

The Role of Communication Technology in Facilitating Nonresident Father-Teen Relationships: A Mixed Methods Approach

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## **Dedication**

*This is dedicated to the family and friends who supported me through this journey.*

## **Abstract**

The goal of this dissertation was to determine to the role communication technology has in nonresident father-teen relationships. Two studies were conducted to answer this research questions: Study 1, a quantitative, descriptive study ( $n = 93$ ) mapped the use of communication technology in nonresident father-teen relationships, and Study 2, a qualitative study ( $n = 10$ ) explored the meaning technology-mediated interactions had for teens who believed technology played an important role in their relationships with nonresident fathers. Study 1 found that nonresident father-teen dyads used mobile phone calls and texting more frequently than other forms of communication technology, and communicated on a monthly basis. Study 2 found that teens' interactions mediated by communication technology helped maintain the father-teen relationship, had a role in family process, and made nonresident fathers and teens feel part of the same world. Results, limitations, and implications for research and practice are discussed.

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## **Introduction**

Nearly half of all children in the U.S. will have a nonresident father at some point during their youth. This is in part due to the reality that that 4 out of 10 births in the 2000s were outside of marital unions (Amato, 2000; Ventura, 2009). Researchers have posited that despite father absence in the child's immediate physical and geographic location, involvement by the nonresident father in their children's lives can have significant and meaningful impacts on offspring well-being (see Amato & Gilbreth, 1999).

Research on nonresident father-child relationships have made vast strides in the last 20 years, though it is still quite limited in a very important way as recent studies do not account for the proliferation of communication technology use in families. Even though the rapid development of and access to communication technologies has greatly enhanced people's ability to stay connected despite physical and geographic barriers, the role communication technology has in facilitating nonresident father-child relations is largely missing from the literature. There have been several studies that explore parents' communication technology and Internet use, though there has been little focus on nonresident fatherhood (Boase, Horrigan, Wellman & Raine, 2006; Dworkin, Connell, & Doty, 2013; Fox, Rainie, Lenhart, Spooner, & Carter, 2001; Wellman, Smith, Wells, & Kennedy, 2008). Furthermore, nonresident fathering studies have focused on the frequency of communication but they do not provide insight on the role and meaning of father-child communication, nor whether these experiences are uniformly meaningful or positive for the offspring (Hawkins, Amato, & King, 2007; Jones, 2004; King &

Sobolewski, 2006; Manning & Lamb, 2003; Menning, 2002; Menning, 2006; Mitchell, Booth, & King, 2009; Stewart, 2003).

The goal of this study was to expand upon the previous research in nonresident father involvement by exploring how nonresident father-child communication is facilitated through communication technology-mediate interactions, and to learn more about the meanings offspring attach to these interactions. The study will broaden the scope of previous studies which have included communication via phone or mail, to include newer communication options such as e-mail, smart phones, social networking sites, video chat, etc.

### **Theoretical Approach**

This study was framed using the life course perspective. The life course perspective posits that people's lives are influenced by historical events, family interactions, and the distinctive characteristics of their generation (Shanahan & Macmillian, 2008). The timing of phenomena influences its impact on individuals; in addition to the 'what' (i.e. father-teen communication), the 'when' phenomena occurs is important as well. Previous research has suggested that one's family experiences during the teen years have a developmental impact on their life trajectories, such as relationships and the decisions made about pursuing a post-secondary education (Harris, Furstenberg, & Marmer, 1998; Hofferth, Boisjoly, & Duncan, 1998; Pallas, 2003). Based on the life course perspective and previous family research, the high school-age teen years may present a window in one's life course where nonresident fathers' actions make a lasting impression on their offspring, which impact and have meaning for young adult offspring.

Furthermore, the life course perspective considers how unique characteristics or “events” of a given generation impacts one’s life. Thus, just as the proliferation of the telephone, motor vehicles, and commercial air travel has fundamentally transformed past generations, the emergence of internet-mediated communication and mobile devices has inexorably changed the way many families live, work, and communicate.

Despite its widespread use, the role of communication technology (especially internet-mediated communication) is absent in previous nonresident fathering literature even though it has shown it to be an important part of family life (Boase et al, 2006). Even recent studies (see Adamsons & Johnson, 2013) do not include forms of communication such as e-mail, relying strictly on telephone calls or mail correspondence to examine long-distance communication, largely due to the restrictions of available data. From a life course perspective, the explosion of information and communication technology in today’s society represents a unique characteristic of recent cohorts that has revolutionized communication and information sharing in ways past generations could not have imagined (Shanahan & Macmillian, 2008). This may arguably have a unique contribution to the nonresident father-teen dynamic and offspring development, a topic which has not been explored in previous fathering research.

### **Defining Key Terminology**

**Nonresident Father.** For definitional purposes, a nonresident father is a father who does not reside or has never resided with offspring due to phenomenon such as divorce, separation, or non-marital births. Most nonresident fathers share the characteristic that they are physically absent or non-members of offspring's household.

The bulk of previous nonresident fathering studies, which has drawn on large, national data, have relied on variables that measured a father's absence from an offspring's household as an inclusion criteria for nonresident fathers (Hawkins et al., 2007; Harris et al., 2009; King & Sobolewski, 2006; Manning & Lamb, 2003; Menning, 2002; Mitchel, Booth, & King, 2009; Stewart, 2003; Sweet & Bumpass, 2002). In addition, most studies are limited to biological fathers. However, given the diversity of families in the U.S., nonresident father-child relationships and parenting schedules are not uniform. A benefit of this study was it allowed participants to provide a more detailed description of the relationships they had with a nonresident father. In addition to including teens who may have been adopted, this study also included teens whose fathers were nonresidents due to reasons outside of divorce and non-marital fertility, such as a father's long-term overseas military deployment.

**Child, Teen, and Offspring.** The terms 'child,' 'children,' or 'offspring' were used in this study to reference participants in the sample, not in reference to any particular age, but to frame the participants as offspring or children of nonresident fathers.

### **Background**

**Nonresident father-child communication.** Research has shown that nonresident fathering has a positive impact on child well-being. A meta-analysis of over 80 studies (conducted before 2000) showed that nonresident father involvement had a significant impact on various child outcomes, including academic outcomes, economic well-being, and behavioral outcomes (Amato & Gilbreth, 1999). An updated meta-analysis which spans the last decade largely confirmed that nonresident father involvement is associated

with child well-being (Adamsons & Johnson, 2013). Although nonresident father involvement may have a positive impact on child well-being, scholars have offered that nonresident father-child contact is low. Research from the 2000's has found that only 26% of children saw their nonresident fathers on a weekly basis, while 29% of children had no contact from their nonresident fathers within a year's period (Amato, Meyers, & Emery, 2009; King & Sobolewski, 2006).

Previous studies have examined nonresident father-child communication, both as a measure of nonresident father involvement as well as a facilitator of nonresident father involvement. Generally, this body of research has conceptualized and measured nonresident father-child communication using three predominate measures. These measures are frequency of 1) face-to-face contact, 2) telephone conversations, and 3) mail correspondence over a 12-month period (Hawkins et al., 2007; Jones, 2004; King & Sobolewski, 2006; Manning & Lamb, 2003; Menning, 2002; Menning, 2006; Mitchell et al., 2009; Stewart, 2003). These studies have not found there to be a consistent, significant association between nonresident father-child communication and measures of child well-being such as behavioral or academic outcomes.

Despite a lack of association between nonresident father-child communication and child well-being, previous research has found nonresident father-child communication to be positively associated with other measures of nonresident father involvement, such as fathers' active participation in shared activities such as attending religious services, going to a movie, or working together on a child's school project. When nonresident father involvement is conceptualized as active involvement, measured

it has been shown to be significantly associated with a number of child outcomes, including a reduction in behavioral problems and positive academic outcomes (Hawkins et al., Jones, 2004; King & Sobolewski, 2006; Låftman, 2008; Manning & Lamb, 2003; Mitchell et al., 2009). Although nonresident father-child communication itself has not proven to be a strong predictor of child well-being, the research does show it to have a role in facilitating nonresident father involvement. Given that research has shown that traditional measures of communication tend to promote other forms of father involvement and in some cases predict positive academic and behavioral outcomes, the inclusion of more forms of communication such as e-mail may help expand these previous findings.

**Communication technology.** Over the last decade, there has been shift in communication technology use. Many people in the U.S. have shifted from relying solely on stationary devices (such as landline telephones and desktop computers) to additionally relying on mobile or portable communication devices. A 2010 study showed that over 75% of the population own cell phones or laptop computers (Smith, 2010). The popularity of smartphones and tablet devices has also skyrocketed since their introduction in the mid 2000's. In 2013, over 90% of the U.S. population owned a cell phone, 56% owned a smartphone, and 34% owned a tablet device (with half of tablet owners being between the ages of 35-44) (Smith, 2013; Zickuhr, 2013). In addition, a large number of children and adults in the U.S. reported using social networking sites such as Facebook, which can now be accessed literally any time or any place with the use of mobile devices (Lenhart, 2009). Recent research has also shown that parents with teenage children

utilize social networking sites more often than the general population and use social networking sites as part of their parenting (Doty & Dworkin, 2014).

There is currently a lack of research on the role and meaning communication technology has in nonresident father-child relationships. However, there is a modest body of research looking at the impact of communication technology in broader family relationships. One study showed that two-parent resident families are the largest users and consumers of technology, and that technology use enhances relationships in these family types (Wellman et al, 2008), but little is known about how technology facilitates communication or enhances the relationships of children and their nonresident fathers. Research on the use of technology in families has shown that it use helped families maintain contact and build social capital with kin across long distances, and played an important role within the home as well, improving the connection between family members (Boase et al., 2006; Fox et al., 2001). Research also found that college students used technology to stay in touch with parents, particularly over large geographical distances, and that technology use supplemented (but did not replace) other methods of communication (Connell & Dworkin, 2012). The proliferation of communication technology in the U.S. now provides myriad ways for families to interact and communicate with each other. Given the research, it is plausible that technology has played an important role for children whose fathers did not reside with them due to non-residency.

Scholars have suggested that nonresident fathers, compared to resident fathers, are disadvantaged in terms of remaining both physically and psychologically present in the

lives of offspring. Research has shown that fathers who do not reside with their children are much more likely to emotionally withdraw from these relationships, and are much less likely to visit children when resident mothers enter into new romantic relationships (Bengston, Biblarz & Roberts, 2002; Guzzo, 2009). Recent research, however, has also revealed a steady increase in nonresident father involvement. The rate of father-child communication has increased compared to years past. The frequency of offspring who had not communicated with their father in a year's time has dropped as well as the rate of father-child estrangement (father-child dyads that do not maintain contact) (Amato et al., 2009).

