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Cell Phone Usage Patterns with Friends, Parents, and Romantic Partners in College Freshmen

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Cell Phone Usage Patterns with Friends, Parents, and Romantic Partners in College Freshmen

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ABSTRACT

The current study examined cell phone usage with parents, friends, and romantic partners in 71 college freshmen by recording all calls and text messages sent and received in their cell phone history for one week. Participants ranged in age from 18 to 21 years old. We found that participants used voice calls more than text messaging in contact with parents, but we found no difference in amounts of calls and text messages with friends or romantic partners. No difference was found between males and females in overall mobile phone voice call and text message frequencies. We did find that participants used their cell phones in contact with mothers more than in contact with fathers. Findings may be useful for increasing an understanding of how college freshmen use mobile phone technology to communicate with major contact groups.

INTRODUCTION

Communication and connectedness play essential roles in human relationships (Markham et al., 2010; Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004; Pittman, Irby, & Tolman, 2003). The social support provided by parents and peers has been reported as one of the major factors in overall life satisfaction among adolescents (Gallagher & Vella-Broderick, 2008). Essential social behaviors such as expression, growth of self-awareness, connection to the community, and the giving and receiving of insight are all facilitated by social communication (Brown & Van Riper, 1973). Also, according to Burleson, Kunkel, Samter, and Werking (1996), both male and female groups report communication as highly valued for certain aspects of life such as comforting, ego support, and conflict management.

As technology progresses, new forms of communication have become increasingly popularized, especially among adolescents (Lenhart, Ling, Campbell, & Purcell, 2010). Phone technology in particular has greatly influenced modern communication patterns. After recording

the opinions of several college students participating in focus groups, the mobile phone was identified as the most important information and communication technology used in contacting both parents and friends (Chen & Katz, 2009). Our study seeks to explore mobile phone usage patterns among freshmen living in dormitories during their first semester in college, specifically looking at how this relates to adolescents' cell phone communications regarding parents, peers, and romantic partners, as well as gender differences in cell phone use.

REVIEW OF LITERATURE

Modern Phone Communication

Landlines and cellular phones provide the modern world with the unique opportunity to instantaneously connect with others. As compared to cell phones, landline phones have been associated more often with family interactions. Researchers theorize this is because the landline phone is located at home. Therefore, adolescents report using landline phones more in family contexts. The mobile phone differs from landline phones in that the cell phone allows for more communication in a context independent of the family for adolescents (Ishii, 2006). Interestingly, landline phone usage is on the decline for the adolescent age group. In fact, 26% of teens that had cell phones in one nation-wide study reported living in households without any landline phones (Lenhart, Ling, Campbell, & Purcell, 2010).

By focusing on college students' attitudes towards cell phones, one study illustrates how cell phones have integrated into the modern adolescent's lifestyle. The participants from this study reported that cell phones are a necessity in modern times and provide cost efficient communication, safety and security, dependency, functionality, and a medium for information seeking. Females in the study reported the highest likelihood to have phones for safety reasons whereas males reported higher emphasis on functionality (Lee, Meszaros, & Colvin, 2009).

Certain gender differences have been found for texting among adolescents as well. Girls and high-school students aged fourteen to seventeen have been found to use text messaging considerably more than boys and younger aged teenagers (Lenhart, Ling, Campbell, & Purcell, 2010). The current study is interested in finding out if similar gender differences can be found in the 18-21 year old age group.

The utilization of text messaging has increased dramatically over the past decade. Through the course of a seven year-long study, researchers found a significant increase in the number of text messages sent over time for each age group considered (Lenhart, Ling, Campbell, & Purcell, 2010). This fact reflects the domestication of text messaging into our modern society. Teens especially have been found to display a special affinity for text messaging as their preferred type of mediated interaction. Adolescent texting behavior has been found to peak in the late teen to young adult age group (nineteen to twenty-one years old). In 2001, this age group reported sending an average of six text messages per day. In 2007, the average number of texts sent within the nineteen to twenty-one age group increased to eighteen per day (Ling, 2010). Another more recent study reported that 72% of teens use text messaging, and these teens averaged sending fifty texts per day (Lenhart, Ling, Campbell, & Purcell, 2010).

Researchers point to the life transition that is characteristic of many people at this age as the reason why the late teen and early twenties age group tends to text the most. Theoretically, as teens move into their own homes and dormitories for the first time, they oftentimes feel more need to establish a social sphere outside of their parents' homes and reach out to others (Ling, 2010). This age group may turn to cell phone use to facilitate this process.

