

**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA**



**SEXTING AND RISKY SEXUAL BEHAVIOUR AMONG
UNIVERSITY OF GHANA STUDENTS**

BY

**DOREENDA ENYONAM AHIATAKU
(10552607)**

**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF
GHANA, LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT
FOR THE AWARD OF MASTER OF PUBLIC HEALTH DEGREE**

JULY, 2016

DECLARATION

I, Doreenda Enyonam Ahiataku hereby state that, apart from other people's work which have been cited and duly acknowledged, this is entirely my own work done out of supervision.

.....
Doreenda Enyonam Ahiataku
(Student)

.....
Date

.....
Dr. Abubakar Manu
(Supervisor)

.....
Date



DEDICATION

I dedicate this piece of work to the Almighty God and my wonderful family who have always supported me with their prayers, support and love.



ACKNOWLEDGEMENTS

My profound gratitude goes to the Almighty God for making it possible to go through this programme successfully.

My heartfelt thanks go to Dr. Abubakar Manu for supervising my work. I am grateful and appreciate his advice, essential and fruitful comments, patience, essential and constructive criticisms, patience and guidance throughout my research period. To my Head of Department, Professor Augustine Ankomah, I say a big thank you for your countless advice and support.

I owe a special gratitude to, Dr. Fred Yao Gbagbo, for his encouragement and making time to go through my work and offering constructive ideas and criticisms. I would forever be grateful.

To the CEO of the Cape Coast Teaching Hospital, Dr. Daniel Asare, the Director of Nursing, Mrs. Sophia Blankson and my colleagues and friends at work. Thank you all for being instrumental in the achievement of this dream. May the almighty God shower his blessings upon you.

To my loving parents, Mr. & Mrs. Ahiataku, and my siblings. I say a big Thank you, for your ceaseless prayers, support and encouragement.

To all my programme mates, research assistants and friends, I say a big Thank you to you all for being there with your assistance and encouragement.

To all individuals who contributed in one way or the other. I say a big thank you all for making this work a possibility.

ABSTRACT

Background: Youth sexuality is of paramount interest to many stakeholders, since potential negative consequences may occur. These include HIV/AIDS, other STIs, and unintended pregnancies. Studies elsewhere indicate that sexting increases risky sexual behaviour among the youth.

In Ghana however, there is no empirical evidence about sexting behaviours among the youth and the extent to which sexting influences risky sexual behaviours.

This study, sought to examine the influence of sexting on risky sexual behaviour among University of Ghana students. Specifically, it determined the prevalence of sexting among students of the University Of Ghana, the factors that motivate sexting and the relationships between sexting and risky sexual behaviours.

Methodology: The study was a cross-sectional quantitative study using structured questionnaires. A multistage cluster sampling technique with probability proportional to size was used in the sampling process, to compute for the number of students to be used. The measure of size was the number of students in each Hall. First, five (5) Halls out of the 11 mixed Halls were randomly selected using the lottery method.

The second stage involved systematic selection of room numbers of the selected halls. Respective sampling intervals were calculated for each Hall, and every n^{th} room was selected.

In the third, one student was chosen at random from the selected rooms. In cases where a student in the selected rooms refused to participate in the study, or didn't meet the eligibility criteria, we moved to the next room.

At the end of the study the proportion of student sexters and their motivation for doing so was known. The study also determined whether sexting influences sexual behaviour. Data were analyzed using frequencies, Chi-square and logistic regressions in STATA version 13.0.

Results: The study found that most of the students use a smart phone for internet connectivity and females were noted to sext more than males. Overall, 255(38%) of the students have ever sent a sexually suggestive message, and 463(69.1%) have ever received a sexually suggestive message. About 237 (51.2%) were engaged in two way sexting. The reasons given for sexting included to get noticed 427(63.7%), 376(56.1%) to fish for compliments and as a sexy gift for boyfriends/ girlfriends 398(59.4%).

About 160(24.9%) were involved in risky Sexual behaviours. A multivariate analysis showed that there was no significant association between sexting and risky sexual behaviour.

Conclusion: The study showed that females sext more than males and about a quarter of the students are involved in risky sexual behaviours. However there was no association between sexting and risky sexual behaviour.

Key words: Sexting, risky sexual behaviours, two way sexting, University of Ghana

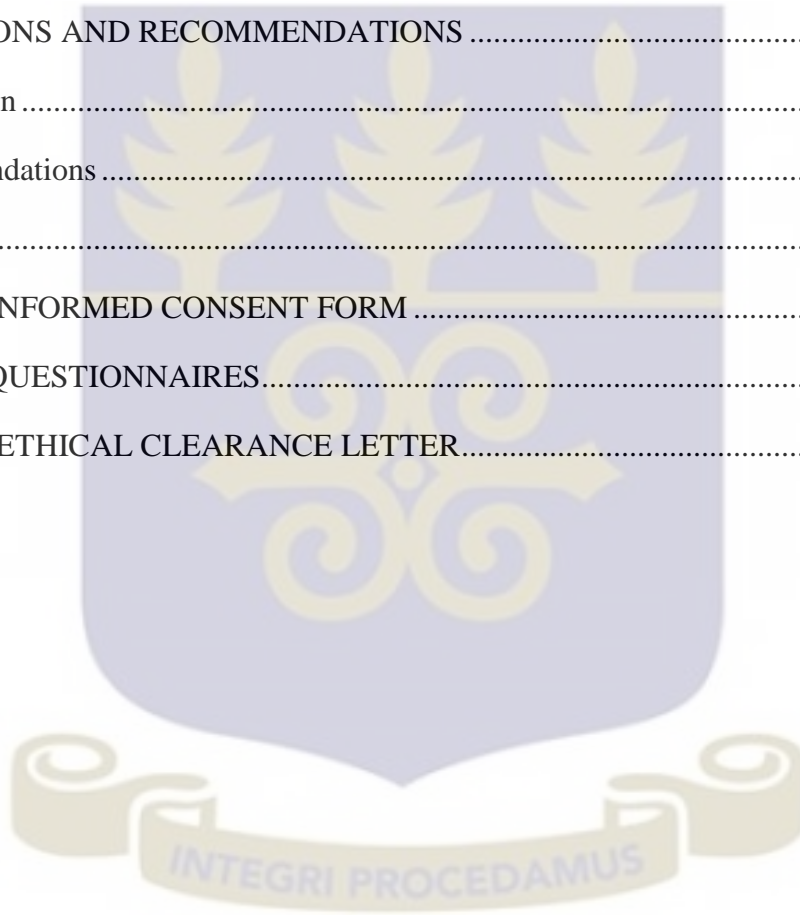
TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
TABLE OF CONTENTS	vi
DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURE	xi
LIST OF ACCRONYMS	xii
DEFINITION OF TERMS	xiii
CHAPTER ONE	1
1.0 INTRODUCTION	1
1.1 Background	1
1.2 Problem statement	3
1.3 Conceptual framework	5
1.5 Study Objectives	8
1.5.1 General Objectives	8
1.5.2 Specific Objectives	8
CHAPTER TWO	9

2.0 LITERATURE REVIEW	9
2.1 Defining Sexting	9
2.2 Prevalence of Sexting.....	10
2.3 Motivations for Sexting.....	11
2.4 Gender and Sexting.....	12
2.5 Consequences of Sexting	13
2.6 Risky Sexual Behaviours	14
2.6.1 Ever Had Sex	14
2.6.2 Sex without a Condom and Multiple Sexual Partners.....	15
2.6.3 Age at Sexual Debut.....	16
2.7 Peer Pressure.....	17
2.8 Risky Sexual Behaviours and Sexting	18
2.9 Influence of Media	19
2.10 Family Structure.....	20
2.11 Religiosity	21
CHAPTER THREE	23
3.0 METHODOLOGY	23
3.1 Study Design	23
3.2 Study Site	23
3.3 Study Population	24
3.3.1 Inclusion Criteria	24
3.3.2 Exclusion Criteria	24
3.4 Study variables	25
3.4.1 Dependent Variable	25

3.4.2	Independent Variables	25
3.5	Sample Size Estimation.....	26
3.7	Sampling Procedure	27
3.8	Training of research assistants	28
3.9	Pre-testing.....	28
3.10.	Data collection Technique and Procedure.....	29
3.11	Data Processing.....	29
3.12	Data Analysis	29
3.13	Ethical Considerations.....	30
3.14	Quality Control.....	31
3.15	Dissemination of findings	31
CHAPTER FOUR.....		32
4.0	RESULTS	32
4.1	Background characteristics	32
4.2	Distribution of students	32
4.3	Prevalence of Sexting.....	35
4.4	Motivations and attitudes for Sexting	39
4.5	Risky sexual behaviours.....	42
4.6	Relationship between Sexting and Risky sexual behaviour.....	44
4.7	Associations between risky sexual behaviour and other variables	48
CHAPTER FIVE		50
5.0	DISCUSSION	50
5.1	Introduction.....	50
5.2	Discussion of findings.....	50

5.3	Prevalence of Sexting.....	50
5.4	Reasons and motivations for Sexting.....	52
5.5	Proportion of students engaging in Risky Sexual behaviours.....	53
5.6	Associations between sexting and Risky Sexual Behaviours	54
5.7	Limitations of the study.....	56
CHAPTER SIX.....		57
6.0	CONCLUSIONS AND RECOMMENDATIONS	57
6.1	Introduction	57
6.2	Recommendations	58
REFERENCES		59
APPENDIX I: INFORMED CONSENT FORM		63
APPENDIX II: QUESTIONNAIRES.....		67
APPENDIX III: ETHICAL CLEARANCE LETTER.....		74



LIST OF TABLES

Table 4.1 Demographic Characteristics of Students.....	34
Table 4.2 Gadgets used for internet connectivity	35
Table 4. 3 Proportion of students who have ever engaged sexting related activities by sex	37
Table 4. 4 Cross tabulation showing the proportion of students who have sent or received sext messages by age groups	38
Table 4. 5 Cross-tabulation showing the proportion of students who have ever sent and ever received sext messages	38
Table 4. 6 Motivations for sexting by sex.....	40
Table 4. 7 Attitudes towards sexting.....	41
Table 4. 8 Risky sexual behaviours by sex of students	43
Table 4. 9 Other Sexual Behaviours	44
Table 4. 10 Associations between risky sexual behaviour and other major variables.....	46
Table 4. 11 Results of Logistic Regression analyses	49

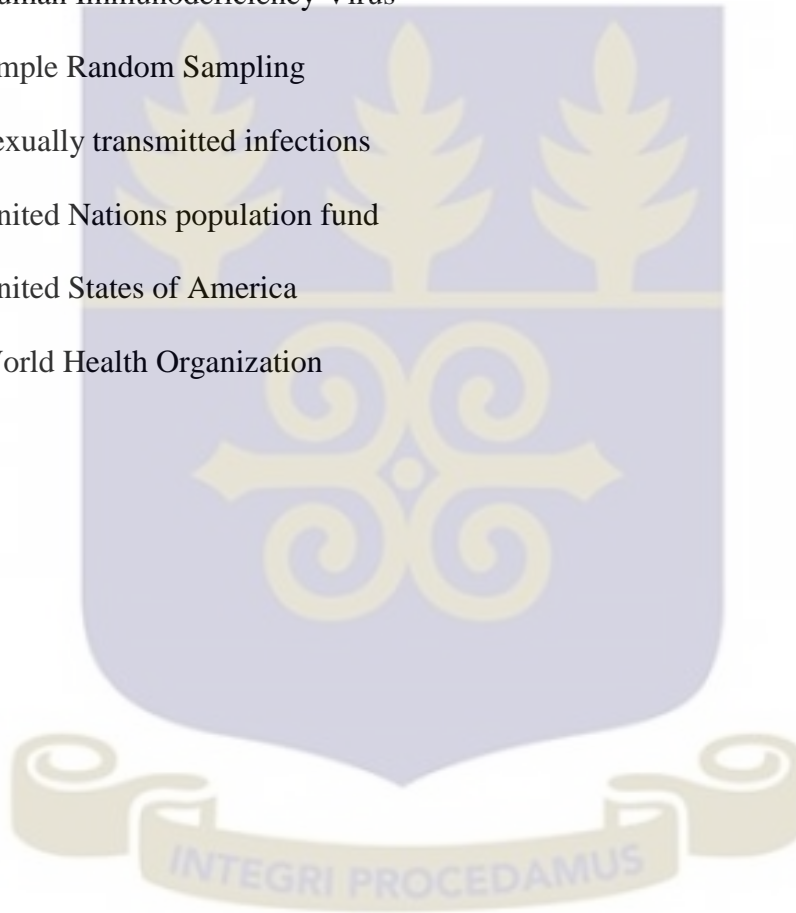
LIST OF FIGURE

Figure 1.1 Conceptual framework, adapted from Netemeyer, Ryn, & Ajzen,(1991)..... 7



LIST OF ACCRONYMS

AIDS	Acquired Immune deficiency Syndrome
AP-MTV	Associated Press-Music Television
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
SRS	Simple Random Sampling
STIs	Sexually transmitted infections
UNFPA	United Nations population fund
USA	United States of America
WHO	World Health Organization



DEFINITION OF TERMS

RISKY SEXUAL BEHAVIOUR: Involvement in more than one of the following activities

1. Ever had sexual intercourse in exchange for cash
2. Ever had sexual intercourse in exchange for gift
3. Ever had sexual intercourse in exchange for favors?
4. Ever had sex when drunk?
5. Ever had sex with a person 10 years older or more?
6. Non condom use during last sexual intercourse
7. Multiple sexual partners within the last 3 months

SEXTING: Refers to sharing (sending or receiving) sexually suggestive photos or messages through cell phones and any other mobile media.

YOUTH: Refers to persons aged between 15 years and 24 years.

YOUNG PEOPLE: Refers to people aged 10–24 years.



CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Youth sexuality is of paramount interest to many stakeholders, because of potential negative consequences such as unintended pregnancies, acquisition of HIV/AIDS and other sexually transmitted infections (Khanna, Singh, & Khas, 2015). Globally, it is an exciting milestone that happens to anybody, as one is no longer considered as a child, neither is one an adult. This stage is characterized by tremendous pace in physical growth and development, social and psychological changes, sexual maturity, debut, development of adult mental processes and a move from an earlier childhood socio-economic dependence towards relative independence (Geary, Baumgartner, & Tucker, 2008; Khanna et al., 2015).

In 2011, the world's population reached the 7 billion mark (UNFPA, 2011). Young people aged between 10-24 years represent about a quarter of the total world population. In developing countries these young people between the ages of 10-24 years make up about 25% of the population, a grander percentage than in the developed countries because of the high fertility rates (UNFPA, 2011).

The last population and housing census for Ghana in 2010 indicated that, like in most developing countries the population of Ghana is largely youthful, with young people between the ages of 15-24 making up about 30.2% of the total population of Ghana (Ghana Statistical Service, 2013)

Majority of students admitted to pursue various undergraduate programmes are directly from the junior high school and anecdotally, 70% are young people.

The transition to adulthood is quite turbulent for young people. During the transition, young people adopt various behaviours that may negatively affect their future health. Studies show that over 70% of disease burden in adulthood is attributed to conditions that started in adolescence (Gore et al., 2011).

According to Lounsbury, Mitchell, & Finkelhor (2011), sexting is the exchange of sexually suggestive pictures or messages, including nude or seminude photographs, through mobile phones or other social networking sites. This phenomenon began with technological advancement in the 21st century. Trends keep changing from country to country, hence becoming a global issue, a study by Barker, Rizzo, Hancock, Norton, & Brown (2014) indicate that teens and the youth around the world are engaging in this behaviour.

