Digital Modes of Communication:
The Relational Effects between College Students
And their Friends, Parents, and Intimate Partners

By

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Abstract

This study analyzes the nature of relationships between college students and their parents, friends, and intimate partners; specifically relating to primary preferred method of communication, perceived victimization, and participation in risky sexual behavior. Social learning theory and social exchange juxtaposed with self-efficacy is used to explain the motivations and continued use of digital modes of communication. Surveys were distributed to college students attending freshmen level courses at Auburn University. The findings were compared to previous studies and literature regarding communication, relationships, and social ties. The research will provide an enhanced understanding how digital modes of communication has evolved and shifted the way college students maintain their relationships.

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CHAPTER ONE

INTRODUCTION

Digital natives and digital immigrants are incorporated into the latest wave of migration into a network of social ties that has spanned the globe over the last decade. Digital natives are "individuals who are born into a technology rich world; digital immigrants are members of older generations that do not interact regularly in online communities" (Hansford & Adlington, 2008, p. 3). The Millennial Generation (Hansford & Adlington, 2008), children born after 1982, is the first generation of digital natives. They have, throughout their lifespan, been afforded the opportunity to socially interact with others through the use of digital modes of communication.

Social interaction allows college students to connect or reconnect with friends and maintain current relationships. Social interactions, in the past, were maintained by using home telephones, mailing letters, or face-to-face communication (Kim, LaRose, & Peng, 2009; Mok, Wellman, & Basu, 2007). Digital modes of communication have allowed college students to interact continuously and efficiently. The continuous connection to parents, friends, and intimate partners strengthens the social ties (Auter, 2007; Mishna et al., 2009, Rubin & Rubin, 2001) – "communication frequency, not quality, is the important element that sustains relationships" (Walker, Krehbiel, & Knoyer, 2009, p. 688). Currently, there is limited

research on why this new form of communication has become so prevalent to the Millennial Generation.

Social grooming is an "activity that is essential to forging bonds, affirming relationships, displaying bonds, and asserting and learning about hierarchies and alliances, may be a motive for extroverted individuals who wish to maintain a large network of friends" (Tufecki, 2008, p. 546). The act of social grooming can be beneficial to the individual by providing social capital. Social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships, mutual acquaintance, and recognition (Ellison, Steinfield, & Lampe, 2007). Social capital appears to be indicative of digital modes of communication usage patterns.

Previous research conducted by Ehrenber, Juckes, White and Walsh (2008) posited that personality and self-esteem were not indicative of individuals that participated in digital modes of communication. It has been presumed lonely and depressed individuals were the main participants (Ehrenber et al., 2008; Kalpidou, Costin & Morris, 2011); research must be conducted to find the motivations behind this innovative form of communication. Flaherty, Pearce, and Rubin (1998) stated there were seven motives for media communication: social interaction, pass time, habit, information, time-shifting, entertainment, and meeting people. The Millennial Generation's motivations to use digital modes of communication, once compiled, will indicate why college students have begun to rely on digital modes of communication as prominent form of interaction (Boase, 2008).

Technology is being introduced faster than social norms can be established or enforced by society (Barnes, 2009; Perkins, Craig, & Perkins, 2011). Social norms are used to regulate behavior and it is the misperceptions of social norms that lead to negative online behaviors

(Perkins et al., 2011). Negative online behaviors include bullying, stalking, parental interference, and inappropriate self-disclosure including, but not exclusive to, naked or provocative photographs, personal geographical information, physical features, and contact information. For the purpose of this paper, whenever bullying, stalking, harassing, or risky sexual behavior is referenced it is specifically in relation to online activities. Victimization including bullying, stalking, and harassing must be examined to determine if online activities are increasing their risk.

Young adults are at a point in their life where identity exploration is intensely rich and fulfilling at that moment, but it is not always a positive experience afterwards (Marcum, Higgins, & Ricketts, 2010; Walker et al., 2009). The social learning theory can be used to explain why young adults may utilize specific mediums to communicate within their own society and the social exchange theory can explain the motivations behind their actions juxtaposed with self-efficacy to explain efficient and expectant outcomes.

1.1 *Purpose of Study*

This study will investigate college students' usage of digital modes of communication to maintain social ties with friends, family and intimate partners, and the adverse effects related to this method of communication. For the purpose of this study, digital modes of communication includes all cellular devices, iPads, iPods, notebook laptops, tablets, and any other electronic handheld devices that allow college students to communicate and interact with their friends, parents and intimate partners; the internet will include all social networking sites, and electronic mail that allows students to communicate and interact with their friends, parents and intimate partners. Continuing thus forth, social groups will be defined as friends, parents and intimate

partners. The Millennial Generation may be using digital modes of communication to benefit from social exchange that occurs during the transactions.

The social exchange perspective focuses on rewards and costs; digital modes of communication will continue to develop if rewards exceed costs (Anderson & Emmers-Sommer, 2006). Online communication has provided a setting for individuals to perform basic social exchanges via the internet at minimal cost. Individuals will regularly visit their friend's websites to say hello, not necessarily because they have unlimited time but they want to place importance on the relationship (Donath, 2008). Online communication has provided society a parsimonious method, beneficial to the individual, to maintain and strengthen social ties. Digital modes of communication have yet to be seen as a desirable replacement for face to face interaction to manage their social experience. People are very active in their selection of communication to satisfy their interpersonal motives which include inclusion, affection, control, pleasure, relaxation, and escape (Auter, 2007; Flaherty et al., 1998). Social networking websites, a digital mode of communication, allows individuals to construct an alternative setting to complement face to face interaction.

Research surrounding the patterns of digital modes of communication is critical for social theorists and scientists to further clarify the motivations of the Millennial Generation. If they understand why and with whom individuals communicated, they could expand upon current research and develop communication tools to minimize conflict, promote social values, and establish norms for digital modes of communication. Motivations for communication have been established in previous research but it hasn't specifically focused on digital modes of communication and without knowing with whom and why it is difficult to validate motivations. Earlier research speculated about digital modes of communication motivations concerning

economical costs and geographical barriers but this does not explain the daily visits that build social capital, nor does it explain the risky behavior that young adults engage in online (Barnes, 2009; Wang & Chang, 2010). This study will attempt to augment the previous research with original data and supplement the perceptibly expanding knowledge base.

CHAPTER TWO

LITERATURE REVIEW

Humans have always had the ability to communicate face to face and initiate social cues to indicate shared meanings and promote understanding. Face to face communication offers a social presence that is rich in emotion and satisfying to individual needs (Flanagin & Metzger, 2001). The methods of communicating with each other have shifted over the years as needs have changed. The most powerful method that has remained consistent, in regards to primary preferred method of communication, is face to face (Donath, 2008; Janusik & Wolvin, 2009).

Society and technology have advanced over the years and a new form of interaction emerged that, once again, has changed, and reshaped communication – the internet. The internet was created in 1969 by the U.S. Department of Defense to exchange information between the military and private sector in event of a nuclear attack (Fang, 1997). Similar to radio broadcasting the internet began to take on a life of its own and the government was no longer able to control all content that was exchanged (Fang, 1997). The world wide web (WWW) is the most used part of the internet providing video feed, graphics, sound, downloadable text and email (Fang, 1997). The WWW was the birthplace for social networking sites such as Facebook, MySpace, Twitter and many others that allow users to interact virtually. The dependency on the internet and the need for instant communication has lead to upgraded versions of digital modes of communication to meet the demands of society.

2.1 *Digital Modes of Communication as Used by College Students*

The Millennials' immersion into digital modes of communication has led the way to a new research environment. They have expressed a desire to communicate through the use of digital modes of communication. This new form of interpersonal communication, once society is able to adapt, will likely develop new societal ideologies and norms that will redefine motives and behaviors towards communication.

The motives for interpersonal communication of the Millennial Generation differ from that of previous generations. Prior research suggests there are variables such as age, race, sex, and socioeconomic status, within the cohort, which indicate different interpersonal communication motives. Rubin and Rubin (2001) found that sex influenced the usage of online and mobile communication. The findings suggested that women were less likely to use the internet for control, but were likely to use it for pleasure, affection, social construction of identity, and inclusion. Women are predominately the care giving sex which explains why they would continue to communicate online to show affection and seek inclusion to satisfy their nurturing needs (Rubin & Rubin, 2001). Females, predominately, use the internet to post highly supportive, emotional comments (Mesch, 2006; Wilska, 2003). Men tend to use the internet to control their environment (Flaherty et al., 1998; Rubin & Rubin, 2001). There are many motives for males and females of the Millennial Generation to utilize digital modes of communication to communicate with their social groups.

Individuals are aware of their own personal communication needs and make decisions on their method of communication, face to face or digital modes, based on the social group engaged in the social transaction. The individual changes the method depending on where the communication is transpiring, the type of information being transferred, and when the

information is exchanged. Satisfying communication occurs when one's expectant outcomes are fulfilled, perception of understanding is successful (Anderson & Emmers-Sommer, 2006) and a meaningful relationship is established.

College students use digital modes of communication to maintain relationships with their parents, friends, and intimate partners. The most effective mode of communication is face to face communication accounting for 44 percent of interpersonal communication (Donath, 2008; Janusik & Wolvin, 2009). Face to face communication is a motivated state of engagement that signifies interest, motivation, and arousal (Rubin & Rubin, 2001). Individuals who are aroused tend to be expressive in their communication which engages their listener and activates a response. The social interaction fulfills social and psychological needs necessary to maintain social ties in the relationship.

Digital modes of communication, which are used to maintain social ties, have fundamentally shifted (Flanagin & Metzger, 2001) the social exchange between young adults and their parents, friends, and intimate partners. Face to face communication is necessary to acquire social cues and direction but is not always necessary to fulfill the need to stay in touch (Flanagin & Metzger, 2001). Research has shown that it is not the content that is important for an online message but rather the gesture related to the act (Boase, 2008). Friends will visit each other's pages several times a day to remain connected or show concern for one another. This behavior is related to the strength of their social tie. Stronger relationships, including friends, parents, and intimate partners, use multiple mediums of communication to exchange information (Quan-Haase & Wellman, 2004).

Young adults typically, in congruence with face to face communication, use digital modes of communication to socially interact with social groups. They do not engage in

conversations that would strain the relationship or alienate (Brass et al., 1998; Kalpidou et al., 2011) their parents, friends, or intimate partners. Previous studies have shown that college students are using digital modes of communication to compensate for geographical distance; lonely and depressed teens use social networking sites to escape depression, entertainment, social insight, and self-identification (Flanagin & Metzger, 2001; Valkenburg & Peter, 2007; Walker et al., 2009).

Digital modes of communication are effective modes of communication to stay in touch with parents, friends, and intimate partners that are not in the same proximity. Cummings and colleagues (2006) found that economic constraints force young adults to engage in digital modes because they cannot afford phone bills (Walker et al., 2009) or travel expenses to satisfy their social needs. The digital modes of communication are readily available to college students at minimal cost.

Individuals may use digital modes of communication to escape depression but evidence from other studies claims that heavy internet usage can lead to social isolation and depression (Donath, 2008; Kalpidou et al., 2011). The lack of face to face communication and isolation does not fulfill the individual's social needs necessary to function. However, depression may be triggered by stressful personal events and the individual will shape their media needs around his/her mood (Romer, Jamieson, & Pasek, 2009). Past studies have shown findings that negate the association between depression and internet use. The study suggests that digital modes of communication provides emotional support for individuals and reduces level of depression (Blanchard & Horan, 1998). This suggests that communication needs have not changed drastically, only the means; technology meets needs, not needs meet technology (Flanagin &

Metzger, 2001). Therefore, there is a lack of evidence to justify the internet as a main predictor of depression due to social isolation.

Online communication has provided a safe environment for disclosure due to the anonymity afforded to users (Valkenburg & Peter, 2007; Wang & Chang, 2010). There are less social limitations placed on digital modes of communication in comparison to face to face communication. Reciprocal self-disclosure can further develop the nature of the relationship and transform a weak tie into a strong tie by developing trust among users (Anderson & Emmers-Sommer, 2006; Donath, 2008). Self-disclosure is cathartic for individuals and allows them to explore their self-identity and form personalized opinions regarding work, love, and worldviews (Walker et al., 2009). Individuals continue to measure the costs and benefits of digital modes of communication and determine which one is most effective for their interpersonal needs.

Society has seen an increase in the usage of digital modes of communication to interact with social groups. Nevertheless, face to face communication continues to be the primary preferred method of communication in an individual's personal communication system (Boase, 2008). Digital modes of communication are contemporary mechanisms that provide efficient and economic methods to connect and develop a safe environment to explore self-identity with minimal risk of rejection (Valkenburg & Peter, 2007; Wang & Chang, 2010). The self-identity that users create becomes a part of their culture and brings them closer to the common culture of other college students (Romer et al., 2009).

2.2 *Popularity of Technology and Its Influence on the Millennial Generation*

The WWW was the birthplace for social networking sites such as Facebook, MySpace, Twitter, and many others that allow users to interact virtually. "The internet is more exciting and challenging as a research environment than earlier media because it is a complex, virtual, social,

and physical world that children and adolescent participate in and co-construct, rather than something that is merely watched or used such as televisions or personal computers" (Williams & Merten, 2008, p. 255). Social networking sites allow college students to 'build' a website that is reflective of their own personality with quotes, interests, photographs, educational history, personal biographical information, and tags. Individuals have the ability to socially construct their world as they wish others to perceive themselves.

The popularity of social networking sites has seamlessly allowed people to remain in touch with their friends and family. Smartphones, Ipads, laptops, and notebook computers are just a few of the electronic devices available to students keep them connected through the use of text messaging, email and the internet. They are able to access social networking sites such as Facebook, MySpace, or Twitter, access emails, or directly text someone with a few clicks on their cell phone. However, availability does not always mean that the college student has the means to purchase the device and this leads to a participation gap (Hansford and Adlington, 2008; Wei & Zhang, 2008). This gap occurs when there is new technology available that may afford opportunities but the individual does not have the economic means to obtain the technology. The participation gap in the Millennial Generation should be considered when researching their usage and access to digital modes of communication.

College students' access to these devices does not allow them to reflect upon their words before hitting the send button, which can lead to consequences that may have been avoided in face to face communication (Kite, Gable, & Filippelli, 2010). The consequences could be as insignificant as a small fight with a friend or as severe as extreme humiliation or even legal action. Juveniles are engaging in risky sexual behavior such as sending naked photographs of themselves to friends and intimate partners. A 14-year-old girl in the state of Washington

experienced consequences from sending a naked photograph. A previous friend of hers obtained a copy of the photograph and sent a text message to all of her contacts.

> "Ho Alert! If you think this girl is a whore, then text this to all of your friends." In less than 24 hours, the effect was as if Margarite, 14, had sauntered naked down the hallways of the four middles schools….Hundreds, possibly thousands of students had received her photo and forwarded it. Students would be handcuffed and humiliated, parents mortified and lessons learned at a harsh cost. Three students were charged with dissemination of child pornography (Hoffman, 2011, p. A1).

"Social harms are not diminished when the producer happens to be another juvenile or the juvenile herself…juvenile prosecution is a befitting response" (Leary, 2007, p. 39). The Millennial Generation is experiencing negative consequences associated with digital modes of communication that previous generations did not have to manage.

2.3 *The Rise of the Cellular Phone and Generational Implications*

Cellular phone technology has rapidly advanced since the original automated mobile telephone system was developed in 1956. The original mobile phone was very bulky, expensive, and service was unreliable. Technology has improved and cell phones are easily stored in pockets, inexpensive, and satellites provide comprehensive coverage. The popularity of cell phones exploded in 1996 when cell phone users surpassed 100 million which was an unexpected goal in such a short timeframe (West & Mace, 2010). The social presence of the cell phone in everyday life has become the norm (Flanagin & Metzger, 2001).

Technology continues to supply the demand and is frequently releasing new models with advanced features. The internet service on the cell phone was launched in 1999 (West & Mace, 2010). It was only a short four years later when the faster internet connection, 3G network, was

announced. The rapid advancement of cellular devices and the services offered increased the amount of mobile users to 2.5 billion in 2006, almost 45 percent of the world's population (West & Mace, 2010). The technology was advancing faster than societies could establish social cues and norms (Barnes, 2009).