Although text messaging is very popular among adolescents, teens also report appreciating the value of voice calling through the medium of their cell phones. Teens reported

that voice calling provides for more nuanced interaction, time efficiency for longer conversations, immediate feedback, and an increase of social cues (as compared to text messaging). Also, when adolescents needed to contact groups that had less text messaging experience, such as some parents, voice calls were reported as the best method for mediated communication (Lenhart, Ling, Campbell, & Purcell, 2010).

Adolescent Cell Phone Use with Parents

Parents are one of the main groups that adolescents tend to communicate with using mobile phones (Lenhart, Ling, Campbell, & Purcell, 2010). Cell phones provide parents with an important opportunity to oversee the daily activities of their teens. Even when parents are separated from their teen in proximity, they are able to still offer psychological and behavioral control as well as support to their children through the use of mobile calling and text messaging (Weisskirch, 2009). However, a stronger parent-teen relationship has been more closely related to the teenager's active calling of parents, rather than the parents' active calling of their teens. Researchers have found a relationship between adolescents' active calling to parents and increased reports of truthfulness and parental knowledge (Weisskirch, 2009).

Teens have been found to most often use mobile voice calls, rather than text messages, when communicating with parents (Lenhart, Ling, Campbell, & Purcell, 2010). Since previous studies have focused on the importance of mobile voice calls with parents in teens, we are curious to see if college freshmen's text messages and mobile voice calls with parents follow the same patterns. The importance of cellular phones in particular for facilitating communication between teens and parents has been highlighted by the research of Chen & Katz (2009). These researchers found that if teens are unable to contact parents by using cell phones (due to travel overseas, dead batteries, etc.), they report using landlines, instant messaging, and e-mail as an

alternative to the preferred medium of cell phones. This further exemplifies how the parents and adolescents utilize the cell phone as an important communication tool.

There are several different reported motivations for teens to call parents their parents. The range of reasons includes needing advice, wanting to complain about something, and keeping in touch. Some teenagers even reported calling their parents for “everything” (Chen & Katz, 2009). Regardless of the adolescent’s gender, mothers were especially emphasized as the most important family contact. Female adolescents reported contacting their parents more frequently than males (Chen & Katz, 2009; Lee, Meszaros, & Colvin, 2009) and reported talking to their parents for longer periods of time than adolescent males (Lee, Meszaros, & Colvin, 2009).

Adolescent Cell Phone Use with Friends

Adolescents also commonly use mobile phones to contact their peers. Researchers have found that 54% of high school participants reported using text messaging to socialize with peers. This is the most common communication method reported in their study. Mobile voice calls came in second at 38%. From there, face-to-face interaction outside of school (33%), landline phones (30%), social network sites (25%), instant messaging (24%), and e-mail (11%) were all significant but less popular methods in reported peer communication (Lenhart, Ling, Campbell, & Purcell).

Lenhart, Ling, Campbell, & Purcell (2010) found that 82% of the teens surveyed through questionnaires reported text messaging friends at least once a day. As for why this is the case, Rawlins (1992) hypothesizes that because friendships do not have the same legal or genetic ties commonly associated with relatives and romantic partners, friend relationships are often viewed as repeatable and replaceable. Thus, friendships depend more heavily upon frequent communication for their maintenance. Another study that gave questionnaires to high school

students also found that socially interactive technology is a popular and common method for communication with friends. One positive aspect of mobile phones that the participants noted was that technology-based communication allows for a more comfortable form of interaction for those who find face-to-face communication less appealing (Pierce, 2009).

When teens were asked what the reasons were for calling and text messaging their friends, they replied that they contacted their friends to say hello and chat, report their location, micro-coordinate their activities, discuss personal matters, and manage school-related work (Lenhart, Ling, Campbell, & Purcell, 2010). Of those that were polled, 86% of the female population reported text messaging their friends several times a day whereas only 64% of boys reported this answer. As for voice calls, girls were also more likely than boys to call their friends at least once per day, and the female participants had higher frequencies of reported calls to friends.

