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## Determinants of Risky Sexual Behavior Among the Youth in Malawi

Beston B. Maonga  
Tapiwa Sphiwe Gondwe  
Kennedy Machira

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DHS Working Paper No. 141

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Beston B. Maonga<sup>1</sup>  
Tapiwa Sphiwe Gondwe<sup>2</sup>  
Kennedy Machira<sup>1</sup>

ICF  
Rockville, Maryland, USA

June 2018

<sup>1</sup>Lilongwe University of Agriculture and Natural Resources, Faculty of Development Studies, Department of Agricultural and Applied Economics, P.O. Box 219, Lilongwe, Malawi.

<sup>2</sup>Lilongwe University of Agriculture and Natural Resources, Faculty of Food and Human Sciences, Department of Human Ecology, P.O. Box 219, Lilongwe, Malawi.

*Corresponding author:* Beston B. Maonga, Lilongwe University of Agriculture and Natural Resources, Faculty of Development Studies, Department of Agricultural and Applied Economics, P.O. Box 219, Lilongwe, Malawi; email: maonga.b05@gmail.com.

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# CONTENTS

---

|   |            |
|---|------------|
| <b>TABLES</b> .....   | <b>v</b>   |
| <b>FIGURES</b> .....  | <b>vii</b> |
| <b>ABSTRACT</b> .....   | <b>ix</b>  |
| <b>1 INTRODUCTION</b> .....   | <b>1</b>   |
| 1.1 Background.....   | 1          |
| 1.2 Rationale of the Study.....   | 1          |
| 1.3 Objectives of the Study.....  | 2          |
| <b>2 DATA AND METHODS</b> .....   | <b>3</b>   |
| 2.1 Conceptual Framework.....   | 3          |
| 2.1.1 Individual factors influencing risky sexual behavior among men.....   | 3          |
| 2.1.2 Household factors influencing risky sexual behavior among men.....  | 3          |
| 2.1.3 Community factors influencing risky sexual behavior among men.....  | 4          |
| 2.2 Theoretical Framework.....  | 4          |
| 2.3 Data.....   | 5          |
| 2.4 Variables.....  | 5          |
| 2.5 Statistical Analysis.....   | 6          |
| <b>3 RESULTS</b> .....  | <b>7</b>   |
| 3.1 Background Characteristics of the Respondents.....  | 7          |
| 3.1.1 Condom use among male youths and adults by marital status.....  | 8          |
| 3.2 Bivariate Analysis Results.....   | 9          |
| 3.2.1 Determinants of men’s engagement in non-marital non-cohabiting sexual partnerships and condom use among youth and adults.....                 | 9          |
| 3.3 Multivariable Analysis Results.....   | 11         |
| 3.3.1 Determinants of men’s engaging in sex with non-marital non-cohabiting sexual partners among unmarried and married male youths and adults..... | 11         |
| 3.3.2 Determinants of condom use with non-marital non-cohabiting sexual partners among male youths and adults in Malawi.....                        | 13         |
| <b>4 DISCUSSION</b> .....   | <b>15</b>  |
| <b>5 CONCLUSIONS</b> .....  | <b>17</b>  |
| <b>6 POLICY RECOMMENDATIONS</b> .....   | <b>19</b>  |
| <b>REFERENCES</b> .....   | <b>21</b>  |



## TABLES

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|           |  |    |
|-----------|--|----|
| Table 2.1 | Definitions and measures of the variables .....  | 5  |
| Table 3.1 | Background characteristics of male youths and adults by marital status among those who had sexual intercourse within the last 12 months preceding the 2015-16 MDHS .....   | 8  |
| Table 3.2 | Percent distribution of male youths and adults who used condoms during sex with a non-marital non-cohabiting partner within the 12 months preceding the 2015-16 MDHS ..... | 9  |
| Table 3.3 | Unadjusted model results estimating determinants of number of non-marital non-cohabiting sexual partnerships among youths and adults by marital status .....               | 10 |
| Table 3.4 | Unadjusted model results estimating determinants of condom use among the youths and adults with non-cohabiting partners in Malawi .....                                    | 11 |
| Table 3.5 | Negative binomial regression results estimating determinants of number of non-marital non-cohabiting sexual partners among youths and adults .....                         | 12 |
| Table 3.6 | Logistic regression results estimating factors influencing condom use among unmarried and married youths and adults .....  | 13 |





