

2015

# The Association Between Online Risk Behaviors and Real Life Sexual Behaviors Among African American Female Adolescents

Nicole Rankine  
*Walden University*

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

 Part of the [Public Health Education and Promotion Commons](#)

---

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).

# Walden University

College of Health Sciences

This is to certify that the doctoral dissertation by

Nicole E. Rankine

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

## Review Committee

Dr. Jacqueline Fraser, Committee Chairperson, Public Health Faculty  
Dr. JaMuir Robinson, Committee Member, Public Health Faculty  
Dr. Rodney Bowden, University Reviewer, Public Health Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2015

Abstract

The Association Between Online Risk Behaviors and Real Life Sexual Behaviors Among  
African American Female Adolescents

by

Nicole E. Rankine

MPH, Walden University, 2010

MS, Georgia State University, 2004

BS, University of Georgia, 2000

Dissertation Submitted in Partial Fulfillment

Of the Requirement for the Degree of

Doctor of Philosophy

Public Health

Walden University

August 2015

## Abstract

An increased exposure to the sexual content of traditional mass media (i.e., television, magazines, movies, music) affects real life sexual behaviors among adolescents.

Engaging in online risk behaviors such as sharing/posting sexual content using social networking sites, cellphones, smartphones, iPads, or other new media devices has become common among adolescents. The purpose of this quantitative, correlation study, based upon the theory of reasoned action and three pre-existing national surveys, was to determine whether significant associations exist between attitudes, intentions, and behaviors related to online risk behaviors and real life sexual behaviors among African American female adolescents in Metro Atlanta. Data were collected from 111 African American female adolescents residing in the Metro Atlanta. Statistical analyses included the Pearson  $r$  correlation, phi coefficient correlation, and logistic regression tests.

According to study results, there were no significant relationships between attitudes and behaviors concerning online risk behaviors and real life sexual behaviors, age and attitudes of online risk behaviors, or relationship status and online risk behaviors.

However, a significant relationship was found between age and engaging in online risk behavior. The positive social change implications include further insight for those working in the area of adolescent sexual health prevention and promotion. The findings can be used to better understand the impact of online risk behaviors on adolescent sexual health and how new media platforms can be effectively used to tailor prevention programs and campaigns.

The Association Between Online Risk Behaviors and Real Life Sexual Behaviors

Among African American Female Adolescents

by

Nicole E. Rankine

MPH, Walden University, 2010

MS, Georgia State University, 2004

BS, University of Georgia, 2000

Dissertation Submitted in Partial Fulfillment

of the Requirement for the Degree of

Doctor of Philosophy

Public Health

Walden University

August 2015

## Dedication

I would like to dedicate the completion of my dissertation to all the young women in my family, the churches where I served in the past and present, those I mentor, those I serve through my volunteerism at various community organizations and those that I will have the opportunity to add value to in the future. This process has been a long and tough journey to get through but I would like to use this as an opportunity to show that through faith, perseverance through setbacks/failures, and hard work coupled with vision and motivation, they too can accomplish anything they set their minds too. A dream delayed does not mean a dream denied. It can and will happen.

## Acknowledgments

I would like to acknowledge everyone who has helped me get to this final destination. I would like to thank Dr. Jacquie Fraser, my chair; Dr. JaMuir Robinson, my methodologist; Dr. Rodney Bowden, the university research reviewer, Dr. Jody Early for her early guidance in finding a research topic and methodology choice; and Dr. Tom Granoff, the statistical expert for providing the help and guidance I needed to successfully develop a quality dissertation. I thank my family (my mother, Valerie Rankine; my father Walden Rankine; my sister, Noreen Burrowes; and my brother, Shawn Rankine) who supported and encouraged me along the way. They were there for will all the phone calls of encouragement and there when I needed to vent or think through this process. I thank all my closest friends and family who prayed me through and participated in my WOWs so I could complete this process with a balanced and sane state of mind. I thank everyone that prayed, sent encouraging words, texts, Facebook messages and supported me through the process. And most importantly, I thank God for giving me purpose, vision, strength, courage, and the favor to see it through to the end.

## Table of Contents

List of Tables .....	vi
List of Figures .....	viii
Chapter 1: Introduction to the Study.....	1
Introduction.....	1
Background .....	6
Problem Statement .....	10
Purpose of the Study .....	12
Research Questions and Hypotheses .....	14
Theoretical Framework.....	16
Nature of the Study .....	21
Operational Definitions.....	22
Assumptions, Delimitations, Scope, and Limitations .....	24
Assumptions.....	24
Delimitations.....	25
Scope	25
Limitations .....	25
Significance of Study .....	25
Summary .....	26
Chapter 2: Literature Review .....	28
Introduction.....	28
Literature Search Strategy.....	29



Literature Review Related to Key Variables and/or Concepts .....	30
Adolescent Sexual Behavior and Reproductive Health .....	30
Predictors of Adolescent Sexual Behavior .....	32
Constructs of Attitudes, Subjective Norm, Intention, and Behavior .....	37
Media and Adolescent Sexual Behavior .....	42
New Media and Adolescent Sexual Behavior .....	44
African Americans and New Media .....	50
Theoretical Framework .....	55
Applicability of TRA to Understand Adolescent Sexual Behavior .....	56
Applicability of TRA to Understand Media and Adolescent Sexual Behavior .....	59
Summary .....	62
Chapter 3: Research Method .....	64
Overview .....	64
Research Design and Rationale .....	67
Population and Sampling Procedures .....	70
Recruitment Strategy and Data Collection .....	72
Instrumentation and Operationalization of Constructs .....	74
Demographic Information .....	79
Online Attitudes, Behaviors, Subjective Norms, and Intentions .....	80
Sexual Behaviors .....	85
Data Analysis .....	87

Threats to Validity .....	90
Ethical Considerations .....	93
Summary .....	95
Chapter 4: Results .....	96
Overview .....	96
Data Collection .....	98
Descriptive Analysis .....	101
Demographics Analysis .....	101
New Media Frequency and Usage .....	102
Sexual Behavior .....	107
New Media and Attitudes .....	108
New Media and Intentions .....	109
New Media and Online Risk Behavior .....	110
Respondents' Summated Scores .....	111
New Media Attitudes .....	111
Real Life Sexual Behaviors .....	113
Online Risk Behaviors .....	113
Data Analysis by Research Question .....	115
Research Question 1 Analysis .....	115
Research Question 2 Analysis .....	116
Research Question 3 Analysis .....	118
Research Question 4 Analysis .....	118

Research Question 5 Analysis .....	120
Research Question 6 Analysis .....	121
Post Hoc Analysis .....	122
Summary .....	123
Chapter 5: Discussion, Conclusions, and Recommendations .....	126
Overview .....	126
Interpretations of Findings .....	128
Research Question 1 .....	129
Research Question 2 .....	130
Research Question 3 .....	132
Research Question 4 .....	133
Research Question 5 .....	134
Research Question 6 .....	136
Post Hoc Analysis .....	137
Overall Analysis.....	138
Limitations .....	139
Recommendations.....	140
Implications.....	144
Conclusions.....	146
References.....	148
Appendix A: Solicitation Letter.....	172
Appendix B: Letter of Cooperation .....	173

Appendix C: Parent Letter of Participation and Implied Consent .....174

Appendix D: Facebook E-Flyer .....176

Appendix E: Adolescent Assent Form.....177

Appendix F: Permission of Use .....180

Appendix G: New Media Attitudes & Behaviors and Sexual Behaviors Survey  
Questions.....184

## List of Tables

Table 1 .....	18
Table 2. ....	78
Table 3. ....	101
Table 4. ....	103
Table 5. ....	104
Table 6. ....	105
Table 7. ....	106
Table 8. ....	107
Table 9. ....	108
Table 10. ....	109
Table 11. ....	110
Table 12. ....	111
Table 13. ....	112
Table 14. ....	113
Table 15. ....	114
Table 16. ....	115
Table 17. ....	116
Table 18. ....	117
Table 19. ....	119
Table 20. ....	121
Table 21. ....	122

Table 22. .... 123

List of Figures

*Figure 1.* Theory of reasoned action..... 17

*Figure 2.* Theory of reasoned action..... 56

## Chapter 1: Introduction to the Study

### **Introduction**

Previous researchers have demonstrated the effects of media exposure on adolescent sexual risk behaviors including multiple partners, unprotected sexual intercourse, inconsistent use of birth control methods, and increased frequency of sexual partners (Center for Disease Control and Prevention [CDC], 2013; Kunkel, Eyal, Finnerty, Biely, & Donnerstein, 2005). With an increase of adolescent risky sexual behaviors, the rates of sexually transmitted diseases (STD) and teen pregnancy continue to rise. The CDC (2013) reported that 19 million new STD infections are acquired annually with half of them among adolescents aged 15 to 24; African American adolescent females are disproportionately affected by STDs. Furthermore, the National Campaign to Prevent Teen and Unplanned Pregnancy (2013) reported that nearly 48% of African American girls in the United States become pregnancy at least once before the age of 20. Because risk behaviors impact the overall well-being of adolescents, evaluation of factors that lead to these risk behaviors is important (Eaton et al., 2012).

In examining the way in which media plays a role in the lives of adolescents, researchers have demonstrated that an increase in exposure to the portrayals of sexuality in traditional mass media (television, magazines, movies, and music) affects adolescent sexual health by leading to engagement in sexual risk behaviors (Escobar-Chaves et al., 2005). Television is the primary form of media that impacts sexual initiation as well as risky sexual behavior among adolescents, followed by exposure to music with sexual content (American Academy of Pediatrics [APP], 2001; Brown et al., 2006; Brown,



2002; Collins, Martino, Elliott, & Miu, 2011b; Gruber & Gruber, 2000; Pardun, L'Engle, & Brown, 2005; Ward & Friedman, 2006). As technology evolves, new media platforms have become a part of adolescents' lives. Adolescents spend much of their time on web sites that allow social interaction (AAP, 2011). According to the American Academy of Pediatrics (2011), new media platforms or devices allow interaction with a social network, including such platforms where a person can access social networking sites (Facebook, MySpace, Twitter), blogs, interactive games, and video sites such as YouTube. Ninety four percent of teens use the Internet, and 64% of teens use new media platforms to participate in some form of daily social activity (Lenhart, Madden, Macgill, & Smith, 2007). With the increased access and use of new media platforms among adolescents, research to assess its impact on adolescent sexual behaviors is imperative.

Assessing emerging factors, such as new media usage, which may impact adolescent sexual behaviors is imperative because, despite public health initiatives to increase prevention measures, reduce STD transmission, and decrease teen pregnancy, there is a continual increase in both STD and pregnancy rates among adolescents (CDC, 2014; National Campaign to Prevent Teen & Unplanned Pregnancy, 2013). Moreover, research has shown certain populations are more likely to contract STDs or become pregnant than others (CDC, 2012). For example, African American female adolescents are disproportionately affected by bacterial STDs including chlamydia, gonorrhea, syphilis, and viral STDs including HIV (CDC, 2012, 2014). The rates of gonorrhea infections for African American adolescents are 18 times the rates of European American adolescents (CDC, 2012). Similarly, chlamydia rates for African American females and

males aged 15-19 years were 6 and 13 times the rates of European American females and males in the same age group (CDC, 2012). African American adolescents also account for 65% of HIV cases reported for young people aged 13 to 24 years in the United States (CDC, 2013b). Additionally, the pregnancy rates among African American teens are slightly higher than Hispanic American teens and three times higher than the rates for European American teens (National Campaign to Prevent Teen & Unplanned Pregnancy, 2013). Understanding the determinants of racial disparities in adolescent sexual behavior is necessary given its link to STDs and teen pregnancy (Liu et al., 2015; Brahmbhatt et al., 2014)

With an increase in concern for adolescent sexual health, researchers have begun to examine the effect of new media and sexual behaviors. Whiteley et al. (2011) found that a greater frequency of new media use was associated with a history of oral, vaginal, and anal sex as well as sexual sensation seeking behaviors including the excitement of having sex with a new partner or the enjoyment of spontaneously having sexual intercourse. New media usage affects adolescent sexual health, but studies about these topics have limitations including the self-reported data, selection bias, a lack of proper theoretical foundation, or inadequate measuring tools (Baumgartner, Valkenburg, & Peter, 2010a; Dake, Price, Maziarz, & Ward, 2012; Landry, Gonzales, Wood, & Vyas, 2013). With the increased access and availability to new media among adolescents and the increased rates of STDs and pregnancy among this population, researchers must explore the impact of new media on adolescent sexual health.

Previous research has assessed the online risk behaviors of adolescents and young adults. Moreno, Parks, and Richardson (2007) examined the MySpace profiles of adolescents ages 16-17 years to explore what type of risk behaviors were displayed. Moreno et al. found that, of the profiles analyzed, 47% displayed risky behavior information including sexual activity, alcohol use, tobacco use, and drug use. Similarly, in a randomized control pilot intervention study, the MySpace profiles of 190 young adults aged 18-20 years were examined, and 54.2% of the profiles examined revealed references to sex and substance use (Moreno, Parks, Zimmerman, Brito, & Christakis, 2009). Understanding how adolescents are using new media platforms is important not only to assess the risk behaviors displayed, but also, to gain a better understanding of how this may impact their health and well-being.

Recently, researchers have begun to take a closer look at the impact of new media platforms on adolescents. Young and Rice (2011) revealed that, out of a population of homeless adolescents and young adults ages 13 to 24 years, social media usage was associated with increased sexual risk behaviors including seeking sex partners online. Researchers have examined the type of content created and shared online among teens and found that, out of a sample of 653 teenagers aged 13-19, 20% had electronically sent or posted nude or seminude photos or videos of themselves, and 39% had shared sexually suggestive images via text, e-mail, or instant message (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008). Exposure to sexual content on television or in music can impact sexual attitudes and behaviors (Bleakley, Hennessy, Fishbein, & Jordan, 2008; Brown et al., 2006; Wingood et al., 2003); however, with new

media platforms, the interactive capacity in which content is created and shared may impact sexual behaviors as well. A more detailed discussion of the literature will take place in Chapter 2.

The capacity to interact with others using new media platforms where the user can share, create, discuss, or modify content is one of the most interesting aspects of new media and an important distinction from traditional media (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Such platforms include social networking sites, e-mails, chat rooms, blogs, instant messaging, online games, and video websites that can be accessed via computers, lap tops, cell phones, or tablets. This interactive aspect of new media provides the opportunity for adolescents to post information in both narrative and picture form that can display personal risk behaviors, such as sexual activity, and drug or alcohol use (Moreno & Kolb, 2012). Moreno (2010) contended that displays of risk behaviors on new media can potentially act as a “media super-peer” (p. 556). Previously described by Strasburger (2004), mass media was said to have the ability to influence and change the behaviors of children and adolescent viewers, thus acting as a type of super peer that could impact the course of childhood and adolescent development. Supported by Strasburger, Moreno argued that displays of risky behaviors on new media platforms may have the ability to influence and change behaviors of not only the creator of the content, but also those that view the content. However, empirical studies of this impact of new media interaction on adolescent sexual behavior are scarce. Additional studies in this area would allow for further understanding of how online risk behaviors impacts

adolescent sexual behaviors and how it may be used in STD and teen pregnancy prevention and intervention strategies.

### **Background**

Adolescent sexual behavior is well researched. According to the 2013 STD Surveillance Report, adolescents aged 15 to 24 accounted for almost 50% of new STDs in the United States (CDC, 2014). The 2013 Youth Risk Behavior Surveillance Report of the United States showed that about 47% of ninth through 12th graders have had sexual intercourse, with about 34% being sexual active at the time of the survey, and 15% having had sexual intercourse with four or more persons (Kann et al., 2014). The CDC (2014) reported that adolescents aged 15 to 19 years have increasingly high incidence rates of both bacterial and viral STDs; in the United States, 3,378.2 and 730.5 cases per 100,000 of adolescent females and males respectively, reported chlamydia infections. Additionally, the rates for gonorrhea infections showed similar trends with 570.9 and 253.4 cases per 100,000 females and males, respectively (CDC, 2011). Reports of primary and secondary syphilis infections followed similar trends as well (CDC, 2011). Although adolescents and young adults made up only 21% of the U.S. population, they made up 39% of the new HIV infections reported in 2010 (CDC, 2013b). Similarly, adolescents have been reported to account for the 329,797 babies were born to women aged 15–19 years in 2011 for a live birth rate of 31.3 per 1,000 women in this age group (CDC, 2012b). The negative outcomes of adolescent sexual risk behaviors have been well researched and despite current knowledge, the incident rates of STDs continue to rise among the adolescent population.

To reduce the causes of morbidity and mortality among adolescents in the United States related to risk behaviors such as sexual activity, understanding the emerging factors that impact adolescent sexual behavior is imperative. Engagement in sexual risk behaviors can place adolescents at risk for unintended outcomes such as STD infections and unplanned pregnancies. Many of the factors that place adolescents at increased risk for negative sexual health outcomes have been identified including undeveloped body systems, early sexual encounters, social and cultural factors, and barriers to health care services (Sales & DiClemente, 2010). Individual behavioral factors such as the frequency of sexual intercourse, the use of condoms at each sexual occurrence, attitudes of condom use, and the number of sexual partners have also been demonstrated to affect the risk of adolescents contracting STDs and becoming pregnant (CDC, 2012b; Kirby & Lepore, 2007). Other behavioral factors including alcohol and drug use among adolescents have been shown to decrease inhibitions which can affect good decision making like condom usage (CDC, 2008; World Health Organization [WHO], 2005). Family structure (Sturgeon, 2008) and youth culture (Harding, 2007) have been shown to influence adolescent sexual risk behaviors as well. Researchers have investigated individual psychosocial factors and their impact on adolescent sexual risk behaviors. Santelli et al. (2004), for example, demonstrated that adolescents' sexual behaviors are influenced by the way they feel about themselves, their peers and family norms, and their beliefs about condoms and condom usage. Those working in STD and teen pregnancy prevention have developed evidence-based programs and interventions in order to decrease the STD prevalence and reduce teen pregnancy among this population. However, with the

emergence of new factors, such as the new media platforms that can impact adolescent sexual behavior, more research is needed.

When looking at subpopulations of adolescents, African American youth are disproportionately affected by the negative outcomes of sexual risk behaviors. The Youth Risk Behavior Surveillance Report (Kann et al., 2014) showed that African American adolescents are more likely to engage in sexual intercourse, have sexual intercourse at an earlier age, and have multiple sexual partners in comparison to their racial counterparts. However, African American youth have been shown to be more likely than their peers of other racial backgrounds to use condoms during sexual encounters (CDC, 2010). With consistent and correct use of condoms, the risk of STD transmission should be reduced; however, rates for both STD infections and pregnancy among African American adolescents continue to increase with African American females bearing the heaviest burden of infection rates (CDC, 2014). Additionally, The National Campaign to Prevent Teen and Unplanned Pregnancy (2013) showed that African American adolescent females aged 18-19 accounted for at least 69% of all births in that age group from 1991-2010 in the United States. The increased rates of STDs and teen pregnancy among African American youth is one of concern and further research is needed to understand the causes of such disproportion.

When looking at factors that impact African American adolescents and sexual risk attitudes and behaviors, media exposure has been found to be a contributing factor. Brown and L'Engle (2009) demonstrated from a longitudinal study of 967 middle school students, divided evenly by gender ( $n = 483$  males, 484 females) and race (478 European

Americans, 489 African Americans), that being African American, being exposed to sexually explicit media at an early age, being older, having less educated parents, a lower socioeconomic status, and a high need for sensation predicted more permissive sexual norms and increased the frequency of oral sex and sexual intercourse for both males and females. Furthermore, Gordon (2008) showed when assessing African American adolescent girls to understand the impact of media on self-perception and appearance, that exposure to sexual portrayals of African American women in the media impacts the self-perceptions of African American adolescent females. The exposure of African American youth to sexual content in media is necessary to study in order gain an understanding of its impact on real life behaviors and to help the initiatives of public health providers to reduce the negative outcomes of adolescent sexual risk behaviors.

Traditional media can influence sexual attitudes and behaviors in the lives of African American adolescents (Brown & L'Engle, 2009); however, with the emergence of various media platforms, researchers have begun to examine the effects of new media (Martino, Collins, & Shaw, 2012). Researchers conducting studies on the influence of new media on adolescent sexual behaviors have been limited in their ability to sufficiently capture the effects of creating and sharing sexual content and also have focused mostly on adult men who have sex with men (Martino et al., 2012; Whiteley et al., 2012). Because African American female adolescents bear the greatest burden of STDs and teen pregnancies among adolescents and previous studies have been conducted on the effects of traditional media on adolescent sexual behaviors among this population,



the focus of this study was on the influence of online risk behaviors on the sexual behaviors among African American female adolescents within Metro Atlanta, Georgia.

### **Problem Statement**

New media provides a platform for teens to socialize, share thoughts, and have open communication with each other through individual profiles, private or instant messaging, blogging, or group messages (Lenhart, Purcell, & Smith, 2011). The use of the Internet among adolescent for interaction with others has increased over the years. Studies have shown that 95% of U.S. adolescents between the ages of 12 and 17 regularly go online, and 80% access some type of social media website (Cookingham & Ryan, 2015). According to Lenhart et al. (2011), 55% of teens aged 12-17 who access the Internet create profiles on social network sites including Facebook and MySpace, and 55% of the creators are females. Previously, African Americans were less likely than their racial counterparts to access the Internet; however, Whiteley et al. (2011) found that, with the growing accessibility to technology, 72% of African American youth reported having access to the Internet in their homes, and at least 72% went online once or twice a week to access information. African American adolescents are now meeting sexual partners online and in chat rooms, which is associated with various sexual risky behaviors (Whiteley et al., 2012).

STD infection rates and teen pregnancy among African American adolescents continue to increase with African American females bearing the heaviest burden of rates (CDC, 2011). In Georgia specifically, adolescents accounted for almost 22,000 of the approximately 59,000 reported incidences of STDs and nearly 13,000 births (Georgia

Campaign for Adolescent Pregnancy Prevention, 2013). Georgia is ranked sixth, seventh, and eighth among the states for having the highest rates of chlamydia, gonorrhea, and syphilis, and although these health issues are seen throughout Georgia, the majority of these cases reported were from the Metropolitan area of Atlanta (Georgia Department of Public Health, 2014). To gain a better understanding of the impact of sexual risk behaviors among adolescents in Georgia, further studies are needed on the local level.

The increased rate of STDs and pregnancy rates among African American adolescents due to risky sexual behavior is a problem. According to Bridges (2008), African American youth in Georgia are at greater risk for negative health outcomes due to risky sexual behaviors when compared to their racial counterparts. Furthermore, African American women in Georgia bear the greatest burden of not only STDs, where they are disproportionately affected by both bacterial and viral STDs, but also teen pregnancy (Bridges, 2008; National Campaign to Prevent Teen and Unplanned Pregnancy, 2013). Despite the numerous interventions based on known factors that impact adolescent sexual behaviors, results are not sustainable over time (DiClemente, Salazar, & Crosby, 2007). Because Georgia is one of five states that omits sexual behavior questions from the national Youth Risk Behavior Survey (YRBS), local data on sexual behaviors of youth in Georgia are limited (Miller, 2012). For that reason, more research is imperative to understand what factors influence such behaviors among this population. Moreover, with the increased usage of new media to interact with the social world, research on the ways in which new media may influence adolescents' sexual health is needed (Martino et al., 2012).

### **Purpose of the Study**

The purpose of this quantitative, correlational research study was not only to explore African American female adolescents' attitudes, intentions, and beliefs about online risk behaviors, but also to determine whether there is a significant association between online risk behaviors and real life sexual behaviors. In this study, the focus was on African American female adolescents who use and have access to interactive media platforms where they can have open communication with a network of friends to socialize, share thoughts, create profiles, send or receive private or instant messages, blog on topics, or send or receive group messages. Results from this study are of importance because researchers have shown that adolescents frequently create and share sexual content on new media platforms; however, current tools used to measure the effects of new media are insufficient because they do not account for the interactive aspects of new media (Martino et al., 2012). This study's results contribute to the existing literature to help to understand how online risk behaviors influence real life sexual behaviors of African American adolescent females in Metro Atlanta, Georgia.

Recent studies have illustrated the negative impacts of new media usage on the sexual health and wellness of adolescents (Cookingham & Ryan, 2015). Martino et al. (2012) hypothesized that teens' sexual persona can be reinforced if teens who post sexual content on social media profiles receive positive reactions from their social network. According to Martino et al., teens who post and send sexual content using new media may process the positive reinforcement to see themselves more in a sexual manner, which could promote risky sexual behaviors in real life; however, studies to test this hypothesis

are rare. The National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com (2008) conducted a national survey to understand how teens and young adults feel about posting and sending sexual content on new media. The National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com found that 22% of teens and 28% of young adults reported that they are more sexually aggressive using new media, and 38% of teens and 40% of young adults reported that sending sexual content makes dating easier. However, results from this study came from a sample of about 1300 adolescents who were 72% European American, 13% Asian American, 11% Hispanic American, and only 7% African American (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008). Based on current research, evidence demonstrates access and usage of new media platforms among adolescents can have a negative impact of their lives. However, more empirical studies are necessary to determine specific correlations among various adolescent subpopulations.

With limited data on the impact of new media among African American adolescents, this study can be useful to designers of STD and teen pregnancy public health initiatives to create culturally competent prevention programs that incorporate new media. While I only focused on African American females, the results can be used to get a better understanding of how teens at higher risk for negative sexual health outcomes use new media. Furthermore, knowing whether or not attitudes impact intention in this area and within this population can help prevention and intervention program developers organize effective strategies to influence attitudes toward sending and posting sexual content.

## Research Questions and Hypotheses

Sexual attitudes and behaviors are often influenced by peers (Jaccard, Blanton, & Dodge, 2005; Santelli et al., 2004). With an increased access to and use of new media where adolescents can post content and interact with their social network, it is important to determine the relationship between online risk behaviors and adolescent sexual behaviors in real life. This study was guided by the following research questions:

1. Is there an association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area?

$H_01$ : There is no significant association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

$H_a1$ : There is a significant association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

2. Is there an association between engaging in online risk behaviors and real life sexual behavior among African American females living in the Metro Atlanta area?

$H_02$ : There is no significant association between online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area

*H<sub>a2</sub>*: There is a significant association between online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

3. Are African American female adolescents who engage in online risk behaviors more likely to engage in riskier sexual behavior than those who do not post sexual content using new media?

*H<sub>03</sub>*: Engaging in online risk behavior is not predictive of riskier sexual behavior among African American female adolescents in Metro Atlanta.

*H<sub>a3</sub>*: Engaging in online risk behavior is predictive of riskier sexual behavior among African American female adolescents in Metro Atlanta

4. Is age associated with attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta?

*H<sub>04</sub>*: There is no significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>a4</sub>*: There is a significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta.

5. Is age associated with engaging in online risk behaviors among African American female adolescents in Metro Atlanta?

*H<sub>05</sub>*. There is no significant association between age and online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>a5</sub>*: There is a significant association between age and online risk behaviors among African American adolescent females in Metro Atlanta.

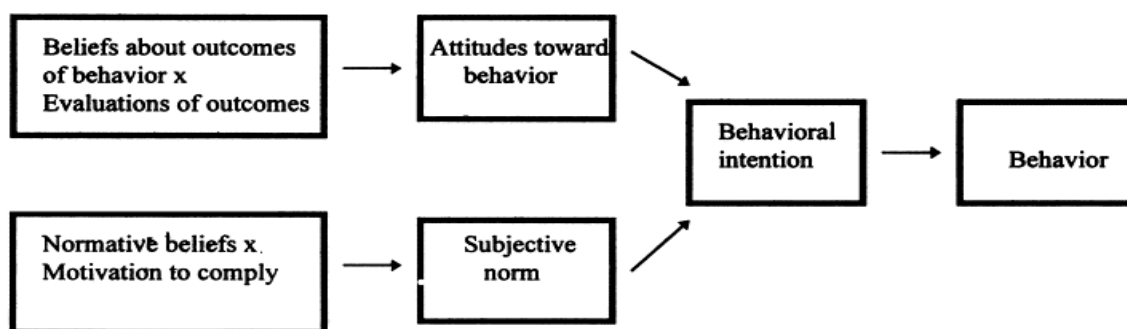
6. Is there an association between relationship status and engaging in online risk behaviors among African American female adolescents in the Metro Atlanta area?

*H<sub>06</sub>*. There is no significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta.

*H<sub>a6</sub>*: There is a significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta.

### **Theoretical Framework**

Researchers have applied several behavioral theories to understand why adolescents engage in sexual risky behaviors (Buhi & Goodson, 2007). According to Gillmore et al. (2002), one common theory applied to adolescent sexual behavior is the theory of reasoned action (TRA). The constructs associated with the TRA as described by Fishbein and Ajzen (1975) are as follows: attitude toward a behavior, subjective norms, behavioral intention, and behavior (Figure 1).



*Figure 1.* Theory of reasoned action. Reprinted from “The prediction of behavioral intentions in a choice situation”, by I. Ajzen and M. Fishbein, 1969, *Journal of Experimental Social Psychology*, 5, 400-416. Copyright 1969 Published by Elsevier Inc. Reprinted with permission.

When desiring to understand how knowledge, attitudes, and intentions interact to determine a person’s behavior, the TRA is found to be most appropriate to apply.

According to McKenzie, Neiger, and Thackeray (2009), the TRA draws a relationship between a person’s intention to perform certain behaviors with the person’s own attitudes as well as the influence of others. The TRA posits that a person’s attitude and perception of the social pressure to perform a certain behavior (subjective norm) are the predictors of behavioral intention and ultimately predictors of performing the behavior (Fishbein & Ajzen, 1975).

In regard to new media and adolescent sexual behaviors, if an adolescent female has a positive attitude toward online risk behaviors as well as a positive perception of what others think about online risk behaviors, then this may impact her intention to engage in real life sexual behavior, which could lead to her actually engaging in sexual behaviors in real life. Conversely, if an adolescent female has a negative attitude toward online risk behaviors, she may be less likely to engage in risky sexual behaviors. A more detailed explanation of the TRA is given in Chapter 2. Given a set of characteristics,



examples of questions that were asked to assess (a) the attitudes toward online risk behaviors, (b) actual online risk behaviors taken, and (c) the sexual behaviors of the participants are listed below in Table 1.