**Lack of qualitative data.** In addition to there being little information on the frequency of communication technology use in nonresident father-teen relationships, there is no qualitative data that sheds light on the role and meaning of communication technology, and very little on nonresident father involvement in general. It is unclear if high school-aged teens truly valued communication with their nonresident fathers or if these interactions during their teen years had a significant developmental impact on them. The paradigm of analyzing secondary data is no doubt responsible for the gains in nonresident fathering research, though there are many facets of father involvement that cannot be gleaned from existing secondary data. More can be learned through a qualitative approach which more deeply probes the impact of nonresident father-teen communication, and in particular can account for the proliferation of communication technology in today's society and its role in family life. Many studies in the area of nonresident fatherhood lack qualitative data on the key variables traditionally used to

study nonresident fatherhood but most notably fail to account for the prominence of communication technology when measuring father-teen communication.

### **Structure of Dissertation**

A mixed methods approach was employed to meet the goals of this dissertation comprising of 1) a descriptive study that mapped the use of communication technology in nonresident father-child dyads during participants' high school-age teen years and 2) an in-depth qualitative analysis of the role and meaning these communication technology-mediated interactions had for participants who believed communication technology played an important role in maintaining nonresident father-teen relationships. This dissertation's overarching research questions are:

*RQ1:* What is the role of communication technology in facilitating nonresident father-teen relationships?

*RQ2:* What meaning do interactions using communication technology have for children of nonresident fathers who believe communication technology helped maintain their relationship?

This dissertation was divided into two separate studies to explore these research aims:

*Study 1:* To map the use of communication technology in nonresident father-teen relationships.

*Study 2:* To examine how communication technology facilitates nonresident father-teen relationships, more specifically, the value and meaning

interactions mediated by technology have for those children who believe it helps them maintain relationships with their fathers.

### **Recruitment and Consent Process**

Approval for this dissertation was obtained from the University of Minnesota IRB (Study #1312P46668 ) under the Social and Behavior Sciences category. Study 1 and Study 2 were approved as a single project with multiple steps by the IRB. Participants were recruited through community colleges and other community agencies across the U.S. Recruitment was also conducted through internet forums, message boards, and social networking sites such as Craigslist and Reddit. A link to the survey, hosted on a secure University of Minnesota site was included in the initial recruitment invitation. Participants' consent was obtained digitally at the onset of the project and again verbally (audio recorded) for those who participated in follow-up interviews. As compensation for participating in Study 1, participants were entered into a drawing for a \$50 Amazon.com gift certificate. Those who participated in Study 2 were compensated for their time with a \$20 Amazon.com gift certificate.

## **Study 1: Mapping the Role of Communication Technology in Nonresident Father-Teen Relationships**

Over the past 20 years, nonresident father involvement has been given a considerable amount of attention in family research. Scholars have focused on multiple forms of nonresident father involvement, such as financial contributions and frequency of communication, and have analyzed its impact on multiple dynamics of child well-being such as academic and behavioral outcomes. Over time, improvements continue to be made to nonresident fathering research, such as exploring resident parents' contributions to the quality of nonresident father-child relationships as well as the use of cutting-edge statistical models. One factor, however, that has forestalled nonresident fathering research has been the lack of available data needed to expand this research, which has led to difficulty in exploring multiple facets of the nonresident father-child relationship.

One area of nonresident fathering research that has not kept pace with current realities of family life in the 21<sup>st</sup> century is the role of communication technology in nonresident father-child relationships. Communication technologies such as e-mail and mobile devices have become mainstream in U.S. culture, yet there is little examination of this in nonresident fathering research. This is due in part to the fact that many nonresident fathering studies have relied on secondary data to analyze the impact of nonresident father involvement on child well-being. Although the availability of large, nationally representative data such as The National Longitudinal Study of Adolescent Health (Add Health) and the National Survey of Families and Households (NSFH) has facilitated progress in nonresident fathering research, the lack of communication

technology variables in these data sets have also limited the ability to understand its role in nonresident father-child relationships (Harris et al., 2009; Sweet & Bumpass, 2002). For example, data from the NSFH have been utilized in many father involvement studies over the last 15 years (Sweet & Bumpass, 2002). The NSFH provides some data about nonresident father-child communication and many other useful variables but have no in-depth information on communication technology, arguably a facet of everyday life, nor its relation to father involvement. Although the last wave of these data is over a decade old, other national studies do not offer data on the intersection of communication technology use and nonresident fathering. The most cited nonresident fathering studies continue to exclusively use less modern measures such as telephone calls or mail correspondence as a standard for measuring nonresident father-child communication, as these are the measures present in many secondary data. Thus, the majority of research spanning the last two decades that examines the connection between nonresident father involvement and offspring well-being was conducted using a small number of data sets. A comparison of literature show that nearly all of these studies conducted within the last two decades come from a small pool of datasets, including the National Longitudinal Study of Youth (King, 1994; McNamee, Amato, & King, 2014), the National survey of Families and Households (King & Sobolewski, 2006; Menning, 2002), and most notably, The National Longitudinal Study of Adolescent to Adult Health (Add Health) dataset (Hawkins, Amato, & King, 2007; Manning & Lamb, 2003, Menning, 2006; Mitchell, Booth, & King, 2009; Stewart, 2003). There are many ongoing longitudinal studies in the family field, though few have comprehensive data on nonresident fathers, and even

fewer on various forms of technology use in these relationships. This study allowed for the examination of family behaviors beyond their frequency of occurrence, delving into the role communication technology has for offspring and their relationships with nonresident fathers during offspring's high school age teen years.

Previous nonresident fathering research has accounted for mother-child relationships in the context of nonresident fatherhood. Scholars have suggested that children who have good relationships with their mothers may be more likely to be engaged with a nonresident father. Previous research has also found that resident mother-child relationship quality is positively associated with nonresident father-child relationship quality. It is possible that high levels of use in resident mother-child dyads would also increase or encourage use in among nonresident father-child dyads. Most research on communication technology use has focused on resident parent-child interactions (Hawkins et al., 2007; King & Sobolewski, 2006; Wellman, 2008).

In summary, although previous work has led to a better understanding about nonresident father involvement in relation to child well-being, there remains a gap in the literature, primarily due to the exclusion of contemporary communication technologies that have the potential to influence children's relationship with their nonresident fathers. Moreover, we are still limited in our understanding of the content of this communication and the meanings children attach to technology-mediated interactions with their fathers. This study aims to address those gaps.

## **Overview**

The goal of this exploratory study was to map the role of communication technology in nonresident-father child relationships during children's high school-age teen years. Young adults between the ages of 18 - 24 were asked to reflect back to their teen experiences with a nonresident father. Specifically, they were asked about types of technology they used in their communication with their fathers during their high school-age teen years. By accounting for the availability and increase of communication technology use, more can be learned about father involvement. In previous studies, nonresident fathers who lived great distances from offspring may have been portrayed (or coded) as uninvolved due to low frequency of face-to-face contact and limited in their ability to actively engage in child-related activities. Given the proliferation of e-mail, mobile devices (e.g. iPhone), social networking sites (e.g. Facebook, Reddit), webcam chat software (e.g. Skype & FaceTime), and a perpetually growing list of internet tools, educational programs and games, there may be more ways to conceptualize both nonresident fathers' frequency of contact and involvement as communication technologies allow fathers and children to interact despite a large gap in geographical distance.

## **Methodology**

### **Study Design**

**Design.** This study was descriptive and retrospective. It focused on the high school-age teen years of children who had a nonresident father during this period. Data for this study were obtained through an online survey of the target population. An on-

line, robust, and user-friendly survey was created using Qualtrics (<http://surveys.umn.edu/qualtrics-u-of-m>).

**Recruitment.** Based on the descriptive and exploratory nature of this study, participants were recruited using convenience and snowball sampling methods. To encourage a diverse sample in terms of cultural background, SES, and geographical location, participants were recruited through community colleges and other community agencies across the U.S. whose students and clientele typically represent more population diversity. Participants were also recruited through Internet forums, message boards, and social networking sites such as Craigslist, Facebook, and Reddit.

Criteria for participation in this study included a) being between the ages of 18 and 24 and, b) had a nonresident father with whom they had some contact with during their high school-age teen years. The 18 to 24-age range was targeted because participants were transitioning into adulthood but could still reflect on not too distant teen experiences in a household where a father was not physically present. In addition, participants were required to have had contact with their nonresident fathers throughout their teens, as it is not possible to learn how communication technology enhanced these relationships when there was no contact. Thus, participants whose fathers were completely absent during their teens were not included in this study, as this group could not provide a context for exploring nonresident father-offspring relationships or their communication technology use.

## **Data Collection**

An online survey was used to obtain data from participants about communication technology use with nonresident fathers. The survey tool was comprised primarily of Likert-type and categorical questions regarding the high school-age teen period. The survey items included areas of communication technology use over a 12-month period, preferred types of technology, barriers to technology use, nonresident father-child relationship quality, in-person contact, and questions about less modern forms of communication technology such as landline telephones and mail correspondence. The survey also contained mirror questions regarding participants' resident mothers for comparative purposes. Most research on the use of communication technology in parent-child relationships have focused on resident parents. Since data on resident fathers is not present in this study, data on resident mothers creates a good basis for comparing technology use among nonresident fathers and their children. Questions focused on the frequency and importance of communication technology use with nonresident fathers. Questions were also asked about various demographic characteristics, and included previously used measures of nonresident father-child communication for comparative purposes. (See Appendix A for a complete set of survey questions).

To measure the relationship quality of nonresident father-teen dyads, the survey also included items that have been used in previous nonresident fathering research. These include questions on face-to-face contact, and frequency of telephone conversations and mail correspondence. These items used in the survey were recreated based on measurements from two national longitudinal studies: National Survey of

Families and Households (Sweet & Bumpass, 2002) and the National Longitudinal Study of Adolescent Health (Harris et al., 2009).

### **Sample**

There were initially 106 responses to the online survey. After surveys in which respondents who were not the correct age (between 18 and 24), did not complete the survey (i.e., they signed on but decided not to participate), or had a resident father were removed, we arrived at a sample size of ( $n = 93$ ). A parent was considered a nonresident if the participant had lived with them half-time or less during their teen years. This study's sample ( $n = 93$ ) consisted of people between the ages of 18 - 24 who had a nonresident father during their high school-age teen years. The average age of participants was 20. The vast majority of fathers' non-residency was due to divorce, though some participant's parents had never been married (12%) nor had ever lived together (5%).