In Ghana sexting and its associated negative outcomes has received media attention (Gadzekpo, 2014), for its prevalence among young people.

Young people who automatically have the obligation to lead the economy of the next generations, face challenges which include cyber addiction, drinking, smoking, under age sex, and teen pregnancy resulting in HIV and AIDS. Other challenges include peer pressure, unhealthy competition and eating disorders (Van Ouytsel, Van Gool, Ponnet, & Walrave, 2014).

This burden if not handled adequately will lead to a world full of diseased persons with a reduced work force and decreased productivity (Strasburger, Jordan, & Donnerstein, 2010).

In a national survey of persons aged between 10 and 17 years old in the US, it was found that, nearly half of the students had been exposed to online pornography in the previous year (Walker, Sanci, & Temple-, 2011).

Though there is a widespread incidence in other countries including sub-Saharan Africa and Ghana, young people are unaware about the legal ramifications that this practice may cause.

Media affect the youth not only by shifting time they employ doing homework, active learning or sleeping but it also impacts beliefs and behaviours as they imitate what they see on screen and deem it correct behaviour. The youth of this generation are very creative and are able to turn around the benefits of media to their benefits, by downloading violent videos, sending sexually suggestive text messages or explicit self-photographs to their friends (Strasburger, Jordan, & Donnerstein, 2010).

This study seeks to understand the technological needs of young people and their technological communication methods; it is also to ascertain what drives them to use technology to their benefit and what motivates them to sext. It also seeks to examine the association between sexting and risky sexual behaviour among University of Ghana students.

1.2 Problem statement

About one third of the total population of persons living in Ghana as at 2010, were young people between the ages of 10 and 24 years (Ghana Statistical Service, 2013). This portrays that the population of Ghana is largely youthful, and these group of individuals are the persons who will be driving the affairs of the homeland in the next generation.

Sexual debut in the country has been quite early. Median age at first sex was reported to be 18.4 years in Ghana and varies between the rural (17.9 years) and the urban (18.8 years) areas. This means that first sex tends to take place among the Ghanaian population when they are in their youth (Ghana Statistical Service, 2013).

In the University of Ghana, the picture is no different. It is evident that almost every student uses a mobile phone. Technology is useful in discussing health problems among students. Smart phones in particular, enable the youth to connect to one another, and to the world through a range of social and visual media, shopping and surfing for information. Alongside the perceived benefits of advancing online and mobile technologies, there are public concerns relating to young people's changing social communication. One inappropriate use is sexting (Lennart et al, 2008; Cooper et al, 2005).

Studies show that close to 20% of teens have sexted. Collins, Elliot and Berry, (2010) were also of the opinion that exposure to sexual media content, enhances a rapid progression to sexual activity and early coital behaviour, which leads to unplanned pregnancies and sexually transmitted infections.

Sexting also affects sexual behaviour in the same way i.e. early sexual initiation, rapid progression to sexual activity and unprotected sex with multiple sexual partners (Benotsch et al., 2013; National campaign to Prevent Teen pregnancy, 2005).

Sexting has received media attention in other countries including Ghana for its perceived prevalence and associated outcomes, but there is no empirical evidence in Ghana to back these claims. Therefore policies and programmes targeting issues on young people are silent on this emerging social challenge, making it difficult to design social interventions to address

the motivations of sexting, risky sexual behaviours, or risk factors and outcomes of sexting behaviours.

Research work done among students and the youth in Ghana are uncountable but majority focuses on needs of young people, contraceptive use, knowledge about sexually transmitted infections and sexual debut. Little is known about sexting and how it influences risky sexual behaviour in Ghana. This research is relevant to address the influence of sexting and social media on risky adolescent behaviours.

1.3 Conceptual framework.

The study adapted the theory of planned behaviour, proposed by (Ajzen, 1991), as the conceptual framework (Figure 1.1). The theory describes attitudes toward behaviours. It states that, the most important determinant of a person's behaviour is behaviour intent. The individual's intention to perform behaviour is a combination of attitude toward performing the behaviour and perceived behavioural control and subjective norm.

The constructs are: individual's attitude toward the behaviour, behavioural belief, evaluations of behavioural outcome, subjective norm, normative beliefs, and the motivation to comply.

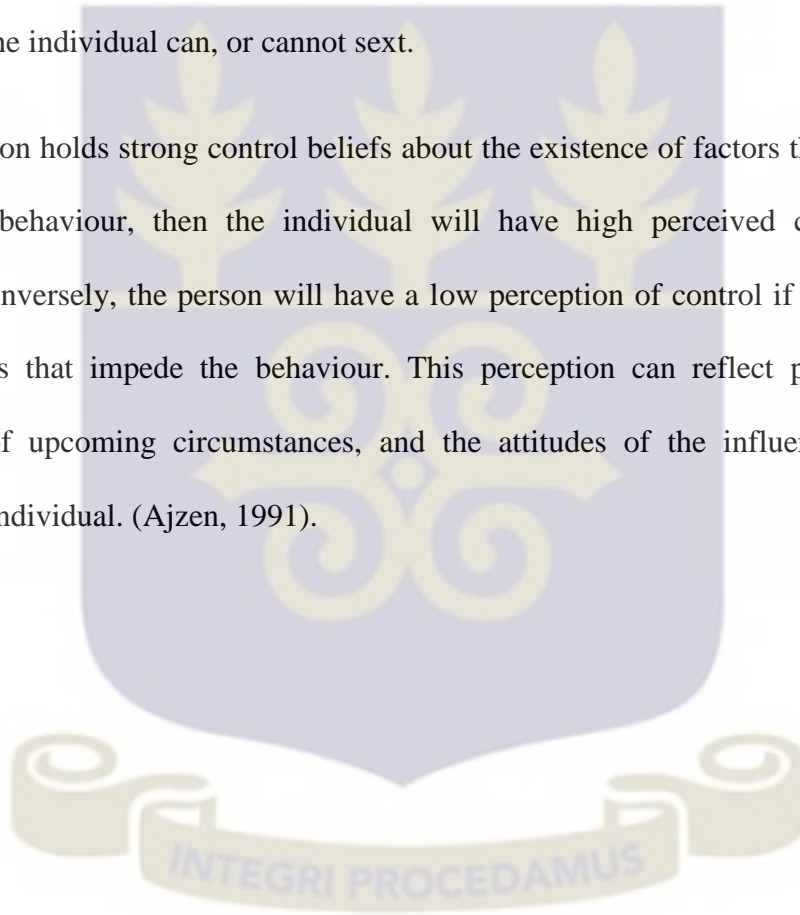
If a person perceives that the outcome of performing a behaviour is positive (e.g. sexting or engaging in risky sexual behaviours), she/he will have a positive attitude toward performing that behaviour. The opposite can also be stated if the behaviour is thought to be negative.

The theory also posits that if relevant others see engaging in sexting behaviour as positive and the individual is motivated to meet the expectations of relevant others, then a positive subjective norm is expected. If relevant others see sexting behaviour as negative and the

individual wants to meet the expectations of these "others", then the experience is likely to be a negative subjective norm for the individual.

Perceived behavioural control is determined by two factors; Control Beliefs and Perceived Power. Perceived behavioural control indicates that a person's motivation to sext is influenced by how difficult sexting is perceived to be, as well as the perception of how successfully the individual can, or cannot sext.

Also, if a person holds strong control beliefs about the existence of factors that will facilitate risky sexual behaviour, then the individual will have high perceived control over the behaviour. Conversely, the person will have a low perception of control if she holds strong control beliefs that impede the behaviour. This perception can reflect past experiences, anticipation of upcoming circumstances, and the attitudes of the influential norms that surround the individual. (Ajzen, 1991).



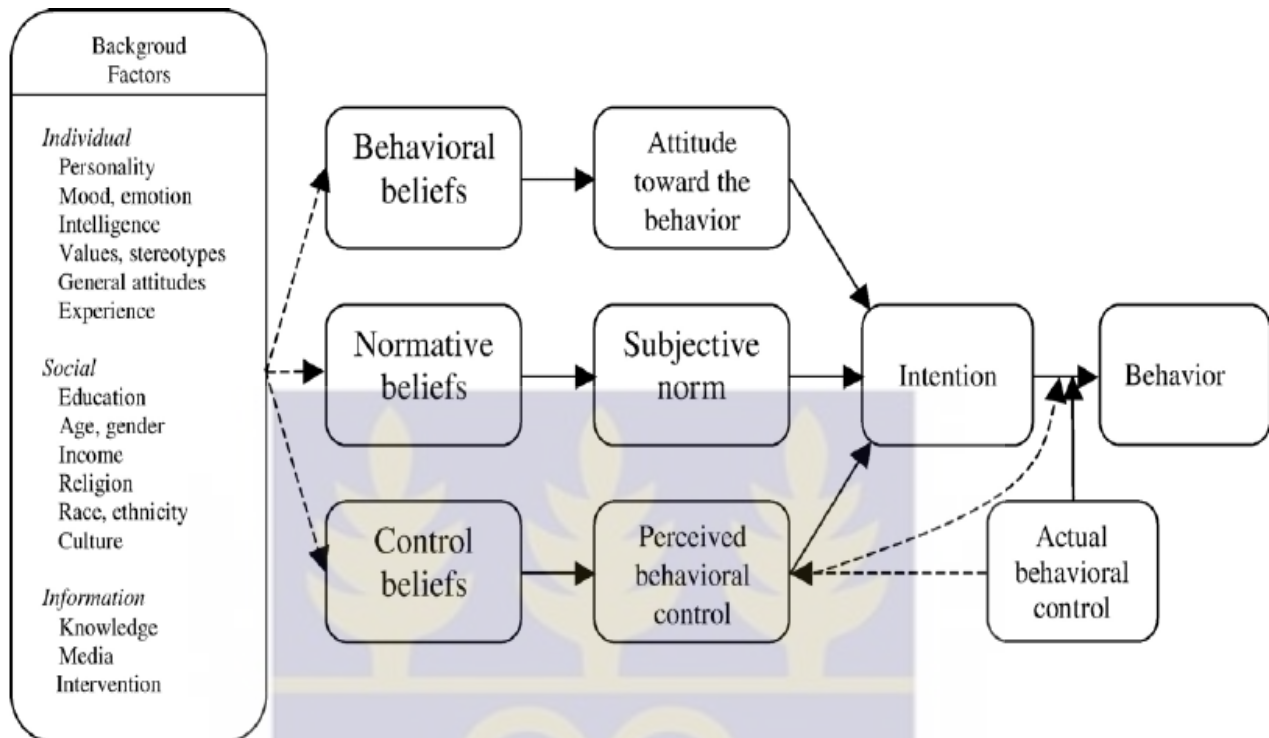


Figure 1.1 Conceptual framework, adapted from (Ajzen, 1991).

1.4 Justification of the study

Global reports show that, to a greater extent the youth begin sexual activity while still attending elementary school. The problem of sexual knowledge is a point of interest for psychologists, doctors, sociologists, and most importantly young people entering adult life. The progressing change of life conditions, submission of one's sexual drive to the common expectations of society, results in greater changes in the sexual behaviour of youth.

Sexing is a relatively new phenomenon arising in social media circles. Studies done in other countries reveal that sexting influences risky sexual behaviours resulting in unintended pregnancies, HIV/AIDS, other STIs and unsafe abortions.

This study will serve as a baseline data for future studies about sexting in Ghana. It will also help head of institutions to formulate policies and programs to reduce the prevalence of Sexting, and measures put in place to reduce the coercive motivations of Sexting.

It will also serve as a form of information for the youth in this country and enable them to avoid harmful sexual practices.

1.5 Study Objectives

1.5.1 General Objectives

The general objective of the study was to determine the influence of sexting on risky sexual behaviours among University of Ghana students.

1.5.2 Specific Objectives

The specific objectives are to:

1. Assess the prevalence of sexting among students of the University of Ghana.
2. Determine the attitudes and motivating factors for sexting behaviours.
3. Determine the proportion of students who engage in risky sexual behaviours.
4. Examine the relationships between sexting and risky sexual behaviour.

CHAPTER TWO

2.0 LITERATURE REVIEW

Being youthful is one of the exciting milestones that can happen to anybody the world over, as one is no longer considered as a child, neither is one an adult. It is a stage of life characterized by tremendous pace in physical growth and development, physical, social and psychological changes and maturity, sexual maturity, debut, development of adult mental processes and a move from childhood socio-economic dependence towards relative independence (Khanna et al., 2015). The WHO however defines the youth as the period in human growth and development that occurs after childhood and before adulthood, from ages 10 to 24 years.

This is the stage where most persons make primary decisions that mainly affect their sexuality, and one may not know if that is the best decision to be taken. Interestingly enough, people make decisions in this phase of life based on their own judgement, irrespective of the opinions older adults may have.

2.5 Defining Sexting

Sexting is a relatively new emerging concept in social media circles. It has been defined variously by different authors, but in all, there is a general consensus that it involves exchange of sexually suggestive pictures or messages, including nude or seminude photographs, through mobile phones to the opposite sex. For example Lenhart (2009), defined “*sexting as the creating, sharing and forwarding of sexually suggestive nude or nearly nude images by minor teens.*” Ybarra & Mitchell (2014), also defined Sexting as

“sending and sharing sexual photos online, via text messaging, and in person”. Other authors also define Sexting as *“sending or receiving sexually explicit messages, photographs and videos through cell phones, computers and other social media”* (Van Ouytsel, Van Gool, Ponnet, & Walrave, 2014). These messages and images can be created by one person, or another person receiving it directly from a producer, or forwarding images received by other people.

For the purposes of this study, emphasis of sexting will be mainly through mobile phones, but it could apply to other social networking sites such as electronic mails, instant messaging and social networking sites(Lounsbury et al., 2011).

2.6 2.2 Prevalence of Sexting

Most studies on sexting have generally been conducted in the United States of America (USA), and these studies have reported different prevalent rates. For example, the National Campaign to Prevent Teen and Unplanned Pregnancy conducted one of the first studies to determine the prevalence of sexting behaviours among young adults using a non-probability sample (n=1,280), comprising 653 teens aged 13-19 years (49% male and 51% female); and 627 young adults aged 20-26 years (51% male and 49% female). The study found that prevalence of sexting was 20% among teenagers, and 33% among young adults (National Campaign to prevent teen and unplanned pregnancy, 2008). Similarly, Gordon-Messer and colleagues using a respondent-driven sample of 3,447 U.S young adults aged 18-24 years found a sexting prevalence of 43% (Bauermeister, Arturo, Gordon-Messer, & Grodzinski, 2014). The same study revealed 28% of the respondents were two-way sexters, while 12.6% and 2% received and sent sext messages respectively. In another U.S based online survey

among young adults, Henderson and Morgan (2011), found a sexting prevalence of 60% among the sample (Henderson & Morgan, 2011).

Another study conducted in the USA by Ybarra & Mitchell, (2014), indicated that sexting was prevalent among the youth and that females sext more than males similar to findings of an online study conducted in two public universities by Delevi & Weisskirch,(2013).The different sexting prevalence rates reported in the various studies may be due to the different samples and methodologies used.

2.3 Motivations for Sexting

A lot of factors have been linked to sexting behaviours. Temple et al. (2014) gave the opinion that; sexting was associated with impulsive behaviours, depression and substance use. Other researchers believe that young people sext as a prelude to sexual activity between partners i.e. in a consensual sexual relationship and to view the other partners' opinion on a possible impending sexual activity (Lenhart, 2009; West et al., 2014). They went ahead to state that sexting was a form of flirtatious behaviour, or gaining romantic attention from ones' partner, whether endorsement will be given to initiate, improve or sustain sexual activity. They further stated that, in relationships where partners live far away from each other, sexting was a means of sustaining the relationship and communication gap.

