

**ENSIGN COLLEGE OF PUBLIC HEALTH,
EASTERN REGION GHANA**

***CONDOM USE AMONG SEXUALLY ACTIVE MALES IN SELECTED
COMMUNITIES IN THE LOWER MANYA KROBO MUNICIPALITY IN
GHANA.***

BY

PHILIP APPIAH YAMOAHA

**A Thesis Submitted to Ensign College of Public Health in Partial
Fulfilment for the Award of:
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DEDICATION

I dedicate this work to The Almighty God, my family and wonderful friends for their continuous support during my study.

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My profound gratitude goes to the Almighty God for the wealth of His grace, mercy, guidance, strength, protection, steadfast love and wisdom throughout this program.

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To my family, thank you for your support and encouragement. Finally to all my friends who contributed in diverse ways to making this project a reality, I say God bless you.

ABSTRACT

Consistent and correct use of condoms remains an effective way to tackling sexually transmitted infection including HIV. Understanding the predictors of condom use that underlies individual and societal attitude towards condom use can contribute to the uptake of condoms as an important public health strategy for HIV prevention in Ghana. An exploratory cross-sectional study on condom use was conducted among sexually active men aged between 15 and 49 years in the Lower Manya Municipality in the Eastern Region of Ghana. Using both qualitative and quantitative methods, the study explored the relationship between condom use and individual and environmental factors, knowledge and perception of condoms.

Educational level, (OR= 1.107, 95%CI [0.95-1.27], P= 0.164) having Children (OR= 3.28, 95%CI [1.74-6.19], P= 0.000) and Occupation (OR= 1.047, 95%CI [0.954- 1.143], P= 0.331) were the factors that remained in the multivariate stepwise regression model after adjusting for other covariates at significant level of 0.05. 53.33% males have more than one sexual partner and also males who sought help from their sexual partners in putting on condoms were 1.5 times more likely to have condom slip or break during sexual intercourse. The qualitative results indicates that, reason for condom use by the youth was based on perceived risk of pregnancy first, then vulnerability to STI`s. It also points religion and societal norms as barriers of condom acceptability. HIV/STI prevention strategies and interventions that aim to promote condom use should consider these identified factors that influence condom use in Ghana and consider them in interventions. Interventions to promoting condom use must not only be based on of susceptibility and severity of HIV and effectiveness of condoms in preventing HIV infection but the focus should be on total health issues including reproductive health and healthy family planning methods, healthy childbirth, and prevention of STIs in general.

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LIST OF ABBREVIATION

GDHS	Ghana Demographic and Health Survey
TFR	Total Fertility Rate
STI`S	Sexual transmitted infections
AIDS	Acquired Immunodeficiency Syndrome
HIV	Human Immunodeficiency Virus
TRA	Theory of Planned Behaviour
TBP	Theory of Reasoned Action
FGD	Focus group discussion
GAC	Ghana Aids Commission
GHS	Ghana Health Service

CHAPTER ONE

1. INTRODUCTION

1.1 Background to Study

Men play a powerful role in reproductive decisions. Men's participation is a promising strategy for addressing some of the world's pressing reproductive health problems. Since the 1930s, latex condoms have been available to prevent both pregnancy and sexually transmitted disease, but in most parts of the world they have never been widely used. Estimated pregnancy rates during perfect use of condoms is 3% at 12 months.(CDC 2006). Laboratory and epidemiological studies have shown that latex condoms provide an effective barrier against even the smallest STD pathogens including HIV. (CDC 2006)

The 2014 GDHS report indicates 77 % of women and 86 % of men age 15-49 know that consistent use of condoms is a means of preventing the spread of HIV and the most popular male contraceptive method used by unmarried women's partners in Ghana is the male condom, representing 8% (Ghana Statistical Service 2008)

Therefore promoting a positive attitude towards condom use is a strong public health measure to tackling reproductive health issues such as fertility and prevention of STI's. Many national measures in Ghana to reduce fertility rate and control STI's has yielded results in reducing TFR from 6.4 in 1988 to 4.2 in 2014 and increasing CPR from 15% in 2000 to 29% in 2014. National HIV indicators stand at prevalence of 1.6 in 2014. The HIV prevalence was 3.6% in 2003, dropping to 1.8% in 2008.(Ghana Health Service 2013)

But the impact could be better if male involvement in the use of contraceptives, especially the male condom was well accepted and male positive attitudes towards condom use is needed to achieve such impact.

1.2 Problem statement

Many national public health measures such as the National AIDS Control Programme and Population Control Programmes use condoms as a major tool in achieving its target, yet the prevalence of male condom use is still low even though knowledge of its benefit is high. Therefore individual and societal factors that affect the use of male condom when understood would enhance effective and result oriented programming for behavior change communication.

1.3 Justification

To ensure that Ghana reduces its total fertility rate from 4.2 to 3.0 by 2020 and increases contraceptive prevalence rate from 29% to 50% by 2020 and further reduce HIV prevalence rate from 1.4 to acceptable global targets by 2030. Male condom use will have to be increased to play a crucial role. Therefore this study seeks to ascertain the possibility of using behavioral change communication to enhance male condom use and the necessity of exploring the male attitude towards condom use.

1.4 Objectives

The main objective of this study is to assess the male attitudes that affect their use of male condoms in the Lower Manya Municipality, Eastern Region of Ghana.

To achieve this main objective, the following specific objectives were investigated:

- 1) The knowledge of male condom use.
- 2) The pattern of sexual risk behaviours.
- 3) The barriers of acceptability to condom use based on:

- a) Socio-demographic background
- b) Socio-cultural/religious background
- c) Socio-economic background
- d) Spousal/partners influence
- e) Lack of skill of male condom use

4) The measure of the frequency of male condom use:

- a) Condom use at first sexual intercourse
- b) Condom use at last sexual intercourse
- c) Condom consistency with most recent partner
- d) Condom consistency in the last four weeks.

5) The level of intended use of male condom in non-users

1.5 Research Hypotheses

The overall goal of the research is to find out factors that affect the attitude of male condom use. The hypotheses of this study are concerned with the association between factors that influence the attitude of males towards the use of male condoms in the Lower Manya Municipality.

The hypotheses is as follows:

H₁: Knowledge of condoms influences its use

H₂: The pattern of sexual risk behaviours influence condom use

H₃: Individual background characteristics influence their use of condoms

1.6 Scope of Study

The study is limited to the Lower Manya Municipality and basically considers the male attitude towards male condom use. Primary data was collected in five communities (two urban and three rural) from sexually active males between 15 to 49 years.

1.7 Structure of the Thesis

This thesis consists of six chapters. Chapter one, comprises of the introduction, problem statement; justification; research objectives; and the scope of study. Chapter Two focuses on review of literature. Chapter three which is the research methodology, explains how the study was carried out. Then Chapter four looks at analysis and results from the study. Chapter five discusses the findings from the study. Finally, Chapter six presents the conclusions and recommendations based on findings from the study.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 History of Male condoms

Male condoms appear to have been the first barrier contraceptive for male use. Evidence from ancient artwork and records indicates that condoms may have been used for contraception thousands of years ago. An example is the discovery of a 12,000 years old cave art in France depicting a man and woman engaging in sexual intercourse with the penis covered (Collier A. 2007)

Condoms have been a subject of curiosity throughout history. The idea of safer sex has been explored in ancient and modern history, and has been used to prevent sexually transmitted diseases. The first known documentation of the condom use was that of King Minos of Crete (Collier A. 2007) in about 3000 B.C. King Minos was a figure of history from the Bronze Age. Minos, was said to have serpents and scorpion in his semen and his mistresses died after having intercourse with him. In order to protect himself and his partners, he used the bladder of a goat in the woman's vagina which protected the woman from disease.(de Vincenzi I 1994)

The Ancient Egyptians were one of the first civilizations to use “sheaths”, as condoms were called. Egyptians were known to have ritualistic culture and their use of symbols and calligraphy to denote communication. Evidence from about 1000 BC shows that linen sheaths were used to prevent diseases like bilharzia which were endemic. The giving of the word “Condom” was as a result for its popularity in the 18th century(Collier A. 2007)

The first clear description of a condom for sexual intercourse was made by Italian Anatomist and physician Gabriello Fallopio in the 1500s to offer protection against syphilis(Youssef H 1993)

Rubber vulcanization during the Industrial Revolution significantly changed the face of the condom, the process of heating sulfur and natural rubber together to form a malleable and durable material with a higher elasticity and tensile strength gave condom a commercial value. By 1860, condoms were produced on a large scale, was affordable and could be reused. Skin condoms made from intestines or bladder became outdated at the end of the 19th century even though it was more comfortable than rubber (Jutte R 2008)

The transformation of the condom to a small, simple latex with high flexibility is a public health breakthrough.

Now, the male latex condom is a popular form of birth control and STI's prevention. Globally, 18 billion people were estimated of using condoms in the year 2015 alone (Gotz A, Sontheimer M 2009)

However, there are some concerns from users such as decrease in sensitivity and sensation during sexual intercourse, interruption with sexual play when putting it on. But such concerns could be overcome through technical innovations and behavioral changes when attitudes and other factors affecting condom use are accessed and understood to inform policy and programming.

2.2 Condom effectiveness and efficacy

The male condom is a barrier method for the prevention of HIV and sexually transmitted infections and for the prevention of pregnancy. When placed over a man's erect penis, it is designed to cover the penis during sexual intercourse and physically block ejaculatory fluids, sperm cells, and infectious agents from entering the sexual partner's body. The male condom is designed to cover both the glans and shaft of the penis and may have a reservoir tip to provide space for the ejaculate.