Demographic characteristics of the sample are outlined in Table 1. Most participants self-identified as non-Hispanic White (74.2%). This is similar to data used in past nonresident fathering studies (Sweet & Bumpass, 1996). Recent research has shown that rates of mobile phone ownership are similar across ethnic groups in the U.S., although more non-Hispanic Whites families have Internet access at home compared to other ethnic groups, relying less on mobile phones as the sole source of Internet access (Anderson, 2015). Unlike nationally representative studies, participants in the current study were predominately middle-class female college students at the time of the study. The majority of participants (85%) rated themselves as having good, very good, or

excellent skills with communication technology, with the majority of the participants living in the Southern (57%) and Northeastern (23%) regions of the United States.

In terms of family structure and history, most participants had parents who had been married or who had cohabitated at some point in their lives. Over half of the sample (70%) had fathers who lived in the same or neighboring town during the child's teen years. Thirty-nine percent of participants reported that their mother had sole custody of them during their teen years. An additional 55% reported their parents had shared custodial arrangement. A follow-up question asked participants about the amount of time they lived with either parent despite custody. The majority (74%) lived primarily with their mother during their teen years while a small number (13%) lived about half-time with each parent. The remaining 13% reported 'other' living arrangements such as living with grandparents, moving out in their mid-teens, or residing in foster care.

### **Data Analysis**

Descriptive statistics, including correlations, were utilized to map the role of communication technology in facilitating nonresident father-teen relationships. To map frequency of communication use within a 12-month period during participants' high school years, individual survey items, each with 6 response options (1 = *Never* to 6 = *Several times a day*) were used (See Questions 19 and 25A-L in Appendix A). This study also examined in-person contact, landline telephone use, and mail correspondence with their non-resident fathers, as well as teen's use of communication technology with their resident mothers ( $n = 70$ ) for comparative purposes (See Questions 33A-L in Appendix A).

Correlations were used to examine the relationships among nonresident father-teen communication, father-teen relationship quality, and geographic distance.

Correlations were used for their ability to describe the strength and direction of any significant findings among these data (Greenstein, 2006).

Overall, very little (approximately 5%) missing data were found across each item in this study. Available case analysis was used to manage missing data, meaning all available data were used for each statistical analysis (Allison, 2002). Although this technique is becoming less commonly used in favor of more robust and modern methods for handling missing data, it was adequate for this study because there were little missing data, the number of cases was similar across each correlation analysis, and statistical analyses were conducted using individual survey items.

## **Results**

To map the role of communication technology in nonresident father-child relationships, descriptive data on the various dimensions of technology use were analyzed.

### **Usage of Communication Technology**

**Frequency and forms of contact.** Nonresident fathers typically initiated technology-mediated contact with their teen offspring (45%). Thirty-nine percent (39%) of the sample said that both they and their fathers initiated contact and 16% reported that they typically initiated contact with their fathers.

The most frequent forms of communication in nonresident father-teen dyads were mobile phone calls (using smart phones or cellular phones) ( $M = 3.45$ ,  $SD = 1.37$ ), in-

person contact ( $M = 3.27$ ,  $SD = 1.24$ ), and texting ( $M = 3.07$ ,  $SD = 1.68$ ). Teens communicated with their fathers on slightly more than a monthly basis. About 10% of respondents said they *Never* saw their father or communicated via mobile phone over a 12-month period, while about a third of the sample (31%) said that they *Never* texted their father in a 12-month period during their teen years. As opposed to in-person contact, texting, and mobile phone use, other forms of communication technology such as e-mail (*About once a year*) and video chat (*Never*) were used less frequently. The majority of the sample said that they never used these forms of communication to interact with nonresident fathers over a 12-month period. These low levels of usage were similar to previous measures of communication such as landline telephones and mail correspondence. Although the data showed that mobile phone calls, in-person contact, and texting were the most frequently used methods of communication in nonresident father-teen dyads, there was variation across each type. For mobile phone calls, in-person contact, and texting, approximately 35% of respondents selected *About once a month* as their response. These data are presented in Table 2.

**Factors related to communication technology use.** Correlation analyses were used to determine if mobile phone use (Q25B), texting (Q25D), and in-person contact (Q19) were correlated with father-teen relationship quality (Q21) or geographic distance (Q18). Father-teen relationship quality was significantly and positively correlated with the frequency of mobile phone calls,  $r = .44$ ,  $p < .001$ , texting,  $r = .40$ ,  $p < .001$ , and in-person contact  $r = .46$ ,  $p < .001$ . A teen's geographical distance from a nonresident father was significantly and negatively correlated with the frequency of mobile phone

calls,  $r = -.45, p < .001$  and texting,  $r = -.35, p = .001$ . Geographical distance was also negatively correlated with in-person contact,  $r = -.62, p < .001$ . However, this finding should be interpreted with care, as the closer fathers live to their children, the more chances they have to establish in-person contact with their children. In sum, the correlation analyses show that higher relationship quality with and living closer to nonresident fathers is correlated with higher levels of communication.

**Comparing nonresident fathers and resident mothers.** Participants were asked if they had a very good relationship with both their father and mother (1 = *Strongly Disagree* to 5 = *Strongly Agree*). The distribution for father-teen relationship quality was highly varied (*Strongly Disagree* = 14%; *Disagree* = 29%; *Neither Disagree/Agree* = 26%; *Agree* = 21%; *Strongly Agree* = 10%). On the other hand, the distribution for mother-teen relationship quality was largely skewed toward higher-quality relationships (76% chose *Agree* or *Strongly Agree*), suggesting that the sample had consistently better relationships with their resident mothers during their teen years. For comparative purposes, communication technology use was analyzed in resident mother-teen relationships as well ( $n = 70$ ). As with nonresident father-teen communication technology use, mobile phones ( $M = 4.85, SD = 1.02$ ) and texting were used the most ( $M = 4.48, SD = 1.78$ ), however the frequency of communication was greater in mother-teen dyads, using these technologies most frequently on a weekly or daily basis. These data are presented in Table 3.

### **Barriers to Usage**

Participants were asked to address potential barriers that affected communication

technology use in the context of father-teen relationships (Q27). Over 90% of participants identified at least one barrier to father-teen communication, and nearly 50% of the sample identified at least two. The leading barrier participants cited was fathers' unfamiliarity with communication technology (49%), which was much higher than teens' own unfamiliarity with technology (6%). Another prevailing response was that participants found communication technology-mediated interactions to be uncomfortable or negative (35%). Many said they did not have access to communication technology (24%) or did not use technology because they wanted to limit personal information they shared with their fathers through social networking websites such as Facebook (28%). Many participants simply pointed out a general lack of interest in maintaining communication during their teen years both on their part (30%) and on the part of their nonresident fathers (36%). Lastly, 12% specified other reasons such as difficulty scheduling time to interact, fathers' unavailability, or fathers not believing that emerging technologies such as texting are valid means of communicating.

### **Importance of Communication Technology in Maintaining Contact**

Several survey questions asked the participants about the role and importance of communication technology in maintaining contact with their nonresident fathers during their teen years (See Q28 – Q32 in Appendix A). Participants were asked if communication technology helped maintain a relationship with their nonresident father during their teen years. Over half of the sample agreed (42%) or strongly agreed (16%) that communication helped maintain a relationship while 24% neither agreed nor disagreed. Over half of the sample agreed or strongly agreed to being able to

communicate about important issues with their fathers using communication technology.

Although a substantial portion of the sample said technology played an important role, half of the sample (49%) preferred in-person interaction over communication technology use. A portion of the sample (20%) said interaction through technology was better while the remainder had no preference.

### **Discussion of Study 1**

The goal of this study was to map the role of communication technology use in father-teen relationships, with a new focus on contemporary forms of technology such as mobile devices and social media sites that have not been included in prior studies. The use of communication technology in nonresident father-teen relationships has not been studied in fatherhood research although communication technology has been shown to play an important role in maintaining relationships in other family types (Boase et al., 2006; Fox et al., Carter 2001).

For the 93 participants in this study, mobile phone calls and texting were the most frequently used forms of communication technology use in non-resident father-teen dyads. Use of these technologies was on par with in-person contact, which occurred on average, slightly more than once a month. E-mail and landline phones were used less frequently, while other forms of technology such as video chat (e.g. Skype) was rarely used.

The frequency of communication in this study was not dissimilar to the rates of contact in previous research that utilized nationally representative data (Amato et al.; King & Sobolewski, 2006; Manning & Lamb, 2003; Menning, 2006; Mitchell, Booth, &

King, 2009; Stewart, 2003). Most had, on average, only monthly contact with a nonresident father. Although infrequent, participants reported that even their minimum contact played an important role in maintaining a relationship with their non-resident father and allowed them to discuss important issues when they could not see each other in person. Given previous research, it is unsurprising that frequency of both in-person contact and technology-mediated communication was also somewhat low in this study.

It may be pertinent to consider an additional finding related to relationship quality when interpreting the frequency of contact. Only 30% of the participants indicated that their relationship with their father was good. Thus, considering the finding that communication technology use was positively correlated with relationship-quality, it is possible that relationship quality mediates the frequency of communication teens had with their nonresident fathers. However, it should be noted that it was still important to the participants that they were able to maintain some relationship with their fathers, even though the amount of contact appeared quite minimal. Perhaps if teens had positive relationships with their nonresident fathers, there may be a stronger impetus for both teens and nonresident fathers to have more frequent communication, something beyond the scope of this study.

It is also interesting to note that participants had a much higher frequency of text and mobile phone interactions with their resident mothers compared to nonresident fathers. Previous research has shown that mother-child relationship quality tends to be higher and less varied compared to nonresident fathers (Arendell, 2000; Hawkins et al., 2007). It is possible that this translates into the frequency of technology use. Research

has shown an upshot in communication technology use among two-parent households (Wellman et al., 2008) but there is minimal data on nonresident father relationships. However, it is not possible to know the similarities or differences in the frequency and type of communication technology use among different family types without additional research. This study did find a statistically significant negative correlation between geographical distance and technology usage, though the data on usage among both resident mothers and nonresident fathers coupled with the data on relationship quality suggest that relationship quality is an impetus for communication technology usage in parent-teen relationships. Thus, while communication technology can no doubt bridge the gap of geographical distance, it is possible that technology use transpires more among parents and children who have better relationships. However, it is not clear if this is based on higher quality resident parent-teen relationships or the mere convenience of a shared residence.

### **Limitations**

This study had limitations that should be noted. The most notable limitation of this study was that participants were recruited using a convenience sampling technique. They elected to participate and as a result, the data are intrinsically biased. Data used in this study are not representative of the target population of teens with a nonresident father and results cannot be inferred to the larger population of interest. Since this study did not control for socioeconomic status, the findings may be further biased. However, previous research has found that parents' comfort with technology poses a more significant barrier to its use compared to factors such as age or income (Doty, Dworkin, & Connell, 2012).

This study found that many nonresident fathers were uncomfortable with technology, although these were the second-hand perceptions of teens.