Table 1

*Sample of Survey Questions Pertaining to Specific Constructs of the TRA.*

<b>Construct</b>	<b>Question(s) from Sex Tech Survey</b>	<b>Directions</b>
<i>Attitude</i>	How much do you agree or disagree that each of the following described the activity of sending suggestive messages or nude and seminude pictures/video of oneself? <i>Flirty, Gross, Hot, Lamé, Stupid, Dangerous, Exciting, Fun, Harmless, Immoral, I choose not to answer.</i>	Strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, strongly agree, I don't know.
	Thinking about suggestive messages or nude/seminude pictures/videos that you ever received, how did getting them make you feel? <i>Amused, Angry, Creeped out, Disappointed, Embarrassed, Excited, Grossed out, Happy, Included, Sacred, Surprised, Turned on, Turned off, More interested in dating sender, More interested in hooking up with sender, Less interested in dating sender, Less interested in hooking up with sender, Other, I choose not to answer.</i>	Mark all that apply
<i>Subjective norms</i>	What are the reasons you would be concerned about sending or posting sexy messages or pictures/video of yourself? <i>Already had a bad experience, Could disappoint friends, Could disappoint teacher/coach, Could hurt my relationship or changes with someone I like, Could hurt my reputation, Could hurt my family's reputation, Could get in trouble with the law, Could get in trouble at the school, College recruiter might see, Potential (or current) employers might see, potential embarrassment, Might regret it later, Might make people think I'm slutty in real life, Other, Don't know, I choose not to answer.</i>	Mark all that apply
	How common would you say each of the following is among people your age? <i>Sending sexy messages to someone else, Sharing sexy messages with people other than the one(s) they were meant for, Sending sexy pictures/video of oneself to someone else, Posting sexy picture/video of oneself online, Sharing sexy picture/video with people other than the one(s) they were meant for, I choose not to answer.</i>	Not common at all, not very common, fairly common, very common
	What do you think are the reasons that girls send/post sexy messages or pictures/video of themselves? <i>Get or keep a guy's attention, Guy pressured them to send it, As a "sexy" present for a boyfriend, To feel sexy, Get a guy to like them, Pressure from friends, To get positive feedback, To be fun/flirtatious, To get noticed, In response to one she received, Other, None of these/don't know. I choose not to answer.</i>	Mark all that apply

<i>Behavioral Intention</i>	Which of the following, if any, have you personally ever done? <i>Sent a sexually suggestive message to someone (e-mail, IM, text, etc.), Posted a sexually suggestive message to someone's online profile (like MySpace, Facebook, etc.), NET sent/posted sexually suggestive messages, Received a sexually suggestive message from someone (e-mail, IM, text, etc.), Shared a sexually suggestive message with someone other than the one(s) it was originally meant for, Had a sexually message (originally meant to be private) shared with me, None of these, I choose not to answer.</i>	Mark all that apply
-----------------------------	--	---------------------

	Which of the following, if any, have you personally ever done? <i>Sent a nude or seminude picture/video (of yourself) to someone (via e-mail, cellphone, etc.), Posted a nude or seminude picture/video (of yourself) online (like MySpace, Facebook, in a blog, etc.), NET sent/posted a nude or seminude picture/video of yourself, Received a nude or seminude picture/video from someone (of himself/herself), Shared a nude or seminude picture/video (originally meant to be private) shared with me, None of these, I choose not to answer.</i>	Mark all that apply
--	--	---------------------

### Questions(s) from Teens, Social Media and Privacy

### Directions

Thinking about all the different ways you socialize or communicate with friends...About how often you do the following with each other: use the Internet, send text messages, exchange e-mail, exchange instant messages, and exchange messages through social networking sites like MySpace or Facebook. <i>several times a day, about once a day, 3-5 days a week, 1-2 days a week, every few weeks, once a month, a few times a year</i>	Select one for each behavior
---	------------------------------

<b>Construct</b>	<b>Question(s) from Youth Risk Behavior Survey</b>	<b>Directions</b>
------------------	--	-------------------

<i>Behavior</i>	Have you ever had sexual intercourse? <i>Yes, No, I choose not to answer</i>	Select one
-----------------	--	------------

	During your life, with how many people have you had sexual intercourse? <i>I have never had sexual intercourse, 1 person, 2 people, 3 people, 4 people or more people, I choose not to answer</i>	Select one
--	---	------------

	During the past 3 months, with how many people did you have Sexual intercourse? <i>I have never had sexual intercourse, I have had sexual intercourse, but not during the past 3 months, 1 person, 2 people, 3people, 4 or more people, I choose not to answer</i>	Select one
--	--	------------

	The last time you had sexual intercourse, did you or your partner use a condom? <i>I have never had sexual intercourse, Yes, No, I choose not to answer</i>	Select one
--	---	------------

The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? *I have never had sexual intercourse, No method was used to prevent pregnancy, Birth control pills, Condoms, An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon), A shot (such as Depo Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing), Withdrawal or some other method, Not sure, I choose not to answer*

Select one

---

Peslak, Ceccucci, and Sendall (2012) used the TRA to explore new media usage among college students. New media usage was significantly associated with how the participants felt about using new media as well as how using new media was viewed by others in their social network (Peslak et al., 2012). Other researchers have applied the TRA to study various aspects of media exposure and its effect on adolescent sexual behavior. Bleakley, Hennessy, Fishbein, and Jordan (2011) used the TRA to understand how exposure to sexual portrayals in media influenced adolescents' sexual behavior and Bleakley, Hennessy, and Fishbein (2011) applied the TRA to examine the intentions of adolescents seeking sexual content in media. Similarly, Bull, Pratte, Whitesell, Rietmeijer, and McFarlane (2009) and Roberto, Zimmerman, Carlye, and Abner (2007) applied the TRA to examine the ability of using digital media interventions to improve adolescent sexual health. The TRA may be sufficient to provide an understanding of the impacts of new media usage and adolescent sexual attitudes and behaviors.

In this study, the attitudes and subjective norms concerning posting sexual content via new media were explored to understand if attitudes and subjective norms of online sexual risk behaviors can influence the intention to engage in sexual behaviors, leading to the actual engagement in sexual behaviors in real life. Results of this study can provide a

greater understanding of how online risky behaviors on new media can impact sexual behaviors in real life. The TRA was an appropriate theoretical framework to use for this research study because sending and posting sexual content via new media use is a personal decision based on attitudes and subjective norms of the adolescent females. Therefore, I examined whether personal beliefs and attitudes toward online risk behaviors impact the sexual behaviors of African American female adolescents by influencing the intentions to engaging in sexual behaviors in real life.

### **Nature of the Study**

This quantitative, correlational design was used to determine associations between attitudes toward and use of new media to post sexual content and their real life sexual behaviors among African American female adolescents (ages 13-17) living in the Metro Atlanta area. The survey used was based on pre-existing survey questions from the Sex and Tech survey, a national survey administered by The National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008). The second part of the survey was comprised of questions used on the Pew Research Center Survey, "Teens, Social Media and Privacy," that was conducted in 2012 to determine the general use of new media among teens (Madden et al., 2013). The final part was comprised of questions from the sexual risk behavior subscale of the YRBS administered nationally by the CDC (2013c) as well as locally by state officials. A total of 172 survey participants were recruited from community base organizations (CBOs) and through the social media network, Facebook. The inclusion criteria included African American female adolescents aged 13-17 who were able to read, speak, and understand English. A sample size of a

minimum of 150 participants was selected to give a  $\pm 4\%$  margin of error with a confidence level of 95% for each question (CDC, 2013c; Creative Research System, 2012).

### **Operational Definitions**

The operational definitions of terms, jargons, or special words used in the study are as follows:

*Adolescent:* A period characterized by three distant stages of life: early (persons approximately 11-14 years of age), late (persons approximately 15-17 years of age), and young adults (persons approximately 18-24 years of age) which is categorized by the completion of puberty with a mental focus on self-involvement, self-image and the development of self-concept (Department of Health and Human Services, 2011). In this study, I focused on participants in their early and later adolescent stages.

*African American:* A person having origins in any of the Black racial groups of Africa (U.S. Bureau of the Census, 2010).

*HIV:* It is the virus that can lead to AIDS (CDC, 2011).

*Messages:* Content written electronically in e-mails, text, IM, on new media, and so on (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008, p. 5).

*New media:* Media that is social, interactive, malleable, and portable including any media that allows online activities where users can create and exchange content using platforms such as social networking sites, e-mails, chat rooms, blogs, instant messaging, online games, and video websites (Martino et al., 2012, p. 3).

*Online risk behaviors:* Posting or sharing of messages, videos, or pictures of sexual content publically (Baumgartner, Valkenburg, & Peter, 2010b).

*Pictures/videos:* Content captured electronically on a cell phone or digital camera (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008, p. 5).

*Sexual content:* Sexually suggestive pictures and videos and sexually suggestive messages (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008, p. 5).

*Sexual health:* A state of physical, emotional, mental, and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction, or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence (WHO, 2013).

*Sexual risk behavior:* Any behavior that can impact sexual activity resulting in unintended health outcomes (CDC, 2013).

*Sexually active:* Having had sexual intercourse in the past 3 months (CDC, 2008).

*Sexual suggestive pictures and video:* Seminude or nude personal pictures and videos taken of oneself and not found on the Internet or received from a stranger (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008, p. 5).

*Sexually suggestive messages:* Written sexual suggestive personal texts, e-mails, or IMs not received from a stranger, like spam (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008, p. 5).

*Social factors:* Factors that promote sexual risk behaviors including poverty, racism, culture, segregation, and incarceration (Valentine, 2008, p. S23).

*Social media:* A group of Internet-based applications that employ mobile and web-based technologies to create interactive platforms where individuals can create and exchange content within a bounded system. Examples include social networking sites such as Facebook, MySpace, Twitter, blogs, sites that allow interactive games, and video sites such as YouTube (Boyd, 2007, p. 1; Kietzmann et al., 2011, p. 241).

*Traditional mass media:* Sources of communication including television, magazines, movies, music, and the Internet (Brown, 2002).

### **Assumptions, Delimitations, Scope, and Limitations**

#### **Assumptions**

I assumed that the study instrument was valid and reliable based on previous use in survey research among adolescents. I assumed that the survey questions were effective to collect the appropriate data that addressed the research questions in this study. In addition, I assumed that participants honestly and accurately responded to the questions asked. Finally, I assumed that the sample size was sufficient to represent the population under study, and participation was voluntary.

**Delimitations**

This study was delimited to African American females (aged 13-17) who lived in the Metro Atlanta area of Georgia and who read, spoke, and understood English. Adolescents who did not meet all qualifications for this study were excluded. This study was delimited to the perceptions by the participants of the impact of online risk behaviors on sexual behaviors; the impact of new media on other areas were not considered.

**Scope**

I investigated whether there was a relationship between attitudes toward of online risk behaviors, online risk behaviors, and real life sexual behaviors. I also determined if African American female adolescents who lived in the Metro Atlanta area and engaged in online risk behaviors were more likely to engage in sexual behavior than those who did not.

**Limitations**

This study was limited to African American adolescent females in Metro Atlanta area counties in Georgia. Secondly, because the survey was self-administered and self-reported, there was an increased chance of social desirability bias from the reports including recall bias, over reporting, or underreporting. Thirdly, I described associations only at a single point in time. Because the survey was online, it was not be possible to assess the physical or emotional state of the participants.

**Significance of Study**

African American youth face a world of complex decisions while trying to cope with environmental, socioeconomic, and behavioral factors that influence their sexual



health. With increasing access to new forms of technology, there is a need to understand how these new media platforms impact their sexual health. In this study, I addressed that gap by providing a voice for African American female adolescents to understand how this population uses new media. This research is important to health professionals who seek to develop effective, culturally appropriate STD and pregnancy prevention initiatives to address sexual health. Additionally, this research provides an understanding of the link between online risk behaviors and real life sexual behaviors among African American female adolescents.

The social change implications of this study include an addition to the existing body of knowledge on the impact of social media usage on adolescent health. Also, because research on sexual behaviors among adolescent residents is limited in Georgia, this study contributes to the efforts of local health professionals looking for innovative methods of incorporating new media platforms into existing STD prevention programs. Furthermore, the work conducted in this study can promote positive social change as a catalyst to begin more empirical studies to measure the impact the interactivity of new media on adolescent sexual behaviors in Atlanta, Georgia and beyond.

### **Summary**

Adolescents who engage in sexual risk behaviors are a growing public health concern. Although incidences of STD infections have decreased over the years, researchers have demonstrated that rates of both bacterial and viral STDs are disproportionately higher among African Americans adolescents. In order to control morbidity and mortality due to sexual risk behaviors among youth, researchers must

address the new factors that are being shown to impact these behaviors. The evolution of new media has become a social phenomenon worth researching. Understanding how new media influences sexual behaviors, especially among the high risk population of young African American women, is necessary to guide public health initiatives in order to create program content that is relevant and sustainable. With African American female adolescents disproportionately affected by STDs and teen pregnancy, there is a need to gain a better understanding of what new factors are contributing to these high risk behaviors.

In Chapter 2, the literature on the health issues of adolescent sexual risk behaviors, factors that influences these behaviors, the evolution of new media usage, and sexual health of African American adolescents is reviewed. Literature demonstrating the evidence linking of traditional mass media to adolescent sexual behavior will be discussed. Additionally, the increase trend of new media by African American adolescents and its known impact on sexual health is also be addressed.

In Chapter 3 the research design of this study, the justification for the use of a quantitative method approach, the context for the study, and the ethical implications of the study is described. Justification for the study's sample population, methods of data collection and analysis is also discussed. Chapter 4 consists of a summary of the study's results. Chapter 5 provides a discussion of the findings, their limitations, their social change implications, and recommendations for continued research.

## Chapter 2: Literature Review

### **Introduction**

The research problem addressed in this study was whether online risk behaviors impacts sexual behavior among adolescents. The purpose of this study was two-fold: (a) to assess the attitudes, beliefs, and intentions regarding online risk behaviors among African American adolescent female adolescents in Metro Atlanta and (b) to determine whether there was a significant association between engaging in online risk behaviors and the actual engagement of real life sexual risk behaviors among these aforementioned adolescents. Adolescents use social media and new media devices to post, share, and receive sexual content (Landry, Gonzales, Wood, & Vyas, 2013; Lenhart, 2012; Lenhart, Purcell, Smith, & Zickuhr, 2010; Moreno, Parks, Zimmerman, Brito, & Christakis, 2009). Although literature concerning the evaluation of the sexual content posted using new media is growing, studies on the impact of use of new media on adolescent sexual behaviors are scarce. Knowledge of how risk behaviors displayed on new media impacts sexual behaviors may help in the understanding of how new media platforms can decrease sexual risk behaviors and promote positive sexual health among adolescents, specifically among high risk populations.

This chapter begins with a discussion of literature concerning the problem of adolescent sexual behavior. Following is a discussion of literature concerning predictors of adolescent sexual behaviors assessed by investigators using quantitative methods. Next, the evolution of media, the digital divide, and information gaps concerning new media and its impact on adolescent sexual behavior are discussed. Lastly, the TRA,

which forms the theoretical framework for this study, is discussed. Literature where TRA was not only applied to understand adolescent sexual behavior, but also applied to assess the impact of media on adolescent sexual behaviors is reviewed, concluding with a chapter summary.

### **Literature Search Strategy**

The research and scholarly literature was accessed through the Stephen B. Thacker Public Health Library and Information Center of the Centers for Disease Control and Prevention. To search literature on factors that influence adolescent sexual behaviors, a search was conducted using Web of Science, OVID/Medicine, and PubMed, which produced 181 citations from 1995-2014. The following keywords were used:

*adolescents, HIV prevention, STD prevention, structural factors, risk factors, adolescents, structural barriers, sexual behavior, African Americans, and Black.*

To search literature about the impact of traditional and new media on adolescent sexual behavior, a search was conducted using ABI/INFO, PsycINFO, SocioAbs, ERIC, Web of Science, PubMed, ProQuest, and LexisNexis, which produced 91 citations from 2001-2014. The following keywords were used: *adolescent (teen, child, youth, girl, female, young woman, young women) and attitude (perception, behavior, demeanor, or disposition) and social network (texting, cell phone), mass media, new media, social media, Twitter, Facebook, YouTube, MySpace, African Americans, and Black.* Because current research for this topic is emerging, reference lists from authors' works in the area were also another source of relevant literature for this topic.

## **Literature Review Related to Key Variables and/or Concepts**

### **Adolescent Sexual Behavior and Reproductive Health**

Adolescent sexual behaviors have been a public health concern for decades. During the 1970s, policies were established to increase access to reproductive health and family planning services for the adolescent population in the United States (Finkel & Finkel, 1983). According to Finkel and Finkel (1983), government funding was allocated to provide resources for public health initiatives that focused on teenage pregnancy and sex-related programs for teens. Additionally, federal programs were created from the Adolescent Health Services and Pregnancy Prevention and Care Act (1978) to assist young mothers and parents of teen mothers (Finkel & Finkel, 1983). Subsequently, the concern of adolescent sexual behavior grew as the prevalence of STD infections increased among this population. A total of 329,797 women ages 15-19 years in the United States became teen mothers in 2011, and sexually active adolescents aged 15- to 19 years were reported to have the highest rates of chlamydia and gonorrhea infection with about a 3 and 2 % annual increase, respectively (CDC, 2012b, 2014). The CDC (2013b) also reported that about 39% of the new HIV cases diagnosed in 2009 were youth ages 13-24. Among this population, minorities were disproportionately affected, with African American teens and young adults accounting for 33% of the new HIV infection and Hispanic Americans accounting for 24% of the new infections, in comparison to 16% of European American teens reported infections (CDC, 2013b). Over the years, with an increase of negative health outcomes among adolescents due to sexual

risk behaviors, more researchers sought to address this concern to determine contributing factors that influence these risk behaviors.

The impact of teenage pregnancy and both bacterial and viral STDs on the African American adolescent subpopulation is also well documented. The birth rates of African American and Hispanic American teens were more than 2 times higher than the rate for European American teens in 2011 (CDC, 2012b). Furthermore, the prevalence of gonorrhea, chlamydia, syphilis, HIV, hepatitis B, herpes, and the human papillomavirus (HPV) have all been found to be disproportionately higher among African Americans than any other racial or ethnic groups (Newman & Berman, 2008). The 2012 STD Surveillance Report showed that the rates of gonorrhea infections for African American adolescents are 18 times the rates of European American adolescents (CDC, 2014). Similarly, chlamydia rates for African American females and males aged 15-19 years were 6 and 13 times the rates of European American females and males, respectively, in the same age group (CDC, 2014). In 2009, African American adolescents also were shown to account for 65% of HIV cases reported for young people aged 13 to 24 years in the United States (CDC, 2012c). African Americans only make up 13% of the U.S. population; yet are disproportionately impacted by negative outcomes of sexual risk behaviors. As a result, much research has been conducted to assess these disparities.

Surveillance of the adolescent population has shown disparities among the sexual health of minorities. According to the CDC (2012c), 48 % of African American teenage girls have had an STD in comparison to 20 % of European American teenage girls (CDC, 2012c). Hall et al. (2008) revealed that 1 in every 30 African American women is

expected to be diagnosed with HIV during her lifetime. Adolescent sexual risk behaviors have been found to be one of the leading causes of death among young people and are researched by CDC to gain a greater understanding of adolescent health (CDC, 2012c). According to Newman and Berman (2008), STD disparities seen in the United States are greatest in the southern region, where African Americans have the highest prevalence of STDs. There is a need to examine factors that impact adolescent sexual behaviors in order to obtain knowledge that can aid those working in STD and teen pregnancy prevention and that can lead to the development of relevant and effective prevention program initiatives (Bachanas et al., 2002; Buhi & Goodson, 2007). Despite current public health initiatives to reduce STD transmission and teen pregnancy, there is a continual increase of STD infection among adolescents as well as teen pregnancy rates (CDC, 2011, 2012b). With such high rates of STDs and teen pregnancy among African American adolescent females, there was justification to explore the association of understudied factors that may impact adolescent sexual behaviors such as the emergence of new media.

### **Predictors of Adolescent Sexual Behavior**

The predictors of adolescent sexual behavior has been well researched. Mmari and Blum (2009) reported that the preponderance of research articles concerning adolescent sexual behavior consisted of quantitative research examining factors that affect health outcomes. For example, self-efficacy has been a factor to be connected with adolescent sexual risk behavior. Boone and Lefkowitz (2004) demonstrated that in a sample of 154 sexually active college students, of which 62% were females in their late

adolescent years (18-24), condom use was correlated with self-efficacy. The more participants believed that condom use was a positive barrier for STD infection, the higher self-efficacy they had and the less likely they were to participate in sexual risk behaviors (Boone & Lefkowitz, 2004). Additionally, according to Boone and Lefkowitz, sexual attitudes were significantly correlated with alcohol use before or during sex. Studies such as these that demonstrate how sexual attitudes and knowledge impacts sexual behavior is imperative to creating effective prevention programs.

Other personal factors that influence adolescent sexual behavior have been researched. Self-esteem enhancing, the desire to improve one's self and to be accepted by peers, has also been demonstrated to be a contributing factor to adolescent sexual risk behaviors (Robinson, Holmbeck, & Paikoff, 2007). According to Robinson, Holmbeck, and Paikoff (2007), an adolescent's sexual development and sexual decision making process can be influenced by not only the views of one's self, but also the views of others. For example, a teen that has a positive self-esteem may feel more comfortable in their sexuality leading to negative outcomes due to his or her decisions in sexual practices. To examine this idea, investigators sampled 315 African American males and females in the fourth and fifth grade, from an urban neighborhood in Chicago to examine factors that influenced sexual risk behaviors. They conducted a longitudinal study, where participants were followed for six years and assessments were conducted at years three and six following the baseline data collection. Results demonstrated that out of the remaining sample of 189 participants aged 16-19 years, males reported that self-esteem enhancing was a motivating factor to engage in sexual behavior ( $t(145) = 3.91, p < .01$ ).



Described as a way to feel better about one's personal being, self-esteem enhancing was said to result from feelings of loneliness or inferiority (Robinson et al., 2007).

Other quantitative studies have shown that, during the adolescent stage, the idea of self-concept as defined as "the totality of an individual's thoughts and feelings having reference to himself" (Goodson, Buhi, & Dunsmore, 2006, p. 311) has been associated with sexual risk behaviors, where adolescents with a high self-concept have shown a lower level of risk behavior and adolescents with low self-concept were more likely to engage in more risk taking sexual behaviors (Salazar et al., 2004; Spencer, Zimet, Aalsma & Orr, 2002; Taylor-Seehafer & Rew, 2000). The fluctuation of adolescent self-esteem based on how they define and evaluate themselves is important to understand as it relates to sexual behavior. This understanding can drive education and prevention initiatives.

Despite the impact of individual level factors on adolescent sexual risk behaviors such as self-concept, other relevant individual behavioral factors such as alcohol and drug use have been shown to affect the lifestyle of adolescents and increase sexual risk behaviors. In a longitudinal study of late adolescent females ages 18-21, Morrison-Beedy, Carey, Feng, and Tu (2008) reported that, at baseline, 70% of participants stated that they participated in binge or underage drinking, 31% and 12% reported use of marijuana and opiates, respectively, and 30% said that they previously had an STD. On average, participants reported having at least one sex partner within the last three months of the study and two sex partners within the last year. At a three month follow-up, about 98% of

participants reported participation in some type of sexual behavior. Additionally, of the participants who reported engaging in unprotected sex, investigators found that alcohol or drug use were contributing factors (Morrison-Beedy et al., 2008). Research on contributing factors for adolescent sexual behaviors is necessary to understand due to the impact risk behaviors such as alcohol and drug use has on the adolescent population.

Other risk behaviors such as smoking have been shown to impact adolescent sexual behaviors. Berg et al. (2012) conducted a randomized control study demonstrating that smoking also increased adolescent sexual risk behaviors. Comprised of 715 sexually active adolescent African American females aged 15-21, this study revealed that 165 of participants reported to have smoked cigarettes; 80% had been smoking for at least six months, 60% at least one year, and 34% at least three years. Using audio-computerized software, researchers demonstrated that smoking cigarettes was significantly associated with having older sexual partners ( $p < .001$ ), an STI diagnosis ( $p = .002$ ), multiple sex partners ( $p = .003$ ), and an increase of alcohol and drug use ( $p < .001$ ) (Berg et al., 2012). Although less common, the correlation of smoking and sexual activity among adolescents should alert health practitioners to the possibility of significant impact on adolescent sexual health.

Family and other social influences have been demonstrated to impact adolescent sexual behavior. According to Browning, Leventhal, and Brooks-Gunn (2005), the use of quantitative methods revealed family attachment and support also had a significant ( $p < .05$ ) effect on adolescent sexual risk behavior. In a secondary research study that

examined the longitudinal data from a study conducted in the neighborhoods of Chicago, investigators found that adolescents' emotional attachment to family delayed their sexual activity; however, no evidence was found to support the idea that direct parental controls such as parental and peer monitoring had an effect on the initiation of sexual activity among adolescents (Browning et al. 2005). As adolescents develop, it is easy to believe that their family dynamics have an impact on their sexual health; however, with the inconsistencies revealed by studies as it relates to family and adolescent sexual health, further research is needed to determine other factors that have a direct impact.

Moreover, studies have shown that housing and geographic locations also affect adolescent sexual risk behaviors. Street involved youth have been reported to have a higher prevalence of STDs when compared to the general adolescent population (Marshall, Kerr, Shoveller, Montaner, & Wood, 2009). Marshall et al. (2009) used survey research to examine structural factors that impacted the sexual risk behaviors of homeless and street involved youth from Vancouver, Canada. Results illustrated that of 529 participants ages 14-26 years, 78.4% reported being sexually active, 69.4% reported they did not engage in safe sex, and 61.0% reported that they had multiple sexual partners. Data analysis revealed that homelessness (95% CL: 1.24 – 2.82) and limited healthcare access (95% CI: 1.21 – 5.18) were directly related to the number of sexual partners of the participants. These results suggest that structural factors such as geographic location can contribute to the increase of sexual risk behaviors seen among adolescents (Marshall et al., 2009). Over the years, results from quantitative research as demonstrated many predictors of adolescent sexual behaviors; therefore, using a quantitative approach for this

study was appropriate to examine how emerging factors such as new media impact adolescent sexual behaviors.

### **Constructs of Attitudes, Subjective Norm, Intention, and Behavior**

Researchers have previously investigated predictors of adolescent sexual behavior through the assessment of various constructs such as attitudes, behavioral intention, and subjective and social norms. Buhi and Goodson (2007) performed a systematic review of 69 studies that examined predictors of adolescent sexual behavior. Of the 69 studies, researchers reported they found eight studies that revealed that the intention to have sex resulted in the actual engagement in sexual intercourse, 13 that found parental monitoring had a protective effect on adolescent sexual risk behavior, 24 that demonstrated perceived norms were associated with adolescent sexual risk behaviors, 11 that found self-efficacy impacted sexual behavior, two that found self-standards were related to sexual initiation, three that linked sexual behaviors and emotions, and 24 that demonstrated that individual beliefs and attitudes impacted adolescent sexual risk behavior. These results demonstrate the impact of attitudes and intentions on sexual behavior and support the need to study these constructs. Moreover, attitudes, behavioral intention and subjective and social norms are the key constructs that comprise the TRA, on which this current study is based.

Much research has been conducted to assess factors that affect the sexual attitudes and intentions of adolescents. In another systematic literature review, Goodson et al. (2006) examined the idea of self-esteem and its relationship to adolescents' sexual behaviors, attitudes, and intentions. Results revealed that, of the studies reviewed, 60%

did not find a significant relationship between self-esteem and participants engaging in sexual behaviors including sexual activity, condom use, becoming pregnant, or contracting an STD. Attitudes towards sexual activity and intentions to have sex were also found to be not related to self-esteem (Goodson et al., 2006). However, 26% of the studies reviewed demonstrated an inverse relationship between the two, where participants with a high self-esteem showed low levels of sexual activity. Additionally, only 14% of the studies revealed a positive association, where participants with a high self-esteem demonstrated an increase of sexual activity.

Additionally, Santelli et al. (2004) found that middle school students were more likely to delay the initiation of sexual intercourse because of their personal norms and the perceived norms of their peers. In a study of 46 middle schools in New Jersey, 2,973 students with the racial makeup consisting of 51% African American, 30% Hispanic American, 9% White, 3% Asian, and 6% other, completed a questionnaire concerning sexual behaviors, psychosocial constructs, and demographics (Santelli et al., 2004). Results indicated that when adolescents perceived their peers were delaying sexual activities, they were less likely to initiate any sexual activity themselves. The study further demonstrated that both gender and race were primary predictors for sexual intercourse with males becoming sexually active earlier than females, and African Americans and Hispanic Americans more likely to engage in sexual activity at an earlier than Whites and Asians. These results suggest that perceived norms can greatly impact sexual risk behaviors among adolescents.

Peer influence during the adolescent years has been demonstrated to impact adolescent sexual behaviors. Findings from a similar study by Jaccard, Blanton, and Dodge (2005) supported the results of Santelli et al. (2004). Jaccard et al. (2005) conducted a cross-sectional study that examined peer influence on sexual activity. Participants in the study were approximately 1,700 students in grades seven and eleven from 135 schools nationwide. Using a self-reporting questionnaire, results revealed that 39% of the participants were sexually active and individuals that participated in sexual activities were connected with close friends who engaged in sexual activities ( $p < .05$ ). Decision making during the adolescent years is influenced by various factors. Understanding the social influences provides insight for effective health interventions.

The impact of subjective and social norms such as the influence of social and community networks on adolescent sexual behavior has also been well documented in the literature. In a systematic review, DiClemente et al. (2007) found 11 studies that documented an association between family support and adolescent sexual risk behavior, 13 that found an association between parental communication and adolescent sexual risk behavior, 12 that connected peer norms with risk behaviors and others that documented an association of adolescent sexual risk behaviors with school connectedness, perceived barriers, parental monitoring, parental attitudes, family structure, and social support.

Aronowitz, Rennells, and Todd (2005) studied a sample of African American mothers and daughters in New York and found that sexual risk behaviors of participants were correlated with the closeness of teen daughters to their mothers ( $r = -.39$ ,  $p = .03$ ),

social norms of peers ( $r = -.57$ ,  $p = .001$ ), and the social norms of the mothers ( $r = -.51$ ,  $p = .004$ ). There was also some indication that parental communication about sex was associated with the knowledge of the mothers. Researchers concluded that the strength of parental relationships with their daughters was associated with an increase of sexual communication and an increase in motivation of the adolescent to avoid circumstances that would result in sexual risk taking (Aronowitz et al., 2005). The role of parental influence on adolescent decision making is often underestimated. Adolescent sexual behavior is influenced by a range of individual and social factors.

Media has shown to directly impact adolescent sexual behavior. With the popularity of traditional media usage, researchers have examined its effect on adolescent sexual behavior, attitudes, and perceptions. According to Escobar-Chaves et al. (2005), results from a systematic review of literature from 1983-2004 on the impact of media on adolescent sexual attitudes and behavior, revealed that this area was extremely understudied. Of 2,522 research documents, only 12 were found to examine the link between media and sexual behaviors. They found that, when comparing teens who watched television shows with a low level of sexual content, teens who were exposed to television with a high sexual content were more likely to not only engage in sexual intercourse, but also have more accepting attitudes to premarital sex. Bleakley, Hennessy, Fishbein, and Jordan (2008) conducted a study to assess the relationship between music exposure and sexual initiation and sexual experiences. By indicating sexual behavior at three different time points as well as the frequency rate of exposure to music, researchers measured initiation and advancement in noncoital sexual activity level over two years.

Results demonstrated that participants who listened to more sexually explicit lyrics were more likely to subsequently initiate intercourse and advance to more levels of noncoital sexual activity. Brown and L'Engle (2009) also demonstrated from a longitudinal study that early exposure of sexually explicit media predicted more permissive sexual norms, increase oral sex and sexual intercourse for both males and females. With the emergence of new media platforms, an understanding of traditional media exposure on adolescent sexual behavior is necessary to assess the level of impact media has on sexual initiation based on the frequency and length of exposure.

Internet access and usage among adolescents has increased over the years. Braun-Courville and Rojas (2009) examined over 400 young people in a cross sectional survey that assessed their Internet exposure of sexually explicit web sites, sexual behaviors and attitudes. With almost 100% of the participants having accesses to internet, over half reported to have visited a site of sexual content. Using a logistic regression, researchers found that adolescents who were exposed to sexually graphic web sites were more likely to have multiple sexual partners. Conversely, Ward (2004) also found that the influence of media on adolescent attitudes and behaviors among African American youth was dependent on the types of media platform to which the participants were exposed. These mixed results suggest that the effect of media on adolescent sexual health among African Americans is not conclusive. However, as new forms of media evolve, more research is needed to understand their impact on the sexual health of African American adolescents.



## **Media and Adolescent Sexual Behavior**

To further understand the impact of media associated with adolescent sexual behaviors, researchers have investigated the negative outcomes resulting from such media exposure. Rideout, Foehr, and Roberts (2010) reported that adolescents spend about 7 1/2 hours a day using media and are consistently exposed to sexually explicit content in various programming and advertising. Furthermore, in a biennial study conducted by the Kaiser Family Foundation, researchers revealed that 70% of media contained sexual content (Kunkel et al., 2005). Various research studies have demonstrated associations between adolescent sexual behavior and traditional media exposure. For instance, with the increase of sexual images found in the media, television watching is an environmental factor that has been revealed to have great influence on the initiation of sexual behavior among adolescents. Collins et al. (2004) demonstrated in a one-year longitudinal study that increased exposure to sexual images in the media increased the probability of early sexual activity. Using a survey of over 1,700 young people, researchers used a multivariate regression analysis to understand the relationship between TV viewing habits and sexual experience. Data showed a relationship between increased adolescent exposure media with sexual content and an increased likelihood of sexual initiation and sexual activity. Studies demonstrating the correlation between media and adolescent sexual behavior are necessary to guide new intervention initiatives as well as assess the impact of new media. Such studies support the need to assess the impact of new media platforms such as social media sites, blogs, email, and videos.