Young people, who may not be in any form of relationship whatsoever, may sext to attract the attention of someone they are interested in or to spice up current sexual relationship; by once a while sending a sext as a present to their partners. A lady may also send a sext message to her partner to get attention from him and a guy could do it for fun, to feel sexy, excited or coquettish.

Apart from these some young people see the ability to sext as a form of bravery to achieve what some of their peers are not able to do (Lennart et al 2008; Henderson & Morgan, 2011). Whilst most young people especially females are pressured to sext, a lot more of sext; whether sending or receiving takes place in a consensual relationship, or as a youthful experimental phase of life, to gain attention from peers (Collins, Martino, & Shaw, 2011).

Another study by Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, (2013), revealed that sexting is most often a reciprocal behaviour between romantic partners. Among the participants who had ever sent or received a sext, 66% reported both sending and receiving sexts. Most young men and women report sharing sexts within a dating relationship.

2.7 2.4 Gender and Sexting

Studies on gender and sexting are different in their reports. Females have been shown to be avid primary sexters than males (Ybarra & Mitchell, 2014). This could be explained as most young females may be compelled to send sext messages to males they are sexually attracted to, or to initiate sexual activity. The compulsion to sext is greater among females, as most young females' sext as a reward to their partners, to gain favors from them. They are usually the senders unlike males who are almost always at the recipient side (Cooper, Quayle, Jonsson, & Svedin, 2014) ; Benotsch, Snipes, Martin, & Bull, 2013).

Other studies from the USA revealed that female have higher incidence of sending images of themselves and receiving these types of images compared to male students (Ybarra & Mitchell, 2014; Martinez-Prather & Vandiver, 2014). The same study also reported that

students send sexually explicit images more often to their boyfriends (37%; n =73), followed by someone they were interested in dating (23%; n = 45). Rarely did students report sending images (3%; n = 6) to an adults. Images were also most likely to be received by a friend (26%; n =88), followed by someone they were interested in dating (23%; n = 78), and to a lesser extent by an adult (4%; n = 14).

On the contrary, other studies also revealed that males were avid primary sexters than females (Henderson & Morgan, 2011; Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013; West et al., 2014). However, this finding contradicts findings by studies which reported that females sext more than males. (Ybarra & Mitchell, 2014; Martinez-prather & Vandiver, 2014; Benotsch, Snipes, Martin, & Bull, 2013; Barker, Rizzo, Hancock, Norton, & Brown, 2014).

Other studies however show no differences in sexting behaviours among the different sex categories. (Temple et al., 2014; Lenhart, 2009). These variations could be due to the various geographic locations and methodologies and definitions of Sexting employed in the studies.

2.8 Consequences of Sexting

Research examining young people's attitudes to sexting, reveals that most people are aware of the consequences of sexting, but they engage in it anyway. This may include public disgrace if the images get out in the open, psychological and social harms, stigma due to permanence of the image, and stigma attached to having a naked picture of you out in the public domain. This could be very embarrassing and emotionally tormenting (Mitchel et al, 2012; Henderson & Morgan, 2011).

2.9 Risky Sexual Behaviours

Risky sexual behaviour is commonly said to be behaviours that increases one's risk of contracting sexually transmitted infections and experiencing unintended pregnancies. They include ever having sex especially at an early age, having multiple sexual partners, having sex while under the influence of alcohol or drugs (Oluwatoyin & Oyetunde, 2014).

Eaton et al.(2010), defined risky sexual behaviours as the kinds of sexual behaviours that the youth are involved in; they include having sexual intercourse without a condom, multiple sexual partners and sexual intercourse for reward. It is influenced by values mores, religiosity and cultural orientations of the person sending or receiving the sext. Studies show that persons who sext have a high risk of initiating and engaging in sexual behaviours than persons who do not sext (Barker, Rizzo, Hancock, Norton, & Brown, 2014; Ybarra et al, 2012; Benotsch et al, 2012).

2.6.1 Ever Had Sex

Sex for young people, despite any changes of morals, is still an expression of their emotions. It is these emotions that give this act a moral rank. First sexual involvement is a major event, having an enormous impact on a young individual's psyche. As such, it cannot be misplaced in consideration of human development. According to the Alan Guttmacher Institute (2004), 4 in 10 Ghanaian women and two in 10 men aged 15–19 years have ever had sex by age 20, and 83% of women and 56% of men have had sex. The median age at first intercourse is 17.4 years for women and 19.5 years for men. Among those who have had sex, four in 10 women and six in 10 men aged 12–24 years have had more than one sexual partner. The

proportion of 15–19-year-olds who have had sex declined substantially between 1993 and 1998, from 59% to 38% among women and from 33% to 19% among men.

Sexual coercion is a common occurrence: One in four sexually experienced young women has ever been forced against their will to have sexual intercourse (8% of sexually experienced young men report the same). Also, twelve percent of women and 2% of men were forced into their first sexual experience (The Alan Guttmacher Institute, 2004).

2.6.2 Sex without a Condom and Multiple Sexual Partners

Unsafe sex occurs if a vulnerable person has sex with at least one partner who has an STI, without taking precautions to inhibit infection. Susceptible people are not yet infected, either because the infectious agent has not been successfully transmitted, or because the agent has been transmitted but infection has not yet been established. Such susceptible people form a group which is truly exposed to infection and they are at a very high risk of becoming infected.

Engaging in hazardous sex are those persons who either engage in unprotected sex but who have not yet met a partner who has an STI, or who have had sex with at least one partner who has an STI, but have taken measures to prevent transmission.

These people have the potential to be exposed to infection, either by having sex with an infected partner, or if the measures taken to prevent transmission are ineffective (e.g. condom failure).

Having risky sex could be defined as having more than one sexual partners and not using condoms during sexual intercourse (Slaymaker, Walker, & Zaba, 2004).

2.6.3 Age at Sexual Debut

Globally, more youthful persons initiate sexual activity while still in elementary school (Krauss et al., 2012). The age at which young people commence sexual initiation varies widely in countries. Sexual debut depends on the cultural and sexual norms which prevail in that country, and the influences of sexual behaviours in a person's locality (Geary et al., 2008).

A study on sexual initiation among the youth in selected European countries revealed that initiation of sexual intercourse during adolescence is statistically normative among developed nations. Among young adults who participated in the study in eleven European nations, the prevalence of sexual initiation before the age of 20 years for males ranged from 73% in the Netherlands to 88% in Iceland. For females, the lowest was reported in Portugal at 51% and the highest in Denmark at 90%. Using data from the mid-1990s, researchers at the Guttmacher Institute found that differences in prevalence of adolescent sexual debut were minimal between the United States, Sweden, France, Canada and the UK; although adolescents in the United States were slightly more likely to initiate sexual intercourse before the age of 15 (Darroch, Frost & Singh, 2001).

In Ghana, the median age at sexual debut for women and men between the ages of 20 - 24 years is 18.4 years and 20 years respectively (GDHS, 2014). According to Krauss, et al, (2012), reasons for sexual initiation vary from person to person. In their study, reasons for sexual initiation given by participants were love (50.4%), curiosity (22.4%), accident (17.8%) and to sustain a relationship (6%). The most common reason for sexual initiation in Belarus, Ukraine, Poland and France was love. In the United Kingdom curiosity was mainly

reported and in Germany by accident. Students of age of 15-16 years more often asserted to have initiated sex by accident. The main sources of sexual education given by the students were friends (76.0%), then school (66.0%), television/internet (65.0%), parents (61.2%), the press (42.4%).

The consequences of early sexual debut without contraception include unintended pregnancies, early child birth, unplanned abortions, STIs and HIV/AIDs. Others include suicide, and premature death from unsafe abortion.

For most youth their first sexual encounter is coerced; therefore they didn't actually have a choice in the timing of their sexual encounter, it could be likened to a verbal pressure. (Geary et al., 2008). Since sexual initiation increases with age once it is started, the frequency increases with age (Cubbin, Santelli, Brindis, & Braveman, 2005).

2.7 Peer Pressure

This could mean social pressure by members of one's peer group to take a certain action, stance or adopt certain values, or otherwise conform in order to be accepted. Conforming to a certain kind of behaviour, is very important to the youth as it makes them have some sense of belongingness or acceptability among their friends.

Someone in the youthful bracket will join a particular peer group, because he or she is attracted to the group's norms, values or activities. The group may probably be the popular group around the school, or vicinity and being part of that group is certainly what it takes to feel accepted or gain respect from peers. By being allowed to join the group, you would have to in one way or another justify your inclusion by willy-nilly participating in the activities that the group deems appropriate.

Youth risky behaviours are influenced by the perceptions of what their peers do. In effect if they believe that their peers engage in risky sexual behaviours it is a yardstick for them to do so as well, and if they believe their peers are engaged in healthy behaviours they are likely to do so as well (Black, Schmiede, & Bull, 2013). Being in the youthful bracket is a stage where one is always willing to try new things, especially what is in vogue at that particular instance.

2.8 Risky Sexual Behaviours and Sexting

Various studies suggest that sexting is highly associated with risky sexual behaviours. Most young people don't just sext for the fun of it but are also involved with other risky sexual behaviours including aggression, having unprotected sex and sexual intercourse with multiple sexual partners. Most young people do not sext to anybody, but rather to their long term sexual partners. This to them is a form of commitment and a way of showing affection (Benotsch, Snipes, Martin, & Bull, 2013 ; Barker, Rizzo, Hancock, Norton, & Brown, 2014).

In an Associated Press - Music Television (AP-MTV) sponsored study revealed that 45% of youth (aged 14–24 years) who reported having sex in the past week, also reported sending at least one sext. They also found that sexually active youth were twice as likely to share naked photos compared with their non–sexually active peers (AP-MTV, 2009). Although useful, these findings do not explicate whether sexting is related to self-reported sexual risk behaviours. Researchers have proposed three perspectives regarding the relationship between sexting and sexual behaviour: sexting may lead to risky sexual behaviours such as early sexual initiation and less contraceptive use (Temple et al., 2014) sexting may be a safer sex behaviour if it is used in lieu of physical contact (Lenhart, 2009). Sexting may replicate a new medium for the long-standing practice of photo sharing in romantic and sexual

relationships and have no association with safer or riskier sex behaviours. (Bauermeister, Jose Arturo, Gordon-Messer Deborah, Grodzinski Alison, 2014). It is vital to understand how sexting is related to sexual behaviours, as it could be promoted as safer sex behaviour or become a focus of intervention to prevent risky sexual behaviour.

Media reports and scholars have also proposed a relationship between sexting and psychological well-being. Some researchers suggest that mental health is connected to youth's motivation to sext. People with social anxiety may prefer texting to voice calls as a medium for intimate contact, and may also prefer sexting as a medium for sexual contact (Ringrose, Gill, Livingstone, & Harvey, 2012).

2.9 Influence of Media

In this era of increased technological expansion, there is a wide development and availability of information on different media such as magazines, radio, television, internet, mobile phones and other social media.

Young people are the earliest adopters of information communication technology, such as mobile phones, the internet, instant Messaging, and other social networking sites including Facebook, Twitter, My space etc. These advancements in technology is almost always everywhere irrespective of ones geographic location (Chandra et al., 2015; Collins, Martino, & Shaw, 2011). The easy accessibility to all these forms of information makes the youth to be readily prone to the positive and negative influence of the media (Lenhart, Ling, Campbell, & Purcell, 2010; West et al., 2014).

The youth spend about 7 hours a day using media. They usually use more time on media than any other activity except time spent to sleep. This is mainly because they have access to internet and technology either at home or outside the home. The media has also become a

self-styled teacher for the youth as they replicate whatever they see in the media either via television, internet, computer or mobile phone, irrespective of whether it is right or wrong. According to social learning theory, young people learn by observing especially when these behaviours are deemed to be rewarding (Strasburger et al., 2010).

Several mediums have been identified as a means of transferring nude, seminude pictures and sexually suggestive text messages. Research indicates that cell phone use within the United States has increased remarkably among young people since 2004 (Lenhart, 2009). With the increase in cell phone usage there seems to be a rise in the number of sext messages being sent. The National Campaign to Prevent Teen Pregnancy (2008), report indicated that 26% of those surveyed had posted/sent nude or semi-nude pictures of themselves and 48% had sent sexually suggestive text messages on a cell phone. Other mediums reported in sending nude or seminude pictures included 27% on the internet and 5% on social networking sites (i.e., Facebook, Myspace, or a blog). Other avenues reported in sending sexually suggestive text messages include 49% via the internet and 14% on social networking sites (i.e., Facebook, Myspace, or a blog). Overall, cell phones appear to be the main method of sending sexually suggestive text messages, which coincides with the idea that many cell phones are equipped with immediate access to cameras, video, and internet access; making the transmission of nude or semi-nude photos or sexually suggestive text messages easier and faster than ever (Lenhart, 2009).

2.10 Family Structure

Studies have shown that living with ones parents or a guardian gives some kind of protection against risky sexual behaviours since at least one becomes conscious of oneself and tend to do the right thing at all times. Other studies suggest that living with at least one parent is

equally enough i.e. a girl living with a single parent especially the mother is more likely to engage in premarital sex than one who is living with both parents. Living with a single parent predisposes a young person to risky sexual behaviours (Lenhart, 2009; Walker et al., 2011).

A unified family atmosphere and affirmative peer networks, contribute to reduced levels of risky sexual behaviour among adolescents from religious families. Parents who monitor their children's activities and peer environments, engage their families in regular activities and foster strong parent-child relationships can help reduce risky sexual behaviour, regardless of family religiosity. Parental involvement in prevention programs may help reduce rates of teenage pregnancy and STDs (Rostosky, Wilcox, Laurie, Wright, & Randall, 2004).

2.11 Religiosity

Past research that has examined the influence of religiosity on adolescent sex finds that religious individuals have first sex at a later age than their less religious peers. Studies indicate that the number of sex partners decreases as religiosity increases (Jones et al. 2005).

Family, schools, and religion are examples of institutions that use socialization control because they socialize members to adopt the norms and values of the institution. Individuals abide by these norms and values because they are bonded to the agents of socialization and they do not want to jeopardize the bonds or to risk being sanctioned by the group.

Over time those norms and values become a part of the individual and the social control mechanism is self-sustaining. Thus, the impact of religion on sexual behaviour is largely a function of the values that it imparts. From a religious perspective, values include the view that sex is reserved for marriage and should take place within the context of a loving, committed relationship. From the perspective of most religions, these principles are seen as

divinely ordained while behaviour that violates them is considered immoral (Farmer, Trapnell, & Meston, 2008; Logan, Moore, Logan, & Moore, 2003; Rostosky et al., 2004).

In conclusion, previous studies in other countries have shown that sexting is an emerging concept that influences risky sexual behaviours of young adults. However, there is no general consensus on practices that are considered sexting behaviours among young adults, and the relationship between sexting and risky sexual behaviours. Technology has come to stay with tremendous benefits, but young people seemingly abuse it to their own advantage.

For the purposes of this study, emphasis on sexting will be mainly through mobile phones, but it could apply to other social networking sites such as electronic mails, instant messaging and social networking sites. This study seeks to describe the reasons that motivate sexting behaviour, and examine the relationships between sexting and risky sexual behaviours.



CHAPTER THREE

3.0 METHODOLOGY

This chapter outlines the various methods used for the study; giving descriptions of the study area, study design, sampling methods, study procedures, data collection tools and data analysis, as well as ethical considerations.

3.1 Study Design

The study was a cross-sectional quantitative design. It was conducted in May/June 2016, among students of the University of Ghana, to explore Sexting and risky Sexual behaviour.