Additionally, the study utilized a retrospective approach, meaning participants (age 18-24) were asked to reflect back on their teen years. There are two limitations of this retrospective approach that impacted this study. First, since participants reflected to previous years, there was a lag in the availability of the newest technologies. Although mobile phones and texting were used most frequently by participants in this study, there may have been other communication technologies that have emerged or lost popularity since this study took place. Secondly, when research participants reflect back to memories of past experiences, their recall might not be accurate (Fisher, 2007). Finally, this study only examined the role and importance of communication from the viewpoint of children of nonresident fathers. It was not possible to explore the father-child dyadic relationship in full, a limitation that future research should strive to correct.

### **Implications**

As the usage and variety of communication technology continues to proliferate in the 21<sup>st</sup> century, future nonresident fathering studies should account for its role in father-child relationships. There is growing interest in the role technology has in family process. And while there have been several studies that explore parents' communication technology use, virtually no research exists on its intersection with nonresident father involvement (Dworkin, Connell, & Doty, 2013). Qualitative research may help illuminate some of the findings from this study in terms of the types of technologies teens found helpful as well as how father-teen relationship quality punctuated the use of

technology. In addition to relationship quality, future research could more deeply explore the barriers to communication such as fathers' unfamiliarity with communication technology and pursue ways of infusing technology into facilitating nonresident father-teen relationships. The high school-age teen years present a unique window of opportunity for nonresident fathers to be involved with their children, though this lack of interest may suggest a poor father-teen relationship, or may encompass other factors such as the fact that teens are too occupied with many academic and social obligations to commit significant time to nonresident fathers. If this is the case, qualitative research will highlight both the impetus and barriers to nonresident father-teen communication mediated by technology, and will create knowledge that will continue to advance the study of nonresident father involvement.

Parent educators and practitioners, particularly those who work with families after divorce or separation, could help fathers consider how they might use communication technology to not only stay in touch with their children on a more regular basis, but also develop a deeper relationship with their children. A study that includes a sample of nonresident fathers' perspectives could further illuminate barriers to communication and technology use. Perhaps differentiating between the relative advantages and disadvantages of the various types of communication technology modalities would help fathers consider how to best use technology. Given resident mothers' higher frequency of use in this study, further studying nonresident and resident parental interactions could perhaps generate ideas about how fathers stay involved with their children in this digital age.

## **Conclusions**

Previous research has shown that nonresident father involvement is significantly associated with child well-being in terms of behavioral and academic outcomes (Adamsons & Johnson, 2013; Amato & Gilbreth, 1999). Despite the positive influence nonresident fathers can have on their children, research shows that nearly a third of children have an absent nonresident father (Amato et al. 2009; King & Sobolewski, 2006). This study mapped the use of and roles various communication technologies played in nonresident father-teen relationships. Although the participants preferred in-person contact with their nonresident fathers, the majority of study participants rarely saw their fathers face-to-face. Mobile phone calls and texting were primarily useful in helping father-teen dyads keep in touch and maintain their relationships. This study helps fill a gap in nonresident fathering research that has not yet accounted for the influence of newer communication technologies in family relationships. It sets the stage for future research that examines the role of technology in families. Specifically, it highlights the challenge of including the most recent forms of communication technology. The rapid and dynamic changes in ways to communicate in the contemporary digital age outpace the time frame necessary to conduct research and disseminate results through scholarly journals. Scholars must recognize that limitation and strive to include newest and emerging technologies that are being used to communicate within families.

## **Study 2: A Qualitative Study of How Communication Technology Facilitates Nonresident Father-teen Relationships**

Over the past several decades, family scholars have given considerable attention to the rise in father-absent households. Researchers have speculated that nearly half of all children in the U.S. will experience living in a single-parent, mother-headed household at some point before the age of 18 (Amato, 2000; Bumpass, 1984). Though major life transitions such as divorce physically separate fathers from their children, other family circumstances, such as a rising rate of non-marital births, also contribute to fathers living away from their children. Recent census data found that nearly 40% of births took place outside of marital unions, leading to a larger number of nonresident fathers in the U.S. (Ventura, 2009).

Early estimates of father involvement have suggested that nonresident fathers are typically disengaged (Aquilino, 1994). However, research in the 2000's began to show an upward trend in nonresident father involvement. In fact, nonresident fathers' involvement with their children has slowly increased and there is a smaller percentage of children who have no contact with their nonresident fathers (Amato, Meyers, & Emery, 2009). Though demographic data suggest a rise in fatherless households, nonresident fathers find ways to be active participants in their children's lives.

Scholars have attributed the increase in nonresident father involvement in part to policy efforts and programs that help fathers pay child support, encourage them to stay in touch with their children, and provide parenting training (Amato et al., 2009). However, there has been little focus on the role of communication technology in nonresident father-

child relationships despite its widespread proliferation and use in the U.S. Given the fact that communication technology use and ownership has sharply increased among teens and adults (Smith, 2013; Zickuhr, 2013), it is reasonable to surmise that communication technology may play a role in the increase of nonresident father involvement. This study explored the role of communication technology in nonresident father-teen relationships and the meaning and developmental impact communication technology had on these offspring during their teen years.

### **Overview**

This qualitative study focused on young adult children's perspectives about interactions with their nonresident fathers during their teen years. The primary purpose was to learn about the role and meaning of communication technology use in nonresident father-teen relationships beyond solely measuring the frequency of its occurrence. It focused on children of nonresident fathers who thought technology was helpful in maintaining father-child relationships. A qualitative approach provided an opportunity for participants to self-identify the communication technologies that were relevant in their relationships with their nonresident fathers, and the meanings they attached to those interactions. The study's goal was to provide a rich description of the role communication technologies have in facilitating and maintaining nonresident father-teen relationships, leading to a more contemporary understanding of nonresident father involvement.

## **Methodology**

### **Recruitment**

Participants in this study were recruited from Study 1, a voluntary, online survey ( $n = 93$ ) on nonresident father-teen communication technology use. Those who took the survey had an opportunity to volunteer for a follow-up interview. Forty participants indicated their willingness to be interviewed.

Next, based on their survey responses, a pool of participants was identified for follow-up. The following characteristics were used to select potential interviewees: 1) participants lived half-time or less with their father during their teen years; 2) participants thought communication technology helped them maintain a relationship with a nonresident father when in-person was not an option, regardless of the quality of that relationship. The decision was made to recruit only those who thought technology was helpful because it would lead to more valuable interview data on the role and meaning technology had in these nonresident father-teen relationships. Approximately 25 potential interview candidates met the criteria. Requests to participate were sent via e-mail; an additional reminder e-mail was sent to those who did not respond to the initial e-mail contact.

Additionally, the author strove to include ethnically, economically, and geographically diverse participants. At the onset of the recruitment process, an effort was made to recruit those who did not identify as “White Non-Hispanic” to increase the ethnic and cultural diversity of the sample. Eleven eligible participants from Study 1 who did not identify as “Non-White Hispanic” expressed interest in a follow-up

interview. The author invited this special population to participate in follow-up interviews by e-mail one week prior to contacting the entire candidate pool of 25. Of these 11 potential volunteers, 4 scheduled and completed interviews. After this, general e-mail invitations were sent to all eligible participants from Study 1 who expressed interest in follow-up interviews with several reminder e-mails being sent, arriving at final sample ( $n = 10$ ).

Although this study's sample was not nationally representative, a specific effort was made to recruit ethnically, geographically, and economically diverse participants. To this end, participants were recruited through ethnically diverse student groups, fraternities, and sororities, such as Greek organizations that are historically African American. Additionally, participants were recruited through community colleges throughout the U.S., such as rural community college systems in New England, and metropolitan systems in the Midwestern and Southern regions of the U.S. Community colleges were chosen for recruitment because they are known for serving first-generation, lower-income, and ethnically diverse students.

### **Sample Characteristics**

The recruiting process resulted in a total of ( $n = 10$ ) who scheduled and completed a follow-up interview. Participants were predominately female, between the ages of 18-19, and lived in various U.S. locations. Only one participant was male and only one participant was over the age of 19. Four of the ten interviewees were persons of color including Hispanic/Latino, Asian, and African American ethnic backgrounds. Although the majority (8 out of 10) of participants were enrolled in either 2-year or 4-

year colleges, the participants came from various socioeconomic classes.

Seven out of ten participants had a nonresident father as a result of divorce and lived with a resident mother, though one participant resided with a grandmother during high school. The sample varied in terms of father-child relationship quality, time since parents' separation, geographic distance from a nonresident father, frequency of contact, parenting schedules, and custodial arrangements. For instance, two participants had nonresident fathers living in another country or overseas, two had fathers living out-of-state, six had fathers living close-by, and one participant's father resided with his ex-mate and children for several months during the separation/divorce period. However, factors such as geographical distance did not necessarily preclude a good relationship between father and child. In fact, relationship quality was unrelated to geographical distances in most cases. For example, some participants who lived in close proximity to their nonresident father during the high school-age teen period had poor relationships and minimal contact, while others living great distances from a nonresident father maintained strong ties, in part due to communication technology.

### **Analytic Approach**

Interviews were conducted over the phone throughout March and April 2014, were audio-recorded, and were transcribed verbatim by the author. The interview protocol can be found in Appendix B. Interview data were analyzed using qualitative thematic analysis to identify themes about communication technology use in nonresident father-teen dyads. Thematic analysis is a useful approach to analyzing qualitative data due its flexibility in allowing the application of family theory and its ability to generate

categories and themes that are supported by interview data. Guided by the work of previous qualitative researchers, thematic analysis was conducted in six steps (Braun & Clarke, 2006; Daly, Kellehear, Glikzman, 1997; Guest, 2012; Smith, Flowers, & Larkin, 2009). 1) I transcribed and familiarized myself with the data. 2) I created initial memos and coded the data. 3) After I generated an account of each person's story, I searched for emerging themes and subthemes in the coded data. This was done by systematically compiling codes into a Google spreadsheet and searching for connections across each story. 4) I generated connections across themes, and 5) I identified and labeled the emerging themes found in the data. 6) I described and produced a final account of identified emerging themes.

The concepts of reliability and validity in qualitative research are not present in the same ways as in quantitative research. Instead, qualitative research uses a system of checks and balances called trustworthiness to verify the findings of qualitative research. Several steps were taken to help ensure the trustworthiness of the interview data in this study outlined by Morrow (2005) and Shelton (2004). To help ensure the trustworthiness of the data, I used an established methodological approach to analyze the interview data and provide information so that my study could be repeated or replicated with a different sample. Although not generalizable in the quantitative sense, qualitative findings should be transferrable to like contexts. This is similar to the concept of external validity in quantitative research. Although external validity cannot arguably be attained in qualitative research, the themes generated should be applicable to similar contexts. Thus, future research independent of my study should be able to transfer my findings to similar

situations.

