SnapMaps on Snapchat; See Appendix A). Through the use of these applications, parents could potentially see a lot of what their college student is doing and where they are going without ever being physically near them.

Parental Relationships and Technology

Due to advances in technology, parents can connect with their college students nearly instantly. At any moment they could text, call, check social media, or track their child's location, depending on their level of virtual connectivity. This can be a positive thing. Since they may not be together physically as often, use of technology can help to maintain bonds with one another (Lepp et al. 2016). However, this increased availability of technology could also lead to helicopter parenting (Lynne, Duran, and Miller-Ott 2017). Helicopter parenting can result in higher levels of reported conflicts on the phone (Lynne et al. 2017), lower quality parent-child communication (Segrin et al. 2012), symptoms of depression, and difficulties adjusting to college (Darlow, Norvilitis, and Schuetze 2017). This conflict, research suggested, could be due to students feeling like they lack autonomy (Lynne et al. 2017).

Emerging Adulthood

All of this information must be situated in the context of emerging adulthood. Emerging adulthood is defined by Jeffrey Arnett in the following:

“[Emerging adulthood] is neither adolescence nor young adulthood but is theoretically and empirically distinct from them both. Emerging adulthood is distinguished by relative independence from social roles and from normative expectations. Having left the dependency of childhood and adolescence, and having not yet entered the ensuring responsibilities that are normative of adulthood, emerging adults often explore a variety of possible life directions in love, work, and world-views (Arnett 2000: 469).”

The in-between nature of this stage in life can make it difficult for both parents and their children alike to determine appropriate levels of monitoring and interaction and achieve that autonomy that is so important.

This autonomy can come at different times, and involve different indicators for the emerging adult (Arnett 2000). One of these indicators is financial independence (Arnett 2000).

Interestingly enough, financial independence is related to lower rates of delinquency among emerging adults (Hill, van der Geest, and Blokland 2017). In their article, Hill and colleagues do not attempt to answer the question of why that is, however they theorize that it could be due to the fact that emerging adults who are financially dependent on their parents don't feel like adults yet and, as a consequence, may not feel like they need to act like adults (Hill et al. 2017). This finding only serves to build onto the difficulty of answering the question: What is the appropriate amount of parental monitoring and support in emerging adulthood?

Though the appropriate amount is unknown, emerging adults still often need some level of support from their parents. In another study on emerging adults, Hill, Van der Geest, and Blokland (2018) found that having parental social support could work to prevent emerging adults from participating in delinquent behaviors. This shows that parents still very much play an active role in their child's life even into emerging adulthood (Hill, Blokland, and van der Geest 2018).

In the context of this study, emerging adulthood is an important concept because it is distinct from adolescence. Many of the studies reviewed in the parental monitoring section of this paper look at adolescents, defining this age group as grades 7-12 (Harris-McKoy and Cui 2013), 14-18 years old (DiClemente et al. 2001), and 10-19 years old (Hoeve et al. 2009). All of these age ranges fail to account for those who fall under Arnett's explanation of emerging adulthood, defined as spanning ages 18 to 25 (Arnett 2000). College students tend to be primarily emerging adults which is why an understanding of this population as separate from adolescents is critical to this study (Arnett 2000). Technology can provide students the chance to communicate with their parents during this time, thus still allowing them to maintain the bonds they need while they transition to adulthood (Lepp et al. 2016).

Cultural and Socioeconomic Considerations

There are also cultural and socioeconomic considerations that can impact a student's interactions with their parents and, as a consequence, their behaviors in college. Different cultures have different traditions regarding emerging adults' responsibilities to the family, academic or career goals, and future living situation. Socioeconomic status could impact whether college is a possibility, or the parent's view of education. Parental support for student's academic goals can also look different depending on socioeconomic status due to understanding of the educational system, available time off from work, and other variables (Auerbach 2007). All of these factors can impact how parent-child interactions take place.

Parent-child interactions can also be heavily impacted by parenting style. Research into parenting styles has touted the authoritative style as more beneficial to children's overall development than the authoritarian style (Rubin and Kelly 2015). However, it was found that working class parents are more likely to use the authoritarian style with their children (Rubin and Kelly 2015). This style is more likely to be predictive of mental health issues such as anxiety and depression, as well as lower self-esteem (Rubin and Kelly 2015). Though similar in name, the authoritative and authoritarian styles of parenting are distinct from one another (Smetana 1995). The authoritarian style of parenting refers to "parents who are demanding but not responsive" (Smetana 1995:299). The authoritative style of parenting, on the other hand, refers to "parents who are both responsive and demanding (Smetana 1995:299)." This style can also be associated with an overall better adjustment to the college setting, which researchers Rubin and Kelly assert could be due to the positive psychological qualities that are nurtured by this parenting style, such as self-regulation (2015).

Theory

How technology impacts parent-child relationships can be an important indicator of attachment to parents. Attachments, as theorized by Hirschi (1969), can be important to keeping people from engaging in delinquent behaviors. One of these important attachments is the attachment to parents. Thus, if there is meaningful contact and attachment to parents during college, a student who is transitioning into making decisions on their own could be positively impacted. In female college students, it has been found that being able to speak with parents on the phone was positively related to parental attachment (Lepp et al. 2016). However, for males neither calling nor texting was important for attachment to parents (Lepp et al. 2016).

It is important, then, to determine not only what level of parental contact is appropriate, but also what kind works for which individuals. This way parents can avoid intruding on autonomy, while still maintaining the attachment that could prevent delinquent choices (Hirschi 1969; Lynne et al. 2017; Smetana et al. 2006).

Summary

Current research finds that parental monitoring is overall beneficial to adolescents, and some of this support is still required for these individuals as they transition into emerging adulthood (Arnett 2000; DiClemente et al. 2001; Fletcher et al. 2004; Hoeve et al. 2009; Kaynak et al. 2013; Napper and Hummer 2015; Smetana et al. 2006). Research has also shown that technology use connecting college students to their parents can be beneficial during this transitional time (Lepp et al. 2016). This research seeks to understand parental monitoring of emerging adults, which is a much different group than the more commonly studied adolescents, in the context of available technology. Thus, the focus of this study lies at the intersection of these two ideas.

Chapter 3: Data and Method

Research Question:

How does smartphone technology impact parental monitoring of college students and their behaviors?

Sample

The purpose of this research is to bridge the gap in research on parental monitoring and its impacts on college student behavior with technology as a moderating variable. For the purposes of this study, a college student is anyone that is enrolled as an undergraduate student and is over the age of 18. Students surveyed could live on or off campus, and attend any undergraduate institution.