3.2 Study Site

The study site was the University of Ghana. It is the premier and largest University in Ghana, with a student population of about 40,000. It was founded in 1948 as the University College of the Gold Coast, and was originally an affiliate College of the University of London, which supervised its academic programs and awarded degrees. It gained full University status in 1961. (University of Ghana,2016).

The original emphasis of the University was on liberal arts, social sciences, Basic Science, Agriculture, and Medicine, but (partly as the result of a national educational reform programme) the curriculum was expanded to provide more technology-based and vocational courses and postgraduate training. The university is composed of 4 colleges, 19 schools, 5 institutes and 11 centers of learning.

The University awards Diploma, Bachelors, Masters and PhD degrees. Apart from the main Campus, the University has other Campuses in Accra, Korle-Bu and Kpong. For the purposes

of this study, only students in the main campus were considered. (University of Ghana, 2016).

3.3 Study Population

The study universe was all undergraduate students of the University of Ghana. For the purposes of this study, the study population was limited to students of the University who are unmarried.

3.3.1 Inclusion Criteria

Students included in the study were all undergraduate students in the main campus of the University of Ghana who are unmarried.

3.3.2 Exclusion Criteria

Persons that were excluded in the study were,

- Students in the University, who are married
- Students who did not give their voluntary consent to participate in the study
- Students in other campuses of the University
- Graduate students in the University, since majority are married and more than 25 years

3.4 Study variables

3.4.1 Dependent Variable

The dependent variable for this study was Risky Sexual Behaviour. This is a created composite variable comprising the following items:

- Ever had sexual intercourse in exchange for cash?
- Ever had sexual intercourse in exchange for gift?
- Ever had sexual intercourse in exchange for favors?
- Ever had sex when drunk?
- Ever had sex with a person 10 years older or more?
- Condom use during last sexual intercourse
- Multiple sexual partners within the last 12 months.

These seven questions were originally coded as Yes = 1 and No = 2. Condom use at last sex was reverse-coded. During the analyses, these 7 variables were recoded as No = 0 and Yes = 1. A new variable was therefore created by summing them up. The scale was thereafter categorized into two, where anyone who scored from 1 to 7 in any of the behaviours was said to be engaged in risky sexual behaviours while all those who scored 0 (zero) were considered not to engage in risky sexual behaviours.

3.4.2 Independent Variables

The independent variables included the following; Sexting, socio-demographic characteristics such as age, sex, ethnicity, religion, guardian and programme of study. It was directly measured in the questionnaire.

3.5 Sample Size Estimation

The formula below proposed by Cochran, (1977), was used to calculate the sample size.

$$n = \frac{z^2 p(1 - p)}{d^2}$$

Where,

n =required sample size

Z =confidence level at 95% (standard value of 1.96)

P = estimated prevalence of sexting which is unknown so will be presumed to be 50%.

e =margin of error to be determined by the researcher (5% will be used)

The sample size will therefore be:

$$\frac{(1.96) \times 1.96 \times 0.5(1 - 0.5)}{0.05 \times 0.05}$$

Giving a sample size, of approximately 384.

3.6 Sample Size Adjustment

Giving that, there is loss of precision under cluster sampling; the computed sample size was multiplied by a **design effect**¹ of 1.5 in order to improve precision. As has been used in previous studies.(Kaiser, Woodruff, Bilukha, Spiegel, & Salama, 2006)

¹ Under cluster sampling there is a loss of precision thus, the design effect, which is an adjustment factor is multiplied by the computed sample size from SRS to improve sampling effectiveness or precision

Thus

$384 \times 1.5 = 576$. Furthermore, a 25% upwards adjustment was made to account for non-response and recording errors, resulting in a final sample size of 720.

3.7 Sampling Procedure

A multistage cluster sampling technique, with probability proportional to size was used in the sampling process. The measure of size was the number of students in each Hall. First, five (5) Halls out of the 11 mixed Halls were randomly selected using the lottery method. The sample size for each of the five Halls was computed as follows:

$$\text{HALL A: } \frac{1858}{7836} \times 720 = 171$$

$$\text{HALL B: } \frac{1126}{7836} \times 720 = 104$$

$$\text{HALL C: } \frac{1624}{7836} \times 720 = 149$$

$$\text{HALL D: } \frac{1742}{7836} \times 720 = 161$$

$$\text{HALL E: } \frac{1472}{7836} \times 720 = 135$$

The second stage involved systematic selection of room numbers of the selected halls. Respective sampling intervals were calculated for each Hall, and every n^{th} room was selected. In the third, one student was chosen at random from the selected rooms. In cases

where a student in the selected rooms refused to participate in the study, or didn't meet the eligibility criteria, we moved to the next room.

3.8 Training of research assistants

A day training session was held for the research assistants to ensure that they understood the context of the research topic. The training also ensured they were adequately equipped for the field work. The trainees were educated on the following aspects of the study:

- The objectives of the study and the sensitivity of the topic;
- The sampling procedures, sampling techniques, as well as other methods to be used in the study;
- The need to ensure confidentiality at all times;
- How to obtain informed consent.

3.9 Pre-testing

The interviewer administered questionnaire was pretested in the University of Professional Studies. A total of 25 students, selected randomly were used for this study. Data was collected from all the sections to be covered by this study. This was done to help test the feasibility of the sampling procedure, reliability of the data collection tools, reaction of the students and the ability of the research team to carry out the study. Necessary corrections were then made before the questionnaire was finalized.

3.10. Data collection Technique and Procedure

The study used structured questionnaires in collecting data. The questionnaire contained mostly closed ended questions, and was organized into three sections namely (A) demographic characteristics (B) sexting behaviors, and (C) sexual behaviour. The questionnaire was designed and administered in the English Language.

The questionnaires were self-administered, Research assistants distributed the questionnaires to the selected students and they were required to complete the questionnaires. The research assistants later followed-up and collected the completed questionnaires.

3.11 Data Processing

At the end of the self-administered questionnaire, the questionnaires were cross checked for completeness and internal consistency. The data were cleaned and then entered into SPSS. The data was doubly entered; this helped in detecting any discrepancies. Data were then cross checked and the necessary corrections made for accuracy of the final entered data. The final data was then exported into STATA version 13 for analyses.

3.12 Data Analysis

Data were analyzed using STATA version 13. Categorical variables were described using frequencies and percentages and descriptive statistics using percentages and frequencies were presented in tables for socio demographic characteristics, gadgets used for internet connectivity and risky sexual behaviours. Sexting behaviours were grouped and expressed as a percentage over the total number of students used for the study. Chi-square analyses were used to find the factors that are significantly associated with sexting and risky sexual

behaviours. All variables that were significant were put in a simple and multiple logistic regression models to determine the strength of association. Odds ratio and their 95% confidence intervals in the logistic regression model was used to access the strength of association. In all analyses, a p-value less than 0.05 were used to determine the statistical significance.

3.13 Ethical Considerations

The following ethical issues were considered in the study.

- Ethical approval was sought from the Ghana Health Service Ethical Review Committee. With **ID NO: GHS- ERC 89/12/15**.
- Permission was sought from the Management of the various halls of residence where the study was undertaken.
- Informed consent was obtained from all participants of the study. It was explained to the students that participation in the study was voluntary and that they could withdraw from the study at any point in time if they so desire.
- Participants were informed about the risks and discomforts involved in the study, given the sensitive and intimate nature of the topic.
- Data were analyzed in aggregate. The students' identity remained anonymous as no personal identifiers could be linked to the data.
- Students were assured of privacy and confidentiality. Confidential interviews were conducted and no other persons have access to the study data.
- The study data were password protected, stored on a computer and backed on an external hard drive. Hard copies were locked in file cabinets with access limited to

only the principal investigator. Additionally, the Principal Investigator had no conflict of interest in this study.

3.14 Quality Control

The following quality control measures were employed to ensure data integrity.

- Four qualified research assistants were trained before pre-testing of questionnaires. They were chosen based on their experience with data collection and familiarity with the subject area.
- A day's training was conducted for the research assistants to ensure that they understood the context of the research topic, objectives and the sensitivity of the topic.
- Meetings were held every day after collection of data using the administered questionnaires to ensure completeness of the questionnaires.
- Solutions to challenges that were identified were proffered by the team.
- Data was thoroughly cleaned before analyses.

3.15 Dissemination of findings

The study targeted the groups listed below for the dissemination of the study findings:

- A copy will be sent to the library of School of Public Health, University of Ghana
- Copies will be sent to the main library of the university of Ghana and other departmental libraries for participants involved in the study
- A scientific paper will be written for publication in a reputable journal

CHAPTER FOUR

4.0 RESULTS

This chapter presents the results of the study. Various statistical procedures were employed to analyse the data. The chapter is organized under the following headings

1. Background characteristics
2. Distribution of students
3. Gadgets used for internet connectivity
4. Prevalence of sexting
5. Motivations and attitudes for sexting
6. Risky sexual behaviours and other sexual behaviours
7. Associations between sexting and Risky sexual behaviours.

4.1 Background characteristics

Questionnaires were distributed to 720 eligible students; complete data was obtained from 670 students. This yielded a response rate of 93 %. The analyses in this chapter are based on the 670 students who fulfilled all the criteria for the study and had complete information.

4.2 Distribution of students

The study participants comprised 283 (42.2%) males and 387 (57.8%) females. The background characteristics are presented in Table 4.1. Majority of the students (97.3%) were young people between the ages of 17 and 24 years and some 2.7 % were between the ages of 25 and 29 years of age.

With regards to family structure, about 66.3% live with both parents and 7.9% of the students live with other family members. Among the students, majority were Christians (91.6%). Other socio demographic characteristics are shown in Table 4.1.

The device mainly used for internet connectivity is a smartphone 581 (86.7) %, followed by a laptop 484 (72.2%) and then a hand held tablet. The male and female distributions of gadgets used are presented in Table 4.2



Table 4.1 Demographic Characteristics of Students

Demographic variables	Female (%)	Males (%)	Total (%)	P- value
Age Groups				
15 – 19	92 (23.8)	62 (21.9)	154 (23.0)	0.03
20 – 24	290 (74.9)	208 (73.5)	498 (74.3)	
25 – 29	5 (1.3)	13 (4.6)	18 (2.7)	
Guardian				
Both parents	260 (67.2)	184 (65.0)	444 (66.3)	0.001
Mother	73 (18.9)	42 (14.8)	115 (17.2)	
Father	22 (5.7)	20 (7.1)	42 (6.3)	
Alone	1 (0.3)	15 (5.3)	16 (2.4)	
Other relatives	31 (8.0)	22 (7.8)	53 (7.9)	
Religion				
Christian	357 (92.3)	256 (90.5)	613 (91.5)	0.71
Muslim	26 (6.7)	23 (8.1)	49 (7.3)	
Traditionalist	4 (1.0)	4 (1.4)	8 (1.2)	
Ethnicity				
Akan	203 (52.5)	140 (49.5)	343 (51.2)	0.9
Ga	59 (15.3)	48 (17.0)	107 (16.0)	
Ewe	74 (19.1)	55 (19.4)	129 (19.3)	
Northerner	42 (10.9)	31 (11.0)	73 (10.9)	
Other	9 (2.3)	9 (3.2)	18 (2.7)	
Programme of study				
Sciences	157 (40.6)	112 (39.6)	269 (40.2)	0.8
Humanities	230 (59.4)	171 (60.4)	401 (59.9)	
Level of study				
Level 100	61(15.8)	23(8.3)	84(12.5)	0.000
Level 200	106(27.4)	112(39.6)	218(32.5)	
Level 300	140(36.2)	106(37.5)	246(36.7)	
Level 400	80(20.7)	42(14.8)	122(18.2)	

Table 4.2 Gadgets used for internet connectivity

Gadget Used for internet Connectivity	Female	Male	Total	Chi-square	P-value
Smartphone with internet					
No	49 (12.7)	40(14.1)	89(13.3)	0.3078	0.579
Yes	338(87.3)	243(85.9)	581(86.7)		
Laptop with internet					
No	117 (30.2)	69(24.4)	186(27.8)	2.7904	0.095
Yes	270(69.8)	214(75.6)	484(72.2)		
Tablet with internet					
No	264(68.2)	179(63.3)	443(66.1)	1.7996	0.18
Yes	123(31.8)	104(36.8)	227(33.9)		

4.3 Prevalence of Sexting

From the study, 504 (75.2%) of the students have access to 24 hour internet, which is the medium for sending sexually suggestive messages. On the whole, about 338 (50.5%) of the students indicated that males sext more (Table 4.3). However, 129 (19.2%) of the students had no idea of who sexts more: whether males or females.

About 255 (38%) of the students, reported to have ever sent a sexually suggestive message or image, while 463 (69.1%) indicated that, they had ever received a sexually suggestive message/image.

More than half, 378 (56.4%) of the students indicated they have never been asked to sext before whereas 127 (19.2%) had no idea, whether or not they have been asked to sext.

Out of the 255 (38%) of the students who admitted ever sending a sexually suggestive message or image, 62 (9.3%) admitted to sending sexts often, whilst about 316 (47.1%) indicated they do so rarely.

Findings from the study indicated that females 258 (66.7%) receive sexts more than males, whereas 133(52.2%) males send sexts more than females. 152 (54.5) females have also been asked to sext. Also, among those who have ever sent sexually suggestive messages, students between ages 20-24 years recorded the highest rates: 178 (69.8%). Table 4.4 shows a summary of sexting proportions among age groups.

