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## An Investigation into the Relationship between Smart Phones, Family Communication, and Attachment

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AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN SMART PHONES, FAMILY  
COMMUNICATION, AND ATTACHMENT

By  
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*To the PCB-TLH Connection, for whom the depths of devotion have no end.*

*“For once we begin to feel deeply all the aspects of our lives, we begin to demand from ourselves and from our life pursuits that they feel in accordance with that joy which we know ourselves to be capable of.” – Audre Lorde*

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Last but not least, to Gizmo: bark bark, bark bark bark, bark bark, bark bark. Translation, in not as many words: I miss you, amiguito. I hope you are well.

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## **ABSTRACT**

In previous scholarly research, the relationship between family connectedness and mobile phone usage has mixed results, with some research touting phones as a relationship enhancer and other admonishing its role in the interpersonal divide between children and their parents. The research then branched off into examining whether or not phone use can be deemed “problematic” as opposed to phone use in other unique communication contexts. This thesis aims to examine if there was a relationship between Conversation Orientation, Mobile Phone Usage, and Attachment in early adolescent children. It was hypothesized that conversation orientation would negatively predict mobile phone use and that mobile phone use would negatively predict attachment. A survey design was employed utilizing a convenience sample of university undergraduate students (N=196). They were asked to keep their early adolescent experiences in mind while they completed the survey. Afterwards, data analysis was conducted using IBM SPSS Statistics 26. Results indicated that there was no significant relationship between conversation orientation and mobile phone usage, as well as no significant relationship between mobile phone use and attachment despite individuals with higher attachment scores registering higher phone use. Further research should work to define a phone use scale that is divorced from the realm of problematic phone use. Alternatively, there may be other factors at play in this relationship that could be introduced into future analysis. Utilizing early adolescents as a sample would provide a more detailed platform for analysis and generating conclusive results.

# CHAPTER 1

## INTRODUCTION & LITERATURE REVIEW

### Introduction

The world we are living in is becoming more and more interconnected via digital means. Accessing the internet can be as simple as accessing an app on a smartphone. Cellular data connections and Wi-Fi hotspots have expanded the effective area one could access the internet anywhere in the world. Technology has allowed individuals to become global citizens, with a situational awareness of occurrences that lie outside their personal spheres of influence, thus allowing people to leave much greater impacts on their world than ever before.

According to a Pew Research pamphlet released in 2019, it is estimated that around 81% of Americans own a smartphone, a drastic increase from the 35% from when they first started tracking smartphone ownership in 2011 (Pew, 2019). A far cry from the nearly four-thousand-dollar Motorola DynaTAC first released in 1983, smartphones that can fulfil the basic functions of voice calling and accessing the internet have become much more popular in recent years, overtaking “dumbphone” sales in 2013 (Peng, 2019). In other words, more complex mobile phones are created, distributed, and sold to more people every day.

Adolescence is a critical time in a child’s life; it’s the transitional phase in one’s life where they gradually move from the dependence and care of their parents to becoming a self-sufficient, autonomous member of society. The common consensus is that the process of puberty is the largest psychological factor in early adolescence and defines the age range of adolescents as 10-14 years of age (UNICEF, 2011). Part of adolescence is adolescents expanding their social networks, which technology has helped to hasten.



With the lowering cost of smartphones, it has become more feasible for multiple family members to utilize smartphones. While in 2004, Pew Research reported a twenty percent gap in the use of cell phones between parents (65%) and children (45%), that gap drastically shrunk to just a six percent margin by 2008 (77% for parents, 71% for children) (Pew 2009). Parents assert that mobile phones have been reported as being helpful in the daily planning of family life (Devitt & Roker, 2009). With this increase in access and use by smartphones among children has also come the increased concern among adults. They can feel that overconsumption can have adverse effects on the family unit, chief among them being the distancing of family members due to less frequent face-to-face interactions (Connell et al., 2015).

Media use among early adolescent children is one of the issues that are of utmost concern to parents (Duggan et al., 2015). It has been shown that mobile phone use is increasing among late adolescents (Santana-Vega et. al, 2019), as well as those in other stages of adolescents as well. An analysis of parents' opinions of their children's internet use by Bartau-Rojas and colleagues (2018) found two things: First, parents were more pessimistic rather than optimistic at the prospect of increased internet use; second, they acknowledged the benefits internet use had on their children such as access to information, self-management and digital autonomy as well as its use as a stimulus for parental supervision. In fact, maximizing the benefits and minimizing the risk of internet use among young children and teenagers remains one of the largest challenges faced by families, schools, and social and educational policymakers (Bartau-Rojas et. al, 2018). Attempting to solve this issue is difficult, in part due to the varied conclusions reached in previous scholarly research on the topic.

While there is much research that examines the effects of increased media use across various mediums (i.e., television, film, online gaming) has on children at the individual level, the

effects that mobile phones have on early adolescents within a family unit is not entirely clear. It is the early adolescent perspective that needs more quality research with regard to newer technology, in order to glean an insight as to the direction of future emerging media effects research should be. With technology advancing at an ever-growing rate, the consequences of exposure to mobile technology on families is a research area of great interest.

This thesis sets out to explore the relationship between family communication, mobile phone usage, and attachment in a child's early adolescent period. Utilizing a survey design of university undergraduate students, path analysis will assist in the investigation of any effects on parental attachment mobile phone use may have.

## **Literature Review**

### **Adolescents**

Investigating media effects research from a dual parent-child standpoint presents many challenges. This is due to the fact that either the parents, the children, or both parties may be completely oblivious to the implicit consequences of media consumption (Van den Bulck et al., 2016). A facet critical to understanding these effects—though often misrepresented—is the adolescent's perspective (De Mol & Buysse, 2008).