Sexual content in movies has also been evaluated for its impact on adolescent sexual behavior. Collins et al. (2004) supported the work of O'Hara, Gibbons, Gerrard, Li, and Sargent (2012) who examined the relationship of exposure to sexual content in movies and adolescent sexual behavior. Results from the study conducted by O'Hara et al., (2012), revealed exposure to movies with sexual content was a predictor of early sexual debut. Furthermore, results showed that the exposure to sexual content in movies, increased sexual risk behaviors by not only changing the behavior of participants, but also by increasing their sensation seeking desires.

In recent years, researchers have begun to examine multiple forms of media including television, music, movies, and magazines, and their impact on adolescent sexual behavior (L'Engle, Brown & Kenneavy, 2006). Using surveys from a sample of over 1,000 middle school students, researchers analyzed exposure to sexual content in various media and its effect on intention to initiate sexual activity as well as the perceptions of sex. Results demonstrated significance between media exposure and sexual initiation. Furthermore, Ward (2004) and Brown (2002) demonstrated that mainstream mass media (television, magazines, movies, music, and the Internet) provided increasingly frequent portrayals of sexuality, where the more negative gender roles portrayals are apparent among those youth with increased exposure. Research on traditional media exposure on adolescent sexual behavior has been well researched; however, with the emergence of technology, research on the impact of new media platforms on adolescent sexual behavior is limited.

## **New Media and Adolescent Sexual Behavior**

The term new media has become common use when discussing the Internet and the emergence of new technology. New media as defined by Martino et al. (2012) are media that are “social, interactive, malleable, and portable (mobile)” (p. 3). New media can include online activities that allow the creation and exchange of content such as social networking sites, emails, chat rooms, blogs, instant messaging, online games, and video websites (Collins, Martino, & Shaw, 2011). Kietzmann, Hermkens, McCarthy, and Silvestre (2011) further contended that social media include technologies where people can share create, discuss, or modify content. Although these new media platforms are heavily used by young people, research on the effect of these types of new media on adolescent sexual behavior is limited. With the limited studies on how the emergence of new technology impacts adolescent sexual health, studies to determine the association of new media and “real life” sexual behavior is imperative.

Research on the impact of traditional forms of media on adolescent sexual behavior has been clearly described in literature; however, the previous approaches to understanding the impact of media on adolescent sexual behaviors are inadequate and have several weaknesses. Firstly, previous research studying the impact of traditional forms of media on adolescent sexual behavior mainly focused on exposure of media at a single point in time, whether one episode of a television program or a particular television season (Martino, Collins, & Shaw, 2012). According to Martino et al. (2012), this limited focus of exposure to media, does not sufficiently capture the ongoing interactive nature of new media platforms, where adolescents can create, and share sexual

content. Secondly, recent studies on new media have focused mostly on adult men who have sex with men (Martino et al., 2012; Whiteley et al., 2012). Other research on new media usage and its effects on adolescent sexual health have limitations including self-reported data, selection bias, lack of proper theoretical foundations, as well as inadequate measuring tools (Baumgartner et al., 2010a; Dake et al., 2012; Landry, et al., 2013). Given the current limitations, further research on the impact of new media on adolescent sexual behavior is needed.

Researchers have examined many aspects of new media including who uses it, how it is used, and frequency of use. A recent survey found an increase in the usage of new media platforms over the past five years. It has been reported that 93% of teenagers aged 12-17 use the Internet and 73% of these youth use social networking sites (Lenhart, Purcell, Smith & Zickuhr, 2010). O’Keeffe and Clarke-Pearson (2011) found that 75% of teens now have cell phones, and use them to access social media, text, and even instant messages. Lenhart (2012) also reported that 75% of teens, text using cell phones and 23% of teens have smartphones they use to create, share and receive content. Out of almost 82% of teens who access the Internet, reports have demonstrated that girls aged 15-17 are more likely to create content online than boys aged 15-17; however, both equally share their content with others by using photos, online posts, stories, or videos (Lenhart, Madden, Macgill, & Smith, 2007). Furthermore, reports showed 51% of youth access social media sites more than once a day and 22% of adolescents access social media more than 10 times a day (Common Sense Media, 2009). With an increase of social media

usage among adolescents, research on how adolescents use such new media platforms is imperative.

Researchers have begun to examine the type of content created and shared online among teens. In a survey entitled *Sex and Tech* conducted by organizers of the National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008), researchers have found that, out of a sample of 653 teenagers aged 13-19, 20% have electronically sent or posted nude or seminude photos or videos of themselves and 39% have shared sexually suggestive images via text, email or instant message. Additionally, the survey revealed that the recipients of these sexually suggestive media content vary; 71% of teen girls and 67% of the boys reported that they shared this type of content with a boyfriend or girlfriend, and 21% and 98% of girls and boys, respectively, reported they sent their content to others they desired to date or “hook up” with. These results have also showed that 15% of the teens in this sample have sent or posted sexually suggested images to someone they only knew online (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008). Lenhart (2009) supported the *Sex and Tech* survey results, when she reported that, with the use of a cell phone, teens are able to exchange nude or semi-nude photos between romantic partners, to others outside the relationship, and to those of interest. Gaining an understanding of how adolescents are using new media platforms to exchange sexual content is imperative to understanding how this usage impacts adolescent sexual health.

An examination of the content created or shared on social media profiles is the initial step in understanding its impact on the lives of adolescents. Content analyses has been conducted by Moreno, Parks, Zimmerman, Brito and Christakis (2009), who examined the My Space profiles of 500 teens and found that 24% of the profiles contained sexual content such as descriptions of sexual experiences, photos with sexual connotation, and sexually suggestive icons. These results are supported by a previous cross-sectional observational study conducted by Moreno, Parks, and Richardson (2007), where researchers analyzed web profiles and showed that, of the 142 profiles analyzed, 47% contained risk behavior information including sexual activity (21%), alcohol use (25%), tobacco use (9%), and drug use (6%). Similarly, in a content analysis of My Space, Hinduja and Patchin (2008) revealed that 15.4% and 5.4% of 1,475 profiles had posted a personal photo in a swimsuit or underwear or a photo of friends in a swimsuit or underwear, respectively. Furthermore, in a sample of 100 youth profiles, 70% of the photos posted on profiles were considered inappropriate, with 44% containing explicit or graphic language and 16% of profiles referencing sexual activity (Williams & Merten, 2008). Even with the limited literature available on the use and access of new media platforms among adolescents, studies have revealed how using new media is becoming an issue that can impact adolescent sexual health and development through the posting and sharing of sexual content. For that reason, the focus of this study to understand the association between online sexual behaviors and real life sexual behavior is supported by current literature.

When analyzing the relationship of new media use and adolescent sexual behaviors, researchers have conducted studies to understand how behaviors on new media platforms impact sexual behaviors. Landry, Gonzales, Wood, and Vyas (2013) found that, out of 428 Latino adolescents in the ninth and tenth grades, 93% of the males used social media sites on the Internet and 97% of the females texted others using a mobile phone. Also, out of the sample, 41% of respondents reported they either sent or received more than 100 messages per day. Survey results also demonstrated that 30% of the participants previously had sexual intercourse. A one-way analysis of variance revealed that there was a statistically significant relationship between sexual risk behaviors and the frequency of text messaging and social media use ( $p=.013$ ), where respondents who used these new media at least once per day were more likely to report previously having sexual intercourse.

In another study, Babkowski, Brown, and Neffa (2013) also revealed a relationship between new media usage and adolescent sexual behaviors. For this study, the MySpace accounts of 560 participants were monitored for 60 days following an initial interview. Results revealed one third of the profiles contained sexual content of self and that being more sexually experienced was significantly ( $p<.001$ ) associated with an increase of sexual content on profiles. According to study results, sexually active females showed an increase in sexual self-disclosure on social media profiles, which was significantly associated with early sexual debut ( $p=.036$ ) and an increase rate of casual sex ( $p=.039$ ). If posting sexual content online is shown to reflect sexual risk behaviors in

real life, then knowing these correlations is helpful for health practitioners and prevention initiatives for adolescent sexual health.

Researchers have shown that the disclosure of sexual content using new media platforms can have an impact on not only those that create them, but also, those that receive these messages. Baumgartner et al. (2010b) demonstrated that risky online sexual behavior from a sample of 1,445 Dutch adolescents aged 12-17 was significantly associated with how youth perceived the involvement of their peers in their risky activity ( $p < .05$ ). Results also showed that 17.2% of participants engaged in at least one risky online behavior including searching online to talk about sex; searching online to find someone to have sex with; posting nude or seminude photos; and sending personal information to someone they only knew online. These results suggest that peer influence has an impact on online sexual risk behaviors (Baumgartner et al., 201b). Whiteley et al. (2011) also found that a greater frequency of new media use was associated with a history of oral, vaginal, and anal sex as well as sexual sensation seeking behaviors including the excitement of having sex with a new partner or the enjoyment of spontaneously having sexual intercourse. With limited literature on the topic, more studies are needed to show the relationship between online risk behavior and real life sexual behavior.

The exchange of content online has increased among adolescents over the years. Kietzmann, Slivestre, MaCarthy and Pitt (2012) suggested that this type of sharing of content using new media is a result of both intrinsic and extrinsic motivation; an internal



desire for inclusion by peers and an external need for reward. Research on the factors that influence such risky behavior on new media is scarce in the United States. In a group of teenagers ages 12-17 from Singapore, Liau, Khoo, and Hwaang (2005) revealed, that age, frequency of Internet use, frequency of chatting, gaming behavior, parental rules, the type of content shared, and the amount of inappropriate messages received were predictors of risky Internet behaviors. Similar results were found when Stefanescu, Chirita, Chirita and Chele (2009) examined factors that influenced risky Internet behaviors among 283 Romanian teenagers. These results revealed that frequency of Internet use, parental rules, type of personal information given out, frequency of chatting, inappropriate websites have been visited, and type of internet advice heard were predictors of risky Internet behaviors including talking about sex and exchanging sexual content. Results from these studies indicated that new media can greatly impact the sexual and personal identity of adolescents. Identity, as defined by Stefanescu, et al., (2009) is, “the result of the process through which the individual assumes social values, shared norms of behavior and knowledge which allow the individual to feel part of a social group and at the same time, allow him to be recognized” (p178). Further research on the variables of on attitudes about the creation and sharing of sexual content using new media is imperative to further understand the effects of new media content on adolescent development.

### **African Americans and New Media**

Over the years, there has been an increase in access and use of social media among African Americans. The digital divide has decreased between African American

adolescents in comparison to European American and Hispanic American adolescents (Rideout, Foehr, & Roberts, 2010). Studies have revealed that 98% of African American students have a Facebook account (Lee, 2012), 33% frequent the Internet several times a day (Lenhart et al., 2010), 74% spend at least two hours per day online, and of the 72% that have cell phones, an average of 186 texts are sent per day (Lenhart, 2012). More research is needed to understand the effect of new media on sexual health for this high risk population. For that reason, the focus of this study will be on African American adolescents, specifically females and their use of new media platforms and related sexual behaviors.

Much research has shown that exposure to various form of media affect adolescent sexual health; moreover, this relationship has also been associated with race and ethnicity. Turner (2011) found that when examining the relationship between sexual behaviors and sex role portrayals in music videos, out of the 140 music videos examined, videos with African American artists were significantly more likely to portray sexual content and display sexual acts than videos with European American artists. In 2003, Wingood conducted a study to assess the impact of rap music within the African American community. This study focused on the occurrence of STDs and sexual risk behaviors among African American females aged 14-18, who were highly exposed to music videos with sexually explicit lyrics and violence. For a period of 12 months, investigators evaluated the level of exposure to rap music and adolescent risk behaviors including violence, drug or alcohol abuse, sexual activity, and STD infection. Data were analyzed in bivariate and logistic regression analyses and revealed that during the

observation period of the study, almost 40% of participants acquired an STD, 15% had multiple sexual partners, and 44% consumed drug and alcohol (Wingood, 2003). The increased exposure to sexual content in various media has been previously demonstrated. With the increase of access and use of new media among adolescents to send and receive sexual content, more research is needed to assess the impact of online risk behaviors on real life sexual behaviors.

Other researchers have conducted studies to evaluate the impact of media has on African American adolescents. Brown et al. (2006) examined the effect of mass media on sexual behaviors in African American and European American adolescents. In this study, results demonstrated that sexual activity and sexual initiation were accelerated more amongst European American adolescents in comparison to African American adolescents, but African American adolescents were shown to be more influenced by friends' and parents' expectations. Ward (2004) also found that the influence of media on adolescent attitudes and behaviors among African American youth was dependent on the types of media platform to which the participants were exposed. As new forms of media evolve, more research is needed to understand their impact on the sexual health of African American adolescents.

The focus of this study is to determine if there an association between attitudes about online risk behaviors and real life sexual behavior among adolescent African American female adolescents living in the Metro Atlanta area. According to the National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com (2008), out of a

sample of 1,280 respondents, 66% and 72% of teen girls and young adult females, respectively, feel sending or posting sexual content was fun or flirtatious and reported that sending such content using new media impacted their real life behaviors by making them more forward and sexually aggressive and increased their propensity to date or hook up with others. Furthermore, survey results showed that 29% of teens and 24% of young adults perceived that by sharing sexual content using new media, others expect them to be more likely to date or hook up (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008). Since females have been reported to be more likely to post or send sexual content using new media platforms, focusing on female participants in this current study will contribute to the literature concerning new media usage and its impact on sexual health among this population.

Much research has demonstrated that African American adolescents are disproportionately affected with negative outcomes of sexual risk behaviors. When the National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com (2008) administered the Sex and Tech survey to understand attitudes, subjective norms, intentions and behaviors using new media, the survey included nearly 1,300 participants but only seven percent were African American. Research has revealed there is no significant difference in new media usage between African Americans and European Americans (Zickuhr, & Smith, 2012). For that reason, with the closing of the digital divide gap, more research is needed to explore the impact of new media on real life sexual behaviors among high risk populations such as African American female adolescents.

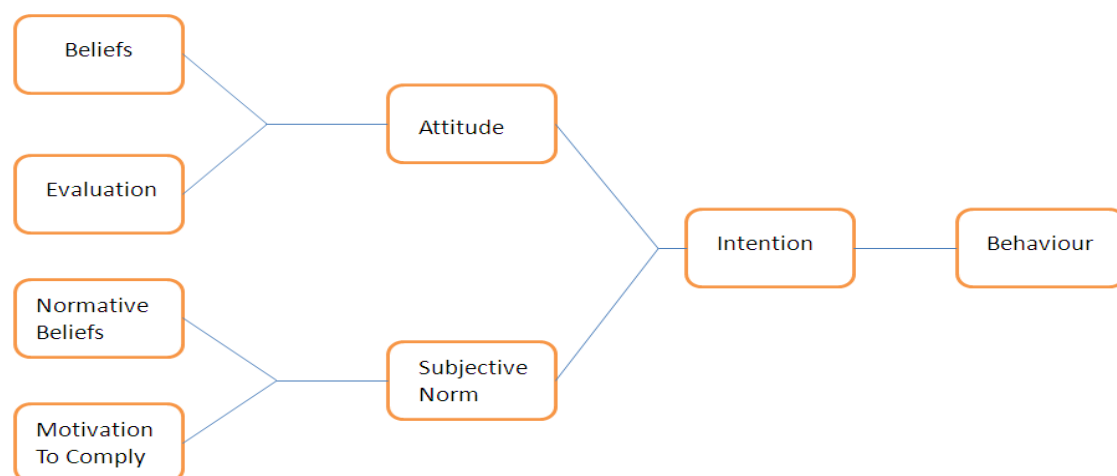
Other researchers have begun to explore the impact of online behavior on real life behaviors among African American adolescents. Whiteley et al. (2012) conducted a study with 1,045 sexually active African American adolescents aged 13-18 years to understand how online activity impacted real life risk behaviors. Results revealed that six percent of participants reported meeting sexual partners online ( $p < .001$ ). Other risk behaviors such as drug use and multiple sex partners were also associated with respondents meeting sex partners' online (Whiteley et al., 2012). Whiteley et al. (2011), also found that, among a sample of 1,518 African American adolescents, Internet usage was associated with oral, vaginal or anal sex ( $OR=1.03$ ,  $CI=1.00-1.05$ ). With African Americans adolescents, especially females, having been reported to be a population to engage in high rates of risky sexual behaviors such as early initiation, unprotected sex and sexual intercourse with multiple partners are a high risk population (Bachanas et al., 2002), further research is needed to understand more about emerging factors such as new media platforms that can impact the sexual health of this high risk population.

Understanding the impact on new media on adolescent sexual behavior is imperative due to the increased use and access of social media sites. Although, research has demonstrated that new media usage can have a negative impact on adolescents, research should begin to evaluate how this usage can be beneficial to public health initiatives. The use of social networking sites via new media platforms has already been demonstrated to be an effective and low cost strategy for disease prevention (Young et al., 2013). With the increased access and availability to new media among adolescents

and the increased rates of STDs and pregnancy among this population, further research must explore the impact of new media on adolescent sexual behaviors.

### **Theoretical Framework**

In 1974, Ajzen and Fishbein proposed an explanation for the relationship between attitude and behavior; which later became known as the theory of reasoned action (TRA). According to the TRA, the main predictor to most behavior is a specific intention to engage in that behavior. Furthermore, this behavioral intention is determined by personal attitudes and social factors (Ajzen & Fishbein, 1973). In 1977, Ajzen and Fishbein further explained that the attitude a person has towards performing a behavior is based on his or her personal evaluation and beliefs of the behavior, which can result from perceived consequences and personal values. Subjective norm involves the perceived social pressure to engage or not to engage in a behavior (Ajzen & Fishbein, 1977). Based on the TRA, not only a person's attitude toward performing a behavior, but also how those important to them feel about the behavior, influences that person's intention to engage in that behavior. If a person intends to engage in a specific behavior then they are most likely to do so (Ajzen & Fishbein, 1977). In other words, a person performs a behavior based on his or her intention to do so, which is influenced by personal attitudes and the perceptions of important others (Figure 2).



*Figure 2.* Theory of reasoned action. Reprinted from *Understanding attitudes and predicting social behavior*, by I. Ajzen and M. Fishbein, 1980, NJ: Prentice-Hall. Copyright 1980 by Englewood Cliffs. Reprinted with permission.

### **Applicability of TRA to Understand Adolescent Sexual Behavior**

Many researchers have applied the TRA in investigating adolescent sexual behavior. Buhi and Goodson (2007) conducted a systematic review of literature from 1996-2005 to examine research that investigated the predictors of adolescent sexual behavior and intention. The results of this review demonstrated that out of eight studied determinants, three detractors including intention, perceived norms, and time home alone were found to be the most stable predictors of adolescent sexual behavior. From this review, Buhi and Goodson (2007) noted that 43 of the 69 studies reviewed used a theoretical framework. Six of these studies applied the TRA to understand the predictors of adolescent sexual behaviors such as intention and attitude. Furthermore, Gillmore et al. (2002) examined the use of the TRA to explain initiation of sexual intercourse among over 700 students. In focus groups, students were asked open-ended questions about reasons for, consequences of, and attitudes toward having sex. Results demonstrated that

intentions to engage in sexual intercourse were significantly based on the attitudes toward sex, prior experience, and the beliefs of others. These results suggest that, based on the TRA model, adolescents develop a set of sexual beliefs rooted from various sources including thoughts of personal consequences of sex, views of others on sex, or the rewards of sex (Gillmore et al., 2002). From these beliefs, adolescents develop attitudes and social norms where they assess how desirable sex would be to them or what others think they should do. From these attitudes and norms, adolescents form the intention to either engage or not engage in risky sexual behaviors (Gillmore et al., 2002). The evaluation of the TRA in previous studies on predictors of adolescent sexual behavior further supports its use in this study.

Other researchers have used the TRA to examine the constructs of attitude, intentions and behaviors. Carvajal et al. (1999) applied the TRA to examine how attitudes and social norms predicted the delay of sexual intercourse among 827 adolescents in the ninth grade. Using a quantitative survey, at baseline participants reported they never engaged in sexual intercourse and after being given a follow up survey approximately two years later, results revealed that social norms and personal attitudes towards postponing sexual Tschann, and Marin (2002) applied the TRA to examine the predictors to the intention to have sex among 84 Latin American female adolescents ages 14-19, including their attitudes toward having sex and their beliefs of how others felt about them having sex. In this study, researchers recruited a group of Mexican American adolescents using a telephone survey and group of Central American adolescent females, who were either pregnant or already teen mothers, through health clinics. Results showed that for



those teen mothers that participated, social norms predicted intention to engage in sexual intercourse. The use of the TRA to understand the predictors of adolescent sexual behaviors is important as researchers begin to assess the impact of online risk behavior on real life sexual behaviors.

When looking at the sexual behavior of high risk populations, the TRA has also been applied. Doswell, Braxter, Cha, and Kim (2011) tested the ability of the TRA to explain the sexual behaviors of African American female adolescents. In this study, researchers examined the correlations of age, pubertal development, and the TRA constructs, tested the validity of the TRA to predict sexual behavior, identified which TRA construct accounted for sexual behaviors, and examined whether intention to engage in sexual intercourse was a predictor of sexual behavior. Using a cross sectional and correlational quantitative design, 198 African American girls aged 11-14 were recruited to complete a self-reported questionnaire. Results showed that participants held more permissive attitudes towards engaging in sexual behaviors ( $r = -.29, p < .001$ ), had a higher intention to engage in sexual behaviors ( $r = -.24, p = .002$ ), and were more likely to engage in sexual behaviors in real life ( $r = .18, p = .014$ ). Using the TRA, results showed that permissive attitudes toward sexual behaviors was highly correlated with a higher intention to engage in sex at an early age ( $r = .80, p < .001$ ) and moderately correlated with the intention to engage in sexual behaviors ( $r = -.37, p < .001$ ). These results support the use of the TRA to describe how attitudes and social norms toward a behavior can predict the intention to engage in that behavior, which can lead to actual engagement in that behavior.

### **Applicability of TRA to Understand Media and Adolescent Sexual Behavior**

Previous research not only has revealed that the TRA can be applied to understand adolescent sexual behaviors, but also has shown how the TRA can be applied to understand the impact of media exposure on behavior. Bleakley, Hennessy, and Fishbein (2011) applied the TRA to examine the intentions of adolescents seeking sexual content in media. Bleakley et al., recruited 810 adolescents aged 13-18 to complete an online survey to assess adolescents who reported actively seeking sexual content in media. The association between seeking sexual content online and sexual behavior was examined. Additionally, how the intention to seek sexual content in media is a predictor of active seeking of sexual content in media was also examined. Results showed 51% of participants reported actively seeking sexual content from at least one media source including movies, television, music, pornography, web sites, and magazines. It was also revealed that attitudes, social norms, and self-efficacy significantly ( $p < .05$ ) predicted the intention to seek sexual content, which lead to participants actively seeking sexual content in the media from any source (Bleakley et al., 2011).

In another study conducted by Bleakley, Hennessy, Fishbein, and Jordan (2011), 460 adolescents aged 16-18 were recruited for a web-based longitudinal study to understand how exposure to sexual portrayals in media influenced adolescents' sexual behaviors. Using the TRA as one of their theoretical models, researchers showed that intention to engage in sexual intercourse was influenced by attitudes, social norms, and self-efficacy regarding sexual media content; however, results revealed that exposure to sexual media content only affected the social norms of participants. In other words, this

study showed exposure to sexual content in media can impact how adolescent viewers perceive how others feel about sexual content in media, which can influence their own behaviors (Bleakley, Hennessy, Fishbein, & Jordan, 2011). The behavior of seeking sexual content online can impact the mental, emotional, and physical development of adolescents. As a result, studies are needed to evaluate the factors that contribute to these behaviors.

With the emergence of technology, researchers have begun to use the TRA to explore the impact of new media on behavior on adolescents. Peslak et al., (2012) used the TRA to demonstrate how attitudes and social norms regarding new media are associated with the intention to use new media, which influences the use of new media among the college students. Using survey research, 196 college students were asked questions related to social networking attitudes, social norms, intention and behavior. Results showed that social media usage was significantly associated with how the participants felt about using social media ( $p < .001$ ), as well as how using social media was viewed by others in their social network ( $p < .005$ ). Although this study focused on college students, it gives insight of how new media usage impacts the lives of young people.

Other researchers have applied the TRA as a theoretical framework for web-based sexual health intervention strategies. Roberto et al. (2007b) applied the TRA to examine the ability of using digital media interventions to improve adolescent sexual health. With 887 ninth graders, researchers conducted a 7-week computer-based intervention designed

to change attitudes and knowledge regarding pregnancy, STD, and HIV prevention.

Using a pretest-posttest experimental design, a survey was administered before and after the intervention. Results indicated the intervention group illustrated significantly greater knowledge concerning the health issue, had significantly more favorable attitudes towards waiting to have sex, and had more favorable attitudes on condom usage than the control group (Roberto et al., 2007b). Similarly, Bull, Pratte, Whitesell, Rietmeijer and McFarlane (2009) conducted an Internet-based intervention using the TRA as one of the theoretical frameworks. This study explored the impact of a single session condom promotion intervention for young adults aged 18-24 recruited from clinics and online. Results showed that the sexually active young adults who participated online demonstrated a slightly higher increase in condom norms than the control group; however, no intervention effects were shown in young adults recruited from clinics. The results from these studies suggest that the TRA may be sufficient to provide an understanding of new media usage and attitudes and behaviors relevant to online risk behaviors as well as provide a framework for interventions based on new media; however, further research is needed.

In addressing the gap in research for understanding the association of online risk behaviors and real life sexual behaviors, I evaluated attitudes and subjective norms of posting sexual content on online using new media platforms among African American adolescent females to assess the constructs of the TRA. Using pre-existing surveys, data was collected to not only assess outcomes of the constructs of the TRA including attitudes, subjective norms, behaviors, and intentions of engaging in online risk

behaviors, but also, participants were asked questions to assess real life sexual behaviors. In accordance with the TRA, the attitudes, and subjective norms were the predictors of the intention to engage in online risk behaviors, which would lead to the actual engagement in real life sexual behaviors. Additionally, data was analyzed to determine if these associations hold for both age and relationship status. A detailed description of data collection and analysis is presented in Chapter 3.

### **Summary**

In this chapter, information relevant to the application of the TRA to understand the impact of new media on adolescent sexual behavior was presented. Using the TRA as this study's theoretical framework allowed me to understand if a participants' attitude and subjective norms was a predictor of her behavioral intention, and if that intention was the predictor to engagement in sexual behavior. The literature discussed in this chapter described how this theory could be applied to explain how attitudes and social norms of sexual behavior impact intention, and if the intention to engage in a sexual risk behavior that is a predictor of actual engagement in that behavior.

Adolescent sexual behavior is of great public health concern due to the increase of potential negative outcomes such as teen sexually transmitted disease infection, and transmission of the human immunodeficiency virus. With the emergence of new technology, the impact of new media usage on adolescent sexual health is of interest. Research has demonstrated that adolescents frequently post and share sexual content using new media and this type of online risk behaviors can impact the real life behaviors.

However, this research did not include a high percentage of high risk populations. When looking at high risk populations, African American youth have greater access to new media than in previous years; however, many are using new media platforms to engage in online risk behaviors that can lead to real life sexual risk behaviors. Engagement in such sexual risk behaviors will only continue to contribute to the morbidity of this population and increase the prevalence of STD and teen pregnancy.

The literature review for this study revealed evidence to support the need for a study to explore how attitudes toward and use of new media to post sexual content impacts sexual behaviors among African American adolescent females. The literature presented in this chapter revealed how both traditional and new media impact adolescent sexual behavior. Because there has been an increase in the prevalence rates of STD infection among adolescents, where African American adolescents females are disproportionately affected, more evidence is needed to understand the effects of emerging factors, such as new media, on sexual behaviors. Furthermore, more research should be conducted to address the gap in research regarding the link between sexual risk behaviors online and real life sexual behaviors, especially for high risk populations. To address this gap, I examined the effects of new media on adolescent sexual behaviors among African American adolescent females. In Chapter 3, the data collection and analysis procedures of this study is described.

## Chapter 3: Research Method

### Overview

African American youth have reduced the “digital gap” previously seen between their other racial counterparts regarding availability and access to the Internet (Rideout, Foehr, & Roberts, 2010). RadioOne (2008) conducted a national survey for African Americans aged 13-74 to examine how they felt about various aspects of life in the United States and found that about 90% of African American teens are online, spending on average 26 hours a week on the Internet. Other researchers have revealed that among adolescents, there is an increased engagement in sexual risk behaviors online including searching online to talk about sex, finding someone to have sex with, and posting nude or seminude photos, videos, or messages (Baumgartner et al., 2010b; National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008). However, little is known about whether these online risk behaviors are associated with real life sexual behaviors, specifically in high risk populations such as African American teens. The purpose of this quantitative correlational study was two-fold: (a) to assess African American adolescent females’ attitudes, beliefs, and intentions regarding online risk behaviors and (b) to determine whether there is a significant association between online risk behaviors and real life sexual risk behaviors among this population.

In this chapter, the quantitative correlational design for this study is described, followed by the methodology and the threats to validity. Subsequent sections include methods relating to the population, sampling procedures, recruitment procedures, instrumentation and operationalization of constructs, ethical considerations, data

collection, and data analysis. This chapter provides justification for the use of a correlational design to address the research questions and to accept or reject the null hypotheses.

The following research questions were addressed in this study:

1. Is there an association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area?
2. Is there an association between engaging in online risk behaviors and real life sexual behavior among African American females living in the Metro Atlanta area?
3. Are African American female adolescents who engage in online risk behaviors more likely to engage in riskier sexual behavior than those who do not post sexual content using new media?
4. Is age associated with attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta?
5. Is age associated with engaging in online risk behaviors among African American female adolescents in Metro Atlanta?
6. Is there an association between relationship status and engaging in online risk behaviors among African American female adolescents in the Metro Atlanta area?



The following hypotheses were tested in this study:

*H<sub>01</sub>*: There is no significant association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

*H<sub>a1</sub>*: There is a significant association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

*H<sub>02</sub>*: There is no significant association between online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

*H<sub>a2</sub>*: There is a significant association between online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

*H<sub>03</sub>*: Engaging in online risk behavior is not predictive of riskier sexual behavior among African American female adolescents in Metro Atlanta.

*H<sub>a3</sub>*: Engaging in online risk behavior is predictive of riskier sexual behavior among African American female adolescents in Metro Atlanta

*H<sub>04</sub>*: There is no significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>a4</sub>*: There is a significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>05</sub>*. There is no significant association between age and online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>a5</sub>*: There is a significant association between age and online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>06</sub>*. There is no significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta.

*H<sub>a6</sub>*: There is a significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta.

### **Research Design and Rationale**

By understanding the purpose of a research study, investigators can present their intention for the study and develop effective research questions and study designs. In this quantitative, correlational study the independent variables were use of new media, posting sexual content using new media, attitudes about posting sexual content with new media, relationship status, and age and the dependent variable was real life sexual behavior.

For this study, a quantitative correlational research design was determined most appropriate because the purpose was to examine relationships among known variables based on an existing theoretical framework. According to Creswell (2013), quantitative research is necessary to examine the statistical significance of two or more variables by using instruments that produce numerical data. Salkind (2009) contended that quantitative correlational research is valuable when examining variables to look for relationship and not causation. Gerstman (2008) noted that correlation research is used to

test the strength of relationship between two or more variables without stating how one variable affects the other. Morrow (2010) supported Gerstman's contention and stated that a significant relationship between two variables does not determine cause-and-effect. The purpose of this study was to determine correlation between online risk behaviors and real life sexual behaviors among African American teen girls. For that reason, quantitative methods were applied.

Much has been written on the influence of philosophies of science on research designs. Creswell (2013) noted that worldviews influence the methodological choices of researchers when exploring certain occurrences. Researchers with a postpositivist view apply more quantitative approaches to determine the variables that affect certain outcomes (Creswell 2013). Having a connection between empirical data and a particular theory gives researchers the opportunity to shape their knowledge. Reynolds (2007) contended that having empirical data from quantitative research allows researchers to go back and evaluate the associations between theory and research. Contrary, a qualitative approach affords researchers the opportunity to ask different types of questions, understand the participants' personal experiences and opinions, and allow the researchers to analyze change, determine causation, and to determine how participants interpret constructs (Salkind, 2009). The focus of this study was is to solely explore the relationships of variables. Of the approaches considered, a quantitative correlational design was the most appropriate methodology for this study to determine if there was a statistically significant relationship between online risk behaviors, relationship status, and age and real life sexual behavior.