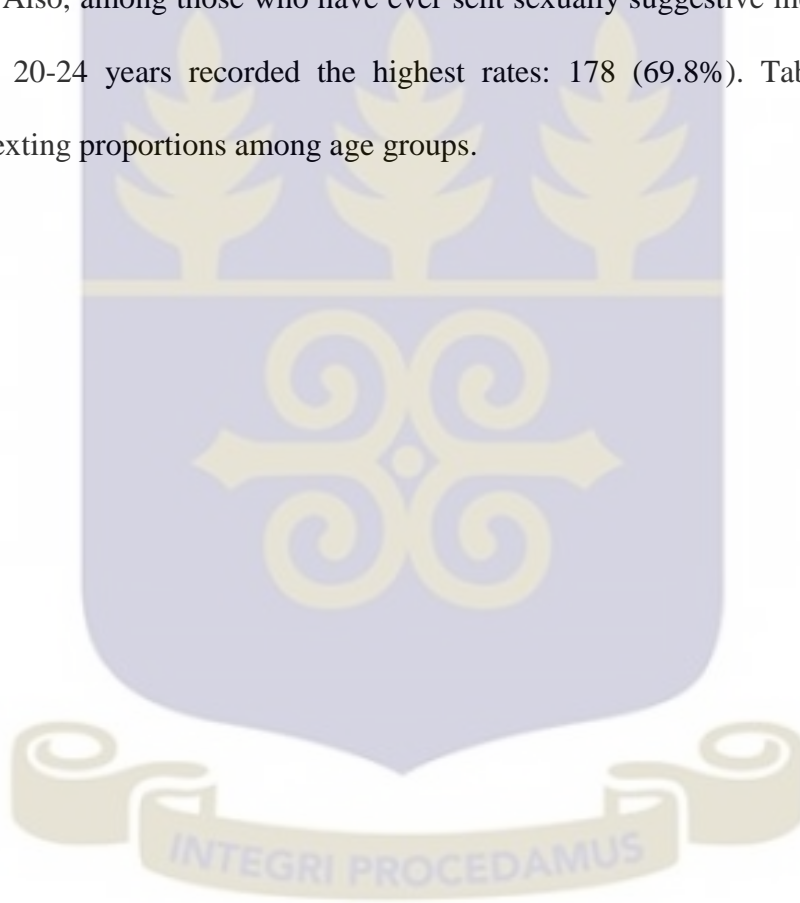


Table 4. 3 Proportion of students who have ever engaged in sexting related activities by sex

Variable	Female (%)	Males (%)	Total (%)	P- value
Who sext more				
Male	204 (52.7)	134 (47.3)	338 (50.5)	0.05
Females	103 (26.6)	100 (49.3)	203 (30.3)	
No idea	80 (20.7)	49 (38)	127 (19.2)	
Have you been asked to sext				
Yes	152 (54.5)	127 (44.9)	279 (41.6)	0.45
No	228 (60.3)	150 (57.9)	378 (56.4)	
No idea	7 (53.9)	6 (2.1)	13 (2.0)	
How often do you sext				
Rarely	178 (46)	138 (48.8)	316 (47.1)	0.130
Often	30 (8.0)	32 (11.2)	62 (9.3)	
Never	179 (46.3)	113 (40.0)	292 (43.6)	
Ever received any sexually suggestive picture				
Yes	258 (66.7)	205 (72.4)	463 (69.1)	0.110
No	129 (33.7)	78 (27.6)	207 (30.9)	
Total	283(42.2)	387(57.8)	670(100)	
Ever sent any sexually suggestive picture				
Yes	122 (31.5)	133 (52.2)	255 (38.0)	0.000
No	265 (68.5)	150(36.1)	415 (62.0)	
Total	387(57.8)	283(42.2)	670(100)	
Access to 24hour internet				
Yes	292 (75.5)	212 (74.9)	504 (75.2)	0.873
No	95 (24.5)	71 (25.1)	166 (24.8)	

Table 4. 4 Cross tabulation showing the proportion of students who have sent or received sext messages by age groups

Age group	Ever received sext message			Ever sent sext message		
	Yes	No	Total	Yes	No	Total
17-19	113(24.4)	41(19.8)	154(23.0)	68(26.7)	86(20.7)	154(22.9)
20-24	337(72.8)	161(77.8)	498(74.3)	178(69.8)	320(77.1)	498(74.3)
25-30	13(2.8)	5(2.4)	18(2.7)	9(3.5)	9(2.1)	18(2.7)

4.3.1 Two-way sexters

A cross-tabulation of ever sent and ever received sext messages was performed to find out students who engage in two-way sexting. As shown in Table 4.5, more than half (51.2%) of the students who have ever sexted engaged in two-way sexting (sending and receiving sexually suggestive messages and images).

Table 4. 5 Cross-tabulation showing the proportion of students who have ever sent and ever received sext messages

Ever sent sext message	Ever received sext message		Total
	Yes	NO	
Sent	237(51.2)	18(8.7)	255(38.1)
Not sent	226(48.8)	189(91.3)	415(91.9)
Total	463(100)	207(100)	670(100)

4.4 Motivations and attitudes for Sexting

Table 4.6 describes students' motivations for sexting. Whilst 398 (59.4%) of the students indicated that they send sexts messages as a sexy gift to their boyfriends/girlfriends, about 56% of the students indicated that they sext to get compliments. However, females were more likely to report sexting for complements compared with their male counterparts (57.8% vs. 48.1%, $p = 0.001$). Similarly, about two-thirds (63.7%) reported that they sext to get noticed, with females more likely than males to report sexting to be noticed (67.4% vs. 58.7% respectively, $p = 0.02$).

Table 4.7 describes the attitudes towards sexting behaviours. On the whole, 513 (76.3%) of the students disagreed that it is ok to post nude pictures of themselves, and 22 (3.3%) enjoy messages with sexual reference. Other attitudes towards sexting are described in Table 4.7



Table 4. 6 Motivations for sexting by sex

Variables	Female (%)	Males (%)	Total (%)	P- value
Avoid been tagged shy	13 (3.4)	9 (3.2)	22 (3.3)	0.90
Exciting	164 (42.4)	155 (54.8)	319 (47.6)	0.02
Feel alive	109 (28.2)	93 (32.9)	202 (30.2)	0.19
Feel sexy	235 (60.7)	167 (59.0)	402 (60.0)	0.66
Feel special	184 (47.6)	133 (47.0)	317 (47.3)	0.89
Get compliments	240 (57.8)	136 (48.1)	376 (56.1)	0.00
Get noticed	261 (67.4)	166 (58.7)	427 (63.7)	0.02
Receive gifts	161 (41.6)	120 (42.4)	281 (41.9)	0.84
Sexy gifts for boy/girlfriend	232 (50.0)	166 (58.7)	398 (59.4)	0.74



Table 4. 7 Attitudes towards sexting

Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Posting of nude pictures is ok					
Male	199(70.3)	55(19.4)	16(5.6)	5(1.8)	8(2.8)
Female	314(81.4)	55(14.2)	15(3.9)	0(0.0)	3(0.8)
Sexting is fun					
Male	103(36.4)	54(19.1)	79(27.9)	33(11.7)	14(5.0)
Female	197(50.9)	56(14.5)	102(26.4)	25(6.4)	7(1.8)
Fun to get nude pictures from an internet friend					
Male	131(46.2)	59(20.9)	59(20.9)	27(9.5)	7(2.5)
Female	286(73.9)	65(16.8)	29(7.5)	2(0.5)	5(1.3)
It is ok to contact an online friend					
Male	83(29.3)	60(21.2)	66(23.3)	65(23.0)	9(3.2)
Female	181(26.8)	93(24.0)	82(21.2)	20(5.2)	11(2.8)
It is ok to post nude pictures of a friend without asking					
Male	193(68.2)	54(19.2)	26(9.2)	2(0.7)	8(2.8)
Female	311(80.4)	45(11.6)	26(6.7)	2(0.5)	3(0.8)
Enjoy messages with sexual reference					
Male	122(43.1)	81(28.6)	49(17.3)	19(6.9)	12(4.2)
Female	243(62.8)	85(22.0)	42(10.9)	3(0.8)	26(3.8)

4.5 Risky sexual behaviours

Table 4.8 provides the various modes of risky sexual behaviours identified among the students encountered during the study. Overall, 160 (23.9%) of the students as against 510 (76.1%) were categorized as indulging in risky sexual behaviour (sex for gifts, sex for cash, sex for favor, sex when drunk, sex with someone more than 10 years older than you, multiple sexual partners and last sex without a condom). Regarding condom use during last sexual intercourse, 123(40.2%) of the students used a condom. Other responses indicated that some 66 (21.6) have ever had sex for Cash. These and other sexual behaviours are presented in Table 4.8 and Table 4.9 respectively.

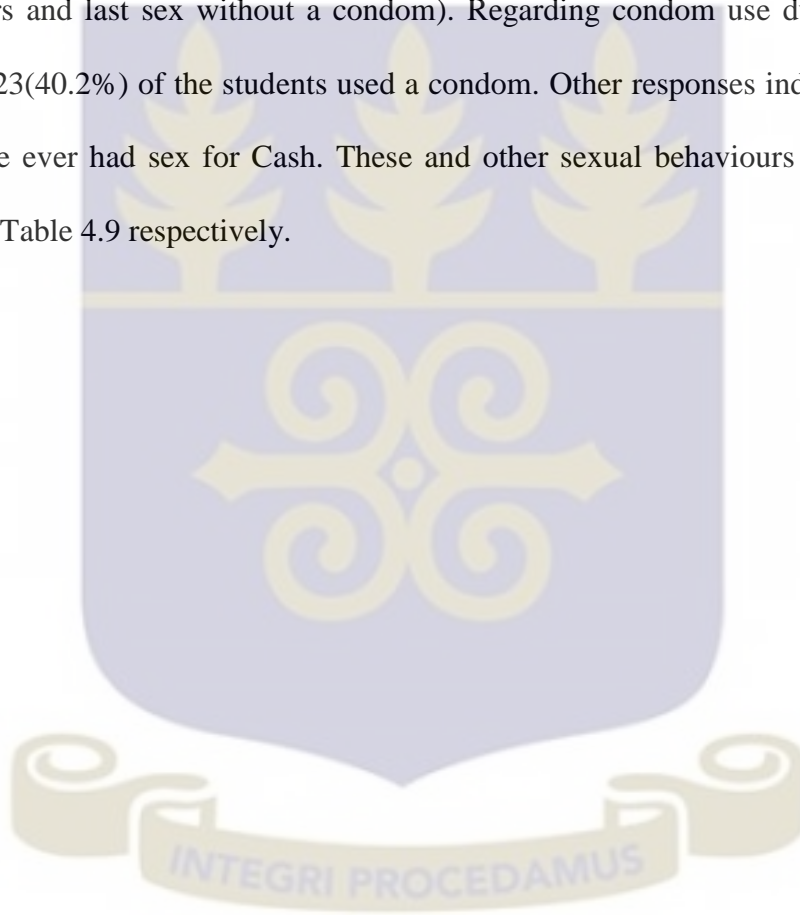


Table 4. 8 Risky sexual behaviours by sex of students

Variables	Female (%)	Males (%)	Total (%)	P- value
Sex for gifts				
Yes	23 (20.1)	15 (13.7)	38 (17.0)	0.29
No	91 (79.9)	94 (86.2)	185(82.9)	
Sex for cash				
Yes	23 (24.1)	24 (18.2)	66 (21.6)	0.21
No	132 (75.9)	108 (81.8)	240 (78.4)	
Sex for favors				
Yes	37 (21.3)	25 (18.9)	62 (20.3)	0.62
No	137 (78.7)	107 (81.1)	244 (79.7)	
Sex when drunk				
Yes	46 (26.4)	40 (30.3)	86 (28.1)	0.46
No	128 (73.6)	92 (69.7)	220 (78.9)	
Sex with someone 10years older or more than you				
Yes	39 (22.4)	26 (19.7)	65 (21.2)	0.57
No	135 (77.6)	106 (80.3)	241 (78.8)	
Students with risky sexual behaviours				
Yes	80 (20.7)	80 (28.27)	160 (23.9)	0.023
No	307 (79.3)	22 (16.7)	510(76.12)	
Condom use on last sex				
Yes	74 (42.5)	49 (37.1)	123 (40.2)	0.34
No	100 (57.5)	83 (62.9)	183 (59.8)	

Table 4. 9 Other Sexual Behaviours

Sexual behaviours	Female (%)	Male (%)	Total (%)	Chi-square	P-value
Been in a relationship before					
No	99 (25.6)	90 (31.8)	189 (28.2)	3.1235	0.077
Yes	288 (74.4)	193 (68.2)	481 (71.8)		
Currently having a sexual partner					
No	295 (76.2)	216 (76.3)	511 (76.3)	0.0009	0.977
Yes	92 (23.8)	67 (23.7)	159 (23.7)		
Ever had sexual intercourse					
No	273(70.5)	174 (61.5)	447(66.7)	6.0405	0.014
Yes	114(29.5)	109(38.5)	223(33.3)		
Circumstance of first sex					
Coaxed	34(29.8)	28 (25.7)	62(27.8)	0.5281	0.768
Forced	19 (16.7)	18(16.5)	37(16.6)		
Own will	61 (53.5)	63(57.8)	124(55.6)		
Any pressure for sex					
A great deal	31(8.0)	31 (11.0)	62 (9.3)	5.3127	0.07
A little	124 (32.0)	107 (37.8)	231 (34.5)		
None	232 (60.0)	145 (56.3)	377 (56.3)		

4.6 Relationship between Sexting and Risky sexual behaviour

Table 4.10 illustrates the results of a Chi-square test conducted to ascertain the relationship between the outcome variable Risky sexual behaviours (sex for cash, sex for favor, sex with someone 10 years older or more, sex when drunk, no condom use at last sex, and multiple sexual partners in last 12 months) and other independent variables.

The test was essentially to establish the level of association between the respondent's risky sexual behaviour and the other independent variables.

The Chi-square test showed that age was significantly associated with risky sexual behaviour with the highest among age group (20-24) at 130 (81.2%). The overall association with age showed a statistical significance at $p < 0.05$.

Other variables such as sex, religion, ever sent a sexually suggestive message/image, ever received a sexually suggestive message/ image and whether you initiated sexting before sexual debut were cross tabulated. These associations also showed statistical significance. ($P < 0.05$).

However, there was no associations between Ethnicity, program of study and family structure ($p > 0.05$). Other associations are shown in Table 4.10.

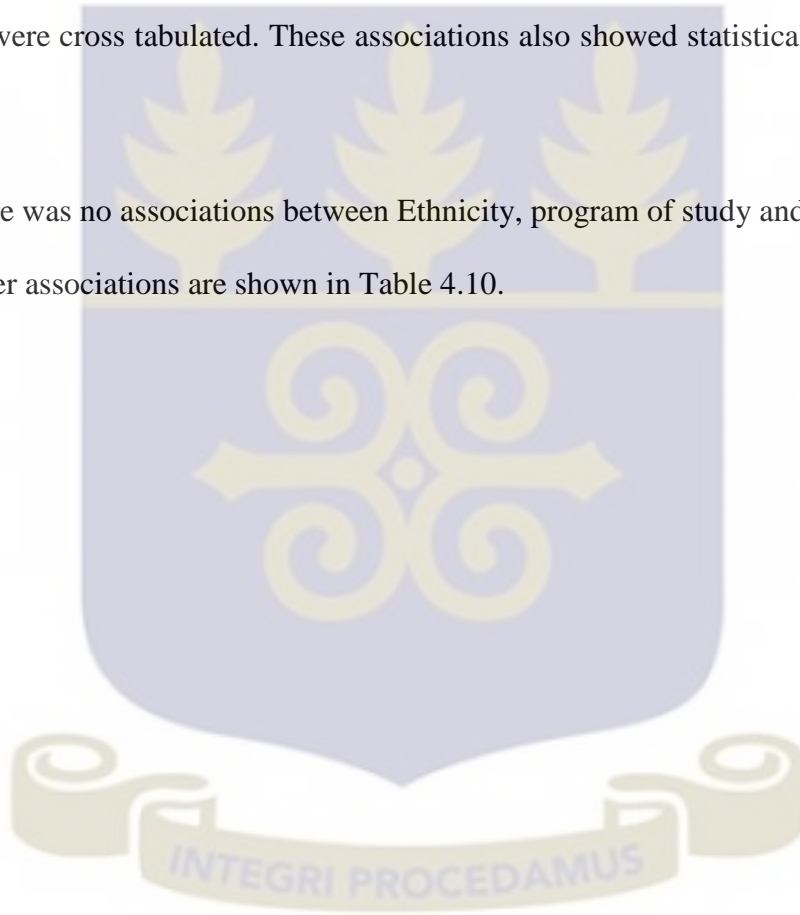


Table 4. 10 Associations between risky sexual behaviour and other variables

Variable	Risky Sexual Behaviour		Chi-square Value(df)	P –Value
	Yes (%)	No (%)		
N=670				
Age			13.3(2)	0.001
17-19	22(13.8)	132(25.9)		
20-24	130(81.2)	368(72.2)		
25-30	8(5.0)	10(1.2)		
Sex			5.1(1)	0.023
Male	80(50.0)	203(39.8)		
Female	80(50.0)	307(60.2)		
Religion			7.5(2)	0.023
Christian	141(88.1)	473(92.8)		
Moslem	14(8.8)	34(6.7)		
Traditionalist	5(3.1)	3(0.6)		
Ethnicity			6.4(4)	0.17
Akan	90(56.3)	253(49.6)		
Ga	27(16.9)	80(15.7)		
Ewe	24(15.0)	105(20.6)		
Northerner	18(11.3)	55(10.8)		
Other	1(0.6)	17(3.3)		
Family structure			3.9(4)	0.426
Both parents	99(61.9)	345(67.7)		
Mother	30(18.7)	85(16.7)		
Father	9(5.6)	33(6.4)		
Alone	6(3.8)	10(2.0)		
Other Relatives	16(10)	37(7.2)		

Continuation of Table 4.10

Risky Sexual Behaviour				
Variable	Yes (%)	No (%)	Chi-square Value(df)	P –Value
N=670				
Ever sent a sexually suggestive picture/image			21.9(4)	0.000
Yes	86(53.7)	169(33.1)		
No	74(46.2)	341(66.9)		
Ever received a sexually suggestive message/image			14.5(1)	0.000
Yes	130(81.2)	333(65.3)		
No	30(18.8)	177(34.7)		
Did you initiate sexting the first time you had sex?			414.9(1)	0.000
Yes	60(37.5)	19(3.7)		
No	99(61.8)	45(8.8)		

4.7 Association between risky sexual behaviour and other variables

In determining the association between the participant's background characteristics and other independent variables, both simple and multiple logistic regression analyses were done. Table 4.11 indicates that students between ages 25-29 years were 4.8 times more likely to engage in risky sexual behaviours compared to students aged 17-19 years (95% CI=1.7-13.49; $P < 0.05$). However when all other variables are held constant, the relationship becomes insignificant.