Lastly, to confirm that my findings were derived from the interview data and not my own biases, an audit of both my coded qualitative data as well as the themes generated was conducted by my advisor, who is experienced in qualitative research methods. To conduct the audit, my doctoral advisor independently reviewed my coding of raw interview transcripts, my identification and organization of these codes in the Google spreadsheet, and the themes I generated from the compilation of coded interview data. We discussed the essence of each theme and specific interview segments that illustrated them to arrive at agreement and verification that the themes and the coded data were in alignment. This process served to validate my findings.

### **Findings**

Three overarching themes were identified from the interview data: 1) *Communication technology helped...*; 2) *Technology made children and fathers part of the 'same world';* and 3) *Children used technology to do family process.* Several subthemes emerged within each of the overarching themes.

#### **Theme #1: Communication Technology Helped...**

It was clear from our recruitment criteria that participants found communication technology helpful in some way but it was not clear to what extent technology helped nonresident father-teen relationships. We found from participants' narratives that using communication technology to maintain a relationship with their father was both important and meaningful. From simply keeping in touch, to communicating needs, to facilitating more complex interactions that allowed them to express intimacy and

emotion, communication technology played a critical role in sustaining teen's relationships with their non-resident fathers.

**Keep in touch.** Participants overwhelmingly described communication technology in helping them maintain communication with their nonresident father, particularly over long geographical distances, enhancing these relationships in ways not otherwise possible. Interactions through mobile phone calls, text messaging, e-mail, and video chat were important for maintaining contact. When asked the importance communication technology had in keeping in touch with one participant's nonresident father, whose father lived out-of-state, Amelia said, "There wouldn't have been literally any other way unless I flew over to see him." With technologies such as video-chat, she was able to have regular, face-to-face contact with her father, adding that, "it really opened opportunities--things you couldn't always do in person because of transportation--we've had a stronger connection, especially because of technology." As with this participant and others, communication technology was nearly the sole means of maintaining contact.

Another participant, whose fathers lived outside the U.S. shared:

Technology was very important because I wouldn't have stayed in contact with my father over those several year spans...We always had a line of contact. We'd e-mail maybe once or twice a month and then we'd Skype for major events like Christmas and birthdays. (Christian)

Not knowing where her father would be on a day-to-day basis and needing to contact him, Beatrice said, "I would say e-mail and text were the ways I could most reliably get

in touch with my dad."

***Technology was vital during children's busy school and social lives.*** Although long geographical distances posed a barrier to nonresident father-teen interactions, another barrier was a busy schedule of social and academic activities that are typically associated with high school students' lives. Communication technology helped participants 'make time' for their dads. One participant offered:

I think it really helped us not fall out of touch when things got busy. We could plan things and share information easily. I think it did help us get closer because we could talk in-between visits. I could do it on the go, while with other people, in class, etc. It was less time-consuming than calling or visiting. (Hazel)

***The role of asynchronous communication.*** While many participants offered that video chat simulated a realistic, face-to-face experience, most mentioned that texting offered convenience and ease of use that really helped them stay in touch with a nonresident father with one participating saying, "It was an easier way to reach someone if you couldn't get in touch over the phone or otherwise" (Ivy).

Not only was it was easier to have asynchronous conversations via texting in situations where nonresident fathers lived in different time zones, children liked to be able to choose when to respond to text messages and seemed more apt to do so compared to phone calls.

I use texting a lot more than calling. It's just quicker. When we were just talking on the phone, I was finding an excuse to go. With texting, I never want to stop because it's easier and I can respond on my own time...if I'm not in the mood that

day I can just respond the next day. I feel like it has helped a lot with maintaining our relationship. If it wasn't for that I don't feel like we would have progressed as much in our relationship. We would just have the phone and sometimes, you know, he'd call and I'm busy and I don't answer and I forgot. Since we mostly text, I'll respond more to that than a missed call. (Amelia)

**Facilitate needs of the father-child relationship.** Many participants described how technology-mediated communication enabled them to have meaningful interactions with a nonresident father, helping maintain and facilitate relationships. This included the scheduling of visitations and extended phone conversations, and helping fulfill other needs of a high school-age teen, such as providing transportation or money. Technology played a role in facilitating and expediting these needs. One participant, who lived in the same neighborhood as her father and described their relationship as "decent" offered that "texting was an easy way to communicate brief things. If we needed to talk more than that, I could call him on the phone" (Hazel). Danielle, who also lived in the same neighborhood as her father, said: "We would text when it was okay for my dad to come pick me up and things like that" (Danielle).

Another participant described their interactions via technology as "... a lot of time scheduling things. If I had a sports game, where it was, when it was, could he come, if he needed to drop me off...more often than not it was for scheduling" (Evelyn). Others mentioned that they and their fathers used technology when they needed help. "Our texting was mostly on a need basis. It was mostly what we needed like 'Dad I need a ride.' Most of the time it was something HE needed from me. I'd say texting was pretty

much used on a need-basis" (Ivy).

**Make interactions less awkward.** Many participants said that communication technology helped their interactions with their nonresident fathers feel less awkward.

When we FaceTime it honestly feels the same to me [as in-person contact]. It feels better with awkward or intimate conversations. You don't feel uncomfortable. It really helps. If me and my father were talking [in person], I felt more comfortable if my mother was there just because I maybe didn't understand my father. But I felt like with FaceTime, it provided that same sense of comfort. (Amelia)

Furthermore, participants described how their conversations were less awkward if they shared pictures or use social media (e.g. Facebook) that served as conversation starters:

He'll sometimes 'Like' my things on Facebook or mention something in person like a picture of me and my friends that'd he'd bring up in conversation. It was definitely a conversation starter and it just let him into my life a little more. (Evelyn)

Another participant mentioned that her dad linked his social media to his cell phone so that calls would share social media content. "His phone was linked to Facebook, so when I called, my Facebook profile picture would show. So, that would be the first thing we'd talk about: 'Why'd you change your Facebook picture?' or 'What's going on in this picture?'" (Juliet).

***Priming children for in-person encounters.*** For participants who rarely saw their fathers due to structural barriers such as geographic distance, interactions via communication technology also helped prepare them for in-person visits. A participant who only had yearly contact with a nonresident father said, "It was a way to keep in contact with my dad. If I only saw him or spoke with him during face-to-face time when we met like once every two years, it would be much more awkward" (Christian).

***Express emotions and intimacy.*** Participants felt that communication technology helped them to express emotions and intimacy toward a nonresident father when in-person contact was not an option. Many reflected upon meaningful and heartfelt interactions that strengthened the father-child bond, interactions which were mediated by communication technology.

***Excitement.*** When reflecting back on their father-child relationship during their teen years, participants often mentioned feelings of excitement. There was excitement both in using communication technology to be able to share news with their nonresident father. When asking one participant what emotions she attached to her interactions with her dad using technology, she said:

Mainly excitement. Especially finding out what colleges I got into and that sort of thing. I'd text him and be like 'I got into X!' And then I was looking at schools we would be talking the phone and I'd be telling him everything! (Juliet)

This example illustrates how participants were excited to share experiences with a nonresident father and were also successful in conveying excitement using multiple forms of communication technology.

Participants reported that their nonresident fathers also expressed excitement in using communication technology to connect with their children. The fact that their fathers wanted to reach out and be involved with them had a very significant impact on participants. When reflecting back to their high school-age teen years, many participants had positive and profound memories of this.

My dad would go to his sister's so he could purposely FaceTime me. At first he'd tell me to start it because he didn't know what he was doing. 'You press the button,' or, 'you start it,' he'd say. He was really excited about that about that and I value that so much. He learned how to use it so when he'd say "let's FaceTime," I'd stop whatever I was doing. I'd separate a little time to do that. It didn't matter what we had to talk about but it was more that he wanted to have an intimate conversation. That touched me. It had a big role in my life. (Amelia)

***Frustration with father.*** Some participants had negative or frustrating memories of their interactions with a nonresident father, which were only exasperated by technology, in part because they had difficulty expressing their emotions. One participant, whose father lived in another state, recalled frustrated interactions mediated by technology.

We talked almost exclusively through e-mail. We mostly talked about planning trips or college plans. We bickered a lot so it was mostly arguments back and forth about when I wanted to come visit, why I wasn't doing well in school, or why I hadn't applied to college yet. I never really liked talking on the phone because conversations had a tendency to escalate. E-mail was easier because of

the way we could phrase things but sometimes emotions would get lost in translation. (Felicia)

### **Theme #2: Technology Made Children and Fathers Part of the 'Same World'**

Neither children's developmental growth, nor their relationship with a nonresident father, were static over space and time. Technologies, particularly picture sharing, video chat, and social media, helped nonresident fathers be a part of important milestones and everyday life events which they would have otherwise missed due to barriers such as geographical distance. With myriad technologies, there are many ways for children to involve their nonresident fathers in a variety of events from sharing school projects, meeting a boyfriend or girlfriend, and even major events such as a high school graduation. Communication technology, "...kept dad involved--it bridged that gap" (Evelyn), and "It was like a window into what was happening with me and my sister" (Grace). When reflecting back to their teen years, many participants felt that technology's ability to include fathers in life events helped make the nonresident-father child relationship more real and authentic, describing this as enabling fathers and children to be part of the "same world."

I would talk about exciting things happening in school. We would use technology to send pictures like if dad wanted to see what I was working on for school or if I wanted to see pictures of the dogs, which was neat. (Hazel)

Christian commented that social media websites such as Facebook were useful for keeping his nonresident father part of his world in a less direct way. "Friends post pictures on Facebook and would tag me in them. My dad could see those pictures--it was

a much more convenient way for my dad to stay in touch with my life.”

One participant lamented at her difficulty using technology with a nonresident father who lived overseas. She attempted to use Skype to connect but was unsuccessful on multiple occasions. Those experiences, when looking back, were filled with negative emotions:

If Skype had actually worked, the long stretches of time my father was overseas would've been so much easier. He'd only be able to talk to us once a week and it would just be my mom being like, "we got an e-mail from your dad." It would have been so nice if we could've had an hour-long talk on Skype every Sundays--if we could see his face--it would've helped so much. Then I could take that time to show him my report card, or show him the model my brother made. It could've been something where he could see the physically, tangible object--could see us growing up--not just texting him saying that I got all A's again. Being able to see his face and him being able to see ours, it would've made things a lot easier.

(Beatrice)

Although difficulties with technology had negative feelings attached to them, participants generally had positive emotions tied to their ability to involve fathers in their lives:

It was great that we could share those moments--my accomplishments over the years--like when I graduated high school. I could take a picture on my phone or FaceTime him. Especially in my teen years, I experienced a lot of changes and there were so many things happening that he otherwise could never have seen.

