TO WHAT DEGREE DO MOBILE DEVICES AFFECT THE SOCIAL LIVES OF ADOLESCENTS

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Abstract

Background: Mobile devices have rapidly taken over the world of communication. As technology advances, many are turning away from the traditional methods of communication and utilizing mobile devices as their primary mode of communication. Mobile devices have especially taken over the way adolescents communicate.

Objective: The goal of this study is to examine the social lives of adolescents and discuss how excessive mobile device usage can limit their abilities to interact face to face.

Design and Method: This research design and method is based on statistics and antecedent research that has evaluated the use of mobile devices by adolescents and whether it has positively or negatively affected their social lives. The research questions are: How has unhealthy mobile device usage prevented adolescents, who are addicted to their devices, from having proper in-person interactions? How have mobile devices changed the social lives of adolescents in the United States over the last 10 years? Why are young people more susceptible to unhealthy smartphone use and mobile device addiction?

Results: This study will assess the usage, habits, and emotional connection that young individuals may have with their mobile devices and how this connection influences the quality of face to face interactions with their friends.

Conclusions: There are many factors to take into consideration. Adolescents are more likely to engage in excessive mobile device habits and they are the most susceptible to the negative effects that may result. This means that they are at a higher risk for developing an addiction to their mobile devices. The consequence of addiction is a dependency, which subsequently places a strain on the quality of their real-life relationships and social interactions.

Keywords: Addiction, adolescents, connectedness, dependency, excessive, the iPhone effect, the Martini Effect, mobile devices, multitasking, risk, social interactions, technology
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Chapter 1: Introduction

Mobile devices have launched a new way for everyone to communicate with one another. They have made it possible for anyone to interact with others instantly from almost anywhere. Of course, there were already many modes of communication such as writing letters, sending emails, calling from a payphone, or a home phone, just to name a few. These methods were effective but did not help much on-the-go, or when a phone or computer was unavailable. Now that mobile devices are here, everyone now can communicate with almost anyone at any given time, no matter when or where they are around the world. This instant way of communicating has created a society that has become accustomed to the constant availability of others and being able to contact them anytime. The subsequent expectation of availability has created a way for everyone to be round-the-clock connected. This is also known as the Martini Effect. The Martini Effect title derives from the old martini slogan, “anytime, anyplace, anywhere.” “[The title] ‘Martini effect’ refers to always being linked to others through mobile devices” (Quinn & Oldmeadow, 2013, p. 237-238).

Mobile devices were created for convenience. Despite the initial purpose, many have become highly dependent on mobile devices for everything and some even become addicted. Mobile device addiction can place strains on face to face interactions and hinder the ability to socialize in-person. “Mobile phones have affected every aspect of [the] personal and professional lives of people” (Humphreys, 2005, p. 811). Many adolescents battle addiction to their mobile devices. “Adolescents are strongly attached to their smartphone, and they regard a smartphone as their second self. Many smartphone users have reported that they would not be able to live without a smartphone” (Cha & Seo, 2018, p. 2). This is because they depend on their phones to feel connected. When adolescents have limited to no mobile phone use, many of them experience anxiety. According to research done by Quinn and Oldmeadow (2013, p. 239), young mobile device users have reported feelings of
“disconnection and loneliness, isolation and frustration” when they did not have access to their mobile devices.

This study will investigate how mobile devices affect the social lives of adolescents. It will dive into the effects of smartphones and how they allow the youth to feel a sense of belonging and connectedness to their peers. It will also discuss how mobile device addiction affects the quality of their social interactions.

Although the new mobile technology has helped us to be able to keep in contact with friends and family from a distance, it has also taken away the quality of our face-to-face interactions. This is because young people have become addicted to communicating from mobile devices which subsequently creates an environment where they lack value in face to face interaction and prefer to use their mobile devices instead. This ever-developing change in communication has brought upon many questions regarding whether this change has a more positive or negative effect on the social lives of adolescents. I have decided to focus on the following: How have mobile devices changed the social lives of adolescents? How have mobile devices prevented young people from having proper in-person interactions? What causes mobile device addiction? Why are young people more susceptible to becoming addicted?
Chapter 2: Literature Review

The Growing Fixation Over Mobile Devices

From the invention of the first Motorola mobile phone to the newest Apple iPhone 11, mobile devices have rapidly grown into a staple item in everyone’s life. Mobile technology is an ever-developing field and each year there is at least one new upgrade to a device. From iPhones to iPods, iPads, tablets, and laptops, people can now say that they have all entertainment and communication at their fingertips. Humphreys noted that these “new technologies have provided a new place for people to be able to socialize in ways that they were already familiar with” (Humphreys, 2005, p. 811). The familiarity aspect is especially true because the phone was not a new thing to people, but mobile phones were an advancement to a communication method they were already familiar with.