College students were selected because they are in a unique position in their life. Almost all college students who move away from home are doing so for the first time, so this is the first time in their life they are experiencing true independence. However, individuals still desire and need parental support in order for this transition to college and adulthood to be successful (Darlow et al. 2017). Since college students are still relying on their parents to a degree while also trying to establish autonomy (Darlow et al. 2017), it is a perfect population to research this topic, as the line between what is a good amount of monitoring and what is not is still so blurry.

Descriptive statistics are reported in Table 1. The sample consisted of 247 respondents. Of those 247 respondents, 60 self-identified as a man, 180 as a woman, 1 as non-binary, and 2 selected “other”. Most responded that they were in-state students at their institution (n=148), and 91 responded that they were out of state students. Respondents overwhelmingly self-identified as white or Caucasian (85.54% of the full sample), 11 identified as Asian or Pacific Islander (4.55% of the full sample), 9 identified as Black, Afro-Caribbean, or African American (3.72% of the

full sample), 8 identified as Latino or Hispanic (3.31% of the full sample), and 7 selected “Other” (2.89% of the full sample). Finally, a little over half (n=127) of the respondents responded that they were currently living “off-campus not with the parent(s)/guardian(s)” (See Table 2). 61 respondents lived on campus, 25 were living with parent(s)/guardian(s) off campus, and the other 20 had moved back in with their parent(s)/guardian(s) due to COVID-19 (See Table 2). This sample, then, is predominantly white/Caucasian women who live off campus, not with their parent(s)/guardian(s). This will be discussed in greater depth in the limitations section.

Collection Method: Electronic Survey

The survey was distributed using social media. It was originally published on February 10, 2021, and closed on February 27, 2021 using Instagram and Twitter. Individuals were not only able to access the link from my personal account on these websites, but they were able to repost/share the link with their followers and networks. This allowed the survey to expand much farther beyond the original audience. Social media was selected as the distribution strategy because, due to COVID-19, it was not possible to distribute the survey in person. By distributing the survey online, it made completion of the survey safe and accessible to students, no matter where they were physically located.

Dependent Variable

College Student Behavior: College student behavior was measured by asking about students’ consumption of alcohol, usage of non-prescription drugs, and attendance at parties (See Appendix B). Individual items were coded 1=Never and 6=Once a Day (for full list of coded values, see Table 3). Responses to each question were averaged to compute a mean scale for behavior. On average, students reported a 3.01 mean level, which equates to “once a month,” on indicator questions about engagement in alcohol

and drug related behavior, as well as attendance at parties. This means that, on average, students were engaging in potentially problematic behaviors once a month.

Independent Variable

Parental Monitoring: Parental monitoring was measured by asking students about their feelings and perceptions regarding their parental interactions, such as “I feel my parents can be overbearing” (See Appendix B). All of these questions were based on students’ perceptions of their parental interactions. Individual items were coded 1=Strongly Disagree and 5=Strongly Agree (for full list of coded values, see Table 3). Responses to each question were averaged to compute a mean scale for parental monitoring. On average, students reported a 2.26 mean level, which equates to students responding “disagree” with a slight leaning toward “neutral”, on indicator questions about perceptions of parental monitoring. This means that, on average, students were not perceiving close parental monitoring.

Key Moderating Variable

Usage of Smartphone Technology: Usage of smartphone technology was measured by first asking students if they owned a smartphone, then asking about the different apps they use, focusing mainly on social media and location sharing apps (See Appendix B). These apps were selected because they have features that could be used for monitoring (See Appendix A for descriptions of applications). 100% of participants responding to the question (approximately 14 did not answer) that they own a smartphone, which was specified as a “phone with internet access, the ability to download applications, etc.” (see Appendix B). 97.40% of students reported using Instagram, 96.10% reported using Snapchat, 79.22% reported using Facebook, 74.46% reported using Twitter, 68.40%

reported using TikTok, 59.74% reported using Find My Friends, and 10.39% reported using Life360 (See Appendix A for description of applications).

Parental Interaction Through Technology: In addition, questions asked about interactions with parents through social media (See Appendix B). Individual items were coded 0=Unsure and 5=Daily for questions about frequency and 1=Strongly Disagree and 5=Strongly Agree for questions related to perceptions (for full list of coded values, see Table 3). Responses to each question were averaged to compute mean scales for frequency of interactions. On average, students reported 1.99 mean level of frequency of parental interaction through technology, which equates to approximately a few times a year. This indicates that students, on average, are not interacting with their parents very frequently through social media. Perceptions of interactions were averaged separately, with the mean score of parents requiring students to allow social media access being a 2.19, the mean score of wanting parents to have social media access being a 2.68, the mean score of not caring if parents have social media access being a 3.31, and the mean score for intentionally filtering social media content so parents can only see certain posts being a 2.71. These scores indicate students generally disagreed with *wanting* their parents to have social media access, and filtering their content for their parents, but also indicated that they feel neutral about not caring if their parents see their social media content. The difference between actively wanting and not caring if parents access social media is important to note.

Analytical Strategy

To examine the relationship between technology use, parental monitoring, involvement in risky behavior, and perceptions of parental interactions, a series of bivariate correlations were

run using SPSS. A two-tailed test was used, and the results were analyzed using .05 and .01 significance levels.

Chapter 4. Results

Perceived Parental Monitoring and Parental Interaction Through Social Media

The analysis began by examining the association between parental monitoring and parental interaction through social media. There was a significant correlation between students who reported feeling like their parents were monitoring their behaviors closely and multiple data points relating to social media interaction (See Table 5). Specifically, feeling like parents were closely monitoring students even while they were away at school was significantly negatively correlated with parents checking on social media platforms ($r = -.214, p < .01$), interacting on social media ($r = -.238, p < .01$), and parents asking their student about social media ($r = -.372, p < .01$). This negative correlation means that as students report their parents checking on, interacting with, and asking about social media, they were actually less likely to report feeling closely monitored. On the contrary, feeling closely monitored was significantly positively correlated with parents requiring students to allow them access to their social media ($r = .389, p < .01$), as well as students reporting feeling like parents were “overbearing” ($r = .539, p < .01$). Despite this high positive correlation between close monitoring and feeling like their parents are overbearing, having parents who were overbearing was significantly negatively correlated with feeling as though parents “know about everything they do” ($r = -.219, p < .01$).