The discovery of AIDS as a sexually transmitted disease in the 1980s (Anijar K 2005) brought about the popularity of condoms as a contraceptive and as a use of prevention of sexually transmitted

diseases.(American Social Health Association 1987). When condoms are used consistently and correctly, it becomes an important strategy for reducing STIs and HIV(Collier A. 2007)

The difference between the efficacy and effectiveness of the male condom is efficacy refers to the protection the male condom affords when perfectly assed in the laboratory, whiles the effectiveness of the male condom refers to the protection afforded by the condom when used in the real population.

The effectiveness of the male condom in preventing pregnancy and sexually transmitted infections is dependent on correct and consistent use. With correct and consistent use, the male condom has been shown to prevent pregnancy, HIV and other sexually transmitted diseases with high efficacy.

Laboratory studies have proved that the latex condom forms an impervious barrier to sperm cells and sexually transmitted bacteria and viruses. Clinical studies have also shown that condom protects the user and the sexual partner against sexually transmitted infections such as HIV.

2.3 Attitude towards condom use

Attitude refers to a person's evaluation of any psychological object. Attitudes are determined by the beliefs that are important to a person.(Willock, J.; Deary, I.J.; Edwards-Jones, J.; Gibson et al. 1999). Attitudes are formed by what an individual perceives to be true about the object of interest. This perception may sometimes be based upon information and knowledge or an emotional reaction towards the object. Many beliefs and values may buttress an object of interest. These evaluation and judgments of psychological objects are represented as items of knowledge, which are based on the three general classes of information such as cognitive information, emotional information and information about past behavior(Ajzen, I.; Fishbein 2003) The beliefs underlying an individual's social pressure are termed normative beliefs and represent the perception of the preferences of whether one should perform the behavior or not (Herath & Wijekoon 2013)

Even though numerous factors may influence sexual behaviours, theoretical and empirical evidence suggests that attitudes are highly related to sexual behaviours, including condom (Albarracín D., Johnson B. T. 2001)

Many research suggests that attitudes predict condom use.(Adih W. K. Alexander C. S. 1999)

And since attitudes may contribute to the low rate of condom use in Sub Saharan Africa, an examination of male attitudes towards condoms use may inform development of more relevant programmes to encourage consistently use of condoms and ultimately to prevent new cases of HIV infection.

2.4 Complex determinants of condom use.

There are five broad factors that were identified to affect condom use from literature. These are individual characteristics, knowledge and perception of condoms, partner-related factors, provider-related and environmental factors. The scope of this thesis is to explore individual characteristics, knowledge and perception of condoms and environmental factors

2.4 .1 Individual factors

Literature suggests a strong association between socio-demographic characteristics and condom use. Socio-demographic characteristics may include age, sex, occupation, marital status, level of education. Research by Bankole et al and others , (using data from the 2004 National Adolescent Survey among 12-19 year old male and females in Burkina Faso, Ghana, Malawi and Uganda) shows that age, sex and education level were important in the decision to use condoms or not.(Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007)

Similarly, Sunmola also demonstrated in his study among 710 sexually active men and women working in a brewery in Nigeria that, there were association between condom use and marital status and the number of years of education. Male Respondents who had had 12-18 years of education were associated with more condom use whiles 7-12 years of education among females were also related to condom use.(Sunmola AM 2004)

An anthropological study by Akarro that examined reasons for which barmaids in Tanzania use condoms revealed positive association between condom use and age, marital status, education and number of children.(Akarro RR 2008)

2.4.2 Knowledge and perception of condoms

Knowledge of reliability and effectiveness of condoms has proved to impact positively on condom use. Both formal education and information giving through education on condoms has the ability to increase condom use. Education which turn to raise awareness on personal risk, control of STI such as HIV has been proved to contribute to increasing condom use.(UNAIDS 2004)

A study of adolescents in Burkina Faso, Ghana and Uganda reported that, adolescents who have seen a condom demonstration are 2 to 5 times as likely as those who have not to have good knowledge of correct condom use.(Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007)

Also Bankole et al (2007) found that knowledge of condom effectiveness in HIV prevention were associated with higher levels of condom use(Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007)

2.4.3 Environmental factors

Any identifiable element in the physical, cultural, political, demographic and economic environment that affects the survival, operations, and growth of an individual is termed as environmental factors. (M. Helweg-Larsen 1994)

Gender, religion, ethnic group, locality income level are factors that are entrenched in our socio-cultural norms which affects the health outcomes of individuals.

Gender dynamics influences reproductive health issues such as contraceptive choices, for example a study by Molla et al indicates how virginity was shaping the sexual behaviour of the youth before and after marriage in Ethiopia, thus delaying sexual debut was essential in protection against STT's (Molla) But this at the same time can increases the woman's vulnerability once they initiate sex in marriage without using

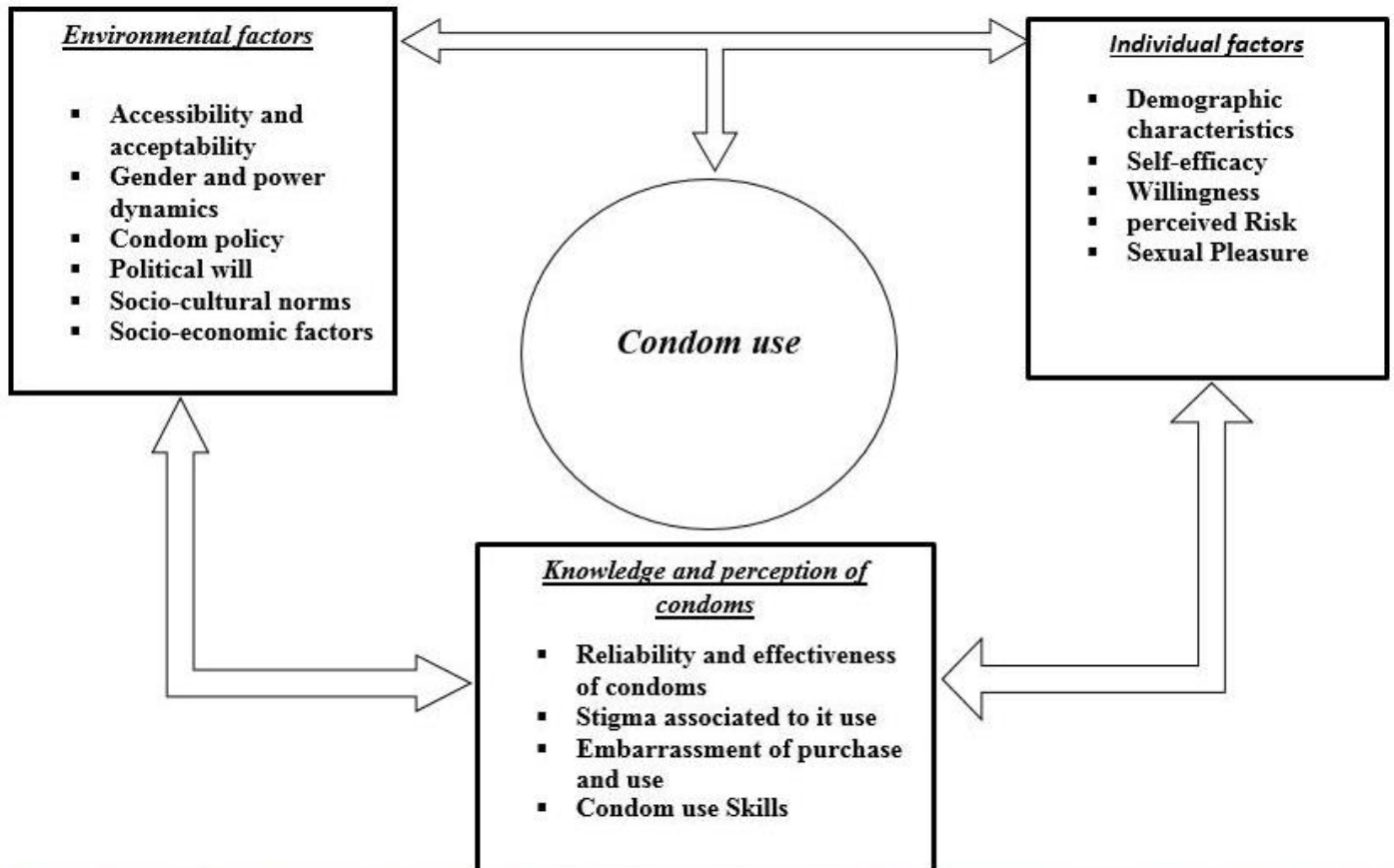
condoms, when they assume marriage as an assurance for protection against HIV and other STI's. (Molla M, Yemane B 2008)

Policies in place and political will of government within which condom intervention takes place may influences its uptake or acceptance. Literature shows that strong political will influences the accessibility, acceptability and availability of condoms at all levels.(UNAIDS 2004)(Federal Government of Nigeria. 2009)

A well-coordinated national strategy and efforts could lead to more outcomes such that of The National Agency for Control of AIDS of the federal republic of Nigeria. It has sale outlets at established locations to be easily accessed by the key population and also distribute condoms with education on how to correctly use and dispose condoms.(Federal Government of Nigeria. 2009)

Socio-economic factors such poverty, education and income status, employment status may increase vulnerability for infection. Migrant workers, urban dwellers, the youth, commercial sex workers and poor are the at risk populations with sexual and reproductive health issues (Ammann AJ. 2002)

Figure 1.0: Conceptual framework for discussing factors influencing condom use among men.