But with picture messages and FaceTime it felt like he's so close and feels like he knows everything about me...it felt like we were in the *same world* [emphasis added]. (Amelia)

**Children used technology to keep fathers out of their world.** While participants used technology to make a nonresident father part of the same world, in some instances participants also used technology to put nonresident fathers at a distance. It allowed them to control what fathers could access, particularly as it related to social media sites. Felicia shared, "We tried to be friends on Facebook but I felt my privacy was being invaded so that didn't last long--I always felt judged by what my dad saw on my Facebook so I kept him at distance."

While Felicia completely blocked her father from viewing her social media, Grace was more selective about her father's access.

I would set restrictions on what my dad could see since I spent a lot time with my mom's family--vacations and that sort of stuff--I don't know if I was shielding my dad because he missed the family or didn't want him to see certain things but it resulted with him on this list where he could only see things that I designated.  
(Grace)

Although children used technology to connect their nonresident fathers to their world, some mentioned they had to coach their fathers to avoid embarrassing or socially inappropriate connections. "I remember 'Friending' my father on Facebook, maybe junior year of high school. I was like, 'Please don't comment on my posts--this is your privilege--you can look at my life but don't comment or anything'" (Grace).

### **Theme #3: Children used technology to do family process**

Communication technology was used to do family process and traverse complex nonresident father-child relationships, particularly across geographical distances and oftentimes with multiple family members. Families were able to involve multiple family members, especially both parents, through a series of e-mails or in a family meeting to resolve complex issues.

Beatrice, her mother, and her nonresident father, resolved disputes using technology, or as she put it, helped keep her father 'in the loop' despite living overseas:

I remember when I was 15 or so. I wanted to go on this group date to the movies with a boy. It was a big deal for my family. My mom was like "I'm not just going to give you permission to go on this group date...you need to talk to your dad." So I ended up e-mailing him and the three of us ended up having an e-mail conversation over the next week before the date came up. He begrudgingly agreed but it was a week of back and forth e-mails about who's going, are there chaperones...really hashing out all the details. (Beatrice)

Others shared similar experiences about technology's ability to involve both parents in decisions that affected their children. Danielle, whose father lived in the neighborhood, shared:

Texting was helpful because I was able to see if I could come visit that weekend. My dad was able to find out if my mother would allow it-- when my dad remarried, his wife would contact me on Facebook to see how I was or if I could come visit them that week.

However, e-mail chains can be cumbersome and lose effectiveness when the string of messages is long. Participants discussed how they used more advanced technologies in more complex discussions with multiple family members. Video chat and smart phones enabled children to include nonresident fathers in family discussions and allow them to operate within the boundaries of the family system.

With group chat I could just text both my parents and be like 'I am going to be home an hour late.' iPhones were conducive to that. It was a lot easier to have a conversation between the three of us because everyone was part of the conversation. (Hazel)

Beatrice shared another story about how technology was used to conduct family process with more ease than back and forth e-mails.

Texting and group chat had been really useful, especially in my teen years. We used to travel for school competitions and sports. A lot of them were optional but I would want to go. My mother, father, and me would talk about that. We could have a three-way pow-wow over text. That way we could be physically talking about it all at once, not "go ask dad" or "mom said this," avoiding the back-and-forth of them asking each other questions or getting into an argument. It really helped to have a physical group chat like that, almost like a "reply all" e-mail. (Beatrice)

### **Limitations of Communication Technology**

Overall, participants in this study had many positive things to say about the role and meaning of technology in their relationships with nonresident fathers. However,

participants also discussed the shortcomings of communication technology in maintaining a relationship with a nonresident father. Although communication technology opened doors for children who otherwise had little contact with a nonresident father during their teen years, for some it did not mend a poor father-child relationship or completely replace a father who was physically absent. "Technology definitely helps keep that link with my dad but it doesn't necessarily make a bad relationship better."  
(Grace)

Participants who had poor or tepid relationships with a nonresident father seemed to use it less frequently and appeared to attach less meaning to technology mediated interactions. "We didn't use technology a lot because we just weren't very talkative at the time, not for any bad reason but it was just our personalities" (Ivy).

Another participant mentioned that she used technology less frequently as the relationship with her father dwindled.

In the beginning technology helped, but the relationship began to die so I don't think it would've mattered much. I stopped seeing him as much and the phone calls and texts stopped coming. He barely texted and as the relationship started ending I'd only get a text for holidays and my birthday. (Danielle)

While participants generally felt that communication technology enhanced their relationship with a nonresident father, it did not necessarily replace a yearning for in-person contact. Christian, who saw his father every one or two years because he lived overseas commented:

I think we got to know each other more face-to-face, like personality wise more

than e-mail. E-mail always seemed a bit more formal and talking to a camera was slightly strange for me. We would talk more about broad things whereas face-to-face I'd say was a bit more personal.

Other participants discussed the necessity of communication technology in maintaining a relationship with a nonresident father but also discussed their preference for in-person contact. "I definitely prefer face-to-face conversation over technology. Texting was a really good way to keep in touch but talking in person was best" (Hazel). Ivy thought of technology as a "back-up" to in-person contact. "It did play a good role but it was like a Plan B on how to contact someone. I would say it was a means to an end."

Beatrice, who discussed her difficulties using Skype to contact her overseas father, had a lot to say about the limitations of communication technology:

I would say technology moving more and more towards the constant connectivity is awesome but it's also kind of sad at the same time because it still can't replace the person not being there. Sometimes you want a hug or want your dad to pat you on the back and say "good job." But it's more like "Good job, I wish I could hug you." There's something gut-wrenching about that feeling, "I wish I could hug you but you can't." Skype and all these programs are awesome. As much as technology has helped my relationship with my dad, it also never is going to replace the years that he wasn't there. I'm never going to get back those graduations, Girl Scout dances, and award ceremonies that he missed.

## Discussion of Study 2

Although the use of communication technology has been given attention in broader family research (Boase et al., 2006; Fox et al., 2001), specific attention to how it affects nonresident father-teen relationships has not been considered. The study's goal was to provide rich descriptions of the role communication technology plays in facilitating and maintaining nonresident father-teen relationships. It focused on the use of contemporary technology such as social media, texting, etc., which has not been included in previous nonresident fathering studies (Hawkins et al., 2007; King, 1994; Manning & Lamb, 2003, Menning, 2006; Mitchell, Booth, & King, 2009; Stewart, 2003).

The first theme, *Communication technology helped...*, showed that communication technology facilitated nonresident father-teen relationships in numerous ways. It helped teens stay in touch with their nonresident fathers during teens' busy school lives and during times when they could not see their fathers in person for long periods of time. It helped facilitate the needs of the father-teen relationship, which ranged from arranging visits to asking for money. It helped father-teen interactions feel less awkward, particularly by keeping a line of communication open during times apart. Many participants felt that interactions with nonresident fathers would be much more awkward if they could not have communicated between in-person visits. Lastly, technology enabled teens to express both positive and negative emotions such as feelings of excitement as well as frustration with their nonresident fathers.

The second theme, *Technology Made Children and Fathers Part of the 'Same World'*, showed that communication technology helped father-teen dyads transcend

geographical boundaries. Through video chat, photo sharing, and other types of technology, nonresident fathers were able to be emotionally present for major events and turning points, such as high school award ceremonies, though technology also allowed them to maintain a lasting feeling of emotional presence through the high school years. Participants commented that they were able to keep nonresident fathers ‘in the loop,’ throughout their daily lives.

Although communication technology helped father-teen dyads transcend geographical boundaries in making fathers part of the ‘same world,’ it also furnished teens with a surprisingly high amount of control over the boundaries of the father-teen relationship. If they chose to, teens were able to partition off their digital lives from their father. This unique feature allowed teens to relax or restrict nonresident fathers’ access to various social spaces. For example, participants offered that they were able to choose when or if they would respond to calls or texts from a nonresident father, and filter the content nonresident fathers could see on social media pages such as Facebook. This is consistent with research that examines a child-effects model of nonresident father involvement. Contrary to the majority of nonresident fathering research which posits that fathers are the primary agents in maintaining active involvement in offspring’s lives, a child-effects model suggests that children’s behavior have a large part in predicting nonresident father involvement (Hawkins et al., 2007). Communication technology created this unique feature in that teens could choose to live different lives on the Internet, separate from nonresident fathers.

The third theme, *Children used technology to do family process*, aided teens in

navigating complex family relationships which included multiple interactions with multiple family members such as a resident parent. Communication technology created a ‘family meeting’ space of sorts, which could be used to mediate issues between teens, nonresident fathers, and sometimes resident parents. Participants’ stories showed that teens used communication technology to negotiate or discuss many issues ranging from visitations to whether or not a teen was permitted to attend a school dance or stay out after curfew.

This study is consistent with existing research that shows that frequency of communication and involvement by a nonresident father is positively associated with child well-being (Adamsons & Johnson, 2013; Amato, 1999; Hawkins et al., 2007; King, 1994). Previous research has examined how frequency of communication and frequency of involvement from a nonresident father impacts children, though these studies have been limited to primarily quantitative analyses that did not extend to the role of communication technology (Menning, 2006; Mitchell, Booth, & King, 2009; Stewart, 2003). The data show that there are some very clear benefits of communication technology in nonresident father-teen relationships as well as some limitations. Participants offered that communication technology helped in a variety of ways, made nonresident father-teen dyads feel like part of the same world, and helped these dyads do family process, although the benefits of technology seemed less pronounced when teens had a poor relationship with their fathers, and many participants remarked that while providing many benefits, communication technology did not completely replace a father’s physical absence from both day-to-day life as well as major life events.

## **Limitations**

This study had several limitations that should be noted. The first limitation is the bias inherent in using a convenience sample. Although this study did not aim to collect a representative sample generalizable to the target population, participants elected to be interviewed. It may be that those who had very negative experiences with a nonresident father may not have volunteered for this study. A nationally representative sample of teens with nonresident fathers may have led to different findings. Although an effort was made to recruit a diverse sample, the participants were predominately white, female, and enrolled in either a two-year or four-year college. A more culturally diverse sample would help uncover any differences in how communication technology is used in father-teen relationships in different cultures.

A second limitation was the use of a retrospective approach in which participants reflected back to their high school-age teen years. Although this approach led to a deeper understanding of the role and meaning technology, participants' memories may not have been accurate (Fisher, 2007). Further, the teen years for participants in this study dated several years back so their experiences may not be inclusive of the latest communication technologies available. Lastly, this study focused only on teens' perceptions of how use of community technology influenced their relationship with their fathers. It did not include fathers' perceptions, and thus, findings must be interpreted in light of the missing perspective.

## **Implications**

This study has implications for practice and future research in family science.