# FIGURES

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Figure 2.1      Conceptual frameworks..... 4



## ABSTRACT

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Generally, men of reproductive age in Malawi continue to be vulnerable to new HIV and AIDS infection and re-infection due to risky sexual behavior, including having sexual intercourse with multiple non-marital, non-cohabiting sexual partners and not using condoms with them. With a sample of 7,478 men age 15-54 drawn from the 2015-16 Malawi Demographic and Health Survey (MDHS), this study examines determinants of risky sexual practices among men in Malawi. The study considers risky sexual behavior as having multiple non-marital, non-cohabiting sexual partners and not using condoms during sexual intercourse with these partners. This risky behavior can have serious health consequences and carries medium-to-long-term health and socioeconomic implications for the youth of Malawi. The study examines male youth age 15-24 and adults age 25-54 who had sexual intercourse in the past 12 months preceding the 2015-16 MDHS, by their marital status. Negative binomial and logistic regression analysis was used to identify determinants associated with their risky sexual behavior. The study found that religion was a key factor associated with having an increased number of non-marital, non-cohabiting sexual partners. Also, attainment of formal education was a consistent predictor that significantly reduced men's high-risk sexual behavior. Thus, education serves as the most important tool to facilitate behavior change among men in Malawi. Based on the findings, this study proposes redesigning and implementing extensive pro-men sexual and reproductive health educational campaigns to tackle key health and demographic topics aimed at changing men's attitudes and behavior toward engaging in sexual intercourse with multiple non-marital non-cohabiting partners and toward consistent and correct condom use. Such education campaigns must cut across the social fabric of Malawi's society, including religious institutions.

**KEY WORDS:** non-marital non-cohabiting sexual partners, high-risk sexual practices, male youths and adults, condom use, Malawi



# 1 INTRODUCTION

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## 1.1 Background

In sub-Saharan Africa, inconsistent condom use during sexual intercourse, especially among men, continues to pose a serious health challenge with a high likelihood of negatively affecting the region's socioeconomic development. This condition is exacerbated by cultural beliefs, customs, and practices and the lack of a coherent regional approach to comprehensively tackle such issues. The UNAIDS Global AIDS Monitoring Report (2017) reiterated that risky behavior among youths and adults results in increased prevalence of HIV/AIDS infections, leading to high death rates among the economically active age group, 15-60 years.

The 2015-16 Malawi Demographic and Health Survey (MDHS) indicated that Malawi has a high prevalence of men with multiple non-marital non-cohabiting sexual partners among other risky sexual practices (National Statistical Office (NSO) and ICF 2017). In response, the Malawi health sector has been promoting different sexual and reproductive health campaigns to change people's sexual behavior. For instance, the Malawi Government adopted a political directive that aimed at scaling up efforts on HIV/AIDS control—the 90–90–90 campaign, which aims to achieve 90% of the population knowing their HIV status, ensure that 90% of affected people are on sustained treatment, and that 90% have their viral load suppressed upon receiving antiretroviral therapy. In addition, the Malawi Reproductive Health Policy advocates for increased access to condoms by, among other efforts, ensuring free distribution of condoms in public places.

Despite such admirable efforts, men's practices of having multiple sexual partners and non-use of condoms still prevail among both youths and adults. There are few studies in Malawi that explore factors affecting or associated with men's behavior to have multiple sexual partners and not to use condoms in such risky practices. Chavula (2016) attempted to explore the factors that influence sexual behavior among men in Malawi. However, the scope of the work focused on academia and hence cannot be generalized. Within the African continent, scholars who have explored the factors influencing risky sexual behavior have focused on adolescents and women as a unit of analysis; men tend to be ignored in most studies (Odimegwu et al. 2017; Shore et al. 2017). In Botswana a nationally representative study explored risky sexual behavior among youths (Letano et al. 2013). However, the study scarcely discussed core issues influencing the youths' engaging in sexual partnerships with multiple non-marital, non-cohabiting sexual partners and non-use of condoms.

