REGIONAL INSTITUTE FOR POPULATION STUDIES

AT THE

UNIVERSITY OF GHANA

A COMPARATIVE STUDY OF CONDOM USAGE AMONG MEN IN URBAN POOR COMMUNITIES IN ACCRA.
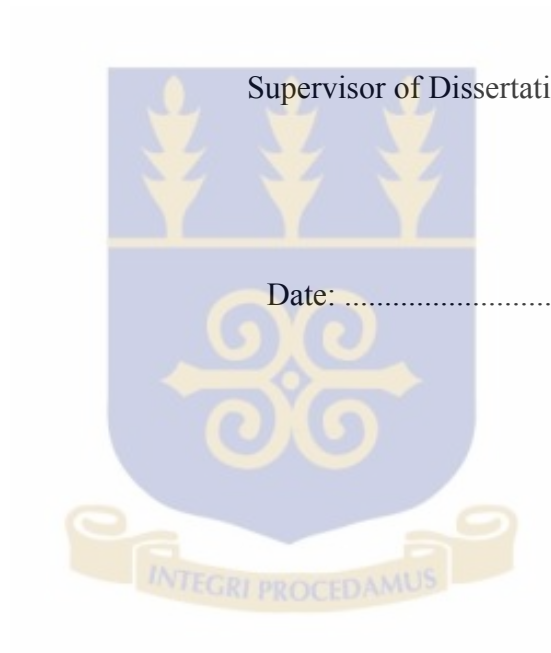
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ACCEPTANCE

Accepted by the College of Humanities, University of Ghana, Legon in partial fulfilment of

the requirements for the degree of MA (Population Studies).

Supervisor of Dissertation:...

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DECLARATION

I, JOSHUA NII SODJA SCHANDORF, declare that except for duly cited references, this is the result of original research undertaken under supervision at the Regional Institute for Population Studies at the University of Ghana, Legon, between August 2013 and July 2014 and that neither a part nor the whole of it has been presented elsewhere for the award of another degree.

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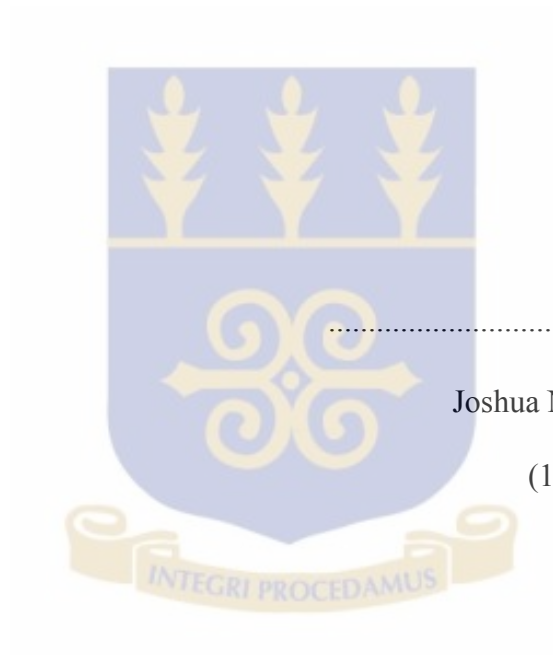
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ACKNOWLEDGEMENT

DEDICATION

To my parents

Dada and Mama, God bless you.

ABSTRACT

HIV/AIDS and increasing population levels are topical issues in Sub-Saharan Africa. Male condoms may be the solution to these two problems. The vulnerability of urban poor communities in Accra to these problems cannot be overlooked. It is essential to find out the level of male condom usage in such urban poor communities.

This study primarily sought to compare male condom use among three urban poor communities in Accra. The study also investigated the influence of community of residence on male condom use. Data was sourced from the 2011 EDULINK Urban Health and Poverty Project Wave 2 conducted by United Nations Regional Institute for Population Studies. The communities are Agbogbloshie, Jamestown and Usshertown. The communities have relatively different levels of poverty. Agbogbloshie has the highest poverty level, Jamestown has the lowest level of poverty while poverty in Usshertown stands between the two other communities.

Univariate analysis showed that Agbogbloshie had 34% male condom use, while Jamestown had 35.8% male condom use and Usshertown had 40.4% male condom use. The results indicated that there is a low rate of male condom use in the urban poor communities. However, Chi-square tests showed that there was no significant difference in male condom usage in the three urban poor communities. Multivariate analysis indicate that 31% of variations of male condom use in the urban poor communities could be explained by community of residence and other factors. Odds ratios show that men in Jamestown are 18.3% less likely to use a condom than men in Usshertown. The likelihood of men in Agbogbloshie to use a condom is 21.4% more than men in Usshertown. However, after controlling for the other background characteristics in the model, living in these urban poor communities has no significant relationship with male condom use.

The results from the study indicate that it is necessary to include comprehensive sex education in the Junior and Senior High School curricula to orient young men early in life on the importance of male condom use. There is the need for more research on the reasons why men do not use condoms in their multiple sexual relations. This would give policy makers clear targets to reach in order to increase the levels of male condom usage in urban poor communities in Accra and by extension Ghana as a whole.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In sub-Saharan Africa, male condom use continues to be low even in an era where increasing population levels and HIV/AIDS are topical issues. Birth control and curbing the spread of HIV/AIDS pandemic are issues in many sub-Saharan African countries that can be solved simultaneously by using a male condom.

In the year 2000, the United Nations made the fight against HIV/AIDS a top priority by placing combating of HIV/AIDS as the 6th. Goal of the Millennium Development Goals (MDGs) through increasing access to prevention commodities such as male condoms to many countries.

Ghana has played its part in the fight against the spread of HIV/AIDS. Prior to the United Nations MDG 6 of combating HIV/AIDS, malaria and other diseases, numerous television adverts and programs were strongly advocating for the use of condoms as a means of curtailing the spread of HIV/AIDS infections. After the United Nations introduced the MDGs, even more television programs, documentaries, adverts and campaigns have been carried out to promote male condom use.

Most often contraceptive interventions have been targeted at women. In order to control births women have become the 'guinea pigs' as it were. Different pills, injections and devices have been used on women in order to control births. Men had been left out of such interventions. Male condoms have come as a relief to women since male condoms serve a dual purpose. Male condoms help curb the transmission of sexually transmitted infections and serve as a suitable birth control method. With the advent of HIV/AIDS in Ghana in the 1980's, condoms were seen as a means to curbing HIV/AIDS transmission from an infected

partner to an uninfected partner. In line with this, various organizations have worked to promote male condom usage in Ghana.

However, according to the Ghana Demographic and Health Survey (2008) quite a number of men in Ghana engage in casual sexual relationships with two or more women without the use of condoms. This shows that men in Ghana are practicing risky sexual behaviour hence the need for more studies into such behaviour. According to the Ghana Demographic and Health Survey (2008), in 2008, 17% of men who had sex in the past 12 months had two or more partners during that time. Among these men only 26% used a condom during their last sexual intercourse.

The Ghana AIDS Commission has been leading the fight against HIV/AIDS and other sexually transmitted infections by promoting condom use. Similarly, organizations such as the Planned Parenthood Association of Ghana (PPAG) and the National Population Council of Ghana have worked tirelessly to promote the use of contraceptives in Ghana. Nonetheless, the responses to contraceptive messages have not been positively correlated to such messages. Equally important is the work by Ghana AIDS Commission which has been to promote condom use in order to curb transmission of HIV/AIDS but such efforts have not yielded high rates of condom use by Ghanaian men.

Studies have shown that although men may be knowledgeable about condoms, many men have various reasons why they do not use condoms in their heterosexual relationships. Some men do not use condoms because it connotes unfaithfulness. Alcohol intake before sex is also a reason why men don't use condoms. Men being in long term relationships, lack of access to condoms, lack of information about condoms, trust of a partner, negative beliefs, religious and cultural beliefs are all reasons why men do not use condoms. Other studies have looked at the influence of community on the use of male condoms. There is evidence that

men are less likely to use a condom with a woman who lives in the same community with them than if the woman were to be a resident of another community (Sarkar, 2008). A study in Zimbabwe showed that condom use is lower among rural communities than urban communities (Adetunji and Meekers, 2001). This has also been confirmed in Kenya (Papo et al. 2011). Many studies have so far focused on the individual reasons for condom use and non-use. Those that have focused on community influences have often assumed that urban areas have homogeneous usage rates. This work seeks to investigate urban poor communities which may have been overlooked by such an assumption. According to the Ghana Demographic and Health Survey (2008), even though knowledge about male condoms in Ghana is high for both married and unmarried sexually active men, male condom usage in Ghana continues to be low.

This study investigates the rate of male condom usage in three urban poor communities in Accra in order to find out if such low rates exist as the Ghana Demographic and Health Survey (2008) has noted. This study would also find out if the male condom usage rate among the urban poor communities differ. The study would further seek to find out whether the communities have an influence on male condom usage. The urban poor communities are Agbogbloshie, Jamestown and Usshertown. Though these three urban communities are poor communities there exists some distinction among them.

The conditions in these three urban poor communities suggest somewhat more favourable living standards (higher levels of education and income) in Jamestown compared to Usshertown and Agbogbloshie (Greif and Dodoo, 2015). Agbogbloshie is paricularly distinct because it has characteristics of a slum as prescribed by the Nairobi Cross-Sectional Slums Survey (2000). It has the lowest levels of school enrolment, no water closet or flush

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toilets and lacks proper drainage. Residents from Agbogbloshie are predominantly economic migrants from northern and rural parts of Ghana. Agbogloshie has the lowest rate of knowledge about male condoms as compared to the other urban poor communities. Jamestown has the highest proportion of educated people and knowledge about condoms than Usshertown and Agbogbloshie. Jamestown also has more flush toilet facilities than the other two communities. Usshertown has fewer flush toilet facilities and lower rates of knowledge about condoms than Jamestown. There are more indigenous Ga people in Usshertown and Jamestown than there are in Agbogbloshie.