Participants who have never sent a sexually suggestive message, were 0.4 times less likely to be involved in risky sexual behaviours than those who have ever sent sexually suggestive messages (95% CI=0.29-0.61; $P<0.05$). However, when all other variables are adjusted for, the relationship becomes insignificant with risky sexual behaviours ($p > 0.05$)

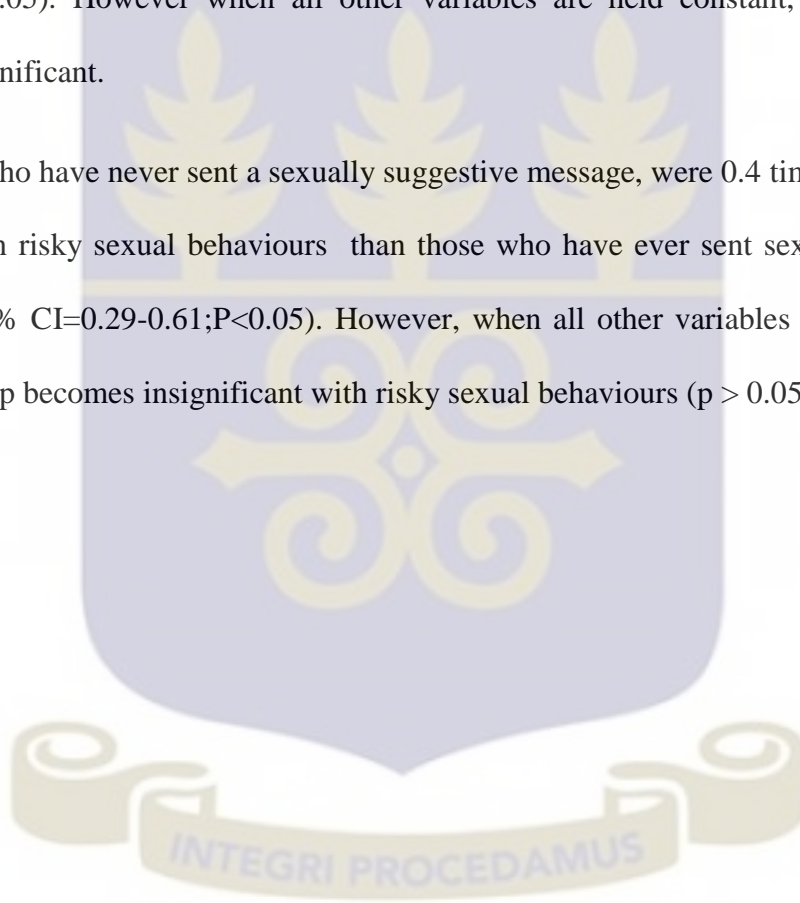


Table 4. 11 Results of Logistic Regression analyses

Variable	Risky sexual Behaviours			
	UNADJUSTED		ADJUSTED	
	OR(95%)CI	P-VALUE	OR(95%CI)	P-VALUE
Age		0.001		0.16
17-19	Reference			
20-24	2.1(1.29-3.47)		2.06(0.96-4.41)	
25-29	4.8(1.7-13.49)		1.38(0.33-5.66)	
Sex				0.54
Male	Reference			
Female	0.66(0.42-0.94)	0.023	0.82(0.45-1.51)	
Religion		0.0415		0.36
Christian	Reference			
Muslim	1.3(0.7-2.4)		2.68(0.64-11.12)	
Traditionalist	5.6(1.31-23.6)		1.58(0.17-15.5)	
Ever sent a sexually suggestive image/text		0.000		0.90
Yes	Reference			
No	0.42(0.29-0.61)		1.03(0.54-1.96)	
Ever received a sexually suggestive message				0.69
Yes				
No	0.43(0.28-0.67)	0.0001	1.2(0.52-1.96)	
Initiated sexting before your first sexual encounter				0.001
Yes	Reference			
No	0.69(0.37-1.30)		0.6(0.31-1.16)	

*Adjusted for age, sex, religion, ever sent sexually suggestive message, ever received sexually message and initiated sexting before first sexual encounter.

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

This study sought to investigate the influence of sexting on risky sexual behaviours among students of the University of Ghana. Specifically, the study examined the prevalence of sexting among students of the University of Ghana, the factors that motivates students' to sext and attitudes towards sexting behaviours, the proportion of students who engage in risky sexual behaviours and the relationships between sexting and risky sexual behaviours.

5.2 Discussion of findings

The study population comprised 42.2% males and 57.8% females. The students were between the ages of 17-29 years. 154 (22.9) % of the students were adolescents between the ages of 17-19 years and 498 (74.5%) were young adults between the ages of 20 -24 years. This age structure mimics the age structure of studies done elsewhere in the West Coast, among young people and adolescents in tertiary institutions (Delevi & Weisskirch, 2013).

5.3 Prevalence of Sexting

In literature, sexting is said to increase with age (Ybarra & Mitchell, 2014; McGraw & McGraw, 2013). One of the objectives of the study was to determine the prevalence of sexting among students in the University of Ghana. The results showed that 255 (38.0%) of the students reported to have ever sent a sexually suggestive message or image, and majority, 463 (69.1%) indicating that they have ever received a sexually suggestive message.

Studies on prevalence of sexting by sex are varied. This study revealed that females were avid primary sexters than males, similar to findings by (Ybarra & Mitchell, 2014; Martinez-

prather & Vandiver, 2014; Benotsch, Snipes, Martin, & Bull, 2013; Barker, Rizzo, Hancock, Norton, & Brown, 2014). This however contradicts findings by (Henderson & Morgan, 2011; Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013; West et al., 2014). These studies reported that males sext more than females. However, other studies by (Temple et al., 2014; Lenhart, 2009) showed no significant differences between males and females.

In this study, it was confirmed that sexting increases with age, i.e. Out of the 255 students who indicated to have sexted, 178 (69.8) belonged to age group 20-24. This is similar to studies done by Gordon-Messer et al., 2013; Henderson & Morgan, 2011).

Among those who have ever sent sexually suggestive messages/images, majority sent it to their boy/girlfriends, colleagues or just mere friends. Less than 2% sent it to elderly persons. Similarly, 1.5% elderly persons sent sexually suggestive messages/images to the students. This is in line with findings of an online survey conducted in two public universities in the West Coast, USA (Delevi & Weisskirch, 2013). Their findings indicated that young people and adolescents usually sent sext messages and images to friends, colleagues and persons they are in consensual relationships with (Delevi & Weisskirch, 2013).

A retrospective study on sexting among adolescents, analyzing motivating factors, potential factors and the role of a capable guardian, in the United states by Martinez-prather & Vandiver, (2014), revealed that females are more pressured to sext than their male counterparts. This assertion was confirmed in the current study where 152 (54.5%) females, indicated that they have been asked to sext.

The findings on prevalence of sexting were however inversely related to analysis of various literature by Lounsbury et al., (2011). They debunked the idea that sexting is a problem of epidemic proportions among teenagers, as there is little consistency in the estimated

prevalence of sexting among adolescents. They continued that the high estimates that have received the most media attention come from studies with a number of problems including unrepresentative samples, vaguely defined terms, and great potential for public misperception. They asserted that the media reportage exaggerates the true extent of the problem, and that sexting occur in a small minority of adolescents.

5.4 Reasons and motivations for Sexting

Factors that motivate adolescents and young people to sext are numerous. A lot of factors have been linked to sexting behaviours. Temple et al, (2014) gave the opinion that; sexting was associated with impulsive behaviours, depression and substance use. Other researchers have reported that, young people sext as a prelude to sexual activity between partners i.e. in a consensual relationship and to view the other partners' opinion on a possible impending sexual activity (Lenhart, 2009; West et al., 2014). They continued that sexting was a form of flirtatious behaviour, or gaining romantic attention from ones' partner, whether endorsement will be given to initiate, improve or sustain sexual activity, and that in relationships where partners live far away from each other, sexting is a means of sustaining the relationship and communication gap.

The researcher considered attitudes and reasons for sexting as the motivational factors that will make someone to send a sexually suggestive text/image. Majority of the students 427 (63.7%) gave their reasons as sending sexts to get noticed, 402(60%) and 56.1% reported that it made them feel sexy and to fish for compliments whilst 398(59.4%) of the students sent sexually suggestive messages or images to their boy/girlfriend as a sexy gift. Chi-square analyses revealed that, males and females had comparable views regarding motivations, and reasons why nude or semi-nude pictures/images are sent. These findings is attuned to an

online survey conducted among Hispanics in large North West University by Henderson & Morgan, (2011), and studies by National Campaign to prevent teen and unplanned pregnancy (2008).

Motivations for sexting indicate that whilst most young people especially females are pressured to sext, a lot more of sext; whether sending or receiving takes place in a consensual relationship, or as a youthful experimental phase of life, to gain attention from peers (Collins et al., 2011).

This is similar to findings by of the study which indicated that more females have been asked to sext more than females this could be so because most males receive sexually suggestive messages, which was not primarily intended for them.

5.5 Proportion of students engaging in risky sexual behaviours

Another objective of this study was to determine the proportion of students that were involved in risky sexual behaviours. A lot of behaviours are deemed to be risky, but for the purposes of this study, the following questions were asked to ascertain ones risky sexual behaviour status: whether Yes or No. They included Sex for Cash, Sex for gifts, Sex for favour,sex with someone 10years older or more, multiple sexual partners in the past 12 months and sexual intercourse without a condom.

Results from the study indicated that a very low proportion of students engage in risky sexual behaviours with all the behaviours recording below 30%, except Condom use at last sex which recorded 59.8%.Indicating that, among all the students who have had sex, the most risky behaviour exhibited is non condom use. This phenomenon is similar with studies done in Slovakia by Ondrej Kalina, who reported a 27% condom use at last sex (Kalina, 2012).

Putting all the risky sexual behaviours together to attain one variable, where scoring a ‘Yes’ in any one of the variables put you in the risky Sexual behaviour category, it was observed that 23.88% of the students engaged in risky sexual behaviours.

In Cross tabulating risky sexual behaviours with guardians, it was observed that, though the association was insignificant at a p-value >0.05 , it was observed that persons who lived with both parents had a lower probability of engaging in risky sexual behaviours than persons who lived with either of their parents, alone or other relations.

From the study, it was also observed that compared to males, females were less likely to be involved in risky sexual behaviours. This relationship was significant, but after adjusting for other variables, the relationship became insignificant. This results is synonymous with a study done in Ibadan, Nigeria among secondary school adolescents.(Oluwatoyin, Famutimi Esther, 2014).

5.6 Associations between sexting and risky sexual behaviours

The principal investigators quest to find an association between sexting and risky sexual behaviours, a Chi-square analysis was done for all the demographic characteristics and sexting behaviours against the generated dependent variable, risky sexual behaviour. All the variables that were statistically significant at bivariate level, $p < 0.05$ were entered into a simple regression model to determine the strength of the associations. After wards, all other confounding variables were controlled for and the adjusted odds ratios were calculated.

The findings indicated that age of students, sex, religion, having ever sent a sexually suggestive message; having ever received a sexually suggestive message and initiating sexting prior to sexual debut were statistically significant, with a p-value < 0.05.

These variables were put in a multiple regression model and after adjusting for other confounding variables; the results showed that persons aged 20-24 years were more likely to engage in risky sexual behaviours, than persons aged 17-19 years.

Persons who have never sent sexually suggestive messages were 0.42 times less likely to be engaged in risky sexual behaviours. After adjusting for all other variables, the odds were almost the same. This finding confirms results from other studies by Temple and others in 2014, who reported that persons who sent Sexts had 2 times the odds of indulging in risky sexual behaviours, but after adjusting for other variables, it was no longer significantly associated with risky sexual behaviour (Temple et al., 2014).

Another online survey conducted in Rhode Island, USA, among at risk adolescents revealed that Sexting was significantly associated with risky sexual behaviour (Barker et al., 2014). Similar findings by Henderson & Morgan, (2011), as well as another conducted Benotsch and colleagues in 2013, revealed that sexting is robustly associated with risky sexual behaviour (Benotsch et al., 2013).

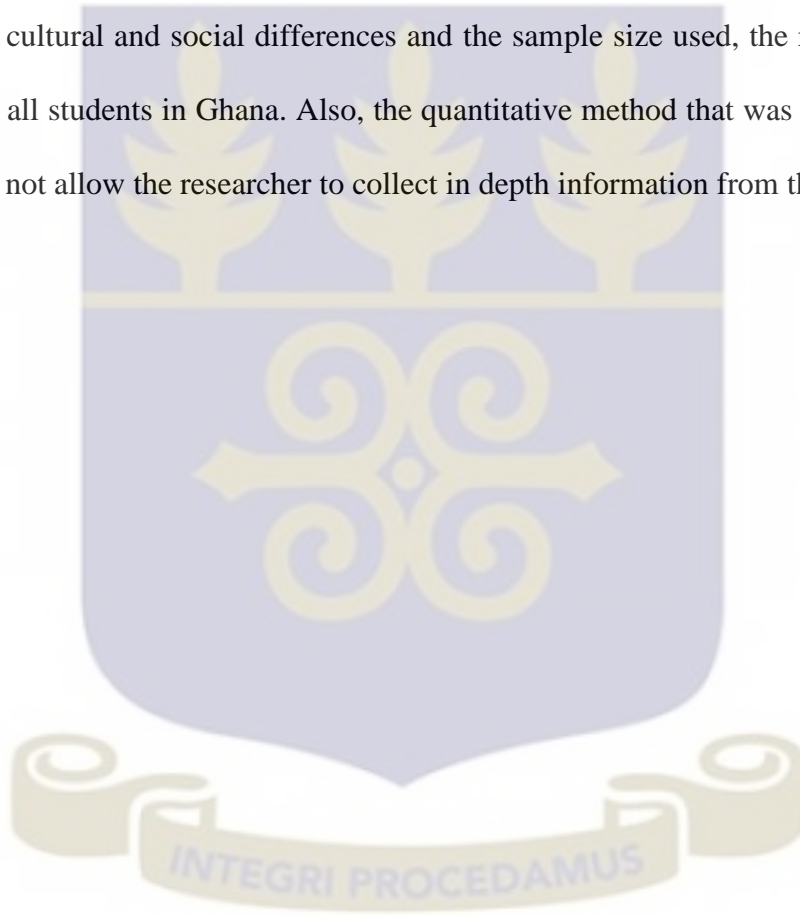
Contrary to these findings, Gordon-Messer et al., (2013), in an online survey in Michigan, USA, reported that Sexting was the new norm in sexual relationships, and it did not occur with risky sexual behaviours.