2.5 Sexual Risk Scale

The Multidimensional Condom Attitudes Scale (MCAS) is to measure condom attitudes in five independent areas: (a) the *reliability and effectiveness* of condoms, (b) the sexual *pleasure* associated with condom use, (c) the *stigma* associated with people proposing or using condoms, (d) the *embarrassment about negotiating and using* of condoms, and (e) the *embarrassment about purchasing* condoms. The scale can be used with individuals who do and do not have personal experience with condoms. It has 25 items that assesses these five independent factors associated with condom use as mentioned above. The MCAS was found to be reliable and valid in three studies using ethnically diverse samples of University of California Los Angeles undergraduates. The scale has been used with a range of populations, such as HIV positive individuals from urban clinics in California, Chinese and Filipina American college women and sexually active adult cocaine or heroin users(M. Helweg-Larsen 1994)

2.6 Behavioral Theory

A theory is a set of interrelated constructs (concepts, definitions) and propositions that present a systematic view of phenomena by specifying relations among variables, with the purpose of explaining phenomena. Individual health behavior theories focus on the thought processes individuals go through before taking a health-related action. Decisions individuals make to take or not to take an action are based on cues, references and information from their social, physical and cultural environment. The Health Belief Model (HBM), The Theory of Planned Behavior (TPB), The Trans theoretical Model (TTM) and Precaution Adoption Process Model (PAPM) are examples of individual health behavior theories

2.7 Theory of Planned Behavior

This thesis makes use of the constructs of The Theory of Planned Behavior (TPB) to assessing the attitude of males towards condom use in the study site. Ajzen and Fishbein developed the Theory of Reasoned Action (TRA) in 1980. This theory assumes that people are normally quite rational, in that they make systematic use of available information, consider the implications of their actions, and thus behave in a sensible manner. TRA argues that behavior is best predicted by a person's intentions which are in turn affected by his/her attitude and perceived social pressure. Thus the TRA provided a theoretical framework for examining the influence of attitudes and goals on volitional behaviors (Willock, J.; Deary, I.J.; Edwards-Jones, J.; Gibson et al. 1999)

Although the TRA has been successful in predicting and understanding many behaviors, it fails to predict behavior which is not entirely under individual volitional control. Thus, the TRA restricts itself to volitional behaviors; skills, resources or opportunities not freely available are not considered to be within the domain of the TRA or are likely to be poorly predicted by the TRA. Hence the Theory of Planned Behavior (TBP) was developed to improve the TRA. The extension called the perceived behavioral control was added as an extra construct to the TRA to reflect any constructing or encouraging factors that may affect an attempted behavior being carried out. The TPB states that a person's behavior results from his/her goals and intentions, attitudes, perceived behavioral control and social norms (Herath & Wijekoon 2013).

Therefore TPB denotes; Attitudes toward behavior (attitude), perceived social pressure (subjective norm), and perceived behavioral control (perceived control) result in the formation of intentions (behavioral intention). Intentions are the underlying psychological factor for the formation of behavior, while (perceived controls) may also contribute to it. Intention is the cornerstone of the

TPB, both as a predicted variable and a predictor of behavior, and the strength of intention is the important predictor of behavior (Herath & Wijekoon 2013)

2.8 Conceptual framework

TPB was used to develop the conceptual framework of this study as shown in Figure 2 below. According to the conceptual framework, a male condom use behavior is guided by three kinds of considerations; attitude towards condom use, social (norms) factor and control factor (constraining or encouraging factors).

2.8.1 Attitude towards Condom use

Knowledge about condom use, environmental aspects and personal characteristics are the factors which influence ones belief and contribute toward formation of behavioral beliefs for condom use attitudes.

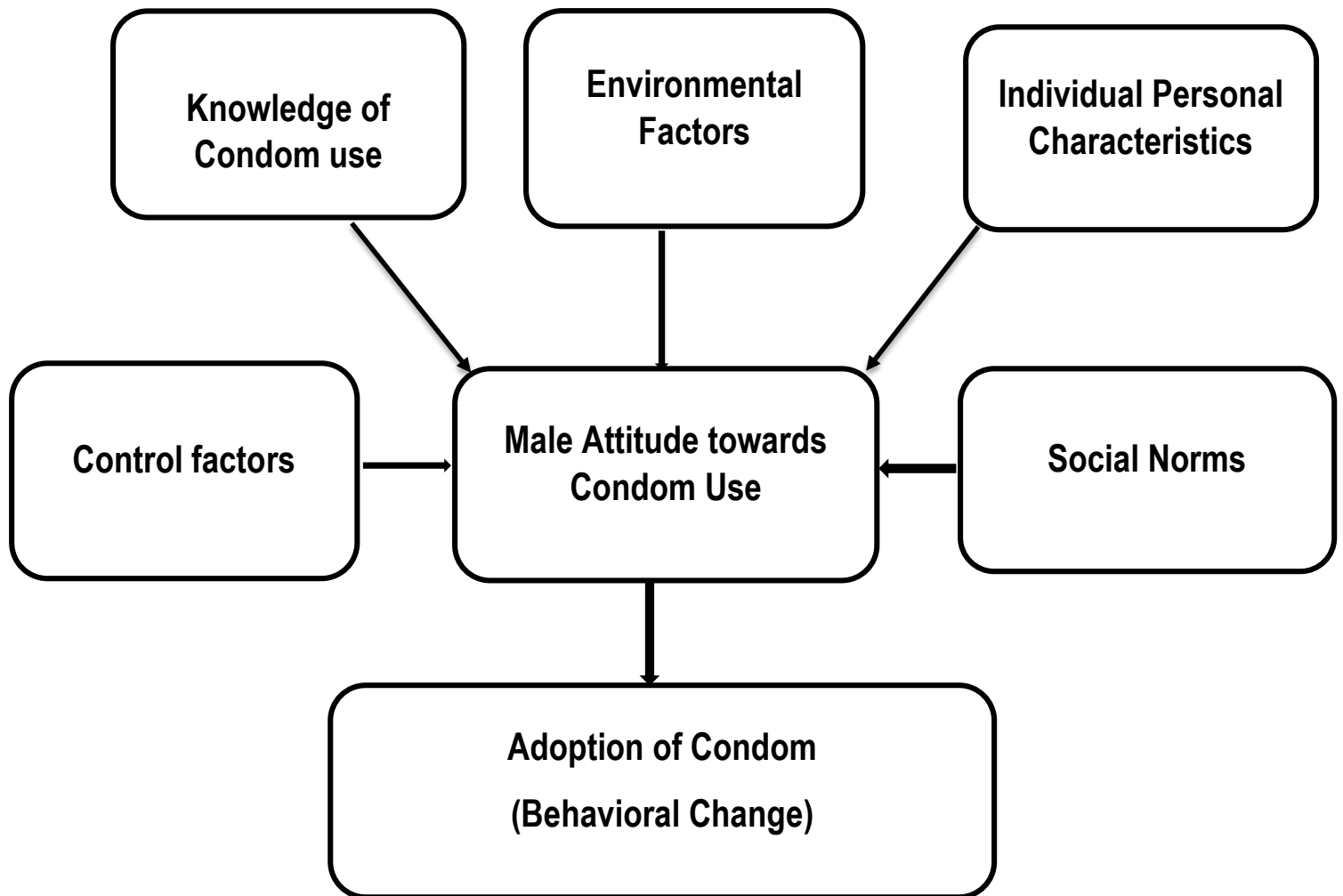
2.8.2 Social factor (Social pressure)

Influence of the partner, friends and peers forms the normative beliefs for the social factor.

2.8.3 Control factor

There are beliefs about the presence of factors that may further or hinder performance of a behavior.

Figure 2 .Conceptual framework of factors influencing condom use among sexually active males



The framework assumes that behaviors are not within the user's control. Barriers of acceptability and accessibility contribute to the formation of control beliefs.

CHAPTER THREE

METHODOLOGY

3.0 Study site

The study was conducted in the Lower Manya Krobo Municipality of the Eastern Region of Ghana. The Municipality covers an area of 304.4 sq. km, constituting about 1.7 % of the total land area within the Region (18,310 km).

The Lower Manya Krobo Municipality has a total population of 89,246 with males and females constituting 46.5 percent, and 53.5 percent of the population respectively. The Municipality has a youthful population with 35.1 percent of the population below 15 years. The aged (60 years and older) constitute 8.3 percent of the population. (2010 Population and Housing Census, Ghana Statistical Service, 2014)

The municipality is largely urban; the distribution of the population by locality indicates that (83.7%) of the residents live in urban areas while the remaining (16.3%) reside in rural areas.

The sexually active males (15-59 years) constitute 55.7% of the total male population. Therefore, our study population of interest was 23,115 males aged between 15 to 59 years.

The 2014 GDHS indicates national male condom use prevalence at 1.2 % for spouse of married women (that of the Eastern region at 0.9%) and 8% of partners of unmarried women. The municipal has the highest urban site HIV prevalence of 11.6% (2013) and 8.5% (2014) in Agomanya, according to the 2013 and 2014 HIV Sentinel Survey Report. (Ghana AIDS Commission, 2014). The municipal was selected for this study against this background. Six communities (two rural and four urban) were randomly selected within the

municipal for sampling interviews. The communities are Kpong, Agormanya, Akuse and Odumase Krobo (Urban communities) and Asitey and Oborpa (Rural Communities). All six communities are among the 20 largest communities in the municipal.

3.1 Population Dynamics of the Study Community

Table 3.1: Population by sex in the study communities

Serial Number	Name of Community	Total	Sex	
		Population	Male	Female
1	Kpong	15944	7602	8342
2	Agormanya	15618	7075	8543
3	Odumase	15245	6815	8430
4	Akuse	6115	2890	3225
5	Asitey Mannwan	1449	616	833
6	Oborpa Blornya	682	359	323
Total		55,053	25,357	29,696

Source: Ghana Statistical Service, 2010 Population and Housing Census

3.2 Study population

The participants for the questionnaire interviews were (N= 314) sexually active males between the ages 15-59 years in six communities within the lower Manya municipality from 11th February to 2nd March 2016. The Focus Group Discussion (FGD) participants (N= 8) with age, location and socio economic status as the guiding criteria groups were divided into two; youthful unemployed and older-employed at Agormanya and Kpong respectively.