Cell phone culture has evolved into usage for a multitude of purposes and activities: work duties, entertainment, parenting, dating, bullying, commerce, global placement systems (GPS), text messaging, fashion, and identity-construction (Goggin, 2006). GPS systems are built into smart phones to provide directions for the users but the privacy concerns, particularly stalking, have not been addressed. Stalkers can now use cell phones to track their victims with minimal concern of getting caught. An example, reported in the news, details how a boyfriend tracked his girlfriend: "I've been tracking my girlfriend through her mobile phone. I can see exactly where she is, at any time of day or night, within 150 yards, as long as her phone is on…there is no trace of what I'm doing on her phone…its foolproof" (Southworth & Tucker, 2006, p. 671). The implications of digital modes of communication are exponential and if abused can be very dangerous.

Cell phones offer short messaging service (SMS) which allows the user to send brief messages to other users without requiring voice transmission. Text messaging is used primarily by students to socialize with their friends and secondarily as a way to obtain information (Sweeny, 2010). SMS is typically referred to as texting and the messages are generally only a few sentences that are direct questions or statements. The continuous engagement of sending and receiving the messages indicates that the communication arouses "an activated motivated state" which leads to a stronger interpersonal relationship between the two individuals (Auter, 2007; Mishna et al., 2009, Rubin & Rubin, 2001, Walker et al, 2009). The influx of messages

also signifies the importance of the cell phone to complete daily tasks such as scheduling appointments, acquiring bank balances, scheduling social events as well as remaining connected to social networks of friends, parents and intimate partners.

Older generations shy away from using new technology to socially construct their reality but eventually will have to abdicate and conform in order to function within societal norms (Ling, 2008). Conformity may include finding carriers that offer cell phones with large buttons and large screens to accommodate for vision impairments (Ling, 2008) or they may have to have their grandchildren teach them how to use the phone; otherwise they may be isolated from outside social circles. Their level of conformity will depend on their usage and needs. Several elderly people carry the phone for safety but rarely ever turn it on (Ling, 2008).

"Technologies and their affordances have made way for a new, 'participatory culture, in which'…the culture absorbs and responds to the explosion of new media technologies that make it possible for average consumers to archive, annotate, appropriate, and re-circulate media content in powerful new ways" (Hansford & Adlington, 2008, p. 57). The transformation will make them dependent upon the technology; individuals created the technology and the technology are now constructing the individual.

2.4 *Electronic Mail*

The rise of the internet has provided an avenue for electronic communication via emails. Its original inception occurred in 1972 when the first email management program was written (Herring, 2002). National governments and universities began utilizing emails in the early seventies but it was not until the early nineties when email became accessible and affordable to the public. Emails today, are used daily to communicate with co-workers, family, friends, and intimate partners. Email is also available on cell phones that provide internet service. However,

the instant gratification comes with the price of instant expectations of response times and increased availability (Middleton & Cukier, 2006).

Social norms have begun to alter as more individuals are carrying cell phones, personal digital assistants, and other devices to check their email accounts (Gershon, 2008; Ling, 1998). They provide an avenue for individuals to multi-task during face to face conversations, accepting interruptions at family gatherings, and blurring boundaries between work and home life. Potentially, this could be due to the fact that individuals view media in direct correlation with their own personal reality (Auter, 2007; Gershon, 2008). Society has not yet fully integrated into a digital world and view the interuptions as dysfunctional to social transactions that are occuring face to face.

Middleton and Cukier (2006) outlined four core concepts of dysfunctional behavior attributed to mobile email usage: *danger*, specifically using a cell phone to check emails while driving; *anti-social behavior*, "heads are down and their thumbs are moving"; *distraction*, the constant vibration calls out to the individual to check the message regardless of time or place; and *infringement*, the electronic device delivering emails has essentially become an electronic leash that pulls at the individual. These types of behavior are common with college students whether they are on campus or socializing with their friends (Auter, 2007; Middleton and Cukier, 2006).

Despite the dysfunctional behaviors associated with digital modes of communication, there are positive benefits linked with mobile electronic mail usage. It allows people to communicate despite conflicting work schedules, time zones, or distance (Dimmick, Kline, & Stafford, 2000), and provides students greater access to faculty (Stephens, Houser, & Cowan, 2009). Unfortunately, students have become too reliant on social networking sites and their new

electronic paralanguage is filtering into their emails. Electronic paralanguage includes intentional misspellings, spatial arrays, and ALL CAPITAL LETTERS to convey yelling (Flaherty et al., 1998). Research shows that individuals, such as employees and college students, who use proper grammar in their emails, receive more time and consideration from the reader (Stephens et al., 2009). This new paralanguage could be considered a cost in the social transaction and the negative effects could impact their long term educational and occupational goals.

2.5 *Social Networking Sites: A General Overview*

There is a universal need for humans to communicate with one another. There are many different ways to communicate but recently society has adopted an efficient method to stay in touch with one another: social networking sites. The first recorded social networking site, sixdegrees.com, was available for public use in 1997 (Boyd & Ellison, 2007). Sixdegrees.com was the first website to combine a user profile, friends list, and list school affiliations. However, the internet was still a new concept and social networking online had not gained enough popularity to sustain sixdegrees.com. The website was shutdown in 2000. Online social networking sites continued to surface on the internet sporadically, but in 2003 MySpace entered the cyber world and became an instant success (Boyd & Ellison, 2007). Facebook was launched in 2005 and users flocked to the site by the millions. Thus began the online world of social networking as it is know today.

Pew Research Center in September, 2009 reported 73 percent of American teens and Millennials utilize social networking compared to 47 percent of adults participating in social networking (Lenhart, Purcell, Smith & Zickuhr, 2010). They also reported that teens that go online daily, 80 percent, are more likely to utilize social networking sites than those who visit

less often, 62 percent. "When it comes to use of specific social networking sites by different age cohorts, young adult profile owners stand out by being much more likely than those thirty and older to have a profile on MySpace. Seventy-one percent of profile owners between the ages of 18 to 29 have a profile on Facebook, 66 percent have a profile on MySpace and an additional 7 percent have a profile on LinkedIn" (Lenhart et al., 2010, p. 19). In regards to sex, 18 percent of men and 10 percent of women have a profile on the business social networking site, LinkedIn, while 78 percent of women versus 68 percent of men have a profile on Facebook (Lenhart et al., 2010). This supports the idea that men are using digital modes of communication for mastery and control of their environment while women are utilizing digital modes to support social ties.

> Recent research shows that 83 percent of teenage social networking users have added comments to pictures that friends have posted, 77 percent have posted public messages to a friend's page, 71 percent send private messages to friends, 66 percent post comments to friends' blogs, and 54 percent send instant messages or chat through these sites. All of these activities are done with the purpose of creating a virtual presence and interpersonal network that is socially appealing but also unique to the individual and representative of his or her likes, dislikes, inclination, activities, and friendships (Patchin & Hinduja, 2010, p. 1818).

The internet has been inundated with diverse types of sites that focus on dating, politics, economy, workplace, and socializing but popular culture has dubbed Facebook, MySpace and Twitter the favorites (Farhi, 2009).

Social networking sites used by college students are defined by Coyle and Vaughn (2008) as a specific type of website focused on the creation and growth of online social networks which allows users to interact. College students, typically, are economically challenged and not able to

afford travelling to maintain friendships across distance. Social networking sites provide a vessel for communication to sustain friendships that span local, state, national, and international boundaries (Walker et al., 2009). Technology has provided a way for the Millennials and society to remain connected at all times.

Social networking sites allow users to connect with others who have shared interests. This connection provides them a feeling of inclusion within the group which, as previous research has shown, is important to satisfy internal interpersonal motives to belong (Pelling & Katherine, 2009). Social networking sites also allow individuals to maintain social ties with relative ease as they can log onto the computer and visit a friend's page. The content of the message is not as important as the thought behind the visit (Boase, 2008). This type of social grooming is important for strengthening a weak tie or maintaining a strong tie but not the most significant method of communication. People still require the face to face connection and physical presence to cultivate a person's established social networks (Coyle & Vaughn, 2008; Donath 2008).

2.6 *Facebook*

Facebook is defined as "a 'social network' intended to permit friends (old and new) to maintain contact with each other in a modern, overcharged world where face to face contact is often difficult, even for close neighbors" (Gallon, 2010, p. 120). It was founded in February 2004 by Mark Zuckerburg to provide a platform for college students to locate other friends on campus and had amassed twenty-one million users by 2007 (Ellison et al., 2007). It is the social networking site of choice for Millennials with 73 percent maintaining active profiles. Millennials usage of Facebook has also been related to educational background which is a factor in the participation gap previously mentioned. Users with a high school diploma or less, 63

percent have a Facebook account versus users with some college experience, 78 percent have a Facebook account (Lenhart et al., 2010). Facebook, despite usage pattern differences, has been able to reach across age, sex, and class boundaries and recruit users from all cohorts.

The progression of Facebook is quite amazing as every year the popularity of the site expands and new applications are being added to entice potential users. Online profiles are managed by the user and all information posted is at the discretion of the user. The user has the ability to accept or reject friend requests, also known as 'friending', share digital and video images, post blogs, write on other friend's walls, and play games. A Facebook account is now the norm as opposed to the exception as there are over 500 million active users all over the world; typical user's log onto the site for 20 minutes per day (Ellison et al., 2007).

Bandura (1977) theorized that observational learning occurs during exposure to activities through symbolic interaction and outlining benefits prior to the action. Facebook allows users to access their email directories, to send instant messages to friends to tell them about Facebook, and promote the benefits of online social networking. Generally, if the message is received from someone well known, the individual will investigate and may reciprocate by creating an account. The account is a venue to communicate not only with the original friend that sent the message but others they may locate once they have a profile.

Facebook users are frequently viewing their friends' pages and the content that is posted on their wall. They compile that information and process it as reality, regardless whether there is truth in the content. A young girl in Florida created a fake Facebook profile for a classmate. She posted sexually explicit photographs that placed the classmates head on a young prepubescent girl's body and commented, "I'm a member of the itty bitty titty club" (Mandell, 2011, p. 1).

The young girl faced ridicule and humiliation at her school. The public nature of Facebook puts everyday happenings on display for all friends to view and judge.

The narcissistic behavior of the Millennials is disturbing to older generations as online postings include details about sexual behavior, drinking, and incriminating photographs (Mishna et al., 2009). The behavior exhibited by younger generations' displays "willingness, bordering on compulsion, to broadcast the details of their private lives to the general public" (John, 2006, p. 8). A 23-year-old New Yorker claimed, "I definitely think I have an audience, because I've always felt cool and popular. And weird… And fun…I think my generations ... are self-promoters, and a lot of us are narcissistic... We just naturally feel entitled to the fact that we are little celebs in our own minds, and we're sort of casual about that" (Timpane, 2009, p. 1).

Face to face communication carries a level of societal norms that regulate self-disclosure; online communication offers an outlet that relatively safe from societal censure (Perkins et al., 2011; Tosun & Lajunen, 2009). Facebook is potentially losing legitimacy as individuals are beginning to understand the difference between face to face and digital modes of communication.

2.7 *MySpace and Twitter*

MySpace is a social networking site that competes with Facebook. It has the similar features and opportunities for its users. The profile contains basic information that includes age, sex, relationship status etc., and allows the user to seek out other friends. It originally was launched to compete with an out of date social networking site, Friendster, but was quickly adopted by the Indie-rock scene which used profiles to promote their bands (Boyd & Ellison, 2007). Young adults used MySpace to follow their favorite bands and connect with friends. The rapid growth of MySpace was not given the same media attention as its counterpart, Facebook,

and therefore when the public realized how large it was several security issues surfaced regarding sexual misconduct between adults and minors (Boyd & Ellision, 2007). MySpace responded and made changes to age restrictions but were unable to shake the stigmatization of being a hook-up site. Thus, their popularity has waned and users looked for other venues to connect with social groups. Sixty-six percent of Millennials have a profile on MySpace (Lenhart et al., 2010) but is quickly losing active users and the digital natives migrate to Facebook. MySpace, in the wake of Facebook, is now used for music solicitation.

Twitter, on the other hand, is a new social phenomenon that has been widely accepted by the thirty and forty something crowds (Farhi, 2009) but not by the Millennials. Thirty-seven percent of Millennials reported using Twitter with a higher usage by girls than boys (Lenhart et al, 2010). Twitter was created in 2006 by a company called Obvious and enables users to post 140-character messages (Farhi, 2009). The operating system facilitates in a similar fashion as text messaging, except instead of sending the message to one receiver you send it out to all of your followers. Followers are individuals who sign up to follow your daily posts. The messages are called tweets and the users are Twitteurs. Twitteurs are generally older and more interested in news – the average Twitter user is two or three times more likely to view a news website (Farhi, 2009). Twitteurs have the ability to pick and choose their followers and develop a group or community of shared interests to utilize as a brainstorming facility or social network. The site is also used for professionals to share information, links and other comments in real-time.

Teachers have also created Twitter accounts to interact with students during class sessions. Universities across the United States are testing Twitter-based classrooms that will allow students to post questions during class. This gives the students opportunities to speak up,

whereas in normal setting they may have been embarrassed or overlooked due to the size of the classroom (Young, 2010).

Social networking sites such as Facebook, MySpace, and Twitter have created settings for users to create an online identity to share and exchange information. It has also provided an outlet for users to fulfill a need for self-disclosure that is not always viable through other methods of communication including, face to face, email, or texting that can result in feelings of awkwardness. It has provided a vehicle for social exchange that generally provides more rewards than costs.

2.8 *Millennial Involvement*

Young adults now are wired and connected with their friends effortlessly as they use digital modes of communication to socially exchange information. According to Pew Research Center (2006), over 75 percent of Millennials have social networking sites, 29 percent revisit sites multiple times a day, 62 percent connect wirelessly when they are away from home, 94 percent carry cell phones, 83 percent sleep with their cell phone within arm's reach, and 75 percent talk and text while they are driving. Social networking sites are used for social grooming which is presumed to stabilize social ties. Yet, face to face communication is the primary preferred method of communication (Donath, 2008; Janusik & Wolvin, 2009). Digital modes of communication will be examined to locate and identify patterns relevant to risky sexual behavior and victimization.

Social capital, "…features of social organization such as networks, norms and social trust that facilitate coordination and cooperation for mutual benefit" (Blanchard & Horan, 1998, p. 296), can now be obtained through digital modes of communication used by college students. The interactions required to gain social capital can have adverse effects on the individual's

current status or future status, depending on the offense. The adverse effects include bullying, stalking, parental interference, and a lack of privacy. Marcum et al., (2010), found that online communication and disclosure of personal information increased the likelihood of being victimized.

Research has been compiled on specific online activities to determine target suitability, activities that make the individual more vulnerable to predators (Hinduja & Patchin, 2007; Marcum et al., 2010). The activities included use of chat rooms, online sex talk, and disclosing personal information to strangers. These activities can lead to severe consequences, as seen in the following examples: in 2008, 18-year-old Jessica Logan of Cincinnati, Ohio hanged herself after an ex-boyfriend forwarder her nude cell-phone photos to high school classmates; in 2006, an eighth-grader in Missouri learned an internet romance was a hoax and killed herself; in 2001 an Oregon State University student was convicted of invasion of privacy for using his laptop webcam to broadcast over the internet sexually explicit images of his roommate and his roommates girlfriend having sex (Nutt, 2010). The research previously conducted is more descriptive and does not quantify a link between risky sexual behavior and victimization as suggested by the literature. If this connection is made, future research could focus more on the prevention of behaviors that leave individuals at risk.

As the fluidity of offline and online relationships continue to comingle, college students have begun to censor themselves due to the risk of exposure (Patchin & Hinduja, 2010). The loss of self-disclosure in a newly formed relationship could have damaging effects to one or both individual and their future behaviors. Current innovations used for digital modes of communication require research to understand the costs and rewards to society to promote social awareness and develop social norms.

The Millennial Generation has been immersed in technology and new media their entire lives and thus they are digital natives. They are living in a new digital world that includes digital immigrants but has the ability to exclude individuals (Hansford & Adlington, 2008). Older generations generally choose not to participate (Auter, 2007); however, there are Millennials, who experience a 'participation gap' (Hansford & Adlington, 2008; Wei & Zhang, 2008). Individuals in low prestige occupations may not have access to the internet or email usage, whereas, individuals in high prestige positions have internet access, email addresses and cell phones provided by their employer (Boase, 2008). Individuals who do not have access to the internet lose the opportunity to search matchmaking websites for friends or intimate partners, access job search engines, and many other specialized needs that are only afforded to individuals who are able to utilize the internet.