Despite the existing sexual and reproductive health policies and studies aimed at improving the health and well-being of people in Malawi, little is known about key factors that influence men to engage in multiple sexual partnerships and continued non-use of condoms. With a special focus on the male youth as well as adult men, this study therefore attempts to explore these factors.

## 1.2 Rationale of the Study

In a country whose development has been rocked by population-related challenges, studies of sexual risky behavior contribute in principle to encouraging policy dialogue. This study is therefore envisaged to contribute to Malawi's policy debate on the national agenda to curb the spread of HIV/AIDS and other sexually transmitted diseases, as well as efforts to control population growth. The study intends to shed some insight into the promotion of adolescent health by creating a platform on which the youths could be

well informed and would understand the risks associated with high-risk sexual behavior. Such understanding is necessary to minimize public health challenges facing the Malawi population, especially among youth. The study is intended to identify the determinants of risky sexual behavior among men, especially among rural youth who are in the majority in Malawi. The topic is approached from three fronts—individual, household, and community factors that explain men’s engaging in sexual activity with a number of non-marital, non-cohabiting sexual partners and not using condoms during sexual intercourse with non-cohabiting partners.

### **1.3 Objectives of the Study**

The study investigates prevalence and determinants of risky sexual behavioral practices in Malawi with a special focus on men (youths and adults) by their marital status. Specific objectives of the study are:

- 1) To assess the background characteristics of men (youths age 15-24 and adults age 25-54) engaging in risky sexual practices by their marital status,
- 2) To assess sociodemographic factors that influence men (youths and adults) to indulge in multiple sexual partnerships and that affect condom use with non-cohabiting partners.

## **2 DATA AND METHODS**

---

### **2.1 Conceptual Framework**

In the data-driven conceptual framework (Figure 2.1), the study examines risky sexual behavior at two levels, namely number of non-marital non-cohabiting sexual partners, and non-use of condoms (identified as high-risk sexual behavior), both of which are assessed through factors at the individual, household, and community levels. The study focuses on men who had sex with non-cohabiting partners in the past 12 months before the 2015-16 MDHS. Similarly, for condom use, the focus is on men who had sex with non-marital, non-cohabiting partners in the past 12 months before the MDHS.

#### **2.1.1 Individual factors influencing risky sexual behavior among men**

Chosen from an array of possible individual factors are educational attainment and religion. In the context of this study, educational attainment was thought to have an inverse association with engaging in non-marital, non-cohabiting sexual partnerships and a positive association with men's consistent use of condoms in sexual intercourse with non-marital, non-cohabiting partners. This is premised on the positive role that education makes in enlightening society on issues of behavioral change. Of note, this conceptual framework is limited to the content and type of data available in the 2015-16 Malawi DHS; if not restricted due to data availability, the framework could include other background factors.

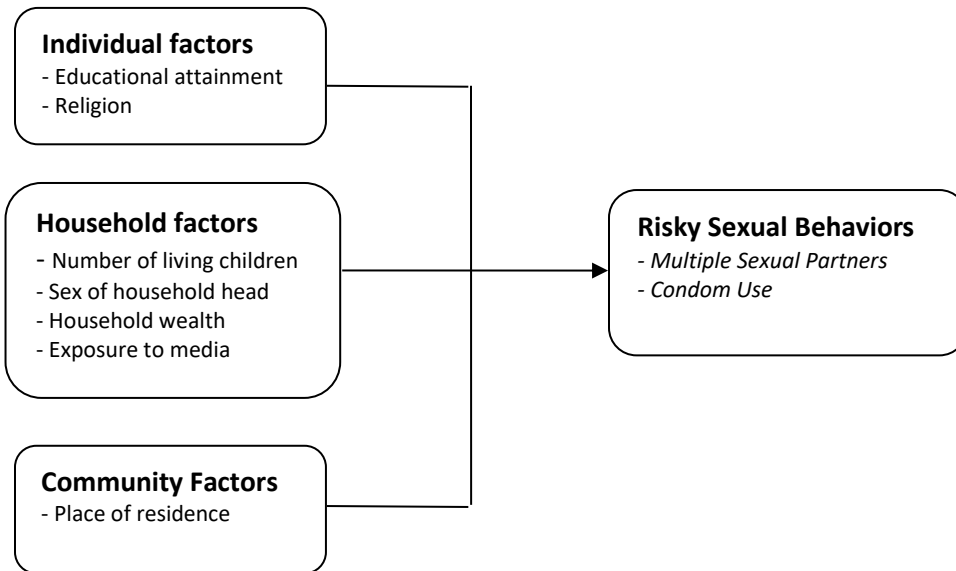
#### **2.1.2 Household factors influencing risky sexual behavior among men**