Practitioners who work with nonresident father families, may consider how communication technology could serve as a conduit for increased nonresident father involvement, regardless of geographical distance between father and child residence. Practitioners may be able to incorporate communication technology in their practice or facilitate trainings that help fathers understand the role and benefits technology can have in their relationship with children.

It is important for practitioners to recognize the benefit for children of having some level of control over their nonresident father's access to their lives, particularly the digital spaces in which contemporary adolescents live. This is a unique feature afforded by communication technology that practitioners could tap into. Communication technology affords children a high level of control over the nonresident father-child relationship that is not present in many other arenas. Although potentially detrimental to father-child relationships, cultivating this unique feature of technology could provide a form of stability and safe haven for children who are often embroiled in conflicts between nonresident fathers and their ex-mates.

The findings of this study have implications for future nonresident father involvement research. Future studies should continue to include multiple forms of communication technology in their measures. Given the ever-expanding nature of communication technology, newer forms of technology may offer new ways to facilitate nonresident father-child relationships. Moreover, newer fathers will have been socialized in a digital world, and may be more comfortable with the use of technology than some of the fathers of participants in this study.

A qualitative methodological approach may prove useful in future nonresident fathering studies. Although previously available secondary data have been a boon to nonresident fathering research, it has limited the ability to explore the meanings associated with various forms of nonresident father involvement in children's lives.

Lastly, this study only examined the role and meaning of communication from the viewpoint of children of nonresident fathers. Future studies may uncover more about father-child relationships by including nonresident fathers. Nonresident fathers have to negotiate many physical and psychological barriers in maintaining relationships with their children. Studies that include fathers' perspectives in the analysis of communication technology may yield findings useful to both family researchers and family therapists. Child-effects models of nonresident father involvement have suggested that children's behavior and actions may be the deciding factor in determining nonresident father involvement. Learning fathers' perceptions may help uncover their likelihood of maintaining involvement based on children's online inclusionary or exclusionary behaviors.

### **Conclusions**

Using various technologies, participants in this study were able to include a nonresident father in their lives during the high school-age period. Reflecting back on their high school teen years, participants found meaning and attached strong feelings to their ability to make a nonresident father part of the same world. At the same time, some participants such as Felicia and Grace, showed that children were able to exert a level of control over their nonresident father's involvement.

Previous studies have examined the role of nonresident father involvement, though little attention has been given to either communication technology-mediated interactions and none have used a qualitative approach (Hawkins et al., 2007; King & Sobolewski, 2006; Menning, 2006; Mitchell, Booth, & King, 2009). The qualitative design of this study allowed for a deep and more contemporary understanding of nonresident father-child communication. Participants' stories reveal that communication technology-mediated interactions, whether text messaging or interacting via webcam programs such as FaceTime, is laden with emotion. For example, participants' excitement or frustration could only be captured using a qualitative approach. The goal of this study was to provide rich descriptions of the role and meaning communication technology-mediated interactions had in father-teen relationships. This study expands the edge of knowledge in nonresident fathering research by building on existing research, and will help inform future nonresident fathering studies that aim to encompass the role of communication technology in the context of these nonresident father-child relationships.

### **Synthesis of Study 1 & Study 2**

The goal of this dissertation was to map the usage of communication technology in nonresident father-teen relationships as well as the role and meaning these technology-mediated interactions had for children of nonresident fathers. This dissertation was guided by a life course perspective lens (Shanahan & Macmillian, 2008) to explore the use of technology at a critical phase of human development – the child's high school-age teen years. Previous research has suggested that one's family experiences during these

years may have a life-long developmental impact (Harris, Furstenberg, & Marmar, 1998; Hofferth, Boisjoly, & Duncan, 1998; Pallas, 2003). It also recognized the importance of context to the developmental process, in this case, the proliferation of communication technology in participants' lives. Similar to how the automobile or commercial air travel revolutionized the lives of previous generations, the proliferation of communication technologies such as e-mail, smart phones, social networking sites, video chat software has revolutionized family communication, in this case between nonresident fathers and their children, in ways never experienced by previous generations.

The mixed methods approach of this dissertation allowed 1) for a description of that context, i.e., the forms of technology, the frequency with which it was used, and the barriers to using it (Study 1), and 2) then a deeper exploration of the role and meaning that technology-mediated communication had in participants' relationships (Study 2). In Study 2, we focused solely on teens who thought technology was helpful in maintaining relationships with their fathers to help get a clearer picture of the role and meaning technology had in these relationships. The findings of these two studies uncovered some of the benefits as well as shortcomings in the use of communication technology in father-teen relationships.

Both studies demonstrated that communication technology had positive benefits for nonresident father-teen relationships. Study 1 findings showed that communication technology helped nonresident father-teen dyads maintain a relationship and communicate about important issues when they could not see each other in person. Study 2 found that communication technology enhanced father-teen relationships in a number

of ways and made children feel as if their geographically distant fathers were part of the same world.

Both studies revealed that although communication technology enhanced father-teen relationships, it did not replace the impact of and desire for in-person contact. In Study 1, a substantial majority of participants preferred in-person contact with a nonresident father over technology-mediated communication even though in-person contact was infrequent. In Study 2, participants shared heartfelt stories of the role communication technology played in maintaining a relationship with a nonresident fathers, though many also lamented that communication technology was not a complete substitute for a father's physical absence during key moments of the high school years. Thus, communication technology allowed nonresident fathers to be emotionally or psychologically present at some level. This helped ameliorate their absence in some ways, but for many, it was not enough.

Another salient component that influenced the importance of communication technology use was the quality of nonresident father-teen relationships. Both studies show that the frequency of communication technology use, as well as the meaning it had in father-teen relationships, was punctuated by the relationship quality of these relationships. Study 1 found a significant difference between frequency of technology usage and nonresident father-teen relationship quality. Many participants also cited poor or negative interactions as a barrier to using technology to communicate with a nonresident father. In Study 2, participants who described their relationship with their nonresident father as poor or tepid relationship had fewer interactions using technology

and had fewer comments about the role and meaning communication technology in those relationships. Although technology helped maintain nonresident father-teen relationships, results suggest that it does not attenuates poor father-teen relationships.

This research contributes to the nonresident fathering literature by including more recent forms of communication technology. Moreover, the mixed methods approach facilitated the mapping of the use of these contemporary forms in nonresident father-child relationships as well as an exploration of the meanings and roles attached to these forms of communication in teens' lives. Although this dissertation's data was not nationally representative, it included measures absent from the available secondary data on which many fathering studies are based. Its qualitative approach allowed for a deeper understanding of the role and meaning communication had for children of nonresident fathers. Results from this research set the stage for a more contemporary understanding of communication technology as well as for future research on its impact in nonresident father-teen relationships.

Future studies in this arena could be improved by examining technology among resident fathers. In Study 1, communication technology use was much higher among resident mothers and their children compared nonresident fathers. Comparing resident versus nonresident fathers' use of technology in facilitating father-child relationships may help expand the edge of knowledge in father involvement research and suggest implications for practice among family practitioners and fathering support groups.

## Tables

Table 1

*Demographic Characteristics of Sample*

Variable (Categorical Response Options)	<i>n</i>	%
Ethnic background		
Non-Hispanic White	68	74.2
Black of African American	6	6.2
Latino or Hispanic	8	8.3
Asian	7	7.2
Other	3	4.1
Biological sex		
Male	27	28.7
Female	66	71.3
Currently a college student		
Yes	77	84.4
No	14	15.6
Participant has children		
Yes	8	8.7
No	83	91.3
Participant's parents ever married		
Yes	78	88.2
No	10	11.8
Participant's parents ever shared residence		
Yes	83	94.6
No	5	5.4
Social status		
Working class	20	21.4
Middle class	49	53.3
Upper-middle class	21	22.8
Upper class	2	2.5

Table 2

*Mean Responses of Nonresident Father-Teen Interaction within a 12-Month Timeframe  
(with Standard Deviations in Parentheses)*

Type of Communication	Mean Usage
In-Person Contact	3.27(1.24)
Mail Correspondence (Letters, Cards, Etc.)	1.53(0.93)
Landline Telephone	2.64(1.49)
Mobile Phones (Smart Phones/Cell Phones)	3.45(1.37)
E-Mail	2.22(1.34)
Texting	3.07(1.68)
Instant Messaging (e.g. Facebook Chat, Google Chat)	1.78(1.34)
Social Networking Sites (e.g. Facebook, Twitter)	1.89(1.44)
Photo, Video, Information Sharing Websites/Programs	1.47(1.23)
Video Chat (e.g. Skype, FaceTime)	1.56(1.19)
Smartphone Apps/Games	1.45(1.20)
Online Games	1.53(0.93)
Other (Unspecified)	1.20(0.88)

*Note.* 1 = Never; 2 = About once a year; 3 = About once a month; 4 = About once a week; 5 = About once a day; 6 = Several times a day

Table 3

*Mean Responses of Resident Mother-Teen Interaction within a 12-Month Timeframe*

*(with Standard Deviations in Parentheses)*

Type of Communication	Mean Usage
Mail Correspondence (Letters, Cards, Etc.)	1.33(0.75)
Landline Telephone	2.85(1.72)
Mobile Phones (Smart Phones/Cell Phones)	4.85(1.02)
E-Mail	2.70(1.45)
Texting	4.48(1.78)
Instant Messaging (e.g. Facebook Chat, Google Chat)	2.01(1.55)
Social Networking Sites (e.g. Facebook, Twitter)	2.22(1.57)
Photo, Video, Information Sharing Websites/Programs	1.57(1.20)
Video Chat (e.g. Skype, FaceTime)	1.63(1.20)
Smartphone Apps/Games	1.43(1.17)
Online Games	1.17(0.81)
Other (Unspecified)	1.06(0.50)

*Note.* 1 = Never; 2 = About once a year; 3 = About once a month; 4 = About once a week; 5 = About once a day; 6 = Several times a day

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Appendix A  
Internet Survey Questionnaire for Study 1

**Demographic Questions**

1. What is your age in years?
2. What is your biological sex?
  1. Male
  2. Female
  3. Other (Please specify) \_\_\_\_\_
3. Which category best describes your racial or ethnic background?
  1. White (non-Hispanic)
  2. Black or African American
  3. Latino or Hispanic
  4. American Indian/Native American
  5. Asian or Pacific Islander
  6. Other (Please specify) \_\_\_\_\_
4. Which region of the country do you live in?
  1. Midwest (IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, WI)
  2. Northeast (CT, ME, MA, NH, NJ, NY, PA, RI, VT)
  3. South (AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV)
  4. West (AK, AZ, CA, CO, HI, ID, MT, NV, NM, OR, UT, WA, WY)
5. When you were a teen (between the ages of 14 - 18), what category best describes the area in which you lived?
  1. Urban
  2. Suburban
  3. Rural
6. Would you consider yourself:
  1. Working class
  2. Middle class
  3. Upper-middle class
  4. Upper class
7. What is your highest level of education
  1. Some school: no diploma
  2. High school/GED completion
  3. Some college
  4. Associate's/2-year college degree
  5. Bachelor's/4-year college degree
  6. Graduate/Professional degree