3.3 Study method

The main target groups were sexually active males between 15-59 years in the Municipality who have been living, schooling or working in the study area for more than one year.

The inclusion criteria for the target group was:

- (i) Living in study area over 1year
- (ii) Aged between 15 and 59 years
- (iii) Working or studying in the study area for the past one year
- (iv) Capable of independent communication and giving informed consent to this study.

3.4 Study Design

This was an exploratory cross-sectional study on condom use among sexually active males between the ages of 15 to 59 years. The study explored the relationship between condom use and individual factors, social norms and control factors such as partner and provider-related factors that are likely to predict condom use.

3.5 Sampling method

The six communities were purposively chosen because of their population size, proximity and nature (urban or rural). In purposive sampling, a particular group of people or communities are targeted. As such the six communities were chosen for this study

A list of the available places where men gather in the various communities was made. Therefore the target population were randomly (every second person counted) interviewed from places like commercial lorry stations, schools, fitting shops, drinking spots and football parks instead of households due to unreliable household address systems in the district. Men who met the inclusion criteria were consented and interviewed.

3.6 Sample size

The target number of respondents was 355 sexually active males living in Lower Manya Krobo Municipality. This was based on the background that, the national male condom use prevalence for sexually active unmarried women is 8% and that of married women is 1.2%, therefore the expected frequency of 8% was at 95% confidence interval with $\pm 5\%$ margin of error. The total population of males aged between 15 to 59 years in the municipal is 23115 in 2010. (Ghana Statistical Service 2010)

But 314 respondents were interviewed, therefore the response rate was 88.5%.

3.7 Ethical consideration

Ethical approval for the conduct of this study was sought from the Ethics Review Board of Ensign College of Public Health. Written informed consent was sought from respondents after the aim, objectives, procedures modalities for the dissemination of the study were explained. Confidentiality of subjects was protected at all times and respondents were free to decline to participate at all times or to withdraw from the study.

3.8 Data collection tools

Both quantitative and qualitative methods were used in this cross-sectional study among sexually active men in six communities in the Lower Manya Krobo Municipal. Closed ended questionnaires were used to collect quantitative data whiles topics were generated to form semi structured Interview (SSI) for Focus Group Discussion (FGD).

3.9 Quantitative methods

3.9.1 Questionnaire interviews

Two trained research assistants did face to face interviewing for all respondents using a questionnaire finalised after pre-testing and appropriate modification. The questionnaire explored topics reflecting the objectives of the study as detailed above. Closed-ended questions were used to make for less interviewee interpretation and bias, easier data capture and analysis. Data from the questionnaires were double entered, verified and cleaned using Microsoft Access 2010. Draft findings from analysis of the questionnaire survey were used to generate thematic areas that were explored in the qualitative methods.

3.10 Qualitative methods

3.1.1 Focus group discussion (FGD)

The FGD had people with similar background and experiences together to discuss a specific topic of interest. Groups were constituted to be as homogenous as possible. The guiding criteria in this regard were age and socio economic background. Two focus group discussions (FGDs) were held with groups of 4-6 men, aged between 18 and 45 years. The moderator and the note taker sought the consent of participants to record and take notes on all discussions and assure participants of confidentiality, set ground rules with participants to respect anonymity and privacy of other participants as much as possible. The discussions were facilitated by a moderator who used a topic guide derived from common themes from the Semi structured Interview (SSI) with open ended questions. In addition to the moderator, a note taker took notes on all the discussions and observed the body and facial expressions of participants. All interviews were conducted in the language spoken by all of the participants within one to two hours. All interviews were recorded, transcribed, translated from the local language into English and typed with appropriate quality control checks. Guided by the objectives of the study a coding list was generated based on common themes that arose in the interviews.

3.11 Study limitations

- Recall bias of participants about condom use, number of sexual partners within the past six months, income level per months
- Interviewer bias resulted because there was no back translation of the questionnaire into the local language to ensure that research assistants interpreted questions in the same way as in English.
- There was selection bias because respondents were selected conveniently from places where men easily gather but not randomly selected households.
- Socially acceptable and desirable answers due to sensitivities around sexual and reproductive issues
- The biases presented by the interviewer would influence the response of women in the study. This would affect the external validity of our study.

3.12 Data analysis

STATA version 12 was used for analysis. Analysis was performed to describe the socio-demographic characteristics of study respondents. Using logistic regression, both univariate and multivariate analyses were performed to find out factors that were related to condom use among sexually active men in Lower Manya Krobo Municipality. Statistical significance was accepted when P-value <0.05. QSR Nvivo qualitative analysis software was used to highlight common themes. The findings were presented using quotes from interviews to illustrate the major themes.

CHAPTER FOUR

ANALYSIS AND RESULTS

This chapter presents findings of both quantitative and qualitative analysis. Both univariate and multivariate analysis were carried out on the individual personal characteristics, environmental factors, knowledge of condom, control factor and social related factors.

4.0 Background characteristics of study Men

The mean age of males interviewed was 25.7 years. (SD 6.4). Majority (35.67%) of the males were between ages 22-26 year and the minority (1.91%) were between 42-48 years. 28.03% of the males were from Kpong.

Both males with (Junior Secondary/Middle School form 1-4) and (Senior Secondary/Vocational /Technical) education levels were 32.2%. And 2.5% of males had no formal education. 27.7% and 15.9% of males were students and civil servants respectively.

Over ninety percent (92.68%) of the males were Christians with only 3.18% being Moslems. Other and traditional religions constituted 4.14%. About 63.06 % of the males had no children while 36.94 % did. 60.96% of the males who had children had more than one child.

Over half (63.26%) of the males were single, 17.89% and 15.34% were co-habiting and married respectively.

Detailed background characteristics is showed in Table 4.1

TABLE 4.1 Characteristics of study participants

Background Characteristics	Frequency	Percentage (%)	(SD*) (CI**) (Mean***)
<u>Community</u>			
Agormanya	66	21.02	
Akuse	45	14.33	
Asitey	34	10.83	
Kpong	88	28.03	
Oborpa	17	5.41	
Odumase	64	20.38	
Total	<u>314</u>	<u>100</u>	
<u>Age Categories</u>			
15-21	67	21.34	
22-26	112	35.67	
27-31	66	21.02	
32-36	39	12.42	
37-41	24	7.64	
42-46	4	1.27	
47-51	2	0.64	
Total	<u>314</u>	<u>100</u>	(25.72***) (+-6.36*)

Marital Status

Co-habiting	56	17.89
Divorced	6	1.92
Married	48	15.34
Single	198	63.26
Separated	5	1.6
Total	<u>313</u>	<u>100</u>

Characteristics of study participants(continued)

	Frequency	Percentage (%)	(SD*) (CI**) (Mean***)
<u>Educational Level</u>			
None	8	2.5	
Primary(class 1-6)	53	16.9	
JHS/Middle form 1-4	101	32.2	
SHS/Tech/Voc. Sch	101	32.2	
Six Form/Poly/University	51	16.2	
Total	<u>314</u>	<u>100</u>	
<u>Ethnicity</u>			
Ada	35	11.15	
Akan	32	10.19	
Dagomba	2	0.64	
Ewe	67	21.34	
Ga	11	3.5	
Gonja	4	1.27	

Krobo	163	51.91
Total	<u>314</u>	<u>100</u>

Employment Status

Artisan	9	2.87
Auto Mechanic	7	2.23
Business Personal	43	13.69
Civil Servant	50	15.92
Driver	44	14.01
Fisherman	4	1.27
Peasant farmer	20	6.37
Trader	18	5.73
Unemployed	32	10.19
Student	87	27.71
Total	<u>314</u>	<u>100</u>

Religion

Christianity	291	92.68
Islamic	10	3.18
Traditional	4	1.27
Others	9	2.87

Total	<u>314</u>	<u>100</u>
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4.1 Quantitative analysis

4.1.1 Individual factors and condom use

About 67.10% (208) of males had ever used condom while 32.90% (102) had never used it. 53.84% (112) of males reported to have used condom at first sexual intercourse, out of 206 males 46.60% (96) used condom at the last sexual intercourse. Of 203 males 43.35% (88) used condom in the last four weeks and 89 males out of 200 use condom with their most recent sexual partner, representing 44.5%.

Therefore, the estimated condom use in sexually active males in Lower Manya Krobo Municipality was 4.15 per 1000 sexually active males.

Both univariate and bivariate logistic regression that examined the association between condom use and individual factors are presented below. Males from Asitey and Akuse were 3.31 (OR=3.31, 95% CI [1.13-9.69], p=0.029) and 2.77 (OR=2.77, 95% CI [1.06-7.21], p=0.036) times more likely to have used condom than those in Agormanya.

Males within the ages 32-36 years were 15.78 times as more likely to have used condoms compared to 15-21 year olds (OR=15.78, 95% CI [4.4-56.57], p=0.00). In addition, males in the age groups 27-31 and 22-26 were 5.46 (OR=5.46, 95% CI [2.5-11.9], p=0.00) and 3.19 (OR=3.91, 95% CI [1.7-6.00], p=0.00) times as likely to have used condoms respectively compared to males between 15-21 years of age.

The increase in the level of education increased with the increasing odds of condom use Primary (class 1-6) (OR=0.59, 95% CI [0.30-1.16], p<0.132), SHS/Tech/Voc. School (OR=1.65, 95% CI [0.89-3.06], p<0.108). These associations were not statistically significant. Single males were 0.46

times likely to have used condom compared to those Co-habiting. (OR=0.46, 95%CI [0.24-0.91], $p < 0.026$).