2.9 *Social Capital – A Motivation for Participation*

Social capital is comprised of networks, norms, and social trust (Blanchard & Horan, 1998) that allows individuals to operate within society. Blanchard and Horan (1998) state that flatter or horizontal networks add social capital and vertical or hierarchical networks detract. A social networking site is an example of a horizontal network. It allows the user to set up a profile, choose status, post blogs, and post messages on other individuals' sites. The individual's network may include strong and weak ties. Weak ties provide social capital (Blanchard & Horan, 1998). Strong ties usually include family members and close friends; they are an example of a vertical network. Digital modes of communication allow college students to establish weak ties and acquire social capital.

Caroline Haythornthwaite (2005) noticed differences associated with the strength of the tie. Weak ties traveled in different social circles, exchange information infrequently, and had a

low motivation level to share resources. Strong ties share friends, frequently communicate, and share a high level of intimacy and resources. There is distinct difference between the behavior toward weak and strong ties. Weak ties use only a few means of communication, are opportunistic, and are sustained through mandated, organizations or groups. Strong ties use multiple means of communication, face to face communication, and are supported through both mandated media and other optional, more private modes of communication (Haythornthwaite, 2005). The management of weak ties to gain social capital, through digital modes of communication, is viewed as an acceptable behavior and a low cost for the benefit.

Social scientists have concluded that a loss or decline of social capital can lead to social unrest, disorder, and minimal participation in community events (Ellison et al., 2007). Civic involvement promotes an ethical environment that encourages social norms to be adhered. Research has suggested that high levels of internet usage have become an alternative to group or civic participation (Quan-Haase & Wellman, 2004). The anticipation of social capital at a smaller cost may be the link to college students and their continued participation in digital modes of communication.

Social capital is directly affected by the type of relationship involved in the interaction (Williams, 2006). In 2000, Putnam proposed there were two types of social capital that are called bridging and bonding. Bridging is an inclusive type that occurs when individuals of different backgrounds form a connection between social networks. Bonding is an exclusive type that occurs with strong ties, provides strong emotional support, but does not promote diversity (Kalpidou et al., 2011; Williams, 2006).

Social networking sites produce bridging social capital, which, according to Williams (2006) generates outward looking attitudes, connections with a broader range of people, and

diffuses reciprocity among a larger community. Research has indicated that the low entry and exit costs of the internet have the capability to form bridging social (Williams, 2006). Given the types of social capital afforded to individuals and the different forms of communication, future research must be used to examine what motivates individuals to utilize digital modes to acquire social capital.

2.10 *Relationships of Social Groups*

2.10.1*College Students and Friends*

College students utilize multiple methods of communication to remain in contact with their friends. The cultivation of the relationship, defined by Tufekci (2008) as social grooming, is important and can determine the strength of their friendship. Online social communication is indicative of extroverted behavior, low social anxiety, and sociability in face to face interaction (Mesch, 2006).

Social networking sites allow students to find new friends that share similar interests through use of search functions and group applications. The group feature provides a platform for open discussions on politics, civic events, or social events (Park, Kee, & Valenzuela, 2009). Civic activity in the community promotes social capital (Romer et al., 2009).

The friendships made online begin as weak ties, also defined as "friendsters" (Donath, 2008) and depending on the connection may eventually lead to a stronger relationship. Students lean heavily on their friends for moral support and the "connected presence" (Coyle & Vaughn, 2008) they feel with each other enhances the significance of the friendship.

Introverted college students also use social networking sites to socialize with others to alleviate feelings of depression and loneliness. Online communication has been seen as the "Prozac of social communication" (Kim et al., 2009, p. 451) as it offers anonymity and less risk

to the individual. The anonymity offers a safe haven for self-disclosure which will eventually lead to a strong connection. The bonding builds social capital and the individual, potentially, may evolve and become more active in society.

Students have the ability to connect with their current friends online and establish new relationships. Their village will now span the globe with friends located all over the world (Blanchard & Horan, 1998). As technology continues to progress, friendships will evolve into social networks that offer unlimited social and economic opportunities to future generations at low personal cost.

2.10.2 *College Students and Parents*

Society has named the 'helicopter parents,' always flying low around their children to keep an eye on their activities. Psychologists have expressed concern that their overbearing behavior may emotionally handicap their children (Jackson, 2010). Students who attend college away from home are no longer experiencing their first taste of independence – they are being inundated with messages from mom and/or dad.

Parents have socialized their children from the day they were born and provided them with necessary coping skills to maintain independence (Bandura, 1977). However, technology has made communication so convenient that parents are pleased at the opportunity to stay connected via mobile communication and frequent their student's social networking site to peruse activities (Walker et al., 2009). The question remains whether or not they are invading their student's privacy by previewing online photos or reading messages, and furthermore, does this invasion weaken the relationship?

Previous research concludes that 'helicopter parents' actually help students become more active in the campus community and also influence student satisfaction with the overall college

experience (Lipka, 2007). The usage of digital modes of communication between college students and their parents supports the idea that the frequency of communication strengthens the social ties and develops trust in the relationship (Donath, 2008).

2.10.3 *College Students and Intimate Partners*

Intimate relationships require knowledge, caring, interdependence, mutuality, trust, and commitment (King, Austin-Oden, & Lohr, 2009). The need to belong is innate in human nature and individuals will seek out companionship. Young adults stay connected to each other when they are involved in an intimate relationship. The intensity of a continuous connection quickly enhances the feelings and emotions involved (Auter, 2007; Mishna et al., 2009, Rubin & Rubin, 2001, Walker et al, 2009).

For decades, it has been recognized that college students involved in an intense intimate relationship may feel the need to exhibit sexual tendencies to appear more attractive to their partner (Blau, 1964). Sexting, text messages or images that are sexually explicit, are shared via cell phones (Brown, Keller, & Stern, 2009). Rick Peters, a senior deputy prosecuting attorney, claimed "having a naked picture of your significant other on your cell phone is an advertisement that you're sexually active to a degree that gives you status" (Hoffman, 2011, p. A1). This could prove to be problematic if the relationship ends and one party shares the private messages with others. Students can be cruel and may forward the pictures to a large social network that will pass it forward. This can cause the individual to experience extreme humiliation, emotional distress, decrease self-esteem, and lose interest in school (Heck, 2009).

There is also the criminal side to sexting that, in some states, is considered child pornography. Several states including Pennsylvania, Ohio, Michigan, Alabama, Wisconsin, Florida, New York, New Jersey, Connecticut, Texas, and Utah have filed charges against

teenagers for various content distributed without permission (Heck, 2009). Convicted individuals, if they live in a state with strict child pornography laws, will have to file as sex offenders for the rest of their lives. The availability of technology and the choices students are making have life-long consequences.

Digital modes of communication have heightened intimate partner's awareness of one another's daily activities. This direct exposure to situations involving one favoring another person, interacting with previous partners, others showing interest in the student's partner or ambiguous comments can lead to jealousy (Muise, Christofides, & Desmarais, 2009). Students who have jealous tendencies may begin checking up on their partner's online activities. This involves reading emails, text messages, and social networking site activities that may implicate infidelity.

Baughman (2010) defines stalking as monitoring email communication directly or through spyware, sending threatening emails that insult or harass, disrupting email communications by flooding a victim's email box with unwanted mail or by sending a virus, using the victim's email identity to send false messages to others to purchase goods and services, and using the internet to seek and compile a victim's personal information and whereabouts. For some, stalking is a way to manage their jealous tendencies without losing all self-control. Social networking sites, in particular, post personal information and friends' comments may indicate key information that could place the individual in danger (Baughman, 2010).

Relationships with intimate partners can be intensified by mobile and online communication mediums. This can lead to self-disclosure that enables trust in the relationship and a stronger connection. There are also consequences to these actions that should be evaluated prior to engaging in sexting or stalking. Recently, a news story reported about the suicide of

Jamey Rodemeyer. He was 14-year old boy who was harassed and stalked by his classmates for being gay. Jamey struggled to deal with the bullying and even uploaded a video to the It Gets Better website claiming that he had struggled with bullying but had overcome the adversity and moved forward with his life (Body & Marwick, 2011). Unfortunately, his cries for help were not loud enough. College students need to be aware of the dangers of participating in a relationship utilizing multiple mediums for communication.

2.11 *Rewards and Costs of Digital Modes of Communication*

Previous findings have shown that strong social ties fulfill interpersonal communication motives (Flaherty et al., 1998). Strong ties, as Haythornwaite (2005) noted, share a high level of intimacy, self-disclosure, and use multiple means of communication. Generally, connections made online begin as a weak tie. Research has shown a correlation between the usage of online communication and reduced communication apprehension (Anderson & Emmers-Sommer 2006). Communication apprehension is defined as a person's level of anxiety associated with real or anticipated interaction with others (Flaherty et al., 1998). Digital modes of communication allow the individual a sense of freedom from restraint and can lower barriers to interaction and encourage self-disclosure (Ellison et al., 2007).

Interpersonal online relationships, due to the anonymous nature, are developed faster than face to face communication (Anderson & Emmers-Sommer, 2006). According to Donath (2008), the most valuable contribution of social networking sites are their potential to add trust to weak ties. A trusted weak tie can lead to future connections and a broader network to rely on for shared resources; stronger ties bring validity to a profile but a large network of weak ties adds diversity (Donath, 2008). The diversity in the profile allows the individual to potentially form a richer relationship that may lead to an offline connection (Donath, 2008).

Digital modes of communication also require a code of honesty that is not always given in face to face communication. Face to face communication requires responding on cue and adapting to the signal received from the sender both verbally and in gesture. The respondent can see if their deception is transparent and adapt a new plan in the moment (Lewis & George, 2008).

Sociologists today must study the motivating factors for college students to remain connected to their parents, friends and intimate partners – with whom and how frequently are they communicating? It is clear, based on the research, that the communication patterns and motivations have shifted, but it is unclear what the long-term effects will be on the nature of the relationships. This information will lead to explanatory research on how social norms and values are being redefined and how it modifies the dynamics of the relationship. This information will lead to a greater understanding on how social norms and values are being redefined and how it modifies the dynamics of the relationship.

CHAPTER THREE

THEORY

3.1 *Social Exchange Theory – Millennial Generation's Motivation to Participate*

George Simmel postulated that exchange is the purest form of interaction amongst humans. He defined exchange as "the sum of values is greater afterward than it was before, and this implies that each party gives the other more than he had himself possessed" (Simmel, 1971, p. 44). Interaction among individuals occurs naturally within the process of socialization. The individual involved in the exchange is not consciously aware of the costs and benefits of this process. Individuals who interact or communicate with their social groups, utilizing digital modes of communication as a form of exchange, have the potential to strengthen their social ties with minimal effort or time.

Peter Blau viewed exchange as a "social process of central significance in social life, which is derived from simpler processes and from which a more complex process are in turn derived" (Blau, 1964, p. 4). There are certain qualifications that must be completed in order to have a successful exchange: the result can only be acquired through a form of communication and individuals must be able to adapt to new methods to increase the efficacy of the results. Digital modes of communication have allowed participants an efficient way to interact with their social groups which qualifies as a social exchange.

The efficiency of digital modes of communication does not come without a cost to the individual; it is just not always apparent at the time of inception. There are three types of

costs associated with exchange: direct, investment, and opportunity (Blau, 1964). A direct cost is subordination or relinquishment of power to another. An investment cost relates to the effort for furnishing services and gaining respect which is valuable for social acceptance. Opportunity costs generally are associated with the time spent on the social transaction. Social exchange focuses on the costs and benefits of social transactions that lead to complex social structures.

Social structures are founded upon the daily associations and interactions within a society (Blau, 1964). These structures are conceptualized as individuals define values and beliefs but also rely upon social forces to dynamically shift the framework to the needs of society. Exchange is a social force that acts as a mechanism for development of social structures and can be used to explain what motivates individuals to participate in digital modes communication.

Social structures construct social norms, within the organization, to legitimize the authority of the exchange. The differentiation of power within social exchange helps mediate the desires of individuals and give balance to the relationship. "Balanced social states depend on imbalances and disturbances in other social states; forces that restore equilibrium in one respect do so by creating disequilibrium in others" (Blau, 1964, p. 26).

Individual participation in social exchange is driven by the need for social rewards. The benefits can be extrinsic or intrinsic. An example of an extrinsic benefit would be advice, invitations, assistance, or compliance. An intrinsic benefit, the most coveted reward, is personal attraction, respect, and social acceptance. Social exchange between individuals can be a slow process but over time and completion of successful social transactions a trust is built and social acceptance is gained.

Blau (1964) suggested that happiness is generally derived from the social actions of others and the end result yields an intrinsic benefit of gratification. However, it is not always an equal exchange – one person will have to subordinate himself and give power to the other. The action of the individual that receives less will eventually have this favor returned in a future social transaction. Social grooming, a social transaction, is an exchange where an individual regularly visits a friend's social networking site and comments to show importance of the relationship. The individual commenting does not get an immediate response but there is an expectation that the friend will reciprocate at a later date, thereby returning the favor. Favors, in social exchange, are viewed as social rewards; social rewards lead to stronger social bonds (Blau, 1964). Social relationships are strengthened after the occurrence of each social transaction.

Individuals who do not return favors are perceived as unappreciative and are socially sanctioned within social structures. The individual will lose appeal to individuals within the group and potentially lose intrinsic benefits. Intrinsic benefits are acquired over time as individuals are socially integrated into the group. Social integration requires social attraction between individuals dependent upon competitive processes of acceptance (Blau, 1964). Social networking sites allow users to personalize their pages in an effort to gain social approval. This competition creates social strains among the groups and the need for social bonds is even stronger.

Social approval is a social reward that cannot be bartered, only acquired as value is obtained (Blau, 1964). Value is achieved through shared similar social experiences. Individuals will go to great lengths to conform to social norms and gain social cohesion. Simmel (1971) acknowledged that the highest human achievements involve "…those which manifest, or at least appear to manifest, the most depth, the most exertion, the most persistent concentration of the

whole being-which is to say the most self-denial, sacrifice of all that is subsidiary, and devotion of the subjection to the objective ideal" (p. 53). Individuals must sacrifice themselves for the sake of the group to receive social approval. Social cohesion provides social support which begets social approval and intrinsic benefits.

Once an individual is accepted into the group there is a sense of freedom that allows them to let down their guard and express their real persona. However, the stage in between requires individuals to share common beliefs and 'bluff' about past experiences. Bluffing is accepted in social exchange due to the fact that the cost to the individual calling the bluff may be too high and he may lose his own status in the test (Blau, 1964). Digital modes of communication allow individuals to bluff with very little repercussions. Flirting is a form of bluffing that implies a promise that must eventually be given. When people are separated from their words and actions, they behave badly without any consequences. Separating people from their words creates new forms of behavior and misbehavior (Barnes, 2009).

> The contrasting element complements us; the similar element strengthens us. Contrast excites and stimulates; similarity reassures. Both, though by very different means, give us the feeling that our particular existence is legitimate. But where we feel that the one is appropriate in regard to a particular phenomenon, the other repels us. Contrast then appears hostile, while similarity bores us. Contrast presents us with too high a challenge; similarity, with too low a task. It is difficult in regard to either to find a tenable position: therefore, because we have no points of contact and comparison; here, because we feel that what is similar to us or, what is worse, that we ourselves are superfluous (Simmel, 1950).

This creates a paradox for the individual – they cannot fully be socially integrated due to the charade but they feel a necessity to commit to the role. This is a direct cost of exchange that can lead to risky sexual behaviors or perceived victimization.

3.2 *Exchange as Interaction – The Role of Self-Efficacy in Social Exchange and Social Learning*

Self-efficacy is "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p. 71). It is experienced uniquely by individuals and can provide a sense of control or competence. Self-efficacy has developed across theories with a few overlaps between motivational theories, social exchange theory, and cognitive theories, social learning theory (Gecas, 1989). Social exchange focuses on the sense of control it provides the individual and social learning focuses on the level of competence that is experienced by the individual.