Of the research that has been done investigating media effects on adolescents, the results are diverse. Different proposed effects of media consumption on adolescents, range from two extremes. One is that technology is an expansion of their worldviews with a window to the outside world that is readily accessible in the palm of their hand. The other is that technology use can lead to a potential overreliance on technology for emotional gratification negatively affecting their real-world disposition (Prakash-Yadav & Rai, 2017). The result of this large variation in research findings highlight the challenge in determining the best strategies for managing

technology's pervasive, continued integration into daily life (Roehl & Stewart, 2018). The transition from child into adulthood is normally a challenging time for adolescents, as they begin to navigate an increasing sense of independence and self-discovery (Roth & Brooks-Gunn, 2000). Mobile phones provide another potential tool or distraction that early adolescents now have to reconcile in this confusing and difficult life transition.

Another unique aspect of adolescence is that many early adolescents are coming to terms with and struggling with identity formation and self-discovery (Strasburger et al., 2013). The large expectation is that during adolescence, individuals will develop the necessary skills to be able to function apart from the family (Lei & Wu, 2007). Very common among western societies, a progression away from the parental figures begins to occur in early adolescence (Larson et. al, 1996). The early adolescent sense of self is fragile and malleable, as teens will “try on” different personalities until they find one that they feel most aligns with their burgeoning self-concept (Schwartz & Pantin, 2006). The mobile phone's instantaneous nature and access to a myriad of information can provide adolescents with an alternative method in order to establish their identities (Lei & Wu, 2007). Children with a greater frequency of communication with their parents may utilize their mobile phones less.

Previous researchers have asserted that the internet is rapidly changing the manner in which adolescents communicate with one another about their existence (Eagle, 2007). As Lei and Wu (2007) point out:

The number of adolescent Internet users continues to grow not only because adolescents are intensely interested in forming online relationships, gathering information, and enjoying online entertainment but also because the expansiveness of cyberspace frees them from some of the constraints of adolescence by giving them easy access to a world beyond that of their families and schools. (p. 634)

While intergenerational transmission refers to the process in which children internalize norms and rules from their parents, it has been supposed that children may also, in turn, socialize their parents as well (De Mol & Buysse, 2008). New media research was very likely the first field in which the effect of children on their parents has been documented (Van den Bulck et al., 2016). For example, children are often the ones to bring about technological innovations in the home and assist their parents in understanding said communication technologies (Katz, 2010).

Therefore, an important question to ask within the field of effects research with children and adolescents is the effect of the introduction of media and content on the family (Van den Bulck et al., 2016). Socialization should be viewed as a bi-directional process that takes the perspective of both the parents and the children into account (Van den Bulck et al., 2016). Rich Ling (2010) describes the concept of adolescents beginning to reach out of their familial sphere and seek greater independence as emancipation. With respect towards mobile phones, Ling noted a large uptick in text message frequency before teens reach their 20s is an example of emancipation and should be considered a life phase of adolescent development (2010). To this end, Rich Ling and Brigitte Yttri (2006) provide the following excerpt as an explanation for how telephonic communication as a result of mobile phone access has exacerbated the emancipation process:

The mobile telephone has lowered the threshold for telephonic access. It has done this in a situation in which the adolescents are yearning to develop contact with peers and emancipate themselves from their parent's control. At the same time, parents can see both the device's positive and negative aspects.  
(p. 231)

## **Family Communication Patterns**

The family has long been considered one of the basic and most influential units of society. It is within families that individuals begin to build their basic understanding of how interpersonal interactions are started, developed, and maintained (Koerner & Fitzpatrick, 2002). Families are characterized both by their unique shared worldviews and by the value and belief systems which define them within the context of their social environment (Reiss, 1981). How adolescent members of a family learn to communicate with each of the other family members is influential when viewing how they eventually interact with strangers (Koerner & Fitzpatrick, 2002). However, varying methods of communication can and often do exist within the same family, unlike other communication contexts (Koerner & Fitzpatrick, 2002). Because the family is a unique communication context, Reiss (1981) contended that a typology should exist to help categorize different family types.

To that end, Ritchie and Fitzpatrick (1990) developed two axes of categorization that are dependent on both the expectations for homogeneity of shared values and beliefs and the communication environment cultivated within the family unit, known as conformity and conversation orientation, respectively. This thesis will focus on the latter of those two.

Conversation orientation is the degree to which families create an environment in which they are encouraged to participate in unrestricted interactions about a wide range of topics (Koerner & Fitzpatrick, 2002). Each of these two axes are arranged on a spectrum with two ends, high and low. Family groupings with high conversation orientation frequently have free conversations about various topics and willingly express their thoughts and feelings with each other about a wide range of topics, while families with a low conversation orientation, communication is less frequent, and the number of topics covered are minimal (Koerner &

Fitzpatrick, 2002). There is research to indicate that more communication with parental figures negatively predict mobile phone use among adolescents (Liu et. al, 2012). As children age, physical proximity becomes less important for attachment bonds; mediated communication tools like mobile phones can help maintain or even slow the degradation of developed attachment bonds (Lepp et al., 2016).

**Hypothesis 1: Higher Conversation Orientation Will Negatively Predict Phone Use  
Among Early Adolescents.**

**Mobile Phone Use**

Soon after its introduction, the mobile phone quickly became integrated into the fabric of everyday life (Wajcman et al, 2008). Family life is no exception to this phenomenon. Generally, family technology findings have led to divided opinion of as to what the consistent effect is (Carvahlo et. al, 2015).