Also, being a Krobo puts males 0.72 times likely to have used condom as being a male from the Ada tribe. (OR=0.72, 95%CI [0.32-1.62], $p < 0.29$). This association was not statistically significant.

Moreover, Muslims were 0.46 times as likely to have used condoms as Christians (OR=0.46, 95%CI [0.13-1.63], $p < 0.231$). On the other hand, males of traditional religion were 1.38 times as likely to have used condoms as Christians. This association was not statistically significant (OR=1.38, 95% CI [0.14-13.50], $p=0.779$).

The unemployed/students (OR=1.4, 95% CI [0.27- 7.56], $p < 0.67$) and Civil Servants/Petty Traders (OR=1.8, 95% CI [0.29-11.16], $p= 0.528$) were 4.1 and 1.8 times as likely to have used condom respectively as farmers. Number of children was associated with condom use as males with four children were 0.1 (OR=0.1, 95% CI [0.018 - 0.62], $p=0.013$) times as likely to have used condoms as men with no child.

4.1.2 Multivariate Regression

Educational level, (OR= 1.107, 95%CI [0.95-1.27], $P= 0.164$) having Children (OR= 3.28, 95%CI [1.74-6.19], $P= 0.000$) and Occupation (OR= 1.047, 95%CI [0.954- 1.143], $P= 0.331$) were the factors that remained in the multivariate stepwise regression model after adjusting for other covariates at significant level of 0.05. Having children increases the odds of men using condom 3.28 times more than those who did not have children, adjusting for all other variables.

In the multivariate model of individual personal characteristics, Married males were 19.38 (OR= 19.38, 95%CI [1.21-310.4], P= 0.036) times more likely to have used condom compared to males co-habiting, adjusting for other covariates. (Education level, Ethnic group, family type, occupation, age group) adjusted for.)

Males from Oborpa Community were 0.032 (OR= 0.032, 95%CI [0.004-0.258], P= 0.001) times likely to have used condom compared to men living in Agormanya, adjusting for all other covariates. Males of age group 22-26 years (OR= 3.05, 95%CI [1.11-8.36], P= 0.076) and 32-36 years (OR= 6.09, 95%CI [1.344 – 27.66], P= 0.018) were 3.05 and 6.09 times more likely to have used condom to males of 15 to 21 years, all covariates (Education level, Ethnic Group, family type, occupation, marital status) adjusted for.

4. 2 Knowledge and perception of Condom Use

4.2.1 Reliability analysis of Knowledge and attitude of Condom use

Some concepts of knowledge and attitude of condom use were not perfectly measured by a single item. Therefore, reliability analysis was conducted to ensure that the measured concepts were adequate and reliable. A commonly used measure of reliability is internal consistency. The most widely used internal consistency measure is Cronbach's alpha. The generally agreed lower limit for Cronbach's alpha is 0.7, although it may decrease to 0.6 in exploratory research (Hair *et al.*, 1988). As this is an exploratory research, Cronbach's alpha with 0.6 lower limit was used as a criterion in this analysis. Table 3 presents Cronbach's alpha of the variables in the model calculated by reliability analysis in STATA 12.

Table 4.2: Cronbach`s alpha analysis of the Condom attitude variables in the model

NO	VARIABLE	CRONBACH'S ALPHA
1	<i>Knowledge of the reliability and effectiveness of condoms</i>	0.6291
2	<i>Sexual pleasure associated with condom use</i>	0.8222
3	<i>Stigma associated with people proposing or using condoms</i>	0.8216
4	<i>Embarrassment about negotiating and using of condoms</i>	0.6585
5	<i>Embarrassment about purchasing condoms</i>	0.7096
6	<i>Socio cultural and economic barriers</i>	0.6071
7	<i>Frequency of condom use</i>	0.7155

The Cronbach`s alpha of the variables ranged from 0.6071 (Acceptable) to 0.8222 (Very reliable).

Most of the variables in the model showed high internal consistency.

4.2.2 Univariate and multivariate analysis of Knowledge and attitude of Condom use

Some knowledge of condom use was assessed as follows; 295 males knew of female condom (95.78%, N=308) meanwhile only 50 (16.56 %, N=302) reported their partners have ever used it.

10.41 % (30), (N=288) males agreed that sex feels good with female condom. 88.35% (182, N=206) buy condom from store/pharmacy/chemical store while 9.22 % (19, N=206) and 2.43% (5, N=206) have access from friends and sexual partners respectively. KISS condom was the favorite brand [52.24 % (105) N=201] followed by FIESTA condom [14.93% (30), N=201] and BE SAFE condom [26% (12.94), N=201].

29.79% [(59), N=198] males prefer putting condom in their bag, 28.78% [(57), N=198] in their pocket, and 25 % [(50), N=198], 5.05% [(10). N=198] in drawer and pillow/under bed respectively before use, other keeping places include under car seats and center table representing 11.11 % [(22),N=198]

77.14% [(143), N=201] of males use condom mainly for the purpose of preventing STI's (HIV/AIDS, Gonorrhea etc.) while 24.37% [(49), N=201] use it for pregnancy prevention and [4.47 % (9), N=201] for both. 135 out of 314 men reported of having sexual partners, with 53.33 % [(72),N=135] having more than one sexual partners.

The 5 score on the Likert scale was collapsed to two ends (upper and lower ends), thus Agree and Disagree. Therefore the responses of males on condom attitude are presented as such in table 4.0

Table 4.3: A table showing the percentages of responses of men on condom knowledge and attitude

No	Variable	Item	(Agree) n (%) [N=314]	(Disagree) n (%) [N=314]	(Neutral) n (%) [N=314]
1	<i>Knowledge of the reliability and effectiveness of condoms,</i>	<i>Using condoms is a good way to protect your sex partner from diseases people can get through sex</i>	242 (77.07)	55 (17.52)	17 (5.41)
2	<i>Sexual pleasure associated with condom use</i>	<i>Condoms take all the pleasure out of sex</i>	116 (36.94)	166 (52.87)	32 (10.19)
3	<i>Stigma associated with people proposing or using condoms</i>	<i>If a man wants to use a condom, his sexual partner might think he was having sex with other people</i>	183 (58.28)	109 (34.71)	22 (7.01)
4	<i>Embarrassment about negotiating and using of condoms</i>	<i>Condoms make a man look silly before his partner</i>	139 (44.27)	144 (45.86)	31 (9.87)
5	<i>Socio cultural and economic barriers</i>	<i>Using condoms is immoral</i>	174 (55.41)	123 (39.17)	17 (5.41)
6	<i>Embarrassment about purchasing condoms</i>	<i>It is embarrassing to buy condoms in a store</i>	95 (30.25)	202 (64.33)	17 (5.41)

7	<i>Frequency of condom use</i>	<i>Do you use Condom with your most recent partner</i>	<i>(YES) n(%)</i> <i>[N=200]</i>	<i>(NO) n (%)</i> <i>[N=200]</i>	<i>Null</i>
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4.2.3 Condon use skills

The condom use skills was also assessed from males who reported to have ever used condom. Out of 204 males who reported to have ever used condom 139[(68.13%), N=204] had had condom slip off or broke during sexual intercourse in the past 12 months with 25 males having experienced that once, 24 males at twice and 15 males thrice. 141[(70%), N=200] males do not seek help from their partners to putting on a condom. 44.59%[(99), N=222] of men disagree to seeking the help of their sexual partners in putting on condom whiles 38%[(86), N= 222] agree to that.

Table: 5.1: 2x2 table showing the association of partner assisting in wearing condom and condom slipping off braking during sexual intercourse

Condom slipping/breaking during sexual intercourse	Often Seek help from partner in putting on condom		Total
	YES	NO	
YES	51	88	139
NO	15	39	54
Total	66	127	193

The Odds Ratio (OR) for the above contingency table is 1.5. This means males who sought the help of a sexual partner in putting on condom is 1.5 (0.72-3.23) times more likely to have experience condom slipping or breaking during sexual intercourse compared to those who did not seek assistance. 52.94 %[(63), N=119] and 42.86% [(51), N=119] of males use Saliva and Cream/pomade respectively, to lubricate their condom when it feels dry during sexual intercourse. The rest used water and oil for lubrication. 50% (105), N=210 of males dispose used condom in Dust bin, 20.95 %(44), N=210 both flush it into the toilet and throw it on open ground.

4.3 Qualitative analysis

4.3.1 Perceived risk

When males were asked, what was their outmost reason for using condoms, some respondents showed their main concern was unwanted pregnancy. This was illustrated by a quote from two participant in the FGD:

“with me, my main concern is to prevent pregnancy because I am not much scared about the disease and thus the mindset of most men”(Participant, FGD)

“we (men) are not much scared about the disease but the pregnancy. With the disease to be scared it all depend on the environment in which you live in... ..(Participant, FGD)

These responses are in line with findings from other study that had a 0.30 probability of men being very worried about their health and a 0.40 probability of being very worried about pregnancy(Cederbaum Tamika D. Gilreath and Anamika Barman Adhikari 2014).

Some respondent will use condom based on a perceived risk of sexual partner:

“example; maybe a lady who is always at home and I met her for the first time how will you expect me to use condom for her.” (Participant, FGD)

Some respondents asserted that using condom is based on the personal characteristics and decision sexual partner as quoted here:

“I also release that a lady who is a virgin will never allow you to use condom to brake her virginity, something that she has kept for so long, how can you use rubber to brake it. And from a right source of a girl, a girl who is very matured and know what is right for her will never allow a man to use condom to brake her virginity” (Participant, FGD)

4.3.2 Religion and condom use

Some respondent said condom use is immoral which is not right in the sight of God, when asked about their religious views on condom use. The following illustrates their response:

“it is immoral to me because from the onset of the generation of God, he created man and woman to have sex but he never added any material to it or something to it” (Participant, FGD)

Some participants revealed that the perceived benefit of condom use makes it moral and right:

“I also think is not immoral because the world is full of some disease and then unwanted pregnancy, and this condom use are ways to prevent even teenage pregnancy and also our partners not to be affected and even we the youth...”