Among household factors, having a relatively large number of living children was hypothesized to have a negative influence on men's decision to engage in multiple sexual partnerships with non-marital non-cohabiting partners, but to have a positive effect on consistent condom use. The assumption was that men in such a situation would not want to have more children due to the socioeconomic cost implications. On the other hand, in a female-headed household the woman might engage in multiple sexual partnerships with non-marital non-cohabiting partners for economic survival reasons and therefore might have a high likelihood of not consistently using condoms outside marriage, as she likely would have low bargaining power over the men. This would also lead men to engage in non-marital non-cohabiting sexual partnerships. Youths in female-headed households might also behave differently from those in male-headed households because they would fear a male head more than a female head. This study considers that men from wealthier households might be more likely to have multiple sexual partnerships than their poorer counterparts, as it would be easier for them to find sexual partners other than their wives, using economic advantage (Uchudi et al. 2012).

Exposure to media was deemed to have a dual effect on whether men with high exposure to media would be more likely to engage in sexual relationships with non-marital non-cohabiting partners and/or use condoms consistently, as this might depend upon the type of information and messages received. It is argued that youths as well as adult men who are frequently exposed to pornographic and sexual-related news and information tend to be more likely to engage in multiple sexual partnerships (Uchudi et al. 2012). On the other hand, men with a high level of exposure to advisory news and information on the dangers of engaging in multiple sexual partnerships and to advocacy on the need for consistent condom use would be more likely

avoid multiple sexual relationships and also to use condoms. Therefore, like economic wealth, the influence of exposure to media on men’s risky sexual behavior could be indeterminate.

**Figure 2.1 Conceptual frameworks**



### 2.1.3 Community factors influencing risky sexual behavior among men

Place of residence was thought to exhibit mixed influence on men’s high-risk sexual behavior, and the direction of influence was indeterminate. On one hand, men living in socioeconomically better-off urban areas would likely have a higher risk of engaging in non-marital non-cohabiting sexual partnerships than men in poorer rural areas (Uchudi et al. 2012). On the other hand, urban men would likely have more exposure to information about sexually transmitted infections, including HIV/AIDS, owing to heavy presence of well-equipped health and medical facilities and a variety of media outlets, leading to reduced risks compared with those in rural areas (Silas 2013).

## 2.2 Theoretical Framework

The study attempts to adopt health promotion theories among the people who are vulnerable to adverse health outcomes. Three models—the Lewin Theory of Change, the Health Belief Model, and the Theory of Reasoned Actions—can be used to understand men’s behavior regarding their engagement in non-marital non-cohabiting sexual partnerships and condom use. Based on the study objectives, the Health Belief Model was deemed most appropriate.

The Health Belief Model (HBM) is a theory of behavioral change that can be used to understand how people act when faced with various health-related challenges. The constructs of the HBM include perceived susceptibility, threat and severity, cues to action, modifying factors, perceived benefits and barriers, and self-efficacy. In the context of this study, an individual who feels susceptible to life-threatening sexually transmitted infections will likely change his or her sexual behavior. However, behavior change is dependent



upon modifying factors, which among others include education (knowledge), religion, exposure to media, and other socioeconomic factors such as household wealth and place of residence. Taking action to change behavior entails examination of benefits and barriers as well as self-efficacy. For instance, an individual would likely use condoms with non-marital non-cohabiting sexual partners if the perceived benefits outweighed the negative effects of such an action; and this must be backed by one’s self-confidence to use condoms (Glanz, Rimer and Lewis 2002).