Social exchange theory has expanded its rationale and has been utilized to validate social networks (McDonell, Strong, Gottfried, & Burton, 2006). When individuals are anticipating the costs of social interaction, they contemplate the positive outcomes and determine if there is an alternative that would be more efficient. If it appears to be a fair exchange then the social interaction will transpire and self-efficacy will increase. Research has shown the increased self-efficacy promotes a sense of control and mastery of one's environment (Gecas, 1989). As previously mentioned men tend to use the internet to control their environment (Flaherty et al., 1998; Rubin & Rubin, 2001) and therefore, gain self-efficacy. A high sense of agency will allow the individual, for the purpose of exchange, to subordinate himself to another and acquire a favor. Eventually, as social rewards are exchanged and self-efficacy is validated, an established pattern of behavior will provide coveted intrinsic benefits.

Social learning, a process of established patterns of behavior that is extinguished or elaborated, focuses on efficiency expectations and outcome expectations. Anderson and Emmers (2006) found that satisfying communication occurred when one's expectations are fulfilled, perception of understanding is successful, and a meaningful relationship is established. Efficiency outcomes are the belief that completing a task is within one's capacity. Millennials now have the opportunity to remain socially connected with high school friends despite geographical barriers or financial obligations with the assistance of digital modes of communication (Flanagin & Metzger, 2001; Valkenburg & Peter, 2007; Walker et al., 2009).

Digital modes of communication have provided an efficient outcome that allows Millennials to anticipate future outcome expectations. Outcome expectations are one's expectation that a completed task will provide the expected outcome (Bandura, 1977). Millennials will visit their social group's sites to post messages or comments in anticipation that a response will follow (Boase, 2008; Quan-Haase & Wellman, 2004; Tufecki, 2007). The expectation varies depending on if you are posting on a social networking site, sending an electronic mail or text messaging with the latter producing the highest expectation due to the instant delivery. Individuals will gravitate toward tasks they feel confident in completing and with each completion they will gain self-efficacy. Therefore, if an individual sends multiple text messages with no response they will stop the communication to avoid the negative feelings and loss of self-efficacy. Again, the increase in self-efficacy provided by positive outcomes, will promote positive behaviors and individuals will begin to attempt tasks they once believed were impossible. Established efficacy outcomes will be used in future social transactions to determine the costs and rewards. Digital modes of communication provide the Millennials with an efficient way to interact and acquire self-efficacy that encourages social learning.

3.3 *Social Learning Theory –Millennial Generation's Continued Participation*

Social learning is a theory that can be used to explain why digital modes of communication were integrated effortlessly (Chau & Hu, 2002; Hong, Thong & Wong, 2002; Wei & Zhang, 2008) into the social interaction of college students. "Social learning is a continuous process in which established patterns of behavior are often extinguished or extensively elaborated, and new modes of response are adopted" (Bandura, 1969, p. 251). The Millennial Generation has relied heavily on digital modes of communication to interact with their social groups (Donath, 2008). Bandura (1977) defines interaction as a bidirectional operation of reciprocal determinism, behavior, environment other personal factors that relate to each other. There are situations where behavior will outweigh environment and vice versa. The interactions between college students and their social groups produce symbols that are used to navigate the social exchange.

Symbols allow college students to navigate their environment and make deductions based on prior knowledge (Bandura, 1977). The social learning theory postulates that individuals arrange their environment in a fashion that enhances the rewards from the interaction and minimizes the risk. Digital modes of communication, specifically social networking sites, allow college students to create an environment where they feel comfortable disclosing information with minimal risk of societal retribution (Tosun & & Lajunen, 2009; Valkenburg & Peter 2007). The individual makes decisions to self-regulate when knowledge of a consequence is imminent. Response consequences occur when individuals interact and experience a positive or negative outcome. The response consequence functions to help the individual gather information, provide motivation by rewards, and strengthen the capacity to respond automatically (Bandura, 1977).

The first function, gathering information, begins when the individual experiences outcomes from various interactions and then develops a hypothesis. This information allows the individual to predict what may happen in the future. College students presume when they engage in social grooming they will improve their social status and gain social capital. As negative responses are experienced, the individual will adjust the hypothesis to avoid a future negative outcome (Bandura, 1977).

Motivation through incentives, the second function, is powerful and can encourage behavior. The individual anticipates the reaction they get from the behavior and modify the behavior if they expect a positive response. A study conducted by Hu et al., (2004) found that 89 percent of college students use instant messaging functions on their cell phones and like the instant response given (Quan-Haase, 2008). "The capacity to bring remote consequences to bear on current behavior by anticipatory thought encourages foresightful behavior" (Bandura, 1977, p. 18).

The third response consequence function, strengthening automatic response, increases as individuals learn the rewards (Bandura, 1977). Typical users of Facebook usually log onto the site for 20 minutes every day (Ellison et al., 2007). College students have begun to rely on their cell phones as a lifeline to their social groups. They have a sense of loss and disconnect from their peers if they are not in possession of their cell phone (Auter, 2007; Wilska, 2003). Cell phones have only readily become available to college students in the last ten to fifteen years; this sense of loss and disconnect is a socially learned behavior originating from the recent access of digital modes of communication.

Interactions that continue to provide the expected positive outcomes encourage the repeated behavior but this should not be confused to indicate the response is exclusively

automatic. College students do not automatically log onto social networking sites or check their cell phones; they do this because there is an expectation of a message or a missed call. The individual hypothesizes that positive outcome is forthcoming and therefore regulates the behavior to produce the intended response; without the positive outcome, the individual will not perform the behavior. "The dubious status of both automaticity and response strengthening, and the vestigial connotations of the term reinforcement, make it more fitting to speak of regulation than reinforcement of behavior by its consequences" (Bandura, 1977, p. 21). This distinction between a learned response and an automatic response is almost as important as modeling in social learning.

Human behavior is largely learned through a form of observation called modeling. Modeling occurs when an individual behavior is observed, an idea is formed about how the behavior was performed and then used at a later date to duplicate the behavior (Bandura, 1977). Modeling happens when individuals choose to replicate the behavior of someone that has status and has attractive attributes. Cell phones have been available since the early 1960's but didn't become popular until 1996 when cell phone users surpassed 100 million (West & Mace, 2010). Cell phone users originally were wealthy individuals (West & Mace, 2010) that the average citizen did not expect to model. Once cell phones became more affordable to the general public, the amount of users increased significantly as individuals began to model the behavior of their social groups. Facebook began in 2004 and by 2007, through advertising and recruiting, had over 21 million users (Ellison et al., 2007). "Revolutionary advances in communication technology, which vastly expand the range of influence, have transformed the social diffusion process" (Bandura, 1977, p. 55). The rapid increase over the past fifteen years indicates how quickly the Millennial Generation has adapted to this innovative social change.

Modeling has four component processes that provide a solid framework for observational learning: attentional processes, retention processes, motor reproduction processes, and motivational processes. Attentional processes can suggest why college students would attend to digital modes of communication. Retention processes can show how college students are able to acclimate to the new technological environment. Motor reproduction processes could suggest why there is generational gap between digital natives and digital immigrants. The final component, motivational processes, could indicate why college students continue to use digital modes of communication to interact with their social groups. Each component can be used to explore and explain how individuals socially learn behaviors.

Individuals must pay attention to exhibited behaviors and select what information should be visually or verbally coded and later serve as a mediator (Bandura, 1969). Immediate social groups, typically, have the most effect on the individual's early learned behaviors. "Much of the conduct being modeled at any given time is socially prescribed or highly functional; hence, it is adopted in essentially the same form as it is portrayed" (Bandura, 1977, p. 40). Research has shown how the internet provides outlets for introverted and extroverted individuals (Blanchard & Horan, 1998; Tosun & Lajunen, 2009). Digital modes of communication provide college students with a controlled medium to express themselves that requires minimal personal expense. As the individual's social network expands, social attraction is more important when choosing who to observe and emulate (Bandura, 1977). The individual will also select particular aspects of the behavior to use in future interactions.

The observed actions and the qualities selected must be retained for future interactions in order for the individual to benefit. The individual must observe and code a response pattern in symbolic form to reciprocate the behavior (Bandura, 1977). College students have socially

learned that returning to their friend's web pages to comment produces a future message from their friend which provides a positive outcome (Donath, 2008; Mesch, 2006). The college student originally did not know the positive response they would remit from their comment but once it was reinforced by a reciprocal comment the behavior was socially learned and experienced as a reward. The comments or messages that college students leave for their friends can be embedded with paralanguage or symbols to indicate social presence (Flaherty et al., 1998). "Imagery formation is assumed to occur through a process of sensory conditioning. That is, during the period of exposure, modeling stimuli elicit in observers perceptual responses that become sequentially associated and centrally integrated on the basis of temporal contiguity of stimulation" (Bandura, 1969, p. 220). Thus, the individual uses the symbolic forms to anticipate outcomes for future behaviors.

The motor reproduction process involves utilizing the symbolic forms to make decisions that elicit positive outcomes (Bandura, 1977). The individual rarely converts the information into the correct response on the first try. Promiscuous friending on social networking sites was originally seen as a sign of popularity. Recently, users have begun to realize that friendsters, people only know in the context of social networking sites, have limited social value (Donath, 2008; Stefanone, Lackaff & Rosen, 2010). This trial and error should produce a socially learned response pattern that will advance self-corrective adjustments to behavior.

The motor production process is also affected by the individual's level of development to determine the accuracy of their visual and verbal codes. At early stages of development, they rely heavily on the model's response to their behavior to determine the accuracy of their response (Bandura, 1977). If the model gives them a positive response or reward for their behavior they will have motivation to repeat the behavior. Digital immigrants, unlike digital

natives, are struggling to understand how and why digital modes of communication are used. The generational gap is creating a divide between social understandings among the two cohorts (Hansford & Adlington, 2008). "Social changes can arise only though failures in transmission between generations (Bandura, 1969, p. 251).

Social learning theory postulates that children who receive conflicting models from adults and peers adopt different standards than children who only receive models from adults. However, the different standards adopted by individuals who are exposed to divergently thinking models, may lead to more innovative thinking and allow the individual to be more open-minded (Bandura, 1977). Modeling can lead to the dispersion of new social ideas across society that promotes social change.

The diffusion of innovation into a society begins with the acquisition of an innovative behavior. "Another influential source of social learning is the abundant and varied symbolic modeling provided by television, films, and other visual media" (Bandura, 1977, p. 39). Generally, this behavior is introduced by someone with a high status within the social group and the acquisition rapidly follows. "Learners must acknowledge and value the other person's social presence; otherwise, social interaction is absent and social learning will not occur (Tu, 2000, p. 30). Modeling is the medium for transmission of the new behavior (Bandura, 1977). Individuals observe the behavior and begin to reciprocate providing legitimate support to the new innovate behavior. The adoption of social behaviors is relatively effortless, whereas, the adoption of dissocial behaviors is slow (Bandura, 1969). Social diffusion of digital modes of communication provides supporting evidence that the Millennial Generation views this type of communication as a legitimate social behavior.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 *Research Questions*

The Millennial Generation has actively used digital modes of communication to maintain social ties with their friends, family, and intimate partners. The first research question inquires to identify the primary preferred method of communication used by college students to maintain social ties with their friends, parents, and intimate partners. The current research suggests that college students are relying heavily on digital modes of communication for social interaction but it is not replacing face to face communication.

The second research question queries does the age a college student was first given their own personal cell phone, indicate a higher amount of usage to maintain social bonds with their friends, parents and intimate partners, relates to literature suggesting parents are using mobile phones to monitor their children (Davie, Panting & Charlton, 2004). Parents who give their children a cell phone at an early age should have an established method of communication through the cell phone that strengthens the social tie. However, Wilska (2003) suggests that children are given more privacy and parents are unaware of all the activities they are participating through their mobile phone. The activities they may be participating in such as risky sexual behavior or victimization will be addressed in the last three research questions.

College student's behavior online may not always be consistent with their behavior in person. The online environment gives a sense of anonymity that breeds an unethical climate where adverse behavior may be viewed as insignificant; whereas, face to face interaction

demands that social norms are adhered and individuals are held accountable for their actions (Brass, Butterfield & Skaggs, 1998). This leads to research question three which asks if the frequency of internet usage and digital modes of communication among college students indicate a correlation with prevalence of perceived victimization specifically relating to bullying, harassment, and stalking.

Research question four similar to research question three, ponders whether the amount of time college students communicate with their friends, parents, and intimate partners via digital modes of communication indicate a correlation with risky sexual behavior defined as uploading, emailing, or texting nude photographs of self or genital area. College students are aware of online dangers but regardless of this knowledge they are actively giving out personal information online and engaging in behaviors they know are risky (Mishna, McLuckie & Siani, 2009).

Victimization and risky sexual behavior are both adverse effects of digital modes of communication that are experienced uniquely by sex. The final research question queries if there is a significant difference between male and female participation in risky sexual behaviors and the risk of perceived victimization. Research has shown that women are as actively involved in digital modes of communication as men but traditional sex roles persist and more women than men are afraid of technology (Auter, 2007; Rubin & Rubin, 2001; Wilska, 2003).

4.2 *Survey Research*

All data for this research project are original data collected through use of a survey instrument written by Kandace Henry, principal investigator. A detailed proposal was given to the Internal Review Board at Auburn University and was approved on Mar 23, 2010 Approval Number 11 071EP1103. The recruitment information letter and survey are attached in Appendix 2.

4.2.1 *Participant/Sample Population*

The participant population, a convenience sample, was acquired voluntarily from students currently enrolled at Auburn University who were at least 19 years of age. The data collection included all completed surveys from participants that were at least 19 years of age. The university population at the time of survey collection included 23,533 undergraduates enrolled – 50.58 percent male (n = 11905) and 49.41 percent female (n = 11628) (Auburn University, 2011). Auburn University's student population is predominantly Caucasian reporting 82.6 percent. The remainder of the population is 8.1 percent African American, 2.1 percent Asian, 2.4 percent Hispanic, and 4.8 percent listed as other (Auburn University, 2011). The sample population (N = 435) included 37.7 percent male (n = 164) and 62.3 percent females (n = 271). The sample population included 83.2 percent Caucasian (n = 362), 8.7 percent African American (n = 38), 1.8 percent Asian (n = 8), 3.7 percent Hispanic (n = 16), and 2.3 percent other (n = 10) which is almost identical to Auburn University's student population. The high rate of return helped to give more validity and reliability to the survey by producing a larger population. The sample population was compiled from several introductory courses and is likely skewed in regards to age as more freshman are typically in introduction courses. This should not affect the overall study as the target population is the Millennial Generation which includes children born after 1982 (Hansford & Adlington, 2008). The sample population is skewed by sex due smaller number of male participation in the survey. This could be due to the fact that the data collection occurred in classes were offered through College of Liberal Arts which, historically, has a higher female/male proportion of degrees awarded (Auburn University, 2011).

4.2.2 *Survey Instrument*

The survey instrument contained 64 questions that focused on demographic information, attitudes towards digital modes of communication, online behavior regarding relationships, bullying, stalking, and harassment, and overall satisfaction with digital modes of communication. Participants answered questions regarding primary preferred method of communication, amount of communication, satisfaction of intimate interpersonal networks, level of closeness perceived with intimate interpersonal networks and overall strength of relationship due to usage of multiple media sources, risky sexual behaviors, and victimization. The survey is provided in Appendix 3.

4.2.3 *Survey Sections*

Specifically, the survey instrument is comprised of seven sections. Section A. contains demographic questions, (age, sex, school classification, major, gpa, ethnic/racial background, annual income of parents, biological/adoptive father's highest level of education, biological/adoptive mother's highest level of education, type of high school attended and home situation prior to age 18). Section B., Communication and Interaction was comprised of questions that measured communication patterns between the participant and friends, parents, and intimate partners and participation in risky sexual behavior (preferred method of communication with mother, father, friends, former intimate partner, and current intimate partner; amount of communication with mother, father, friends, former intimate partner, and current intimate partner; participation in texting/uploading/emailing physical description of your appearance, photograph of self, naked photograph of self, or photograph of genital area). Section C., Cell Phone Usage, incorporated 12 questions about cell phones (cell phone ownership, age first received cell phone, type of cell phone, functional capacity of cell phone, personalization features, which pay the college student's cell phone bill, average monthly minutes used, average

text messages sent daily, sexting, feeling when not in possession of cell phone, best friend's phone number, connect wirelessly, and specific location of cell phone use pertaining to driving, during class, movie theater, religious services, on a date, and in a bathroom). Section D., Online Usage and Social Networking Sites, encompassed questions internet usage (hours a day spent online, social networking site profiles, amount of social networking site profiles, length of time profile has been on social networking site and amount of time checking social networking site). Section E., Email Accounts included four questions regarding the frequency of usage (checking email, primary use of email, device used to check email, and if email has been replaced by social networking site message systems). Section F., Relationships through Digital Media was comprised questions pertaining to intimate relationships (identification of former or current partner, where the participant met their intimate partner, frequency of communication with their partner, meet in person, text message, email, instant message, photo message, participation in sexting, bluffing over text, private messages forwarded without permission, negative consequences associated with delayed response to messages, fighting or breaking up using digital modes, participation in bullying, harassment or stalking, victimization of bullying, harassment or stalking, feelings toward gps trackers, and feeling disconnected from social groups). Section G., Digital Media Communication Satisfaction, contained three Likert scale questions (feelings toward your relationship with you intimate interpersonal networks, level of closeness felt with intimate interpersonal networks and feelings related to utilizing multiple sources of media to communicate).