When it comes to mobile technology, does this new convenience stand as an advantage? or is it creating a social divide between people when they are face to face? Quinn and Oldmeadow introduce the “martini effect” (Quinn & Oldmeadow, 2013, p. 237) which is defined as the constant availability of people through cell phones. The Martini Effect is a prime example of the convenience that mobile devices provide.

According to the Newport Academy, text messaging is the primary method of communication amongst teens (“The Latest on Teen”, 2017). Aside from text messaging becoming a primary method of communication, teens are also becoming digitally tied to their devices through games, and social media apps. Social media apps are applications that are similar to websites. These apps are used as another channel of communication between people. Most people use social media applications as a platform to share and discuss various content. The desire to communicate with one another through these many avenues causes this digital tie. Being digitally tied to devices has subsequently disconnected people from their lives in the present time. According to research done by Shea Bennett (2014), there are
currently more than 2 billion active social media users on the web. Bennett also conducted a survey where the results indicate that adolescent mobile device users between the ages of 15 and 19 spend an average of 3 hours per day on social media platforms. This research has shown that there is a thin line developing between normal device usage, overuse, and addiction. Bennett's survey shows that 18% of social media users were unable to resist checking their Facebook profiles after only a few hours. Bennett indicated that 28% of those participants open their iPhones and check their Twitter feed before they even get out of bed in the morning (2014).

**The Overuse of Mobile Devices is Prevalent Amongst the Youth**

According to studies done by Shalini Misra et. al. (2014), adolescents are heavy mobile device users. Even if they do not feel the need to use their phones, while out with a group of friends. This same study has shown that an individual will be inclined to use their mobile device anytime they see a friend take out theirs (Misra et. al, 2014, p. 276). This is called the iPhone effect. The iPhone effect is “when one person takes out their phone amongst a group and the rest follow suit, which will then result in a lack of conversation and eye contact” (Misra, S. et. al., 2014).

Young people mostly use their mobile devices to keep in contact with friends via text messages or social networking sites (Quinn & Oldmeadow, 2013). This convenient access to social networks and their friends may cause overuse of these devices as well. “Social networking sites are the fastest growing activity for adolescents” (Quinn and Oldmeadow, 2013). Recent statistics done on teens have shown that over 60% of them use their cell phones after they have gone to bed and it has negatively affected their sleep and 77% of them say that they also send messages during that time. Adolescents may excessively use their mobile devices, but many studies have shown this use to be within a normal range. Not only is this perceived as normal, but has been shown to improve adolescent relationships with their
peers. It has also made them feel better about themselves by giving them a sense of belonging.

Yuhan Wei believes that this “normal” use of mobile technology creates a lack of social and emotional interconnectedness among individuals. The aforementioned is true especially for youth because even as they gather in person, most times, they are using their mobile devices rather than interacting with one another. According to statistics from Newport Academy, over 70% of teens check their mobile devices on an hourly basis or feel the need to respond to any texts that they receive immediately, and 44% use their mobile devices at the dinner table (“The Latest on Teen,” 2017). These numbers are alarmingly high especially being that the development of mobile technology is not that old. As mobile technology advances, these numbers will only increase, which will lead one to believe that it will have no other choice but to negatively affect the quality of face to face communication between people, families, friends, and peers.

**The Misuse of Mobile Devices Can Have Detrimental Effects**

There are many ways people can misuse mobile devices. One of the most common misuses of mobile devices is overuse, which can lead to device addiction. Although mobile devices carry everything that people may need, whether it is contacting someone on the go, or needing directions to the next stop, people find themselves using their devices at all times. On average teens are using their phones for at least 7 hours each day (“The Latest on Teen”, 2017).

Once a teen has reached a level of addictive behavior their brains begin to react to their phone as if it were a drug. Just the sound of their phone ringing or a text message pinging through releases the dopamine hormone in their brain causing a drug-like reaction. They will constantly crave for the next message or ring coming from their phone. Because of this anticipation, they are more likely to ignore face-to-face interactions and create a block
between them and those around them (“The Latest on Teen”, 2017). Adolescents often become consumed in their phones while in the presence of other people. This overuse is causing a strain on personal face-to-face relationships, like the iPhone effect.