## 2.3 Data

The study employed data from the 2015-16 Malawi Demographic and Health Survey to assess determinants of risky sexual behavior among male youths and adults in Malawi. The MDHS is a nationally representative sample survey that collected information among people of reproductive age on family planning, sexually transmitted infections, and HIV/AIDS, among other topics. The 2015-16 MDHS collected data on reproductive health from women age 15-49 and men age 15-54. This study focused on the 7,478 men who had sex in the last 12 months preceding the survey to study determinants of their engagement in non-marital non-cohabiting sexual partnerships and condom use. Detailed description about the study is available elsewhere (NSO and ICF 2017).

## 2.4 Variables

Table 2.1 presents the variables used in the analysis of determinants of men’s behavior of having non-marital non-cohabiting sexual partners and non-use of condoms, among men in Malawi who had sex in the last 12 months preceding the 2015-16 MDHS. The study defines “youths” as young men age 15-24, and “adults” as men age 25-54.

**Table 2.1 Definitions and measures of the variables**

| <b>Variables</b>                    | <b>Definitions</b>  | <b>Measures</b>  |
|-------------------------------------|---|--|
| <b><i>Dependent variables</i></b>   |   |  |
| Non-marital non-cohabiting partners | Number of sexual partners excluding spouse in last 12 months preceding the DHS survey | Count variable from 0, 1, 2, 3...  |
| Condom Use                          | Condom use during sexual intercourse with non-marital partners                        | 1 = “Yes, used”; 0 = “No, not used condom”   |
| <b><i>Independent variables</i></b> |   |  |
| Education                           | Educational attainment of the respondent  | 0 = No education, 1 = Incomplete primary, 2 = Complete primary, 3 = Incomplete secondary, 4/max = Complete secondary or higher |
| Religion                            | Religious belief of the respondent  | 1 = Catholics, 2 = Protestants (other Christians), 3 = Muslims and Others (no religion, cults and traditionalists)             |
| Number of living children           | Number of children ever born to a woman (age 15-49)                                   | 0 = “0”; 1 = “1 - 3”; 2 = “4+”   |
| Media exposure                      | Access to family planning information in the media                                    | 0 = “Neither on Radio nor TV”; 1 = “Either on Radio or TV”; 2 = “Both on Radio and TV”   |
| Household wealth                    | Wealth status (quintile) of the household   | 1 = “Poorest”; 2 = “Poor”; 3 = “Medium”; 4 = “Rich”; 5 = “Richest”   |
| Sex of household head               | Gender of the household head  | 0 = “Male”; 1 = “Female”   |
| Place of residence                  | Place where the respondent resides  | 1 = “Rural” 2 = “Urban”  |

## 2.5 Statistical Analysis

The study used descriptive statistics, percentages, and frequencies to describe individual, household, and community characteristics of the respondents. Sampling weights were taken into account to adjust for representativeness of the estimates and for non-response. Unadjusted and adjusted regressions were fit for both outcomes. For the outcome of “number of non-marital non-cohabiting partners,” a negative binomial regression was used to examine the associations with the independent variables. A binary logistic regression was used for analyzing determinants of condom use at last sex with a non-marital, non-cohabiting partner among those who have had sex in the last 12 months with this type of partner. Separate models were fit for unmarried and married youth (age 15-24) and adults (age 25-54); therefore, there were four models fit for each outcome. This was performed because of the different distributions these four groups have with respect to the outcomes.

To test the degree of correlations between the variables, pairwise Pearson Correlation was conducted, and a coefficient of less than 0.5 denoted no major correlation between the independent variables, and thus was considered for analysis. Appropriateness of the ordinary Poisson regression was checked for analyzing the count variable ‘number of non-marital non-cohabiting sexual partners’ and significant over-dispersion was found. Hence, negative binomial regression was used instead. Additionally, the model was adjusted for the complex sample design of the 2015-16 MDHS, which collected data using a two-stage sampling method. Data analysis was performed using Stata (v 15.0).

## 3 RESULTS

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### 3.1 Background Characteristics of the Respondents

Table 3.1 presents background characteristics of male youth age 15-24 and adults age 25-54 who had sexual intercourse in the past 12 months preceding the 2015-16 DHS survey in Malawi, by marital status. A total of 5,743 men in the sample had sexual intercourse in the 12 months preceding the survey. About 30% (1,721) were youths and 70% (4,022) were adults. Among the youths 31% were married and 69% were not. By contrast, among the adults only 8% were not married and 92% were married.