Perceived Parental Approval and Student Behavior

This concept of parents knowing about everything their student does leads to an interesting question around approval of the behaviors being asked about in the survey. Students reporting to drink alcohol and use drugs not prescribed to them by a medical professional were highly correlated with parents both knowing and approving of this usage (See Table 6). The result was similar for attendance at parties, which was significantly positively correlated with

parents knowing about attendance at parties ($r=.191$, $p < .01$). Though attendance at parties was not significantly positively correlated with parental approval of the activity, this could also be due in part to the impacts of COVID-19, which will be discussed in the limitations section.

Though this relationship is interesting, it is impossible to know the temporal ordering of the relationship, meaning whether the approval caused students to feel more comfortable doing it, or the students engaged in these activities and their parents also happen to approve of them. It is also important to note that since the majority of the sample was juniors and seniors (See Table 1), many students may have been of legal drinking age at the time of the survey completion, which could impact how their parents feel about their engagement in these activities.

Perceived Parental Monitoring and Engagement in Alcohol and Drug Related Behaviors

There were no significant correlations found between student's perceived parental monitoring and their choices surrounding alcohol use, drug use, and party attendance (See Table 7).

Parental Interaction Through Social Media and Engagement in Alcohol and Drug Related Behaviors

In regard to interaction through social media and usage of alcohol and drugs, there was a negative correlation between parents checking on social media platforms and students reporting to have had 5 or more drinks in one occasion ($r= -.137$, $p < .05$). Parents checking on social media ($r= .219$, $p < .01$), as well as parents asking about social media ($r= .204$, $p < .01$) were significantly positively correlated with attendance at parties (See Table 8).

Chapter 5. Discussion and Conclusion

This research aimed to assess relationship between parental monitoring, smartphone technology, and college student behavior. While there is an abundance of research finding positive impacts from parental monitoring on adolescents, and some on college students (Fletcher et al. 2004; Kaynak et al. 2013; Napper and Hummer 2015; Smetana et al. 2006), none took into account a relatively recent phenomena in society: the rise of social media. Previous research has discussed technology use and how it impacts parent-child relationships in college, but didn't look specifically at how parental monitoring could take place through social media apps such as Twitter or Instagram (Lepp et al. 2016). This gap in research is important to fill because technology will only continue advancing and becoming more engrained in our daily lives. It is important to know if parental monitoring through social media can impact college students, so parents can better know and understand how their behaviors impact, either positively or negatively, their student's behaviors.

In the context of the research question, there does not seem to be a significant, clear correlation between parental monitoring through technology and whether or not students engage in alcohol or drug related behaviors. Only one significant relationship emerged: there was a negative correlation between parents checking on social media and students drinking 5+ drinks on one occasion. Though this correlation could indicate the potential that social media interaction could deter binge drinking, more research would need to be done due to the fact that this correlation was significant at the .05 level while the others were significant at the .01 level (See Table 8). In addition, none of the other social media indicators (interaction on social media, asking about posts) were correlated with drinking 5+ drinks on one occasion, or any of the alcohol/drug usage questions at all.

Though there is no clear relationship between parental monitoring through smartphone technology and the behaviors measured, there is another relationship I think could be investigated further in future studies. The relationship between close parental monitoring of college students and feeling like parents are overbearing is so important in the greater context of the discussion about helicopter parenting and healthy parent to college student relationships. It would be worthwhile to determine what students deem as close parental monitoring, what about that close parental monitoring feels so overbearing, and how that is impacting their relationship with their parents. The negative correlation between overbearing parents and parents knowing all about their student's lives could be indicative that the students of overbearing parents aren't sharing information with their parents because they feel they are overbearing. This relationship could be further investigated, because I think the implications for the parent-child relationship could be important.

In addition, the significant positive correlations between alcohol and drug usage and the parental approval of this usage warrants further investigation. Though this study cannot establish direction or causality in that relationship, the strong correlations indicate the possibility that students are engaging in these behaviors because of parental approval. This is important to gain a deeper understanding of because parental allowance of alcohol consumption was also significantly positively correlated with drinking 5+ drinks on one occasion. If parental approval is an important element in students choosing whether or not to engage in these behaviors, that could be critical to know when educating parents on how to discuss alcohol and drugs with their emerging adults. If parents knew their students really took their approval to heart, they could have the opportunity to instill safe and healthy drinking habits prior to their student leaving home for the first time.

Overall, this study indicates that close parental monitoring may not be the appropriate type of interaction when individuals are emerging adults and trying to gain independence, as this may feel overbearing. However, there is also strong potential that parents still have an impact on their students' choices, shown both by the social media and binge drinking correlation and the behaviors and approval correlations. Though these are only correlations, there is strong enough support for future studies to investigate these topics in more depth to determine how much of an impact is present, and the best way for parents to utilize that impact in a positive way.

Limitations

In this section I will discuss the reasoning behind each of the selections, as well as any potential factors outside of the study that may impact the results. The limitations/impacts imposed by the COVID-19 pandemic will be discussed in the next section, as those are unique to this specific time.

The variety of ages could impact the results as students surveyed were 18 and older. This means that it is likely that not all of the students who completed the survey were of legal drinking age. This could not only act as a deterrent against drinking alcohol for the students who are underage, but could impact how parents view their student's drinking habits. A parent may not condone drinking under the legal age, but condone drinking once a student is of age. Similarly, a student may not feel comfortable with their parent knowing that they drink alcohol underage, but once they are of age they are comfortable with their parents knowing. On the other side of the issue, parents may no longer care about a student's drinking habits once they turn 21, or a student may feel much more comfortable discussing alcohol with their parents. Thus, students who are of the legal drinking age may no longer be impacted by their parents' views of drinking alcohol now that they are old enough to consume it legally.

While the survey does discuss a variety of topics, many of the behaviors mentioned are related to alcohol and drug use, and parties. Responses to these could be impacted by religious and cultural differences, as different religions and cultures view these activities differently. Parents who come from these cultures or hold these religious beliefs may also view these behaviors differently. For example, a student may be of legal drinking age, but a parent may still disapprove of alcohol or drug consumption due to religious beliefs or cultural norms.

Religious beliefs and cultural norms could also play a role in parent-child interactions, and perceptions of what constitutes an overbearing amount of parental monitoring. However, to account for this the survey is based on student's perception. Different students require and desire different amounts of monitoring and support, but by asking about perception rather than strictly specific behaviors, I hope to account for these differences.

Finally, the sample is largely white/Caucasian women. This is not a representative sample of college campuses across the United States.