1.2 Statement of the problem:

HIV/AIDS is a problem in many Sub-Saharan African countries. The young productive human capital of many Sub-Saharan African countries are at risk of contracting this incurable disease. This high risk population are the labour force of these countries, therefore when they are infected productivity of such countries could be hampered immensely. Consistent male condom use could solve this problem. This study on condom usage is well positioned to investigate male condom usage in urban poor communities since poverty has been indicative of HIV/AIDS vulnerability (Browning et. al, 2008; Magadi, 2013).

Increasing population growth rate without commensurate economic development in many sub-Saharan African countries is another major problem. According to the Ghana Demographic and Health Survey (2008), even though knowledge about male condoms in Ghana is high for both married and unmarried sexually active men, male condom usage in Ghana continues to be low (see also UNAIDS 2013; Darteh and Nnorom, 2012). Multiple casual heterosexual intercourse is prevalent in Sub-Saharan Africa including Ghana. These

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unprotected multiple heterosexual intercourse could result in many unintended pregnancies. Births that come about through these pregnancies contribute to Ghana's increasing population. Population and Housing Censuses conducted in Ghana have given some evidence of increasing population growth rates. The first post-independence census was conducted in 1960, reporting a population of 6.7 million. This was followed by the 1970 Census, reporting a population of 8.6 million, giving an inter-censual growth rate of 2.4 percent. The 1984 and 2000 censuses recorded populations of 12.3 million and 18.9 million, respectively, with an average growth rate of 2.7 percent between the two census periods. However the Population and Housing Census of 2010 recorded a population of about 25.6 million and a population growth rate of 2.5 percent. This shows a very slight decline in population growth rate which is not enough to deny that Ghana's population is increasing quite rapidly. Population Reference Bureau (2013) estimates Ghana's mid 2013 population at 26.1 million which is further evidence of Ghana's increasing population. HIV/AIDS and increasing population in Ghana are two important issues that need sufficient attention.

1.3 Rationale/Justification:

Many studies have focused on the barriers and the determinants of male condom usage (Fleming et al., 2014; Harris et al., 2013; Stutterheim et al., 2012; Zabrocki et al., 2014; Chirinda and Peltzer, 2014; Morris et al., 2014).

Some studies have also compared male condom use in urban and rural areas. Studies on male condoms in urban locations have assumed that urban areas are homogenous. Thus, this study proposes to look at urban areas only and with a focus on urban poor communities. This study is relevant because it looks at poor communities within urban areas where male condom usage may not be as high as generally assumed for all urban areas.

A comparison among these urban poor communities is also worthwhile since these three communities have varying levels of poverty. It is unsafe to assume that these three urban poor have homogenous usage rates without first comparing them. This work would seek to execute this comparison. This comparison among three urban poor communities is warranted since the communities are distinct (Greif and Dodoo, 2015). Agbobloshie has characteristics of a slum as prescribed by the Nairobi Cross-Sectional Slums Survey (2000). Slum communities have been associated with high risky sexual behaviour (Kamndaya et al., 2014). Risky sexual behaviour does not promote condom use thus this increases the vulnerability of individuals living in slum communities to HIV and other sexually transmitted infections. The other two urban poor communities have relatively slightly better socio-economic development and infrastructure than Agbogbloshie. Jamestown has relatively better socio-economic conditions than Usshertown (Greif and Dodoo, 2015).

The contribution of urban poor communities to Ghana's growing population cannot be overlooked. Better reproductive and sexual health campaigns can be run if information from the lower tier of society are considered. The findings of this study could also help policymakers in Ghana to adopt appropriate policies in order to maximize limited resources. When appropriate measures are carried out to increase male condom use in such urban poor communities and other areas in Ghana, Ghana's increasing population growth may be controlled. The spread of HIV/AIDS and other sexually transmitted infections can equally be reduced considerably.

Therefore this work finds out if men's condom use is influenced by the community in which they reside. The answers gathered from these responses would help to plan better interventions in the fight against the spread of HIV/AIDS, which is Goal 6 of the United

Nations' MDGs. The findings of this study could also be used to adopt strategies to promote

male condom use in order to curb unplanned pregnancies.

1.4 Research Questions:
This study will seek to answer the following questions:

- **What is the percentage of male condom use in the three urban poor communities?**

- **Is there a significant difference between the levels of male condom use in the three urban poor communities?**

- **Does spatial location/community influence male condom use?**

1.5 Objectives:
The general objective of this study is to ascertain whether men's community of residence influences their male condom usage.

The specific objectives are as follows:

- To ascertain the level of male condom use in the three urban poor communities;

- To compare male condom usage in the three urban poor communities to find out if they differ significantly.

- To propose action plans for policy makers based on the findings of this study.

1.6 Organization of the study

The study consists of seven chapters. Chapter One comprises of background information, the problem statement, the rationale and the objectives of the study. Chapter Two includes the literature review, the conceptual framework and hypothesis. Chapter Three consists of the methodology used in conducting this study.

Chapter Four uses descriptive statistics to examine and describe the distribution of the respondents by their background characteristics, and other control variables that are considered important in the study. The dependent variable for this study is male condom use in the last 12 months. It is described in detail in Chapter Four.

Chapter Five examines bivariate relationships between the independent variable, the control variables and male condom use. In the sixth chapter, binary logistic regression models are employed to examine the link between communities and male condom use, while controlling for other factors. The final chapter provides a summary of the study findings, conclusions drawn from the results and their policy implications.

CHAPTER TWO
LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Literature Review

Condoms are the only form of modern contraception which provide a dual function of preventing the transmission of sexually transmitted infections such as HIV/AIDS and reduction of the probability of occurrence of pregnancy. The discourse on male condoms usage has been examined through the application of theories such as the theory of reasoned action, the theory of planned behaviour, the health belief model as well as the theory of gender and power. A number of previous studies on male condoms have centred on urban areas in general. However, this study seeks to add to studies on male condom use in urban areas, with a focus on three urban poor communities in Accra, Ghana. This review of literature would be based on four major themes. The themes include male condom use rates in Sub-Saharan Africa, the determinants of male condom use, barriers to male condom use and spatial/geographical location as an influence on male condom usage within a population. Research on male condom use is very broad, this review would seek to source knowledge from recent studies on male condom usage from various authors.

2.1.1 Male condom use rates in Sub-Saharan Africa:

In Sub-Saharan Africa, there is a general decrease in male condom use even in the face of HIV/AIDS pandemic (UNAIDS epidemic report, 2013). There is ample evidence from studies in many Sub-Saharan African countries to support the 2013 UNAIDS epidemic report. A collection of strong evidence from reviewed research which spans from 1980-2011 by Maticka-Tyndale(2012) emphasizes that sub-Saharan Africa (SSA) has the world's

highest rates of HIV and other sexually transmissible infections (STIs), as condom use is generally rare.

It is worthwhile to note that in the most populous country in Sub-Saharan Africa (Nigeria), male condom use is low. Estimates from a cross-sectional study of the Nigeria Demographic and Heath Survey 2008 show that condom use among unmarried male youth aged 15-24 years in Nigerian is low (Adebowale et al., 2013). This increases the need for more inquiry into condom use practices in the face of the HIV/AIDS menace.

Meekers et al. (2003) state that in Cameroun, despite the HIV epidemic, a substantial fraction of youth, particularly males, continue to have high rates of partner change which put them at risk of contracting HIV. The study also showed that many youth had multiple regular sexual partners with which consistent condom use remained low.

In a related study carried out in Cote d'Ivoire, Zellner (2003) states that condom use in Cote d'Ivoire remains low even in the presence of increasing HIV prevalence and widespread awareness of how the HIV virus is transmitted. In all, only 23% of Ivorian men indicated that they had ever used a condom. Although people in Cote d'Ivoire are aware of how HIV/AIDS is acquired and transmitted, few men are actively involved in protecting themselves from sexually transmitted infections.

A study based on 2004 National Adolescent Survey of four sub-Saharan African countries by Bankole et al.(2007) estimates consistent condom use at 38% in Burkina Faso, 47% in Ghana, 20% in Malawi and 36% in Uganda. This is evidence that other African countries like Burkina Faso and Malawi have low male condom usage.

Research has equally delved into the male condom use between rural population and urban population. In generalizing rural and urban areas as homogenous entities, studies have estimated that rural areas have lower levels of condom use than urban populations. Evidence

from Kenya shows lower levels of male condom use among rural population than among urban population (Papo et al., 2011). This work envisages going further by looking into poor communities in urban areas which have been overlooked by this homogeneity assumption.

In Ghana, there have been some indications of low male condom use despite a wide range of intervention programs available. A community-based study by Adih and Alexander (1999) observed that only 21% of men used a condom during their last sexual encounter with a casual partner. Darteh and Nnorom (2012) highlight that based on analysis of the Ghana Demographic and Health Survey 2008 (GDHS 2008), although there is a high level of sexual activity in Ghana, condom use is generally low. The GDHS 2008 gives additional evidence that only 32% of males and 25% of females used a condom the first time they had sex.

Similarly, a study of adolescents in two urban poor areas in the Brong-Ahafo Region of Ghana showed results that concur with findings in GDHS 2008. The results indicate that 29% of the adolescents were involved in multiple sexual relations. Among these individuals, a question on how frequently condoms were used showed about 37% of the adolescents had used condoms once in a while with more males (42.7%) than females (34.65%) indicating that they used condoms once in a while (Darteh and Nnorom,2012).

According to Kumi-Kyereme et al. (2013), in Ghana, unprotected casual heterosexual relationships is high. Their work which was based on an analysis of data from the ten regions in Ghana shows that compared with men in the Western Region, unprotected casual heterosexual sex was significantly less likely among those in the Upper East Region of Ghana. In addition, casual heterosexual relationships is common among widowed and divorced women aged 35-44 years. This is further evidence of the need for more studies into male condom usage.