Cha and Seo stated, “When these characteristics [keeping up with fashion, pursuing interactions and feedback, seeking validation from peers], including novelty seeking in adolescents, are combined with their immature control competence, they are placed at a high risk of smartphone addiction” (Cha and Seo, 2018). Addiction is the result of these actions because these young people are constantly seeking feedback and validation from their peers. After receiving validation, it can only cause them to become addicted to seeking more from their peers.

Another issue involving mobile device usage is dependency. Adolescents have a significant level of dependence on their mobile devices. Jameel references Griffiths and Kuss with the term “always on” (Jameel, 2019, p. 780). This term means that the youth are always connected via their mobile phones. The youths’ phones are never turned off; they are constantly checking them throughout the day, and the phones are always next to them even when asleep. According to Quinn and Oldmeadow, “Young mobile phone users experience a feeling of disconnection, loneliness, isolation, and frustration when their mobile phone is unavailable to them” (Quinn & Oldmeadow, 2013, p. 239). Social disconnection was researched by Yuhan Wei. Yuhan stated that smartphones might be severing our connection to one another. Wei believes that people are becoming less connected to their “peers on a deeper level because mobile devices are distracting and people are unable to concentrate while engaging in a social atmosphere” (2016, p. 13).

This deep connection plays a very significant role in the way humans relate and communicate emotionally. If this connection is compromised by smartphone addiction, people will begin to face several socio-emotional concerns. This emotional dependency that
is developing, especially amongst adolescents, is becoming detrimental to both their mental and physical health (The Latest on Teen, 2017).

Young people are beginning to stray away from face to face communication and becoming dependent on the support that they receive from the use of their devices. The dependency is already causing many cases of emotional distress, anxiety, and depression (The Latest on Teen, 2017). Adolescents are experiencing emotional distress when they do not have access to their phones. This type of emotional reaction is unhealthy. Society must begin to acknowledge the issue that may be at hand, and stress the importance of face-to-face interaction, and how it has a positive effect on not only adolescence but all people.
Chapter 3: Methods

The design for this study is qualitative. The study covers the developing issue of unhealthy and addictive mobile device use amongst adolescents. To investigate the research problem, an ethnographic study was incorporated into the research design. The design consists of Phase I, a systematic literature search, and Phase II, an ethnographic study of four adolescents who are mobile device users.

Phase I

Phase I consisted of researching scholarly journal articles. This was conducted to collect data from any previous research. Peer-reviewed journal articles were collected from sources such as EBSCOHost, Google Scholar, and the SUNY Purchase College Library. The search terms used in these databases included, “unhealthy smartphone use amongst adolescents”, “cell phone addiction”, “teen mobile device misuse”, and “cell phones affecting face to face interaction”. A related book, The Cyber Effect, from Amazon Audibles, was beneficial. Due to the current Coronavirus pandemic, many of us are unable to use books as resources. All libraries in New York state are closed, except for online ebooks and articles.

Once the search was complete, all of the relevant data was extracted and incorporated into a synthesis matrix. Once the synthesis matrix was created it served as a guide for me to create my literature review. The systematic literature review was done by subcategorizing the main topics of the articles and synthesizing the information retrieved. This served as a good base for my research, whereas, I was able to organize all useful information from the sources. This, therefore, provided me with the key information I needed to use to add to the conversation.
Phase II

For the second part of the study, four adolescents were observed in a family social setting and all had access to their devices. It is sometimes difficult to find a group of adolescents, especially today, that do not have access to a mobile device. For part of this study, I will create a controlled observational environment. The group of adolescents will be encouraged to play a game without using their mobile devices. I will observe the adolescents in a family situation where they must interact face-to-face. For this group, the suggested activity will be a game of Scrabble.

This observation will create evidence of how the social interactions of young people are affected with or without the presence of their mobile devices. It will prove whether mobile devices influence face-to-face interaction among young people. The data collected was for the number of adolescents who excessively use their phones while in the presence of others. This number will be compared to the amount of those who do not. It will also be recorded whether the addictive habits of an individual, which is part of the group, will affect the rest of the group. This data will provide the information needed to know the habits of adolescents today when it comes to mobile device usage.

Phase I and Phase II were completed for the ethnographic study. The data from peer-reviewed articles and the data collected will be compared to conclude if the adolescents studied are excessively using their mobile devices or socially interacting during the Scrabble game. This created a basis for comparison. I compared the in-person interactions of the family activity with how the youth interacted with their mobile devices.