4.2.4 *Validity and Reliability*

Reliability and validity are two essential functions of a good measure. Reliability measures consistency, stability, and predictability and validity measures truthfulness, accuracy,

authenticity, and soundness (Hubley & Zumbo, 1996). A similar survey instrument was utilized in a class project, outside of this research project, to get feedback regarding efficiency from students in the Nutrition and Food Science Department at Auburn University. The surveys were distributed on days when tests were scheduled to increase rate of return. Fifty-two students completed surveys. The survey instrument was adjusted structurally to reflect suggestions from the test sample but the content remained consistent.

The sample population used for the current research project was predominantly 18 to 24 years of age which is the specific generation targeted for this research and the racial demographics mirrored that of the whole population. These two factors are a good measure of reliability. In addition, Cronbach's α, .718, was utilized to determine the internal consistency of the risky sexual behavioral scale.

"Construct validity is ordinarily studied when the tester has no definite criterion measure of the quality with which he is concerned and must use indirect measures. Here the trait or quality underlying the test is of central importance, rather than either the test behavior or the scores on the criteria" (Cronbach & Meehl, 1955, p. 282). Since this is the first time the survey questions have been tested it seems appropriate to use construct validity to measure truthfulness, accuracy, authenticity, and soundness. Construct validity gives the scientist the freedom to adjust constructs when observations do not fit the original hypothesis (Cronbach & Meehl, 1955). Statistical tests were performed to ensure the validity of the research. A factor analysis was initially utilized to measure and interpret the relationship among the variables. "A factorial description is exact and stable; it is economical in explanation; it leads to the creation of pure tests which can be combined to predict complex behaviors" (Cronbach & Meehl, 1955, p. 286). Pearson's correlations were computed to test relationships between the constructs. "Rarely will

it be possible to estimate definite "construct saturations," because no factor corresponding closely to the construct will be available. One can only hope to set upper and lower bounds to the loading" (Cronbach & Meehl, 1955, p. 290).

4.3 *Dependant Variables*

Due to the nature of this research, several dependant variables were used in the study. The research questions cover different behaviors among respondents and examined primary preferred method of communication, amount of cell phone usage, victimization, and risky sexual behavior.

4.3.1 *Primary Preferred Method of Communication*

Preferred method of communication is defined as the college student's way of interacting with their social group. Recipients were asked to choose their primary preferred method of communication with their mother, father, friends, former intimate partner, and current intimate partner. Response categories were nominally coded: 1) face to face, 2) telephone call, 3) text message, 4) email, 5) social networking sites, and 6) other.

4.3.2 *Amount of Cell Phone Usage*

Amount of cell phone usage is defined as how many minutes on average a month were used and how many text messages on average per day were sent. Minutes a month on average were nominally coded with response categories as follows: 1) 0-999, 2) 1000–1999, and 3) >2000. Text messages on average per day were nominally coded with response categories as follows: 1) 0-74, 2) 75-149, 3)150-349, and 4) >350.

4.3.3 *Victimization*

Victimization is a composite variable examining perceived form of harassment, bullying, and stalking that were experienced by the participant. A reliability of the three variables

bullying, harassing, and stalking yielded Cronbach's α .112, meaning this variable cannot be used as scale variable, but for the purposes of this study incidence is more important than prevalence. Therefore, the victimization variable is a dichotomous variable coded "0" for no victimization and "1" for one or more incidents of victimization whether bullying, harassment, or stalking. Participants were asked three questions to evaluate their feelings of experienced victimization and the response categories for all three questions were yes or no. The first question was 'have you ever felt stalked by someone through the use of digital media?' Next, the recipients were asked "have you ever felt bullied by someone through the use of digital media?' The final question asked of the recipients was 'have you ever felt harassed by someone through the use of digital media?' The victimization variable is a dichotomous variable and all questions were measured with a "0" for no and a " 1" for yes; therefore, the victimization variable reflects any affirmative response to bullying, stalking and harassing as a yes and all no responses indicates the respondent did not experience any of the three forms of victimization.

4.3.4 *Risky Sexual Behavior*

Risky sexual behavior was defined by the following activities: texting, uploading or emailing naked photograph of self and texting, uploading or emailing photograph of genital area. Initially, sexting was included in the merged variable but a reliability analysis produced a Cronbach's α -.013 but when it was removed it produced a Cronbach's α .718. Therefore, sexting was removed from the risky sexual behavior variable to increase reliability. The risky sexual behavioral scale variable was constructed using six questions in which the respondents were asked if they had ever: 1) "texted a naked photograph of self", 2) "texted a photograph of genital area", 3) "uploaded a naked photograph of self", 4) "uploaded a photograph of genital area", 5) "emailed a naked photograph of self", and 6) "emailed a photograph of genital area."

For each of the six individual questions, respondents were asked to check any response category in which they had participated and leave blank if they had never participated. The response categories were dichotomously coded as "0" for no and "1" for yes. The total index scale ranged from 0-6. The computed sum for all six questions was totaled for the risky sexual behavior scale.

4.4 *Independent Variables*

This study also includes several independent variables that included preferred method of communication among social groups, age of first cell phone procurement, amount of internet usage, and risky sexual behavior.

4.4.1 *Definition of Social Groups*

Social groups, for this study, included friends, parents, and intimate partners. Friends included anyone who they considered in their personal social network that they interacted with; there was no specification regarding how much interaction was involved in the relationship. Parents included biological parents, step parents, and caregivers. Intimate partners were defined as individuals who shared a relationship that was maintained more than four dates and were not considered just a 'hook-up.' Participants were asked questions about their former and current partners.

4.4.2 *Primary Preferred Method of Communication*

Primary preferred method of communication is defined as the college student's way of interacting with their social group. Recipients were asked to choose their primary preferred method of communication with their mother, father, friends, former intimate partner, and current intimate partner. Response categories were nominally coded: 1) face to face, 2) telephone call, 3) text message, 4) email, 5) social networking sites, and 6) other.

4.4.3 *Age of First Cell Phone Procurement*

Age referenced the biological age of the individual when they received their first cell phone. Respondents were asked "how old where you when you got your first cell phone?" Participants were asked to hand-write the age they received their first cell phone. Participant response was given an ordinal value based on their answer.

4.4.4 *Amount of Internet Usage*

Internet usage was measured by specific amount of hours online each day. Participants were asked how many hours a day to you spend online and were given the following response categories which were nominally coded as follows: 1) 0 –1, 2) 2-3, 3) 3–4, 4) 5 –6, 5) 6+.

4.4.5 *Risky Sexual Behavior*

Risky sexual behavior was defined by the following activities: texting, uploading or emailing naked photograph of self and texting, uploading or emailing photograph of genital area. Initially, sexting was included in the merged variable but a reliability analysis produced a Cronbach's α -.013 but when it was removed it produced a Cronbach's α .718. Therefore, sexting was removed from the risky sexual behavior variable to increase reliability. The risky sexual behavioral scale variable was constructed using six questions in which the respondents were asked if they had ever: 1) "texted a naked photograph of self", 2) "texted a photograph of genital area", 3) "uploaded a naked photograph of self", 4) "uploaded a photograph of genital area", 5) "emailed a naked photograph of self", and 6) "emailed a photograph of genital area." For each of the six individual questions, respondents were asked to check any response category in which they had participated and leave blank if they had never participated. The response categories were dichotomously coded as "0" for no and "1" for yes. The total index scale ranged

from 0-6. The computed sum for all six questions was totaled for the risky sexual behavior scale.

4.5 *Statistical Plan of Analysis*

The first research question inquires to identify the primary preferred method of communication used by college students to maintain social ties with their friends, parents, and intimate partners. To address the first research question, a factor analysis is used on the preferred method of communication variables among all categories of social groups. "Factor analysis produces several linear combinations of observed variables, and each linear combination is a factor. The set of factors are extracted from the correlation matrix and rotated to increase interpretability (Wilska, 2003, p. 451)". The factor analysis showed that communication with father was the least correlated social bond with all other social bond categories. A reliability analysis yields a Cronbach's α .441 indicating that all five social groups cannot be combined. Therefore, a descriptive statistical analysis will show a clearer picture of primary preferred method of communication for all social groups individually.

The second research question queries does the age a college student was first given their own personal cell phone, indicate a higher amount of usage to maintain social bonds with their friends, parents, and intimate partners. To address the second research question a frequency distribution is run on age the respondent first received own personal cell phone descriptive statistics are completed. Following, a Pearson correlation matrix is constructed to demonstrate associations between age of first cell phone procurement with amount of cell phone usage and frequency of contact with several social groups.

Research question three asks if the frequency of internet usage and digital modes of communication among college students indicates a correlation with prevalence of perceived

victimization specifically relating to bullying, harassment, and stalking. This question is addressed by examining the amount of usage variable through conducting frequency analysis. First, a frequency analysis is run of the total sample and then separately by internet usage groups. Next, run a Pearson correlation on victimization and hours a day spent online. Finally, a one-way ANOVA is used to show difference between usage groups.

Research question four ponders whether the amount of time college students communicate with their friends, parents, and intimate partners via digital modes of communication indicate a correlation with risky sexual behavior defined as uploading, emailing, or texting nude photographs of self or genital area. A frequency analysis of percentages shows differences in risky sexual behavior and sexting among internet usage categories. A Pearson correlation is constructed for the fourth research question based on the frequency of communication with social groups, frequency of online use, frequency of cell phone use, and risky sexual behavior. The correlation matrix is an imperative component of this study because past research (Donath, 2008; Kalpidou et al., 2011) has suggested that high internet use increases risky sexual behavior, but no study has included all three variables concomitantly. Since, the Pearson correlation shows statistically significant relationships, it is necessary to run a linear regression or a multiple stage linear regression of risky sexual behavior on victimization or other variables that show statistically significant relationships. The regression analysis will show if, in fact, risky sexual behavior has increased when respondents spent more time online.

The fifth and final research question queries if there is a significant difference between male and female participation in risky sexual behaviors and the risk of perceived victimization. Therefore, to address the question of risky sexual behavior and its relationship to victimization, a linear regression of risky sexual behavior on victimization is conducted and sex is introduced as

a controlled variable. In order to clarify the nature of the relationship, a multiple linear regression analysis of sex, internet usage, and risky sexual behavior on victimization is run in a two-stage format. If initial results do not show a relationship between participation in risky sexual behavior and perceived victimization, it may be necessary to separate the perceived victimization down to individual items.

CHAPTER FIVE

RESULTS

5.1 *Descriptive Statistics of Sample Population*

5.1.1 *Demographics of Age*

The sample population was comprised of 435 college students that ranged from 19 to 33 years of age with a median age of 20. The percentage breakdown of the cohorts indicated that of the sample population there were as follows: 191 students age 19, 44 percent; 107 students age 20, 25 percent; 60 students age 21, 14 percent; 44 students age 22, 10 percent; 14 students age 23, 3 percent; 7 students age 24, 2 percent; and 12 students age 25 to 33, 3 percent. The Millennial Generation (Hansford & Adlington, 2008), currently 18 to 28 years of age, is clearly represented in the sample with 98.9 percent of the sample falling in the age range.

5.1.2 *Demographics of Parent's Annual Income, Education, and Home Situation*

Respondents had nine response categories to choose from regarding their parent's annual income ranging: less than $15,000; $15,000 – $29,999; $30,000 – $44,499; $45,000 – $59,999; $60,000 – $79,999; $80,000 – $99,999; $100,000 – $119,999; $120,000 – $139,999; and $140,000 or more. Three percent selected less than $15,000, 2 percent selected $15,000 – $29,999, 5 percent selected $30,000 – $44,499, 6 percent selected $45,000 – $59,999, 12 percent selected $60,000 – $79,999, 15 percent selected $80,000 – $99,999, 13 percent selected $100,000 – $119,999, 13 percent selected $120,000 – $139,999, 25 percent selected $140,000 or more and 5 percent did not respond. Pursuing this further, the social stratification of

the groups between upper, middle, working, and lower is important to determine socioeconomic status.

> There is no consensus definition of "middle class," neither is there an official government definition. What constitutes the middle class is relative, subjective, and not easily defined. The U.S. Census Bureau has published figures for 2007 breaking the income distribution into quintiles, or fifths. The narrowest view of who might be considered middle class based on that presentation would include those in the middle quintile, which includes households with income between $39,100 and $62,000. A more generous definition might be based on the three middle quintiles, those households with income between $20,291 and $100,000. (Cashell, 2008, p. 1).

Alabama's mean income for 2010 was $55,543 (U.S. Census Bureau, 2011). With this in mind, the income distribution from the U.S. Census Bureau (2011), which includes the following categories: less than $10,000; $10,000 to $14,999; $15,000 to $24,999; $25,000 to $34,999; $35,000 to $49,999; $50,000 to $74,999; $75,000 to $99,999; $100,000 to $149,999; and $150,000 to $199,999.or more, will be broken down into quintiles with the lower two signifying the lower class and the middle three signifying the middle class and the upper two signifying the upper class. The social stratification for this research will be as follows: lower class will $0 to $14,999, middle class will range from $15,000 to $99,999, and the upper class will range from $100,000 to $199,999. The social stratification of the sample population indicated the lower class equated 3 percent, the middle class equated 43 percent, and the upper class equated 54 percent.

The participants were given eight response categories to indicate separately their father's and mother's highest level of education: less than high school, high school graduate, some

college, two-year college graduate, four-year college graduate, some graduate work, graduate degree, and does not apply. Regarding their father's highest level of education, 3 percent selected less than high school, 11 percent selected high school graduate, 11 percent selected some college, 4 percent selected two-year college graduate, 37 percent selected four-year college graduate, 3 percent selected some graduate work, 29 percent selected graduate degree, and 1 percent selected does not apply. Regarding their mother's highest level of education, 1 percent selected less than high school, 13 percent selected high school graduate, 13 percent selected some college, 7 percent selected two-year college graduate, 41 percent selected four-year college degree, 4 percent selected some graduate work, 20 percent selected graduate degree, and 1 percent did not respond.

The home situation of the respondents were listed in eight response categories: lived with biological/adoptive parents, lived with biological/adoptive mother only, lived with biological/adoptive father only, lived with biological mother and step-father, lived with biological father and stepmother, lived with biological mother and boyfriend/partner, lived with biological father and girlfriend/partner or other. 80 percent of the respondents chose lived with biological/adoptive parents, 8 percent chose lived with biological/adoptive mother only, .5 percent chose lived with biological/adoptive father only, 6 percent chose lived with biological mother and step-father, 2 percent chose lived with biological father and step-mother, 2 percent chose lived with biological mother and boyfriend/partner, .2 percent chose lived with biological father and girlfriend/partner, and 1.3 percent chose other.

5.1.3 *Demographics of Socioeconomic Status*

The media usage of the sample population, as previously mentioned in chapter four, supports the idea that they are digital natives. However, the participation gap (Hansford and

Adlington, 2008; Wei & Zhang, 2008) must still be considered as the population is examined. Socioeconomic status for participants can be estimated by computing proxy measures including but not limited to income, education, and home situation. Eighty percent of the population had a home situation that indicated the respondent lived with both biological/adoptive parents. Twenty-five percent of the sample population's parent's annual income was $140,000 per year. Education is indicative of socioeconomic status and the majority of parents of this sample population had at least a four year degree. Thirty-seven percent of the sample's fathers had completed a four-year degree and 29 percent had completed a graduate degree. Forty-one percent of the sample's mothers had completed a four-year degree and 20 percent had completed a graduate degree. One hundred percent of the sample population had cell phones and 87 percent said their parents paid for the monthly bill.