2.1.2 Determinants of male condom use:

The value of male condoms cannot be overemphasized in Sub-Saharan Africa. Though usage rates are generally low, some men prefer to use male condoms consistently in their heterosexual relationships. Men of different countries and cultures in Africa adhere to the use of male condoms for a myriad of reasons. These reasons may have bearings on either their socialization, environment, or other factors.

In recent research, in relationships that a man has concurrent partners, male condoms are patronized. Men in concurrent relationships are more likely to use a condom with a partner perceived to be a risk in terms of STI transmission. In a situation where within a month a man has sex with 3 different categories of people such as a wife, girlfriend and sex worker he is more likely to use a condom with the sex worker and girlfriend to avoid contracting a sexually transmitted infection (Fleming et al., 2014).

Literature further suggests that adolescent males (15-17 years) are more prone to condom use in both main and concurrent partnerships as compared to adolescent females (Harris et al., 2013). Possibly, females are not able to negotiate condom use due to gender-based power differentials (Atwood et al., 2011). A study on post-conflict Liberian adolescents (15-17) showed that adolescents who had greater communication with their parents on issues of sexuality were more likely to use condoms with main only and concurrent only sex partners relative to those who did not use a condom with either partner types (Harris et al., 2013).

The role of age and education as predictors of male condom use is essential. Early sexual debut is characterized by decreased likelihood of using a condom. An individual's educational attainment has also been seen to have a positive relationship with male condom use. A study was conducted in China to find out the rate of condom use at sexual debut. The

study employed a nationally representative data of China which showed that among Chinese youth only 36% used a condom at sexual debut. The study emphasizes age and educational attainment as significant predictors of condom use at sexual debut (Guo et al., 2013).

The importance of education on male condom usage cannot be overlooked. A study on determinants of risky sexual behaviour and condom use among college students in China showed that exposure to sex education is an important predictor of condom use. College students who had comprehensive HIV/AIDS knowledge were more prone to condom use in their heterosexual relationships than those with less or no knowledge about HIV/AIDS (Sun et al., 2012).

Meanwhile, in South Africa, contrary to previous studies (Davidoff-Gore et al., 2011; Adetunji and Meekers, 2001), low economic status (low education and unemployment) is associated with higher condom use. Low economic status which in previous studies led to lower access to condoms and hence low use, has now been found to be associated with higher condom use. As HIV prevalence is highest among those who are poor and unemployed with low education and predominantly Black Africans, possibly, in recent times the poor also tend to use condoms more in order to protect themselves. In addition, males with multiple concurrent sexual partners have a higher rate of condom use (Simbayi et al., 2014).

In order to use a condom consistently, knowledge about how a condom is used correctly and how it can prevent an individual from acquiring HIV and other sexually transmitted infections is relevant. Zinou et al. (2014) estimate that knowledge about HIV/AIDS and condoms is a significant predictor of consistent male condom use. Knowledge of the usefulness and effectiveness of condoms is a predictor of male condom use. Adetunji and Meekers (2001) suggest that awareness of the efficacy of condoms for HIV

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prevention has a strong effect on consistency of condom use in non-marital relationships. The study results showed that the percentage of men that consistently use condoms varied from 56% for those who were aware that condoms prevent transmission of the HIV virus to 44% for those who do not. This knowledge about condoms is acquired from the frequency of exposure to mass media information about condoms and sex.

Adetunji (2000) posits that there is a greater likelihood of condom use among those with multiple partners and in casual relationships. Youth in short term relationships in Ghana and South Africa have also been found to have a greater likelihood of condom use in such relationships. In some parts of Africa, men would only use a condom if they are having sex with more than one partner within a time period. In Zimbabwe, condoms were used primarily for non-marital sexual relations. Bankole et al. (2007) also add to the reasons why men use condoms in heterosexual intercourse by indicating that important predictors of consistent condom use are residence, education, living arrangement and exposure to mass media, specifically the radio and newspaper.

Van Rossem et al. (2001) suggest two other reasons why men use condoms in their sexual relations. The fear or concern about unwanted pregnancy has a strong effect on consistency of condom use with stable partners as concern about HIV infection has a strong effect on consistency of condom use with non-stable partners. Men who have a stable sexual partner would use a condom only to avoid getting their partner pregnant so that they avoid the responsibilities attached to an unintended pregnancy. Men with multiple partners would use a condom with the intention of avoiding HIV/AIDS and other sexually transmitted infections.

Meekers and Klein (2002) propose that parental support and personal risk perception are associated with higher levels of condom use. This implies that if parents are supportive of

their children using condoms and if parents educate their children on how to use a condom, there would be a higher probability of condom use among such individuals. If parents demystify the topic of contraception and condoms for that matter, young adults would possibly be more prone to the use of condoms to protect themselves. Men's awareness of their personal risk of contracting sexually transmitted infections during unprotected sexual intercourse promotes condom use.

It is probable that if men are granted access to free quality condoms, they will be more inclined to use them in their sexual encounters. A study on condom use and sexual behaviours among individuals procuring free male condoms in South Africa showed relatively high levels of condom use (Myer et al., 2002). This suggests that if men are given free condoms, they would probably use condoms more consistently than if they had to buy them. However, even in the event that free quality condoms are readily available other factors may determine men's condom use.

The Health Belief Model (HLM) has been used to investigate predictors of consistent male condom use in a cross-sectional study of male secondary school students in Cameroun. The main components of the Health Belief Model employed to investigate predictors of male condom use among male secondary school students in rural Cameroun were perceived susceptibility to HIV, perceived severity of HIV/AIDS, perceived benefit of condom use, perceived condom use self-efficacy and perceived barriers to condom use. The HLM posits that an individual will take action to prevent a health problem (HIV/AIDS) if they regard themselves as vulnerable to the condition (perceived susceptibility to HIV), if they perceive the problem to be serious in nature (perceived severity of HIV/AIDS), if they perceive that consistent condom use would help reduce vulnerability to HIV/AIDS (perceived benefit of condom use), if they perceive that there a few barriers to consistent

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condom use (perceived barriers to condom use) and if they believe in their ability to successfully use condoms consistently to prevent HIV/AIDS infection. The study indicates that only perceived barrier to condom use had no significant association with consistent condom use (Tarkang, 2013).

The belief that condoms do not diminish sexual pleasure is also a predictor of male condom use. A study in Luanda, Angola showed that for both males and females, consistent condom use was positively associated with believing that condoms did not diminish sexual pleasure. The study also showed that males who believed that condoms were safe and those who had multiple partners were more likely to be consistent users. The belief that condom use does not connote lack of trust is an equally important predictor of condom use at last intercourse in regular and casual relationships (Prata et al., 2005).

Literature has noted age as a dictator of male condom use in heterosexual relationships. A cross-sectional study of youth age 14 to 18 years gives some credence to this. In southern Tanzania it was found out that among male secondary school students, age was positively correlated with actual condom use. The likelihood of actual condom use was higher among older youth (16 to 18-year-olds) than their younger counterparts (14 to 15-year-olds). This difference in condom use practise could probably be explained by level of exposure to information about HIV/AIDS or condoms at different ages (Njau et al., 2013).

2.1.3 Barriers to male condom use:
In different countries and cultures men prefer not to use condoms when engaging in sexual intercourse with single and multiple sexual partners for a varied number of reasons.

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Some of the reasons why men do not subscribe to male condom use ranges from psychological, social, cultural to physical reasons.

Local or community beliefs, values and norms have the potential to influence condom use. In some societies, when a man proposes using a condom, it defies their masculinity. It is assumed that a man does not use condoms. If a woman proposes using a condom it taints her respectability. In such circumstances a woman is tagged as promiscuous. These two beliefs inhibit male condom use. In other communities, faulty risk perceptions inhibit condom use. These faulty risk perceptions stem from myths or lack of knowledge about HIV/AIDS and the role of condoms in fighting HIV/AIDS. Societal norms which allow men to have wives and recognize concurrent partners inhibits the use of condoms. More sexual partners in addition to a wife is seen as a sign of greater social status. There are also communities where issues of sexuality are considered as taboos. A case in point is the situation in Curacao where a qualitative study revealed that community beliefs, values and norms inhibit male condom use in heterosexual relationships. Tourism is a major commodity in Curacao, therefore norms in Curacao are against openness of HIV prevalence as it might militate against tourism (Stutterheim et al., 2012).

In many heterosexual relationships, a common barrier to male condom use during sexual relations is the level of intimacy between individuals. Research indicates that perceived intimacy levels predict condom use rather than HIV risk awareness or knowledge. Intimacy is defined differently by men and women.   High levels of intimacy inhibit the use of condoms. As intimacy is built or increases the likelihood that couples would use a condom in their sexual relationships diminishes (Zabrocki et al., 2014). As their work included longitudinal ethnographic interviews, level of intimacy was accessed over time.

Substance or alcohol use before sexual intercourse contributes to inconsistent condom use. This probably occurs because couples are less cautious when they are under the influence of a drug or alcohol. Poor communication between sexual partners about whether or not to use condoms has reduced the likelihood of couples using a condom in their sexual relationships. Transactional sex is a barrier to male condom use. In sexual encounter where women exchange sex for a commodity, the likelihood of condom use is minimal. A cross-sectional population based survey of youth age 18-24 by Chirinda and Peltzer (2014) has evidence of these barriers to male condom use.

An individual's knowledge of his/her HIV/AIDS status has an influence on male condom use in heterosexual relationships. A cross-sectional study of Cameroonian youth showed that testing negative for HIV/AIDS and one's ignorance of HIV/AIDS status do not promote consistent condom use in sexual exposures. Individuals may not know their HIV status because HIV testing centres are unutilized (Morris et al., 2014).

Trust which is defined differently by men and women in heterosexual relationships has come as a barrier to condom use in sexual exposures. In many relationships, partners are dissuaded from using a condom always in their sexual encounters because condoms are labelled as a sign of mistrust. In order to prove trust for each other couples decide not to use condoms. Young adults aged 15-24 in Tanzania have shown evidence of this phenomenon. It has been found that trust is negatively associated with consistent condom use among young adults (Hattori, 2014).