COVID-19 Limitations

As a result of the COVID-19 pandemic, which is impacting every facet of daily life, there are several limitations. The first and primary of these issues is that many students have chosen to spend their semester at home, or gone home mid-semester. This impacts whether or not they are spending additional time they normally wouldn't spend with their parents/guardians. The second of these issues is that the precautions an individual may take to not contract or spread COVID-19 may be impacting their normal behavior. This could especially impact the survey results for first year students, who have never experienced a semester of college that is "normal" and not impacted by COVID-19. While students who were attending university before COVID-19 may be able to recall past experiences as well, students who have just started their college career may

only have college experiences impacted by COVID-19. This means many of them may not be attending social events, making friends in typical ways, and as a result may be limiting their behaviors unintentionally. Finally, parental concerns and monitoring could be heightened as a result of the pandemic.

Future Directions

Future research should seek to determine what the appropriate amount of parental involvement for college students is, so parents are able to make informed choices about when to step forward and when to step back. In addition, future research should delve deeper into the socio-economic and cultural elements of parenting, and how this impacts the parent-child relationship in college. As technology continues to develop, it will also be greatly important to continue to monitor how it plays a role in this issue. Finally, future research should seek to determine whether parental approval is important to emerging adults in their decisions to engage in alcohol and drug related behaviors, or if that relationship was heavily influenced by the older age of the sample in this study.

This topic continues to be an important one because previous research supports parental involvement to a degree while individuals are in this transitional phase of life (Fletcher et al. 2004; Kaynak et al. 2013; Napper and Hummer 2015; Smetana et al. 2006). It is crucial, then, to determine what degree is appropriate, so as to avoid the relationship found in this study between close monitoring and perceptions of parents being overbearing, and promote positive relationships. In addition, technology will only continue to become more prevalent. As technology continues to advance, as well its monitoring capacity, it is important to understand how it will impact behavior and relationships.

References

- Arnett, Jeffrey Jensen. 2000. "Emerging Adulthood." *American Psychologist* 55(5):469–80. doi: 10.1037//0003-066X.55.5.469.
- Auerbach, Susan. 2007. "From Moral Supporters to Struggling Advocates: Reconceptualizing Parent Roles in Education through the Experience of Working-Class Families of Color." *Urban Education* 42(3):250–83.
- Brook, Judith S., Jung Yeon Lee, Elaine N. Brown, Stephen J. Finch, and David W. Brook. 2011. "Developmental Trajectories of Marijuana Use from Adolescence to Adulthood: Personality and Social Role Outcomes." *Psychological Reports* 108(2):339–57. doi: 10.2466/10.18.PR0.108.2.339-357.
- Coombs, Robert H., and John Landsverk. 1998. "Parenting Styles and Substance Use during Childhood and Adolescence." *Journal of Marriage and Family* 50(2):473–82.
- Crocetti, Elisabetta, Jolien Van der Graaff, Silvia Moscatelli, Loes Keijsers, Hans M. Koot, Monica Rubini, Wim Meeus, and Susan Branje. 2016. "A Longitudinal Study on the Effects of Parental Monitoring on Adolescent Antisocial Behaviors: The Moderating Role of Adolescent Empathy." *Frontiers in Psychology* 7(1726). doi: 10.3389/fpsyg.2016.01726.
- Darlow, Veronica, Jill M. Norvilitis, and Pamela Schuetze. 2017. "The Relationship between Helicopter Parenting and Adjustment to College." *Journal of Child Family Studies* 26:2291–98. doi: 10.1007/s10826-017-0731-3.
- DiClemente, Ralph J., Gina M. Wingood, Richard Crosby, Catlainn Sionean, Brenda K. Cobb, Kathy Harrington, Susan Davies, Edward W. Hook III, and M. Kim Oh. 2001. "Parental Monitoring: Association with Adolescents' Risk Behaviors." *Pediatrics* 107(6):1363–68. doi: 10.1542/peds.107.6.1363.
- Dishion, Thomas, and Robert McMahon. 1998. "Parental Monitoring and the Prevention of Child and Adolescent Problem Behavior: A Conceptual and Empirical Formulation." *Clinical Child and Family Psychology* 1(1).
- Flanagan, India M. L., Katharine M. Auty, and David P. Farrinton. 2019. "Parental Supervision and Later Offending: A Systematic Review of Longitudinal Studies." *Aggression and Violent Behavior* 47:215–29.
- Fletcher, Anne C., Laurence Steinberg, and Meeshay Williams-Wheeler. 2004. "Parental Influences on Adolescent Problem Behavior: Revisiting Stattin and Kerr." *Child Development* 75(3):781–96. doi: 10.1111/j.1467-8624.2004.00706.x.
- French, Michael T., and Johanna C. Maclean. 2006. "Underage Alcohol Use, Delinquency, and Criminal Activity." *Health Economics* 15:1261–81. doi: 10.1002/hec.1126.

- Harris-McKoy, DeAnna, and Ming Cui. 2013. "Parental Control, Adolescent Delinquency, and Young Adult Criminal Behavior." *Journal of Child Family Studies* 22:836–43. doi: 10.1007/s10826-012-9641-x.
- Hill, Jessica M., Arjan A. J. Blokland, and Victor R. van der Geest. 2018. "Risk Factors for Self-Reported Delinquency in Emerging Adulthood." *European Journal of Criminology* 15(5):544–66. doi: 10.1177/1477370817749495.
- Hill, Jessica M., Victor R. van der Geest, and Arjan A. J. Blokland. 2017. "Leaving the Bank of Mom and Dad: Financial Independence and Delinquency Desistance in Emerging Adulthood." *Journal of Development Life Course Criminology* 3:419–39. doi: 10.1007/s40865-017-0058.
- Hirschi, Travis. 1969. *Causes of Delinquency*. Taylor and Francis Group.
- Hoeve, Machteld, Arjan Blokland, Judith Semon Dubas, Rolf Loeber, Jan R. M. Gerris, and Peter H. van der Laan. 2008. "Trajectories of Delinquency and Parenting Styles." *Journal of Abnormal Child Psychology* 36:223–35.
- Hoeve, Machteld, Judith Semon Dubas, Veroni I. Eichelsheim, Peter H. van der Laan, Wilma Smeenk, and Jan R. M. Gerris. 2009. "The Relationship Between Parenting and Delinquency: A Meta-Analysis." *Journal of Abnormal Child Psychology* 37:749–75. doi: 10.1007/s10802-009-9310-8.
- Johnson, Wendi L., Peggy C. Giordano, Wendy D. Manning, and Monica A. Longmore. 2011. "Parent-Child Relations and Offending during Young Adulthood." *Journal of Youth Adolescence* 40:786–99.
- Kaynak, Övgü, Kathleen Meyers, Kimberly Caldeira, Kathryn Vincent, Ken Winters, and Amelia Arria. 2013. "Relationships among Parental Monitoring and Sensation Seeking on the Development of Substance Use Disorder among College Students." *Addictive Behaviors* 38:1457–63.
- Lepp, Andrew, Jian Li, and Jacob Barkley. 2016. "College Students' Cell Phone Use and Attachment to Parents and Peers." *Computers in Human Behavior* 64:401–8.
- Lynne, Kelly, Robert L. Duran, and Aimee E. Miller-Ott. 2017. "Helicopter Parenting and Cell-Phone Contact between Parents and Children in College." *Southern Communication Journal* 82(2):102–14. doi: 10.1080/1041794X.2017.1310286.
- Mahedy, Liam, Georgina J. MacArthur, Gemma Hammerton, Alexis C. Edwards, Kenneth S. Kendler, John Macleod, Matthew Hickman, Simon C. Moore, and Jon Heron. 2018. "The Effects of Parental Drinking on Alcohol Use in Young Adults: The Mediating Role of Parental Monitoring and Peer Deviance." *Addiction* 113(11):2041–50.
- Maldonado-Molina, Mildred M., Jennifer M. Reingle, and Wesley G. Jennings. 2011. "Does Alcohol Use Predict Violent Behaviors? The Relationship between Alcohol Use and