“we are sexually active and we don’t date one lady, we date several ladies and now there are sickness around so we should always use condom to protect ourselves, so is not immoral, so I disagree to condom being immoral” (Participant, FGD)

4.3.3 Environmental and social control to condom use

Some males confirmed the embarrassment about purchasing condoms in their statements:

“Sometimes maybe I am going to buy a condom in one of the shops or the drug store, it is in mind that I will feel shy when I meet a lady, because nowadays I don’t think they have deferent names for condom, so I will feel shy and maybe I cannot buy it again. So shyness is one of the hindrance.”

Other participants revealed the unavailability of their favorite brands prevent condom use:

“Sometime I have a specific type and a special type to go for, so when I go to the shop or drug store and I don’t get that type, I don’t buy it again”.

CHAPTER FIVE

DISCUSSION OF RESULTS

Guided by the objectives and conceptual framework of this study, the discussion has been divided into three aspects; individual characteristics, knowledge on condom use and environmental factors (barriers of acceptability) that would possibly influence condom use in Lower Manya Krobo Municipal. Following the constructs in the framework, it was therefore helpful to discuss the predictors of condom use because it does not limit the discussion to only individual factors but other factors (knowledge on condom use and environmental factors) that would probably influence the individual decisions on condom use.

5.0 Individual personal characteristics

As showed by quantitative analysis and results, after adjusting for age, religion, occupation, having children, marital status, ethnic group and family type, the increasing level of education increased the odds of condom use. Males with secondary education were 1.65 more likely to use condom compared to those who had had primary education. And males with tertiary education have 2.62 times more odds of using condom to males with primary education.

The evidence suggests that, males who had higher education were more likely to have used condoms than their counterpart with lower education. Education increases the ability of males to be able to access information from different sources. Educated people are well placed to talk about issues related to sexually transmitted diseases like HIV/AIDS, its transmission and prevention. This would decrease their vulnerability to myths and

misconceptions about condoms. As such the finding of this study was expected. The study yielded consistent results with the 2014 Ghana DHS and 2006 National Sexual Behavior Survey of Thailand.(Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007).(Ghana Statistical Service 2008)

This study found association between age and condom use like other studies, (Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007)(Molla M, Yemane B 2008). Surprisingly, after adjusting for other variables, men of age group 22-26 years and 32-36years were 3.05 and 6.09 times more likely to have used condom to men of 15-21 years respectively. This could be due to such age group having a better Socio-economic status and hence can have better access to condoms or better still having more sexual partners and hence, increase in perceived risk increases condom use. This is evident from responses from the FGD: *“we are sexually active and we don't date one lady, we date several ladies and now there are sickness around so we should always use condom to protect ourselves” (Youthful Participant, FGD)*

“example; maybe a lady who is always at home and I met her for the first time how will you expect me to use condom for her.” (Youthful Participant, FGD)

From the finding of this study, religion was found to have a role in predicting condom use among men. Both quantitative and qualitative evidence suggest this. Men of traditional and Islamic religion were 1.38 and 0.46 times as likely to have used condoms as Christians respectively. Influence from Christian background makes some men to perceive condom use as immoral:

“it is immoral to me because from the onset of the generation of God, he created man and woman to have sex but he never added any material to it or something to it” (Participant, FGD)

As evidenced by the quantitative analysis unemployed/students and Civil Servants/Petty traders were 4.1 and 1.8 times as more likely to have used condom as farmers after adjusting for age, education, religion, number of children and marital status.

As occupation is closely linked with the level of education, it increases one’s knowledge on preventive methods (such as condom use). The results from this study suggests that farmers who are mostly not formally educated are the least to use condoms. Only 50% had ever used condom as compared to 81.5% of Civil servants. This is consistent with the finding of a the 2014 GDHS and 2006 National Sexual Behavior Survey of Thailand.(Chamratrithirong & Kaiser 2012)

Evidence gathered from the quantitative analysis, after adjusting for other covariates, suggest men who had children were 3.28 times more likely to have used condoms compared to men with none. This may probably be explained by perceived risk or past experience of pregnancy of sexual partners. Answers from some men form the qualitative study buttress this point:”*with me, my main concern is to prevent pregnancy because am not much scared about the disease and thus the mindset of most men” (Participant, FGD)*

Contrary to other studies and literature who found low use of condoms among married men and women.(Do M 2011) (Sunmola AM 2004), this study found a high use of condom among married men (19.38 more likely to used condom compared to men co-habiting), even though literature indicates that marriage creates a false sense of security from infections

which has its basis on trusting partners and hence the low use of condom (UNAIDS 2004) (Do M 2011). But analysis from the data indicates married men in this study were second to single men in having multiple sexual partners (21.12%) and this could attribute to their higher odds of condom use due to perceived risk.

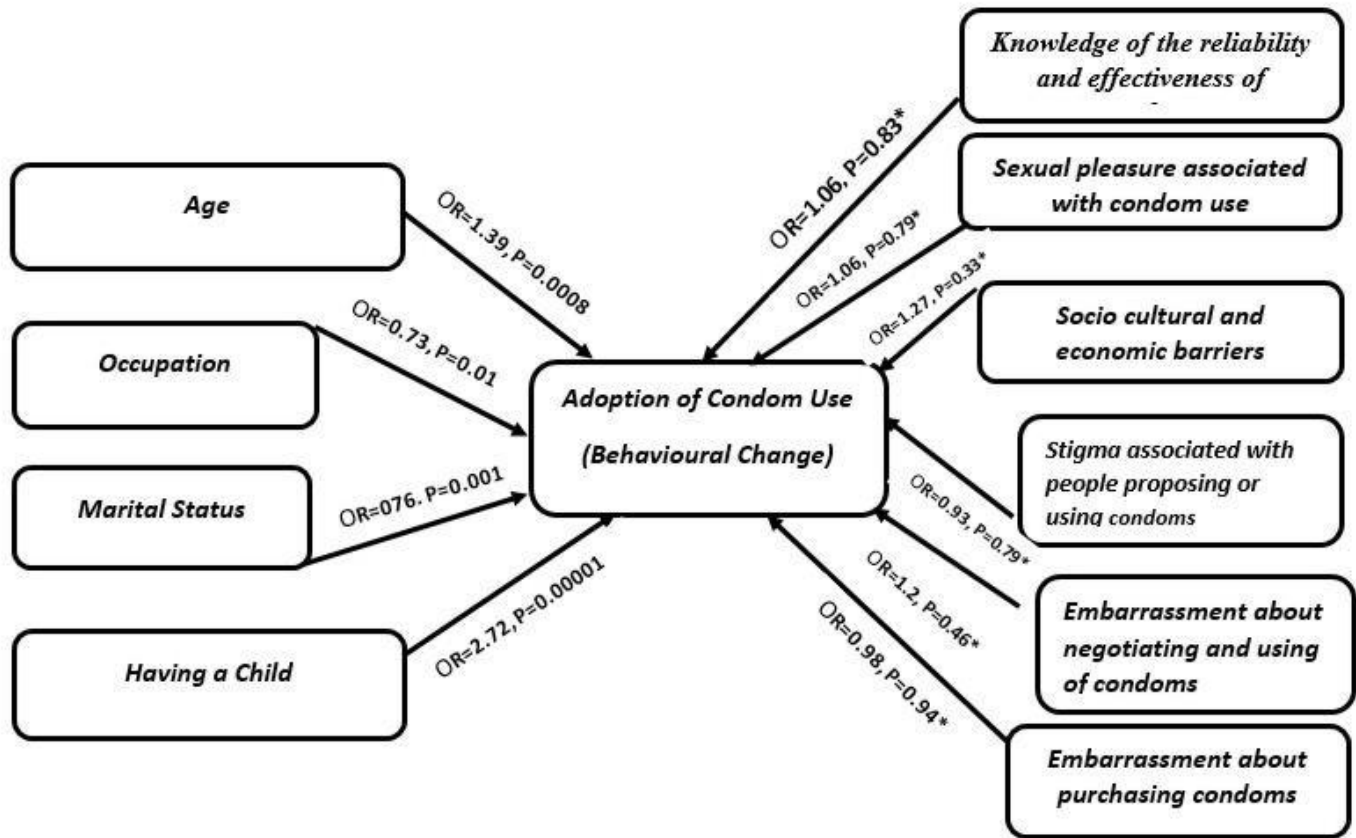
Location of men was a significant factor in condom use, men living in Oborpa community were 0.032 less likely to have used condom to men Agormanya. Oborpa is rural community and as such low condom use is expected. Asity (peri-urban community) has higher odds (30.24 times more likely) of condom use. This is consistent with 2014 Ghana GDHS results. (Ghana Statistical Service 2008)

5.1 Knowledge and perception of condom use

Knowledge of reliability and effectiveness of male condom was higher among (77.07%, $N=242$) respondents and this could contribute to the over 60% condom use by men in this study. Bankole et al (2007) found that knowledge of condom effectiveness in HIV prevention were associated with higher levels of condom use. Men who were faced with stigma in proposing or using condom and embarrassment about purchasing condoms were less likely (OR = 0.93 and 0.98 respectively) to have used condom compared with those faced with issues of sexual pleasure, social and economic barriers and embarrassment in negotiating condom use. Factors such as condom interfering with sexual pleasure appears not to have influence on condom use, having an OR=1

Empirical evidence from other studies suggests that attitudes are highly related to sexual behaviours, including condom use as found with two items accessing attitudes in this study (M. Helweg-Larsen 1994).