A common barrier to male condom use is resistance tactics. These male condom use resistance tactics are the various techniques men use to avoid using condoms. Men use resistance tactics because of perceptions that male condoms reduce sexual sensation. Latent profile analysis has been used to highlight the relationship between resistance tactics and

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condom use. Davis et al. (2013) note that young men have used condom resistance tactics to avoid using a condom consistently in their heterosexual relationships. Tactics such as risk-level reassurance and seduction to avoid using a condom are employed in the face of notions that condoms reduce sexual sensation.

The influence of partner context on male condom use among urban dwelling adolescents is an important feature in the male condom use context. Urban dwelling adolescent boys tend to have a low level of condom use regardless of partner familiarity risk. The theory of interpersonal behaviour suggests that adolescent sex partner characteristics (casual, unexpected, drinking alcohol, met in public and age discordance) influence condom use and STI risk. Gender is also likely to influence condom use. The theory of gender and power suggests that a man's preference for condom use is usually of more influence than a woman's preferences. Therefore if a man favours resistance tactics to condom use, women would be at a disadvantage (Staras et al., 2013).

Civic (1999) posits that higher levels of love, longer relationships, more serious and committed relationships are individually associated with less condom use. Men are less likely to use condoms with partners whom they have been with for long time and people with whom they have higher levels of love for. In line with this, Hendriksen et al. (2007) indicate that young adults who were married or had been involved in a relationship for 6 months or more are significantly less likely to have used a condom during their most recent sexual intercourse.

Inability to access male condoms limit sexually experienced adolescents from using condoms. Meekers et al. (2001) explain that although a majority of sexually experienced adolescents had purchased condoms from retail outlets, only about 50% had obtained condoms from health facilities, even though the latter distribute free condoms. Many

adolescents perceive that access to condoms is more difficult from public sector outlets than from private sector outlets, because the public sector providers tend to question the adolescents' behaviour while the latter do not. The judgemental and unprofessional approach of some health care providers limits young adult's access to condoms. Prata et al. (2005) explain that barriers to obtaining reproductive health information and services, such as inconvenient locations and operating hours contribute to condom non-use by men. Other barriers to male condom access and use include regulations that restrict provision of services and supplies on the basis of age or marital status and lack of confidentiality on the part of service providers. All these reasons contribute to the low rate of condom usage among young men in most Sub-Saharan African countries.

However, even when condoms are made freely accessible, some other factors limit men from using them consistently. A study on condom use and sexual behaviours among individuals procuring free male condoms in South Africa showed alcohol consumption before sex was associated with decreased condom use. The data showed that the use of contraceptives other than condoms primarily injectable contraceptives may also account for the reduction in condom usage (Myer et al., 2002).

A related study in China showed that pornographic information and alcohol consumption are important social-environmental factors of condom use (Sun et al., 2012). Men who had high levels of alcohol intake before sexual intercourse were less likely to use a condom consistently. Young men who are exposed to a lot of pornographic information are less likely to use male condoms consistently.

A study undertaken in the Philippines on young people aged 12-21 in urban poor metro Manila showed that lack of information about contraception was the reason why

contraceptives were not being used. Considering that the study was conducted in urban poor communities, 13% of the respondents attributed the cost of contraceptives or having no money to buy contraceptives as the reason behind their non-use of contraceptives. Distance to one or more sources of family planning information and services was found to be another reason why young people were not using contraceptives in their heterosexual relationships (Aguiling-Pangalangan and Acosta-Alba, 2009).

Negative beliefs and religious beliefs could explain why men do not use condoms consistently. Siegel et al. (2012) did extensive work on condom use in Northern Tanzania. It was found that certain individuals believed condoms had worms that transmit HIV whilst others were of the view that condoms cause cancers. The respondents (67%) were of the view that wearing a condom during sex is like eating candy in the wrapper because it makes sex have no pleasure. Approximately 53% of the respondents said that new unopened condoms had small holes while 35% believed that condoms cause cancer. The work further showed that negative beliefs lower willingness to use condoms. Even though condom use had increased in East Africa, the usage rate remains substantially below optimal levels. Maticka-Tyndale (2012) proposes that multiple sexual relationships and inseminations are taken as evidence of masculinity. The deposit of semen is seen to display manliness. In some regions, condoms continue to be associated with twentieth century campaigns of population control, which are interpreted as a desire of 'western' countries to depopulate Africa. This cultural belief discourages men from using condoms. In two studies in Kenya, young men pointed out that condoms are useless in preventing an infection since it is only God who can determine one's life course, including whether an infection will result from a particular sexual encounter or whether death will result from an infection (Maticka-Tyndale, 2012).

Religion plays a role in the discourse on male condom usage. In a study conducted in southern Tanzania among secondary school students, being a Christian had a reduced likelihood of condom use as compared to being a Muslim. In addition, nearly half of sexually experienced respondents never used a condom in their last sexual intercourse (last 3 months). Furthermore, among men, being a Catholic and having multiple concurrent sexual partners was negatively correlated with actual condom use (Njau et al., 2013).

2.1.4 Geographical location characteristics as predictors of male condom usage:

Research has suggested that community factors could influence male condom usage in such communities. Researchers have looked at different factors in explaining how a community can influence male condom usage in such communities.

Perceptions about the risk of contracting sexually transmitted infections in specific geographical locations have accounted for inconsistent condom use at such locations. A cross-sectional study within an online community of travellers reveals that travelling to specific geographical locations is likely to influence male condom use negatively. The study notes that travelling to Latin America or the Caribbean is significant with inconsistent condom use. Travellers perceived such locations as low risk zones therefore their inconsistent use of male condoms (Alcedo et al., 2014).

Adetunji (2000) argues that in Zimbabwe, an individual's region of residence has a significant impact on men's condom use. The study showed that sexually active men in the more ethnically diverse Midlands province tended to use condoms more than men in other regions.

Adetunji and Meekers (2001) argue that consistency of condom use with non-marital partners corresponds strongly with urban residence, for both men and women. This means that men with non-marital partners who live in urban areas are more likely to be consistent condom users than those who are in rural residence. A study based on data from 2001 Knowledge, Attitudes and Practices survey in Luanda, Angola indicates that urban residence was an important predictor of condom use at last intercourse in regular and casual relationships (Prata et al., 2005). Studies in Kenya have shown lower levels in condom usage in rural areas than in urban areas (Papo et al., 2011).

Ukwuani et al. (2003) proposes that men living in clusters with higher indicators of development were more likely to use condoms. In addition, condom use is much more prevalent in areas where health care services are nearby (0-5km). Therefore in a community where there are close and easily accessible health facilities, male condom use is more likely.

In Zambia, like some other African countries, the rate of male condom use is far below the level needed to curb serious threats to sexual and reproductive health (Benefo, 2004). Within male-reported relationships, having a partner from the same community was associated with a reduced likelihood of condom use (Benefo, 2004). Sarkar (2008) confirms that in Zambia, having a sexual partner from the same community is associated with non-use of a condom.

Stephenson (2009) posits that community demographic profiles are influential in shaping risky sexual behaviour of young men. Prevailing economic conditions and the behaviours and attitudes of adults in the community are strong influences on young people's sexual behaviours. Furthermore, Maticka-Tyndale (2012) argues that economic resources and urban location contribute to condom use through better access to condoms. This implies that

urban areas are better structured and have the requisite health facilities which provide better family planning services than rural settings.

In conclusion, the literature reviewed have provided information on how various researchers have approached the study of condom usage in different geographical and social environments. The barriers to male condom use vary. The reasons include inability to access male condoms, as a sign of trust to a sexual partner, alcohol intake before sexual intercourse as well as 'not wanting to eat a toffee with its wrapper'. The determinants of male condom use include effect of knowledge of HIV/STI transmission, age, high educational attainment, personal choices, accessibility of condoms and community factors. Although a substantial amount of research has been done on the rate of male condom use, the determinants of male condom use and the barriers to condom use in heterosexual intercourse, there is a need for more research on how a community can influence or predict male condom usage in that community. Most studies have assumed that rural and urban areas have homogenous male condom use rates and tend to overlook poor communities within urban areas. This research seeks to address these urban poor communities that may have been overlooked by such an assumption.

2.2 Conceptual framework

The conceptual framework (Figure 2.1) for this study looks at how a community influences the male condom usage in that community. The independent variable in this study is the community. There are three communities in this study. The least improved area (Agbogbloshie), a more improved area (Usshertown) and a third community which is

relatively the most improved area (Jamestown) of the three communities. The dependent variable in this study is male condom usage in the last 12 months. The control variables in this study are age of the respondents, educational attainment of respondents, marital status of the respondents, religion and number of sexual partners in the last 12 months. These particular variables were chosen as control variables since literature shows that they have a potential to influence male condom usage.

Age of men can influence male condom usage because literature has shown that young men whose partners are 0-4 years younger are about two and a half times more likely to use condoms consistently than those whose partners are 5-9 years younger (Bankole et al., 2007). According to Njau et al. (2013), age is positively correlated to condom use.

Studies have also cited marital status as a predictor of male condom usage (Adebowale et al., 2013),   therefore the need to control for the effect of marital status in this model. Similarly, number of sexual partners **(**Harris et al., 2013) and religion (Njau et al., 2013) have been cited as predictors of male condom usage therefore it is important to hold their effect constant to be able to test if a community has an influence of male condom usage in that community. Figure 2.1 shows the conceptual framework of this study. Due to data limitations, many vital variables were not incorporated in the conceptual framework. These variables include trust (Hattori, 2014), intimacy levels (Zabrocki et al., 2014), resistance tactics (Davis et al., 2013) and alcohol consumption before sex (Rizwan et al., 2014).