Wajcman et al. (2008) also noticed that mobiles phones are overwhelmingly used for social connectivity and that, with families, phones have allowed for more frequent communication and micro-coordination of daily familial life. This micro-coordination may serve to either reinforce the established conversation orientation or allow for them to be more amorphous and become less rigid over time, primarily due to the increased frequency of communication afforded by mobile phones. The direct contact as a result of mobile phones can be positive or negative depending on the individual and the family structure that they are a part of (Chen & Katz, 2009). Chen and Katz (2009) ultimately assert that better parent-child relationships via increased frequency of communication are a direct result of their adoption of

mediated communication via mobile (2009). However, findings like this are not consistently supported by subsequent research.

Adolescents in prior research in the topic area have mixed opinions when it comes to the impact that mobile phones have on their lives. On one hand, adolescents view mobile phones as a safety blanket to protect themselves from potentially dangerous situations, allowing them to stay out longer (Devitt & Roker, 2009). They also feel it allows them to put their parents' minds at ease, since they can instantly tell them where they are and at what time they will return home (Devitt & Roker, 2009). Adolescents feel that the autonomy they are beginning to seek can be more easily afforded to them due to the independence and social flexibility that mobile phone technology allows them, with younger age groups even reporting greater peace of mind as a result (Devitt & Roker, 2009).

Parents have much different conceptions of the impact of mobile phones on their children. While a majority of the parents interviewed by Devitt and Roker (2009) reported that they too were fond of the fact that they can instantly communicate with their child and easily monitor their whereabouts, parents were particularly concerned about the safety of their daughters more so than their sons, despite adolescent girls not feeling this same level of fear. Parents of children that live in urban areas particularly felt worried about the safety of their children after being given a mobile phone and preferred to speak to them (Devitt & Roker, 2009). Despite this, parents did not think that mobile phones made their children any more vulnerable to bullying and violence, reasoning that these things already happened regardless of mobile phone ownership (Devitt & Roker, 2009). Nevertheless, the parents had to adapt to the rapid autonomy and changes brought on by new mobile technology (Devitt & Roker, 2009). Increases in mobile phone ownership, especially among adolescents, leaves parents with a

societal and social pressure to both develop and maintain family technology rules (Lanette & Mazmanian, 2016).

The 24-hour nature of mobile phone and connectivity lends itself to a new expectation for constant socialization among peer groups, which has also raised concerns about the authenticity of these mediated social interactions (Roehl & Stewart, 2018). Another effect of constant connectivity is the persistent managing of adolescents' public persona. While using social media to selectively project the positive aspects of their lives, adolescents overwhelmingly report that their online identity does not reflect their true self (Turkle, 2015). Adolescents are in the precarious position to have to navigate balancing these things on their own.

Constancy has been posited as a new term to describe this ubiquitous and continuous state of connected screens in the lives of children and adolescents and often compared to being "on call," always ready to engage and interact with others electronically (Borzekowski, 2019). The "on call" analogy comes about because of the striking similarity in how adolescents deal with notifications in a manner similar to how doctors, nurses or first responders are prepared to respond to an unscheduled emergency nearly instantaneously (Borzekowski, 2019). Not unlike first responders and medical professionals, it has been asserted that adolescents who are more constantly connected to their devices have also suffered from poorer sleep quality and quantity, an improper balance of work and home responsibilities, and difficulties in executing quotidian tasks (Borzekowski, 2019).

### **Attachment**

Attachment has been a psychological metric utilized to describe the closeness of family members to one another. The start of attachment in this capacity can be traced back to John Bowlby's (1958) studies of postwar European children who had been separated from their



maternal figures and how it related to juvenile delinquency in the 1930s. Bowlby (1958) noted that the extent to which mothers would allow close proxemic contact with their children has a profoundly positive effect on the child's development, whereas denial of this intimate contact would lead to emotional disturbances in the infants when they grow up. Eventually, Bowlby further developed these ideas in the years following with even more adolescents who were separated from their families when they were infants as a result of the post-war years.

Bretherton (1980) asserts that Bowlby's attachment system is a continuous active system in which attachment bonds are strengthened or weakened depending on the nature and result of the interaction on the part of the parents. If parents were to cause attachment insecurity in their children, they may turn to negative avoidance behaviors to cope with the created insecurity (Howard & Medway, 2004).

The attachment measure was originally developed by Armsden and Greenberg (1987), who defined it as a meaningful and lasting affective bond with a father, mother or a close peer. It is characterized by good communication, emotional closeness, and trust. The development and strength of attachment begins in childhood and depend largely on physical proximity (Lepp et al., 2016). The potential disruption of attachment formation can lead to emotional or psychological disturbances (Bowlby, 1977). As Bowlby (1977) has laid out, a sense of security is derived from the maintenance of an attachment bond; in contrast, anxiety, sadness, depression, and anger may be produced by the threatened or actual loss of attachment relationships, or by unresponsive and unpredictable attachment relationships. Because of this, attachment has crucial implications for the development of adolescents into psychologically stable adults.

Attachment has been shown to negatively correlate with aggression and depression in adolescents (Lei & Wu, 2007). In early childhood, attachment is constructed via physically and emotionally intimate behaviors and actions, the primary object of attachment likely being the parents or legal guardians. However, beginning in adolescence, symbolic communication by means of telephones, letter, and Internet becomes more important than physical approximate-seeking behavior in infancy and childhood (Leondari & Kiosseoglou, 2000). While they are growing up, adolescents begin to feel more alienated from their parents and start to become more devoted to peers and close friends for emotional support (Lei & Wu, 2007). This study is aiming to examine if mobile phone use plays a factor in subsequent attachment between early adolescents and their parental figures.