8. Are you currently a student?
- No
  - Yes
9. What is your employment status?
1. Out of work but not looking for work
  2. Out of work and currently looking for work
  3. Working part-time (under 29 hours per week)
  4. Working full-time (over 30 hours per week)
10. What best describes your relationship status?
1. Single, never married
  2. In a relationship
  3. Married or domestic partnership
  4. Separated/Divorced
  5. Widowed
11. How many children do you have? If none, please enter '0'

**Parental Demographic Questions**

12. Were your parents ever married?
1. No
  2. Yes
13. Did your parents ever live together?
1. No
  2. Yes
14. What age in years is your **father**?
15. What age in years is your **mother**?
16. When you were a teen (between the ages of 14 - 18), how would you best describe the custody arrangement your parents had regarding where you lived:
1. Mother had sole physical custody of me
  2. Parents had joint or shared physical custody of me
  3. Father had sole physical custody of me
17. When you were a teen (between the ages of 14 - 18) how much of the time did you **live with your father compared to your mother**?
1. Lived full time with father
  2. Lived more than half of the time with father
  3. Lived with mother and father equal amount of time
  4. Lived more than half of the time with mother
  5. Lived full time with mother

18. When you were a teen (between the ages of 14 - 18), how would you best describe the geographical distance between your home and your father's home?

1. Father lived in the same town or city
2. Father lived in a neighboring town or city
3. Father lived in a different state
4. Father lived in another part of the country
5. Father lived in a different country

**Baseline father-child communication questions**

19. When you were a teen (between the ages of 14 - 18), about how often would you see your father **in person** over a **12-month** period?

1. Never
2. About once a year
3. About once a month
4. About once a week
5. About once a day
6. Several times a day

20. When you were a teen (between the ages of 14 - 18), about how often would you communicate with your father through **mail correspondence** (i.e. writing letters) over a **12-month** period?

1. Never
2. About once a year
3. About once a month
4. About once a week
5. About once a day
6. Several times a day

21. I feel that during my **teen years**, I had a very good relationship with my **father**.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

22. I feel that during my **teen years**, I had a very good relationship with my **mother**.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

### **Baseline Tech questions**

23. During your teen years, how would you have rated **your skill level** with communication technologies such as e-mail, text messaging, familiarity with social media sites, etc.?

1. Poor
2. Fair
3. Good
4. Very Good
5. Excellent

24. Which sentence best describes how your technology use has changed over time since your teen years?

1. I tend to stick with the same technologies over time
2. I try to keep up with current technology trends
3. Cutting edge; I'm always using the newest sites and getting the newest gadgets available

### **Father-Child Communication Technology Questions**

The next set of questions is about communication technology use with your father in your teen years (about the time when people that age would be in high school or between the ages of 14 - 18). These can be any sorts of communication technology you can think of, for example: e-mail, texting, phone calls, photo-sharing, using webcam chat programs like Skype, social networking sites like Facebook, video games, and other technologies you can think of.

25A-L. When you were a teen (between the ages of 14 - 18), about how often would you interact with your **father** using **communication technology** over a **12-month** period

[1 = *Never*, 2 = *About Once a Year*, 3 = *About Once a Month*, 4 = *About Once a Week*, 5 = *About Once a Day*, 6 = *Several Times a Day*] for each

- A. Landline Telephones
- B. Mobile phones (smart phones/cell phones)
- C. E-Mail
- D. Texting
- E. Instant messaging (e.g. Facebook chat, AOL Messenger, Google Chat)
- F. Social Networking Websites (e.g. Facebook)
- G. Photo, video, and information sharing (Instagram, Youtube, Reddit)
- H. Tweeting (e.g. Twitter.com)
- I. Video Conferencing (e.g. Skype)
- J. Smartphone Apps
- K. Online video games
- L. Other Communication Technologies

26. If you selected "Other Communication Technologies" in the above question, please list them here:

27. What barriers, such as your or your father's comfort and familiarity with technology, affected how you may have used communication technology? Check all that apply

1. Father unfamiliar with technology
2. My unfamiliarity with technology

3. Did not own/have access to technology
4. Father's lack of interest
5. My lack of interest
6. Wanted to limit information about my personal life
7. Interactions were uncomfortable or negative
8. Other reason (please specify) \_\_\_\_\_

28. When communicating with technology, who initiated most of the interactions you had with your father?

1. Mostly me
2. Mostly father
3. Father and me equally

29. When I could not see my father in person, communication technology helped my father and me maintain a relationship.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

30. I could communicate with my father about important issues through the use of communication technology.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

31. When you think back to how you interacted with your father using communication technology **compared to** interacting in person, was there a major difference between the two?

1. Interacting in person was better
2. Interacting through technology was better
3. No difference
4. N/A Didn't use

32. Overall, how important was the role of communication technology in staying connected to your father?

1. Not at all important
2. Somewhat important
3. Important
4. Very important

### **Mother-Child Communication Technology Questions**

The next set of questions is about communication technology use with your mother in your teen years (about the time when people that age would be in high school or between the ages of 14 -

18). These can be any sorts of communication technology you can think of, for example: e-mail, texting, phone calls, photo-sharing, using webcam chat programs like Skype, social networking sites like Facebook, video games, and other technologies you can think of.

33A-L. When you were a teen (between the ages of 14 - 18), about how often would you interact with your **mother** using **communication technology** over a **12-month** period  
[1 = Never, 2 = About Once a Year, 3 = About Once a Month, 4 = About Once a Week, 5 = About Once a Day, 6 = Several Times a Day] for each

- A. Landline Telephones
- B. Mobile phones (smart phones/cell phones)
- C. E-Mail
- D. Texting
- E. Instant messaging (e.g. Facebook chat, AOL Messenger, Google Chat)
- F. Social Networking Websites (e.g. Facebook)
- G. Photo, video, and information sharing (Instagram, Youtube, Reddit)
- H. Tweeting (e.g. Twitter.com)
- I. Video Conferencing (e.g. Skype)
- J. Smartphone Apps
- K. Online video games
- L. Other Communication Technologies

34. If you selected "Other Communication Technologies" in the above question, please list them here:

35. What barriers, such as you or your **mother's** comfort and familiarity with technology, affected how you may have used communication technology? Check all that apply

1. Mother unfamiliar with technology
2. My unfamiliarity with technology
3. Did not own/have access to technology
4. Mother's lack of interest
5. My lack of interest
6. Wanted to limit information about my personal life
7. Interactions were uncomfortable or negative
8. Other reason \_\_\_\_\_

36. When communicating with technology, who initiated most of the interactions you had with your mother?

1. Mostly me
2. Mostly mother
3. Mother and me equally

37. When I could not see my mother in person, communication technology helped my mother and me maintain a relationship

1. Strongly disagree

2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

38. I could communicate with my mother about important issues through the use of communication technology.

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

39. When you think back to how you interacted with your mother using communication technology **compared to** interacting in person, was there a major difference between the two?

1. Interacting in person was better
2. Interacting through technology was better
3. No difference
4. N/A Did not use

40. Overall, how important was the role of communication technology in staying connected to your mother?

1. Not at all important
2. Somewhat important
3. Important
4. Very important

### **Finishing up**

41. Would you be interested in participating in a one-on-one follow-up interview (over the phone or in person) about communication technology use with your father? The goal of these interviews is to learn more about communication technology use in father-child relationships. If you are chosen, you would receive an additional financial incentive for participating in an interview. You will still be eligible for the drawing for completing this survey regardless of your answer to this question.

- No/Yes
- If yes, please enter valid e-mail address: \_\_\_\_\_ (this will remain confidential but will be recorded along with your answer for follow-up purposes)

42. Would you like to be entered into a randomized drawing for a \$50 amazon.com gift certificate?

If yes, you will be taken to a separate page to enter a valid e-mail address. Your e-mail address will not be linked to your survey responses and will be stored separately.

## Appendix B Semi-Structured Interview Protocol for Study 2

[To be administered after the consent process]

Hello and thank you for taking the time to participate in this interview. The goal of this interview is to learn about the role communication technology had in your relationship with your father during your teen years--learning more about if it enhanced your relationship and the meaning you attached to those interactions.

This interview may take up to an hour and will be audio-recorded. If at any point, please let me know if you feel uncomfortable, do not wish to answer a question, would like me to turn off the recording device, or would like to stop the interview. You are not required to answer questions you do not want to and can choose to stop this interview at any time. Do you have any questions?

If you would like proceed with this interview, please provide your verbal consent and we will begin:

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1. Would you please orient me to your living situation during your teen years (e.g. who you lived with, how often you saw your father, etc.) as well as your relationship with your dad? The survey portion of this study asked questions aimed at family background information, but in this day and age families can vary greatly in terms of structure, custody arrangements, living arrangements etc.

2. When you think back to your teen years, how did you use communication technology to maintain a relationship with your father?

What were some of main technologies used and what role did these technologies play in the relationship?

What was technologies main role, overall?

3. How do you think communication enhanced your relationship (if at all) with your father?

Through technology, how did you experience family process (particularly across long geographical distances)? For example, were you able to build trust, show support, or have meaningful family interactions over long distances through these technologies?

- Follow-up: Could you get a sense of what your dad was feeling when you interacted through technology (e.g. could you tell he was proud, sad, happy, angry, etc.?)

4. What was direct communication or face-to-face communication like compared to asynchronous communication? (**Explain for clarity: communication such as texts or emails that don't occur in real time**). For example, maybe you could say things to each using e-mail or texting that you could find difficult to say in person.

- Follow-up: Can you describe any times when you and your dad had a difficult or particularly meaningful interaction via communication technology? What was that like?
- Follow-up: Could you describe a time when communication technology was particular effective/useful/ineffective/frustrating in interacting with your father?

5. Thinking back to your teen years as well as your development over time, what meanings (if any) do you attach to interactions via communication technology with your dad?

Was there anything particular unique or meaningful about communication technology in your relationship? Or was it just a means to an end?

Do you have any particularly positive or negative emotions attached to these interactions?

6. Is there anything you want to add? Did I leave anything out? Is there anything I failed to talk about that I should address with you or future interviewees?

**Additional prompts/follow ups**

-What was x like for you?

-Could you describe a time when x happened?

-What meaning did x have for you?

-How do you think x impacts you today compared to your teen years?

-How do you feel about x?

-It sounds like x, would you say more about this?

-You seem to have reacted strongly to x. Is there more you want to share about x?