Adolescent Cell Phone Use with Romantic Partners

Studies have found that communication is essential for successful romantic relationships (Burlison, Kunkel, Samter, & Werking, 1996). These relationships are also related to cell phone use in adolescents (Emmers-Sommer, 2004). This may be linked to the finding that the frequency of contact in which romantic partners engage has been related to overall satisfaction with relationships. Also, researchers have linked reports of intimacy with the combination of face-to-face time and phone interaction within a romantic type of relationship (Emmers-Sommer, 2004). In a study comparing aspects of communication within peer and romantic relationships, six out of the total eight aspects of communication listed in the study were reported as more important to romantic relationships than in friendships (Burlison, Kunkel, Samter, & Werking, 1996). This

study helps us better understand the value put on communication in romantic and emphasizes a perceived greater importance of communication skills for romantic relationships.

Jin & Pena (2010) asked college students to estimate their average time spent calling and texting their romantic partners, as well as the frequency that they called and text messaged these romantic partners. Reported time spent calling and texting were both quite significant. The average estimate for time spent calling their partner was an hour and fifteen minutes. Time spent text messaging was only slightly less time-consuming at an hour and ten minutes on average per day. The frequency in which the students called their partners averaged to approximately seven times per day, and the frequency of which the participants estimated text messaging averaged to 36 times per day. This study is interesting because it discusses the extensive amount of time college students spend texting and calling their romantic partners and further highlights the importance of frequent contact in romantic relationships.

Summary

Previous research supports the notion that communication is an influential aspect of human behavior. Today, mobile phones provide people, adolescents especially, with a greater ability to maintain connectedness with others. Our research seeks to explore cell phone usage patterns in first semester college freshmen living in dormitories. By recording all calls and text messages made and received from their mobile phones for a week, we can see patterns in the students' average call/text frequencies to parents, friends, and romantic partners. Because much of the research on cell phone usage in adolescents has been based on estimates, we find it valid to explore cell phone use by getting more specific detail on the numbers of each call and text message recorded in their phones. We are also interested in looking at gender differences in these

patterns as well as which medium, text messages or voice calls, is used most in cell phone communication with parents, friends, and romantic partners.

In summary, the following three hypotheses will be examined. First, I hypothesize that in cell phone usage among college freshmen, text messaging will be the most used method of contact with friends whereas mobile voice calls will be the most used method of contact to both mother and father, and out of those reporting romantic relationships, mobile voice calls will be the most used method in contact with romantic partners. Second, I expect to find that college females make and receive more text messages and voice calls than males. Third, I hypothesize that the students will text and talk with their mothers more than their fathers.

METHOD

Participants

The data was collected from a larger study of 105 college freshmen at a large university located in the southern United States at six time periods throughout the course of one school year. The first-year college student participants were aged 18 or older and were recruited in their freshmen residence halls on the first day of classes in the fall semester of their first year. This particular study focuses on the Time 2 follow-up measure six weeks into their first semester. The majority of attrition in this sample was due to declined participation after Time 1 either by verbal request to discontinue participation or by a lack of response upon researchers' attempts to schedule Time 2 participation. Based on demographic variables, there were no significant differences between those that continued participation for Time 2 and those that discontinued participation after Time 1. Sixty-one of the 105 participants completed measures for all six time periods, and 71 participants completed the Time 2 measure considered in this study. The analyses reported here are based on a total sample of 71 participants, 34 of which are female, and

37 are male. The 31 participants who reported phone activity with romantic partners in Time 2 were also included in a sub-sample for this study. Participants ranged in age from 18 to 21 years ($M = 18.09$, $SD = .45$). Eighty-five percent of participants were White (Non-Hispanic), 9% were African-American, and 5% were Asian-American. More than half of the participants had mothers (54.7%) or fathers (56.6%) who had received a Bachelor's degree or higher.

Procedure

Incoming freshmen were recruited in their residence halls on the first day of classes of their first semester in college. During Time 1, the students signed informed consent and completed surveys at a study hall located in their dormitories in order to maintain privacy and minimize distraction. During Time 2, researchers recorded participants' reported cell phone data history while in the lobby of their freshmen dormitories. Students received a slice of pizza for their Time 1 participation, and no incentives were given for participation in Time 2.

While Time 1 surveys included questions on demographic variables, parental attachment, and perceived self-worth, the only information used from Time 1 for this particular study was participant gender. For Time 2, the researchers recorded cell phone logs based on participants' reports of information from the history on their cell phones. The researchers considered a week's worth of cell phone history listed on participants' mobile phones.