Figure 2.1: **Conceptual framework on the influence of community on male condom usage in that community.**

INDEPENDENT VARIABLE:

Communities

- Least improved area (Agbogbloshie)

- Most improved area (Jamestown)

- More improved area (Usshertown)

DEPENDENT VARIABLE:

Male condom use/non-use in the last 12 months

CONTROL VARIABLES:

- Age
- Marital status
- Education
- Religion
- Number of sexual partners in the last 12 months

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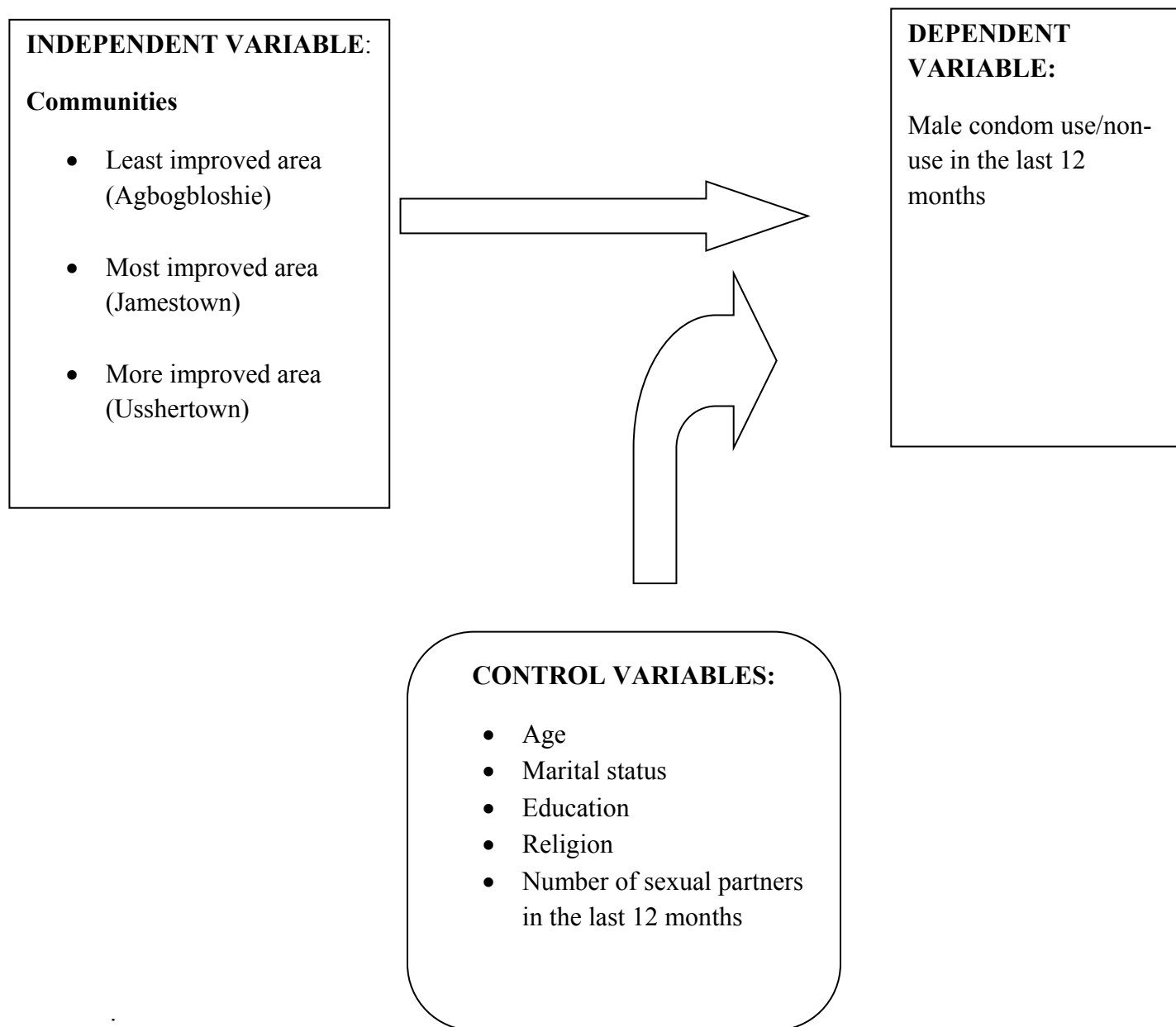
Source: Authors' own construct.

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2.3 Hypothesis

The conceptual framework (Figure 2.1) provides the basis for which the following hypothesis

is tested.

I.   Men living in Jamestown are more likely to use condoms during sex compared to

men living in Agbogbloshie.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter provides detailed information on the source of the data used for the study, sample selection, measurement of variables, the methods of analysis used and the limitations of the data used in this study.

3.2 Source of Data

The data for this study was from a study conducted by the United Nations Regional Institute for Population Studies in 2011 as part of its EDULINK Urban Health and Poverty Project Wave 2. The EDULINK Urban Health and Poverty Project Wave 2 is the second of EDULINK surveys conducted by the United Nations Regional Institute for Population Studies.

The sample for the survey was drawn from 29 enumeration areas (EA's), each with 20 households systematically chosen to make up a total sample size of 580 households distributed over three urban poor communities. The number of EA's and households in each community was proportionate to the population size of that locality. There were five EA's from Agbogbloshie, eight from Jamestown and sixteen from Usshertown. The aim of this sampling procedure was to arrive at a survey with 500 households interviewed. Estimates from the Ghana Statistical Service indicated that the non-response rate in the Greater Accra Region is about 15%, and so adding an extra 15% of households to the 500 aimed at led to the figure of 580. In each household chosen, every female between the ages of 15 and 49 and every male between the ages of 15 and 59 was eligible to be interviewed.

The survey gathered information on the respondents' background and mobility, community and environment, sexual and reproductive health, work and livelihood, fertility preferences, chronic non-communicable disease conditions, community perception of body weight, dietary patterns, general lifestyles and psychosocial health.

3.3 Sample design and selection

The total number of male respondents aged 15-59 interviewed in this survey were 426. Since the study is on male condom use, men who were not sexually active were filtered out. Subsequently, men who did not have sex in the 12 months preceding the survey were filtered out. This yielded a final sample size of 314 men aged 15-59years.

3.4 Measurement of variables

The variables employed in this study are categorized as independent, dependent and control variables.

Independent Variable

The independent variable used in this study is the community in which men live. This is represented by the locality names. Male respondents are either from Agbogbloshie, Jamestown or Usshertown.

Dependent Variable

Male condom usage in the last 12 months among males aged 15-59, is used as the dependent variable in this study. The question used to measure this variable was "During the last 12 months, did you use condoms with all the people you had sex with?". The responses

to the question are coded as 1= With all of them, 2= With some of them, 3= With none of them, and 4= Did not have sex in past 12 months. The respondents who selected option 4 (Did not have sex in the past 12 months) are filtered out since they did not use condoms. The responses were then recoded to two options only. The options are either yes or no. The option number 1 (With all of them) and 2 (With some of them) were combined and recoded as 0= Yes while the option 3 (with none of them) was recoded as 1 =No. Therefore the new responses to the question "During the last 12 months, did you use condoms with all the people you had sex with?" are 0= Yes and 1=No. For the purpose of this study, male condom use is the main focus.

Control Variables

The control variables in this study are mainly some of the characteristics of the respondents. They are age of the respondents, marital status of the respondents, educational attainment of the respondents, religion of the respondents and the number of sexual partners in the last 12 months. Number of sexual partners in the last 12 months is measured by the question "In the last 12 months, how many persons have you had sex with?" The responses to this question are recoded as 1=Single Partner, 2=Multiple Partners. Respondents with only one sexual partner in the last 12 months are coded as 1=Single Partner while respondents with more than one partner in the last 12 months are coded as 2=Multiple Partners. Table 3.1 shows the measures of the other control variables used in the study.

Table 3.1 Levels of measurement of the control variables

Variable	Measurement
Age	15-19
	20-24
	25-29
	30-34
	35-39
	40-44
	45-49
	50-54
	55-59
Marital Status	Yes, currently married
	Yes, living with a partner
	No, not in union
	Divorced/Separated
Educational Attainment (Respondent)	No education
	Primary
	Middle/JHS
	Secondary/SHS
	Higher
Religion	No Religion
	Catholic
	Protestants
	Pentecostal/Charismatic
	Islam
	Traditional/Spiritual/Other
Number of Sexual Partners	Single
	Multiple

3.5 Methods of analysis:

All the analysis in this study were employed using the statistical analysis software package IBM SPSS Statistics (Version 16). Some of the analyses include regression analysis, frequencies and cross-tabulations. The variables were checked for collinearity. There was no collinearity found among the variables.

Univariate analyses are performed basically to show the proportion of men from the three urban poor communities with their characteristics and male condom usage. Descriptive statistics in the form of tables showing frequencies and percentages are used to display the results of univariate analyses performed.

Bivariate analyses performed using cross-tabulations were used to examine the association and the statistical significance between the independent variables and dependent variable as well as the control variables and the dependent variable. Cross-tabulations examined the association and statistical significance between the community and their male condom usage. Cross-tabulations were also employed to test the association and statistical significance of characteristics of male respondents and male condom usage. Due to the varying sizes of cells, Pearson's Chi-square Tests and Fisher's Exact Tests are used to measure whether or not observed associations are statistically significant.

Furthermore, binary logistic regression analysis is performed to determine the effect of the community on male condom usage while controlling for the effects of other variables. The binary logistic regression involved measuring the place of residence of respondents' effect on male condom usage in the three individual communities while controlling for the effect of age, marital status, education, religion and number of sexual partners in the last 12 months.

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3.6 Data limitations:

The variable used to measure male condom usage in the three communities is a proxy variable and subject to various interpretations. In this study, the variable used to represent male condom usage is "During the last 12 months, did you use condoms with all the people you had sex with". The responses provided could be interpreted in different ways.

Data limitations do not allow for including other important variables in the analysis such as trust and relationship to last sexual partner. Literature has shown that important variables such as the type of relationship a man has to his last sexual partner may influence male condom usage (Fleming et al. 2014).

The data is also limited in that it does not enable finding out reasons why men in the three urban poor communities do not use condoms consistently in their heterosexual relationships. This information is very essential to policy making and implementation.