5.2 *Economic Impact of Digital Modes of Communication*

A measurement has not been designed specifically to measure the participation gap but when parent's income was cross tabulated with parent's annual income some interesting findings occurred. The age a cell phone was received was cross tabulated with parent's annual income and a pattern occurred: as the age increased the parent's income decreased. This suggests that parents with more disposable income are more likely to give their child a cell phone at a younger age than those with less disposable income. Cell phones today with their artistic skins, top 40 ringtones and charms have become an extension of college students. Friends, parents, and intimate partners get their own special ringtone to signify their status. As relationships progress, the song may be changed to reflect the nature of the relationship that particular day. However, college students must purchase these features and therefore, not available to everyone. Ten percent of the sample population said they had personalized their cell phone with ringbacks of

those 68 percent reported they had parents with annual incomes of $80,000 and above per year. Sixty percent said they had personalized their cell phones with ringtones of those 68 percent had parents with annual incomes of $80,000 and above per year. Thirty-two percent said they personalized their cell phones with skins of those 69 percent had parents with annual incomes of $80,000 and above per year. Three percent said they personalized their phones with charms of those 75 percent had parents with annual incomes of $80,000 and above per year. 69 percent said they personalized their phones with screensavers of those 69 percent had parents with annual incomes of $80,000 and above per year. There is a pattern suggesting that parents with higher incomes have the capability to offer more personalized features on their student's cell phone.

5.3 *Media Usage of Sample Population*

The sample population is part of the Millennial Generation, which is why it is not surprising that 100 percent of the sample population owned cell phones. Forty-seven percent of the sample population received their cell phone between the ages of 13 and 14. Sixty percent of the sample population personalized their phones with ringtones and 70 percent personalized their phones with screensavers. The majority of the sample population, 45 percent, talked on their cell phone between 0 – 499 minutes per month. On average, the sample population sent between 25 and 49 text messages per day. It is interesting to note that 5 percent of the sample population sent over 350 messages per day which suggests if they slept 8 hours a day that would indicate they sent a text message every 3 minutes.

The sample population, typically, spends two to three hours online per day. Digital modes of communication, specifically cell phones and laptops, allow college students to continue to connect to the internet away from their desktop computers. This improves their efficiency

maintaining social ties with their social groups. Ninety-one percent of the sample population connects to the internet utilizing a cell phone or laptop. The majority of the sample population, 57 percent, has at least one social networking site with a profile and has had this profile for four to six years. Sixty-four percent check their Facebook account several times a day and 37 percent check their email four to six times a day. The sample population's primary use for email is related to schoolwork but the majority, 64 percent, checks their email on a desktop. This could indicate that cell phones are primarily used for maintaining social ties with social groups and not for professional purposes such as schoolwork.

5.4 *The Affects of Digital Modes of Communication on Social Groups*

The Millennial Generation has become reliant on their cell phones to manage and organize their lives and social contacts. Forty percent of the sample felt stressed about missing phone calls and text messages when they were not in possession of their cell phone. However, only 21 percent of the sample feared negative consequences if they did not immediately respond to their intimate partner's phone call or text message. When questioned if they knew their best friends phone number, only 18 percent said "yes." Sixty-two percent of the sample population participated in sexting and 90 percent of them participated in sexting using text messages. Forty-one percent felt that sexting accelerated the physical relationship with their intimate partner but only 10 percent of the sample felt that if they had bluffed, or talked a big game on a text message, they had to be just as forward face to face. In deference, 71 percent felt that cell phones, email, and internet use has accelerated physical relationships. Sixty percent of the sample has used digital modes of communication to fight with their intimate partner and 30 percent have sent a text message to break up with their intimate partner. GPS, as suggested by the literature, are an imminent privacy concern as they become more common in smartphones.

Seventy-seven percent of the sample population agreed that GPS trackers will increase stalking occurrences. These statistics support the literature suggesting that the Millennial Generation actively select specific modes and are using digital modes of communication to communicate with their social groups (Auter, 2007; Flaherty et al., 1998).

5.5 *Detailed Summation of Research Questions Statistical Analysis Results*

5.5.1 *Research Question One*

The first research question inquires to identify the primary preferred method of communication used by college students to maintain social ties with their friends, parents, and intimate partners. The literature (Hansford & Adlington, 2008) suggests that digital natives would prefer using face to face communication with social groups over all other methods to maintain social ties. The results from this study supported past findings that the primary preferred method of communication to maintain social ties was overwhelmingly face to face between respondent and mom 73.6 percent, dad 70.1 percent, friends 76.3 percent, former intimate partner 37.3 percent, and current intimate partner 91.7 percent. Of all the respondents who preferred communicating by phone, 21.8 percent was with mom, 22.1 percent was with dad, 3.6 percent was with friends, 9.6 percent was with their former intimate partner, and 2.7 percent was with their current intimate partner. Of all the respondents who preferred communicating by text message, 3.6 percent was with mom, 5.0 percent was with dad, 20.1 percent was with friends, 29 percent was with former intimate partner, and 5.7 percent was with current intimate partner. Of all the respondents who preferred communicating by email, .7 percent was with mom, 2.8 percent was with dad, no respondents preferred this method with friends, 1.5 percent was with former intimate partner, and no respondents preferred this method with current intimate partner. Of all the respondents who preferred communicating with social networking sites, .2

percent was with mom, no respondents preferred this method with dad, no respondents preferred this method with friends, 19.8 percent was with former intimate partner, and no respondents preferred this method with current intimate partner. 2.1 percent answered "other" for preferred method of communication with former intimate partner. "Other" cannot be broken down to a specific type of communication. Table 1 shows the percentage breakdown and number of respondents for each method of communication. Interestingly, phone calls were the second highest preferred method of communication for both parents among respondents to maintain social ties, but text messaging was the second highest for friends, former and current intimate partners to maintain social ties.

5.5.2 *Research Question Two*

The second research question queries does the age a college student was first given their own personal cell phone, indicate a higher amount of usage to maintain social bonds with their friends, parents and intimate partners, relates to literature suggesting parents are using mobile phones to monitor their children (Davie, Panting & Charlton, 2004). Table 2 shows a descriptive categorization of age first received own personal cell phone. The age range of the sample was 8 – 28. The mean age was 16.13 years and the median age was 14 years. However, 25 percent of the sample received their cell phone at age 13. The next highest percentage was age 14, 22 percent of the sample, indicating that the median is a better measure of the sample.

Table 2a shows a Pearson correlation indicating there are no statistically significant relationships between age first cell phone and both amount of monthly minutes used and average number of daily texts sent contrary to past findings. There is also no relationship between age first cell phone and the amount of communication with parents, friends, former and current intimate partners. There is a significant correlation ($p < .01$) between amount of communication

with mom and amount of communication with dad with a Pearson's correlation coefficient of .302. However, we would typically expect for contact with both parents to be highly correlated because 80 percent of the sample indicated both biological/adoptive parents co-resided in the home.

5.5.3 *Research Question Three*

Research question three questions if the frequency of internet usage and digital modes of communication among college students indicate a correlation with prevalence of perceived victimization specifically relating to bullying, harassment, and stalking. As previously discussed, internet usage groups were constructed and were coded into nominal response categories as follows: low users 1) <3 hrs/day, moderate users 2) 3-6 hrs/day, and high users 3) 6+ hrs/day. Percent comparisons between the internet usage response categories are shown in Table 3. 91 percent of the sample, (N = 398), responded to questions on perceived victimization, and of those 32.2 percent felt they had been stalked, 8.5 percent felt they had been bullied, and 16.1 percent felt they had been harassed through digital modes of communication. For the low usage group, 36.4 percent (N =205; n = 80) felt they had been stalked, 9.1 percent (N =203; n = 20) felt they had been bullied, and 17.3 percent (N =201; n = 38) felt they had been harassed through digital modes of communication. For the moderate usage group, 27.8 percent (N =163; n = 49) felt they had been stalked, 8 percent (N =162; n = 14) felt they had been bullied, and 15.3 percent (N =163; n = 27) felt they had been harassed through digital modes of communication. For the high usage group, 27.8 percent (N =28; n = 10) felt they had been stalked, 8.3 percent (N =28; n = 3) felt they had been bullied, and 11.1 percent (N =27; n = 4) felt they had been harassed through digital modes of communication.

These findings indicate a trend pertaining to the low usage group. Users who spent less than three hours a day online were 4.2 percent more likely to be stalked than the total sample and 8.6 percent more likely to be stalked than users who spend 3 or more hours a day online. They were also 4.1 percent more likely to be harassed than moderate and high users. This trend remained stable for each victimization component although at lower levels for bullying.

The Pearson correlation matrix showed no significant correlation between perceived victimization and hours per day spent online yielding a correlation coefficient of -.008. Similarly, a one-way ANOVA examining group differences among internet usage response categories yields no statistically significant findings producing a significance of .313. These results did not support the original presumption that a high amount of usage would be positively correlated with perceived victimization due to the unethical behavior that is considered acceptable online.

5.5.4 *Research Question Four*

Research question four similar to research question three, ponders whether the amount of time college students communicate with their friends, parents, and intimate partners via digital modes of communication indicate a correlation with risky sexual behavior defined as uploading, emailing, or texting nude photographs of self or genital area. Of the total sample population, 36.6 percent participated in sexting. Going further and arranging the 36.6 percent by internet usage groups, low users 1) <3 hrs/day, moderate users 2) 3-6 hrs/day, and high users 3) 6+ hrs/day, that participated in sexting, low users accounted for 39 percent, moderate users accounted for 33 percent, and high users accounted for 20 percent. Participation for the total sample that participated in risky sexual behavior was 20.2 percent. The internet usage groups that participated in risky sexual behavior show that 20.5 percent of low users participated, 18.8

percent of moderate users participated, and 27.8 percent of high users participated. Table 4, which illustrates this information, shows an interesting trend with all usage response categories and sexting. Approximately a third or more of each group had participated in sexting but only the high usage respondents maintained this number when asked if they had participated in online risky sexual behavior.

Frequency of communication with dad, friends, and former intimate partners had no statistically significant link to risky sexual behavior. On the other hand, as Table 4a shows, there was a significant finding ($p < .01$) in the relationship between risky sexual behavior and current intimate partners with a Pearson's correlation coefficient of .138, the more frequently respondents communicated with their current intimate partner the more likely they were to have texted, uploaded, or emailed nude photos of themselves or their genitalia. Remarkably, there was another unexpected statistically significant finding ($p < .05$) with a correlation coefficient of -.11. The less frequently respondents communicated with mom the more likely they were to have texted, uploaded, or emailed nude photos of themselves or their genitalia.

Research has found that women were less likely to use the internet for control, but were likely to use it for pleasure, affection, social construction of identity, and inclusion (Auter, 2007; Rubin & Rubin, 2001; Wilska, 2003). Since current intimate partner was one of the statistically significant findings, a regression analysis, broken down by sex and amount of communication with mom and current intimate partner on risky sexual behavior is essential. A two-stage regression analysis could indicate if there are significant sex differences for risky sexual behavior in regards to communication with social groups.

Table 4b shows the results from the two stage linear regression and a noticeable sex difference was discovered in regards to who they frequently communicate with and risky sexual

behavior. Two of these two-stage linear regressions were completed to divide the population by biological sex. Model 1of the regression was amount of communication with mom on risky sexual behavior. Model 2 of the regression added amount of communication with current intimate partner on risky sexual behavior. The two-stage linear regression of the female population of the sample shows no statistically significant (F = .325) relationship between communication with mom and risky sexual behavior with a beta value of -.040. However, when communication with current intimate partner was added in model 2, there was a statistically significant (F = 2.48) relationship with a beta value of .149. Similarly, the regression on the male population of the sample showed an inverse association; where amount of communication with mom was statistically significant (F = 4.528) in stage one with a beta value of -1.86. Interestingly, when communication with current intimate partner was added in stage two, the strength of the association between the amount of communication with mom and risky sexual behavior increased to a beta value of -1.94 and produced a stronger significance (F = 3.43). Although the R^2 for each model remained relatively low (Model 1 Females: R^2 = .002, Model 2 Females: R^2 = .024; Model 1 Males: R^2 = .035, Model 2 Males: R^2 = .052), the beta values show significant associations between the study variable risky sexual behavior and amount of communication with mom and current intimate partner. Furthermore, the goodness-of-fit, as shown by the R^2, would be presumably enhanced with a larger sample size. For males the greater amount of communication with their mom the less likely they were to engage in risky sexual behavior and for females the more they communicated with their current intimate partner the more likely they were to engage in risky sexual behavior.

There was no significant relationship between perceived victimization and participation in risky sexual behavior. Three separate linear regressions show there is no significant

relationship between risky sexual behavior and both stalking and bullying. There is, however, a significant connection ($p < .05$) with an $R^2 = .021$ between harassment and online risky sexual behavior.

5.5.5 *Research Question Five*

Research question five queries if there is a significant difference between male and female participation in risky sexual behaviors and the risk of perceived victimization. Table 5 a two-stage linear regression of sex, internet usage, and participation in risky sexual behavior indicated no statistically significant ($F = 2.118$) relationship, beta value .088, between participation in risky sexual behavior and perceived victimization. Model 1 included biological sex and amount of time online on perceived victimization. Model 2 added risky sexual behavior on perceived victimization to evaluate the strength of the relationship. Amount of time online accounted for the most variance in Model 1 beta value of -.104, while sex accounted for the least variance with a beta value of .003. When participation in risky sexual behavior was added in Model 2 it produced a beta value of .088. However, amount of time online accounted for the most variance with beta value of -.108. This finding indicates that regardless of participation in risky sexual behavior and biological sex the amount of perceived victimization is not affected.

The combined dichotomous perceived victimization variable was effective to measure the association between frequency of internet usage and digital modes of communication with prevalence of perceived victimization, because the incidence of whether the respondent felt victimized was more salient to answer research question 3. However, the incidence of that dichotomous perceived victimization variable is apparently not as effective as explaining the relationship between participation in risky sexual behavior and perceived victimization. Hence, three separate two-stage regressions by victimization type are more effective to portray the

relationship between risky sexual behavior and perceived victimization. Research question four showed differences by sex in risky sexual behavior and research question three showed differences in internet usage groups and perceived victimization, therefore, sex and internet usage will be used as control variables in stage one of each regression.

Table 5a illustrates the separate results from three separate two-stage linear regressions. Risky sexual behavior produced the highest beta value at .098, compared to sex at a beta value of -.038 and internet usage at a beta value of -.07 as shown in stalking Model 2. These results, although not statistically significant (F = 2.079), indicate a potential increase in risky sexual behavior associated to perceived stalking. The bullying two-stage regression also revealed a weak association with risky sexual behavior producing a beta value of .071, however there was a statistically significant (F = 3.893) relationship with the sex control variable with a beta value of .159. Internet usage produced a low beta value of -.011 indicating no significant relationship to perceived bullying. This indicates differences in perceived bullying and risky sexual behavior in regards to sex. Perceived harassment was the only two-stage linear regression which showed in Model 2 a statistically significant (F = 3.837) relationship with risky sexual behavior producing a beta value of .140 in comparison to sex with a beta value of .098 and internet usage with a beta value of -.042. The dichotomous perceived victimization variable did not work in the first regression run because stalking and bullying had a weak or no association with risky sexual behavior and harassment was the only factor that was significant. Harassment was the only item from the dichotomous perceived victimization variable that produced a significant association with risky sexual behavior. Additionally, in terms of the sex control variable, bullying was the only regression model to indicate a difference between the sexes and perceived victimization with a Model 1 beta value of .156 and Model 2 beta value of .159, but this association was not

connected to participation in risky sexual behavior. The sex control variable remained insignificant in both of the other models, stalking and harassment, and therefore there does not seem to be a difference by sex related to their participation in risky sexual behavior and perceived victimization.

CHAPTER SIX

DISCUSSION AND CONCLUSION

6.1 Discussion

The Millennial generation is the first generation to grow up in a technology-driven society that considers mobile and online communication necessary to navigate daily activities. Their 'connected presence' (Coyle & Vaughn, 2008) to their parents, friends, and intimate partners have transformed the dynamics of their relationships. Digital modes of communication are being used by the Millennial Generation to communicate and interact with their social groups.