Measures

Participant Gender. In the demographic information included in Time 1 surveys, participants were asked to identify as either male or female.

Cell Phone Log. Researchers recorded the participants' responses to questions on cell phone usage based on a week-long period of data on their cell phone's call and text message history.

For voice calls, participants were asked the date and time of all calls made throughout the week and whether the calls were incoming or outgoing. The researchers then asked the participants for the duration of each call, and who the call was from or who they called (either mother, father, friend, romantic, sibling, peer/acquaintance, extended family, business, other, or didn't know). The participants were also asked if the contact was a student met at the participants' university, was known previously, or was both a student at the participants' university and known previously.

For text messages, participants were asked the date and time of the initial text message in each text conversation made throughout the week and whether the initial text in each text conversation was incoming or outgoing. The researchers then asked the participants for the amount of texts included in each text conversation, and who the text was from or sent to (either mother, father, friend, romantic, sibling, peer/acquaintance, extended family, business, other, or didn't know). Just as for voice calls, the participants were asked if the contact was a student met at the participants' university, was known previously, or was both known previously and a student at the participants' university.

Some data from the cell phone log was grouped together or isolated to answer the hypotheses. This study focused solely on text message conversations and mobile voice calls with mothers, fathers, friends, and romantic partners. Text messages were grouped together into text conversations. A text conversation classified as either one text message or multiple text messages sent to or received from a single contact in which each text followed a single conversation. A participant could have multiple text conversations with the same contact within the course of a day if conversations were spaced out. Assessing Hypothesis 2 and Hypothesis 3 required the combining of total text message conversations and voice calls in order to determine if there was a

difference in gender and parental contact in total cell phone usage. The total number of text message conversations and mobile voice calls were grouped together in assessing these two hypotheses.

RESULTS

A preliminary set of descriptive statistics was conducted, looking at mean and standard deviation of all calls and text message conversations reported by participants to determine overall mobile phone usage patterns within a one-week time period. Table 1 reports the descriptive statistics for cell phone usage with fathers, mothers, friends, and romantic partners. Participants held on average a total of .39 (SD = .98) text conversations and 1.31 (SD = 2.10) voice call conversations with their father in one week. Contact with mothers averaged to 1.11 (SD = 1.86) text conversations and 2.92 (SD = 2.60) phone calls. An average of 16.14 (SD = 15.46) text conversations and 16.11 (SD = 14.16) voice calls were reported in contact with friends. Participants held an average of 5.29 (SD = 11.41) text conversations and 6.29 (SD = 7.78) phone calls per week in contact with romantic partners.

Paired samples t-tests were conducted in order to test Hypothesis 1, in which we expected to find participants to report using text messaging more than voice calls to friends, and we proposed that mobile voice calls would be used more than text messaging with mothers, fathers, and romantic partners. The first paired samples t-test was conducted to compare text messaging and mobile voice call usage with mothers and fathers. The hypothesis that participants would use mobile voice calls more than text messaging with mothers and fathers was affirmed. College students communicated with their mothers and their fathers using phone calls significantly more than text messages. The participants communicated with mothers using phone calls an average of 2.92 times (SD = 1.86), as compared to using text messaging an average of 1.11 times (SD =

1.11); $t(70) = -4.99, p = 0.00$). The participants used phone calls in communication with their fathers an average of 1.31 times ($SD = 2.10$), as compared to using text messaging an average of .39 times ($SD = .98$); $t(70) = 3.93, p = 0.00$. Contrary to our predictions on cell phone usage with friends, there were no significant differences in text messaging ($M = 16.14, SD = 15.46$) and mobile voice calls ($M = 16.11, SD = 14.16$) reported; $t(70) = 0.01, p = .99$. For those reporting contact with romantic partners, we did not find that participants used mobile voice calls more than text messaging with romantic partners as hypothesized. There was no significant difference found in text messaging ($M = 5.29, SD = 11.41$) and voice calls ($M = 6.29, SD = 7.78$) with romantic partners; $t(30) = -0.46, p = 0.65$.

Our expectation in Hypothesis 2 that women used text messaging and mobile voice calls more than men was not found. An independent samples t-test was conducted in order to compare gender in text message and mobile voice call usage. There was not a significant gender difference in female frequencies of texts and calls ($M = 41.18, SD = 23.36$) and male frequencies of texts and calls ($M = 44.76, SD = 26.31$); $t(69) = -0.60, p = 0.55$.