The data collection tool that was used was an anonymous online survey via Survey Monkey. The survey was comprised of portions of three pre-existing online surveys including the Youth Risk Behavior Survey, the Sex and Tech Survey, and the Teens, Social Media, and Privacy survey (Appendix G). These pre-existing surveys have been previously used in research concerning youth risk behaviors and new media usage. Questions on the study's survey included those based on Likert scales as well as closed-ended questions. Nachmias and Nachmias (2008) contended that the use of a Likert scale is appropriate to assess attitudes or behaviors. With closed-ended questions, resulting answers can be used to understand the sample in which the data were collected by use of descriptive and inferential statistics (Creswell 2013). According to Evans and Mathur (2005), online surveys are cost effective, give speed and timeliness, provide ease for data collection and analysis, and make it easier to obtain a large sample size. Naser (2013) also contended that with anonymous online surveys, participants tend to be more honest because they feel a higher level of comfort that gives them the ability to open up and give more truthful responses due to the anonymous environment. Given the sensitive nature of the topic of this study, an anonymous online survey was deemed most appropriate because it allowed the participants to feel more comfortable with their self-reporting.

Using surveys, such as an anonymous online survey, allows researchers to not only examine correlations, but also to generalize various aspects of a population by studying a sample of that population. According to Salkind (2009), researchers use surveys to examine the frequency and relationship between variables and explore constructs such as attitudes, beliefs, opinions, and preferences. Once data are collected

using surveys, according to Gerstman (2008), investigators can organize and analyze the information gathered to further understand the sample in which the data were collected using descriptive and inferential statistics. McKenzie, Neiger, and Thackeray (2009) argued that survey research can ensure sufficient deductive and inductive reasoning as well as a numerical and narrative description of data. The data collected in this study were analyzed using statistical tools and to address the potential for errors; a *p* value of less than .05 was used to reject the null hypotheses with a 95% confidence level. Data were collected from female African American adolescents aged 13-17 to determine the relationship between online risk behaviors and real life sexual behavior.

### **Population and Sampling Procedures**

This study was conducted within the Metropolitan Area of Atlanta, Georgia where the population is nearly 5.3 million, with about 2,950,435 African Americans and nearly 1,019,775 female adolescents between the ages of 10-24 (US Census, 2010b). According to the 1990 census, the Atlanta metropolitan area consist of the following counties: Fulton, DeKalb, Gwinnett, Cobb, Clayton, Butts, Cherokee, Douglas, Fayette, Forsyth, Henry, Newton, Rockdale, Walton, Barrow, Bartow, Coweta, Paulding, Pickens, and Spalding counties (U.S. Census, 2010b). For this study, African American female adolescents who met the following criteria were eligible for participation: (a) age 13-17; (b) able to read, speak, and understand English; and (c) reside in the Metro Atlanta area. Since the nature of this study dealt with sexual behaviors, the main sampling method was a purposeful and volunteer strategy to ensure participants meeting the necessary criteria were recruited from settings where the target population was accessible. As defined,

purposive sampling is “a technique that is targeted and specifies pre-established criteria for recruiting the sample” (Crosby, DiClemente, & Salazar, 2011, p. 303). Although believed to be limited in generalizability because it does not produce a sample that represents the larger population, purposive sampling is thought to be convenient and inexpensive (Salkind, 2009; Schutt, 2011). With such a sensitive topic, random sampling was challenging for various reasons including the inclusion criteria of only African American female adolescents and the disclosure of sexual behaviors. For this reason, both purposeful and volunteer sampling were determined the most appropriate strategies over other sampling methods in order to facilitate the recruitment of participants who met the inclusion criteria.

I focused on African American female aged 13-17 living in Metro Atlanta, Georgia for this study. Government data from the Youth Risk Behavior Survey (YRBS), a national survey used to assess risky health behaviors of the middle school and high school student population of the United States, showed that an average of 369 and 326 African American females in Georgia responded to the voluntary survey in 2011 and 2009, respectively (CDC, 2012d). When calculating an adequate sample size for this study, the sample size calculation for logistic regression based the work of Peduzzi, Concato, Kemper, Holford, and Feinstein (1996) was employed. Researchers recommended that to estimate the minimum number of cases to include in a study the following equation can be used:

$$N = 10 k / p$$

where  $k$  is the number of covariates and  $p$  is the smallest probability of negative or positive cases in the population. In this study, there are 3 covariates to include in the logistic model including attitudes toward and engaging in online risk behaviors, age, and relationship status.. The probability of positive cases in the population will be estimated at 0.20 (20%). Therefore; the minimum sample size required was:  $N = 10 \times 3 / 0.20 = 150$ . Power analysis was conducted and revealed that the observed statistical power was .951.

### **Recruitment Strategy and Data Collection**

Based on pre-established relationships built through community partnerships as well as referrals, participants were recruited from community youth organizations throughout Metro Atlanta area. Solicitation letters (Appendix A) requesting these organizations to be site participants were sent out to explaining how the sole responsibility of a site participant was for the authorized person to distribute study information and materials to the parents of their program. Organizations who agreed to help in recruitment, signed and returned a Letter of Cooperation (Appendix B). Once approved to collect data, the authorized person of the participating organizations was given information about the study to distribute to the parents of their program participants. This information contained a description of the study's purpose, risks and benefits of participation, pertinent background information, procedures, statements of anonymity, contact information, and the survey hyperlink (Appendix C). A copy of the survey questions was also available to the parents. Parents reviewed materials, asked questions, and determined whether or not they wanted their child to participate. Parents

who consented to their child's participation shared the survey hyperlink with their child, implying consent.

Secondary recruitment was done via Facebook. A Facebook event page was created to describe the nature of the study (Appendix D). Invitations were sent to my current social network to solicit parents of adolescents meeting the study's inclusion criteria. Parents interested in their child participating were provided a description of the study's purpose, risks and benefits of participation, pertinent background information, procedures, statements of anonymity, contact information, and the survey hyperlink (Appendix C). Parents also received a copy of the survey questions. Once study materials are reviewed, parents who consented to their child's participation shared the survey hyperlink with their adolescent, implying consent.

The access and usage of new media platforms has increased over the years and youth are now more tech savvy than ever. Using a data collection tool that was familiar to access by the target population was important. Reports revealed 73% of teens aged 12-17 access the Internet and use social networking sites (Lenhart, Purcell, Smith & Zickuhr, 2010). For this study, I used Survey Monkey, an online survey research software, which not only used a SSL encryption feature to protect study participants, but also masked the IP addresses to increase anonymity. Once a participant received and clicked the survey hyperlink, the first page contained an adolescent assent form (Appendix E) where participants gave implied consent. No personal identifiers were obtained and an individual's completion of the survey implied their consent to participate. Furthermore, storage of email addresses and IP addresses were disabled in order to collect survey



responses anonymously. Following assent, participants completed the survey. The survey remained open for 5 months and a sample size of 172 was obtained. The data collected was imported to SPSS version 16.0 software program for analysis.

### **Instrumentation and Operationalization of Constructs**

The survey instrument used for this study was based on portions of three existing instruments relevant to the topic being evaluated: The Sex and Tech Survey (The National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008), the Teens, Social Media and Privacy survey (Madden et al., 2013) and the CDC's (2013c) Youth Risk Behavior Survey (YRBS). The YRBS is public domain and permission was granted to use the Sex and Tech survey and the Teens, Social Media and Privacy survey (Appendix F).

The Youth Risk Behavior Survey (YRBS) was developed by the CDC and is a national school-based survey that monitors six categories of priority health risk behaviors among teens and young adults that contribute to unintentional injuries and violence; tobacco use; alcohol and other drug use; sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases, including HIV infection; unhealthy dietary behaviors; and physical inactivity (CDC, 2013c). The YRBS also includes questions related to obesity and asthma. The YRBS has been previously tested for reliability and used by states to assess youth risk behaviors. To determine its reliability, the CDC conducted two test-retest reliability studies as a measurement of how stable the test was over time (CDC, 2013c). In the first study, researchers sampled 1,679 students in grades 7<sup>th</sup> through 12<sup>th</sup> and administered the survey twice. Results demonstrated that three

fourths of the questions had a high reliability ( $\kappa=61\%-100\%$ ) between the two times that the tests were administered (Brener, Collins, Kann, Warren, & Williams, 1995). However, responses of the seventh grade students were less consistent than those in the higher grades suggesting that this test is more suitable for students in higher grades. Overall, results showed that students who participated in the survey reported health risk behaviors reliably over time. In the second reliability study, Brener et al. (2002) administered the survey twice to a sample of 4,619 students in grades 9-12 and found that results did not vary by gender, grade, or race/ethnicity ( $\kappa=24\%-91\%$ ). These findings also revealed that there were a few items that were inconsistent between the times the surveys were administered. These questions were subsequently omitted from future surveys. The conclusion was that answers to the administered tests were reliable over time. In addition to Brener's tests of reliability, Zullig, Pun, Patton, and Ubbes (2006) conducted a study using a sample of middle school students to complete the YRBS twice in a two week period. These findings support the use of questions from the YRBS for this current study participants to assess sexual behaviors.

Although, to date, no study has been conducted to the test validity of all the self-reporting health risk behaviors of the YRBS, Brener, Billy and Grady (2003) conducted a systematic review to examine factors that may affect the validity of adolescents' self-reports of the risk behaviors assessed by the YRBS. Results demonstrated that when adolescents self-report risk behaviors, the reports are affected by cognitive processes that can influence how the respondents answer the questions including comprehension, retrieval, decision-making and response generation (Brener et al., 2003). Additionally,

according to Brener et al. (2003) adolescent self-reporting of health risk behaviors was found to be affected by situational factors including social desirability, fear, and perceived lack of confidentiality, anonymity or privacy. When assessing the self-reporting of sexual behaviors among adolescents, researchers found that self-reports are mainly subjected to the process of comprehension, leading to misinterpretation of terminology and the process of retrieval, leading to recall bias, where sexual behaviors are underreported because the inability to remember specific encounters (Brener et al., 2003). Also, self-reports of sexual behaviors were reported to be subjected to social desirability, where adolescents would underreport or over report behaviors based on the situation (Brener et al., 2003). Based on previous studies, the limitations of results from the current study was taken into consideration when analyzed. For this study, only five of the multiple choice questions from the YRBS pertaining to sexual risk behaviors were used.

The Sex and Tech survey, on the other hand, was developed to “better understand the interaction between sex and cyberspace with respect to attitudes and behaviors” (National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com, 2008, p. 1). Sex and Tech was created to survey teens aged 13-19 and young adults aged 20-26, to quantify the proportion of youth that are using new media platforms to post and send sexual content. The Sex and Tech survey was administered by TRU, a global research company that conducts marketing research on teens and young adults to provide companies and organizations insight on ways to connect with the younger generation based on their opinions and behaviors. Sex and Tech assessed electronic activity of

participants by utilizing 25 questions in which respondents are directed to mark all that apply or use a Likert scale ranging from 1 = strongly disagree to 5 = strongly agree, and with 6 = don't know. TRU used the Sex and Tech survey to investigate 1,280 teens and young adults aged 13-26. The youth who participated in the Sex and Tech survey were stratified according to the U.S. census and were selected from a sample of volunteers who contribute to TRU online surveys. The data collected were weighted to reflect the demographic population of teens and young adults in the United States (National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com, 2008). For this current study, 18 questions from the Sex and Tech survey pertaining to attitudes and behaviors of using new media to post sexual content and demographics was used.

The Teens, Social Media, and Privacy survey conducted by researchers at the Pew Research Center was part of a project that produced reports exploring the impact of the Internet on families, communities, work and home, daily life, education, health care, and civic and political life. The Pew Project's reports were based on nationwide random phone surveys, online surveys, and qualitative research aimed to be a resource to understand the impact of the Internet on the lives of U.S. adolescents. The results of the Teens, Social Media, and Privacy survey were based on a nationally representative phone survey of 802 parents and their 802 teens ages 12-17. Interviews were conducted in English and Spanish and on landline and cell phones (Madden et al., 2013). The Teens, Social Media, and Privacy survey was developed based on previous research conducted by the Youth and Media Team at the Berkman Center for Internet & Society at Harvard University. This study was conducted with 24 focus group interviews with 156 students

to gain insight on privacy and digital media. This research sample for this study was not designed to be representative of particular population; however, the sample did include participants from diverse ethnic, racial, and economic backgrounds. Participants ranged in age from 11 to 19 (Madden et al., 2013). Only four questions from the Teens, Social Media and Privacy survey was used in the current study to assess the frequency of new media usage by participants.

The survey used in this study was comprised of 10 multiple choice questions, five Likert scale questions, four questions that allow participants to mark all that apply, and eight yes/no questions. Questions ranged from demographics to frequency of new media usage, attitudes, subjective norms, intention, and behaviors regarding posting and sending sexual content using new media platforms as well as sexual behaviors. The questions in this study's survey appeared in the order reflected in Table 2.

Table 2.

*Elements of Online Survey*

<b>Element</b>	<b>Description</b>	<b>Level of Measurement</b>
Demographics	Age	Continuous
	Relationship status	Nominal
	County	Nominal
Usage	Frequency of new media usage	Continuous
Attitudes	Perceptions about sending sexual content	Continuous
Subjective norms	Perceptions about people who send sexual content	Continuous
Intention	Reasons for personal online behaviors	Continuous
Behavior	Use of new media to post sexual content	Continuous
	Sexual behaviors	Continuous

## Demographic Information

Demographic data collected in this study included gender, age, race/ethnicity, county, and relationship status. This data was used to assess characteristics of the respondents.

The following questions related to demographics were included in this study:

1. Are you male or female?

Gender	Yes	No
Male		
Female		

2. How old are you? \_\_\_\_\_

- A. 13
- B. 14
- C. 15
- D. 16
- E. 17
- F. Other

3. Are you:

Race/Ethnicity	Yes	No
Black / African-American		
Other		

4. In which Metro Atlanta county do you reside?

- A. Fulton
- B. Dekalb
- C. Gwinnet
- D. Cobb
- E. Clayton

- F. Butts
- G. Cherokee
- H. Douglas
- I. Fayette
- J. Forsyth
- K. Henry
- L. Newton
- M. Rockdale
- N. Walton
- O. Barrow
- P. Coweta
- Q. Paulding
- R. Pickens
- S. Spalding
- T. Other

5. Does any of the following describe your current relationship status?

Status	Yes	No
Not in a relationship		
In a casual/dating relationship		
In a serious relationship		
Married		

### **Online Attitudes, Behaviors, Subjective Norms, and Intentions**

Attitudes, subjective norms, intentions, and behaviors regarding online risk behaviors were measured using seventeen selected questions from the Sex and Tech survey. Questions included five 5-point Likert scale questions, four yes/no questions, and

eight “mark all that apply” questions. When answering the Likert scale questions, participants were able to respond with: strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree, or strongly agree. Positive responses were coded as follows: strongly disagree=1, somewhat disagree=2, neither agree nor disagree=3, somewhat agree=4, or strongly agree=5. Negative responses were reverse coded as follows: strongly disagree=5, somewhat disagree=4, neither agree nor disagree=3, somewhat agree=2, or strongly agree=1. For the yes/no questions responses were scored as follows: yes = 1, no = 2. For the “mark all that apply” questions, checked responses were coded with 1, responses not checked were coded with 2. A complete list of the items used to measure these constructs are in Appendix G. The following questions were samples from this section:

1. How much do you agree or disagree that each of the following describes the activity of sending suggestive messages or nude/semi-nude pictures/video of oneself?

	<b>Strongly disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree Nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
Flirty	1	2	3	4	5
Gross	5	4	3	2	1
Hot	1	2	3	4	5
Lame	5	4	3	2	1
Stupid	5	4	3	2	1
Dangerous	5	4	3	2	1
Exciting	1	2	3	4	5
Fun	1	2	3	4	5
Harmless	1	2	3	4	5
Immoral	5	4	3	2	1



2. How much do you agree that each of the following is common among people your age?

	<b>Strongly disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree Nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
Sending sexy messages to someone else	1	2	3	4	5
Sharing sexy messages with people other than the one(s) they were meant for	1	2	3	4	5
Sending of sexy pictures/video of oneself to someone else	1	2	3	4	5
Posting sexy pictures/video of oneself online	1	2	3	4	5
Sharing sexy pictures/video with people other than the one(s) they were meant for	1	2	3	4	5

3. Have you personally ever done any of the following?

	Yes	No
Sent a sexually suggestive message to someone (email, IM, text, etc.)	1	2
Posted a sexually suggestive message to someone's online profile (like on MySpace, Facebook, etc.)	1	2
NET sent/posted sexually suggestive messages ("NET" = Internet)	1	2
Received a sexually suggestive message from someone (email, IM, text, etc.)	1	2
Shared a sexually suggestive message with someone other than the one(s) it was originally meant for	1	2
Had a sexually suggestive message (originally meant to be private) shared with me	1	2
None of these	1	2

4. If you have sent or posted sexy messages or pix/videos to someone of yourself, who did you sent/post to? *Please think about any/all of those you've ever sent/posted and mark all that apply.*

Boyfriend / Girlfriend	
Someone I had a crush on	
Someone I dated or hooked up with	
Someone I just met	
Someone I wanted to date or hook up with	
One or more good friends	
Someone I only knew online	
Other	
I have never sent or posted sexy message.	

Frequency of new media usage was determined based on three questions that were previously used on the Pew Research Center survey, “Teens, Social Media and Privacy”, to determine the general use of new media among teens (Madden et al., 2013). The following were samples from this section:

1. Thinking about all the different ways you socialize or communicate with friends...About how often do you do the following with each other:

Usage	several times a day	about once a day	3-5 days a week	1-2 days a week	every few weeks	once a month	A few times a year
use the Internet							
send text messages							
exchange email							
exchange instant messages							
exchange messages through social networking sites like							

MySpace or Facebook							
---------------------------	--	--	--	--	--	--	--

2. About how often do you do the following:

<b>Usage</b>	<b>several times a day</b>	<b>about once a day</b>	<b>3-5 days a week</b>	<b>1-2 days a week</b>	<b>every few weeks</b>	<b>once a month</b>	<b>A few times a year</b>
Send a sexually suggestive message to someone (email, IM, text, etc.)							
Post a sexually suggestive message to someone's online profile (like on MySpace, Facebook, etc.)							
NET send/post sexually suggestive messages (NET=Internet).							
Receive a sexually suggestive message from someone (email, IM, text, etc.)							
Share a sexually suggestive message with someone other than the one(s) it was originally meant for							
Have a sexually suggestive message (originally meant to be private) shared with me							

## **Sexual Behaviors**

Sexual behaviors was the independent variable in this current study. Using the YRBS was most appropriate to assess sexual behaviors because it is a national school-based survey composed of multiple choice questions that is used by states, territories, tribes, and large urban school districts (Brener et al., 2013). The YRBS evaluates sexual behaviors by seven questions. According to the CDC (2013c), sexual risk behaviors place adolescents at risk for STD infections as well as unintended pregnancies. Higher risk sexual risk behaviors reported by the CDC (2013c) include sex without a condom, sex without birth control or Depo-Prevera or sex with four or more people. Research has shown these risk behaviors are associated with an early debut of sexual intercourse among adolescents (CDC. 2013c). When examining high risk adolescent sexual behaviors from studying four national surveys, including the National Survey of Family Growth (NSFG), the National Survey of Adolescent Males (NSAM), the Youth Risk Behavior Survey (YRBS) and the National Longitudinal Study of Adolescent Health (Add Health) adolescent sexual behavior, Santelli et al. (2000) selected six sexual behaviors to measure: ever having had sexual intercourse; having had sexual intercourse in the last three months; pill use at last intercourse; condom use at last intercourse; number of partners in the last three months; and number of lifetime partners. The following questions and scoring code related to sexual behaviors was included in this study:

1. Have you ever had sexual intercourse, including oral, vaginal, or anal sex?
  - A. Yes (1)

- B. I choose not to answer (1.5)
  - C. No (0)
2. During your life, with how many people have you had sexual intercourse?
- A. I have never had sexual intercourse (0)
  - B. 1 person (0)
  - C. 2 people (0)
  - D. 3 people (0)
  - E. 4 or more people (1)
  - F. I choose not to answer (1.5)
3. During the past 3 months, with how many people did you have sexual intercourse?
- A. I have never had sexual intercourse (0)
  - B. I have had sexual intercourse, but not during the past 3 months (0)
  - C. 1 person (0)
  - D. 2 people (0)
  - E. 3 people (0)
  - F. 4 or more people (1)
  - G. I choose not to answer (1.5)
4. The last time you had sexual intercourse, did you or your partner use a condom?
- A. I have never had sexual intercourse (0)
  - B. Yes( 0)
  - C. No (1)
  - D. I choose not to answer (1.5)
5. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response.)

- A. I have never had sexual intercourse (0)
- B. No method was used to prevent pregnancy (1)
- C. Birth control pills (0)
- D. Condoms (0)
- E. An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon) (0)
- F. A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing) (0)
- G. Withdrawal or some other method (0)
- H. I don't know (0)
- I. I choose not to answer (1.5)

### **Data Analysis**

The data gathered from participants were exported from SurveyMonkey into SPSS for analysis. Data were screened for outliers, skewness, and normality. Descriptive statistics was conducted to calculate the mean, standard deviation, median, and mode of the three response items that asked for demographic factors including: age, county, and relationship status. Cross tabulations were used to assess frequency of responses to items pertaining to attitudes, intent, new media use, online risk behaviors and sexual behaviors. Statistical tests including the Pearson  $r$  correlation was used to test Hypotheses one, four, and five to determine whether there was an association between attitudes toward online risk behaviors, age, and real life sexual behavior. Phi coefficient correlation was used to test Hypothesis two and six to determine if there was an association between engaging in online risk behaviors and “real life” sexual behaviors or relationship status. Using a

logistic regression, Hypothesis three was not tested, since a significant association was not found in Hypotheses two. A 95% confidence level and significant level of .05 was applied to decrease the probability of errors.

When computing the Person *r* correlation to determine a relationship between age, online sexual behaviors and real life sexual behaviors, the correlational coefficients can range from -1.00 to +1.00. Positive numbers were used to identify a positive relationship, where as one variable increases or decreases the other variable does as well. Conversely, negative numbers were used to identify a negative relationship, where as one variable increases or decreases, the other variable moves in the opposing direction (Creswell, 2013). For this study, the following was used to determine the strength of the relationship among the variables: strong ( $\pm .70-1.00$ ), moderate ( $\pm .30-.69$ ), none (.00) to weak ( $\pm .00-.29$ ) (Jackson, 2014).

If a significant association was determined between online risk behaviors and real life sexual behavior, a logistic regression model was to be used to determine if participants who engage in online risk behaviors were more likely to engage in sexual behavior than those who do not engage in online risk behaviors. According to Gerstman (2008) utilizing regression analysis was appropriate to understand how one independent variable relates to one dependent variable. Unlike correlation, regression can assess the contribution to or prediction of one or more variables (independent) to cause another (dependent) (Gerstman, 2008). This inferential statistical tool helped to draw conclusions of whether there is a significant relationship between use of social media to post sexual content and sexual behaviors. As previous stated, the independent variable for this

hypothesis was engaging in online risk behaviors where the dependent variable was sexual behaviors. Using the logistic regression model determines if engaging in online risk behaviors can predict the engagement in real life sexual behavior. The formula that represent the logistic regression model was:

$$Y = \log (p (x)/1 - p (x)) = \beta_0 + \beta_1 X$$

where Y was binary and represent the event of interest (response), coded as 0/1,

p (x) is the probability of successes,

X was the independent variable,

$\beta_0$  and  $\beta_1 X$  were the Y-intercept and the slope, respectively.

For this study, the Y was represented by the outcome of sexual behavior: engage in sexual behavior or does not engage in sexual behavior (yes/no). The predictor variables of interest were sending sexually suggestive messages, posting sexually suggestive pictures/videos, and sending messages/pictures using the Internet.  $\beta_0$  is the intercept estimate of the model, which was the value of sexual behavior when online risk behavior was zero.  $\beta_1 X$  was the slope estimate, which was the amount of change in Y when there was a one unit increase in X. The online risk behavior was the score the participants received as measured by the survey. The statistical significance of  $\beta_1$  was assessed to determine significance in the engagement of online risk behaviors and engagement in sexual behavior.

To determine the association between engaging in online risk behaviors, relationship status and sexual behavior, phi coefficient tabulations were conducted for further analysis. Phi coefficient was chosen most appropriate because it was the measure



of the degree of association between two binary variables, where the correlation requires at least two scores for each individual. This test was used to determine if there was a significant difference between engaging in online risk behaviors (yes/no), relationship status (yes, no), and sexual behavior (yes/no).

### **Threats to Validity**

There are potential risks that can influence an experimenter's ability to claim results obtained from an experiment are conclusive and were not affected by other outside variables. According to Salkind (2009), a design is said to have internal validity when the study's outcome is the result of only the manipulation of the independent variable. Conversely, external validity is synonymous with generalizability, where the results of an experiment can be applied to not only the original sample, but also to another sample or to the population from which the original sample came. Study designs can be subject to several threats to internal validity including history, maturation, mortality, instrumentation, testing, regression, and selection, as well as threats to external validity including threats to experimental procedures, treatments, or experiences of the participants (Creswell, 2013; Nachmias et al., 2008). Understanding the validity of the methodology and instrumentation of a study is imperative to ensure the resulting data from each measurement tool will provide accurate and reliable information that can be used to better understand the studied phenomenon.

In using a survey research design for this study, there were several threats to both internal and external validity. Firstly, since the participants were not randomly selected there was a threat of selection. Secondly, history threats to internal validity were also

possible in this study since the method of data collection was an anonymous online survey. Thirdly, maturation threats to internal validity were possible because of varying composition of the groups that could result in internal changes in the respondents. For that reason, the use of pre-existing surveys was appropriate to increase accuracy of responses. Lastly, this study could have been subjected to testing and instrumentation threat to internal validity. The YRBS has been widely used in previous research and previous validated; however, the Sex and Tech Survey has no records of validation procedures, and thus poses limitations.

Having validity of measurement in this study was imperative to ensure the resulting data from the survey would provide accurate and reliable information. Nachmias et al. (2008) asserted that validity of measurement is concerned with understanding if the test used is measuring what it was designed to measure. Content validity, empirical validity, and construct validity should be considered when designing a study. The goal of all measurement tools is to ensure the test measures what it is designed to measure and is consistent in doing so. For this study, only the questions about sexual behaviors taken from the YRBS have been validated and received expert consultation to establish external validity; however, the other preexisting studies were used in nationwide studies and deemed appropriate to measure what they intended.

In using various methods to measure behavior, in this study, I used instruments that were expected to increase the reliability of measurements and decrease the threat of internal validity in order to obtain generalizable data from the sample population. According to Wiersma (2012), when conducting survey research whether online or

offline, the threats to internal validity include access control, social desirability, and instrumentation such as display effects. Wiersma suggests that when using an online survey, there is a possibility that access to the survey can be compromised by people who complete it more than once or have difficulty accessing it. Social desirability is also thought to be a threat to internal validity in survey research (Wiersma, 2012). When using surveys to obtain self-reports of behaviors, there are often many kinds of response bias that may arise including misreporting, over reporting, or underreporting (McKenzie et al., 2009). When responding to questions of such a sensitive topic such as sexual behaviors, the answers to the questions may result in participants giving the most socially acceptable answers. Participants may to misreport or underreport behaviors they feel are inappropriate by others or they may tend to over report behaviors they feel be more acceptable to others (Donaldson & Grant, 2002). To address these threats in the current study, prior to completing the survey, participants were required to read and acknowledge an assent statement that addressed privacy issues by providing an explanation of the steps used by SurveyMonkey to ensure anonymity including enabling the SSL encryption feature and masking IP addresses.

Lastly, Wiersma (2012) suggested that survey research may be subjected to display effects, which pose a threat to internal validity. Because participants will be able to view the survey from various devices including cell phones, computers, iPad, tablets, etc., questions may be interpreted differently based on the way the survey is displayed on the various screens, slow Internet connection may discourage completion, or devices may have insufficient software or incorrect settings in order to view the survey appropriately

(Wiersma, 2012). To address this threat in the current study, the survey employed basic HTML codes that are standard for all devices. Wiersma contended that survey research can also be subject to threats to external validity including lack of frame for random sampling and low response rates. Creswell (2013) supported Wiersma (2012) in stating that often survey research is not generalizable due to the lack of random sampling. It is up to investigators to reduce the threat of validity in both design and measurement to ensure results are not only accurate and reliable, but also generalizable. For this study, the use of not only preexisting surveys, but also, a commonly used survey research software addressed the potential threats possible.

### **Ethical Considerations**

When dealing with human populations and research, ethical considerations must be taken into account to ensure the protection of participants. Crosby et al. (2011) noted that researchers can explain and justify program plans through the IRB, who provide ethical review and approval for all research that samples human populations. IRB approval ensures that the three basic ethical principles of the Belmont Report, including respect for others, beneficence and justice is maintained throughout the research study (Crosby et al., 2011). This study was conducted in accordance with the approval from Walden University's Institutional Review Board (IRB) # 04-02-14-0075036 prior to study implementation to ensure the ethical considerations for participant were met.

Online survey research is emerging; however, IRB policies and guidelines for this type of research study is limited. Due to the common use of online survey software such

as Survey Money, researchers have begun to address some concerns. Moreno, Gonui, Moreno, and Diekema (2013) discussed the ethical concerns involving survey research and obtaining informed consent online. Issel (2004) claimed that informed consent forms provide an agreement that participants voluntarily and willingly participate in the study with awareness of benefits and risks. Obtaining informed consent online reduces the ability of the researcher to have face-to-face contact with the participant, which reduces the ability of the researcher to observe participants' reactions to the consent process as well as be present to ensure understanding (Moreno et al., 2013). Another ethical issue addressed by Moreno et al, was how to obtain parental consent when conducting research with minors as required by federal regulations. When conducting online research, there is a risk that minors could pose as a parent and complete the parental consent form. When conducting online research, these are important concerns to address.

To ensure ethical practices were taken, in the current study, parents/guardians were recruited, rather than the teen themselves. Parents were solicited and provided with the information and materials about the study, then had the opportunity to consent to their child's participation by sharing the survey hyperlink. Using this type a research design, there was no more than minimal risk to participants completing the anonymous online survey. Participation in this study was voluntary and all participants that accessed the survey link received an assent form that explained the purpose of the study, security measures, and criteria for participation prior to completion of the survey. Participants had aware that their individual responses would not be revealed to any associated organization or reflected in the final analysis of the study. Additionally, there was an SSL

encryption to protect study participants as well as a masking of IP addresses. Participants were also provided with contact information they could have used during the consent process, if needed.

### **Summary**

In this chapter, the rationale for using a correlational survey design as the most appropriate methodology to determine an association between online sexual risk behaviors and real life sexual behaviors was discussed. I also provided a detailed description of the data collection and data analysis procedures that was used to address the research questions. The recruitment strategies employed, as well as the sampling methods utilized were also described. The development of the instrumentation based on three pre-existing surveys that was used to collect data was explained. These pre-existing survey questions were used to collect data on attitudes about posting sexual content on new media platforms, use of new media platforms, and real life sexual behaviors. As outlined in this chapter, the data was analyzed using SPSS to conduct descriptive, correlation, and regression analyses. These statistical tools were used to provide statistical evidence that supported the acceptance or rejection of the null hypothesis. Chapter 4 provides a detailed explanation of the results of analysis.

## Chapter 4: Results

### Overview

The purpose of this study was to explore the attitudes, intentions, and beliefs about online risk behavior and to determine whether there was a significant association between online risk behaviors such as posting/sending sexual content online and real life sexual behaviors among African American teenage girls living in Metro Atlanta, Georgia. Although emerging technology provides teens the opportunity to have open communication with each other through individual profiles, private or instant messaging, blogging, or group messages, there is limited information about how these new media platforms may influence adolescents' sexual health. In this chapter, I will provide an account of the way in which the current study was conducted, describe the data collection procedures employed, review the data analysis techniques conducted, and explain the results of the statistical analyses used to test the study hypotheses and address the research questions.