- Violence in a Nationally Representative Longitudinal Study.” *Youth Violence and Juvenile Justice* 9(2):99–111. doi: 10.1177/1541204010384492.
- McKee, Laura, Christina Colletti, Aaron Rakow, Deborah J. Jones, and Rex Forehand. 2008. “Parenting and Child Externalizing Behaviors: Are the Associations Specific or Diffuse?” *Aggression and Violent Behavior* 13:201–15. doi: 10.1016/j.avb.2008.03.005.
- Napper, Lucy, and Justin Hummer. 2015. “Perceived Parent and Peer Marijuana Norms: The Moderating Effect of Parental Monitoring During College.” *Society for Prevention Research* 16:364–73.
- Pew Research Center. 2019. *Mobile Fact Sheet*.
- Rubin, Mark, and Benjamin M. Kelly. 2015. “A Cross-Sectional Investigation of Parenting Style and Friendship as Mediators of the Relation between Social Class and Mental Health in a University Community.” *International Journal for Equity in Health* 14(87).
- Segrin, Chris, Alesia Woszildo, Michelle Givertz, Amy Bauer, and Melissa Taylor Murphy. 2012. “The Association of Overparenting, Parent-Child Communication, and Entitlement and Adaptive Traits in Adult Children.” *Family Relations* 61:237–52. doi: 10.1111/j.1741-3729.2011.00689.x.
- Singer, Mark I., Daniel J. Flannery, Shenyang Guo, David Miller, and Sylvia Leibbrandt. 2004. “Exposure to Violence, Parental Monitoring, and Television Viewing as Contributors to Children’s Psychological Trauma.” *Journal of Community Psychology* 32(5):489–504.
- Smetana, Judith. 1995. “Parenting Styles and Conceptions of Parental Authority during Adolescence.” *Child Development* 66(2):299–316.
- Smetana, Judith, Nicole Campione-Barr, and Aaron Metzger. 2006. “Adolescent Development in Interpersonal and Societal Contexts.” *Annual Review of Psychology* 57:255–84.
- Wilson, Harriett. 1980. “Parental Supervision: A Neglected Aspect of Delinquency.” *The British Journal of Criminology* 20(3):203–35.

Tables

Table 1. Demographic Breakdown of Respondents

Demographic	% of Sample	# of Respondents
Gender Identity		
Man	24.69%	60
Woman	74.07%	180
Non-binary	0.41%	1
Other	0.82%	2
Residency Status		
In State	61.92%	148
Out of State	38.08%	91
Racial/Ethnic Identity		
Asian or Pacific Islander	4.55%	11
Black, Afro-Caribbean, or African American	3.72%	9
Latino or Hispanic	3.31%	8
Native American or Alaskan Native	0.00%	0
White or Caucasian	84.54%	207
Other	2.89%	7
Year in School		
First Year/Freshman	8.79%	21
Second Year/Sophomore	18.41%	44
Third Year/Junior	26.78%	64
Fourth Year/Senior	41.42%	99
Fifth Year Or More	4.60%	11

Table 2. Current Living Situation at Time of Survey

Living Situation	% of Sample	# of Respondents
On Campus	25.96%	61
Originally on campus, but home with parent(s)/guardian(s) due to COVID-19	7.23%	17
Off Campus not with parent(s)/guardian(s)	54.04%	127
Off Campus with parent(s)/guardian(s)	10.64%	25
Originally off campus in area around school, but home with parent(s)/guardian(s) due to COVID-19	1.28%	3
Other	0.85%	2

Table 3. Coded Values

Unsure	Never	A Few Times A Year	Monthly	Weekly	Daily
0	1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
1	2	3	4	5	
Never	A Few Times A Year	Once A Month	Once A Week	2+ Times A Week	Once A Day
1	2	3	4	5	6
Never	Sometimes	Always			
1	2	3			

Table 4. Descriptive Statistics

	Mean	SD	Min	Max
Parental Monitoring (Independent Variable)				
I feel like my parent(s)/guardian(s) can be overbearing	2.49	1.13	1.00	5.00
My parent(s)/guardian(s) closely monitor my behaviors even while I am at school	1.82	0.94	1.00	5.00
My parent(s)/guardian(s) know about everything I do	2.49	1.16	1.00	5.00
Interaction Through Social Media (Moderating Variable)				
My parent(s)/guardian(s) check on my social media platforms.	1.71	1.45	0.00	5.00
My parent(s)/guardian(s) interact with me on social media platforms	2.41	1.21	1.00	5.00
My parent(s)/guardian(s) ask me about my social media content	1.85	0.91	1.00	5.00
My parent(s)/guardian(s) required me to allow them to “follow” or “friend” me on social media	2.19	1.30	1.00	5.00
I want my parent(s)/guardian(s) to have access to my social media	2.68	1.06	1.00	5.00
I do not care if my parent(s)/guardian(s) have access to my social media	3.31	1.31	1.00	5.00
I intentionally filter what I put on social media so my parent(s)/guardian(s) only see certain things	2.71	1.27	1.00	5.00
Engagement in Alcohol and Drug Related Activities (Dependent Variable)				
I drink alcohol	4.09	1.15	1.00	6.00
I have had 5 or more drinks in one occasion	2.96	1.20	1.00	6.00
I use drugs not prescribed to me by a medical professional	1.92	1.44	1.00	6.00
I attend parties	3.12	1.17	1.00	5.00