A college student's social life revolves around parties, hanging out, and staying up all night with friends. The relationship with friends is vital to the social welfare of the college student. Digital modes of communication allow friends to communicate at all times through social networking sites and text messaging. College students rarely consider the implications of their communications but technology is having an impact on the nature of their relationship.

Students are sending text messages or posting on social networking sites all day while they are in class, walking on campus, eating lunch, and talking with other friends. The cell phone is being viewed as an extension of one's self and is intruding on daily face to face interactions. It is not unusual to see a group of friends sitting together not talking to each other because they are busy texting on their phones. Regardless, face to face interaction continues to prevail over the various modes of communication.

Previous research, conducted by Flanigan and Metzger (2001), concluded that face to face communication is rich in emotion and offers a social presence that is satisfying to individual needs. In congruence with the literature, face to face communication continues to be the primary preferred method of communication to maintain their strong social ties supporting the previous research. Conversely, a pattern emerged when analyzing the second most preferred method of communication.

The second preferred method of communication with parents was telephone calls indicating that the participants continued to seek a strong emotional connection. This could possibly suggest that because their parents are digital immigrants, they shy away from technology and prefer to communicate with their student through face to face or telephone calls. It could also suggest that the social transaction with parents provide the desired intrinsic benefits and students are favoring a richer mode of communication.

Participant's second preferred method of communication with their friends, former and current intimate partners was text messaging. This supports the research conducted by Sweeney (2010) that indicated text messaging is primarily used by students to socialize with their friends. The convenience of digital modes of communication provides a minimal cost to digital natives; therefore, an established pattern of behavior has been adopted.

These research findings support previous literature indicating face to face communication remains the most primary preferred method of communication. They also suggest that the secondary methods of communication are socially learned through interaction with their peers based on the rewards and costs of digital modes of communication. Socially learned interactions have the ability to provide social capital to participants.

Bonding social capital is exclusively acquired through strong social ties, predominantly with family (Kalpidou et al, 2011; Williams 2006). A new trend is occurring that indicates parents are utilizing digital modes communication, specifically cell phones, to monitor the whereabouts of their young children. The parents who do give their child a cell phone must analyze the benefits and costs of their decision. The benefit of always having a continuous connection can provide security and acquire bonding social capital; however, Wilska (2003) suggests that cell phones offer privacy to participate in activities that may be potentially dangerous to the child.

The median age a participant received a cell phone in this study was 14, indicating that parents are accepting digital modes of communication to exchange information with their college student. Nonetheless, the fact remains there is a participation gap (Hansford and Adlington, 2008; Wei & Zhang, 2008) and not all parents have the ability to purchase a cell phone for their children to monitor their activities. Unfortunately, there is minimal research on the effects of the participation gap in relation to cell phone ownership.

Respectively, 87 percent of the participants stated their parents paid for their phone bill which implies social sanctions can be given if their behavior warrants. This motivates the students to conduct themselves in a socially acceptable and responsible manner, or at least in regards to what their parents can monitor through their digital modes of communication.

Age, in relation to acquisition of own personal cell phone, did not indicate a higher amount of usage. This could be because the majority of the sample received their cell phone around the same age. It could also indicate digital natives are comfortable with new modes of technology and are able to adapt quickly, regardless of the age they received their first cell

phone. Either way, the social exchange of information between parents and their college students supports their strong social tie and allows for the acquisition of bonding social capital.

The internet presents a facile method of interacting with social groups with minimal cost and increased social capital. College students are utilizing social networking sites with little thought to the consequences that could have been avoided in face to face communication (Kite et al., 2010). Social norms that are generally followed in society are not adhered to as frequently in online exchanges. As in social learning, college students are adjusting their motor reproduction responses to elicit positive outcomes but are not usually successful on the first attempt. Unfortunately, college students are misunderstanding visual and social cues that are given online and are either participating or experiencing negative outcomes. The increased use of digital modes of communication among the Millennials is effectuating an influx of reported cases of victimization relating to bullying and stalking occurring nationwide.

The perceived victimization they are experiencing online may lead to feelings of depression; however, past literature has only focused on connecting the amount of internet usage to depression and not victimization as a reason. This study focused on the amount of usage in relation to prevalence of perceived victimization specifically relating to bullying, harassment, and stalking. An interesting finding appeared among the low usage group that indicated a higher amount of perceived victimization. This could suggest that the low users initially expected a positive response from internet usage and the direct cost, victimization, they encountered influenced their decision to minimize their time online. If this is true, it may also reduce the number of weak ties among the low usage group and minimize their bridging social capital. As previously stated, bridging social capital is imperative to connecting social networks. This may reduce their opportunity to participate in social grooming, which is necessary to maintain social

ties, and change their response consequences to minimize risk. Overall, the positive outcomes expected from internet usage are not always experienced as indicated by prevalence of perceived victimization.

Although the correlation between perceived victimization and amount of time online did not produce a significant relationship, it did provide information that can be utilized in future research. Social exchange theory postulates that in order to complete successful exchange participants must be able to adapt to new methods to increase the efficacy of the results. The increased levels of perceived victimization among the low usage groups could lead to social isolation and diminish self-efficacy. Diminished self-efficacy can promote self-doubt and lead to feelings of depression. The findings among the low usage groups adds new information to previous research related to depression and may eventually, given further research, assist in finding the link to depression.

Furthermore, college students are maintaining a continuous connection with their social groups that arouses "an activated state" which leads to a stronger interpersonal relationship between two individuals (Auter, 2007; Mishna et al., 2009, Rubin & Rubin, 2001, Walker et al, 2009). This continuous connection between intimate partners may incite bluffing, a socially accepted exchange, from one or both parties. However, bluffing implies a promise is given and will eventually be fulfilled. Social norms that generally regulate self-disclosure of personal information are not followed when participating in bluffing. Sexting is a form of bluffing that is initially used as a method to elicit positive outcomes and promote social cohesion between the intimate partners. Unfortunately, sexting as it has been experienced by many individuals, generates lasting negative outcomes.

Marcum et al., (2010) found that communication and disclosure of personal information increased the likelihood of being victimized. The risky sexual behavior that Millennials are actively participating in to appear socially attractive is dangerous and possibly illegal. The frequency of communication with social groups did not appear to have a relationship with the individual's participation in risky sexual behavior. Hence, it did not support the previous literature. However, supplementary findings deserve discussion to demonstrate a socially learned pattern.

The frequency of communication between intimate partners indicates an increased amount of communication will promote risky sexual behavior. This supports previous research that postulated a continuous connection promotes an "activated state" leading to a stronger interpersonal relationship. It could also indicate that intimate partners were receiving positive outcomes from the behavior and this created a learned response. The behaviors exhibited by intimate partners strengthen their social ties but can also emotional distress if social trust is broken and the photographs are circulated. There is a plethora of evidence in the current news indicating detrimental outcomes to patterns of risky sexual behavior.

Participants involved in risky sexual behavior are being exposed by their intimate partners and ridiculed by their social groups. The exposure has multiple implications for both parties involved. The individual exposed may experience depression, social isolation, and emotional distress which will diminish self-efficacy and bridging social capital. The individual who shared the photograph may possibly face legal action, depending on the state, repercussions from social groups for breaking social trust, and parental censure of digital modes of communication. The consequences of risky sexual behavior may outweigh the benefits for the Millennials and eventually a decline in risky sexual behavior will emerge.

Another interesting finding was the correlation between frequency of communication with mom and participation in risky sexual behavior. The less interaction with mom increased the likelihood of participation in risky sexual behavior. College students, as they develop in their younger years, model the behaviors exhibited by their parents. Their initial response patterns coincide with social norms and beliefs learned from their parents. However, this pattern suggests that the further removed they are from mom the more likely they are to model different behavior with reduced fear of parental censure. Furthermore, as they continue to receive positive outcomes from these risky social exchanges, they establish a pattern of behavior that provides social rewards. These additional findings enhance the expanding body of knowledge by showing how digital modes of communication are creating socially learned behaviors that potentially have negative lasting outcomes and offer direction for future research.

The Millennials choice to conduct risky social exchanges online, based on previous literature suggesting different usage patterns for males and females (Auter, 2007; Rubin & Rubin, 2001; Wilska, 2003), may be influenced by their sex. This study found that males were socially influenced by their moms when they had a strong social tie and females were socially influenced by their relationship with their intimate partner. Thus, the less connected males are with their mothers the more likely they are to participate in risky sexual behavior. In contrast, females who have more contact with their intimate partners the more likely they are to participate in risky sexual behavior. This supports the previous research (Auter, 2007; Flaherty et al., 1998; Rubin & Rubin, 2001) that indicated women were likely to use the internet for pleasure, affection, social construction of identity, and inclusion and men were likely to use the internet for control. It also suggests that socially learned behaviors are influenced by sex. The data indicates that males and females have different motivations for utilizing digital modes of

communication and was used to determine if there was a connection to perceived victimization based on sex and participation in risky sexual behavior.

This study did not find a relationship to suggest that female's participation in risky sexual behavior indicated an increased perception of victimization or inversely that male's participation in risky sexual behavior indicated an increased perception of victimization. However, once a complete breakdown of the dichotomous perceived victimization variable was examined a pattern emerged suggesting a relationship between an individual's sex and participation in risky sexual behavior and perception of bullying. This could indicate that males, who utilize the internet for control and mastery of their environment, are not participating as actively in risky sexual behavior. It could also indicate that males prefer to intimidate or bully individuals face to face and use their social presence as a deterrent. Reflexively, females use the internet for affection and pleasure and may suffer more negative outcomes as they disclose more personal details through digital modes of communication. Females may also feel more comfortable intimidating their peers through a more detached mode of communication to minimize the social censure, due to their stigmatized traditional role expectations, they would experience in face to face. Regardless of technological advancements, this study shows that traditional sex roles continue to persist within society and dictate socially acceptable behaviors.

6.2 Limitations of the Research

The sample population, collected from Auburn University, is the primary limitation of this research project. The sample was selected from students enrolled in classes offered by the College of Liberal Arts. The sample was skewed by sex and race. It is difficult to make conclusions about the Millennial Generation as a whole with such a small geographical sample.

There were a few notable problems with the survey instrument. The survey relied on self-report measures for risky sexual behavior and victimization. The participants could have forgotten an incidence or could have intentionally not reported the behavior. In regards to former intimate partners, there was no indication on the survey that the participant should use the most current former intimate partner instead of an older one. This information could be significant to the method of communication they utilize. The survey did not request the age of the intimate partner which could have been used to make conclusions on participation in risky sexual behavior. There was a time measurement limitation in regards to frequency of use. The survey asked participants how many minutes a month do you use, asked how many text messages you send a day and how many hours a day you spend online. The three variables could not be combined due to different measures of time. The final limitation to the survey instrument focused in the question regarding stalking. Participants that answered yes to being stalked had to select a response to indicate who stalked them. There were several surveys that came back with more than one response category selected. The coding system did not allow for multiple responses.

The participation gap (Hansford and Adlington, 2008; Wei & Zhang, 2008), as previously discussed, is another limitation of this study. The primary reason for a participation gap occurs is socioeconomic status. However, individuals who do have the financial means to obtain new technology may choose not to participate but should not be included in the participation gap. There is not a clear method to measure whom has experienced the gap.

6.3 Suggestions for Future Research

For future research, a larger and more diverse sample population should be employed to make conclusions about the Millennial Generation's relationships with friends, parents, and

intimate partners. The media has recently focused on adverse effects of cyber bullying and multiple campaigns have been launched to counteract these measures. A research study should be conducted to investigate the positive effects aimed at eliminating bullying, cyber stalking, and cyber abuse. Depression and amount of time online should also be considered when conducting further research related to perception of victimization and participation in risky sexual behavior. This information collectively could have future implications on how the Millennial Generation communicates with their social groups.

6.4 Future Implications

The research supplements the expanding field of research on digital modes of communication and the Millennial Generation. It supports the previous research already conducted that found face to face communication to be the primary preferred method. The results of this study showed a significant link between sex and the participation in risky sexual behavior and perceived victimization. Further investigation should be conducted to determine how this is affects the relationship dynamics; does it make the female more susceptible to violence within the relationship? How does gender correlate with risky sexual behavior and perceived victimization?

6.5 *Conclusion*

Communication has undergone diverse medium exchanges – face to face communication is the original and continues to be the most consistent for relationship satisfaction. Face to face permits the exchange of social cues and body language that is unparalleled in other modes of communication. However, digital modes of communication are the current medium exchange that has and continues to modify ideologies, norms, and values.

The socially learned behaviors of college students, relating to digital modes of communication, became evident as patterns emerged in the data. The motivations for males and females participation in digital modes of communication can be linked to what outcomes they are expecting in the social exchange. However, since the expectant outcomes are not always positive there is a possible link that suggests individuals are spending less time online to avoid victimization.

Students are utilizing digital modes to promote self-efficacy and acquire social capital that may lead to a higher status. A higher status within the group may change the socially learned behaviors due to the costs and benefits associated with the achieved hierarchal status. Individuals who are viewed in an achieved status positions are socially attractive. Individuals will attempt to model the behavior so they also can achieve a higher status. Thus, the interaction exchanged through digital modes of communication, continues to change the nature of relationships as new technology is released and functions are customized to construct the social self through use of a digital device.

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APPENDIX 1

TABLES

Table 1

Primary preferred method of communication with social groups - percentage breakdown

	Mom (*n* = 413)	Dad (*n* = 398)	Friends (*n* = 413)	Former Intimate Partner (*n* = 324)	Current Intimate Partner (*n* =336)
Face to Face	73.6	70.1	76.3	37.3	91.7
Phone Calls	21.8	22.1	3.6	9.6	2.7
Text Msgs.	3.6	5.0	20.1	29.0	5.7
Email	0.7	2.8	0.0	1.5	0.0
Social Networking Site	0.2	0.0	0.0	19.8	0.0
Other	0.0	0.0	0.0	2.1	0.0

Table 2

Descriptive categorization of age first received own personal cell phone

age first cell phone received	*n*	%
8	1	0.2
9	1	0.2
10	5	1.1
11	10	2.3
12	34	7.8
13	107	24.6
14	96	22.1
15	79	18.2
16	67	15.4
17	11	2.5
18	8	1.8
19	2	0.5
22	1	0.2
28	1	0.2
Total	423	99.5

Table 2a

Pearson correlations age first cell phone received and amount of communication among social groups

	1	2	3	4	5	6
1. Age	-					
2. Mom	0.025	-				
3. Dad	0.045	0.302**	-			
4. Friends	-0.009	0.021	-0.005	-		
5. Former Intimate Partner	0.079	-0.003	0.028	0.049	-	
6. Current Intimate Partner	0.081	-0.016	-0.016	-0.042	-0.019	-

**p <.01

Table 3

Percent comparisons of perceived victimization by hours/day online

	Total Sample	Low	Moderate	High
Stalked	32.2 (N = 398)	36.4 (N = 205)	27.8 (N = 163)	27.8 (N = 28)
Bullied	8.5 (N = 395)	9.1 (N =203)	8.0 (N = 162)	8.3 (N = 28)
Harassed	16.1 (N = 393)	17.3 (N = 201)	15.3 (N = 163)	11.1 (N = 27)

Table 4

Hours/day online and percentage of risky sexual behaviors

	Total Sample (*N* = 435)	Low (*N* = 220)	Moderate (*N* = 176)	High (*N* = 36)
Sexted	36.6	39.1	33.5	38.9
Participation in risky sexual behavior	20.2	20.5	18.8	27.8

Table 4a

Pearson correlation matrix of amount of communication with social groups, hours/day spent online, and risky sexual behavior

	1	2	3	4	5	6	7
1. Amt Comm Mom	-						
2. Amt Comm Dad	-0.302***	-					
3. Amt Comm Friends	-0.021	0.005	-				
4. Amt Comm Former Intimate Partner	0.003	-0.028	-0.049	-			
5. Amt Comm Current Intimate Partner	0.016	0.016	0.042	0.019	-		
6. Hrs/Day Online	0.023	-0.051	0.05	0.053	-0.098	-	
7. Risky Sexual Behavior	-0.11*	-0.062	0.005	0.037	0.138**	-0.024	-

Note. (N = 435)
*$p < .05$, **$p < .01$, ***$p < .001$

Table 4b

Regression of sex and amount of communication with mom and current intimate partner on risky sexual behavior

	Female (n = 271)		Male (n = 164)	
	Model 1 β	Model 2 β	Model 1 β	Model 2 β
Amount of Communication with mom	-.040	-.027	-1.86*	-1.94*
Amount of Communication with current intimate partner		.149*		.132
R^2	.002	.024	.035	.052
F	.325	2.48*	4.528*	3.43*

*$p < .05$

Table 5

Regression of sex, amount of time online, and participation in risky sexual behavior on perceived victimization

	M1 β	M2 β
Sex	.003	.008
Amount of time online	-.104*	-.108*
Participation in risky sexual behavior		.088
R^2	.011	.019
F ratio	2.118	2.417

Note. (N= 435)
*$p < .01$

Table 5a

Regression of sex, amount of time online, and participation in risky sexual behavior on perceived stalking, bullying, and harassment

	Stalking		Bullying		Harassment	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	β	β	β	β	β	β
Sex	-0.044	-0.038	0.156*	0.159*	0.09	0.098
Internet Usage	-0.066	-0.07	-0.008	-0.011	-0.035	-0.042
Risky Sexual Behavior		.098		.071		.140*
R^2	0.006	0.016	0.024	0.029	0.009	0.029
F ratio	1.224	2.079	4.832*	3.893*	1.833	3.837*

Note. (N = 435)
*$p < .01$

APPENDIX 2

INFORMATIONAL LETTER

My name is Kandace Henry and I am Graduate Student in the Sociology Department. I am currently researching Social Networking and the overall affects it has on relationships between college students and their parents, friends and current or former intimate partners. My research will encompass three main forms of social networking: email, cell phones, and internet through social networking sites. I have compiled my research and populated a survey of questions and would appreciate your assistance. I need approximately fifteen minutes of class time to complete the survey and require students to be at least 19 years of age. The results will remain anonymous and all surveys will be destroyed at the end of this research project. There may be a few questions that may make you uncomfortable; please feel free to skip any question on the survey. This research is important because social networking has shifted the dynamics across all cultures and has the power to restructure and shift social bonds. Please email me if you would be willing to allow your class to participate in the survey: kmh0026@auburn.edu.