The literature will serve as a base for the positive and negative mobile device use. The observation of four adolescents in a group setting will serve as an ethnographic study. The observation and literature were used to conclude about mobile device use among adolescent users.
Research Questions

The following research questions will be answered with the data collected:

**RQ 1:** How has unhealthy mobile device usage prevented adolescents from having proper in-person interactions?

**RQ 2:** How have mobile devices changed the social lives of adolescents in the United States over the last 10 years?

**RQ 3:** Why are young people more susceptible to unhealthy smartphone use and mobile device addiction?

Limitations

As previously mentioned, due to the coronavirus, there are a few limitations that I did encounter while utilizing my preferred methodology. One limitation was that brick and mortar libraries were closed throughout the metropolitan area. This limited me to using eBooks and digital articles. Another limitation was that I was only able to have conversations with the adolescents in my family about their mobile device use.

Bias

My interest in this research topic was personal. As an adolescent, I was addicted to my mobile devices, no matter which one I was using. The attachment to my devices placed a strain on family time, my friendships, and relationships. This was very difficult to overcome. After I did overcome it, I began to believe that mobile devices could create an issue for sociality. For this study, I needed to put my bias aside so that I could objectively research this topic.

I decided to cover this topic because of the arising issue of unhealthy mobile device usage, specifically amongst the youth. Mobile device usage has astronomically increased, nearly doubling over the past 10 years. The increase in use has brought upon a connection between adolescents and their devices that is becoming borderline problematic. Everyone is
becoming accustomed to this dependency on mobile devices, but people must not lose sight of the importance of face-to-face interactions as well.
Chapter 4: Results

Introduction

The purpose of this study was to explore the social lives of adolescents and analyze how excessive mobile device usage has affected their abilities to interact face to face. The elements assessed were the usage, habits, and emotional connection that young individuals may have with their mobile devices. It then discusses how this connection influences the quality of face to face interactions with friends, families, and others around them. This chapter will examine the hypothesis and research questions, then address the relationship between the overuse of mobile devices and its effect on face to face interactions.

Chapter 4 will begin by summarizing all data that was collected and discuss how it was obtained. It will also report all findings from statistics. It will conclude with a summary of each research question and discuss the findings and results related to each question and end with a summary of all research findings.

Data Collection

The data was compiled over a few weeks. It was collected from peer-reviewed articles and resources and a small study done by myself. The majority of the statistics were acquired from the Pew Research Center. Originally, I had set out to do a larger study and interview adolescents regarding their cell phone usage and face to face interactions, but because of restrictions due to the COVID 19 pandemic, I was unable to conduct my original study. Subsequently, I had to rely mostly on my journal resources and the small amount of information I was able to gather from conducting a smaller ethnographic study within a week.
Phase I

Research Questions

RQ 1: How has unhealthy mobile device use prevented adolescents from having proper in-person interactions?

It was first speculated that a majority of today’s adolescents would have unhealthy addictive habits that would interfere with the interactions with those around them. Much of the research has proven that their habits may be a cause for concern, but it is not the majority of adolescents that have an issue having proper in-person communication. Habitual mobile device use has caused more youths to communicate from their devices rather than speaking in person. Wei stated, “more people prefer to stay at home and just connect with the outside world through the internet and their digital devices” (2016, p. 5). Researchers from the University of Maryland also indicate that “smartphone use is likely to make [adolescents] less engaged in prosocial behavior” (Wei, 2016, p. 13). These studies show that adolescents are developing a preference to communicate from their devices, causing a lack of face-to-face communication, but it does not necessarily determine whether they do not have the capability of having a proper in-person interaction. According to the data in Figure 1, obtained from the Pew Research Center, there are just as many social benefits from the use of mobile devices by adolescents as there are possible risks.

Figure 1; Mobile Devices & Adolescents (Brownlee, 2020)
RQ 2: How have mobile devices changed the social lives of adolescents in the United States over the last 10 years?

Over the last 10 years, mobile device use has increased exponentially. The adolescents of today are growing up in the mobile device era and because of it, their social behaviors are evolving. According to The Latest on Teen Cell Phone Addiction, “text messaging is now the most common way that teens communicate” (2017, para. 10). This has proven to be their preferred method of communication over meeting face to face and phone calls. The youth of today have become accustomed to using mobile devices. This is drastically different from what the youngsters of the past were used to. The martini effect is a prime example of how mobile devices have changed the lives of adolescents. Quinn and Oldmeadow say this effect causes people “to be connected to others almost anytime, anyplace, anywhere (2013, p. 237). In figure 2, the author L.M. Browning believes that this omniscient connection that modern technology gives us has disconnected us from the present moment. Quinn and Oldmeadow also point out that since adolescents have become so connected to their devices, “the source of guidance for identity development for them is beginning to shift from their parents and home environment to their friendship groups” (2013, p. 238). Today’s youth are more likely to seek and develop their identities from the influence of peers via mobile communication and social networking sites.