CHAPTER FOUR

PROFILE OF STUDY AREA, DEMOGRAPHIC CHARACTERISTICS

AND MALE CONDOM USAGE LEVELS OF RESPONDENTS

4.1 Introduction

The study is conducted in three urban poor communities in Accra. Poverty is common in these three communities, however, the three communities still remain distinct. Literature has shown that the determinants of male condom usage vary across countries and cultures. The background characteristics of the study population are important in analysing the factors that influence men's condom usage in the three urban poor communities. This chapter is divided into two sections. The first section provides the profile of the study area. The study area is composed of three urban poor communities. The second section provides information on all male respondents in the study area.

4.2 Profile of study area

The study area is composed of three urban poor communities, namely Agbogbloshie, Jamestown and Usshertown. Agbogbloshie is a former wetland and suburb of Accra, Ghana. It is known as a destination for legal and illegal exportation and environmental dumping of electronic waste (e-waste) from industrialized nations (Agyei-Mensah and Oteng-Ababio, 2012). The population of Agbogbloshie consists of economic migrants from northern and rural parts of Ghana. Agbogbloshie has characteristics of a slum as prescribed by the Nairobi Cross-Sectional Slums Survey (2000). The characteristics include lack of flush toilets, lack of proper drainage and health facilities. Dwellings at Agbogbloshie are wooden shacks that lack water and sanitation (Ghana Statistical Service, 2012). Agbogbloshie is situated near the

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banks of the Korle Lagoon and is prone to flooding and significant morbidity and mortality (Joint UNEP/OCHA Environment Unit, 2011). Jamestown and Usshertown are fishing communities inhabited primarily by the Ga. Conditions suggest somewhat more favourable living standards (e.g., higher levels of education and income) in Jamestown compared to Usshertown and Agbogbloshie (Greif and Dodoo, 2015). Based on statistics from the United Nations Regional Institute for Population Studies' EDULINK Urban Health and Poverty Project Wave 2, Jamestown has a higher rate of educated people (96.4%) than Agbogbloshie (83.8%) and Usshertown (96.0%). Jamestown has more flush toilets (13.5%) than Usshertown (6.4%). Agbogloshie has the lowest rate of knowledge about male condoms (64.1%) as compared to Jamestown (71.2%) and Usshertown (64.7%). Agbogbloshie (74%) has the highest rate of poor housing facilities in comparison with Jamestown (22%) and Usshertown (4%). The poor housing facilities include kiosks, several huts, containers and housing attached to shops.

For the purpose of this study and based on the criteria of proportion of educated people, knowledge about condoms and flush toilet facilities, the three urban poor communities are labelled as least improved urban poor area (Agbogbloshie), more improved urban poor area (Usshertown) and most improved urban poor area (Jamestown).

4.3 Characteristics of all respondents from whom male condom usage is computed

Urban poor communities

Table 4.1 shows the number of respondents from each of the urban poor communities. The table shows that Usshertown (52.9%) has the highest proportion of respondents while Agbogbloshie (16.9%) has the lowest proportion of respondents.

Table 4.1 Distribution of respondents by community of residence

Community	Number	Percent
Agbogbloshie	53	16.9
Jamestown	95	30.3
Usshertown	166	52.9
Total	**314**	**100**

Source: Computed from EDULINK Wave 2 Data

Age of respondents

Age of the respondents is a continuous variable which ranges from 15 to 59 years. Age is categorized into five-year intervals i.e. 15-19, 20-24, 25-29 ..., 54-59. Table 4.2 shows the distribution of respondents by age groups with the modal age group being 25-29 with 18.5 percent representation. The lowest age group 15-19 and the highest age group 55-59 are the least represented with 4.1 percent and approximately 3.2 percent representation respectively. The mean age of respondents in the study is 34.61 years with a standard deviation of 10.906.

Table 4.2 Distribution of respondents by age groups

Age	Number	Percent
15-19	13	4.1
20-24	51	16.2
25-29	58	18.5
30-34	53	16.9
35-39	31	9.9
40-44	40	12.7
45-49	29	9.2
50-54	29	9.2
55-59	10	3.2
TOTAL	**314**	**100.0**

Source: Computed from EDULINK Wave 2 Data   Mean: 34.61   Std. Deviation: 10.906

Educational attainment

Literature suggests that men's educational attainment has an influence on male condom usage (Prata et al., 2005). Table 4.3 shows the distribution of respondents by their levels of educational attainment. Most of the respondents (43.3%) have Middle/JHS education while 4.5% of respondents are not educated.

Table 4.3 Distribution of respondents by educational attainment

Educational attainment	Number	Percent
No education	14	4.5
Primary	41	13.1
Middle/JHS	136	43.3
Secondary/SHS	96	30.6
Higher	27	8.6
Total	**314**	**100**

Source: Computed from EDULINK Wave 2 Data

Marital Status

Marital status is an important predictor of male condom usage (Fleming et al., 2014). Marital status is categorized into four items. Table 4.4 shows the distribution of respondents by their marital status. Men who are not in any union have the highest representation (31.8%) while men who are either divorced or separated have the lowest representation (14.3%).

Table 4.4 Distribution of respondents by marital status

Marital Status	Number	Percent
Yes, currently married	97	30.9
Yes, living with a partner	72	22.9
No, not in union	100	31.8
Divorced/Separated	45	14.3
Total	**314**	**100**

Source: Computed from EDULINK Wave 2 Data

Religion

Religion has also been found to be a determinant of male condom usage (Reynolds et al., 2013). Table 4.5 shows the distribution of respondents by their religion. The results in Table 4.5 show that Pentecostal/Charismatic have the highest representation of 36.6% and Traditional/Spiritual believers have the least representation of 2.5%.

Table 4.5   Percent distribution of respondents by religion

Religion	Number	Percent
No Religion	32	10.2
Catholic	20	6.4
Protestants	73	23.2
Pentecostal/Charismatic	115	36.6
Other Christian	28	8.9
Islam	38	12.1
Traditional/Spiritualist/Other	8	2.5
Total	**314**	**100**

Source: Computed from EDULINK Wave 2 Data

Number of sexual partners

The number of sexual partners is a determinant of male condom usage. Adetunji (2000) posits that there is a greater likelihood of condom use among those with multiple partners than those with single regular partners. Prata et al. (2005) confirm this finding. Table 4.6 shows the distribution of respondents by the number of sexual partners. Single partner relationships have higher representation (73.9%) than multiple partner relationships (26.1%).

Table 4.6 Distribution of respondents by number of sexual partners

Number of sexual partners	Number	Percent
Single partner	232	73.9
Multiple partners	82	26.1
Total	**314**	**100**

Source: Computed from EDULINK Wave 2 Data

Male condom usage in the last 12 months.

Male condom usage in the last 12 months is the dependent variable. Table 4.7 shows the distribution of all the respondents from all the three urban poor communities by male condom usage. Approximately 37.9% of the respondents used a condom in the last 12 months while 62.1% of the respondents did not.

Table 4.7 Distribution of respondents by male condom usage

Condom use	Number	Percent
Yes	119	37.9
No	195	62.1
Total	**314**	**100**

Source: Computed from EDULINK Wave 2 Data

CHAPTER FIVE
BIVARIATE RELATIONSHIPS BETWEEN COMMUNITIES, BACKGROUND CHARACTERISTICS AND MALE CONDOM USAGE

5.1 Introduction

This chapter evaluates the bivariate relationships in each of the three urban poor communities in terms of the community of residence and male condom use as well as background characteristics of the respondents and male condom use. The analyses show the relationship and measure of association between the independent variable, the control variables and the dependent variable. Pearson Correlation chi-square test static is used to measure the significance of association between the independent and dependent variables. Due to varying sizes of cells of the control variables, Pearson Correlation chi-square test static and Fisher's Exact test are used to measure the significance of association between the control variables and the dependent variable. The level of significance is set at an alpha value of 0.05 i.e. 95% confidence level. Therefore, if the chi-square test or the Fisher's Exact test yields an asymptotic significance or a significance value greater than 0.05, it means that there is no significant association between the independent variable or control variable and male condom use. However, if the chi-square test or Fisher's Exact test yields an asymptotic significance or significance value less than or equal to 0.05, the interpretation is that there is a significant association between the independent variable or control variable and male condom use.

5.2 Community and male condom use
5.2.1 Male condom use by community

Table 5.1 shows the distribution of male condom use by the three urban communities in the study. The table shows that at 95% confidence level, there is no significant difference

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in male condom use in the three urban poor communities. This is an indication that although the three urban poor communities do not have the same proportion of male condom use, their proportions of male condom use do not vary significantly. The three urban poor communities show evidence of low male condom usage with Agbogbloshie having 34%, Jamestown recording 35.8% and Usshertown having 40.4%. This confirms findings of the 2008 Ghana Demographic and Health Survey about male condom prevalence in Ghana.

Table 5.1 Percentage distribution of male condom use by community

	Agbogbloshie		Jamestown		Usshertown	
Male Condom Use	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Yes	18	34.0	34	35.8	67	40.4
No	35	66.0	61	64.2	99	59.6
Total	**53**	**100**	**95**	**100**	**166**	**100**
χ2=0.956	**df=2**			**Asymp. Sig. =0.620**		

Source: Computed from EDULINK Wave 2 Data

5.2.2 Age distribution of respondents and male condom use by community

Table 5.2 indicates that men aged 15-19 in Agbogbloshie (66.7%) have the highest rate of male condom usage as compared to men in Jamestown and Usshertown. This means that 33.3% of Agbogbloshie men aged 15-19 do not use condoms. Possibly, these teenagers have been the focus of HIV/AIDS education campaigns. Fisher's Exact test shows that in Agbogbloshie and Jamestown, there is no significant relationship between age and male condom use. However, in Usshertown, there is a significant relationship between age and male condom use. This means that in Usshertown (more improved area), age influences male condom use.