This study was a quantitative correlational design, where an online survey was used to collect data. The following research questions were assessed:

1. Is there an association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area?
2. Is there an association between engaging in online risk behaviors and real life sexual behavior among African American females living in the Metro Atlanta area?

3. Are African American female adolescents who engage in online risk behaviors more likely to engage in sexual behavior than those who do not post sexual content using new media?
4. Is age associated with attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta?
5. Is age associated with engaging in online risk behaviors among African American female adolescents in Metro Atlanta?
6. Is there an association between relationship status and engaging in online risk behaviors among African American female adolescents in the Metro Atlanta area?

The following hypotheses were tested:

$H_01$ : There is no significant association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

$H_{a1}$ : There is a significant association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

$H_02$ : There is no significant association between online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.



*H<sub>a2</sub>*: There is a significant association between online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area.

*H<sub>03</sub>*: Engaging in online risk behavior is not predictive of sexual behavior among African American female adolescents in Metro Atlanta.

*H<sub>a3</sub>*: Engaging in online risk behavior is predictive sexual behavior among African American female adolescents in Metro Atlanta.

*H<sub>04</sub>*: There is no significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>a4</sub>*: There is a significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>05</sub>*. There is no significant association between age and online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>a5</sub>*: There is a significant association between age and online risk behaviors among African American adolescent females in Metro Atlanta.

*H<sub>06</sub>*. There is no significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta.

*H<sub>a6</sub>*: There is a significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta.

### **Data Collection**

The online survey consisting of a 30-item questionnaire including the assent page (Appendix G) was delivered via Survey Monkey. The survey was comprised of portions

of three pre-existing online surveys including the YRBS; the Sex and Tech Survey; and the Teens, Social Media, and Privacy survey. The breakdown was as follows: 18 questions from Sex and Tech pertaining to attitudes and behaviors of online risk behaviors; four questions from the Teens, Social Media, and Privacy to assess the frequency of new media usage by participants; and five of the multiple choice questions from the YRBS pertaining to sexual risk behaviors. Three questions were also used to obtain demographic information.

Between April, 2014 and August, 2014, I sent a letter (Appendix A) via e-mail to 126 community organizations that provide services to teenage girls within the Metro Atlanta area to solicit their organization's participation as site participants in this study. They were requested to provide study information and the study link to the parents of their program participants; in turn, the parents were asked to share the survey link with their child, if they consented to their child's participation. A total of 26 organizations agreed to be site participants for this study. In addition, parents were recruited through a Facebook event page (Appendix D) with weekly postings of the study's purpose, risks, 'and benefits of participation' pertinent background information; procedures; anonymity and contact information; and the survey hyperlink. The collected data were exported from Survey Monkey to SPSS 18 for statistical analysis.

The population from which the sample was drawn consisted of the following inclusion criteria: female, African American, and aged 13-17 years. A total of 172 respondents completed the survey; however, five did not report their gender, three did not report their age, 14 reported that they did not meet the age requirement (younger than 13,

older than 17), and four participants reported they did not live in the Metro Atlanta area. These respondents did not meet the study's inclusion criteria, and their data were not included in this study. Additionally, 35 respondents were missing data relevant to the variable of interest, sexual behavior; therefore, they could not be included in the analysis. This resulted in a sample size of 111 girls. A posthoc power analysis was conducted using SPSS and revealed that the observed statistical power was .851. Missing values were estimated using a regression or expectation-maximization analyses (Pallant, 2010). Obtaining sexual health information from teens in a self-reporting survey can be challenging. The sensitive content could be a possible explanation for the incomplete questions. Also, although participants were recruited from multiple organizations as well as from the general community, recruitment was directed at parents rather than the teenagers themselves. This indirect recruitment for teens could also explain the low response rate.

Descriptive and demographic characteristics of the sample were calculated. Descriptive statistics were conducted to calculate the mean and standard deviation of the three response items related to demographic factors: age, county, and relationship status. Cross tabulations were used to assess frequency of responses to items pertaining to attitudes, intent, new media use, and online risk behaviors. The Pearson  $r$  correlation test was used to test Hypotheses 1, 4, and 5 to determine whether there was an association between attitudes toward online risk behaviors, age, and real life sexual behavior. Phi coefficient correlation was used to test Hypotheses 2 and 6 to determine if there was an association between engaging in online behaviors and real life sexual behaviors or

relationship status. A logistic regression was not conducted on Hypothesis 3 because no significant association was found in Hypotheses 2. However, posthoc analysis included a logistic regression model using the variables online risk behavior, real life sexual behavior and age. A  $p$  value of  $< .05$  was established to support rejecting the null hypotheses with a 95% confidence level.

### **Descriptive Analysis**

#### **Demographics Analysis**

All respondents were African American females and not married. Descriptive statistics indicated that the highest percentage of respondents were 13 years of age (36.0%) and the lowest percentage of respondents were 17 years of age (10.8%). Respondents ranged in age from 13 to 17 years with a median age of 14 and average age of 14 ( $M=14.48$ ,  $SD=1.41$ ). In Table 3, the frequency ( $n$ ) counts and percentages for the demographic variables are displayed.

Table 3.

*Frequency Counts and Percentages for Selected Demographic Variables (N = 111)*

Variable	Category	$n$	%
Age	13	40	36.0
	14	21	18.9
	15	19	17.1
	16	19	17.1
	17	12	10.8

*Table 1 cont'd*

Variable	Category	<i>n</i>	%
Relationship Status	No	66	60.4
	Yes	45	39.7
County	Dekalb	32	28.8
	Clayton	30	27.0
	Gwinnet	21	18.9
	Fulton	10	9.0
	Rockdale	4	3.6

Most respondents reported they were not in a relationship (60.4%). Due to the age of respondents, admittance of a casual or serious relationship could be socially undesirable because parental rules may prohibit dating relationships during early adolescence, thus leading to more socially acceptable responses. Also, participants of the organizations that were site participants were mostly middle school students aged 13-14 (54.9%) during the time of the survey recruitment. The majority of respondents reported they lived in DeKalb (28.8%), Clayton (27.0%) or Gwinnett (18.9%) counties. This may have been because most of community organizations that participated as site participants were concentrated in these counties.

### **New Media Frequency and Usage**

In assessing the various ways that respondents access new media platforms, the frequency counts and percentages were determined for various types of devices (Table 4). Most respondents reported they use and frequently access smartphones (92.3%), cell

phones (90.1%), tablets (82.5%) and laptop computers (81.6%). The device with the lowest percentage of access was a video mp3 player (30.1%). In Table 5, the percentage of new media devices used among respondents are illustrated.

Table 4.

*Frequency Counts and Percentages for Respondents and New Media Usage (N=111).*

<b>Device</b>	<b><i>n</i></b>	<b>%</b>
Smartphone	102	92.3
Cell Phone	100	90.1
Tablet	92	82.5
Laptop computer	91	81.6
Game console	85	76.6
Webcam	73	65.6
Mp3 player or IPod	71	63.8
Digital camera	68	60.9
Desktop computer	66	59.6
Video recorder	49	44.0
Video mp3 player	33	30.1
None of these	18	16.0

Most respondents reported that to socialize and communicate with their friends they sent text messages (88.3%) or socialized through accessing the Internet (77.5%)

several times a day. Fewer respondents reported that they exchanged emails several times a day (12.6%). In Table 5, the percentages of respondents who use new media several times a day to socialize and communicate with their friends are shown.

Table 5.

*Frequency Counts and Percentages for Respondents Who Used New Media Several Times A Day To Socialize And Communicate With Their Friends (N=111).*

<b>New Media Behavior</b>	<b><i>n</i></b>	<b>%</b>
Send text messages	98	88.3
Use the Internet	86	77.5
Exchange instant messages	58	52.3
Exchange messages through social networking sites	47	42.3
Exchange emails	14	12.6

With the emergence of new technological devices, new media has become increasingly popular among adolescents. When asked about their personal behaviors while using new media platforms, nearly all respondents reported they sent/received text messages (96.4%). Most had profiles on social networking sites (91.0%), posted photos online (87.4%), and sent/received pictures from their cell phone (87.4%). The least common online behavior reported among respondents was having a profile on dating sites (5.4%). In Table 6, the frequencies and percentages of respondents that engaged in various online behaviors are displayed.

Table 6.

*Frequency Counts and Percentages of Respondents Who Access New Media and Their Online Behaviors (N=111).*

<b>New Media Behavior</b>	<b><i>n</i></b>	<b>%</b>
Send/receive text messages	107	96.4
Have a profile on a social-networking site (like MySpace, Facebook, etc.)	101	91.0
Post photos online	97	87.4
Send/receive pictures or video on your cellphone	97	87.4
View others' profiles/pictures on a social-networking site	94	84.7
Watch TV shows online or on your MP3 Player	86	77.5
Send/receive pictures or video on a computer	54	48.6
Regularly read others' personal blogs	52	46.8
Post videos online (like on YouTube)	41	36.9
Write/update a personal blog	39	35.1
View others' profiles/pictures on a dating/singles site	9	8.1
Have a profile on a dating or singles site (like Match, Ok Cupid, etc.)	6	5.4

In Table 7, the percentage of respondents that had profiles/accounts on various social media sites are illustrated. Kik (92.8%) and Instagram (87.4%) were reported to be two of the most popular social media sites where respondents had an account or profile. Creepy, Reddit, Qooh.me, and 4Chan were least accessed by respondents (0%). With the



continual emergence of social media platforms, adolescents have a variety of sites they can access to communicate with their social networks.

Table 7.

*Frequency Counts And Percentages of Respondents Who Access Social Media Site (N=111).*

<b>Social Media Site</b>	<b><i>n</i></b>	<b>%</b>
Kik	103	92.8
Instagram	97	87.4
YouTube	84	75.7
Oovoo	82	73.9
Snapchat	77	69.4
Ask.fm	76	68.5
Vine	75	67.6
Facebook	73	65.8
Twitter	71	64.0
Tumblr	53	47.4
Pinterest	45	40.5
Keek	45	40.5
Wanelo	30	27.0
Pheed	30	27.0
Creepy	0	0
Reddit	0	0

## Sexual Behavior

Sexual behavior was the independent variable of interest. Of those that participated, 8.1% of respondents reported ever having sexual intercourse. In Table 8, the frequency and percentages of the sexual behaviors assessed are displayed.

Table 8.

*Frequency Counts and Percentages for Sexual Behavior Variables (N = 111).*

<b>Variable and Category</b>	<b><i>n</i></b>	<b>%</b>
Ever had sexual intercourse	9	8.1
Currently Sexually Active*	8	7.2
Birth Control Use§	8	7.2
Condom Use+	7	6.3
Had Sexual Intercourse with Four or More Persons During Their Life	3	2.7

\* Had sexual intercourse with at least one person during the 3 months before the survey.

§ To prevent pregnancy.

+ Among students who were currently sexually active.

Out of the 40 respondents who were 13 years old, 36 reported never having had sexual intercourse (90%). Alternatively, out of the 12 respondents who were 17 years old, 8 reported never having sexual intercourse (67%). Of those reporting having ever had sexual intercourse, four were 17 years old (44.4%,  $n=4$ ) and five were younger than 17. Also, the frequency of having had sexual intercourse with four or more persons was highest among 17 year old respondents ( $n=2$ ) than the younger respondents ( $n=1$ ). Of the respondents, 7.2% ( $n=8$ ) reported they were sexually active, and have had sexual

intercourse during the past three months of taking the survey. In Table 9, the frequency and percentage of respondents who never had sexual intercourse by age are shown. The reports from respondents who never had sexual intercourse decreased with age.

Table 9.

*Frequency Counts And Percentages For Respondents Who Never Had Sexual Intercourse (N = 111).*

<b>Age</b>	<b><i>n</i></b>	<b>%</b>
13	36	37.5
14	18	18.8
15	18	18.8
16	16	16.7
17	8	8.3

### **New Media and Attitudes**

The level of agreement for each term that describes the respondents' attitudes toward sending suggestive messages or nude/semi-nude pictures/video of themselves is displayed in Table 10. On average, participants neither agree nor disagree that sending sexual content online was dangerous ( $M=3.75$ ,  $SD=1.63$ ), stupid ( $M=3.49$ ,  $SD=1.70$ ), lame ( $M=3.29$ ,  $SD=1.64$ ) or gross ( $M=3.17$ ,  $SD=1.63$ ). However, participants disagreed that sending suggestive messages or nude/semi-nude pictures/video of themselves was harmless ( $M=1.88$ ,  $SD=1.24$ ).

Table 10.

*Descriptive Statistics for Attitudes Toward Online Sexual Risk Behaviors.*

Attitude <sup>a</sup>	M	SD	Low	High
Dangerous	3.75	1.63	1.00	5.00
Stupid	3.49	1.70	1.00	5.00
Lame	3.29	1.64	1.00	5.00
Gross	3.17	1.63	1.00	5.00
Immoral	2.70	1.62	1.00	5.00
Flirty	2.44	1.45	1.00	5.00
Exciting	2.20	1.40	1.00	5.00
Hot	2.17	1.34	1.00	5.00
Fun	2.14	1.41	0.95	5.00
Harmless	1.88	1.24	1.00	5.00

<sup>a</sup>Coding: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4= agree, 5=strongly

**New Media and Intentions**

When asked what they believed were the intentions of girls their age who sent/posted messages or pictures/videos of themselves, 90.1% agreed that girls who did this, did so in order to get or keep a guy's attention; 74.8% believed it was done to get a guy to like them; and 73% believed it was done to get noticed. Fewer respondents felt peer pressure was the reason girls their age sent/posted sexy messages or pictures/videos (25.2%). Furthermore, on average, participants somewhat disagreed that the intentions of sending or posting sexy messages or pictures/videos of themselves to someone was fun/flirtatious ( $M=2.69$   $SD=1.72$ ), done to get a guy/girl's attention ( $M=2.66$ ,  $SD=1.66$ ),

done in response to one that was sent to them ( $M=2.47$ ,  $SD=1.55$ ), or done to be a sexy present for a boyfriend/girlfriend ( $M=2.37$ ,  $SD=1.56$ ).

### **New Media and Online Risk Behavior**

As previously discussed, understanding how adolescents use new media platforms is the initial step to assess its impact. Adolescents who frequently socialize using social networking sites conduct various behaviors while accessing these platforms (Purcell, 2012). When asked how common respondents felt various online risk behaviors were among their peers, respondents neither agreed nor disagreed that online risk behaviors such as sexy messages to someone else ( $M=3.61$ ,  $SD=2.00$ ) or sharing sexy pictures/videos with others ( $M=2.99$ ,  $SD=2.04$ ) were common among their peers (Table 11).

Table 11.

*Descriptive Statistics For New Media Behavior And How Common Respondents Feel This Behavior Is Among Their Peers.*

<b>New Media Behavior<sup>a</sup></b>	<b>M</b>	<b>SD</b>	<b>Low</b>	<b>High</b>
Sending sexy messages to someone else.	3.61	2.00	1.00	5.00
Sending of sexy pictures/video of oneself to someone else.	3.33	2.11	1.00	5.00
Posting sexy pictures/video of oneself online.	3.10	2.04	1.00	5.00
Sharing sexy messages with others.	3.07	2.04	1.00	5.00
Sharing sexy pictures/videos with others.	2.99	2.04	1.00	5.00

<sup>a</sup>Coding: 1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4= agree, 5= strongly agree

When asked if they personally had ever done any of these risky online behaviors, most reported they received sexually suggestive message from someone (57.1%). Fewer respondents reported they shared a sexually message with someone (13.2%). In Table 12, the percentage of respondents that engaged in selected online risk behaviors are illustrated.

Table 12.

*Frequency Counts and Percentages of Respondents Who Engage in Selected Online Risk Behaviors.*

<b>Online Risk Behaviors</b>	<b><i>n</i></b>	<b>%</b>
Received a sexually suggestive message from someone (email, IM, text, etc.)	63	57.1
Received a nude or semi-nude picture/video from someone	45	41.1
Had a sexually suggestive message (originally meant to be private) shared	44	39.6
Sent a sexually suggestive message to someone (email, IM, text, etc.)	27	24.3
Sent a nude or semi-nude picture/video (of yourself) to someone	18	16.2

### **Respondents' Summated Scores**

#### **New Media Attitudes**

As previously discussed, attitudes of sending suggestive messages or nude/semi-nude pictures/video was measured using a validated 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*) instrument that consisted of 10 items. Prior to performing statistical analyses, five of the 10 attitude descriptive items that were

negatively worded (gross, lame, stupid, dangerous, and immoral) were reverse scored. Total scores are displayed in Table 13. Mean scores of four and above represented more receptive attitudes towards sending suggestive messages or nude/semi-nude pictures/video online, scores between three and four indicated ambivalence, and scores below three represented a less receptive attitude towards sending suggestive messages or nude/semi-nude pictures/video online. The total attitude score had a mean score of 2.44 with a standard deviation of .86. The individual items rated highest were immoral ( $M = 3.28$ ,  $SD = 1.53$ ), gross ( $M = 2.86$ ,  $SD = 1.54$ ), and lame ( $M = 2.77$ ,  $SD = 1.52$ ). The individual items with the lowest mean scores were hot ( $M = 2.12$ ,  $SD = 1.26$ ), fun ( $M = 2.11$ ,  $SD = 1.34$ ) and harmless ( $M = 1.84$ ,  $SD = 1.17$ ).

Table 13.

*Summated Scale for Attitude Toward Online Risk Behavior Scores (N = 111).*

<b><i>Attitude Score</i></b>	<b><i>M</i></b>	<b><i>SD</i></b>	<b><i>Low</i></b>	<b><i>High</i></b>
Total Attitude	2.44	0.86	1.00	5.00
Immoral	3.28	1.53	1.00	5.00
Gross	2.86	1.54	1.00	5.00
Lame	2.77	1.52	1.00	5.00
Stupid	2.56	1.60	1.00	5.00
Flirty	2.43	1.42	1.00	5.00
Dangerous	2.29	1.54	1.00	5.00
Exciting	2.16	1.31	1.00	5.00
Hot	2.12	1.26	1.00	5.00
Fun	2.11	1.34	0.95	5.00
Harmless	1.84	1.17	1.00	5.00

### Real Life Sexual Behaviors

Real life sexual behaviors of each participant was assessed. The YRBS has been widely used to assess direct markers for sexual risk taking and unintended pregnancy (Brener et al., 2002). Answers to questions to assess real life sexual behaviors were coded by assigning a one to mark risky sexual behaviors and a zero to mark more normative responses. Mean scores of .50 and above represented risky behaviors, and scores below .50 represented normative behaviors (Santelli et al., 2000). The total real life sexual risk behavior score had a mean score of 0.10 with a standard deviation of .33. Total scores for each individual item are displayed in Table 14.

Table 14.

*Summated Scale for Sexual Behavior Scores (N = 111).*

<i>Sexual Behavior Score</i>	<i>M</i>	<i>SD</i>
Total Sexual Risk Behavior	0.10	0.33
Ever had sexual intercourse	0.16	0.42
Currently Sexually Active	0.11	0.37
Birth Control Use	0.07	0.31
Condom Use	0.09	0.35
Had Sexual Intercourse with Four or More Persons During Their Life	0.09	0.35

### Online Risk Behaviors

Online risk behaviors were assessed using yes/no questions, where one was coded for yes and two for no. In Table 15, the summated scale for online risk behavior scores



are illustrated. Mean scores less than 1.5 represented low to higher risk for engaging in online behaviors. Mean scores greater than 1.5 represented a low to no risk for engaging in online behaviors.

Table 15.

*Summated Scale for Online Risk Behavior Scores (N = 111).*

<b>Online Risk Behavior Score</b>	<b>M</b>	<b>SD</b>
Total Online Risk Behavior	1.87	0.20
Sent/posted a nude or semi-nude picture/video on Internet	1.93	0.26
Posted a sexually suggestive message to someone's online profile	1.93	0.26
Sent/Posted a sexually suggestive message on Internet	1.92	0.27
Posted a nude/semi-nude picture/video of yourself online	1.90	0.30
Sent a nude/semi-nude picture/video (of yourself) to someone via phone	1.81	0.39
Sent a sexually suggestive message to someone (email, IM, text, etc.)	1.76	0.43

In Table 16, the psychometric characteristics for the three summated scale scores of interest are shown. The Cronbach alpha reliability coefficients ranged from  $r = .67$  to  $r = .95$  with a median alpha of  $r = .80$ . This suggested that all scales had adequate levels of internal reliability.

Table 16.

*Psychometric Characteristics for Summated Scale Scores (N = 111).*

<b>Score</b>	<b># of Items</b>	<b>M</b>	<b>SD</b>	<b>Alpha</b>
New Media Attitudes	10	2.44	0.86	.80
Real Life Sexual Behaviors	5	0.10	0.33	.95
Online Risk Behaviors	6	1.87	0.20	.67

**Data Analysis by Research Question**

In this section, I will report the statistical analysis of this study's findings, organized by research question.

**Research Question 1 Analysis**

Research question 1 was: Is there an association between attitudes about online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area? To answer this question, the Person  $r$  correlation was conducted on attitudes of online risk behaviors and real life sexual behaviors to determine whether a statistically significant relationship existed between the two variables. As displayed in Table 17, the resulting correlation coefficient for the entire scale was  $r = .096$  ( $p = .319$ ) and the correlation coefficient ranged from  $-.003$  to  $.105$  for the individual items. Since the  $p$  value of  $.319$  was greater than the 5% level of significance, I failed to reject the null hypothesis. There was insufficient evidence to conclude that a significant correlation existed between attitudes of online risk behaviors and real life sexual behaviors.

Table 17.

*Correlations for Attitudes Toward Online Risk Behaviors and Real Life Sexual Behaviors (N=111).*

Variable	Sexual Behavior	
	<i>r</i>	<i>p</i>
Total attitudes of online risk behaviors	.096	.319
Flirty	.007	.946
Hot	-.003	.977
Exciting	.103	.282
Fun	.101	.291
Harmless	.048	.617
Gross	.077	.421
Lame	.052	.588
Stupid	.097	.312
Dangerous	.105	.271
Immoral	-.018	.853

### **Research Question 2 Analysis**

Research question two was: Is there an association between engaging in online risk behaviors and real life sexual behavior among African American females living in the Metro Atlanta area? As in previous studies that have used the YRBS to assess adolescent sexual risk behaviors, answers to questions about sexual risk behaviours in this study were coded by assigning a one to mark risky sexual behaviours and a zero to mark more normative

responses (Santelli et al., 2000). Conversely, since no precedent was found, answers to questions about online risk behaviors was coded in SPSS by assigning a one to mark engagement in online risk behaviors (yes) and a two to mark no engagement in online risk behaviors (no). Then, the phi coefficient test was computed. Regarding online risk behaviors and sexual behavior scores, as shown in Table 18, there was no significant correlation found. The correlation coefficient ranged from .157 to .386 for the individual items and was .748 for the entire scale ( $p=.083$ ). Therefore, I failed to reject null Hypothesis 2 and concluded that there was not enough evidence to support a relationship between engaging in sexual behaviors and engaging in online risk behaviors. Although no significance was found for the total scores, when assessing each individual item, a weak positive correlation existed between real life sexual behaviors and one of six online risk behavior items: posting sexually suggestive messages online ( $\Phi = .346, p=.036$ ).

Table 18.

*Correlations for Online Risk Behaviors and Real Life Sexual Behaviors (N=111).*

Variable	Sexual Behavior	
	<i>r</i>	<i>p</i>
Total Online Risk Behavior	.748	.083
Sent a sexually suggestive message to someone (email, IM, text, etc.)	.313	.209
Posted a sexually suggestive message to someone's online profile	.386	.036 *
Sent/Posted a sexually suggestive message on Internet	.157	.951
Sent a nude or semi-nude picture/video (of yourself) to someone	.319	.184

Table 18 (cont'd)

Variable	Sexual Behavior	
	<i>r</i>	<i>p</i>
Posted a nude or semi-nude picture/video of yourself online	.318	.190
Sent/posted a nude or semi-nude picture/video on Internet	.172	.916

\*  $p < .05$

### Research Question 3 Analysis

Research question three was: Are African American female adolescents who engage in online risk behaviors more likely to engage in sexual behavior than those who do not post sexual content using new media? Since no relationship was found between these two variables from research question two, a logistic regression was not conducted to test Hypothesis 3.

### Research Question 4 Analysis

Research question four was: Is there an association between age and attitudes of online risk behaviors among African American adolescent females in Metro Atlanta? To answer this question, Hypothesis 4 was formulated: There is no significant association between age and attitudes about online risk behaviors among African American adolescent females in Metro Atlanta. A Pearson *r* correlation analysis was performed between age of respondents and attitudes of online risk behaviors to determine whether a statistically significant relationship existed between the two variables. As illustrated in Table 19, no significant correlation was found between overall attitudes of online risk behaviors and age. The resulting correlation coefficient for the entire scale was  $r = -.114$

( $p = .234$ ). Because the  $p$  value of .234 was greater than the 5% level of significance, the results fail to reject the null hypothesis. There was insufficient evidence to conclude that a significant correlation existed between attitudes of online risk behaviors and age.

Although, no significance was found overall, significant relationships were found to exist between age and three of 10 attitudes of online risk behaviors, specifically, “lame” ( $r = -.24, p = .012$ ), “stupid” ( $r = -.22, p = .019$ ), and “dangerous” ( $r = -.27, p = .004$ ).

Table 19.

*Correlations for Attitudes Toward Online Risk Behaviors and Age (N=111).*

Variable	Age		
	<i>r</i>	<i>p</i>	
Total attitudes of online risk behaviors	-.114	.234	
Flirty	.160	.094	
Hot	.055	.566	
Exciting	.068	.480	
Fun	.017	.856	
Harmless	-.014	.886	
Gross	-.050	.600	
Lame	-.238	.012	*
Stupid	-.223	.019	*
Dangerous	-.271	.004	**
Immoral	-.104	.276	

\*  $p < .05$ . \*\*  $p < .01$

### Research Question 5 Analysis

Research question five was: Is age associated with engaging in online risk behavior among African American female adolescents in Metro Atlanta? To answer this question, null Hypothesis 5 (there is no significant association between age and engaging in online risk behaviors among African American adolescent females in Metro Atlanta) was addressed. A Pearson  $r$  correlation analysis was performed between age of respondents and overall online risk behaviors to determine whether a statistically significant relationship existed between the two variables. As illustrated in Table 20, the resulting correlation coefficient was  $r = -.294$  ( $p = .002$ ). Because the  $p$  value of .002 was less than the 5% level of significance, I rejected null Hypothesis 5. There was sufficient evidence to conclude that a weak negative correlation existed between age and engaging in online risk behaviors. Moreover, weak negative correlations were found to exist between age and two of the six online risk behavior subscales: posting sexually suggestive messages online to someone's profile ( $r = -.203$ ,  $p = .032$ ) and sending nude or semi-nude pictures/videos to someone via cell phone, email, etc. ( $r = -.344$ ,  $p = .000$ ). There is a significant negative weak correlation between sending nude or semi-nude pictures/videos, posting sexually suggestive messages and age among adolescent African American females living in the Metro Atlanta area.

Table 20.

*Correlations for Online Risk Behaviors and Age (N=111).*

Variable	Age		
	<i>r</i>	<i>p</i>	
Total Online Risk Behavior	-.294	.002	**
Sent a sexually suggestive message to someone (email, IM, text, etc.)	-.167	.081	
Posted a sexually suggestive message to someone's online profile	-.203	.032	*
Sent/Posted a sexually suggestive message on Internet	-.158	.098	
Sent a nude/semi-nude picture/video (of yourself) to someone via phone	-.344	.000	**
Posted a nude/semi-nude picture/video of yourself online	-.167	.080	
Sent/posted a nude or semi-nude picture/video on Internet	-.004	.963	

\*  $p < .05$ . \*\*  $p < .01$

**Research Question 6 Analysis**

Research question six was: Is there an association between relationship status and online risk behaviors among African American female adolescents in the Metro Atlanta area? To answer this question, the phi coefficient was computed. As with research question two, answers to questions about engaging in online risk behaviors was coded by assigning a one to mark engagement in online risk behaviors (yes) and a two to mark no engagement in online risk behaviors (no). Answers about relationship status were coded by assigning a one to mark in a relationship (yes) and a two to mark not in a relationship (no). Then, the phi coefficient test was computed. As Table 21 displays, the resulting correlation between relationship status and overall online risk behaviors was not significant ( $\Phi = .455, p = .233$ ). Therefore, null Hypothesis 6 was not rejected because



there was insufficient evidence to conclude that there was a correlation between relationship status and online risk behaviors. Although no relationship existed between overall online risk behaviors and relationship status, results illustrated that one of six online risk behaviors was significant, specifically, sending a sexually suggestive message to someone ( $\Phi = .266, p=.045$ ).

Table 21.

*Correlations for Online Risk Behaviors and Relationship Status (N=111).*

Variable	Relationship Status	
	<i>r</i>	<i>p</i>
Total Online Risk Behavior	.455	.233
Sent a sexually suggestive message to someone (email, IM, text, etc.)	.266	.045 *
Posted a sexually suggestive message to someone's online profile	.093	.813
Sent/Posted a sexually suggestive message on Internet	.080	.873
Sent a nude/semi-nude picture/video (of yourself) to someone via phone	.146	.500
Posted a nude/semi-nude picture/video of yourself online	.114	.694
Sent/posted a nude/semi-nude picture/video on Internet	.262	.054

\*  $p < .05$

### Post Hoc Analysis

From research question five, results showed there was sufficient evidence to conclude that a weak negative correlation existed between age and engaging in online risk behaviors. However, no association was found from research question two, examining the relationship between online risk behaviors and real life behaviors.

Therefore, using the logistic regression model, a post hoc analysis was completed to examine the association between real life sexual behaviors and online risk behavior when controlling for age. As shown in Table 22, findings indicated age as a significant variable in the model (odds ratio [OR]: .116, 95% confidence interval [CI]: .234 to 3.39,  $p=.865$ ). The predictive variables for the beta coefficient ( $\beta$ ), the odds ratio (OR), the 95% confidence interval (CI) of the OR and the model p value are shown. Results indicate that there is no statistically significant association between online risk behavior and real life sexual behavior even when controlling for the age of the respondent.

Table 22.

*Logistic Regression Evaluating the Inclusion of Age Predicting Online Risk Behaviors and Real Life Sexual Behavior (N=111)*

Variable	$\beta$	OR	95% CI of OR	p value
Total Online Risk Behavior	-.116	.890	.234, 3.39	.865
Age	.614	1.85	1.13, 3.02	.014 *

\*  $p < .05$ .

### Summary

The purpose of this study was to explore the attitudes, intentions, and behaviors related to online risk behaviors and to determine whether there was a significant association between online risk behaviors and real life sexual behaviors among African American teenage girls living in Metro Atlanta, Georgia. To accomplish this, six research questions and related null hypotheses were tested. The data collected from 111

respondents via an online survey from Survey Monkey was imported into the SPSS software program for analysis. Findings failed to reject the null Hypothesis 1 because there was insufficient evidence to conclude that a significant correlation existed between attitudes about online risk behaviors and real life sexual behaviors.

Null Hypothesis 2 was not rejected because the findings failed to show statistical significance between the overall online risk behavior of sending/posting nude or semi-nude pictures/videos online and real life sexual behavior. Further analysis of online risk behaviors subscale found a significant relationship between posting nude or semi-nude pictures/videos online and sexual behavior. However, overall, these results did not provide sufficient evidence to support the rejection of null Hypothesis 2. Consequently, null Hypothesis 3 was not tested because findings failed to demonstrate significance that engaging in online risk behavior was a predictor of real life sexual behavior.

Null Hypothesis 4 was not rejected because findings failed to show that a significant relationship existed between age and selected attitudes about sending posting sexual content online. Findings provided insufficient evidence to reject null Hypothesis 4. Conversely, findings did provide sufficient evidence to reject null Hypotheses 5 because there was a significant weak negative correlation between sending/posting nude or semi-nude pictures/videos and age. Further analysis in a post hoc logistic regression revealed that age is a factor in the association of engaging in online risk behaviors and engaging in real life sexual behaviors. Null Hypothesis 6 was not rejected because finding failed to show there was a significant relationship between relationship status and online risk behaviors.