However, all the other variables were statistically insignificant with risky sexual behaviour.

5.7 Limitations of the study

Data from this study came from students self-reports, which maybe be influenced by social desirability. Questions that were highly personal or potentially embarrassing in some way may have caused students to respond different than reality.

Secondly, because the sample size was chosen from students in the University of Ghana, looking at the cultural and social differences and the sample size used, the results cannot be generalized to all students in Ghana. Also, the quantitative method that was employed by the researcher did not allow the researcher to collect in depth information from the students.



CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This study was conducted to determine the influence of sexting on risky sexual behaviours among students of the University of Ghana. This was achieved through determining the prevalence of Sexting among students, the attitudes and reasons that motivate sexting behaviours, the proportion of students who engage in risky sexual behaviours and the relationships between sexting and risky sexual behaviours.

Regarding the prevalence of sexting, the findings showed that persons who sent or received sexually suggestive messages and images were high, compared to those who did not. Persons between the ages of 20-25 years, have the higher odds of sexting, compared to persons between the ages of 17-19years. More so it was found out that, females engaged in sexting more than males, and majority of those who have had sexual intercourse initiated sexting before their sexual debut.

Majority of the students gave their reasons for sexting as sending sexts to get noticed, feel sexy and to fish for compliments and as a sexy gift to their boy/girlfriends.

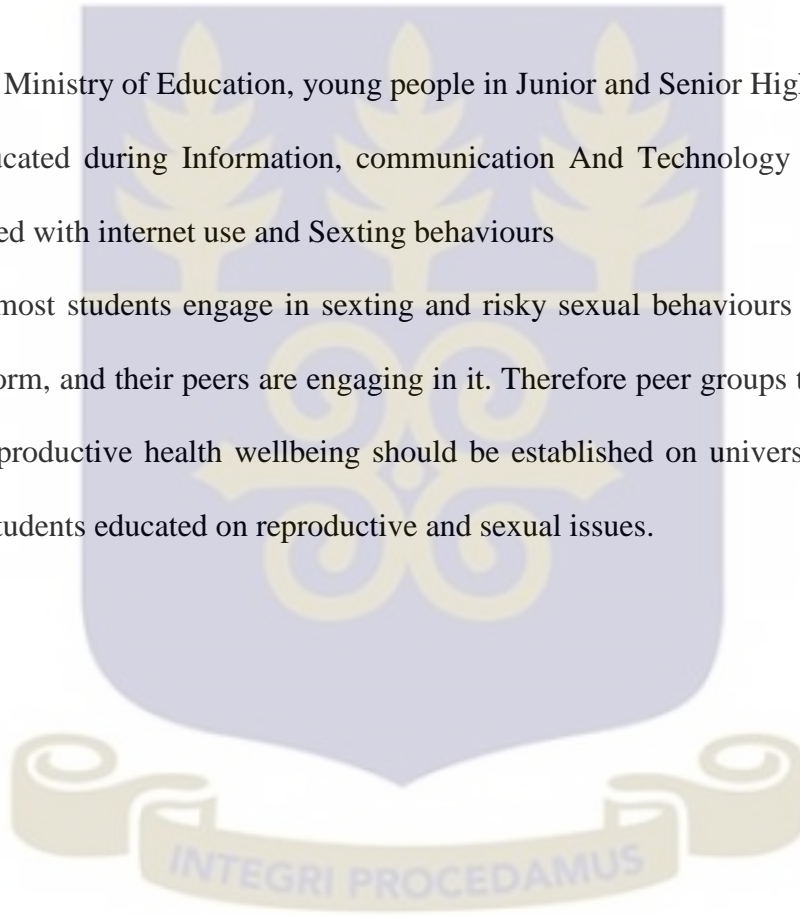
Results from the study also indicated that a very low proportion of students engage in risky sexual behaviours. Among the risky sexual behaviours, condom use at last sex recorded the highest, indicating that, among all the students who have had sex, the most risky behaviour exhibited is non condom use. Males were also reported to have higher odds of engaging in risky sexual behaviours than their female counterparts.

Furthermore, the study also found that, students who sexted have higher odds of involving in risky sexual behaviours than persons who did not.

6.2 Recommendations

On the basis of evidence derived from this study, and conclusions drawn, the following recommendations were made.

1. To the Ministry of Education, young people in Junior and Senior High Schools should be educated during Information, communication And Technology lessons on risks involved with internet use and Sexting behaviours
2. Also, most students engage in sexting and risky sexual behaviours because it is the new norm, and their peers are engaging in it. Therefore peer groups that foster sexual and reproductive health wellbeing should be established on university Campuses to keep students educated on reproductive and sexual issues.



REFERENCES

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [http://doi.org/10.1016/0749-5978\(91\)90020-T](http://doi.org/10.1016/0749-5978(91)90020-T)
- AP-MTV. (2009). Associated Press and MTV. *A Thin Line:AP-MTV Digital Study: Executive Summary*. Available at: http://www.athinline.org/MTVAP_.
- Barker, D., Rizzo, C., Hancock, E., Norton, A., & Brown, L. K. (2014). Sexting and Sexual Behavior in At-Risk Adolescents. *Journal of Paediatrics*. <http://doi.org/10.1542/peds.2013-1157>
- Bauermeister, Jose Arturo, Gordon-Messer Deborah, Grodzinski Alison, Z. marc. (2014). NIH Public Access, 52(3), 301–306. <http://doi.org/10.1016/j.jadohealth.2012.05.013.Sexting>
- Benotsch, E. G., Snipes, D. J., Martin, A. M., & Bull, S. S. (2013). Sexting, Substance Use, and Sexual Risk Behavior in Young Adults. *Journal of Adolescent Health*, 52(3), 307–313. <http://doi.org/10.1016/j.jadohealth.2012.06.011>
- Black, S. R., Schmiege, S., & Bull, S. (2013). Actual versus perceived peer sexual risk behavior in online youth social networks. *Translational Behavioral Medicine*, 3(1), 312–319. <http://doi.org/10.1007/s13142-013-0227-y>
- Chandra, A., Martino, S. C., Collins, R. L., Elliott, M. N., Berry, S. H., Kanouse, D. E., & Miu, A. (2015). Does Watching Sex on Television Predict Teen Pregnancy? Findings From a National Longitudinal Survey of Youth, 122(5). <http://doi.org/10.1542/peds.2007-3066>
- Cochran, W. G. (1977). Sampling techniques. *New York: John Wiley and Sons*.
- Collins, R. L., Martino, S. C., & Shaw, R. (2011). Influence of New Media on Adolescent Sexual Health : Evidence and Opportunities, (April).
- Cooper, K., Quayle, E., Jonsson, L., & Svedin, C. G. (2014). Adolescents and self- - taken sexual images : A review of the literature, 1–37.
- Cubbin, C., Santelli, J., Brindis, C. D., & Braveman, P. (2005). Neighborhood context and sexual behaviors among adolescents: Findings from the National Longitudinal Study of Adolescent Health. *Perspectives on Sexual ...*, 37, 125–134. <http://doi.org/10.1363/3712505>
- Darroch, E Jacjueline; Frost J.Jennifer; Singh, S. (2001). Can More Progress Be Made? Teenage Sexual and Reproductive Behavior in Developed Countries. *The Alan Guttmacher Institute*, (3), <http://www.guttmacher.org/pubs/summaries/euroteens>.

- Delevi, R., & Weisskirch, R. S. (2013). Computers in Human Behavior Personality factors as predictors of sexting. *Computers in Human Behavior*, 29(6), 2589–2594. <http://doi.org/10.1016/j.chb.2013.06.003>
- Eaton, D. K., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J., ... Wechsler, H. (2010). Youth risk behavior surveillance - United States, 2009. *Department Of Health And Human Services Centers for Disease Control and Preventio*, 59(5), 1–142. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/20520591>
- Farmer, M. A., Trapnell, Æ. P. D., & Meston, Æ. C. M. (2008). The Relation Between Sexual Behavior and Religiosity Subtypes : A Test of the Secularization Hypothesis. <http://doi.org/10.1007/s10508-008-9407-0>
- Gadzekpo, A. (2014). Publishing offensive materials is punishable by law. Retrieved March 14, 2015, from <http://www.myjoyonline.com>
- Geary, C., Baumgartner, J., & Tucker, H. (2008). Early sexual debut sexual violence and sexual risk-taking among pregnant adolescents and their peers in Jamaica and Uganda., (8). Retrieved from <http://www.popline.org/node/206926>
- Ghana Statistical Service. (2013). POPULATION AND HOUSING CENSUS, CHILDREN & ADOLESCENTS & YOUNG PEOPLE IN GHANA.
- Gordon-Messer, D., Bauermeister, J. A., Grodzinski, A., & Zimmerman, M. (2013). Sexting Among Young Adults. *Journal of Adolescent Health*, 52(3), 301–306. <http://doi.org/10.1016/j.jadohealth.2012.05.013>
- Gore, F. M., Bloem, P. J. N., Patton, G. C., Ferguson, J., Joseph, V., Coff, C., ... Mathers, C. D. (2011). Global burden of disease in young people aged 10 – 24 years : a systematic analysis, 6736(11), 1–10. [http://doi.org/10.1016/S0140-6736\(11\)60512-6](http://doi.org/10.1016/S0140-6736(11)60512-6)
- Henderson, L., & Morgan, E. (2011). Sexting and Sexual Relationships Among Teens and Young Adults. *Hispanic*, 31–39. Retrieved from http://scholarworks.boisestate.edu/mcnair_journal/vol7/iss1/9/
- Kaiser, R., Woodruff, B. a., Bilukha, O., Spiegel, P. B., & Salama, P. (2006). Using design effects from previous cluster surveys to guide sample size calculation in emergency settings. *Disasters*, 30(2), 199–211. <http://doi.org/10.1111/j.0361-3666.2006.00315.x>
- Kalina, O. (2012). *Sexual risky behaviour among Slovak adolescents and young adults : social and psychological factors*.
- Khanna, P., Singh, K., & Khas, H. (2015). (3):175-205. *Perceived Factors Affecting Well - Being among Urban Adolescents J. Indian Assc. Child Adolesc.Ment.Health*, 11(3), 175–205.

- Krauss, H., Bogdański, P., Szulińska, M., Malewski, M., Buraczyńska-Andrzejewska, B., Sosnowski, P., ... Mikrut, K. (2012). Sexual initiation of youths in selected European countries compared with their sexual and contraceptive knowledge. *Annals of Agricultural and Environmental Medicine : AAEM*, 19(3), 587–92. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23020062>
- Lenhart, A. (2009). Teens and Sexting How and why minor teens are sending sexually part of teen life. *Pew Internet and American Life Project*.
- Lenhart, A., Ling, R., Campbell, S., & Purcell, K. (2010). Teens and Mobile Phones. *Pew Internet and American Life Project*, 20, 1–94.
- Logan, C., Moore, K. A., Logan, C., & Moore, K. A. (2003). Pathways from Family Religiosity to Adolescent Sexual Activity and Contraceptive Use. <http://doi.org/10.1363/4010508>
- Lounsbury, K., Mitchell, K. J., & Finkelhor, D. (2011). The True Prevalence of “Sexting.” *Crimes Against Children Research Center*, (April), April 2011.
- Martinez-prather, K., & Vandiver, D. M. (2014). Sexting among Teenagers in the United States : A Retrospective Analysis of Identifying Motivating Factors , Potential Targets , and the Role of a Capable Guardian. *International Journal of Cyber Criminology*, 8(1), 21–35.
- Mcgraw, J. M., & Mcgraw, J. M. (2013). *Sexting Unleashed : The Social Phenomenon According to Youth Sexters* by.
- National Campaign to prevent teen and unplanned pregnancy. (2008). *Sex and Tech*. http://www.thenationalcampaign.org/sestech/PDF/SexTech_Summary.pdf.
- Oluwatoyin, Famutimi Esther, M. O. (2014). Risky Sexual Behaviour among Secondary School Adolescents in Ibadan North Local Government Area , Nigeria . *Journal of Nursing and Health Science*, 3(3), 34–44. Retrieved from https://www.mendeley.com/research/risky-sexual-behaviour-among-secondary-school-adolescents-ibadan-north-local-government-area-nigeria-1/?utm_source=desktop&utm_medium=1.14&utm_campaign=open_catalog&userDocumentId={bc6652c1-e359-494c-8b92-11fa58e17ddd%7
- Ringrose, J., Gill, R., Livingstone, S., & Harvey, L. (2012). A qualitative study of children , young people and “ sexting ” A report prepared for the NSPCC.
- Rostosky, S. S., Wilcox, B. L., Laurie, M., Wright, C., & Randall, B. A. (2004). The Impact of Religiosity on Adolescent Sexual Behavior : A Review of the Evidence. *Journal of Adolescence Research*, 19(6), 677–697. <http://doi.org/10.1177/0743558403260019>

- Slaymaker, E., Walker, N., & Zaba, B. (2004). Unsafe sex. *Comparative Quantification of Health Risks: Global and Regional Burden of Diseases Attributable to Selected Major Risk Factors*, 1177–1254. <http://doi.org/10.1086/431486>
- Strasburger, V. C., Jordan, A. B., & Donnerstein, E. (2010). Health effects of media on children and adolescents. *Pediatrics*, 125, 756–767. <http://doi.org/10.1542/peds.2009-2563>
- Temple, J. R., Le, V. D., van den Berg, P., Ling, Y., Paul, J. a., & Temple, B. W. (2014). Brief report: Teen sexting and psychosocial health. *Journal of Adolescence*, 37(1), 33–36. <http://doi.org/10.1016/j.adolescence.2013.10.008>
- The Alan Guttmacher Institute. (2004). Research In Brief Adolescents in Ghana : Sexual and Reproductive Health. *Popline.Org*, (1), 1–4. Retrieved from <http://www.guttmacher.org/pubs/rib/rib1-04.html>
- UNFPA. (2011). The State of World Population 2011. *United Nations Population Fund*, 1–132. <http://doi.org/ISBN 978-0-89714-990-7>
- University of Ghana (2016). University of Ghana Student Statistics. Retrieved on 20th September, 2016 from <http://www.ghanaweb.com/GhanaHomePage/education/legon.html>
- Van Ouytsel, J., Van Gool, E., Ponnet, K., & Walrave, M. (2014). Brief report: The association between adolescents’ characteristics and engagement in sexting. *Journal of Adolescence*, 37(8), 1387–1391. <http://doi.org/10.1016/j.adolescence.2014.10.004>
- Walker, S., Sanci, L., & Temple-, M. (2011). Sexting and young people, 30(4).
- West, J. H., Lister, C. E., Hall, P., Crookston, B. T., Snow, P., Zvietcovich, M., & West, R. P. (2014). Sexting among peruvian adolescents. *BMC Public Health*, 14(1), 811. <http://doi.org/10.1186/1471-2458-14-811>
- 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. <http://doi.org/10.1016/j.jadohealth.2014.07.012>

APPENDIX I: INFORMED CONSENT FORM

Project Title: **SEXTING AND RISKY SEXUAL BEHAVIOUR AMONG UNIVERSITY OF GHANA STUDENTS**

Principal Investigator:

AHIATAKU DOREENDA ENYONAM, CCTH, BOX CT I363, CAPE COAST.

TEL: 0244850264. EMAIL: ddeyaet@gmail.com

General information about the study

This is a research study being undertaken by Doreenda Enyonam Ahiataku, a student of the School of Public Health, University of Ghana, Legon; In order to gain a better understanding, of sexting and risky sexual behaviours, among students.