Figure 3.0: Details of factors that were found to influence condom use among sexually active males.



*= not statistically significant

5.2 Condom use skills

65.2% of men who use condom had had condom slip off or broke at least once during sexual intercourse in the past 12 months. 70% men do not seek help from their partners to putting on a condom and those who seek help are 1.5 times more likely to experience condom slip and brake during sexual intercourse. 52.94 % of men reported using saliva to re-lubricate condoms during sexual intercourse. Also 28.78% men put condom in their pocket whiles 11.11% place it under car seats before use.

These results shows that, respondents exhibit inadequate condom use skills which can affect the effectiveness and hence the reliability of condom. A study of adolescents in Burkina Faso, Ghana and Uganda reported that, adolescents who have seen a condom demonstration are 2 to 5 times as likely as those who have not to have good knowledge of correct condom use.(Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007)

46.60% of men used condom at their last sexual intercourse and 44.5% with most recent sexual partner. This results is consistent with other research that also shows consistent use of condom among men as 38% in Burkina Faso, 47% in Ghana, 20% in Malawi and 36% in Uganda(Bankole A, Ahmed FH, Neema S, Ouedraogo C 2007).

In Summary of the qualitative study, responses from young participants indicates three critical issues:

(a) there could be growing unpopularity of condom use among young people; there was less motivation to use condom among young respondents:

“I also think nowadays both the males and the females don’t like the condom, so they don’t look for it, they don’t even have the intension of using it”.(Youthful Participant, FGD)

(b) inadequate existing innovative ways of making condom attractive to young users. One respondent revealed, how embarrassment of condom purchase could reduce if there was existing local jargon for it that reduces embarrassment:

“... because nowadays I don't think they have deferent names of condom, so I will feel shy and maybe I cannot buy it again”.(Youthful Participant, FGD)

(c) the effectiveness of Sexual and Reproductive Health education for young people could be an issue in the municipality as this statement reveals a knowledge gap:

“And also because of the guys pull their penis out of the vagina when the sperm is about to come and they don't impregnate the ladies, so they think they are expect in that. This is so, they don't go in for the condom” (Youthful Participant, FGD)

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

This study is one of the studies that looked at factors influencing use of condom among sexually active men in Ghana. The GAC through its efforts have contributed to the stability of the HIV epidemic since it was first diagnosed in 1986. The GAC promoted condom use as one of its preventive methods. But despite such efforts, this study reveals that condom use is still negatively affected by individual personal characteristics, environmental factors, knowledge gap and social norms. This study identified age, education, occupation, number of children, marital status as pertinent factors that were associated with condom use.

Also religion and social norms were factors that were identified from FGD to have negative influence on condom use. The Ghanaian society still perceive condom use as immoral and hence it associated embarrassment in accessing it, and resulted stigma in using it.

Despite the limitations, this study provides insight into the factors that may predict condom use in Lower Manya Municipality and Ghana. It is therefore supporting the fact that, interventions that seek to promote safe sexual practices should be tailored to the needs of both men and women in a more innovative way.

In conclusion, this study suggests that, HIV/STI prevention strategies and interventions that aim to promote condom use should consider the likely influence these identified factors will have on condom use in Ghana and stake holders should consider these identified factors in program development and operation.

6.2 Recommendation

Knowledge of condoms alone may not be adequate to change attitudes and to encourage sexually active men to use condoms; Condom education programmes should include innovative ideas and experience-based approach.

First, health education messages for sexually active Ghanaian youth must not only dwell on threats of susceptibility and severity of HIV and effectiveness of condoms in preventing HIV infection but should be expressed in the terms of reproductive health, human relationship and family health rather than the risk of sexual transmitted diseases. The focus should be on total health issues including reproductive health and healthy family planning method for spacing, healthy childbirth, and prevention of STIs.

Second, stakeholders should take advantage of the fact that, majority of Ghanaians support condom use education for youth, including lower age groups (12–14) years (Ghana Statistical Service 2008) to develop and implement programmes that addresses young people's condom use attitudes, particularly those that may contribute to adverse health outcomes.

Third, intervention programs should, at the same time, tackle the political, religious and community barriers concerning the sexual stigma that negatively impact condom use.

Fourthly, with 53.33% of males with sexual partners having admitted to having more than one partners is a public health concern which needs urgent interventions considering the fact that, Lower Manya Krobo Municipality is an HIV endemic area.

Moreover, I recommend further work to be done to understand the reasons why males who sought help from partners to put on condoms have a higher odds (1.5 times) to have it slipped off or break during sexual intercourse.

Lastly, stakeholders and NGO should support more research work in various Ghanaian communities to understand more underlying factors that affect condom use, as this will lead to a holistic picture of the problem and provide effective entry points for programme development and policy intervention

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APPENDICES

Appendix 1: Results of Univariate Analysis of all variables assessed

Variable	OR(95% CI)	P-value
Marital Status		
Co-habiting	1	
Divorced	1.66(0.17 - 15.56)	0.65
Married	2.27(0.79 – 6.50)	0.12
Separated	1(Empty)	
Single	0.46(0.24 -0.91)	0.02
Locality		
Agormanya	1	
Akuse	2.77 (1.06 – 7.12)	0.03
Asitey	3.31(1.13 – 9.69)	0.02
Kpong	1.16 (0.59 – 2.27)	0.66
Oborpa	0.31 (0.10 – 0.94)	0.04
Odumase	0.83 (0.41 – 1.69)	0.61
Educational Level		
JHS/Middle Form 1-4	1	
None	1.64 (0.31 – 8.56)	0.55
Primary(1-6)	0.59 (0.29 – 1.16)	0.13
SHS/Tech/Voc. Sch.	1.23 (0.59-2.58)	0.56

Six Form/Poly/University	2.30 (1.00 – 5.32)	0.05
Ethnic Group		
Ada	1	
Akan	0.88 (0.27 – 2.90)	0.84
Dagomba	1 (Empty)	
Ewe	0.46 (0.17 – 1.22)	0.12
Ga	0.45 (0.10 – 1.99)	0.29
Gonja	1 (Empty)	
Krobo	0.45 (0.18 – 1.11)	0.08
Religious background		
Christianity	1	
Islamic	0.46(0.13 – 1.63)	0.23
Traditional	1.38 (0.14 – 13.50)	0.77
Occupation		
Business Personnel	1	
Civil Servant	1.35 (0.26 -6.85)	0.71
Driver	1.87 (0.37 -9.47)	0.44
Fisherman	1.19 (0.23 – 5.99)	0.83
Peasant Farmer	0.75 (0.32 – 17.50)	0.85
Trader	1.80(0.29 – 11.16)	0.52
Unemployed	1.43 (0.27- 7.56)	0.67
Student	1.47(0.30-7.03)	0.62

Any Child		
No	1	
Yes	2.72(1.58 – 4.66)	0.00
Age group		
15 - 21	1	0.84
22-26	2.29 (0.13 – 37.76)	0.56
27 - 31	3.92 (0.22 -67.00)	0.34
32 - 36	11.33 (0.55 – 230.54)	0.11
37 -41	1.18 (0.65 – 21.7)	0.91
42- 46	3.00 (0.83 – 107.44)	0.54
47 – 51	1(Empty)	

Appendix 2: Variables for Cronbach`s alpha analysis

No	Variable	Cronbach`s alpha
A	<i>Knowledge of the reliability and effectiveness of condoms</i>	
	1. Using condoms is a good way to protect your sex partner from diseases people can get through sex.	0.4102
	2. Most of your friends think people should always use a condom when having sex with a new person.	0.2546
	3. Condoms often break or slip off during sex	0.8222
	<i>Total</i>	<i>0.6291</i>
B	<i>Sexual pleasure associated with condom use</i>	
	1. Condoms take all the pleasure out of sex	0.6911
	2. Sex doesn`t feel good when you use a condom	0.6680
	3. Condoms make it hard for a woman to have an orgasm.	0.7956
	4. Sex feels good with female condoms	0.8954
	<i>Total</i>	<i>0.8222</i>
C	<i>Stigma associated with people proposing or using condoms</i>	
	1. If a woman wants her partner to use a condom, her partner might think she was having sex with other people.	0.7602
	2. If a man wants to use a condom, his sexual partner might think he was having sex with other people.	0.8137
	3. Most of your friends think people should use condom whenever they have sex, including their main partner.	0.7952
	4. Most of your friends use condom when they have sex with a new partner	0.7924
	5. Most people of your age are using condoms these days.	0.7276
	<i>Total</i>	<i>0.8216</i>

D	<i>Embarrassment about negotiating and using of condoms</i>	
	1. Condoms make a man look silly before his partner	0.4941
	2. It is embarrassing to put on a condom	0.6175
	3. You often seek help from your partner when putting on condoms	0.5677
	<i>Total</i>	0.6585
E	<i>Embarrassment about purchasing condoms</i>	
	1. It is embarrassing to buy condoms in a store	0.5825
	2. It's hard to find places to buy condoms	0.6624
	3. Condoms are expensive to buy	0.6455
	4. Condoms are inexpensive to buy.	0.6901
	<i>Total</i>	0.7096
F	<i>Socio cultural and economic barriers of condom acceptability</i>	
	1. Using condoms is immoral	0.5025
	2. Most of your friends think that condoms are just too much of a hassle to use.	0.6927
	3. It's hard to find places to buy condoms	0.4612
	4. Condoms are expensive to buy	0.6005
	5. Condoms are inexpensive to buy.	0.4479
	<i>Total</i>	0.6071
	<i>Frequency of condom use</i>	
	1. Do you use Condom with your most recent partner	0.7155
	2. Did you use Condom at last sexual intercourse	0.7155
	<i>Total</i>	0.7155

Appendix 3: Survey Questionnaire

Name of Interviewer:

Date of Interview:

DEMOGRAPHIC, SOCIO CULTURAL&SOCIO ECONOMIC INFORMATION

- 1. What is the name of your locality / town? _____
- 2. How long have you been staying here/there? _____
- 3. What is your House Number? _____ / _____
- 4. What is your date of birth? _____ Age: _____
(dd/mm/yyyy)
- 5. Sex of the respondent
 - Male
 - Female
- 6. What is your marital status?
 - Single
 - Married
 - Separated
 - Widowed
 - Divorced
 - Co-Habiting

If married or co-habiting, currently do you stay with your spouse? Yes No.