Adolescents in Devitt and Roker's (2009) study indicated that they mainly communicated with their parents via mobile devices in order to make plans and arrangements or to negotiate future activities. With the introduction of media into the adolescent world, they might regard the Internet as their new attachment figure or may seek new attachment figures, such as online friendship, through the Internet (Leondari & Kiosseoglou, 2000). Allen and Miga (2010) noted that in interviews, early adolescent attachment is based primarily more on friendships than their relationship with their parents.

The role of new technologies in the home creates some distancing effects between parents and children as well. Adolescents begin to acquire more skill in using interactive media, which in turn reduces their dependence on their parents (Bartau-Rojas et al., 2018). Ling and Bertel (2013) note that mobile phones allow early adolescents freedom from their parents' surveillance and privacy by being able to personally make and receive call and texts. The speed at which technological changes occur may lead to more conflict between parents and children,

since they end up experiencing different developmental worlds in terms of the technology available to children of today versus the more primitive technology the parents grew up with (Arnett 2014). This occurrence adds evidence to a potential causal relationship between technology usage and the state of parent-child attachment.

It has been shown that communication remains an essential element in the development of attachment in adolescence and can be sustained via instant messaging and social networking provided via internet-enabled phone access (Lepp et al., 2016). To this end, mobile phones can be seen as instruments that can in fact enhance family relationships: students who said they had better quality communication with their parental figures spent less time on their mobile phones (Santana-Vega et al., 2019). However, Liu, Fang, Deng, and Zhang (2012) found that quality communication between adolescents and their parents was negatively correlated with the degree of the adolescents' internet addiction.

Going further, other studies have found that uniquely, a parent-child relationship has a directly negative impact on mobile phone use (Zhen et al., 2019). A study conducted by Li and Hao (2019) uncovered that mobile phone use and parental attachment share a negative relationship; They assert that the mobile phones led to a better sense of mindfulness, a present-oriented state of mind which allowed adolescents focus back on the closeness of their relationships to their parental figures. Additionally, in a study run by Chong et. al (2020), similar results were reported: screen time among adolescents was negatively linked with parental attachment.

When discussing the past literature on mobile phone use, there is evidence suggesting a link between family interpersonal communication, phone use, and attachment in early adolescence Generally, more studies support a negative relationship between phone use and

communication or phone use and attachment. This thesis aims to test some of those arguments presented that communication between early adolescents and parents can be negatively impacted by phone use, which in turn can affect attachment in a negative manner.

**Hypothesis 2:** Individuals That Report Higher Phone Use Frequency Will Also Report Lower Parental Attachment.

## **CHAPTER 2**

### **METHODS**

#### **Participants**

In order to properly address the hypotheses as presented, a survey design was utilized. This was the best way to obtain a large amount of information about the media usage habits of undergraduate students when they were in early while also minimizing the risk of perceived invasiveness into their personal lives. The survey was distributed to students through the School of Communication SONA system, and was conducted via Qualtrics. Participants completed the questionnaire regarding their mobile phone and internet use and its potential impact on attachment to their parents or legal guardians in their early adolescence.

An additional reason that an undergraduate sample was utilized was because of the fact that early adolescents may not have a complete understanding of what exactly is happening to them from a communicative standpoint with respect towards mobile phone adoption due to the differences in cognitive development. A third justification for the use of an undergraduate research sample is that despite the best attempt to ensure confidentiality, children and adolescents often report responses that they believe will be pleasing in the eyes of their parents. There are often discrepancies in response information between children and their parents on similar topics (Cleridou et. al, 2017).

The sample comprised of 196 students at a large southeastern university. The average age of the sample was 20.82,  $SD= 2.77$ . The gender breakdown was as follows: Female 87.8%, Male 12.2%. The race/ethnicity breakdown was as follows: Caucasian 75%, Hispanic/Latino 20.4%, African American 7.1%, Asian 7.1%, and Other 0.5%. For race, the frequencies may not add up to 100% because participants were given the option to select multiple races or ethnicities if it felt

applicable to them. The standing breakdown was as follows: Junior 42.3%, Senior 35.2%, Sophomore 17.3%, Freshman 3.1%, and Graduate Student 2%.

## **Variables**

Most survey items were measured on a 7-point Likert scale, from 1 being “Strongly Disagree” and 7 being “Strongly Agree.” Conversation orientation is the independent variable of interest. This was measured using the Revised Family Communication Patterns (RFCP) Instrument developed by Koerner and Fitzpatrick (2002) (Cronbach’s  $\alpha = .95$ ). It consists of 15 items such as “My parents often ask my opinion when the family is talking about something.”

Frequency of phone use was measured using questions developed by the researcher. Observations that score highly on this scale are said to have greater mobile phone usage and those with lower scores are considered to have less mobile phone usage. This scale measures the extent to which mobile phone use affects the user’s life experiences, such as time spent with friends and family as a result of mobile phone use. It was measured on a 5-point scale ranging from 0-15 minutes of phone use a week (1) to an hour or more (5).

Attachment is the dependent variable in the study. It was measured using the parent scale items section of Gullone and Robinson’s Revised Parent and Peer Attachment Inventory (2005) (Cronbach’s  $\alpha = .93$ ). The questions were reworded to ask participants about their middle school aged years as opposed to the present. Respondents scoring high on this scale are considered to have higher attachment to their parental figures, while respondents scoring low on this scale are considered to have lower attachment to their parental figures. Sample items include “My parents listen to my opinions” and “I don’t get much attention at home.” All scale items can be found in Appendix A.