Figure 2; Vagabonds and Sundries (L.M. Browning, 2013)
RQ 3: Why are young people more susceptible to unhealthy smartphone use and mobile device addiction?

“Addiction comes from the human need for self-expression, which urges feedback from others” (Wei, 2016, p. 14). This is one of the reasons why young people are more susceptible to unhealthy smartphone use. It is human nature for people to want to feel as if they “belong” and this sense is even stronger for an adolescent. The adolescent stage is a time where young people are developing many aspects of their personalities. At this age, they are developing who they will become. Mobile devices have become a segue for young people to connect with their friends through direct contact and content sharing via social media. Social media plays a role in how adolescents become addicted to their devices. Social media provides them the opportunity to explore knowledge while allowing them to also interact in different ways. These platforms allow them to express themselves by posting content or sending messages to their friends and in return, they received feedback and validation. This goes back to what Wei said about addiction deriving from the human need for self-expression and feedback.

Phase II

Although there were some portions of Phase I that favored the idea of mobile phones not being an issue, Phase 2 shows the alternative perspective of the youth that feel that they benefit from mobile devices more than it is a distraction. The participants in Phase 2 also do not always have their mobile devices. They said that their phones are most of the time in their parent’s room. They stated that the phones are kept in the parent’s room at night during bedtime or when they need to charge. The parents make sure that the children are not on their devices 24/7 but the children also mentioned that that doesn't bother them anyway. They explained that they really only feel the need to use their phone when they're out and they need to contact someone or if they just want to talk to one of their friends, but other than that, they
do not feel compelled to have to pick up their phone and use it all the time. They also stated that most times their parents ask them if they would like their phones or if they need to use their phones and most times they say “no thanks, I don’t need it right now”.
Chapter 5 - Discussion

The idea of this study was to investigate the use of mobile devices among adolescents. The intent was to see whether mobile devices have had an unfavorable effect on how adolescents interact socially. As a result of my research, I figured out that the detrimental effect of mobile device addiction is not as prevalent as originally assumed. More people feel that mobile devices are beneficial, but there are disadvantages. Most of the articles discuss the disadvantages and their supposed effect on adolescents.

Phase I

Phase 1 of my research went how I expected it to go. I was able to gather many journal article resources. The only thing that changed that process was the fact that I could not physically go into any library and search for other source types. Most of the literature that I found discussed how mobile devices affect adolescents both positively and negatively. The articles elaborate on how mobile device addiction is becoming a problem for adolescents because of their vulnerability. As Cha and Seo said, Adolescents are at high risk for being addicted to their smartphone because of their inability to control certain behaviors because of their age, and they are addicted to seeking attention and feedback from their friends. Yuhan Wei also talked about self-expression causing others to chime in to voice their opinion. Wei also believes that this is the reason why adolescents may be becoming addicted to their devices.

Phase II

The outcome of Phase 2 surprised me the most. During Phase 2, I was able to actually discuss mobile device use with adolescents. The number of adolescents that I was able to speak with was not the amount I originally intended to use for my study. Once again, the inability to meet with anyone in public, due to the COVID-19 pandemic, put a damper on my original plans. Although I was unable to reach a larger quantity of youth that I was able to
speak with, I feel that the data that I was able to retrieve from the few that I did receive responses from sufficed for my research plan. The majority of the adolescents that participated in Phase II also seem to have control over their device usage.

**Conclusion**

Although Phase 1 of my study may show that there have been more negative effects associated with adolescents and their mobile device use, I feel that the results conclude a balance. Taking into consideration the results of phase 1 and there has proven to be a risk of mobile device addiction with unregulated use but with the results of phase 2, we are shown that with parental guidance or even self-regulation adolescents can use their devices without any risk of addiction or detrimental effects.

**So, What - Future Research**

For future research, it would be interesting to look into the effect of parental monitoring. This will be important to see if there is an effect on adolescents who are monitored compared to the ones who are given more freedom. It would be beneficial to see how parental monitoring makes a difference in the number of screen-time children are getting and how it has a positive impact on preventing mobile device addiction.
References