In chapter 5, I will provide a discussion and interpretation of the findings, their limitations, their social change implications, and recommendations for continued research.

## Chapter 5: Discussion, Conclusions, and Recommendations

### Overview

With the emergence of technology and the increased usage of new media devices to access social media sites among adolescents, more studies have been conducted to focus on teen usage and online behaviors (Lenhart, 2015; Lenhart, 2012; Lenhart et al., 2011). According to the Pew Report (as cited in Lenhart, 2015), 92% of teens reported they go online, where 94% of these teens access online sites daily using new media devices such as smartphones. Moreover, 63% of teens also exchange messages with others daily (Lenhart, 2012). In looking at what teens are doing online, researchers have found that teens use new media devices to electronically send or post nude or seminude photos or videos of themselves or have shared sexually suggestive images via text, e-mail, or instant message (National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com, 2008). Furthermore, social media profiles of teens have been found to exhibit content referencing sexual activity and sexually related images (Hinduia & Patchin, 2008; Williams & Merten, 2008). There was a gap in the literature between the way in which adolescents engaged in online risk behaviors such as sending or posting nude or seminude photos or videos of themselves and how these online risk behaviors impacted real life sexual behaviors. This lack of knowledge led to the current study.

In this study, I focused only on African American female adolescents. It was deemed important to focus on this subpopulation not only because of the limited literature surrounding the topic, but also because adolescents are increasingly affected by negative outcomes of sexual behavior, and African American female adolescents are

disproportionately affected (CDC, 2012b, 2012c, 2014). The purpose of this study was two-fold: (a) to assess African American adolescent females' attitudes, behavior, and intentions regarding posting sexual content online using new media platforms and (b) to determine whether there was a significant association between engaging in online risk behaviors such as posting sexual messages, photos, or videos online and engaging real life sexual behavior among this population.

Displays of risky behaviors on social media sites may have the ability to impact the behaviors of the creator of the content, as well as those who view the content. However, empirical studies of this impact are limited. Teens have reported spending hours on social media sites, posting sexual content on sites, and receiving sexual content from others (Rideout & Roberts, 2010). With the emergence of social media networking sites, there is a need for studies in this area that would allow a better understanding of how online risk behaviors on social media impacts adolescents' sexual health.

The TRA provided an ideal model to explore the impact of new media usage on behavior (Bleakley et al., 2011; Peslak et al., 2012). Based on the TRA, a person's attitude toward performing a behavior as well as the perception of how others person feel about the behavior, influences a person's intention to engage in that behavior; if a person intends to engage in a specific behavior then they are most likely to do so (Ajzen & Fishbein, 1977). From this theory, it could be hypothesized for this study that a positive attitude toward engaging in online risk behaviors and social pressure to engage in online risk behaviors would lead to the intention to engage in real life sexual behaviors and ultimately the engagement in real life sexual behavior.

In Chapter 4, I presented the data from the online survey administered to assess the attitudes toward online risk behaviors, the intentions of engaging in online risk behaviors, and the behavior of engaging in online risk behavior and real life sexual behavior. Additionally, the analysis processes used and the findings for the study were presented. In this chapter, a summary of the research will be given including sections on interpretations of findings, limitations, recommendations, implications, and conclusions.

### **Interpretations of Findings**

A sample of 111 African American teenage girls living in the Metro Atlanta area completed the online survey. The average age of the participants was 14 ( $M=14.48$ ,  $SD=1.41$ ), and most respondents reported they were not in a relationship (60.4%). The majority of participants had devices where social media sites could be accessed including smartphones (92.3%), cell phones (90.1%), tablets (82.5%), and laptop computers (81.6%). Most respondents reported that to socialize and communicate with their friends, they sent text messages (88.3%) or socialized through accessing sites on the Internet (77.5%) several times a day. Ninety-one percent of respondents reported that they had a profile on various social networking sites. These results are consistent with previous studies that showed 94% of teenagers access online sites several times a day using new media devices (Lenhart, 2015).

In this study, Kik (92.8%) and Instagram (87.4%) were found to be the most popular sites where participants had profiles and which they accessed several times a day, followed by You Tube (84.0%), Oovoo (82.0%), and Snapchat (77.0%). Similarly, Lenhart (2015) and Madden et al. (2013) also found that teen girls mostly frequented

Facebook (36%) and Instagram (23%). The data collected for this study were used to test the hypotheses and address the research questions discussed in Chapter 4. A  $p$ -value of less than .05 was established to support the rejection of the null hypotheses at a 95% confidence level. This section provides an interpretation of the findings presented in Chapter 4.

### **Research Question 1**

Is there an association between attitudes toward online risk behaviors and real life sexual behavior among adolescent African American females living in the Metro Atlanta area? Null Hypothesis 1, which stated, there is no significant association between attitudes about online risk behavior and real life sexual behavior among the target population, was tested using a Pearson  $r$  correlation analysis. The results of the data analysis ( $r = .096, p = .319$ ) provided insufficient evidence to conclude that a significant correlation existed between attitudes toward online risk behaviors and real life sexual behaviors. Because the results provided no support for Research Hypothesis 1, I failed to reject the null hypothesis.

According to study results, a relationship does not exist between attitudes toward online risk behaviors and real life sexual behaviors. These results are not surprising given that the National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008) found that 66% of teen girls said that sending suggestive messages or nude/seminude pictures/video of themselves was “fun or flirty,” where 52% of these girls did so as a “sexy present” for their boyfriend. Also, in that same survey, 40% of teen girls stated that they sent sexual content online as a joke. It is possible that



the relaxed attitudes toward posting sexual content online might be due to the lack of sexual initiation among this age group as the survey question only asked the respondent to describe the activity of sending suggestive messages or nude/seminude pictures/video of themselves, not how they felt it related to sexual behaviors.

The current study also supports work by van Oosten, Peter, and Boot (2014) who demonstrated that exposure to sexual content on social network sites did not impact sexual attitudes of Dutch adolescents. Investigators analyzed over 1,600 Dutch adolescents ages 13-17 using an online questionnaire that assessed sexual issues and media. van Oosten et al. demonstrated that the attitudes of adolescents were not impacted by posting sexy pictures or messages on social networking sites. This is contrary to previous researchers who reported exposure to sexual content in media such as television and music negatively impacted adolescent attitudes and behaviors (O'Hara, Gibbons, Gerrard, Li, & Sargent, 2012; Ward, 2006).

### **Research Question 2**

Research question 2 was the following: Is there an association between engaging in online risk behaviors and real life sexual behaviors among African American females living in the Metro Atlanta area? Null hypothesis 2, that there was no significant association between engaging in online risk behaviors and real life sexual behavior among the participants, was tested using phi coefficient correlation. No significant correlation was found between the two total scores of engaging in online risk behaviors and engaging in real life sexual behaviors ( $\Phi = .748, p=.083$ ). Therefore, it was concluded that there was not enough evidence to support a relationship between engaging

in online risk behaviors and engaging in real life sexual behaviors. These results are inconsistent with previous findings. Landry, Gonzales, Wood, and Vyas (2013) revealed that among Latino adolescents in the ninth and 10<sup>th</sup> grades, there was a statistically significant relationship between sexual risk behaviors and the frequency of text messaging and social media use ( $p=.013$ ), where respondents who used these new media at least once per day were more likely to report previously having sexual intercourse. Furthermore, Temple et al. (2012) also found that adolescents who engaged in online risk behaviors were more likely to have had sexual intercourse than those adolescents who did not engage in online risk behaviors ( $p<.001$ ).

For this study the majority of respondents reported that they sent/received text messages (96.4%) or pictures/videos (87.4%). Moreover, 24.3% and 16.2% of respondents reported sending sexually suggestive messages and sending nude or semi-nude pictures/videos to someone, respectively. About 41.1% reported they had received a sexually suggestive message from someone and 13.2% had a sexually suggestive message shared with them. The act of sharing sexual content among adolescents using new media devices has become increasingly common (Lenhart, 2009). The current results support this common phenomenon of engaging in online risk behaviors. However; as it relates to real life sexual behaviors, for this study most respondents (86.5%) reported never having sexual intercourse. According to the Guttmacher Institute (2014), the average age for sexual initiation is age 17. Additionally, studies have shown that involvement in community service learning programs can reduce sexual activity and pregnancy rates among adolescents (Kirby, 2007). These factors could have contributed

to the findings for Research Question 2, in that, for this study, the average age of participants was 14 and the primary recruitment was conducted from community service based organizations. As a result, while teens reported they commonly engaged in online risk behaviors, they also reported they had not engaged in sexual behaviors hence supporting the findings that there is no significant correlation between engaging in online risk behaviors and real life sexual behaviors.

In this current study, no correlation was found between engaging in online risk behaviors and real life sexual behavior; however, recent studies have shown an increase in online risk behaviors taken by adolescents (Lenhart, 2015). Although speculative, because of the less frequent engagement in sexual activity among adolescents aged 13-17, posting sexual content online might have more of an impact on sexual behavior among young adults, college students, or persons over the age of 17. Future studies should be conducted to address the posting of sexual content on new media platforms and its impact on the sexual health and development of both early and late adolescents.

### **Research Question 3**

Research question 3 was the following: Are African American female adolescents who engage in online risk behaviors more likely to engage in sexual behaviors than those who do not post sexual content using new media? No significant correlation was found between engaging in online risk behaviors and engaging in real life sexual behavior when testing Hypothesis 2; therefore, a logistic regression analysis was not conducted to test Hypothesis 3, because regression is used to express the functional relationship between two correlating variables. In this study, because the *p* value of .083 was greater than the

5% level of significance, the observed relationship between engaging in online risk behaviors and engaging in sexual behaviors could not happen by chance and thus no relationship between the two variables was determined. As a result, conducting a logistic regression as proposed to test Hypothesis 3 was not needed.

#### **Research Question 4**

Research question 4 was the following: Is age associated with attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta? Null Hypothesis 4, there is no significant association between age and attitudes toward online risk behaviors among African American adolescent females in Metro Atlanta, was tested using the Person  $r$  correlation analysis. No significant correlation was found between total score for attitudes of engaging in online risk behaviors and age ( $r = -.114$ ,  $p = .234$ ). Because the  $p$  value exceeded the significance level, there was insufficient evidence to conclude that a significant correlation existed between the two variables. Although, no significance was found overall, significant relationships were found to exist between age and three of the 10 attitudes of online risk behaviors, specifically, “lame” ( $r = -.24$ ,  $p = .012$ ), “stupid” ( $r = -.22$ ,  $p = .019$ ), and “dangerous” ( $r = -.27$ ,  $p = .004$ ).

These current results are inconsistent with results of a study conducted by Daniels and Zurbriggen (2014) where investigators analyzed adolescents aged 13-18 and young adults no longer in high school aged 17-25, to assess their social media practices and perceptions on social media profiles containing sexually suggestive pictures. Results showed a significant effect of age in the perceptions of posting sexual content online that where in comparison to the young adults, younger adolescent respondents found a

sexually provocative profile on Facebook to be less physically attractive and less socially attractive. Furthermore, the National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008) found that in comparison to 72% young adult females aged 20-26, 66% of teen girls reported sending sexually suggestive content was “fun or flirtatious.” Additionally, results from focus groups of mixed gender found teens’ attitude toward online risk behaviors varied from those who did not think it was a major issue to others who thought it was inappropriate, “slutty,” potentially damaging, or illegal (Lenhart 2009). The inconsistencies in study results may be due to the desensitization from constant exposure to sexual content online through websites or other new media platforms, which could result in relaxed attitudes about posting sexual content online among various subpopulations of young adolescents. However, further research is needed to understand the impact of age on the perceptions and attitudes of engaging in online risk behaviors.

### **Research Question 5**

Research question 5 was that following: Is age associated with engaging in online risk behaviors among African American female adolescents in Metro Atlanta? Null Hypothesis 5, no significant association between age and engaging in online risk behaviors among African American adolescent females in Metro Atlanta, was tested using a Person  $r$  correlation analysis. The resulting correlation ( $r = -.294, p = .002$ ) was significant, which provided support to reject null Hypothesis 5. Because the correlation coefficient was  $-.294$ , it can be concluded that a weak negative correlation exists between age and engaging in online risk behaviors. Moreover, weak negative correlations were

also found to exist between age and two of the six online risk behavior subscales: posting sexually suggestive messages online to someone's profile ( $r = -.203, p = .032$ ) and sending nude or semi-nude pictures/videos to someone via cell phone, email, etc. ( $r = -.344, p = .000$ ).

These results suggest that there is an inverse linear relationship between age and engaging in online risk behaviors; as age increases, engaging in online risk behaviors decreases. For the resulting correlation  $r = -.294$ , the coefficient of determination is 0.09, which means that 9% of the variation in age among the adolescent girls can be predicated by their engagement in online risk behaviors. Conversely, 91% of the variation in age cannot be explained. Posting or sending sexually suggestive content using new media platforms has become very common among adolescents. The current study results support findings by the National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008) that 38% of teens under the age of 19 have reported they have sent and/or posted a sexually suggestive message to someone via email, IM, text, or the Internet. Similarly, 20% of teens reported sending or posting nude or semi-nude picture/video using new media (National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com, 2008). Other studies have also showed that young Dutch girls ages 13-18 have sought out sexually explicit material online (Peter & Valkenburg, 2006) and that nearly 14% of girls age 13-18 have actively sought sexual content from pornographic websites (Bleakley, Hennessy, and Fishbein, 2011).

### Research Question 6

Research question 6 was the following: Is there an association between relationship status and online risk behaviors among African American female adolescents in the Metro Atlanta area? The null hypothesis, there is no significant association between relationship status and online risk behaviors among African American female adolescents in Metro Atlanta, was tested using the phi coefficient analysis. Overall, there was no significant correlation between relationship status and online risk behaviors ( $\Phi = .455, p=.233$ ). Therefore, null Hypothesis 6 was not rejected because there was insufficient evidence to conclude that there was a correlation between relationship status and online risk behaviors. Although no relationship existed between the total online risk behavior score and relationship status, one of the six online risk behavior items was significant, specifically, sending a sexually suggestive message to someone ( $\Phi = .266, p=.045$ ). These results suggest that there was a moderately positive relationship between relationship status and sending suggestive messages to someone, whereas the sending of suggestive messages increases when the relationship is more serious. In other words, adolescents in a relationship are more likely to send suggestive messages than those that are not in a relationship.

Although the current study found no significant correlation between relationship status and total online risk behavior score overall Lenhart (2009) found that in focus groups conducted with teens, the most common reasons for sending sexual content via new media platforms included: (a) an exchange of images between romantic partners; (b) exchanges between partners that are shared with others outside the relationship; and (c)

exchanges between people who are not yet in a relationship, but where at least one person hopes to. Similarly, the National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008) found that one of the main reasons adolescent girls' send/post sexual content online is to attract male peers. Additionally, they showed that, among teen girls who took the Sex and Tech survey, 71% reported they had sent or posted sexually suggestive content to a boyfriend and 21% reported they sent the content to someone they wanted to date or "hook up" with. Likewise, Thomas (2009) demonstrated that nearly 20% of teens aged 13-18 sent, received, or forwarded sexual content online, of which 75% reported they sent these photos to a boyfriend/girlfriend.

### **Post Hoc Analysis**

Since a significant correlation was found for Research Question 5 (Is age associated with engaging in online risk behaviors among African American female adolescents in Metro Atlanta?), but no correlation was found for Research Question 2 (Is there an association between engaging in online risk behaviors and real life sexual behavior among African American females living in the Metro Atlanta area?), a post hoc analysis was completed to assess whether age was a confounding variable in the association of engaging in online risk behaviors and engaging in real life sexual behaviors. When placing age into the regression model, the resulting analysis indicated that age was a significant variable in predicting real life sexual behavior ( $\beta = .614$ ,  $p = .014$ ); however, online risk behavior is not a significant predictor of real life sexual behavior even when controlling for age ( $\beta = .116$ ,  $p = .865$ ). Contrary to previous studies (Mitchell et al., 2012; Temple et al., 2012;) results in this current study show age was not



an extraneous variable that affected the correlation of engaging in online risk behaviors and engaging in real life sexual behaviors.

Previously, age has been shown to be an impact on both engaging in online risk behaviors and sexual activity. The National Campaign to Prevent Teen and Unplanned Pregnancy and CosmoGirl.com (2008), reported that out of 1,280 respondents, the percentage of respondents who sent sexually suggestive messages to someone increased with age, where 38% of teens aged 13-19 reporting engaging in such online behaviors and 58% of the young adults aged 20-26 reported engaging in such online behaviors. Additionally, a higher percentage of young adults (32%) in comparison to teen respondents (19%) reported they sent nude or semi-nude pictures/videos of themselves to someone. Moreover, Liu et al. (2015) revealed that, among people aged 14 to 24 years, engagement in sexual activity increased with age, where 12.5% of 14 year old females reported having had sexual intercourse to more than 75% reporting the same at 19 years.

### **Overall Analysis**

The purpose of this study was to explore the attitudes, intentions, and beliefs about online risk behaviors to determine if there was a significant association between online risk behaviors and real life sexual behaviors among African American teenage girls living in Metro Atlanta, Georgia. Overall, results revealed no significant relationship existed between engaging in online risk behaviors and engaging in real life sexual behaviors. These findings differ from other studies that have looked at the same topic but with different subpopulations of adolescents (Liu et al., 2015; Oosten et al., 2014; Ybarra, & Mitchell, 2014). However, although no significant relationship existed between the

two variables of interest among African American adolescent girls, study results revealed that participants sent and received sexually suggestive content online using new media platforms, frequently engaged their peers online and through text messages, had mixed feeling about engaging in online risk behaviors, and believed the main reason such behavior occurred was to get the attention of someone, specifically a romantic interest. These results are consistent with previous studies. In a study conducted by Cox Communications and partners (2009), nine percent of teens ages 13-18 had sent a sexually suggestive text message or email with nude or nearly-nude photos, three percent had forwarded one, and 17% had received a sexually suggestive text message or email with nude or nearly nude photos. Likewise, in a study administered by MTV in partnership with the Associated Press (2009), findings revealed that one in 10 young adults between the ages of 14 and 24 have shared a nude picture of themselves with someone else and 15% received a nude picture or video of someone. The common occurrence of online risk behaviors will only increase with the emergence of new technical devices and the development of new social media sites. As a result, further research is needed to assess the long term impact of social media on adolescent development and sexual health of all subpopulations.

### **Limitations**

Limitations when studying various aspects of adolescents and online behaviors including self-reported data, selection bias, lack of proper theoretical foundation, as well as inadequate measuring tools have been reported (Baumgartner et al., 2010; Dake et al., 2012; Landry et al., 2013). While the current study provided insights on how African

American adolescent girls used new media as well as their attitudes and behaviors about online risk behaviors, it too had similar limitations previously noted by researchers.

Firstly, using self-reported data to assess online and offline risk behaviors subjected the study to social desirability bias. Krumpal (2013) noted that when asking survey questions about sexual behavior or other risk behaviors, respondents would often over report the socially desirable answers or underreport the socially undesirable answers. In this study, I sought to assess sexually related behaviors both online and offline among adolescents.

Adolescent sexual behavior is a taboo topic; as a result, respondents could have potentially underreported their sexual behaviors causing limitations to the study.

Secondly, the use of an anonymous online survey, made it impossible to assess the physical or emotional state of the participants or ask probing questions to gain further insights into their attitudes and behaviors. Lastly, this study was restricted to African American adolescent females in Metro Atlanta area counties in Georgia, making this sample not representative of the general population of adolescents.

### **Recommendations**

Research studies on the impact of social media on the lives of adolescents have been selective in their study population by age and race/ethnicity. Future research could focus on assessing online risk behaviors from a more representative sample of all subpopulations of adolescents. A study of this magnitude could increase the understanding of online risk behaviors among adolescents aged 13-17 to effectively assess the impact on adolescent development and sexual health. Ybarra and Mitchell (2014) conducted a study to examine the impact of sexting on sexual activity and sexual

risk behavior that included 3,715 respondents ages 13- 18 year old. Out of this sample, only 11% were African American females. Similarly, the National Campaign survey (2008) included persons 13 – 24 in their survey and out of nearly 1, 300 participants, only 7% were African Americans. Inclusion of young adults (18 years and above) in the population can also skew results based on the difference in sexual activity engagement. Reports demonstrate that 27.3% of the U.S. population (U.S. Bureau of Census, 2010b) consists of adolescents; for that reason, studies that focus solely on respondents based on one race/ethnicity could shew the overall understanding of the impact of new media access and usage on the lives of adolescents. Furthermore, by using the definitions established by the Department of Health and Human Services (2011) of early and late adolescents, a more focused study with persons approximately 11 – 14 years of age (early) and persons approximately 15 – 17 years of age (late) would provide greater insight on the impact of the emergence of new media usage on adolescent sexual health as adolescents develop.

Although, the data collection process was convenient and cost-effective, the use of a self-reporting online survey as the only form of data collection resulted in limitations. This quantitative design did not allow for the asking of in-depth questions that could have allowed respondents to elaborate on their responses. Furthermore, as previously discussed, 35 respondents were missing data relative to sexual behavior and were not be included in the analysis. The amount of missing data due to the sensitive topic could be reduced by future research studies utilizing a mixed-methods approach. This could include interviews or focus groups to complement a self-reporting survey

(Millward 2006). Lenhart (2009) used surveys and focus groups to ask adolescents about their perceptions, opinions, beliefs, and attitudes toward online risk behaviors. This phenomenon of incorporating multiple methods into studies enhances the data analysis and allows greater insight on the interpretation of findings (Bekhet, & Zauszniewski, 2012).

Participants in the current study were indirectly recruited through parents. After the solicitation of participation from community youth organizations, parents were asked permission for their child to take the survey and were responsible for providing their child the survey link. With such busy schedules, parents could easily forget because it is not a priority for them. Furthermore, parents may be reluctant to pass a survey related to sexual behavior to their children. Additionally, with teens receiving a study regarding sex-related topics from their parents, some teens may not be open to access the given link to take the survey, resulting in a lower response rate. Examining sexting behaviors and other online risk behaviors as well as real life sexual behaviors among adolescents can be challenging. However, in previous research on the topic of sexting, online risk behaviors and sexual behaviors among adolescents, researchers have done direct recruitment and have received a greater response rate than the current study. Ybarra and Mitchell (2014) recruited over 5,000 adolescents (13-18 years) from the Harris Poll Online and referrals; Lenhart (2009) recruited 800 teens directly through a telephone survey; and Rice et al. (2012) recruited a sample of over 1,800 students from high schools in Los Angeles. Future research should focus on methods where adolescents could be recruited directly in

order to increase response rates; this would not only increase the sample size, but also provide further insight on adolescents' online behaviors.

With the increased usage and access of social media sites, teens are at risk for cyberbullying, online solicitation and predation, relationship abuse, and negative effects on mental health (Carroll & Kirkpatrick, 2011). It is therefore important that further studies be conducted to assess the negative outcomes of engaging in online risk behaviors as well as collect data to examine online behaviors of adolescents in order to further understand how teens use social media and the psychological impact of increased activities online. Although surveys being administered nationwide are beginning to include questions to assess sexting behaviors (Rice et al., 2012), state laws still govern the administration of such surveys. Georgia is one of five states that omits sexual behavior questions from national surveys such as the Youth Risk Behavior Survey (Miller, 2012). An avoidance of such information reduces the overall assessment of the problems and can place adolescents further at risk for negative outcomes. Future national studies should be conducted to gain further insight of the magnitude of the impact online risk behaviors have on the lives of adolescents.

Lastly, in this study, I only focused on African American females. Further studies should be conducted to assess gender differences as well as the online behaviors of adolescents of other races and ethnicities. Socioeconomic status and level of education may also affect the engagement of online risk behaviors and should be studied in a larger sample as well.

### **Implications**

Adolescent usage of the Internet has increased over time. The use of social media to communicate to peers and share information with a social network is an ideal method for teens to express their views and attitudes, as well as receive information (Purcell, 2012). Many teens frequently go online using smartphones and access multiple social media sites (Lenhart, 2015). The results of this study confirm that teens who have access to smartphones, cell phones, tablets and laptop computers are more likely to send/receive text messages, have profiles on social networking sites, post photos online, and send/receive pictures from their cell phone.

Many adolescents have reported they send/post sexually suggestive messages or nude-seminude images of themselves, which can directly influence sex-related online behaviors such as cybersex (Doornwaard, 2014). Although this study did not reveal a relationship between online risk behavior and real life sexual behaviors, results confirm that age can be a predictor of engagement in online risk behaviors. Understanding the relationship between engaging in online risk behaviors and adolescents of all ages would be invaluable for health care practitioners looking to better target information about the real life implications of teens who are more likely to send/post sexual content online using new media devices and engage in online risk behaviors than those that do not engage in online risk behaviors.

In addition, results could be used to add to the literature to inform policy decisions that affect teens who engage in online risk behaviors. Since the emergence of sexting, laws have been established to prosecute teens who create and share sexual

content online (Lenhart, 2015). Lenhart (2015) reported that recently, cases have occurred where adolescents who sent nude images to others have been subjected to various penalties including charges of child pornography distribution, disorderly conduct, illegal use of a minor in nudity-oriented material, to felony charges. An 18 year old teen was also reported to be placed on the sex offender registry for the next 25 years for sending naked images of his 16 year old girlfriend to family and friends (Lenhart, 2015). The results of this current study illustrated that over half (57.1%) of participants have received a sexually suggestive message from someone and about 40% have received a nude or semi-nude picture/video from someone. These results suggest adolescents need further education on the serious impact online risk behaviors could have on their lives.

Studies have shown that social network profiles of adolescents contain sexual content and adolescents are constantly exposed to sexual content online. Slater and Tiggemann (2014) demonstrated that media exposure including television, magazines, Internet, and social media sites were positively associated with self-objectification, suggesting that, due to the negative imagery of women commonly found in today's media, exposure to such sexual content can negatively impact the attitudes of young adolescents and their perceptions of self. As a result, adolescent girls have the propensity to develop a negative self-image due to exposure of sexual content online. The results of this study confirm that many adolescent girls have negative perceptions of the way that girls should present themselves to others, where the majority (90.1%) of respondents agreed that those who engaged in online risk behaviors, did so in order to get or keep a



guy's attention; 74.8% believed it was done to get a guy to like them; and 73% believed it was done to get noticed.

Positive social change could occur by better understanding the factors that impact the engagement of online risk behaviors among adolescents. The gap in literature lies between research on online sexual risk behaviors and research on the impact of online risk behaviors on real life behaviors in the lives of adolescents. This study sought to fill that gap. Results of this study demonstrate the need for education and discussion around the negative impact of online risk behaviors by teachers, health practitioners, and parents. Use of these results could lead to social change because adolescents who educated on this topic will, potentially, reduce their engagement in online risk behaviors or at least become aware of the consequences and negative impact of engagement in such behaviors online. Consequently, as engagement in online risk behaviors among adolescents decrease, the rates of negative outcomes on their sexual health, as well as their daily lives may also decrease. Furthermore, results of this study would allow more adolescents to benefit from health initiatives that promote self-awareness, positive use of social networking sites for disease prevention, and sexual self-perception. The goal is for this study to add to the body of literature and create positive social change among African American female adolescents.

### **Conclusions**

The results from this study contribute to the literature by providing a quantitative demonstration of the relationships between online risk behaviors and real life sexual behaviors, age, and attitudes toward and engaging in online risk behaviors among African

American teen girls living in the Metro Atlanta area. Age can be a predictor for engaging in online risk behaviors among adolescents and real life sexual behaviors. Conversely, although, overall attitudes of online risk behaviors as well as engaging in online behaviors did not result in a significant association with real life sexual behaviors, significant associations were found with individual survey items consistent with previous studies that demonstrated the impact of online risk behaviors on adolescent sexual health.

## References

- Ajzen, I., & Fishbein, M. (1969). The prediction of behavioral intentions in a choice situation. *Journal of Experimental Social Psychology, 5*, 400-416.
- Ajzen, I., & Fishbein, M. (1973). Attitudinal and normative variables as predictors of specific behavior. *Journal of Personality and Social Psychology, 27*(1), 41-57
- Ajzen, I., & Fishbein, M. (1974). Factors influencing intentions and the intention-behavior relation. *Human Relations, 27*(1), 1-15.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological Bulletin, 84*(5), 888.
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*, Englewood Cliffs, NJ: Prentice-Hall.
- American Academy of Pediatrics. (2001). Children, adolescents, and television. Committee on public education. *Pediatrics, 107*(2), 423-425.
- Aronowitz, T., Rennells, R. E., & Todd, E. (2005). Heterosocial behaviors in early adolescent African American girls: The role of mother-daughter relationships. *Journal of Family Nursing, 11*(2), 122-139.
- Babkowski, P. S., Brown, J. D., & Neffa, D. R. (2012). "Hit Me Up and We Can Get Down." US youths' risk behaviors and sexual self-disclosure in MySpace profiles. *Journal of Children and Media, 6*(1), 119-134.
- Bachanas, P. J., Morris, M. K., Lewis-Gess, J. K., Sarett-Cuasay, E. J., Sirl, K., Ries, J. K., & Sawyer, M. K. (2002). Predictors of risky sexual behavior in African

- American adolescent girls: Implications for prevention interventions. *Journal of Pediatric Psychology*, 27(6), 519-530.
- Baumgartner, S. E., Valkenburg, P. M., & Peter, J. (2010a). Assessing causality in the relationship between adolescents' risky sexual online behavior and their perceptions of this behavior. *Journal of Youth and Adolescence*, 39(10), 1226-1239.
- Baumgartner, S. E., Valkenburg, P. M., & Peter, J. (2010b). Unwanted online sexual solicitation and risky sexual online behavior across the lifespan. *Journal of Applied Developmental Psychology*, 31(6), 439-447.
- Bekhet, A. K., & Zauszniewski, J. A. (2012). Methodological triangulation: An approach to understanding data. *Nurse Researcher*, 20(2), 40-43.
- Berg, C. J., Painter, J. E., Sales, J. M., Mays, D., Rose, E., Wingood, G. M., & DiClemente, R. J. (2012). Smoking as a risk factor for STI diagnosis among African American females. *American Journal of Health Behavior*, 36(4), 505-512.
- Bleakley, A., Hennessy, M., & Fishbein, M. (2011). A model of adolescents' seeking of sexual content in their media choices. *Journal of Sex Research*, 48(4), 309-315.
- Bleakley, A., Hennessy, M., Fishbein, M., & Jordan, A. (2011). Using the integrative model to explain how exposure to sexual media content influences adolescent sexual behavior. *Health Education & Behavior*, 38(5), 530-540.
- Bleakley, A., Hennessy, M., Fishbein, M., and Jordan, A. (2008). It works both ways:

The relationship between exposure to sexual content in the media and adolescent sexual behavior. *Media Psychology*, 11(4): 443 – 461.