## CHAPTER 3

### RESULTS AND DISCUSSION

#### Results

Once all the data was collected, IBM SPSS Statistics 27 was utilized in order to conduct the data analysis. For Hypothesis 1, Conversation Orientation and Phone use was broken into two groups, a high group and a low group utilizing a median split at 4.6 for the former and 4.5 for the latter. Then, a Chi-Square test was utilized to test the null hypothesis that there is no relationship between Conversation Orientation and Phone use. For Hypothesis 2, the data set was split into two groups based on high phone use frequency and low phone use frequency utilizing a median split of 4.5, with an independent-samples T-Test employed in analysis against a null hypothesis of no relationship between phone use and attachment.

Hypothesis 1 supposed that Conversation Orientation and phone use in early adolescents had a negative relationship. A chi-square test was conducted assuming equal proportions and it was determined that there was no significant association between Conversation Orientation and Phone Use,  $X^2(1, 195) = .2, p = .44, \text{Phi} \ \& \ \text{Cramer's } V = -.01 \ \& \ .01$ , respectively.

Hypothesis 2 predicted a negative relationship between Phone Use and Attachment. An independent samples T-Test revealed that there was no significant effect,  $T(194) = -.30, p = .38$ , despite high phone use ( $M = 5.01, SD = .97$ ) reporting higher attachment scores than low phone use individuals ( $M = 4.97, SD = 1.09$ ).

#### Additional Findings

Following primary analysis, the researcher elected to conduct some subsequent data investigation. Firstly, the question “With whom did you communicate with the most using your mobile phone?” was examined. Complete results for this question can be found in Appendix D.

Of the respondents who had a mobile phone in their early adolescent phase, 56.6% of them reported that they communicated with their friends or acquaintances the most during their early adolescence, which left the remaining 43.4% of respondents stating they communicated with their family members the most in that time. With this information, the initial sample was split into two groups, a group that primarily used their mobile phone to talk with their family and a group that used their mobile phone to talk to their friends and acquaintances.

An independent samples t-test showed that the difference between respondents who used their mobile phones to communicate with their family ( $M = 4.8$ ,  $SD = 1.37$ ) and respondents who used their mobile phones to communicate with their friends ( $M = 4.42$ ,  $SD = 1.37$ ) on Conversation Orientation was approaching significance,  $t(169) = 1.726$ ,  $p = .09$ . A Factorial ANOVA was conducted to compare the main effects of phone use frequency (high or low) and the group with whom the respondents talked to more with their mobile phones (family or friends) and the interaction effect between the two on attachment. I discovered that the main effect of phone use frequency on attachment was not significant,  $F(1, 167) = .01$ ,  $p = .92$ . The main effect of whom respondents used their phones with more was also not significant,  $F(1, 167) = .10$ ,  $p = .75$ . the interaction effect of both factors on attachment was also found to be not significant,  $F(1, 167) = .34$ ,  $p = .56$ .

## **Discussion**

The study found that conversation orientation did not have a strong effect on phone use. Essentially, the idea that early adolescents retreat into their phones because they do not live in a home environment that is comfortable for them to freely express themselves without the use of mobile phones is not one supported by this research. The findings with respect to mobile phones and communication seem to suggest that the relationship with parent-child communication and



mobile phone usage are contextually dependent on the family environment the adolescents reside in (Chen & Katz 2009). However, contrary to Chen & Katz's assertion, the data did not support their findings of increased parent-child communication being a result of mobile phone introduction. Additionally, the measurements for phone use frequency were very high, with a median of 4.5 on a five-point scale. These results may have been found due to either the participants in the sample having grown up with technologically capable parents at home or mobile phone technology becoming so commonplace they aren't thought of as factors affecting communication between parents and their early adolescent children.

The study also found that phone use did not have a significant effect on parental attachment. Mobile phone use has no supportable effect on how attached early adolescents are to their parents. This can potentially be due to the formation of the attachment bond existing before the introduction of the mobile phone into the life of an early adolescent. However, the assertion made by Lepp (2016) of mobile phones assisting in the continued development of attachment does not have support with the data and analysis presented herein. For this sample, it may be possible that mobile phones are mostly seen and approached as a communication tool, as stated by Devitt & Roker (2009), but not as a bonding tool. Mobile phones were found here to not enhance family relationships, as Santana-Vega and colleagues (2019) found, but it did not hurt those relationships, either.

The additional analyses revealed that there was no significant effect of who early adolescents use their phone to communicate with and their conversation orientation. According to this finding, the communication environment of early adolescents at home is not impacted by the introduction of a mobile phone into their communication arsenal. Additionally, phone use frequency, as well as with whom early adolescents speak on their mobile phones have no

influence on their familial attachment. The study examined the common notion that early adolescents are no longer attached to their parental figures because they have their mobile phones and/or their friends in order to hide themselves away in. The findings provided by the additional analysis do not support this notion. This speaks to the idea that technological mediums should be considered as communication tools as opposed to being the sole instigators of social unity or division.

### **Implications**

From a theoretical perspective, the relationship between family communication, mobile phone usage, and attachment needs to be further reconsidered. Research into the interaction between these constructs seems to have stagnated since the late 2000's. Either a reinterpretation of how these phenomena work together or even a reimagining of how these ideas are thought of in order to discover relationships that measure them accordingly. The research conducted suggests that these ideas cannot give credence to the popular trope of adolescents living with their face buried in their phones, like certain media messages like to espouse. This lack of consensus between what has been found in past forays into the role of mobile phones in familial life is precisely what drives scholars to continue to investigate the phenomenon.

From a practical perspective, this study further illustrates why the role of technology, particularly the mobile phone, needs to be further researched in order to create a clearer picture of its effects on early adolescents. An agreed understanding on what mobile phones do to domestic life among adolescents and their legal guardians is important information for parents to have before making that decision to give their children a mobile phone. We are now at the point where more and more individuals are afforded the luxury of receiving a mobile smart phone for personal use as students (Subramani-Parasuraman et. al, 2017). With widespread mobile phone

ownership well on the way to becoming very commonplace, it appears that the research in technological-familial interactions was left on the backburner in favor of research on newer technology or technological addiction. While this gap still exists in understanding how attachment, conversation orientation, and the role of phones exist, more information would be needed in order to best explain it. These factors will be discussed in the limitations section.