To assess Hypothesis 3, which stated that participants would use their cell phones in calling and text messaging their mother more than their father, a paired samples t-test was conducted to assess differences in the frequencies of text messages and voice calls with mother ($M = 4.03, SD = 3.34$) as compared to the frequencies of text messages and voice calls with father ($M = 1.70, SD = 2.62$). As predicted, participants used their cell phones in contact with their mother significantly more than in contact with their father, $t(70) = 4.73, p = 0.00$.

Table 1
Descriptive Statistics in Text Messaging and Mobile Phone Calls for One Week among Parents, Friends, and Romantic Partners, M (SD)

	(n = 71) <u>Father</u>	(n = 71) <u>Mother</u>	(n = 71) <u>Friends</u>	(n = 31) <u>Romantic Partners</u>
Text Messages	.39 (.98)	1.11 (1.86)	16.14 (15.46)	5.29 (11.41)
Phone Calls	1.31 (2.10)	2.92 (2.60)	16.11 (14.16)	6.29 (7.78)

DISCUSSION

This study sought to obtain more information on college freshmen's cell phone usage in order to learn more about their communication patterns. We were surprised to see in our descriptive statistics such a low average in text messaging and calling in communication with parents. Despite previous research that would lead us to believe otherwise (Lenhart, Ling, Campbell, & Purcell, 2010; Chen & Katz, 2009), the college students in our study did not use their cell phones to contact parents a considerably large amount. Rather, friends were by far the main contact in cell phone usage. This was particularly surprising considering the time period of the study. The college students were only in their sixth week of living on campus during their first semester of college and were not found to be contacting their parents nearly as much as their friends. We would have expected to find that during their transition to college, freshmen in the beginning of their first semester would be communicating with their parents much more than they did.

After analyzing the data, the information supported some of our hypotheses while not supporting others. With regards to the first hypothesis, which explored the utilization of text messaging and voice calls with friends, parents, and romantic partners, our expectation that participants would utilize voice calls more than text messaging in contact with parents was

supported. This result was similar to Lenhart, Ling, Campbell, and Purcell's study (2010), which looked at cell phone usage patterns with parents in the 12-17 years old age group. We did not find support for the assumption that friends would use text messaging more than voice calls in contact with friends or with romantic partners. This could be due to the time period in which this data was taken. Because Time 2 data was taken six weeks into the first semester, the freshmen participants may have utilized a great deal of voice calls to contact former friends in order to get personalized contact because new freshmen students are at a major life stage transition (Ling, 2010). With regards to romantic relationships, the essentiality of communication in these romantic relationships (Burleson, Kunkel, Samter, & Werking, 1996) may result in a need for multiple communication methods, making text messaging as important as voice calls in maintaining contact.

Despite previous findings that female teens tend to text and talk more often than male teens (Lenhart, Ling, Campbell, & Purcell, 2010), our second hypothesis that assumed women would have higher amounts of cell phone communication than men was not supported. This could be because our study only measured frequency of calls and text message conversations and not duration. It is possible that women talk for longer amounts of time on average, even though there was no found difference in phone usage frequencies between genders. Our third hypothesis that participants would use their cell phones more in contact with their mothers than with fathers was supported. This finding supports former research, which emphasizes the importance of maternal contact, even in the later stages of adolescence (Chen & Katz, 2009; Lee, Meszaros, & Colvin, 2009).

Implications

The research from this study can be used to increase an understanding of how college freshmen communicate in their first semester to college. The data from our study showed some interesting results. We were especially surprised to see no difference in gender with regards to cell phone text message and call frequencies and the low average amount of cell phone communication with parents. It would be beneficial in future research to further extend our cell phone study in order to see changes in cell phone usage patterns over the course of the entire freshman year. The data from this study could be used to better understand the transition to college, and how freshmen reach out to others during this transition phase.

Limitations

One possible limitation of this study was the relatively small sample size, especially with regards to those in romantic relationships. This could influence the generalizability of results. Also, analysis of overall phone usage might be altered if duration of voice calls instead of frequency alone was taken into consideration. We might also get a better look at communication if we had looked at whether each call and text message was incoming or outgoing in order to determine who initiated contact. Because this study's aim was to find out some broad, overall patterns in communication, future studies might benefit from looking at more specific questions with regards to cell phone communication in this age group.

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