Despite the generally high level of perceived sexting in Ghana, there is no evidence to suggest that these behaviours truly exist.

The purpose of this study is to determine the influence of sexting on risky sexual behaviours: specifically the prevalence of sexting, factors that motivate sexting behaviours and the relationship between sexting and risky sexual behaviours

Findings will enable us to identify important social factors that contribute to sexting and risky sexual behaviours among University students. And will address gaps in our knowledge of the processes that lead to consequences of sexting among young adults in Ghana.

Procedures

Students from randomly selected halls in the University of Ghana will be included in the study

If you are eligible and agree to participate, you will be required to complete an interviewer-administered questionnaire. We will ask you questions about your background, health and social wellbeing, knowledge about risky sexual behaviours and sexting, motivations for sexting and consequences of sexting.

The survey interview is expected to last about 30 minutes.

Possible Risks and Discomforts

The study may involve some risks. We anticipate some discomfort during the interview process given the sensitive, intimate nature of the topic. We will ask you questions about your background, health and social wellbeing, knowledge about risky sexual behaviours and sexting, motivations for sexting and consequences of sexting.

Some of the questions focus directly on your personal life, and you may feel uncomfortable answering those questions or you may not know the answer to a particular question. You are free to skip any questions you are not comfortable answering.

Possible Benefits

There is no direct benefit to the participants of this study. However, the information you will provide will contribute to the overall knowledge about sexting and risky sexual behaviours that will be generated from this study

This information will help us in identifying the social factors that motivate sexting behaviours. Overall, the study will not only deepen our understanding of sexting behaviours but ultimately help improve the general health and wellbeing of students in Africa.

Voluntary Participation and Right to Refuse

Your participation in this study is absolutely voluntary. During the interview, you can choose not to answer any questions that you do not want to answer. Additionally, you are at liberty to withdraw from the study or stop the interview at any time. However, we will encourage you to participate and complete the questions since your opinions are very important in helping us to examine the motivations of sexting.

Confidentiality

We would like to assure you that whatever information you provide will be handled with strict confidentiality, will be used purely for research purposes, and will never be used against you. Data analysis will be done at the aggregate level to ensure anonymity. Your name or personally identifying information will not be published in any report. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.

Compensation

There is no compensation for participating in this study.

Contact for Additional Information

If you have questions later, you may contact:

(Dorenda Enyonam Ahiataku: [Tel:0244850264](tel:0244850264), e-mail ddeyaet@gmail.com)

Your rights as a Participant

If you have any questions about your rights as a research participant, you can contact the Administrator of the GHS Ethical Review Committee at the following address:

Hannah Frimpong
GHS-Ethical Review Committee
Research and Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Office: 0302 681 109
Mobile: 024 323 5225 or 050 704 1223
Email: Hannah.Frimpong@ghsmaail.org

VOLUNTARY CONSENT

I declare that the above document describing the purpose, procedures as well as risks and benefits of the research titled “(Sexting and Risky Sexual Behaviour among University of Ghana students)” has been thoroughly explained to me in English/Twi/Ga language. I have been given the opportunity to have any questions about the research answered to my satisfaction. I hereby voluntarily agree to participate as a subject in this study.

_____/_____/_____
Signature or Mark of Participant Date

If participant cannot read the read the form themselves, a witness must sign here.

I, _____ was present while the purpose, procedures as well as risks and benefits were read to the participant. All questions were answered and the participant has voluntarily agreed to participate as a subject in this research study.

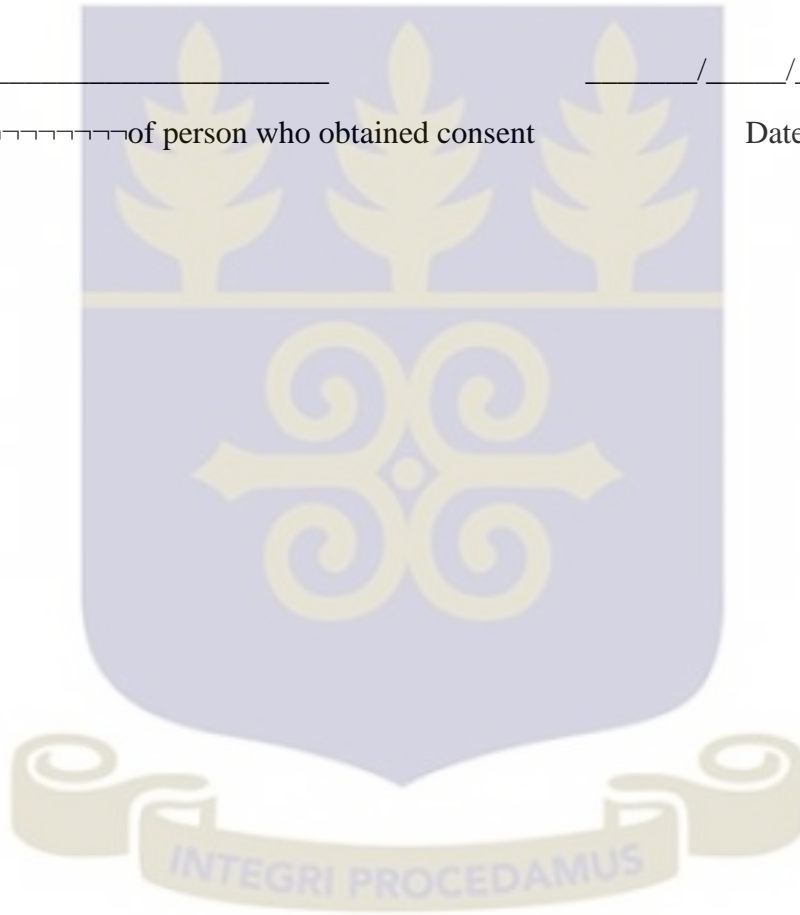
_____/_____/_____
Signature of Witness Date

Interviewer's statement:

I, _____, certify that the nature and purpose, the potential benefits and possible risks associated with participating in the study have been explained to the above individual in the English/Twi/Ga language. The participant has freely agreed to participate in the study.

Signature _____ of person who obtained consent

_____/_____/_____
Date



APPENDIX II: QUESTIONNAIRES

QUESTIONNAIRE ON SEXTING AND RISKY SEXUAL BEHAVIOUR AMONG UNIVERSITY OF GHANA STUDENTS.

SECTION A

DEMOGRAPHIC CHARACTERISTICS.

A1.Age (as at last birthday) _____

A2.Sex: 1 Male 2 Female

A3.Religion: 1 Christian 2 Muslim 3 Traditionalist 4 Other _____

A4.Ethnicity: 1. Akan 2. Ga 3. Ewe 4. Northern Ghana 5. Other

A5.Programme of study

A6. Level of study 1. 100 2. 200 3. 300 4. 400

A7. Whom do you live with?

1. Both Parents 2. Mother 3. Father only 4. Alone 5. Friend 6. Other relatives

SECTION B

SEXTING BEHAVIOURS

6. Do you use any of the following gadgets with internet connectivity?

		INTERNET			
		YES	NO	YES	NO
B1	GADGET USE				
B2	Mobile Phone without internet	1	2	-	-
B3	Smart Phone with mobile internet	1	2	1	2
B4	Laptop	1	2	1	2
B5	Tablet	1	2	1	2
B6	Digital camera/webcam	1	2	1	2
B7	Others (please specify)	1	2	1	2

B8. Do you have a 24 hour access to internet? 1. Yes 2.No

B8a. If yes, How many hours a day?.....

B8b. Have you ever used the Internet to seek health information? 1.Yes 2. No.

B8c. Have you ever watched a sexually explicit film? 1. Yes 2. No. **If NO skip to B9**

B8d. With whom do you usually watch sexual explicit films? 1. Alone 2. Same sex friends
3. Opposite sex friend 4. Someone else, **specify:** _____

B8e. How often did you watch such materials in the last one month? 1. Rarely (once to thrice a month) 2. Often (four to eight times a month) 3. Very often (Eight or more times a month)
.....

B8f. Where do you usually find the sexually explicit material to watch? 1. Internet 2. Rental
3. Friends 4. Found at home. 5. Others, **specify:** _____

B9. Have you ever sent any sexually suggestive picture or text to anyone? 1 Yes
2.No

B10. If yes, who did you send the sexually suggestive message to?
1. Boyfriend 2. Colleague 3. Friend 4. Elderly 5. casual friend

B11. Have you ever received any sexually suggestive text messages or pictures? 1. Yes
2. No

B12. If yes who did you receive the sexually suggestive text message or picture from?
1. Boyfriend 2. Course mate 3. Friend 4. Elderly 5. A close friend 6. Casual friend

B13. How often do you sext? 1. Rarely (once to thrice a month) 2. Often (four to eight times a month) 3. Very often (Eight or more times a month)

B14. Have you ever been asked to send a sext? 1. Yes 2.No

B15. Who do you think sexts more? 1. Males 2. Females

B16. How will you feel if you received a video/image/video with sexual reference?
.....

REASONS FOR SEXTING.

Why do you think people post or send nude pictures? (TICK ALL THAT APPLY)

B17	To feel sexy	0
B18	To feel interesting and special	1
B19	To receive gifts, remunerations,	2
B20	It is exciting	3
B21	To give boy/girlfriend a sexy gift	4
B22	It's fun and exciting	5
B23	Because those who don't do it are made fun of for being shy	6
B24	To get someone to notice them	7
B25	To feel alive	8
B26	To fish for compliments	9

YES

NO

B27	Do you think sexting is an offense punishable by law?	1	2
B28	Do you know of any punishment if caught sexting?	1	2
B29	Is phone sex considered sexting?	1	2

From the following statements, please indicate the extent to which you agree or disagree. Circle the number (code) corresponding to your answer in the spaces provided for each question.

	Question	1= Strongly disagree	2= Disagree	3= Neutral	4= Agree	5= Strongly agree
B30	Posting nude pictures of me ok.	1	2	3	4	5
B31	Sexting is interesting and fun.	1	2	3	4	5
B32	It is fun to receive nude pictures from a person I met on the Internet.	1	2	3	4	5
B34	It is ok to post my telephone number to someone I met on the Internet	1	2	3	4	5
B35	Posting nude pictures of my friends without asking them is quite ok	1	2	3	4	5
B36	I like to receive messages containing sexual references	1	2	3	4	5

CONSEQUENCES OF SEXTING

B37	Likely getting in trouble with parents, if they find out	1	2	3	4	5
B38	Getting in trouble with the law	1	2	3	4	5
B39	Sexting can lead to becoming addicted with virtual/imaginary sex	1	2	3	4	5
B40	Being targeted by criminals or blackmailers	1	2	3	4	5
B41	Having problems with a (future) employer	1	2	3	4	5
B42	Meeting people who turn out to be different from the one seen online.	1	2	3	4	5

SECTION C: SEXUAL BEHAVIOUR AND CONTRACEPTIVE USE

NO	QUESTION	CODING CATEGORY	SKIP TO
C1	Have you ever been in a relationship with a male or female (<i>boyfriend/girlfriend</i>)?	Yes 1 No 2	
C2	Do you currently have a sexual partner (<i>boyfriend/girlfriend</i>)?	Yes 1 No 2	
C3	How many sexual partners (<i>boyfriend/girlfriend</i>) have you had in your lifetime?		
C4	Within the last 12 months, how many sexual partners have you had?		
C5	Have you ever had sexual intercourse?	Yes 1 No 2	→ C10
C6	If Yes, what was your age when you first had sexual intercourse?	(<i>Age in complete years</i>)	
C7	How will you describe your first sexual relation	Own will 1 Coaxed 2 Forced 3	
C8	Within the past 3 months, how many times have you engaged in sexual intercourse?		
C9	Within the last 12 months, how many casual sex partners have you had?		
C10	Do you feel any pressure to have sexual intercourse? IF YES, a great deal or a little?	None 1 A little 2	

		A great deal 3	
C1 1	From whom do you feel the pressure? <i>Circle all that apply</i>	Friends(involved in sexting) 1 Relatives 2 Work colleagues 3 Partner/special friend 4 Other _____ 5	
C1 2	Have you ever had sexual intercourse in exchange for cash	Yes 1 No 2	
C1 3	Have you ever had sexual intercourse in exchange for gift?	Yes 1 No 2	
C1 4	Have you ever had sexual intercourse in exchange for favours ?	Yes 1 No 2	
C1 5	Have you ever had sex when drunk?	Yes 1 No 0	
C1 6	Have you ever had sex with someone 10 or more years older than you?	Don't know 2 Yes 1 No 0	
C1 7	Did you initiate sexting before your first sexual encounter?	Yes 1 No 0	
Contraceptive Use			
C1 8	The first time you had sexual intercourse, did you use a condom?	Yes 1 No 2	
C1 9	Who suggested condom the first time you had sexual intercourse?	Myself 1 My partner 2 Joint decision 3	
C2	Why did you use a condom?	To prevent pregnancy.....1	

0		To prevent STIs 2 To prevent HIV3 To prevent all of the above...4 No particular reason..... 5 Other_____ 6	
C2 1	Did you use a condom the last time you had sexual intercourse?	Yes 1 No 2	
C2 2	If No, did you use any of the following contraceptive methods?	Diaphragm 01 Female Condom 03 Emergency CP 04 Injectables 05 Foam/Jelly 06 Implants 07	IUDs 08 Pill 09 Withdrawal 10 Periodic abstinence 11 LAM 12 Sterilization 13 Other _____) 14
C2 3	Who suggested the use of contraceptives during sex?	Myself 1 My partner 2 Joint decision 3	
C2 4	When you had sexual intercourse during the past 12 months, how much of the time, if any, did you and your partner use a condom?	Never 1 Occasionally 2 Sometimes 3 Most of the time 4 Always 5	
C2 5	Have you heard about family planning?	Yes 1 No 2	C29 →
C2 6	If yes, where did you hear about it	Specify _____ _____	

C2 7	Who in your opinion should do family planning?	Married couples only 1 All sexually active persons 2 Don't know 3	
C2 8	<i>For those who have NEVER HAD SEX, skip to C35; otherwise continue</i>		
	Pregnancy		
C2 9	Have you ever been pregnant OR made someone pregnant?	Yes No	1 2
C3 0	If yes, how many times?		
C3 1	How old were you when you first became pregnant or made someone pregnant?	(Age in complete years) [][]	
C3 2	What happened to the pregnancy/pregnancies? <i>(Circle all that apply)</i>	1 Resulted in live birth 2 Miscarried 3 Aborted 4 Currently pregnant	
C3 3	FEMALES: At the time you first became pregnant; did you want to become pregnant then? MALES: At the time you made someone pregnant, did you intend to make her pregnant?	Yes 1 Not at all 2 Later 3	




APPENDIX III: ETHICAL CLEARANCE LETTER

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

My Ref. GHS/RDD/ERC/Admin/App
Your Ref. No.


Your Health • Our Concern

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: Hannah.Frimpong@ghsmail.org

11th March, 2016

Dorenda Enyonam Ahiataku
University of Ghana
School of Public Health
Legon, Accra

ETHICS APPROVAL - ID NO: GHS-ERC: 89/12/15

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol titled:

“Sexting and Risky Sexual Behaviour among University of Ghana Students”

This approval requires that you submit yearly review of the protocol to the Committee and a final full review to the Ethics Review Committee (ERC) on completion of the study. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.


Please note that any modification without ERC approval is rendered invalid.

You are also required to report all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your sponsor before any publication of the research findings.

Please note that this approval is given for a period of 12 months, beginning 11th March, 2016 to 10th March, 2017. However, you are required to request for renewal of your study if it lasts for more than 12 months.

Please always quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
PROFESSOR MOSES AIKINS
(GHS-ERC VICE-CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

1