With regards toward the additional findings, there was no difference between the group that is frequently communicated with and the subsequent communication orientation and attachment to their parental figures. Parents often struggle with the decision of whether or not to give their children a mobile phone; they fear the idea of their child isolating themselves into the world of the internet offered to them due to mobile phones. The study presented herein shows that this fear is one that may not be warranted, as the data suggests that mobile phone technology has no discernable effects on familial communication or attachment.

### **Limitations & Directions for Further Research**

The largest limitation that this study contained was that, while the survey was designed and intended to gauge early adolescent phone use, an undergraduate student sample was utilized in order to collect survey responses. Access to early adolescents proved too difficult and risky due to the COVID-19 pandemic in which this study was executed, so a student convenience sample was utilized. Another limitation as a direct result of the chosen sampling method is the participants' reliance on memory recall in order to gauge an accurate response about their life with their parents and mobile phones if they had one. With reliance on memory there is bound to be either a simple misremembering of these events and interactions or a reflexive understanding of what life was like in those times. Further research should attempt to use early adolescents as

their research sample, when possible, since its best to receive data directly from the population desired.

A following limitation discovered in the data analysis is the scale used for phone use. It was a rudimentary frequency measure designed by the researcher. The scale was assigned on a five-point researcher-generated scale instead of a seven-point Likert scale. This, combined with the memory recall limitation mentioned earlier, led to a ceiling effect in responses, with most of the respondents measuring the highest in the phone use frequency scale. A quality scale that measures phone use frequency alone is not readily available; many published scales lack sufficient internal consistency and test-retest reliability (Harris et. al, 2020). Most scales available, such as the ones developed by Merlo, Stone and Bibbey (2013) and Foerster and colleagues (2015) measure *problematic* mobile phone use, which was not the focus of this study. Further research should first focus on the development of a scale that measures the frequency of phone use to mitigate subsequent anomalies in statistical analysis. Additionally, further studies should consider other factors within this relationship outside of the ones discussed in this study. It may very well be possible that adding more factors into the theoretical modelling process may reveal a more accurate model of this phenomenon.

An additional limitation within the study is the analysis involving the phone use frequency variable. This analysis involved splitting the sample into two groups based around the “median” of the responses in phone use frequency, which was determined to be 4.5. because phone use frequency was a continuous variable (the highest value on this question was 61 or more minutes of phone use per day), the split created was not a true median. Conceptually, the “medians” of continuous variables are not the midpoint because the values of such variables can

range from 0 to potentially, infinity. To this median of almost an hour or more phone use can be as varied as 62 minutes of phone use a day or five hours depending on the responses collected.

A study of note that examined the phenomenon of the role of mobile phones in family communication is a study conducted by Warren and Aloia (2018). They found that, when it came to the impact of mobile phones on family life, it was dependent on the role the mobile phone played in the relationship (Warren & Aloia, 2018). Relation-centric uses of mobile devices were predictive of feelings of closeness, of which attachment may be one, but conversely, more functional mobile phone use among family members did not predict closeness (Warren & Aloia, 2018). Future research should focus more on the specific task at hand the mobile phones are being utilized for in order to determine its effect on closeness, as it may be contextually dependent on the role the phone is playing (Warren & Aloia, 2018). This further reinforces the idea that mobile phones are tools rather than the source of changes in familial relations and communications.

### **Conclusions**

Attachment and family communication are undoubtedly very complex phenomena to quantify. This study attempted to discover a negative relationship between conversation orientation and mobile phone use and a negative relationship between mobile phone use and parent-child attachment. Following execution of a survey and subsequent data analysis, it can be concluded that no significant relationship exists for any of the two hypothesized relationships. The reliance on memory recall and potential ceiling effects on the data were limiting factors in the analysis process. In all, the research conducted attempted to dive into a relationship between technology and everyday human interaction that is often speculated about by parents and childcare experts alike. The divided opinion on the impact mobile phones have on family

communication and attachment proved the perfect context for this study to be conducted. The survey, while effective in gathering a variety of responses for analysis, had some flaws, primarily relying on a self-made phone use scale that did not prove effective in the analysis phase. The study shows that it may not enough to take these three constructs (conversation orientation, phone use, and attachment) alone in order to analyze this phenomenon.

A scale that quantifies phone use objectively would be needed for more nuanced analysis. Most phone use scales around are primarily for problematic phone use, indicating use for some kind of addiction research, which this study was not rooted in. if possible, it would be of extreme benefit to future researchers to conduct their research using early adolescents as their sample, as their input may paint a better picture of what is going on. This study showed that mobile phone use among adolescents is a very complex issue that warrants further research in this topic must be continued and not left by the wayside.