Table 5.2 Age distribution of respondents and male condom use by community

Age Group	Rate of male condom use (%)		
	Agbogbloshie	**Jamestown**	**Usshertown**
15-19	66.7	0	33.3
20-24	0	60.0	41.9
25-29	47.1	58.3	62.1
30-34	42.9	35.0	46.2
35-39	0	30.8	50.0
40-44	50.0	16.7	33.3
45-49	16.7	28.6	33.3
50-54	33.3	0	10.5
55-59	0	25.0	20.0
Age Group	**Number of respondents**		
	Agbogbloshie (n= 53)	**Jamestown (n= 95)**	**Usshertown (n= 166)**
15-19	3	1	9
20-24	5	15	31
25-29	17	12	29
30-34	7	20	26
35-39	4	13	14
40-44	4	12	24
45-49	6	14	9
50-54	6	4	19
55-59	1	4	5
	FISHER'S EXACT TEST		
Agbogbloshie	Value = 8.894		Sig.=0.315
Jamestown	Value =10.939		Sig.=0.176
Usshertown	Value = 15.668		Sig.=0.040

Source: Computed from EDULINK Wave 2 Data   n = Total number of respondents

5.2.3 Educational attainment of respondents and male condom use by community

Table 5.3 indicates that in all three urban poor communities male condom use is highest among men with secondary school education. However, the male condom use varies among these men. Men in Agbogbloshie with secondary school education have the highest

male condom use (60%) as compared to Jamestown (57.6%) and Usshertown (50.9%). This shows that the proportion of men with secondary school education in Agbogbloshie, Jamestown and Usshertown who do not use condom are 40%, 42.4% and 49.1% respectively. This is an indication that even among the different education levels of men in the three urban poor communities, male condom non-use is still high.

Fisher's Exact test shows that in Agbogbloshie and Usshertown, there is no significant relationship between education and male condom use. However, in Jamestown, there is a significant relationship between education and male condom use. Thus, in Jamestown (most improved area), the level of education does have an effect on male condom use.

Table 5.3 Educational attainment of respondents and male condom use by community

Educational Attainment	Rate of male condom use (%)		
	Agbogbloshie	Jamestown	Usshertown
No education	14.3	0	33.3
Primary	22.2	9.1	38.1
Middle/JHS	33.3	23.8	34.3
Secondary/SHS	60.0	57.6	50.9
Higher	33.3	50.0	37.5
	Number of respondents		
Educational Attainment	Agbogbloshie (n=53)	Jamestown (n=95)	Usshertown (n=166)
No education	7	1	6
Primary	9	11	21
Middle/JHS	24	42	70
Secondary/SHS	10	33	53
Higher	3	8	16
	FISHER'S EXACT TEST		
Agbogbloshie	Value = 4.508		Sig.= 0.328
Jamestown	Value = 13.805		Sig.=0.003
Usshertown	Value = 3.752		Sig.= 0.449

Source: Computed from EDULINK Wave 2 Data   n = Total number of respondents

5.2.4 Marital status of respondents and male condom use by community

Table 5.4 indicates that the highest rate of male condom use is among divorced or separated men in Agbogbloshie (66.7%) while in Jamestown (55.2%) and Usshertown (52.5%) the highest rate of male condom use is found among men who are not in a union. Divorced or separated men in Agbogbloshie who do not use condoms are quite many (33.3%).

Fisher's Exact test shows that in Agbogbloshie and Usshertown, there is no significant relationship between marital status and male condom use. However, in Jamestown, there is a significant relationship between marital status and male condom use. Thus, Men's marital status has an effect on male condom use in Jamestown (the urban poor community with relatively the highest level of socio-economic development).

Table 5.4 Marital status of respondents and male condom use by community

Marital Status	Rate of male condom use (%)		
	Agbogbloshie	**Jamestown**	**Usshertown**
Yes, currently married	25	18.2	27.5
Yes, living with a partner	28.6	30.0	36.8
No, not in union	50.0	55.2	52.5
Divorced/Separated	66.7	46.2	37.9
	Number of respondents		
Marital Status	**Agbogbloshie (n=53)**	**Jamestown (n=95)**	**Usshertown (n=166)**
Yes, currently married	24	33	40
Yes, living with a partner	14	20	38
No, not in union	12	29	59
Divorced/Separated	3	13	29
	FISHER'S EXACT TEST		
Agbogbloshie	3.847		Sig.= 0.275
Jamestown	10.091		Sig.= 0.016
Usshertown	6.559		Sig.= 0.089

Source: Computed from EDULINK Wave 2 Data   n = Total number of respondents

5.2.5 Religion of respondents and male condom use by community

Table 5.5 indicates that the highest rate male condom use is found among catholic men in Usshertown (62.5%) while in Jamestown (50%) the highest rate of male condom use is found among men who are of Islamic religion. This means that condom non-use among Catholics in Usshertown is 37.5%. This is still quite high. It is worth noting that, in all three urban poor communities, there is 100% condom non-use among people who are Traditionalist/Spiritualist/Other religion. Perhaps, their religious doctrines play a part in their male condom non-use behaviour. In Agbogbloshie (50%), the highest rate of male condom use is found among men of other Christian religion.

Fisher's Exact test shows that in all three urban poor communities, there is no significant relationship between religion and male condom use. Despite the varying levels of poverty among the three poor urban communities, religion has no effect on male condom usage in any of the communities.

Table 5.5 Religion of respondents and male condom use by community

Religion	Rate of male condom use (%)		
	Agbogbloshie	**Jamestown**	**Usshertown**
No Religion	25.0	25.0	31.2
Catholic	33.3	33.3	62.5
Protestants	25.0	36.0	40.0
Pentecostal/Charismatic	47.1	46.7	36.8
Other Christian	50.0	0	53.8
Islam	25.0	50.0	56.2
Traditional/Spiritualist/Other	0	0	0

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	Number of respondents		
Religion	**Agbogbloshie (n=53)**	**Jamestown (n=95)**	**Usshertown (n=166)**
No Religion	8	8	16
Catholic	6	6	8
Protestants	8	25	40
Pentecostal/Charismatic	17	30	68
Other Christian	4	11	13
Islam	8	14	16
Traditional/Spiritualist/Other	2	1	5
	FISHER'S EXACT TEST		
Agbogbloshie	Value = 3.378		Sig.= 0.799
Jamestown	Value =10.799		Sig.= 0.071
Usshertown	Value =8.343		Sig.= 0.209

Source: Computed from EDULINK Wave 2 Data   n = Total number of respondents

5.2.6 Number of sexual partners of respondents and male condom use by community

Table 5.6 indicates that in all the three urban poor communities male condom use is higher among men with multiple sexual partners than men with single partners. The rate of male condom use among men with multiple sexual partners in Jamestown (68.2%) which is higher than for men in Usshertown (63.3%) and Agbogbloshie (63.6%). This means that the rate of non-use of male condoms among men with multiple sexual partners in Jamestown (31.8%) which is less than for men in Usshertown (36.7%) and Agbogbloshie (36.4%). In all three communities, there is a significant relationship between number of sexual partners and male condom use. In all three urban poor communities, the number of sexual partners a man has within a time period has an effect on whether or not he will use a condom. This is

consistent with findings from previous research (Fleming et al., 2014; Harris et al., 2013; Simbayi et al., 2014)

Table 5.6 Number of sexual partners of respondents and male condom use by community.

Number of Sexual Partners	Rate of male condom use (%)		
	Agbogbloshie	Jamestown	Usshertown
Single Partner	26.2	26.0	30.8
Multiple Partners	63.6	68.2	63.3
	Number of respondents		
Number of Sexual Partners	**Agbogbloshie (n=53)**	**Jamestown (n=95)**	**Usshertown (n=166)**
Single Partner	42	73	117
Multiple Partners	11	22	49
	FISHER'S EXACT TEST		
Agbogbloshie			Sig.= 0.031
PEARSON'S CHI-SQUARE CORRELATION			
Jamestown	$\chi2= 13.072$		Sig= 0.000
Usshertown	$\chi2 = 15.151$		Sig.= 0.000

Source: Computed from EDULINK Wave 2 Data   n = Total number of respondents

In summary, this chapter evaluated the bivariate relationships between the independent variable and the dependent variable as well as the control variables against the dependent variable. In Usshertown (more improved area), age is a significant predictor of male condom use. In Jamestown (most improved area), education and marital status have a significant relationship with male condom use. In all three urban poor communities, number of sexual partners has a significant relationship with male condom use.

CHAPTER SIX
COMMUNITY OF RESIDENCE, BACKGROUND CHARACTERISTICS AND MALE CONDOM USAGE

6.1 Introduction

This chapter examines the association between community of residence and male condom usage while controlling for background characteristics of respondents. The chapter focuses on the relationship between two variables i.e. community and male condom usage. This chapter presents and discusses results of binary logistic regression models conducted to determine the extent of the influence of man's community of residence on their male condom usage. The sample size of 314 is used in this analysis. For the purpose of this analysis, Usshertown (more improved area) is set as the reference category because it has the highest proportion of respondents.

6.2 Community as a predictor of male condom usage

This section employs two models to examine the influence of community on male condom usage. The first model assesses the influence of community of residence on male condom usage. The control variables are not included in this model. The second model uses community as a predictor variable while controlling for the background characteristics. A reference category is chosen for the independent variable and each control variable. The reference categories in the study are chosen based on highest proportion.

The likelihood of men living in Agbogbloshie, Jamestown and Usshertown using male condoms is interpreted in terms of the odds ratios. An odds ratio that is equal to one indicates same odds of male condom use for a category as the reference category. An odds ratio greater than one indicates higher odds while an odds ratio less than one indicates lower odds of male condom use for a category than the reference category. The likelihood ratios

test is used in predicting the significance of a predictor variable in predicting male condom use. The likelihood test is performed at an alpha value of 0.05. The results of the binary logistic regression to determine the gross effect of men's community on male condom use are presented in Table 6.1.

Table 6.1 Binary logistic regression models showing the association between community and male condom usage without controlling for effects of background characteristics.