Table 5. Correlation Between Parental Interaction Through Social Media and Student’s Perceived Parental Monitoring

	1	2	3	4	5	6	7
1. My parent(s)/guardian(s) check on my social media platforms		.351** <.001 227	.424** <.001 227	-.453** <.001 222	-.075 .277 212	-.214** .002 212	-.204** .003 212
2. My parent(s)/guardian(s) interact with me on social media platforms			.373** <.001 227	-.3.67** <.001 222	-.134 .052 212	-.238** <.001 212	-.256** <.001 211
3. My parent(s)/guardian(s) ask me about my social media content				-.449** <.001 222	-.186** .007 212	-.372** <.001 212	-.190** .006 211
4. My parent(s)/guardian(s) require me to allow them to “follow” or “friend” me on social media					.295 <.001 212	.389** <.001 212	.114 .098 211
5. I feel like my parent(s)/guardian(s) can be overbearing						.539** <.001 212	-.219** .001 211
6. My parent(s)/guardian(s) closely monitor my behavior even while I am at school.							.131 .057 211
7. My parent(s)/guardian(s) know about everything I do							

** Correlation is significant at the .01 level (2-tailed)

Table 6. Correlation Between Parental Approval of Alcohol/Drug Use and Behaviors

	1	2	3	4	5	6	7	8	9	10	11
1. I drink alcohol	1	.681** <.001	.266** <.001	.608** <.001	.364** <.001	.307** <.001	-.201** .003	.012 .858	.017 .800	.283** <.001	.164* .016
	220	219	220	220	217	216	215	216	216	215	215
2. I have had 5 or more drinks in one occasion		1	.325** <.001	.687** <.001	.248** <.001	.108 .114	-.064 .353	-.009 .897	-.014 .836	.173* .011	.067 .330
		219	219	219	216	215	214	215	215	214	214
3. I use drugs not prescribed to me by a medical professional			1	.207** .002	.094 .168	.027 .688	-.034 .620	.375** <.001	.252** <.001	.107 .119	.058 .400
			221	220	218	217	215	217	217	215	215
4. I attend parties				1	.147 .030	.035 .604	-.024 .730	-.043 .527	-.100 .141	.191** .005	.098 .153
				220	217	216	215	216	216	215	215
5. My parent(s)/guardian (s) allow me to drink alcohol					1	.670** <.001	-.261** <.001	.175** .010	.171* .011	.405** <.001	.336** <.001
					218	217	215	217	217	215	215
6. My parent(s)/guardian (s) approve of me drinking alcohol						1	-.387** <.001	.141* .038	.153* .024	.398** <.001	.463** <.001
						217	215	217	217	214	214
7. My parent(s)/guardian (s) do not know I drink alcohol							1	-.059 .386	-.053 .438	-.404** <.001	-.324** <.001
							215	215	215	213	213

8. My parent(s)/guardian (s) allow me to use drugs not prescribed to me	1	.817**	.169*	.191**
	217	<.001	.013	.005
		217	214	214
9. My parent(s)/guardian (s) approve of me using drugs not prescribed to me		1	.183**	.253**
		217	.007	<.001
			214	214
10. My parent(s)/guardian (s) know I attend parties			1	.591**
			215	<.001
				215
11. My parent(s)/guardian (s) would approve of me attending parties				1
				215

** Correlation is significant at the .01 level (2-tailed)
* Correlation is significant at the .05 level (2-tailed)

Table 7. Correlation Between Perceived Parental Monitoring and Engagement in Alcohol and Drug Related Behaviors

	1	2	3	4	5	6	7
1. My parent(s)/guardian(s) closely monitor my behavior even while I am at school.	1	.363**	.131	-.031	-.085	-.037	.039
		<.001	.057	.651	.222	.591	.576
	212	211	211	211	210	212	211
2. I would behave differently if my parent(s).guardian(s) did not follow my social media		1	-.197**	-.029	.081	.016	.103
			.004	.681	.242	.816	.138
		211	211	210	209	211	210
3. My parent(s)/guardian(s) know about everything I do			1	.003	-.117	-.117	.038
				.968	.093	.091	.581
			211	210	209	211	210
4. I drink alcohol				1	-.681**	.266**	.608**
					<.001	<.001	<.001
				220	219	220	220
5. I have had 5 or more drinks in one occasion					1	.325**	.687**
						<.001	<.001
					219	219	219
6. I use drugs not prescribed to me by a medical professional						1	.207**
							.002
						221	220
7. I attend parties							1
							220

** Correlation is significant at the .01 level (2-tailed)

Table 8. Correlation Between Parental Interaction Through Social Media and Engagement in Alcohol and Drug Related Behaviors

	1	2	3	4	5	6	7	8
1. My parent(s)/ guardian(s) check on my social media platforms	1	.351** <.001	.424** <.001	.453** <.001	.098 .146	-.137* .043	-.064 .345	.219** .001
	227	227	227	222	220	219	221	220
2. My parent(s)/ guardian(s) interact with me on my social media platforms		1	.373** <.001	.367** <.001	-.007 .920	-.014 .842	.005 .943	.065 .341
		227	227	222	220	219	221	220
3. My parent(s)/guardian(s) ask me about my social media content			1	.449** <.001	.078 .252	.073 .280	-.067 .319	.204** .002
			227	222	220	219	221	220
4. My parent(s)/guardian(s) required me to allow them to “follow” or “friend” me on social media				1	.030 .658	.064 .346	-.095 .158	.082 .227
				222	220	219	221	220
5. I drink alcohol					1	.681** <.001	.266** <.001	.608** <.001
					220	219	220	220
6. I have had 5 or more drinks in one occasion						1	.325** <.001	.687** <.001
						219	219	219
7. I use drugs not prescribed to me by a medical professional							1	.207** .002
							221	220
8. I attend parties								1
								220

** Correlation is significant at the .01 level (2-tailed)

* Correlation is significant at the .05 level (2-tailed)

Appendices

APPENDIX A. PHONE APPLICATIONS

All descriptions have been directly copied from their description listed on the Apple App Store (<https://www.apple.com/app-store/>)

Facebook

Connect with friends, family, and people who share the same interests as you. Communicate privately, watch your favorite content, buy and sell items, or just spend time with your community. On Facebook, keeping up with the people who matter most is easy. Discover, enjoy, and do more together.