APPENDIX 3

SURVEY

I would like for you to answer the following questions about yourself. In order to get a complete and accurate picture it is essential that you answer as honestly as possible. Your answers are **ANONYMOUS AND SUBJECT TO DATA PROTECTION** so no one will know how you respond.

Instructions: To answer the questions throughout the survey, please place the number that corresponds to your answer in the space provided to the left of each question, fill in the blank or circle the number. Thank you for your cooperation!

Section A. Demographics

_____1. **What is your age in years**? _____

_____ 2. **What is your sex?** (1) Male (2) Female

_____3. **What is your classification?** (1) Freshman (2) Sophomore (3) Junior (4) Senior (5) Graduate Student

_____4. What is your major?_____ undecided _____

_____5 . **What is your current GPA?**

(1) 0 – 1.0 (2) 1.01 – 1.50 (3) 1.51 – 2.00 (4) 2.01-2.5 (5) 2.51 – 3.0 (6)3.01 – 3.5 (7) 3.51 – 3.99 (8) 4.0

_____ 6. **What is your ethnic/racial background or heritage with which you most identify? (Please pick only one).**

(1) Caucasian (Non-Hispanic) (4) African American/Black
(2) Hispanic (5) Other (list below)
(3) Asian _____

_____7 . **What is the annual income of your parents/guardians? (if not sure estimate)**

(1) Less than $15,000 (2) $15,000 – 29,999 (3) $30,000 - $44,499
(4) $45,999 - $59,999 (5) $60,000 – 79,000 (6) 80,000 – 99,000
(7) 100,00 – 119,000 (8) 120,000 – 139,000 (9) 140,00 and above

_____ 8. **What is your biological/adoptive father's highest level of education? (Please skip if this does not apply)**

(1) Less than high school (4) Two-year college graduate (7) Graduate Degree
(2) High School Graduate (5) Four year college graduate (8) Does not apply
(3) Some College (6) Some graduate work

_____ 9. **What is your biological/adoptive mother's highest level of education?**

(1) Less than high school (4) Two-year college graduate (7) Graduate Degree
(2) High School Graduate (5) Four year college graduate (8) Does not apply
(3) Some College (6) Some graduate work

_____ 10. **What type of high school did you attend?**
(1)Private Religious (2) Private Non-Religious (3) Public

_____11. **Which of the following home situations did you spend the majority of your time prior to the age of 18?**

(1) Lived with biological/adoptive parents
(2) Lived with biological/adoptive mother only
(3) Lived with biological/adoptive father only
(4) Lived with biological mother and stepfather
(5) Lived with biological father and Stepmother
(6) Lived with biological mother and Boyfriend/partner
(7) Lived with biological father and Girlfriend/partner
(8) Other (please list) _____

Section B. Communication/Interaction

12. Place an X by your primary preferred method of communication (Choose one for family, one for friends, and one for intimate partners)

	(1)Face-to-Face	(2)Telephone Call	(3) Text Message	(4) Email	(5)Message on Social Networking Site	(6) Other (please write in)	N/a
Mother (a)	☐	☐	☐	☐	☐	☐	☐
Father (b)	☐	☐	☐	☐	☐	☐	☐
Friends (c)	☐	☐	☐	☐	☐	☐	☐
Former Intimate Partner(d)	☐	☐	☐	☐	☐	☐	☐
Current Intimate Partner (e)	☐	☐	☐	☐	☐	☐	☐

13. Place an X by group that reflects your communication with each category (select one for family, one for friends and one for intimate partners)

	(1)Daily	(2)Once a week	(3)Few times a week	(4)Once a month	(5)Few times a month	(6)Few times a year	(7) Once a year	(8) Not at all
Mother (a)								
Father (b)	☐	☐	☐	☐	☐	☐	☐	☐
Friends (c)	☐	☐	☐	☐	☐	☐	☐	☐
Former Intimate Partner (d)	☐	☐	☐	☐	☐	☐	☐	☐
Current Intimate Partner (e)	☐	☐	☐	☐	☐	☐	☐	☐

_____14. **Review the following list and place an X by all that you have participated in:**

_____ (1) Texted physical description of your appearance
_____(2) Texted photograph of self
_____(3)Texted naked photograph of self
_____ (4) Texted photograph of genital area
_____ (5) Uploaded physical description of your appearance on website
_____ (6) Uploaded photograph of self on website
_____ (7) Uploaded naked photograph of self on website
_____ (8) Uploaded photographs of genital area on website
_____ (9) Emailed physical description of your appearance
_____ (10) Emailed photograph of self
_____ (11) Emailed naked photograph of self
_____ (12) Emailed photograph of genital area

Section C. Cell Phone Usage

_____15. **Do you own a cell phone?**
(1) Yes (2) No

If you answered NO please proceed to Section D; if yes please answer the following questions.

_____16. How **old where you when you got your first cell phone?**
_____

_____17. **What type of cell phone do you have? Ex. (blackberry, iphone, droid, razor, etc**) _____

_____18. **Can you send and receive pictures on your cell phone?**
(1) Yes (2) No

_____19. **Who pays for your monthly cell phone plan?**
(1) Parents/Guardian (2) Yourself (3)Intimate Partner (4) Other _____

_____20. **Have you personalized your cell phone to reflect your personality? Please place an X by all that apply.**

Ringbacks (1)	☐
Ringtones (2)	☐
Skins (3)	☐
Charms (4)	☐
Screensavers (5)	☐

_____21. **How many minutes on average a month do you use?**
(1) 0 – 499 (2) 500 – 999 (3) 1000 – 1499
(4) 1500 – 1999 (5) 2000 – 3000 (6) 3000+

_____22. **How many text messages on average do you send a day?**
(1) 0 – 24/day (2) 25 – 49/day (3) 50 – 74/day
(4) 75 – 124/day (5) 125 – 149/day (6) 150 – 224/day
(7) 225 – 349/day (8) 350+/day

_____23. **Have you participated in "Sexting", defined by Google(2010) as the act of sending sexually explicit messages or photos electronically, primarily between cell phones?**
(1) Yes (2) No

If yes, what method did you use?
(1) Text Message (2) Email (3) Social Networking Site

_____24. **Do you use your cell phone during class time for the following activities**?

	Yes(1)	No(2)
Text (a)	☐	☐
Internet (b)	☐	☐
Phone Call (c)	☐	☐

_____25. Do you use your cell phone in the following locations? **Please check all boxes that apply**.

Driving (a)	☐
Movie Theater (b)	☐
Religious Services (c)	☐
On a Date(d)	☐
Bathroom (e)	☐

_____26. **How do you feel when you are not in possession of your cell phone?**

(1) Relaxed by not having to answer calls/respond to text messages
(2) Stressed about missing phone calls/text messages
(3) No affect either way

_____27. **Do you have your best friend's cell phone number memorized?**

(1) Yes (2) No

_____28. **When you are away from home or work, do you ever connect to the internet wirelessly using a Laptop or handheld device?**

(1) Yes (2) No

Section D. Online Usage/Social Networking Sites

_____29. **How many hours a day do you spend online?**

(1) 0 – 1 (2) 2- 3 (3) 3 – 4
(4) 5 – 6 (5) 5 – 6 (6) 6+

_____30. **Have you ever created your own profile on any social networking site such as MySpace, Facebook or LinkedIn?**

(1) Yes (2) No

_____31. How many social networking sites do you maintain a profile?

(1) One (2) Two (3) Three (4) Four (5)Five
(6) Six (7) Seven (8) Eight (9) 9 +

_____32. **How long have you had a profile on a social networking site?**

(1) Less than six months (2) One Year (3) Two Years (4) Three years
(5) Four – Six years (6) Six – Eight Years (7) Eight years plus

33. Place an X in all that are appropriate

How much time do you spend on the following social networking sites?

Amount of time (a)	(1)All Day	(2)Several times a day	(3)About Once a day	(4)Every few days	(5)Once a week	(6)Never
Facebook (b)	☐	☐	☐	☐	☐	☐
MySpace (c)	☐	☐	☐	☐	☐	☐
Twitter (d)	☐	☐	☐	☐	☐	☐
LinkedIn (e)	☐	☐	☐	☐	☐	☐

Section E. Email Accounts

_____34. **How often do you check your email account?**

(1) Once a Day (3) 4 – 6 times/day (5)Never

(2) Twice a Day (4)7+ times/day (6) I don't have email

_____35. **What is your primary use for email? Please pick ONLY one**.
(1)Work (2) School (3) Personal Use
(4) Contact information (ex. Sweepstakes, job applications, and rental applications)

_____36. **What device do you use primarily to check your email?**
(1) Computer (2) Handheld device not cell phone (3) cell phone

_____37. **Social Networking sites (SNS) are offering messaging systems that are similar to email and text messaging is immediate. Do you feel that email is almost unnecessary to send emails with the new methods of communication available via text messages, SNS sites, IM?**
(1) Yes (2) No

Section F. Relationships through Digital Media (11)

The following questions pertain to your former/current intimate relationships with intimate partners. This will be defined as an exclusive relationship that is more than a casual hook-up or a friend with benefits primarily lasting longer than four dates. Please skip this section if you have not had an intimate partner.

_____38. **Please identify which intimate partner you are referencing to answer the following questions.**
(1) Former (2) Current

_____39. **How did you meet your intimate partner?**
(1) School (2) Bar (3) Work (4)Mutual Friends
(5) Online (6) Church (7) Other

_____40. **How often did/do you converse on the telephone during the day?**
(1) 5+ (2) 3-4 (3)1-2 (4) 0

_____41. **How often did/do you meet in person?**
(1) 5+ (2) 3-4 (3) 1-2 (4) 0

42. Please place an X in the appropriate box that answers: How often did/do you?

HOW OFTEN DO YOU -----	(1)Often	(2)Occasionally	(3)Rarely	(4)Never
Converse on the telephone during the day? (a)	☐	☐	☐	☐
Meet in person? (b)	☐	☐	☐	☐
Text messages each other? (c)	☐	☐	☐	☐
Send Emails to each other? (d)	☐	☐	☐	☐
Instant Message each other? (e)	☐	☐	☐	☐
Photo Message each other? (f)	☐	☐	☐	☐

Sext each other? (g)	☐	☐	☐	☐

_____43. **Do you feel that participation in Sexting with your intimate partner accelerated the physical part of your relationship?**
(1) Yes (2) No (3) Did not sext

_____44. **Did you ever feel like you had talked such a big game over text messages that you had to be just as forward in person to meet your intimate partner's expectations, even if you normally would not have acted as forward?**
(1) Yes (2) No

If yes, please give brief description

_____

_____

_____

_____

_____

_____45. **Have you ever had a private message that you sent to your intimate partner forwarded to unintended viewers?**

(1) Yes (2) No

If yes, please give a brief description of the incident?

_____

_____

_____

_____

_____

_____46. **Do you fear negative consequences if you do not respond immediately to messages or answer telephone calls from your intimate partner?**
(1) Yes (2) No

_____47. **Have you ever had a fight utilizing only digital media to communicate?**
(1) Yes (2) No

_____48. **Have you ever broken up with someone or been broken up with through a text**

Message?
(1) Yes (2) No

_____49. **Have you ever snooped and checked your intimate partner's private accounts? Please check all that apply.**

Voicemail(a)	☐
Email account(b)	☐
Social Networking Site(c)	☐

_____50. **Has your intimate partner snooped and checked your cell phone messages, email accounts, and/or social networking accounts?**
(1) Yes (2) No

_____51. **Have you ever stalked someone through the use of Digital Media? (Stalking can be defined as a "pattern of repeated and unwanted attention, harassment, contact, or any other course of conduct directed at a specific person that would cause a reasonable person to feel fear[i])"**
(1) Yes (2) No

_____ 52. **If yes, whom?**
(1) Family member (2) Friend (3) Intimate Partner (4) Other _____

_____53. **Have you ever felt stalked by someone through the use of Digital Media?**
(1) Yes (2) No

_____54. **If yes, whom?**
(1) Family member (2) Friend (3) Intimate Partner (4) Other_____

_____55. **Have you ever felt bullied by someone through the use of Digital Media?**
(2) Yes (2) No

_____56. **If yes, whom?**
(2) Family member (2) Friend (3) Intimate Partner (4) Other_____

_____57. **Have you ever felt harassed by someone through the use of Digital Media?**
(3) Yes (2) No

_____58. **If yes, whom?**
(3) Family member (2) Friend (3) Intimate Partner (4) Other_____

_____59. **Technology has placed GPS trackers in mobile devices that allow friends and strangers to track the location of individuals. Do you feel this will increase the occurrences of stalking?**
(1) Yes (2) No

_____60. **Do you feel that those social networking sites, cell phones, email and the Internet have accelerates relationships between intimate partners?**
(1) Yes (2) No

_____61. **Do you feel disconnected from your social group if you are not online?**
(1) Yes (2) No

Section . Digital Media Communication Satisfaction

62. Please describe your feelings toward your relationship with your intimate interpersonal networks by placing an X the one that applies.

	Very Satisfied	Satisfied	Indifferent	Unsatisfied	Very Unsatisfied
Mother (a)	☐	☐	☐	☐	☐
Father (b)	☐	☐	☐	☐	☐
Friends (c)	☐	☐	☐	☐	☐
Former Intimate Partner (d)	☐	☐	☐	☐	☐
Current Intimate Partner (e)	☐	☐	☐	☐	☐

63. Please classify the level of closeness you feel with your intimate interpersonal networks listed below by placing an X in the one that applies.

	Very Close	Close	Loosely Connected	Distant	Very Distant
Mother (a)	☐	☐	☐	☐	☐
Father (b)	☐	☐	☐	☐	☐
Friends (c)	☐	☐	☐	☐	☐
Former Intimate Partner (d)	☐	☐	☐	☐	☐
Current Intimate Partner (e)	☐	☐	☐	☐	☐

64. Do you feel the using multiple sources of media to communicate strengthens/weakens or has not affect on your relationship?:

	Strengthens	Has no Affect	Weakens

Mother (a)	☐	☐	☐
Father (b)	☐	☐	☐
Friends (c)	☐	☐	☐
Former Intimate Partner (d)	☐	☐	☐
Current Intimate Partner (e)	☐	☐	☐