- Boone, T. L., & Lefkowitz, E. S. (2004). Safer sex and the health belief model: Considering the contributions of peer norms and socialization factors. *Journal of Psychology & Human Sexuality*, 16(1), 51-68.
- Boyd, D. (2007). Why youth (heart) social network sites: The role of networked publics in teenage social life. *MacArthur foundation series on digital learning—Youth, identity, and digital media volume*, Cambridge, MA: MIT Press, 119-142.
- Brahmbhatt, H., Kågesten, A., Emerson, M., Decker, M. R., Olumide, A. O., Ojengbede, O., ... & Delany-Moretlwe, S. (2014). Prevalence and determinants of adolescent pregnancy in urban disadvantaged settings across five cities. *Journal of Adolescent Health*, 55(6), S48-S57.
- Braun-Courville, D., & Rojas, M. (2009). Exposure to sexually explicit web sites and adolescent sexual attitudes and behaviors. *Journal of Adolescent Health*, 45(2): 156-162.
- Brener, N. D., Billy, J. O., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: evidence from the scientific literature. *Journal of Adolescent Health*, 33(6), 436-457.
- Brener, N. D., Collins, J. L., Kann, L., Warren, C. W., & Williams, B. I. (1995). Reliability of the youth risk behavior survey questionnaire. *American Journal of Epidemiology*, 141(6), 575-580.
- Brener, N. D., Kann, L., Kinchen, S. A., Grunbaum, J. A., Whalen, L., Eaton, D., ... &

- Ross, J. G. (2004). Methodology of the youth risk behavior surveillance system. *MMWR. Recommendations and reports: Morbidity and mortality weekly report. Recommendations and reports/Centers for Disease Control*, 53(RR-12), 1-13.
- Brener, N. D., Kann, L., McManus, T., Kinchen, S. A., Sundberg, E. C., & Ross, J. G. (2002). Reliability of the 1999 youth risk behavior survey questionnaire. *Journal of Adolescent Health*, 31(4), 336-342.
- Bridges, E. (2008). *Georgia's youth: Focus on sexual and reproductive health*. advocates for youth. Retrieved from <http://www.advocatesforyouth.org/publications/publications-a-z/635-georgias-youth-focus-on-sexual-and-reproductive-health>
- Brown, J. D., & L'Engle, K. L. (2009). X-rated sexual attitudes and behaviors associated with US adolescents' exposure to sexually explicit media. *Communication Research*, 36(1), 129-151.
- Brown, J., L'Engle, K. L., Pardun, C. J., Guo, G., Kenneavy, K., & Jackson, C. (2006). Sexy media matter: Exposure to sexual content in music, movies, television, and magazines predicts black and white adolescent sexual behavior. *Pediatrics*, 117, 1018–1027.
- Brown, J.D. (2002). Mass media influences on sexuality. *Journal of Sex Research*, 39(1), 42-45.
- Browning, C., Leventhal, T., & Brooks-Gunn, J. (2005). Sexual initiation in early adolescence: The nexus of parental and community control. *American Sociological Review*, 70, 758-778.

- Buhi, E. R., & Goodson, P. (2007). Predictors of adolescent sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health, 40*(1), 4-21.
- Bull, S., Pratte, K., Whitesell, N., Rietmeijer, C., & McFarlane, M. (2009). Effects of an Internet-based intervention for HIV prevention: The Youthnet trials. *AIDS and Behavior, 13*(3), 474-487.
- Carroll, J. A., & Kirkpatrick, R. L. (2011). Impact of social media on adolescent behavioral health. *Oakland, CA: California Adolescent Health Collaborative.*
- Carvajal, S. C., Parcel, G. S., Basen-Engquist, K., Banspach, S. W., Coyle, K. K., Kirby, D., & Chan, W. (1999). Psychosocial predictors of delay of first sexual intercourse by adolescents. *Health Psychology, 18*(5), 443.
- Centers for Disease Control and Prevention (CDC). (2008). Trends in HIV-and STD-related risk behaviors among high school students--United States, 1991-2007. *MMWR. Morbidity and mortality weekly report, 57*(30), 817.
- Centers for Disease Control and Prevention (CDC). (2010). Establishing a holistic framework to reduce inequities in HIV, viral hepatitis, STDs, and tuberculosis in the United States. *Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control. Retrieved from: <http://www.cdc.gov/socialdeterminants>.*
- Centers for Disease Control and Prevention. (2012). CDC fact sheet:African American

and sexually transmitted diseases. *Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control. Retrieved from*  
*<http://www.cdc.gov/nchhstp/newsroom/docs/AAs-and-STD-Fact-Sheet.pdf>*

Centers for Disease Control and Prevention. (2012b). Teen pregnancy: Teen pregnancy in the United States *Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control. Retrieved from*  
*<http://www.cdc.gov/teenpregnancy/aboutteenpreg.htm>*

Centers for Disease Control and Prevention (CDC). (2012c). Estimated HIV incidence in the United States, 2007-2010. *HIV surveillance supplemental report, 17(4).Retrieved from*  
*[http://www.cdc.gov/hiv/pdf/statistics\\_2011\\_HIV\\_Surveillance\\_Report\\_vol\\_23.pdf](http://www.cdc.gov/hiv/pdf/statistics_2011_HIV_Surveillance_Report_vol_23.pdf)*

Centers for Disease Control and Prevention. (2012d). Questionnaires and item rationales. *Adolescent and School Health. Retrieved from*  
*[http://www.cdc.gov/healthyyouth/yrbs/questionnaire\\_rationale.htm](http://www.cdc.gov/healthyyouth/yrbs/questionnaire_rationale.htm)*

Centers for Disease Control and Prevention. (2013). Healthy youth! Health topics – sexual risk behaviors. Retrieved from  
*<http://www.cdc.gov/HealthyYouth/sexualbehaviors/>*

Centers for Disease Control and Prevention. (2013b). HIV among Youth. *Atlanta, GA: National Center for HIV/AIDS, Viral Hepatitis STD, and TB Prevention, Centers for Disease Control. Retrieved from* *<http://www.cdc.gov/hiv/youth/pdf/youth.pdf>*

Centers for Disease Control and Prevention. (2013c). 2013 National Youth Risk Behavior



Survey. *Atlanta, GA: Division of Adolescent and School Health*. Retrieved from [http://www.cdc.gov/healthyyouth/yrbs/pdf/questionnaire/2013\\_xhx\\_questionnaire.pdf](http://www.cdc.gov/healthyyouth/yrbs/pdf/questionnaire/2013_xhx_questionnaire.pdf)

Centers for Disease Control and Prevention (CDC). (2014). Sexually transmitted diseases surveillance 2013. *Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control*. Retrieved from <http://www.cdc.gov/std/stats13/surv2013-print.pdf>

Collins, R. L., Elliott, M. N., Berry, S. H., Kanouse, D. E., Kunkel, D., Hunter, S. B., & Miu, A. (2004). Watching sex on television predicts adolescent initiation of sexual behavior. *Pediatrics, 114*(3), e280-e289.

Collins, R. L., Martino, S. C., & Shaw, R. (2011). Influence of new media on adolescent sexual health: Evidence and opportunities. *Santa Monica, CA: RAND*. Retrieved from [http://www.rand.org/pubs/working\\_papers/WR761.html](http://www.rand.org/pubs/working_papers/WR761.html)

Collins, R.L., Martino, S.C., Elliott, M.N., Miu, A. (2011b). Relationships between adolescent sexual outcomes and exposure to sex in media: Robustness to propensity-based analysis. *Developmental Psychology, 47*(2):585-91.

Common Sense Media. (2009). Is technology networking changing childhood? A national poll. *San Francisco, CA: Common Sense Media*. Retrieved from [www.commonsensemedia.org/sites/default/files/CSM\\_teen\\_social\\_media\\_080609\\_FINAL.pdf](http://www.commonsensemedia.org/sites/default/files/CSM_teen_social_media_080609_FINAL.pdf).

Cox Communications Teen Online & Wireless Safety Survey, in Partnership with the

National Center for Missing & Exploited Children (NCMEC) and John Walsh (2009). Teen online & wireless safety survey: Cyberbullying, sexting, and parental controls. *Cox Communications*. Received from [http://www.cox.com/takecharge/safe\\_teens\\_2009/media/2009\\_teen\\_survey\\_internet\\_and\\_wireless\\_safety.pdf](http://www.cox.com/takecharge/safe_teens_2009/media/2009_teen_survey_internet_and_wireless_safety.pdf).

Creswell, J. W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Crosby, R. A., DiClemente, R. J., & Salazar, L. F. (Eds.). (2011). *Research methods in health promotion*. John Wiley & Sons.

Cookingham, L. M., & Ryan, G. L. (2015). The impact of social media on the sexual and social wellness of adolescents. *Journal of Pediatric and Adolescent Gynecology*, 28(1), 2-5.

Dake, J. A., Price, J. H., Maziarz, L., & Ward, B. (2012). Prevalence and correlates of sexting behavior in adolescents. *American Journal of Sexuality Education*, 7(1), 1-15.

Daniels, E. A., & Zurbriggen, E. L. (2014). The price of sexy: Viewers' perceptions of a sexualized versus nonsexualized facebook profile photograph. Received from <http://dx.doi.org/10.1037/ppm0000048>.

Department of Health and Human Services. (2011). What is adolescence? *Washington DC: Office of Population Affairs*. Retrieved from: [http://www.hhs.gov/opa/familylife/tech\\_assistance/etraining/adolescent\\_brain/Overview/what\\_is\\_adolescence/index.html](http://www.hhs.gov/opa/familylife/tech_assistance/etraining/adolescent_brain/Overview/what_is_adolescence/index.html)

- DiClemente, R. J., Salazar, L. F., & Crosby, R. A. (2007). A review of STD/HIV preventive interventions for adolescents: sustaining effects using an ecological approach. *Journal of Pediatric Psychology, 32*(8), 888-906.
- Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organizational behavior research. *Journal of Business and Psychology, 17*(2), 245-260.
- Doornwaard, S. M., Bickham, D. S., Rich, M., Vanwesenbeeck, I., van den Eijnden, R. J., & Ter Bogt, T. F. (2014). Sex-related online behaviors and adolescents' body and sexual self-perceptions. *Pediatrics, 134*(6), 1103-1110.
- Doswell, W. M., Braxter, B. J., Cha, E., & Kim, K. H. (2011). Testing the theory of reasoned action in explaining sexual behavior among African American young teen girls. *Journal of Pediatric Nursing, 26*(6), e45-e54.
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Flint, K. H., Hawkins, J., ... & Wechsler, H. (2012). Youth risk behavior surveillance--United States, 2011. morbidity and mortality weekly report. Surveillance summaries. *61*(4). Atlanta, GA: Centers for Disease Control and Prevention.
- Emerton, M. (2003). Ethical and methodological problems in online research. Retrieved from <http://www.cddc.vt.edu/aoir/ethics/public/ethmed.pdf>
- Escobar-Chaves S, Tortolero S, Markham C, Low B, Eitel P, Thickett P. (2005). Impact of the media on adolescent sexual attitudes and behaviors. *Pediatrics, 116*:303–326.
- Evans, J. R., & Mathur, A. (2005). The value of online surveys. *Internet Research, 15*(2),

195-219.

Fantasia, H. C. (2011), Influences of social norms and context on sexual decision making among adolescent women. *The Journal of Midwifery & Women's Health*, 56: 48–53.

Finkel, M., & Finkel, D. (1983). Public policy and adolescent sexual behavior in the United States. *Social Biology*; 30 (2): 140-50.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Retrieved from <http://home.comcast.net/~icek.aizen/book/preface.pdf>.

Flores, E., Tschann, J. M., & Marin, V.B. (2002). Latina adolescents: Predicting intentions to have sex. *Adolescence*, 37(148), 659-679.

Francis, J. J., Eccles, M. P., Johnston, M., Walker, A., Grimshaw, J., Foy, R., ... & Bonetti, D. (2004). Constructing questionnaires based on the theory of planned behaviour. *A manual for health services researchers, 2010*, 2-12. Retrieved from [http://pages.bangor.ac.uk/~pes004/exercise\\_psych/downloads/tpb\\_manual.pdf](http://pages.bangor.ac.uk/~pes004/exercise_psych/downloads/tpb_manual.pdf).

Georgia Campaign for Adolescent Pregnancy Prevention. (2013). *Georgia Campaign for Adolescent Power and Potential*. Retrieved from <http://www.gcapp.org/>

Georgia Department of Public Health, (2014). *STD Epidemiology*. Retrieved from <http://dph.georgia.gov/std-epidemiology>.

Gerstman, B. B. (2014). *Basic biostatistics*. Jones & Bartlett Publishers.

Gillmore, M. R., Archibald, M. E., Morrison, D. M., Wilsdon, A., Wells, E. A., Hoppe,

- M. J. & Murowchick, E. (2002). Teen sexual behavior: Applicability of the theory of reasoned action. *Journal of Marriage and Family*, 64(4), 885-897.
- Goodson, P., Buhi, E. R., & Dunsmore, S. C. (2006). Self-esteem and adolescent sexual behaviors, attitudes, and intentions: A systematic review. *Journal of Adolescent Health*, 38(3), 310-319.
- Gonzales, F. A., Wood, S., and Vyas, A. (2013). New media use and sexual behavior among Latino adolescents. *American Journal of Health Behavior*, 37(3), 422-430.
- Gordon, M. K. (2008). Media contributions to African American girls 'focus on beauty and appearance: exploring the consequences of sexual objectification. *Psychology of Women Quarterly*, 32(3), 245-256.
- Gruber, E., & Grube, J. W. (2000). Adolescent sexuality and the media: A review of current knowledge and implications. *Western Journal of Medicine*, 172(3), 210.
- Guse, K., Levine, D., Martins, S., Lira, A., Gaarde, J., Westmorland, W., & Gilliam, M. (2012). Interventions using new digital media to improve adolescent sexual health: a systematic review. *Journal of Adolescent Health*, 51(6), 535-543.
- Guide to Community Preventive Services (2015). Sexual behavior: Youth development behavioral interventions coordinated with community service to reduce sexual risk behaviors in adolescents. Retrieved from [www.thecommunityguide.org/hiv/youthdev-community.html](http://www.thecommunityguide.org/hiv/youthdev-community.html).
- Hall, H. I., Song, R., Rhodes, P., Prejean, J., An, Q., Lee, L. M., ... & HIV Incidence Surveillance Group. (2008). Estimation of HIV incidence in the United States. *Journal of the American Medical Association*, 300(5), 520-529.

- Hinduja, S., & Patchin, J. W. (2008). Cyberbullying: An exploratory analysis of factors related to offending and victimization. *Deviant behavior, 29*(2), 129-156.
- Issel, L. M. (2004). *Health program planning and evaluation: A practical, systematic approach for community health*. Jones & Bartlett Learning.
- Jaccard, J., Blanton, H., & Dodge, T. (2005). Peer influences on risk behavior: an analysis of the effects of a close friend. *Developmental psychology, 41*(1), 135.
- Jackson, S. (2014). *Research methods: A modular approach*. Cengage Learning.
- Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Kawkins, J., Harris, W. A., ... & Zaza, S. (2014). Youth risk behavior surveillance—United States, 2013. *MMWR Surveillance Summary, 63*(Suppl 4), 1-168.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. *Business horizons, 54*(3).
- Kietzmann, J. H., Silvestre, B. S., McCarthy, I. P., & Pitt, L. F. (2012). Unpacking the social media phenomenon: towards a research agenda. *Journal of Public Affairs, 12*(2), 109-119.
- Kirby, D. Emerging Answers 2007: Research Findings on Programs to Reduce Teen Pregnancy and Sexually Transmitted Diseases. 2007. *The National Campaign to Prevent Teen and Unplanned Pregnancy: Washington, DC*. Retrieved from [http://www.thenationalcampaign.org/EA2007/EA2007\\_full.pdf](http://www.thenationalcampaign.org/EA2007/EA2007_full.pdf)
- Kirby, D., Lepore, G., & Ryan, J. (2005). Sexual risk and protective factors. Factors

affecting teen sexual behavior pregnancy childbearing and sexually transmitted disease: Which are important? Which can you change? Retrieved from <http://healthync.ncpublichealth.info/docs/rfa/RFAA264/RiskAndProtectiveFactors-FullReport.pdf>

Klein, J. D., Brown, J. D., Dykers, C., Childers, K. W., Oliveri, J., & Porter, C. (1993).

Adolescents' risky behavior and mass media use. *Pediatrics*, 92(1), 24-31.8.

Krueger, R. A., & Casey, M. A. (2008). *Focus groups: A practical guide for applied research*. SAGE Publications, Incorporated

Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: a literature review. *Quality & Quantity*, 47(4), 2025-2047.

Kunkel, D., Eyal, K., Finnerty, K., Biely, E., & Donnerstein, E. (2005). Sex on TV 4 2005: a Kaiser Family Foundation report.

Landry, M., Gonzales, F. A., Wood, S., & Vyas, A. (2013). New media use and sexual behavior among Latino adolescents. *American journal of health behavior*, 37(3), 422-430.

Leigh, W., & Andrews, J. L. (2002). *The reproductive health of African American adolescents: What we know and what we don't know*. Washington, DC: Joint Center for Political and Economic Studies.

L'Engle, K. L., Brown, J. D., & Kenneavy, K. (2006). The mass media are an important context for adolescents' sexual behavior. *Journal of Adolescent Health*, 38(3), 186-192.

Lenhart, A. (2015). Teen, social media and technology overview 2015. *Washington, DC:*

*A Pew Internet & American Life Project Report*. Retrieved April 2015 from [http://www.pewinternet.org/files/2015/04/PI\\_TeensandTech\\_Update2015\\_0409151.pdf](http://www.pewinternet.org/files/2015/04/PI_TeensandTech_Update2015_0409151.pdf).

Lenhart, A. (2012). Teens, smartphones and texting. *Washington, DC: A Pew Internet & American Life Project Report*. Retrieved from <http://pewinternet.org/Reports/2012/Teens-and-smartphones.aspx>.

Lenhart, A. (2009). Teens and sexting. *Washington, DC: A Pew Internet & American Life Project Report*. Retrieved July, 4, 2010. Retrieved from [http://ncdsv.org/images/PewInternet\\_TeensAndSexting\\_12-2009.pdf](http://ncdsv.org/images/PewInternet_TeensAndSexting_12-2009.pdf).

Lenhart, A., Madden, M., Macgill, A. R., & Smith, A. (2007). Teens and social media. *Washington, DC: A Pew Internet & American Life Project Report*. Retrieved from [http://www.pewinternet.org/pdfs/PIP\\_Teens\\_Social\\_Media\\_Final.pdtime\\_Report\\_Final\\_with\\_toplines.pdf](http://www.pewinternet.org/pdfs/PIP_Teens_Social_Media_Final.pdtime_Report_Final_with_toplines.pdf)

Lenhart, A., Purcell, K., Smith, A., & Zickuhr, K. (2010). Social media & mobile internet use among teens and young adults. *Washington, DC: A Pew Internet & American Life Project Report*. Retrieved from [http://web.pewinternet.org/~media/Files/Reports/2010/PIP\\_Social\\_Media\\_and\\_Young\\_Adults](http://web.pewinternet.org/~media/Files/Reports/2010/PIP_Social_Media_and_Young_Adults)

Lenhart, A., Purcell, K., & Smith, A. (2011). Social media and mobile Internet use among teens and young adults. *Washington, DC: A Pew Internet & American Life Project Report*. Retrieved from <http://www.pewinternet.org/Reports/2007/Teens-and-Social-Media.aspx>.



- Liau, A. K., Khoo, A., & Hwaang, P. (2005). Factors influencing adolescent's engagement in risky internet behavior. *CyberPsychology & Behavior*, 8(6), 513-520.
- Liu, G., Hariri, S., Bradley, H., Gottlieb, S. L., Leichliter, J. S., & Markowitz, L. E. (2015). Trends and patterns of sexual behaviors among adolescents and adults aged 14 to 59 years, United States. *Sexually transmitted diseases*, 42(1), 20-26.
- Madden, M., Lenhart, A., Cortesi, S., Gasser, U., Duggan, M., Smith, A., & Beaton, M. (2013). Teens, social media, and privacy. *Pew Research Center*, 21.
- Marshall, B. D., Kerr, T., Shoveller, J. A., Montaner, J. S., & Wood, E. (2009). Structural factors associated with an increased risk of HIV and sexually transmitted infection transmission among street-involved youth. *BMC Public Health*, 9(1), 7.
- Martino, S., Collins, R. L., & Shaw, R. (2012). Research gaps and measurement challenges for studying the influence of new media on adolescent sexual health. *RAND Corporation*. Retrieved from [http://www.rand.org/content/dam/rand/pubs/conf\\_proceedings/2012/RAND\\_CF292.pdf](http://www.rand.org/content/dam/rand/pubs/conf_proceedings/2012/RAND_CF292.pdf)
- McKenzie, J. F., Neiger, B. L., & Thackeray, R. (2009). Planning, implementing, and evaluating health promotion programs: A primer. (5th ed.). *San Francisco: Pearson Benjamin Cumming*.
- Miller, A. (2012). Sex questions still not a part of youth survey. *Georgia Health News*. Retrieved from <http://www.georgiahealthnews.com/2012/12/sex-questions-part-youth-survey/>

- Millward, L. (2006) Focus Groups. In Breakwell, G., Hammond, S. & Fife-Shaw, C. (eds). *Research Methods in Psychology* (3rd edition). *Sage: London*  
*Retrieved from* [http://www.sagepub.com/upm-data/46878\\_Breakwell\\_Ch17.pdf](http://www.sagepub.com/upm-data/46878_Breakwell_Ch17.pdf)
- Mitchell, K. J., Finkelhor, D., Jones, L. M., & Wolak, J. (2012). Prevalence and characteristics of youth sexting: A national study. *Pediatrics*, *129*(1), 13-20.
- Mmari, K., & Blum, R. (2009). Risk and protective factors that affect adolescent reproductive health in developing countries: a structured review. *Global Public Health Journal*, *4*(4):350-366.
- Moreno, M. A. (2010). Social Networking Sites and Adolescents. *Pediatric Annals*, *39*:9, 565-568.
- Moreno, M. A., Goniou, N., Moreno, P. S., & Diekema, D. (2013). Ethics of Social Media Research: Common Concerns and Practical Considerations. *Cyberpsychology, Behavior, and Social Networking*. 00; p1-6.
- Moreno, M. A. (2010). Social networking sites and adolescents. *Pediatric Annals*, *39*(9), 565.
- Moreno, M. A., Parks, M., and Richardson, L. P. (2007). What are adolescents showing the world about their health risk behaviors on MySpace?. *Medscape General Medicine*, *9*(4) 9.
- Moreno, M. A., Parks, M. R., Zimmerman, F. J., Brito, T. E., and Christakis, D. A. (2009). Display of health risk behaviors on MySpace by adolescents: Prevalence and associations. *Archives of Pediatrics & Adolescent Medicine*, *163*(1), 27.
- Morrison-Beedy, D., Carey, M., Feng, C., & Tu, X. (2008). Predicting sexual risk

behaviors among adolescent and young women using a prospective diary method.

*Research in Nursing & Health*. 31 (4), 329-340.

MTV-AP Digital Abuse Study, Executive Summary. (2009). AThinLine.org. Received from [http://www.athinline.org/MTV-AP\\_Digital\\_Abuse\\_Study\\_Executive\\_Summary.pdf](http://www.athinline.org/MTV-AP_Digital_Abuse_Study_Executive_Summary.pdf)

Nachmias, C.F., & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). *New York: Worth*.

Naser, M. (2013). 10 advantages of online surveys. Retrieved from <http://www.smartsurvey.co.uk/articles/10-advantages-of-online-surveys/>

National Campaign to Prevent Teen and Unplanned Pregnancy. (2013). *Fast Facts: Teen Pregnancy and Childbearing Among Non-Hispanic Black Teens*. *Washington, DC*. Retrieved from [http://www.thenationalcampaign.org/resources/pdf/FastFacts\\_TPChildbearing\\_Blacks.pdf](http://www.thenationalcampaign.org/resources/pdf/FastFacts_TPChildbearing_Blacks.pdf)

National Campaign to Prevent Teen and Unplanned Pregnancy & CosmoGirl.com (2008). *Sex and tech: Results from a survey of teens and young adults*. *Washington, DC: TRU Company*. Retrieved from [http://www.thenationalcampaign.org/sextech/pdf/sextech\\_summary.pdf](http://www.thenationalcampaign.org/sextech/pdf/sextech_summary.pdf)

Newman, L. M., & Berman, S. M. (2008). Epidemiology of STD disparities in African American communities. *Sexually Transmitted Diseases*, 35(12), S4-S12.

O'Hara, R. E., Gibbons, F. X., Gerrard, M., Li, Z., & Sargent, J. D. (2012). Greater

- exposure to sexual content in popular movies predicts earlier sexual debut and increased sexual risk taking. *Psychological science*, 23(9), 984-993.
- O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*, 127(4), 800-804.
- Pallant, J. (2010). SPSS survival manual: A step by step guide to data analysis using SPSS. *McGraw-Hill Education*.
- Pardun, C, L'Engle K, Brown J. (2005). Linking exposures to outcomes: Early adolescents' consumption of sexual content in six media. *Mass Communication & Society*; 8:75–91.
- Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) A simulation study of the number of events per variable in logistic regression analysis. *Journal of Clinical Epidemiology*, 49:1373-1379.
- Peslak, A., Ceccucci, W., & Sendall, P. (2012). An empirical study of social networking behavior using theory of reasoned action. *Journal of Information Systems Applied Research*, 5(3),12.
- Peter, J., & Valkenburg, P. M. (2006). Adolescents' exposure to sexually explicit material on the Internet. *Communication Research*, 33, 178–204
- Purcell, K. (2012). Teens 2012: truth, trends, and myths about teen online behavior. In *ACT enrollment planners annual conference*. Retrieved from [http://www.pewinternet.org/files/old-media/Files/Presentations/2012/July/KPurcell%20ACT%20Conf\\_PDF.pdf](http://www.pewinternet.org/files/old-media/Files/Presentations/2012/July/KPurcell%20ACT%20Conf_PDF.pdf)
- RadioOne (2008). Black America Today. *BlackAmericaStudy.com: Yankelovich*.

Retrieved from <http://www.blackamericastudy.com/>

- Range, L. M., Embry, T., & MacLeod, T. (2001). Active and passive consent: A comparison of actual research with children. *Ethical Human Sciences and Services*, 3(1), 23-31.
- Reynolds, P. D. (2007). A primer in theory construction. *Boston: Pearson Education*.
- Rice, E., Rhoades, H., Winetrobe, H., Sanchez, M., Montoya, J., Plant, A., & Kordic, T. (2012). Sexually explicit cell phone messaging associated with sexual risk among adolescents. *Pediatrics*, 130(4), 667-673.
- Rideout, V. J., Foehr, U. G., & Roberts, D. F. (2010). Generation M [<sup>2</sup>]: media in the lives of 8-to 18-year-olds. *Henry J. Kaiser Family Foundation*.  
Retrieved from  
<https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8010.pdf>
- Roberto, A. J., Zimmerman, R. S., Carlyle, K. E., & Abner, E. L. (2007). A computer-based approach to preventing pregnancy, STD, and HIV in rural adolescents. *Journal of health communication*, 12(1), 53-76.
- Roberto, A. J., Zimmerman, R. S., Carlyle, K. E., Abner, E. L., Cupp, P. K., & Hansen, G. L. (2007b). The effects of a computer-based pregnancy, STD, and HIV prevention intervention: A nine-school trial. *Health communication*, 21(2), 115-124.
- Robinson, M. L., Holmbeck, G. N., & Paikoff, R. (2007). Self-esteem enhancing reasons for having sex and the sexual behaviors of African American adolescents. *Journal of Youth and Adolescence*, 36(4), 453-464.

- Salazar, L. F., DiClemente, R. J., Wingood, G. M., Crosby, R. A., Harrington, K., Davies, S....& Oh, M. K. (2004). Self-concept and adolescents' refusal of unprotected sex: a test of mediating mechanisms among African American girls. *Prevention Science, 5*(3), 137-149.
- Sales, J. M., & DiClemente, R. J. (2010). Adolescent STI/HIV prevention programs: what works for teens. *Research Facts and Findings*. Retrieved from [http://www.actforyouth.net/resources/rf/rf\\_sti\\_0510.pdf](http://www.actforyouth.net/resources/rf/rf_sti_0510.pdf)
- Salkind, N. J., & Rainwater, T. (2009). *Exploring research 7<sup>th</sup> ed.* Upper Saddle River, NJ:Prentice Hall.
- Santelli, J. S., Lindberg, L. D., Abma, J., McNeely, C. S., & Resnick, M. (2000). Adolescent sexual behavior: estimates and trends from four nationally representative surveys. *Family Planning Perspectives, 156*-194.
- Santelli, J. S., Kaiser, J., Hirsch, L., Radosh, A., Simkin, L., & Middlestadt, S. (2004). Initiation of sexual intercourse among middle school adolescents: The influence of psychosocial factors. *Journal of Adolescent Health, 34*(3), 200-208.
- Schutt, R. K. (2011). *Investigating the social world: The process and practice of research*. Pine Forge Press. Retrieved from [http://www.sagepub.com/upm-data/24480\\_Ch5.pdf](http://www.sagepub.com/upm-data/24480_Ch5.pdf)
- Slater, A., & Tiggemann, M. (2014). Media exposure, extracurricular activities, and appearance-related comments as predictors of female adolescents' self-objectification. *Psychology of Women Quarterly, 0361684314554606*.

- Strasburger, V. C. (2004). Children, adolescents, and the media. *Current Problems in Pediatric and Adolescent Health Care*, 34(2), 54-54.
- Stefanescu, C., Chirita, V., Chirita, R., & Chele, G. E. (2009). The factors that influence adolescents' engagement in risky internet behavior: an observational study in Romanian adolescents. In *Proceedings of the 6th WSEAS international conference on Engineering education*. World Scientific and Engineering Academy and Society (WSEAS), 178-182.
- Taylor-Seehafer, M., & Rew, L. (2000). Risky sexual behavior among adolescent women. *Journal for Specialists in Pediatric Nursing*, 5(1), 15-25.
- Temple, J. R., Paul, J. A., van den Berg, P., Le, V. D., McElhany, A., & Temple, B. W. (2012). Teen sexting and its association with sexual behaviors. *Archives of Pediatrics & Adolescent Medicine*, 166(9), 828-833.
- Thomas, K. (2009). Teen online & wireless safety survey: Cyberbullying, sexting, and parental controls. Retrieved from <http://www.scribd.com/doc/20023365/2009-Cox-Teen-Online-Wireless-Safety-Survey-Cyberbullying-Sexting-and-Parental-Controls>.
- Turner, J. S. (2011). Sex and the spectacle of music videos: An examination of the portrayal of race and sexuality in music videos. *Sex Roles*, 64(3-4), 173-191.
- U.S. Bureau of the Census, Population Division. (2010). *The Black Population in the United States*. Retrieved from <http://www.census.gov/population/www/socdemo/race/Black-US.pdf>

- U.S. Bureau of Census. (2010b) *American Fact Finder: 2010 Census*. Retrieved from [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC\\_10\\_DP\\_DPDP1](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1)
- Valentine, J. A. (2008). Impact of attitudes and beliefs regarding African American sexual behavior on STD prevention and control in African American communities: Unintended consequences. *Sexually Transmitted Diseases*, 35(12 Suppl.), S23-S29.
- van Oosten, J. M., Peter, J., & Boot, I. (2014). Exploring associations between exposure to sexy online self-presentations and adolescents' sexual attitudes and behavior. *Journal of Youth and Adolescence*, 44(5), 1078-1091.
- Varma, S. (2006). Preliminary item statistics using point-biserial correlation and p-values. *Educational Data Systems Inc.: Morgan Hill CA. Retrieved*, 16(07).
- Ward, L. M. (2004). Wading through the stereotypes: Positive and negative effects of media use on Black adolescents' conceptions of self. *Developmental Psychology*, 40, 284–294.
- Ward L, & Friedman K. (2006). Using TV as a guide: associations between television viewing and adolescents' sexual attitudes and behavior. *Journal of Research on Adolescence*; 16:133–156.
- Whiteley, L. B., Brown, L. K., Swenson, R. R., Romer, D., DiClemente, R. J., Salazar, L. F., ... & Valois, R. F. (2011). African American adolescents and new media: Associations with HIV/STI risk behavior and psychosocial variables. *Ethnicity & disease*, 21(2), 216.



Whiteley, L. B., Brown, L. K., Swenson, R. R., Valois, R. F., Vanable, P. A., Carey, M.

P., ... & Romer, D. (2012). African American adolescents meeting sex partners online: closing the digital research divide in STI/HIV prevention. *The Journal of Primary Prevention, 33*(1), 13-18.

Wiersma, W. (2012). *The Validity of Surveys: Online and Offline*. Retrieved from

[http://wybowiersma.net/pub/essays/Wiersma,Wybo,The\\_validity\\_of\\_surveys\\_online\\_and\\_offline.pdf](http://wybowiersma.net/pub/essays/Wiersma,Wybo,The_validity_of_surveys_online_and_offline.pdf)

Williams, A. L., & Merten, M. J. (2008). A review of online social networking profiles

by adolescents: Implications for future research and intervention. *Adolescence-San Diego, 43*(170), 253.