Stay up to date with your loved ones:

- Share what's on your mind, announce major life events through posts and celebrate the everyday moments with Stories.
- Express yourself through your profile and posts, watch, react, interact and stay in touch with your friends throughout the day.

Connect with people who share your interests in Groups:

- With tens of millions of groups, you'll find something for all your interests and discover more groups relevant to you.
- Use the Groups tab as a hub to quickly access all your groups content. Find relevant groups based on your interests with the new discovery tool and recommendations.

Become more involved with your community:

- Discover events happening near you, businesses to support, local groups and activities to be a part of.
- Check out local recommendations from your friends, then coordinate with them and make plans to get together.
- Raise funds for a cause that's important to you, mentor someone who wants help achieving their goals and, in the event of a local crisis, connect with other people to find or give supplies, food or shelter.

Enjoy entertainment together with Watch:

- Discover all kinds of content from original shows to creators to trending videos in topics like beauty, sports, and entertainment.
- Join conversations, share with others, interact with viewers and creators and watch together like never before.

Buy and sell with Marketplace:

- Whether it's an everyday or one-of-a-kind item, you can discover everything from household items to your next car or apartment in Marketplace.
- List your own item for sale and conveniently communicate with buyers and sellers through Messenger.

Find My Friends

View the current location of your Apple devices and share your location with friends and family in a single, easy-to-use app.

Features:

- View the location of your missing iPhone, iPad, Apple Watch, Mac or AirPods on a map. You can locate your device even if it can't connect to the internet.
- Play a sound to find your device nearby. Put it in Lost Mode to lock the screen and display a message or erase it remotely to protect your data.
- Use the People tab to share location with friends and family so you can keep in touch, coordinate, or know when a family member has arrived home safely.
- On Apple Watch, use the Find People app to share your location with friends and family members.

Instagram

Connect with friends, share what you're up to, or see what's new from others all over the world. Explore our community where you can feel free to be yourself and share everything from your daily moments to life's highlights.

Express yourself and connect with friends:

- Add photos and videos to your story that disappear after 24 hours, and bring them to life with fun creative tools.
- Message your friends with Messenger. Share and connect over what you see on Feed and Stories.
- Create and discover short, entertaining videos on Instagram with Reels.
- Post photos and videos to your feed that you want to show on your profile.

Learn more about your interests:

- Check out IGTV for longer videos from your favorite creators.
- Get inspired by photos and videos from new accounts in Explore.
- Discover brands and small businesses, and shop products that are relevant to your personal style. Some Instagram features may not be available in your country or region.

Life360

Protect and connect the people who matter most with comprehensive safety features for life at home, on the web, and on the go – all in one place for added value and convenience. Enjoy modern, advanced tools that go beyond a basic GPS phone tracker.

Bring your family closer with comprehensive safety features designed for a busy, modern life – all in one place for added value and convenience. Go beyond basic GPS tracking with smart tools and anytime, anywhere emergency support.

Life360 membership offers a wide range of all-new services. Highlights include:

- SOS to send a silent alert with your location to family members, emergency contacts, and responders.

- 24/7 Emergency dispatch that's always on call for your entire family. Even if you can't call for help, we will.
- Family Safety Assist for comprehensive real-time specialist support anytime, anywhere, and in any situation.
- Identity Theft Protection to safeguard each family member's sensitive digital information and white glove restoration service, including \$1M in coverage.

Explore Life360 for free. Download Life360 and get started with advanced Location Sharing, 2 days of Location History, and 2 Place Alerts to see family members come and go from your top places like home, school, and work. Protect your drivers and passengers and respond to a car crash faster with automatic Crash Detection, and stay safe on the go with automated SOS.

Upgrade to membership for premium features and tools, backed by 24/7 specialist support and emergency dispatch. Find the plan that fits your family's unique needs and try for free for 7 days.

Snapchat

Snapchat is the most fun way to share the moment!

Snap:

- Snapchat opens right to the camera, so you can send a Snap in seconds! Just take a photo or video, add a caption, and send it to your best friends and family. Express yourself with Filters, Lenses, Bitmojis, and all kinds of fun effects.
- Capturing and sending photos and videos is easy! Tap to take a photo, or press and hold for a video.
- New selfie Lenses and Filters are added every day. Change the way you look, dance with your 3D Bitmoji, and even play games with your face!
- Create your own Filters to add to photos and videos—or try out Lenses made by our community!

Chat:

- Stay in touch with friends and groups with love messaging and Group Stories.
- Video Chat with up to 16 friends at once. You can even use Filters and Lenses!
- Express yourself with Friendmojis – exclusive Bitmojis made just for you and a friend.

Stories:

- Watch friends's Stories to see their day unfold.
- Watch Stories from the Snapchat community, based on your interests.
- Explore new perspectives from the top creators.

Discover:

- Watch breaking news and exclusive Original Shows.
- Keep up to date with Stories from top publishers.
- Enjoy a curated feed – made to fit your phone.

Snap Map:

- See where your friends are hanging out, if they've shared their location with you.
- Share your location with your best friends, or go off the grid with Ghost Mode.
- Watch live stories from the community nearby or across the world!

Memories:

- Look back on the Snaps you've saved with free cloud storage.
- Edit and send old moments to friends, or save them to your Camera Roll.
- Create Stories from your favorite memories to share with friends and family.

Friendship Profile:

- Every friendship has its own special profile to see the moments you've saved together.
- Discover new things you have in common with Charms. See how long you've been friends, your astrological compatibility, and more!
- Friendship Profiles are just between you and a friend, so you can bond over what makes your friendship special.

Twitter

Join the conversation! Twitter is your go-to social networking app and the source for what's happening in the world. From world news to local news, entertainment to sports and gaming, politics to fun stories that go viral, when it happens in the world, it happens on Twitter first. Find friends or follow influential people – every voice can impact the world!

Tweet, Retweet, reply to Tweets, Share or Life – Twitter is easy to use.

Chat privately or go big and initiate a group conversation with anyone who follows you. Track your friends and other Twitter followers or follow your favorite celebrity alongside hundreds of interesting Twitter users, to read their content at a glance. Engage your social network with noteworthy links, photos, and videos. Discover which of your Tweets were liked or Retweeted.

Create your free Twitter account today!

Twitter allows you to find interesting people or build a following of people who are interested in you. Maintaining a social connection has never been easier! Twitter allows celebs to build a personal connection with their fans. This is why Twitter has become one of the most used social media platforms in the world.

Build an engaging profile

- Customize your profile, add a photo, description, location, and background photo
- Tweet often and optimize your posting times.
- Post visual content
- Use hashtags in your Tweets
- Draw in followers outside of Twitter.