# APPENDIX A

## SURVEY ITEMS

### I. Demographic Questions

1. Please list your age in years. Please use a whole number.
  
2. Please list your standing in school.
  - a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior
  - e. Grad
  
3. Please list your gender.
  - a. Male
  - b. Female
  - c. Other
  - d. Prefer not to say
  
4. Please list your race/ethnicity. Select all that apply.
  - a. African American
  - b. Asian
  - c. Caucasian
  - d. Hispanic/Latino
  - e. Indigenous/Native
  - f. Other (Please List)

## **II. Revised Family Communication Patterns Instrument (Koerner & Fitzpatrick, 2002)**

For these questions, think about the time you were in middle school:

- 1) In our family we often talked about topics like politics and religion where some persons disagreed with others.
- 2) My parents often said something like “Every member of the family should have some say in family decisions.”
- 3) My parents often asked my opinion when the family is talking about something.
- 4) My parents encouraged me to challenge their ideas and beliefs.
- 5) My parents often said something like “You should always look at both sides of an issue.”
- 6) I usually told my parents what I am thinking about things.
- 7) I could tell my parents almost anything.
- 8) In our family, we often talked about our feelings and emotions.
- 9) My parents and I often had long, relaxed conversations about nothing in particular.
- 10) I really enjoyed talking with my parents, even when we disagreed.
- 11) My parents encouraged me to express my feelings.
- 12) My parents tended to be very open about their emotions.
- 13) We often talked as a family about things we had done during the day.
- 14) In our family, we often talked about our plans and hopes for the future.
- 15) My parents liked to hear my opinion, even when I didn’t agree with them.



### III. Mobile Phone Use Frequency Questions

For these Questions, think about the time when you were in middle school.

- 1) Did you own a mobile phone during this time?
  - a. Yes
  - b. No
- 2) How many minutes per day would you say you used your mobile phone?
  - a. 0-15
  - b. 16-30
  - c. 31-45
  - d. 46-60
  - e. 61+
- 3) When you used your mobile phone, what was the most common activity performed?
  - a. Web Browsing
  - b. Online Shopping
  - c. Messaging
  - d. Social Media
  - e. Other (Please List)
- 4) With whom did you communicate with the most using your mobile phone?
  - a. Mother
  - b. Father
  - c. Sibling
  - d. Extended Family
  - e. Friend(s)
  - f. Other (Please List)

#### **IV. Revised Parent & Peer Attachment Inventory (Gullone & Robinson, 2005)**

For these Questions, think about the time when you were in middle school.

1. My parents respected my feelings.
2. My parents were good parents.
3. I wish I had different parents.
4. My parents accepted me as I was.
5. I couldn't depend on my parents to help me solve a problem.
6. I liked to get my parents' view on things I was worried about.
7. It did not help to show my feelings when I was upset.
8. My parents could tell when I'm upset about something.
9. I felt silly or ashamed when I talked about my problems with my parents.
10. My parents expected too much from me.
11. I easily got upset at home.
12. I got upset a lot more than my parents knew about.
13. When I talked about things with my parents, they listened to what I think.
14. My parents listened to my opinions.
15. My parents had their own problems, so I didn't bother them with mine.
16. My parents helped me to understand myself better.
17. I told my parents about my problems and troubles.
18. I felt angry with my parents.
19. I didn't get much attention at home.
20. My parents supported me to talk about my worries.
21. My parents understood me.
22. I didn't know who I can depend on.
23. When I was angry about something, my parents tried to understand.
24. I trusted my parents.
25. My parents didn't understand my problems.
26. I could count on my parents when I needed to talk about a problem.
27. No one understood me.
28. If my parents knew that I was upset about something, they asked me about it.

## APPENDIX B

### IRB APPROVAL FORM

FLORIDA STATE UNIVERSITY  
OFFICE *of the* VICE PRESIDENT *for* RESEARCH



### EXEMPTION DETERMINATION

March 5, 2020

Dear Christian Chambless:

On 3/4/2020, the IRB staff reviewed the following submission:

Type of Review:	Exempt (2)(ii) Tests, surveys, interviews, or observation (low risk)
Title:	An Investigation into the Relationship between Family Communication and Smartphone Introduction
Investigator:	Christian Chambless
Submission ID:	STUDY00001069
Study ID:	STUDY00001069
Funding:	None
Grant ID:	None
IND, IDE, or HDE:	None
Documents Reviewed:	<ul style="list-style-type: none"><li>• Interview Questions.pdf, Category: Survey/Questionnaire;</li><li>• An Investigation into the Relationship between Family Communication and Smartphone Introduction IRB.pdf, Category: IRB Protocol;</li><li>• Consent Form.pdf, Category: Consent Form;</li></ul>

	<ul style="list-style-type: none"> <li>• Recruitment Flyer.pdf, Category: Recruitment Materials;</li> </ul>
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The IRB staff determined the protocol qualifies for exemption, effective on 3/4/2020.

You are advised that any modification(s) to the protocol for this project that may alter this exemption determination must be reviewed and approved prior to implementation of the proposed modification(s).

Modifications to the research may invalidate the exemption determination (because the research no longer meets the exemption criteria described in HRP-312 – WORKSHEET – Exemption Determination).

Examples of minor changes to exempt research that would *not* alter the exemption determination and should therefore not be submitted to the IRB for further review include the following:

- Making administrative (formatting, grammar, spelling) revisions to the protocol, consent or recruitment materials or other study documents
- Adding or revising non-sensitive questions or non-identifiable response options to a survey, interview, focus group or other data collection instrument

## Page 1 of 2

- Increasing or decreasing the number of study subjects—*unless* adding a new study sample such as children or prisoners or adding a new source of data or records
- Making study team/personnel changes—*except* a change in Principal Investigator (PI)

Examples of changes to exempt research that do require prospectively submitting a modification to the IRB before implementing changes include the following:

- Making substantive revisions or additions (e.g., change in PI; funding source; sample; source of study subjects or their data; study sites or settings; procedures, interventions or interactions with study subjects; use of any drug, device, supplement or biologic; study subjects' time or duration spent performing or participating in study activities) to the protocol, consent or recruitment materials or other study documents
- Adding or revising sensitive questions or identifiable response options to a survey, interview, focus group or other data collection instrument
- Adding a new study sample such as children or prisoners or adding a new source of data or records
- Obtaining, using, studying, analyzing, generating, storing or maintaining identifiable information or identifiable biospecimens in addition to or in lieu of de-identified or anonymous information or specimens

- Change in study risks (e.g., impact upon study subjects; impact upon students' opportunity to learn educational content or assessment of educators who provide instruction; any disclosure of study subjects' responses outside of the research may place study subjects at risk of criminal or civil liability or be damaging to subjects' financial standing, employability, educational advancement or reputation)
- Change in Principal Investigator (PI) or (for students) faculty advisor
- New or change in financial interest

In conducting this protocol, you are required to follow the applicable requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the Library within the RAMP IRB system.