Model 1				
Parameter	**Estimate Beta (βi)**	**Standard error**	**Significance**	**Odds ratios= e^{β}**
Community of residence			0.620	
Usshertown (Reference category)				1.000
Jamestown	-0.194	0.266	0.466	0.824
Agbogbloshie	-0.275	0.330	0.406	0.760
Constant	-0.390	0.158	0.014	0.677
Nagelkerke R^2= 0.004			-2 Log likelihood= 415.758	

Source: Computed from EDULINK Wave 2 Data

In Model 1, the Nagelkerke R^2 value of 0.004 shows that only 0.4% of the variation in male condom usage is explained by the community a man lives in. This means that among the three urban poor communities, the influence of community on male condom usage is very low. The results indicate that there is no significant relationship between community of residence and male condom use among the three urban poor communities. Men living in Jamestown (most improved area) are 17.6% less likely to use a male condom than men living

in Usshertown (more improved area) while men living in Agbogbloshie (least improved area) are 24% less likely to use a condom than men living in Usshertown.

In order to examine the effect of community on men's condom usage, it is necessary to control for background characteristics of respondents. The results of the binary logistic regression to determine the net effect of men's community of residence and respondents' background characteristics on male condom use are presented in Table 6.2

Table 6.2 Binary logistic regression models showing the association between community and male condom usage controlling for background characteristics.

Model 2				
Parameter	Estimate Beta (βi)	Standard error	Significance	Odds ratios= e^{β}
Community of residence			0.659	
Usshertown (Reference category)				1.000
Jamestown	-0.202	0.317	0.525	0.817
Agbogbloshie	0.194	0.414	0.640	1.214
Respondents' Age			0.267	
25-29 (Reference category)				1.000
15-19	-1.240	0.728	0.089	0.289
20-24	-0.716	0.442	0.105	0.489

30-34	-0.313	0.467	0.502	0.731
35-39	-0.022	0.578	0.969	0.978
40-44	-0.793	0.556	0.154	0.452
45-49	-0.682	0.619	0.271	0.506
50-54	-1.594	0.709	0.025	0.203
55-59	-0.933	1.019	0.360	0.393
Religion			0.801	
Pentecostal/Charismatic (Reference category)				1.000
No Religion	-0.381	0.507	0.452	0.683
Catholic	0.055	0.581	0.924	1.057
Protestants	-0.183	0.362	0.613	0.833
Other Christian	-0.248	0.527	0.638	0.780
Islam	0.491	0.450	0.275	1.634
Traditionalist/Spiritualist/Other	-20.562	1.302E4	0.999	0.000
Education			0.030	
Middle/JHS (Reference category)				1.000
No Education	-0.445	0.775	0.566	0.641
Primary	-0.200	0.453	0.659	0.819
Secondary/SHS	0.933	0.325	0.004	2.542
Higher	0.474	0.501	0.344	1.607
Marital Status			0.092	

No, not in union (Reference category)				1.000
Yes, currently married	0.147	0.506	0.771	1.159
Yes, living with a partner	-0.780	0.462	0.091	0.458
Divorced/Separated	-0.609	0.473	0.198	0.544
Number of sexual partners			0.000	
Single Partner (Reference category)				1.000
Multiple Partners	1.544	0.314	0.000	4.684
Constant	-0.286	0.594	0.631	0.751
Nagelkerke R^2 = 0.312		-2 Log likelihood= 335.010		

Source: Computed from EDULINK Wave 2 Data

In Model 2, the Nagelkerke R^2 value of 0.312 means that 31% of the variation in male condom usage is explained by the community a man lives in and other factors such as age, religion, marital status, education and number of sexual partners. After controlling for the other background characteristics in the model, community of residence has no significant relationship with male condom use. The results also show that after controlling for background characteristics, men in Jamestown (most improved area) are 18.3% less likely to use a condom than men in Usshertown (more improved area). The hypothesis which states that men living in a poor urban community with lower poverty levels are more likely to use condoms than men living in a community with a higher poverty level cannot be accepted since there is no significant relationship between community of residence and male condom use in all three urban poor communities.

The likelihood of men in Agbogbloshie to use a condom is 21.4% more than men in Usshertown. This implies that men in Agbogbloshie (least improved) are 21.4% more likely to use a condom than men living in Usshertown (more improved). Residents in Agbogbloshie are more likely to be migrants. Possibly they are more careful with condom use because of their migrant status.

Controlling for men's background characteristics in the model reveals the characteristics that have statistical relationships with men's condom use. Educational attainment (Guo et al. 2013) and number of sexual partners (Fleming et al., 2014) are significant predictors of male condom use. Table 6.2 shows that only men aged 50-54 years had a significant relationship with male condom use. Men aged 50-54 years were 79.7% less likely than men aged 25-29 years to use a condom. This could be due to men aged 50-54 having a desire to leave more children behind to bear their name. This could also be because men aged 50-54 have already gone through the stages of life and may be less cautious at their current age. Assuming that their partners are of the same age, there will not be any need for protection because they will be in their menopause.

Model 2 shows that men with secondary education had a significant relationship with male condom use. Men with secondary education were 1.542 times more likely than men with no education to use a condom. This shows the importance of education as a predictor of male condom use. There was however no significant relationship shown by the other categories of educational attainment.

Number of sexual partners shows a significant relationship with male condom use. Model 2 shows that men with multiple sexual partners have a significant relationship with male condom use in the last 12 months. Men who had multiple sexual partners were 3.684 times more likely to use a condom than men who had a single partner in the last 12 months.

This result is consistent with results from previous research (Fleming et al., 2014; Harris et al., 2013). Possibly, men who have multiple sexual partners are aware of their susceptibility to sexually transmitted infections therefore they may use male condoms as a precaution.

In summary, this chapter assessed two binary logistic regressions. The first binary logistic regression (Model 1) assessed the independent variable (community of residence) and the dependent variable (male condom use). The second binary logistic regression assessed the independent variable (communities of residence), the control variables (age, educational attainment, religion, marital status, number of sexual partners) and the dependent variable (male condom use). In the second binary logistic regression (Model 2), the Nagelkerke R^2 was 0.312 which means that 31% of the variation in male condom usage is explained by the community a man lives in and other factors such as age, religion, marital status, education and number of sexual partners. After controlling for the other background characteristics in the model, it was found that community of residence has no significant relationship with male condom use.

CHAPTER SEVEN

SUMMARY, CONCLUSION AND RECOMMENDATION

7.1 Summary of main findings

This study sought to compare male condom usage in three urban poor communities in Accra. The study also investigated whether male condom use differed significantly among the three urban poor communities in Accra. Data was sourced from the United Nations Regional Institute for Population Studies EDULINK Urban Health and Poverty Project Wave 2 (2011). The study centred on sexually active men's condom use. Univariate, bivariate and multivariate analyses were used primarily to investigate the relationship between community and male condom use. These levels of analysis also investigated the relationship between background characteristics of men and their male condom use.

The univariate analyses showed that out of the sample of 53 men in Agbogbloshie, 34% used a condom in the last 12 months prior to the study while in Jamestown, a sample of 95 men recorded 35.8% condom use. A sample of 166 men in Usshertown showed 40.4% male condom use. The results from the univariate analysis shows a high proportion of men in the three communities did not use a condom in the last 12 months especially men living in Agbogbloshie. Contrary to the hypothesis that men living in an urban poor community with lower levels of poverty are more likely to use condoms than men in an urban poor community with higher levels of poverty, at the univariate level, men in an improved area (Usshertown) were seen to have higher rate of condom use than men living in the most improved area (Jamestown). This phenomenon is probably explained by other factors other than community of residence. Male condom use was least among men living in Agbogbloshie and highest among men living in Usshertown. Male condom use in Jamestown

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is higher than male condom use in Agbogbloshie. Male condom non-use was highest among men in Agbogbloshie and lowest with men from Usshertown. Men in Jamestown registered higher male condom non-use than men in Usshertown.

The bivariate level results indicated that at 5% significance level, there was no significant difference in male condom use in the three urban poor communities. The relationship between respondents' background characteristics and male condom use was also tested. In Agbogbloshie, there is a significant relationship between number of sexual partners and male condom use. In Jamestown, education, marital status and number of sexual partners have significant relationships with male condom use. In Usshertown, age and number of sexual partners have a significant relationship with male condom use. Two models were used at the multivariate level of analysis to show the gross and net effect of community on male condom use. The first model features a binary logistic regression model of the gross effect of community on male condom use. The second model is a binary logistic regression model indicating the net effect of community on male condom use. Results from the first model indicates that community of residence is not a significant predictor of male condom use. The second model also showed that among the three urban poor communities, there is no significant relationship between male condom use and community of residence. Characteristics that emerged as significant predictors of men's condom use are educational attainment and number of sexual partners.

7.2 Conclusion

Although knowledge of about male condom in the three urban poor communities is high, male condom use in the three urban poor communities is low. In this study, community influence on male condom use in three urban poor communities were compared. There was

no significant difference in male condom usage in the threes urban poor communities. Educational attainment and number of sexual partners were seen as significant predictors of male condom use. Accordingly, policy makers must increase and maintain periodic educational campaigns in order to promote the importance of male condoms. Further research needs to be conducted on the reasons why men do not use condoms so as to give policy makers specific target areas for their limited resources.

7.3 Recommendations

The findings of this study are important to both policy makers and researchers. The study indicates that male condom usage is low in urban poor communities in Accra. Intensive education campaigns must be carried out in the urban poor communities of Accra to thoroughly expand on the importance of male condoms in this time of HIV/AIDS and increasing populations in Sub-Saharan Africa. Since these urban communities are poor areas, these periodic intensive educational campaigns should be accompanied by distribution of free quality male condoms.

Comprehensive sex education should equally be included in the Junior and Senior High School curricula to enlighten young men on the importance of male condom use.

There is the need for more research on the reasons why men do not use condoms in their multiple sexual relationships. This would give policy makers clear targets to reach in order to increase the levels of male condom usage in urban poor communities in Accra.

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