- 7. What ethnic group do you belong to?
 - Krobo
 - Ada
 - Ewe
 - Akan
 - Ga
 - Others Specify:.....

8. What is the highest level of school you completed?

- None
- Primary (Class 1 to 6)
- Jr. Secondary/ (Middle Form 1 – 4)
- Sec/Tech./Voc. School
- Six Form/ Polytechnics /University
- Others: Please specify

9. Do you have any children of your own?

- Yes
- No

If Yes, how many

10. What type of family do you belong?

- Nuclear
- Extended
- Others: Please specify

11. If you stay here less than 5 years which region did you migrated from?.....

12. What is your occupation?

- Civil Servant
- Business Personal
- Peasant Farmer
- Trader
- Driver
- Artisan – Specify
- Others: Student/Unemployed Please specify

13. If working/employed, What is your income level?

[] Daily

[] Weekly

[] Monthly.....

14. What is your religion?

[] - Christianity (Specify Denomination):.....)

[] - Islamic

[] - Traditional

[] - Others: Please specify

KNOWLEDGE AND ATTITUDE OF CONDOM

15. Have you ever used a condom during sexual intercourse?

Yes..... (GO TO Q

16).....1

No.....(GO TO Q

17).....2

16. (IF USED CONDOMS READ) Now, Read/I am going to read to you a list of statements people have made about condoms, do you think you would agree or disagree that.....(READ EACH ITEM BEGINNING WITH Q 18)

17. (IF NEVER USED CONDOMS READ) Now, Read/ I am going to read to you a list of statements people have made about condoms. Even though you have never used a condom, do you agree or disagree that.....(READ EACH ITEM BEGINNING WITH Q 18)

[PROMPT “Do you (Strongly Agree, Agree, Neutral, Strongly disagree, Disagree, Decline to Answer)?]

	Strongly Agree	Agree	Neutral	Strongly disagree	Disagree	Decline To Answer
18. Using condoms is immoral	1	2	3	4	8	9
19. It is embarrassing to buy condoms in a store	1	2	3	4	8	9

20. Condoms take all the pleasure out of sex	1	2	3	4	8	9
21. Using condoms is a good way to protect your sex partner from diseases people can get through sex.	1	2	3	4	8	9
22. It's hard to find places to buy condoms	1	2	3	4	8	9
23. Condoms are expensive to buy	1	2	3	4	8	9
24. Most of your friends think that condoms are just too much of a hassle to use.	1	2	3	4	8	9
25. Most of your friends think people should always use a condom when having sex with a new person.	1	2	3	4	8	9
26. Sex doesn't feel good when you use a condom	1	2	3	4	8	9
27. Condoms often break or slip off during sex	1	2	3	4	8	9
28. Condoms make a man look silly before his partner	1	2	3	4	8	9
29. It is embarrassing to put on a condom	1	2	3	4	8	9
30. If a woman wants her partner to use a condom, her partner might think she was having sex with other people.	1	2	3	4	8	9
31. If a man wants to use a condom, his sexual partner might think he was having sex with other people.	1	2	3	4	8	9
32. Most of your friends use condom when they have sex with a new partner	1	2	3	4	8	9
33. Most of your friends think people should use condom whenever they have sex, including their main partner.	1	2	3	4	8	9
34. Condoms make it hard for a woman to have an orgasm.	1	2	3	4	8	9
35. Most people of your age are using condoms these days.	1	2	3	4	8	9
36. Condoms are inexpensive to buy.	1	2	3	4	8	9

37. There is a female condom [] Yes [] No

38. If Yes, has any sexual partner of yours use it before [] Yes [] No

39. Sex feels good with female condoms 1 2 3 4 8 9

[IF USED CONDOM BEFORE] Please Answer Q40 to Q54]

40. Where do you get your condom most at times

[] buy from store/pharmacy/chemical store

[] my partner

[] friend

- family member
- others, Specify.....

41. What is the common or favorite brand you use?

- KISS
- PANTHER
- PROTECTOR GOLD
- FIESTA
- BE SAFE
- CHAMPION CONDOM
- Other, specify.....

42. Where do you keep condoms before using it?

- Pocket
- bag
- Drawer
- Under car seat
- Others, Specify

43. When you use condom, what is your main objective?

- Prevent STI`s (HIV/AIDS, Gonorrhoea)
- Prevent Pregnancy
- Others, Please specify.....

44. In the past six months how many sexual partners have you had.....

FREQUENCY OF CONDOM USE

- 45. Did you use Condom at first sexual intercourse Yes No
- 46. Did you use Condom at last sexual intercourse Yes No
- 47. Have you use Condom in the last four weeks Yes No
- 48. Do you use Condom with your most recent partner Yes No

CONDOM USE SKILLS

49. Have you had the experience of condom breaking or slipping off during sex [] Yes [] No
50. If Yes, in the last 12 months, how many times has a condom slipped off or break during vaginal intercourse.
- a.Time
- b. Don't know []
51. Do you often seek help from your partner when putting on condoms [] Yes [] No

[PROMPT “Do you (Strongly Agree, Agree, Neutral, Strongly disagree, Disagree, Decline to Answer)?”]

52. It's good to seek help from my partner to put on a condom 1 2 3 4 8
9

53. When condom feel dry during sex I use.....: to lubricate it.

- [] Cream/pomade
- [] Water
- [] Saliva
- [] Oil, specify.....
- [] Others

54. How do you dispose condom after use?

- [] Open ground
- [] Dust bin
- [] Flush in the toilet
- [] Others, Specify

Thanks for your time and willingness to participate on the study.

Appendix 4: Focus Group Discussion guide

1. What are the reasons why you use condom?
2. What informs you whether to use condom with a sexual partner or not
3. Is the use of condom moral or immoral to you
4. What are some of the hindrances you face in accessing condoms in this community

Appendix 5: Consent form for Respondent

CONSENT FORM

Part 1. Participant Information

Introduction

I am from Ensign College of Public Health in Kpong and I am conducting a study on the topic mentioned above. I will be explaining all about the study to you and I will need your participation. Please take all the time you need to read this carefully. You may ask me any questions about anything you do not understand at any time. You are a volunteer. You can choose not to take part and if you join, you may quit at any time. There will be no penalty if you decide to quit the study.

Why you are being asked to participate

You has being asked to take part in this study because you live in the lower Manya Krobo Municipal in the Eastern Region of Ghana. Specifically, I am interested in talking to males of ages: 15 to 49 years old.

Procedures

If you agree to be part of the study, a trained project staff will ask you a series of survey questions alone for approximately 30 - 60 minutes. Your responses will be recorded on paper and later entered into a computer database by study staff. As a participant, if you agree to participate in this study, data from your responses may be used for assessment.

Risk and Benefits

I anticipate minimal or no risk to you. There is no direct benefit to you for being in the study; however, study outcomes may lead to better understanding of the use of condoms in the area for healthy life style.

Confidentiality

All data will be de-identified and will be kept private. Your identifiable data such as name or date of birth will not be used in documents, reports, or publications related to this research. I will keep all documents secured and under lock. When typing your survey responses into the computer, all data will be entered without any information that will make it possible for your identity to be known. The information you provide will be kept strictly confidential and will be available only to persons related to the study (myself and my supervisors). The Office of Ethical Review Board of Ensign College may also have access to study records upon their request.

Your responses will not be shown to other participants or community members. The original paper survey forms will be destroyed once data entry and all analysis is complete.

Voluntariness and Withdrawal

Your participation in the study is completely voluntary and you reserve the right not to participate, even after you have taken part, to withdraw. This is your right and the decision you take will not be disclosed to anyone. If you join the study, you can change your mind later. You can choose not to take part and you can quit at any time. There will be no negative consequences if you choose not to participate in the study. Please note however, that some of the information that may have been obtained from you without identifiers, before you chose to withdraw, may be used in analysis reports and publications. You can opt not to have me use it.



Left thumbprint of participant

Cost/Compensation

Your participation in this study will not lead to you incurring any monetary cost during or after the study.

Who to contact

This study has been approved by the Institutional Review Board of Ensign College. If you have any concern about the conduct of this study, your welfare or your rights as a research participant or if you wish to ask questions, or need further explanations later, you may contact me, Philip Appiah Yamoah (0242230304) of Ensign College of Public Health or my supervisor Dr. Joana Nerquaye-Tetteh (0277541145). You may also contact the administrator of the Institutional Ethics Committee of the Ensign College of Public Health at +233 245762229.

Thank you.

Do you have any questions?

Part 2. CONSENT DECLARATION

“I have read the information given above, or the information above has been read to me. I have been given a chance to ask questions concerning this study; questions have been answered to my satisfaction. I now voluntarily agree to participate in this study knowing that I have the right to withdraw at any time without affecting future health care services”

Name of **participant** _____

Signature of **Participant** _____

Date: / / 2016

Name of **witness** _____

Signature of **witness** _____

Date: / / 2016

Name of **investigator** _____

Signature of **investigator** _____

Date: / / 2016