Wingood, G. M., DiClemente, R. J., Bernhardt, J. M., Harrington, K., Davies, S. L.,

Robillard, A., & Hook III, E. W. (2003). A prospective study of exposure to rap music videos and African American female adolescents' health. *American Journal of Public Health, 93*(3), 437.

World Health Organization. (2013). *Sexual and Reproductive Health*. Retrieved from

[http://www.who.int/reproductivehealth/topics/gender\\_rights/sexual\\_health/en/](http://www.who.int/reproductivehealth/topics/gender_rights/sexual_health/en/)

Ybarra, M. L., & Mitchell, K. J. (2014). "Sexting" and its relation to sexual activity and

sexual risk behavior in a national survey of adolescents. *Journal of Adolescent Health, 55*(6), 757-764.

Young, S. D., and Rice, E. (2011). Online social networking technologies, HIV

knowledge, and sexual risk and testing behaviors among homeless youth. *AIDS and Behavior, 15*(2), 253-260.

Young, S. D., Cumberland, W. G., Lee, S. J., Jaganath, D., Szekeres, G., & Coates, T.

(2013). Social networking technologies as an emerging tool for HIV prevention: a cluster randomized trial. *Annals of Internal Medicine*, 159(5), 318-324.

Zickuhr, K., & Smith, A. (2012). Digital differences. *Pew Internet & American Life*

*Project*. Washington DC, Pew Research Center. Retrieved from

[http://pewinternet.org/~media/Files/Reports/2012/PIP\\_Digital\\_differences\\_041312.pdf](http://pewinternet.org/~media/Files/Reports/2012/PIP_Digital_differences_041312.pdf)

Zullig, K. J., Pun, S., Patton, J. M., & Ubbes, V. A. (2006). Reliability of the 2005 middle school youth risk behavior survey. *Journal of Adolescent Health*, 39(6), 856-860.

## Appendix A: Solicitation Letter

Dear Potential Site Participant:

My name is Nicole Rankine, MS, MPH and I am conducting a study as part of my doctoral degree at Walden University in the Department of Public Health, under the supervision of Dr. Jacquie Fraser. The purpose of this study is to examine the association between online sexual risk behaviors and real life sexual behaviors among African American adolescent females in the Metropolitan area of Atlanta, Georgia. The results of this research may offer those working in STD and teen pregnancy prevention a better understanding of how new media influences sexual behaviors and may lead to more effective culturally tailored prevention programs and campaigns.

This study will include an anonymous online survey to collect data on attitudes toward and use of new media to post sexual content as well as sexual behaviors. Participation is voluntary with the option to decline participation at any time. This study does not involve risk (physical or emotional) greater than that ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests. Neither the participants' nor the organization's name will be revealed in my dissertation and all information obtained will be kept confidential. Data collected from this research study will be stored for at least 5 years.

Because your organization provides services to the target population of this study, you are receiving this letter as a request to be a site participant to: 1) inform the parents of your program participants about the study and 2) distribute study materials directly to the parents. Parental consent will be required for each participant. As a result, parents who do agree to allow their child to participate will have the option to "opt out".

If you are willing to be a site participant or if you have any questions regarding this study, please email me at [nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu).

Thank you in advance for your consideration.

Sincerely,

Nicole Rankine  
Doctoral Candidate Walden University  
Public Health  
Community Health Education  
[nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu)  
404-509-1293

## Appendix B: Letter of Cooperation

---

Community Research Partner Name

---

Contact Information

---

Date

Dear Nicole Rankine,

Based on my review of your research proposal, I give permission for you to conduct the study entitled The Association Between the Use of New Media to Exchange Sexual Content and real life Sexual Risk Behaviors Among African American Female Adolescents within the (Insert Name of Community Partner). As part of this study, I authorize you to recruit African American females ages 13-17 in middle or high school to participate in your survey research. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include the distribution of research invitations (in the form of flyers, packets, or emails) on your behalf. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

---

Authorization Official

---

Contact Information

## Appendix C: Parent Letter of Participation and Implied Consent

### **Participants Needed for Research on Social Media Risk Behaviors**

**Are you the parent/guardian of an African American teenage girl that access and use social media?**

**If so...**

Volunteers are needed to take part in a study of to understand if posting sexually suggestive information online is associated with real life sexual behavior.

#### **What's involved?**

Your child will be asked to complete an anonymous online survey that will take approximately 30-45 minutes. Your child will be asked questions about posting sexy messages, pictures, videos using social media including social networking sites (Facebook, MySpace, Twitter), blogs, sites that allow interactive games, and video sites such as YouTube as well as sexual health behaviors. A sample of the survey questions is included.

#### **Who can participate?**

- ❖ African American females age 13-17 years.
- ❖ Reside in the Metro Atlanta area.
- ❖ Have access to and use new media platforms.
- ❖ Able to speak, write and read English.

#### **What are the Risks?**

- ❖ This study does not involve more than minimal risks for your child's involvement (that is, no risks beyond the risks associated with everyday life).
- ❖ In the case of the occurrence of adverse events due to participation in this study, your child will be provided with a phone number to reach their District Youth Development Coordinator from the Georgia Department of Public Health Adolescent Health & Youth Development Program, which provide free services to youth.
- ❖ If needed, to stop data collections due to adverse events resulting from participation in this study, your child can use the Survey Monkey feature called "Stop Collection Now" to immediately close the survey.

**What are the Benefits?**

- ❖ There is no direct benefit to your child but the results may help those working to keep young people healthy.
- ❖ Results may help those working to prevent STDs and pregnancy among teens.

**Is there any compensation?**

- ❖ There is no compensation for this study.

**Will my child be identified?**

- ❖ Your child's responses will be anonymous. No personal information will be collected. The results of this study will be used for scholarly purposes only.

**Does my child have to participate?**

- ❖ Your child's participation is entirely voluntary. She is free to choose not to participate. Should you and your child choose to participate, she can withdraw at any time without consequences of any kind.

**Who do I contact if I have questions?**

For more information about having your child participate in this study, please contact: Nicole Rankine at [nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu) or **404-509-1293**. This study is being conducted by a Walden University doctoral student. The study has been approved by Walden University IRB (#00-00-00-0000000). For more information on the study you can contact the university's Research Participant Advocate at (612) 312-1210 or email address [irb@waldenu.edu](mailto:irb@waldenu.edu).

**How do I give consent?**

By sharing the survey hyperlink with your child implies you:

- ❖ are at least 18 years of age
- ❖ understand what is being requested of your child as a participant in this study
- ❖ consent for your child to participate in this study
- ❖ have been given satisfactory answers to your questions.

**Should you choose to share the below survey hyperlink with your child to participate, please keep a copy of this invitation for your records.**

**TAKE THE SURVEY**

## Appendix D: Facebook E-Flyer

**Participants Needed for Research on  
Social Media Risk Behaviors**

**Are you the parent/guardian of an African American teenage girl that access and use social media?**

**If so...**

Volunteers are needed to take part in a study to understand if posting sexually suggestive information online is associated with real life sexual behavior.

**FOR MORE INFO ON HOW YOUR CHILD CAN PARTICIPATE, INBOX ME  
YOUR EMAIL ADDRESS TODAY!**



## Appendix E: Adolescent Assent Form

Hello, my name is Nicole Rankine and I am a student at Walden University doing a study to explore teens' attitudes, beliefs, and behaviors related with social media and sexting.

I want you to join my study but you can choose to participate or not. Your parent(s)/guardian has sent you this survey but if you do not wish to take part in the research, you do not have to.

There may be some words you don't understand or things that may make you uneasy or you may need to talk to someone. If so, you can talk things over with your parents or contact your county District Youth Development Coordinator from the Georgia Department of Public Health Adolescent Health & Youth Development Program at (404) 657-6638.

### **What's this study about?**

I want to find out how young girls like yourself are using use social media, how you feel about things like sending/posting naked messages, or sexting, and what you do in real life.

### **Why are you asking me?**

I am asking girls like you (age 13-17) who live in Metro Atlanta and who use social media like texting, Facebook, Twitter, Vine, Kik, etc., to complete this survey. This survey is only for black girls because Metro Atlanta has high rates of STDs and pregnancy among girls your age and black young girls have the highest rates. Many young people use social media now and some share or post sexy pictures of themselves so I want to find out if this relates to real life behaviors.

### **What do I have to do?**

I am asking you to complete a survey using the Internet that will take approximately 30 - 45 minutes. The survey will ask questions about how you use social media, and how you feel about posting or receiving sexy messages, and pictures. It will also ask about sexual risk behaviors.

### **Can I be identified?**

This survey is totally anonymous. This means that I will not be able to identify you in any way. None of your personal information will be collected and the results of this study will only be used for my school project.



**Do I have to take this survey?**

You don't have to be in this study if you don't want to be. It's up to you. If you decide not to be in the study, it's okay and nothing changes. Everything stays the same as before. Even if you say "yes" now, you can change your mind later and it's still okay.

**Is this bad or dangerous for me?**

Since you will be taking an anonymous survey on sex, you may feel a little uncomfortable about the topic, but there is nothing that will happen that is bad or dangerous for you. If you need to stop the survey because you feel a certain way just click the "Stop Collection Now" button and it will stop the survey.

**Is there anything good that happens to me?**

You will not get anything directly but you are helping people who work with young people like yourself to keep them healthy.

**Do I get anything for being in the research?**

You will not get paid for taking this survey.

**Who can I talk to or ask questions to?**

For more information about this study, contact me: Nicole Rankine at [nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu) or 404-509-1293. The study has been approved by Walden University IRB (#00-00-00-0000000). For more information on the study you can contact the university's Research Participant Advocate at (612) 312-1210 or email address [irb@waldenu.edu](mailto:irb@waldenu.edu).

**What do I need to do to complete the survey?**

If you have read and understand what's being asked and want to participate, go to the next page to complete the consent form. Be sure to either print the assent form or jot down my contact information, in case you have questions about the study later.

**ELECTRONIC CONSENT: Please select your choice below.****Clicking on the "agree" button below indicates that:**

- you have read the above information
- you voluntarily agree to participate
- you are under 18 years old and have received this link from your parent/guardian and have their permission

**If you do not wish to participate in the research study, please decline participation by clicking on the "disagree" button.**

**O Agree**

**O Disagree**

### Disqualification Page

**Thank you for your time, but you have been disqualified from taking this survey.**

*Why didn't I qualify for this survey?"*

#### **Reasons that May Result in Not Qualifying for the Survey**

1. You did not agree with the terms of this study.
2. You are a male
3. You are not Black/African American
4. You do not live in the Metro Atlanta area
5. You are not between the ages 13 -17 years.
6. You stopped data collection.

For more information about this study or if you have questions contact me: Nicole Rankine at [nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu) or **404-509-1293**.

If you are were uneasy with the topic of the survey and need to talk to someone you can talk things over with your parents or contact the county District Youth Development Coordinator from the Georgia Department of Public Health Adolescent Health & Youth Development Program at (404) 657-6638.

### Thank you Page

**THANK YOU!**

**Thank you for helping to improve the health of young people. Your survey responses are complete and have been submitted. Thank you for your time.**

**Thank you.**

For more information about this study, or if you have questions contact me: Nicole Rankine at [nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu) or **404-509-1293**.

If you are were uneasy with the topic of the survey and need to talk to someone you can talk things over with your parents or contact the county District Youth Development Coordinator from the Georgia Department of Public Health Adolescent Health & Youth Development Program at (404) 657-6638.

## Appendix F: Permission of Use

Printable Format


**Subject :** RE: Permission of Use Request  
**Date :** Tue, Jul 09, 2013 01:49 PM CDT  
**From :** Bill Albert <balbert@thenc.org>  
**To :** Nicole Rankine <nicole.rankine@waldenu.edu>  
**CC :** Jacqueline Fraser <jacquie.fraser@waldenu.edu>, Jody Early <Jody.Early@waldenu.edu>

Ms. Rankin:

Thank you for being in touch and your interest in our survey. Please consider this email response formal permission to use our survey instrument as you outline below.

Please let me know if you need anything additional and good luck with your work.

Bill Albert  
 Chief Program Officer  
 The National Campaign to Prevent Teen and Unplanned Pregnancy  
 1776 Massachusetts Ave., NW Suite 200  
 Washington, DC 20036

Ph: 202-478-8510   
 Twitter: BALbert1

[TheNationalCampaign.org](http://TheNationalCampaign.org)  
[StayTeen.org](http://StayTeen.org)  
[Bedsider.org](http://Bedsider.org)  
[Blog.TheNationalCampaign.org/Pregnant\\_Pause](http://Blog.TheNationalCampaign.org/Pregnant_Pause)

**From:** Nicole Rankine [mailto:nicole.rankine@waldenu.edu]  
**Sent:** Tuesday, July 09, 2013 2:24 PM  
**To:** Bill Albert  
**Cc:** Jacqueline Fraser; Jody Early  
**Subject:** Permission of Use Request

Good day Mr. Albert,

It was a pleasure speaking with you today. As stated previously, I am conducting a study as part of my doctoral degree at Walden University in the Department of Public Health, under the supervision of Dr. Jacqueline Fraser. The purpose of this study is to explore the impact of new media attitudes on sexual behaviors among African American adolescent females in Atlanta, Georgia. The nature of this study is to allow participants to give their attitudes of posting sexual content on new media and its impact on their sexual behaviors. This will help fill the gap in literature regarding the impact of new media on adolescent sexual behaviors.

In my research, I found the National Campaign to Prevent Teen and Unplanned Pregnancy conducted a Sex and Tech survey with a similar objectives. I am sending this email to request access as well as permission to use survey questions developed for your study for my doctoral study. I believe this study will be a great way to add to the existing literature and once completed, my dissertation will be published in ProQuest UMI and will be available to the public.

I am truly excited to see the various work being done with this health issue and would need written permission for use of the survey. Also, any information on methods of validity and reliability would also be helpful. I appreciate your time and consideration in advance. I look forward to hearing from you soon.

Sincerely,

studies on the 1991 and 1999 versions of the questionnaire; a study assessing the validity of self-reported height and weight; a study assessing the effect of changing the race/ethnicity question; a study examining how varying honesty appeals, question wording, and data-editing protocols affect prevalence estimates; and a study examining how varying the mode and setting of survey administration affects prevalence estimates.

[Top of Page](#) 

## Methodology

### **What does it mean for data to be "weighted?"**

Weighting is a mathematical procedure that makes data representative of the population from which it was drawn. In the YRBSS, only surveys with a scientifically drawn sample, appropriate documentation, and an overall response rate of at least 60% are weighted.

### **How are YRBS data weighted?**

YRBS data are weighted to adjust for school and student nonresponse and to make the data representative of the population of students from which the sample was drawn. Generally, these adjustments are made by applying a weight based on student sex, grade, and race/ethnicity.


### **Who does the National YRBS data represent?**

National YRBS data are representative of all public and private school students in grades 9-12 in the 50 states and the District of Columbia. National YRBS data are not the aggregate of the state YRBS data; the National YRBS uses a separate scientific sample of schools and students.

### **Who does the state and local YRBS data represent?**

State, territory and local YRBS data that are weighted are representative of all public school students in grades 9-12 in the respective jurisdiction. State, territory, and local YRBS data that are not weighted are representative only of the students who completed the survey in the respective jurisdiction.


### **How are schools and students selected?**

For the national, state, territory, and local YRBS samples, schools are selected with probability proportional to the size of student enrollment in grades 9-12 and then required classes of students (e.g., English classes) are randomly selected to participate. Within selected classes, all students are eligible to participate. See the [Methodology of the Youth Risk Behavior Surveillance System](#)  [pdf 420K] for a more detailed description of sampling procedures.

[Top of Page](#) 

## Conducting Your Own YRBS

### **How do I conduct a YRBS in my area/district/school?**

See [A Guide to Conducting Your Own Youth Risk Behavior Survey](#)  [pdf 108K] for information useful to communities and groups that plan to conduct their own YRBS survey.

### **Do I need permission to use the YRBS questionnaire for my study/area/district/school? Is there a cost?**

The YRBS questionnaire is in the public domain and no permission is required to use it. You may download the

questionnaire no charge. See [Questionnaires and Item Rationale](#) for the most recent YRBSS questionnaires.

**If I conduct a YRBSS, can CDC help me scan, process, or tabulate my data?**

CDC provides data processing assistance only to states, territories, and large urban school districts that it funds directly to conduct a YRBSS. However, documentation on how the data are processed can be found on the YRBSS [Data Files and Methods page](#) and in the [Methodology of the Youth Risk Behavior Surveillance System](#) [pdf 420K].

**Is funding available for conducting a YRBSS?**

CDC has funding available for all 50 state education agencies and only a small number of territories, tribal governments, and large urban school districts during each five year funding cycle.

[Top of Page](#) ↑



Page last reviewed: June 4, 2013  
 Page last updated: July 16, 2013  
 Content source: National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Division of Adolescent and School Health and National Center for Chronic Disease Prevention and Health Promotion, Division of Population Health

**File Formats Help:**

How do I view different file formats (PDF, DOC, PPT, MPEG) on this site? »

[Home](#) [A-Z Index](#) [Site Map](#) [Policies](#) [Using this Site](#) [Link to Us](#) [All Languages](#) [CDC Mobile](#) [Contact CDC](#)

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA 30333, USA  
 800-CDC-INFO (800-232-4636) TTY: (888) 232-6348 - [Contact CDC-INFO](#)



Printable Format

**Subject :** RE: Permission of Use Request  
**Date :** Wed, Jan 08, 2014 01:23 PM CST  
**From :** "[info@pewinternet.org](mailto:info@pewinternet.org)" <[info@pewinternet.org](mailto:info@pewinternet.org)>  
**To :** [Nicole Rankine <nicole.rankine@waldenu.edu>](mailto:Nicole_Rankine_<nicole.rankine@waldenu.edu>)

Dear Ms. Rackine,

You have the permission of the Pew Research Center's Internet & American Life project to use our data and questionnaires in your academic work as indicated below in your email. Our citation guidelines may be found here:

<http://www.pewresearch.org/about/use-policy/>

Thanks so much for taking the time to check with us on the use of our work,  
Cornelia

Cornelia Carter-Sykes  
Manager, Pew Internet  
Pew Research Center  
<http://www.pewinternet.org>

**From:** Nicole Rankine [mailto:[nicole.rankine@waldenu.edu](mailto:nicole.rankine@waldenu.edu)]  
**Sent:** Friday, December 20, 2013 3:42 PM  
**To:** Pew Internet Information  
**Subject:** Permission of Use Request

Good day,

My name is Nicole Rankine and I am conducting a study as part of my doctoral degree at Walden University in the Department of Public Health, under the supervision of Dr. Jacqueline Fraser. The purpose of this study is to explore the impact of new media usage and attitudes on "real life" sexual behaviors among African American adolescent females in Atlanta, Georgia. The nature of this study is to allow participants to give their attitudes of posting sexual content on new media and its impact on their sexual behaviors. This will help fill the gap in literature regarding the impact of new media on adolescent sexual behaviors.

In my research, I found Pew Reserach Surveys that were conducted to assess similar objectives. I am sending this email to request access as well as permission to use survey questions developed for your study for my doctoral study. I believe this study will be a great way to add to the existing literature and once completed, my dissertation will be published in ProQuest UMI and will be available to the public.

I am truly excited to see the various work being done with this health issue and would need written permission for use of the survey. Also, any information on methods of validity and reliability would also be helpful. I appreciate your time and consideration in advance. I look forward to hearing from you soon.

Sincerely,

Nicole Rankine

## Appendix G: New Media Attitudes &amp; Behaviors and Sexual Behaviors Survey Questions

**Instructions:** Please complete the following survey. Throughout this survey, it is **IMPORTANT** that you understand what we mean so that we interpret your answers correctly. Please keep the following in mind as you read and answer each question:

- Any time that we ask about “**sexy pictures/video**,” I am talking about sexually suggestive, semi-nude, or nude personal pictures/video taken of yourself (alone or by a friend) – and not those found on the Internet, received from a stranger (like spam), etc.
- Any time I say “**sexy messages**,” I am talking about sexually suggestive written personal texts, emails, IMs, etc. – and not those you might receive from a stranger (like spam)
- Throughout this survey, **messages** only refers to those written electronically (in emails, texts, IMs, etc.) – and **pictures/video** only refer to those captured electronically (on a cellphone or digital camera/camcorder).

1. Are you male or female?

Gender	Yes	No
Male		
Female		

2. How old are you? \_\_\_\_\_

- A. 13
- B. 14
- C. 15
- D. 16
- E. 17
- F. Other

3. Are you:

Race/Ethnicity	Yes	No
Black / African-American		
Other		

4. In which Metro Atlanta county do you reside?
- A. Fulton
  - B. DeKalb
  - C. Gwinnet
  - D. Cobb
  - E. Clayton
  - F. Butts
  - G. Cherokee
  - H. Douglas
  - I. Fayette
  - J. Forsyth
  - K. Henry
  - L. Newton
  - M. Rockdale
  - N. Walton
  - O. Barrow
  - P. Coweta
  - Q. Paulding
  - R. Pickens
  - S. Spalding
  - T. Other
5. Does any of the following describe your current relationship status?



Status	Yes	No
Not in a relationship		
In a casual/dating relationship		
In a serious relationship		
Married		

6. Please select all that apply. Do you have and use any of the following?

Device	Yes	No
Desktop Computer (non-laptop)		
Laptop computer		
Cellphone		
Smartphone (Android, iPhone, PDA, Blackberry, etc.)		
Digital camera		
Digital camcorder (video recorder)		
MP3 Player or iPod		
Video MP3 Player		
Webcam		
Game console		
Tablet computer or iPad		
None of these		

7. Please select all that apply. Do you:

New Media Access	Yes	No
Have a profile on a social-networking site (like MySpace, Facebook, etc.)		
Have a profile on a dating or singles site (like Match, Ok Cupid, or eHarmony)		
View others' profiles/pictures on a social-networking site		
View others' profiles/pictures on a dating/singles site		
Write/update a personal blog		
Regularly read others' personal blogs		
Send/receive pictures or video on your cellphone		
Send/receive pictures or video on a computer		
Post photos online		
Post videos online (like on YouTube)		
Send/receive text messages		
Watch TV shows online or on your MP3 Player		

I choose not to answer		
------------------------	--	--

8. Thinking about all the different ways you socialize or communicate with friends...About how often you do the following with each other: *Please select one for each behavior*

Usage	several times a day	about once a day	3-5 days a week	1-2 days a week	every few weeks	once a month	A few times a year
use the Internet							
send text messages							
exchange email							
exchange instant messages							
exchange messages through social networking sites like MySpace or Facebook							
I choose not to answer							

9. Please select all that apply. On which social networking site or sites do you have a profile or account?

Site	Yes	No
Facebook		
Instagram		
Twitter		
Oovoo		
Kik		
Keek		
YouTube		
Vine		

Tumblr		
Pineterest		
Pheed		
Snapchat		
Ask.fm		
Creepy		
Qooh.me		
4Chan		
Wanelo		
Reddit		
Other		
I choose not to answer		

10. How much do you agree that each of the following is common among people your age?

<b>New Media Behavior and Usage</b>	<b>Strongly disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree Nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
Sending sexy messages to someone else					
Sharing sexy messages with people other than the one(s) they were meant for					
Sending of sexy pictures/video of oneself to someone else					
Posting sexy pictures/video of oneself online					
Sharing sexy pictures/video with people other than the one(s) they were meant for					
I choose not to answer					

11. What do you think are the reasons that **girls** send/post sexy messages or pictures/video of themselves? *Please mark all that apply*

Get or keep a guy's attention	
Guy pressured them to send it	
As a "sexy" present for a boyfriend	
To feel sexy	
Get a guy to like them	
Pressure from friends	
To get positive feedback	
To be fun/ flirtatious	
To get noticed	
In response to one she received	
Other: _____	
I choose not to answer	

12. How much do you agree or disagree that each of the following describes the **activity** of sending suggestive messages or nude/semi-nude pictures/video of yourself?

<b>New Media Attitudes</b>	<b>Strongly disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree Nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
Flirty					
Gross					
Hot					
Lame					
Stupid					
Dangerous					
Exciting					
Fun					
Harmless					
Immoral					
I choose not to answer					

13. When concerning online messages, have you personally ever done any of the following?

<b>New Media Behavior and Usage</b>	Yes	No
Sent a sexually suggestive message to someone (email, IM, text, etc.)		
Posted a sexually suggestive message to someone's online profile (like on MySpace, Facebook, etc.)		
NET sent/posted sexually suggestive messages (NET=Internet).		
Received a sexually suggestive message from someone (email, IM, text, etc.)		
Shared a sexually suggestive message with someone other than the one(s) it was originally meant for		
Had a sexually suggestive message (originally meant to be private) shared with me		
None of these		
I choose not to answer		

14. About how often do you do the following: *Please select one for each behavior*

<b>Usage</b>	<b>several times a day</b>	<b>about once a day</b>	<b>3-5 days a week</b>	<b>1-2 days a week</b>	<b>every few weeks</b>	<b>once a month</b>	<b>A few times a year</b>
Send a sexually suggestive message to someone (email, IM, text, etc.)							
Post a sexually suggestive message to someone's online profile (like on MySpace, Facebook, etc.)							
NET send/post sexually suggestive messages (NET=Internet).							
Receive a sexually suggestive message from someone (email, IM, text, etc.)							

Share a sexually suggestive message with someone other than the one(s) it was originally meant for							
Have a sexually suggestive message (originally meant to be private) shared with me							
I choose not to answer							

15. When concerning pictures or videos, have you personally ever done any of the following?

<b>New Media Behavior and Usage</b>	Yes	No
Sent a nude or semi-nude picture/video (of yourself) to someone (via email, cellphone, etc.)		
Posted a nude or semi-nude picture/video (of yourself) online (like on MySpace, Facebook, in a blog, etc.)		
NET sent/posted a nude or semi-nude picture/video of yourself		
Received a nude or semi-nude picture/video from someone (of himself/herself)		
Shared a nude or semi-nude picture/video with someone other than the one(s) it was originally meant for		
Had a nude or semi-nude picture/video (originally meant to be private) shared with me		
None of these		
I choose not to answer		

16. About how often do you do the following: *Please select one for each behavior*

<b>Usage</b>	<b>several times a day</b>	<b>about once a day</b>	<b>3-5 days a week</b>	<b>1-2 days a week</b>	<b>every few weeks</b>	<b>once a month</b>	<b>A few times a year</b>
Send a nude or semi-nude picture/video (of yourself) to someone (via							

email, cellphone, etc.)							
Post a nude or semi-nude picture/video (of yourself) online (like on MySpace, Facebook, in a blog, etc.)							
NET send/post a nude or semi-nude picture/video of yourself							
Receive a nude or semi-nude picture/video from someone (of himself/herself)							
Share a nude or semi-nude picture/video with someone other than the one(s) it was originally meant for							
Have a nude or semi-nude picture/video (originally meant to be private) shared with me							
I choose not to answer							

17. If you have **sent or posted** sexy messages or pix/videos to someone of yourself, who did you sent/post to? *Please think about any/all of those you've ever sent/posted and mark all that apply.*

Boyfriend / Girlfriend	
Someone I had a crush on	
Someone I dated or hooked up with	
Someone I just met	
Someone I wanted to date or hook up with	
One or more good friends	
Someone I only knew online	

Other: _____	
I have never sent or posted sexy messages	
I choose not to answer	

18. If you have **sent or posted** sexy messages or pix/videos to someone of yourself, how much do you agree or disagree that each of the following were the reasons that you sent/posted?

New Media Intention	Strongly disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
Get a guy/girl's attention					
Pressured to send it					
As a "sexy" present for a boyfriend/girlfriend					
To feel sexy					
Get a guy/girl to like me					
As a joke					
To get positive feedback					
To be fun/ flirtatious					
To get noticed					
In response to one that was sent to me					
Don't know					
I choose not to answer					

19. If you have **received** suggestive messages or nude/semi-nude pictures/videos, who did you receive them from? *Please think about any/all of those you've ever sent/posted and mark all that apply.*

Boyfriend / Girlfriend	
Someone I had a crush on	



Someone I dated or hooked up with	
Someone I just met	
Someone I wanted to date or hook up with	
One or more good friends	
Someone I only knew online	
Other: _____	
I have never received suggestive messages or nude/semi-nude pictures/videos	
I choose not to answer	

20. Thinking about suggestive messages or nude/seminude pictures/videos that you every **received**, how much do you agree or disagree that each of the following describes how you felt getting them?

<b>New Media Attitudes</b>	<b>Strongly disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree Nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
Amused					
Angry					
Creeped out					
Disappointed					
Embarrassed					
Excited					
Grossed out					
Happy					
Included					
Scared					
Surprised					
Turned on					
Turned off					
More interested in dating sender					
More interested in hooking up with sender					
Less interested in dating sender					

Less interested in hooking up with sender					
Other: _____					
I choose not to answer					

21. What are the reasons you would be concerned about sending or posting sexy messages or pictures/videos of yourself? *Please mark all that apply.*

Could disappoint family	
Could disappoint friends	
Could disappoint teacher/coach	
Could hurt my relationship or chances with someone I like	
Could hurt my reputation	
Could hurt my family's reputation	
Could get in trouble with the law	
Could get in trouble at school	
College recruiter might see	
Potential (or current) employer might see	
Potential embarrassment	
Might regret it later	
Might make people think I'm slutty in real life	
Other: _____	
Don't know	
I choose not to answer	

22. How much do you agree or disagree with each of the following statements?

<b>New Media Attitudes, Behaviors, Intentions</b>	<b>Strongly disagree</b>	<b>Somewhat Disagree</b>	<b>Neither Agree Nor Disagree</b>	<b>Somewhat Agree</b>	<b>Strongly Agree</b>
There is pressure among people my age to post					

<p><b>sexy pictures/video</b> in their networking site profiles</p>					
<p>Personal <b>sexy messages and pictures/video</b> usually end up being seen by more than just those to whom they were sent</p>					
<p>One has to be aware that <b>sexy messages and pictures/video</b> may end up being seen by more than just the intended recipient(s)</p>					
<p>Girls have to worry about privacy (of <b>sexy messages and pictures/video</b>) more than guys do</p>					
<p>People my age are more forward/aggressive using <b>sexy messages and pictures/video</b> than they are in real life</p>					
<p>Sending personal <b>sexy messages and pictures/video</b> is no big deal</p>					
<p>Sending personal <b>sexy messages and pictures/video</b> can have serious negative consequences</p>					
<p>My friends have sent <b>sexy pictures/video</b> to someone</p>					
<p>My friends have posted <b>sexy pictures/video</b> on the Internet</p>					
<p>People who exchange <b>sexy messages or pictures/video</b> are</p>					

<b>more likely</b> to date or hook up with each other in real life					
People who exchange <b>sexy messages or pictures/video</b> are <b>expected</b> to date or hook up with each other in real life					
I am more forward/sexually aggressive using <b>sexy messages and pictures/video</b> than I am in real life					
I am more forward/sexually aggressive using <b>sexy messages and pictures/video</b> than I would be if the technology were not Available					
I choose not to answer					

23. Have you ever had sexual intercourse?
- Yes
  - No
  - I choose not to answer
24. During your life, with how many people have you had sexual intercourse?
- I have never had sexual intercourse
  - 1 person
  - 2 people
  - 3 people
  - 4 people or more
  - I choose not to answer

25. During the past 3 months, with how many people did you have sexual intercourse?
- a. I have never had sexual intercourse
  - b. I have had sexual intercourse, but not during the past 3 months
  - c. 1 person
  - d. 2 people
  - e. 3 people
  - f. 4 people or more
  - g. I choose not to answer
26. The last time you had sexual intercourse, did you or your partner use a condom?
- a. I have never had sexual intercourse
  - b. Yes
  - c. No
  - d. I choose not to answer
27. The last time you had sexual intercourse, what one method did you or your partner use to prevent pregnancy? (Select only one response.)
- a. I have never had sexual intercourse
  - b. No method was used to prevent pregnancy
  - c. Birth control pills
  - d. Condoms
  - e. An IUD (such as Mirena or ParaGard) or implant (such as Implanon or Nexplanon)
  - f. A shot (such as Depo-Provera), patch (such as Ortho Evra), or birth control ring (such as NuvaRing)
  - g. Withdrawal or some other method
  - h. Not sure

i. I choose not to answer