APPENDIX B. SURVEY

The following questions will be related to your demographics. Please answer by selecting the option you most identify with, or fill in the blank.

1. What gender do you most identify with?
 - a. Man
 - b. Woman
 - c. Nonbinary
 - d. Other (Fill in the Blank)
2. Which of the following best represents your racial or ethnic heritage?
 - a. Asian or Pacific Islander
 - b. Black, Afro-Caribbean, or African American
 - c. Latino or Hispanic
 - d. Native American or Alaskan Native
 - e. White or Caucasian
 - f. Other: (Please Specify)
3. Please select your year in school (Please select based on years attending college, not credits. For example: If you are a first year/freshman with 35 credits from AP or IB courses, please select "First Year/Freshman")
 - a. First Year/Freshman
 - b. Second Year/Sophomore
 - c. Third Year/Junior
 - d. Fourth Year/Senior
 - e. Fifth Year or more
4. Are you an in state student or an out of state student at the institution you attend?
 - a. In State
 - b. Out of State
5. Please enter the state of current residence:
6. Which of the following most closely describes your current living situation?
 - a. On Campus
 - b. Originally on campus, but home with parent(s)/guardian(s) due to COVID-19
 - c. Off Campus not with parent(s)/guardian(s)
 - d. Off Campus with parent(s)/guardian(s)
 - e. Originally off campus in area around school, but home with parent(s)/guardian(s) due to COVID-19
 - f. Other _____ (please specify)

The following questions will ask about your technology usage. Please answer by selecting the option you most identify with, or fill in the blank.

7. Do you own a smartphone? (a phone with internet access, the ability to download applications, etc.)
 - a. Yes
 - b. No
8. Do you currently use any of the following apps (Please select all that apply):

- a. Twitter
 - b. Instagram
 - c. Facebook
 - d. Life360
 - e. Find My Friends
 - f. Snapchat
 - g. Tik Tok
 - h. Other social media apps: _____ (please specify)
9. Does a parent or guardian currently “follow” or “friend” you on any of the following apps (Please select all that apply):
- a. Twitter
 - b. Instagram
 - c. Facebook
 - d. Life360
 - e. Find My Friends
 - f. Snapchat
 - g. Tik Tok
 - h. Other social media apps: _____ (please specify)

The following questions will ask about the frequency of your parent/guardian interaction with your social media.

10. My parent(s)/guardian(s) check on (e.g., review my posts, interactions, content) my social media platforms
- a. Daily
 - b. Weekly
 - c. Monthly
 - d. A few times a year
 - e. Never
 - f. Unsure
11. My parent(s)/guardian(s) interact with me on social media platforms.
- a. Daily
 - b. Weekly
 - c. Monthly
 - d. A few times a year
 - e. Never
12. My parent(s)/guardian(s) ask me about my social media content.
- a. Daily
 - b. Weekly
 - c. Monthly
 - d. A few times a year
 - e. Never

The following statements will be related to social media use in relation to your parent(s)/guardian(s). Please select the degree to which you agree with the statement provided. (0= Strongly Disagree, Disagree, Neutral, Agree, 5=Strongly Agree)

13. My parent(s)/guardian(s) required me to allow them to “follow” or “friend” me on social media.
14. I want my parent(s)/guardian(s) to have access to my social media.
15. I do not care if my parent(s)/guardian(s) have access to my social media.
16. I intentionally filter what I put on social media so my parent(s)/guardian(s) only see certain things.
17. I have “private stories,” “finstas,” or other accounts that my parent(s)/guardian(s) do not know about or have access to.

The following statements will be related to your activities. Please select the frequency with which you engage in the following activities (Never, A few times a year, once a month, once a week, 2+ times a week, once a day)

18. I drink alcohol.
19. I have had 5 or more drinks in one occasion
20. I use drugs not prescribed to me by a medical professional.
21. I attend parties.

The following statements will be related to your activities in relation to your parent(s)/guardian(s). Please select the frequency with which you engage in the following activities (Never, Sometimes, Always)

22. My parent(s)/guardian(s) allow me to drink alcohol.
23. My parent(s)/guardian(s) approve of me drinking alcohol.
24. My parent(s)/guardian(s) do not know I drink alcohol.
25. My parent(s)/guardian(s) allow me to use drugs not prescribed to me by a medical professional.
26. My parent(s)/guardian(s) approve of me using drugs not prescribed to me by a medical professional.
27. My parent(s)/guardian(s) know I attend parties.
28. My parent(s)/guardian(s) would approve of me attending parties.

The following statements will be related to sharing your location with your parent(s)/guardian(s). Please check “Yes” or “No” in response to the options provided.

29. My parent(s)/guardian(s) check in on me while I am at college by:
 - a. Knowing my class/work schedule
 - i. Yes
 - ii. No
 - b. Calling me
 - i. Yes
 - ii. No
 - c. Texting me
 - i. Yes
 - ii. No
 - d. Looking at my posts

- i. Yes
- ii. No
- e. Checking my location via location tracking apps
 - i. Yes
 - ii. No

The following statements will be related to sharing your location with your parent(s)/guardian(s). Please select the degree to which you agree with the statement provided. (0= Strongly Disagree, Disagree, Neutral, Agree, 5=Strongly Agree)

- 30. Sharing my location with my parent(s)/guardian(s) makes me feel safer.
- 31. I wish I didn't have to share my location with my parent(s)/guardian(s).
- 32. I have turned off my location before to avoid my parent(s)/guardian(s) knowing where I am.
- 33. My parent(s)/guardian(s) ask for pictures of me to prove I am home.
- 34. I would behave differently if my parent(s)/guardian(s) couldn't see my location.

The following statements are related to your feelings regarding your parent(s)/guardian(s) technology interaction with you. Please select the degree to which you agree with the statement provided. (0= Strongly Disagree, Disagree, Neutral, Agree, 5=Strongly Agree)

- 35. I avoid posting about certain activities so my parent(s)/guardian(s) will not see.
- 36. I do not engage in certain activities because my parent(s)/guardian(s) would find out.
- 37. My parent(s)/guardian(s) have the contact information for my friends.
- 38. My parent(s)/guardian(s) have the contact information for my friends' parent(s)/guardian(s).
- 39. I feel like my parent(s)/guardian(s) can be overbearing.
- 40. My parent(s)/guardian(s) closely monitor my behaviors even while I am at school. .
- 41. I would behave differently if my parent(s)/guardian(s) did not follow my social media.
- 42. My parent(s)/guardian(s) know about everything I do.