Sincerely,

Office for Human Subjects Protection (OHSP)  
Florida State University Office of Research  
2010 Levy Avenue, Building B Suite 276  
Tallahassee, FL 32306-2742  
Phone: 850-644-7900  
OHSP Group Email: [humansubjects@fsu.edu](mailto:humansubjects@fsu.edu)  
OHSP Web: <https://www.research.fsu.edu/hs>

## APPENDIX C

### CONSENT FORM

Key Information: The following is a short summary of this study to help you decide whether or not to be a part of this study. More detailed information is listed later on in this form.

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you may have experience with a mobile phone in your middle school years.

What should I know about a research study?

- Someone will explain this research study to you.
- Whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you.
- You can ask all the questions you want before you decide.

Why is this research being done?

***The researcher is interested in discovering any differences in communication between parents and children after they've been given a smartphone for personal use. While it has been observed that communication patterns vary due to mobile device use, the nuances of how these patterns change from the perspective of the parents and the children have not been explored at length. Benefits of the study include an increased knowledge and understanding of the changes that take place in the family communication model after introduction of smartphones for the children.***

How long will the research last and what will I need to do?

We expect that you will be in this research study about 15 minutes. You will be asked to answer a series of survey questions about your communication with your parents in the time period before and after you were given a smartphone, which will be recorded via Qualtrics. More detailed information about the study procedures can be found under ***“What happens if I say yes, I want to be in this research?”***

Is there any way being in this study could be bad for me?

***The most important risk involved in taking part in the study involves potential emotional distress resulting from the nature of the Survey questions.***

More detailed information about the risks of this study can be found under ***“Is there any way being in this study could be bad for me? (Detailed Risks)”***

Will being in this study help me in any way?

We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include ***a greater personal understanding of changes in communication between parents and children after giving them smartphones.***

What happens if I do not want to be in this research?

Participation in research is completely voluntary. You can decide to participate or not to participate. Your alternative to participating in this research study is to not participate.

**Detailed Information:** The following is more detailed information about this study in addition to the information listed above.

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at **(850)-645-0915**

This research has been reviewed and approved by an Institutional Review Board (“IRB”). You may talk to them at 850-644-7900 or [humansubjects@fsu.edu](mailto:humansubjects@fsu.edu) if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

How many people will be studied?

We expect about 1000 people here will be in this research study out of the SONA Subject Pool

What happens if I say “yes” to being in this research?

***You will be complete a survey, taking approximately 15 minutes.***

What happens if I say “yes,” but I change my mind later?

You can leave the research at any time it will not be held against you. You will not be asked to explain the extent of your withdrawal and your data will not be utilized in the analysis phase.

What happens to the information collected for the research?

Efforts will be made to limit the use and disclosure of your personal information, including research study and medical records, to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization. In the event that ***the research team is likely to uncover abuse, neglect, or reportable diseases, we are mandated to report such information to the IRB and the Florida State University School.***

***Your information or samples that are collected as part of this research will not be used or distributed for future research studies, even if all of your identifiers are removed.***

We may publish the results of this research. However, we will keep your name and other identifying information confidential to the extent allowed by law.



## APPENDIX D

### FREQUENCY TABLE OF WHO RESPONDENTS USED THEIR MOBILE PHONE TO COMMUNICATE WITH THE MOST

	Frequency	Percent
No phone	7	3.6
Mother	60	30.6
Father	4	2.0
Sibling(s)	3	1.5
Extended family	1	.5
Friend(s)	111	56.6
Other	9	4.6
Missing	1	.5
Total	196	100

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## BIOGRAPHICAL SKETCH

### Christian Chambless

2<sup>nd</sup> Year MA Student seeking to join PhD program in order to research the effect of mobile communication technology on family communication across different cultures, an extension of master's thesis research.

### Education

**Florida State University** — M.A., Tallahassee, FL

August 2019 — May  
2021

- Master's GPA = 3.94
- Relevant coursework: Mass Communication Theory and Effects, Statistical Methods in Communication Research, Qualitative Research Methods, Content Analysis, Political Economy of Media.

**Florida State University** — B.A., Tallahassee, FL

- Bachelor's GPA = 3.40
- Relevant Coursework: Media, Culture, & Environment, Intro to Mass Media, Contemporary Human Communication, Mass Media & Society, Interpersonal Communication, Modelling with SAS.

August 2014-  
May 2018

### Experience

**Teaching Assistant** — Florida State University

August 2019 — May  
2021

As a teaching assistant for Public speaking, I ran my own lab sessions once a week where I instructed students on how to effectively give a speech. During lecture sessions, I answered questions students may have after class and helped administrate exams. For Statistical Methods in Communication Research, I conducted weekly office hours where I clarified student questions and concerns. I also helped grade the exams and final projects.

### Research

**Multimodal Emerging Media (MEME)** — Florida State University  
May 2021

January 2020-

With MEME, I investigated many topics involving new and emerging media technologies. One such project that I spearheaded investigated how artists "selling" out creates an expectancy violation among fans and how that may impact the fans' parasocial relationship with them.