By educational attainment, 56% of married youths and 55% of unmarried youths had incomplete primary education, while 33% of married adults and 45% of unmarried adults had incomplete primary education. Among married youths, 11% had attained secondary education and higher versus 15% among unmarried youths. Among married adults, 18% had completed secondary school or higher compared with 34% of unmarried adults. In terms of religious affiliation, a majority of the male respondents were Protestants—66% of married youth and 63% of unmarried youth, and 67% of married adults and 68% of unmarried adults.

A majority of married youth (72%) were in households that had one to three children, while only about 1% of married youth had four or more children. In contrast, 51% of married adults lived in households with four or more children, while 54% of unmarried adults lived in households with no children. In terms of exposure to media, regardless of marital status a majority of both the youths and adults accessed family planning information on either television or radio, at a minimum of 51%. However, only a small proportion of the sample had access to family planning information on both television and radio—from just 7% among married youth to 18% of unmarried adults.

By household wealth, among married youth about 31% were in the poorest household wealth quintile, while 11% were in the richest. In contrast, among married adults 16% were in the poorest household quintile and 27% were in the richest. Among unmarried youths 12% were in the poorest households and 27% were in the richest. Among unmarried adults 14% were in the poorest households and 48% were in the richest.

**Table 3.1 Background characteristics of male youths and adults by marital status among those who had sexual intercourse within the last 12 months preceding the 2015-16 MDHS**

| Variables                        | Youths      |                 | Adults       |                 |
|----------------------------------|-------------|-----------------|--------------|-----------------|
|                                  | Married (%) | Not married (%) | Married (%)  | Not married (%) |
| <b>Educational Attainment</b>    |             |                 |              |                 |
| No education                     | 4.5         | 1.8             | 9.0          | 6.2             |
| Incomplete primary               | 55.7        | 54.5            | 45.2         | 33.2            |
| Complete primary                 | 11.5        | 5.1             | 12.2         | 6.2             |
| Incomplete secondary             | 17.1        | 23.9            | 15.7         | 20.6            |
| Complete secondary and higher    | 11.2        | 14.7            | 18.0         | 33.9            |
| <b>Religious Affiliation</b>     |             |                 |              |                 |
| Catholic                         | 20.3        | 21.6            | 18.4         | 16.1            |
| Protestants                      | 65.8        | 62.9            | 67.1         | 67.8            |
| Muslim and others                | 14.0        | 15.5            | 14.5         | 16.1            |
| <b>Number of Living Children</b> |             |                 |              |                 |
| 0                                | 26.9        | 94.4            | 3.4          | 54.0            |
| 1 – 3                            | 72.2        | 5.7             | 45.9         | 33.5            |
| 4+                               | 1.0         | 0.0             | 50.7         | 12.6            |
| <b>Media Exposure</b>            |             |                 |              |                 |
| Neither on radio nor TV          | 35.7        | 36.8            | 29.5         | 31.2            |
| Either on radio or TV            | 57.5        | 54.0            | 57.1         | 50.9            |
| Both on radio and TV             | 6.8         | 9.2             | 13.4         | 17.9            |
| <b>Household Wealth</b>          |             |                 |              |                 |
| Poorest                          | 30.7        | 12.1            | 16.1         | 13.5            |
| Poor                             | 26.7        | 16.2            | 20.0         | 10.3            |
| Medium                           | 17.8        | 22.4            | 20.5         | 10.7            |
| Rich                             | 14.2        | 22.4            | 20.7         | 17.6            |
| Richest                          | 10.6        | 26.9            | 22.6         | 48.0            |
| <b>Sex of Household Head</b>     |             |                 |              |                 |
| Male                             | 91.0        | 69.9            | 96.3         | 77.2            |
| Female                           | 9.0         | 30.1            | 3.7          | 22.9            |
| <b>Place of Residence</b>        |             |                 |              |                 |
| Urban                            | 9.9         | 17.6            | 17.2         | 38.1            |
| Rural                            | 90.1        | 82.4            | 82.8         | 61.9            |
| <b>Observations</b>              | <b>536</b>  | <b>1,185</b>    | <b>3,695</b> | <b>327</b>      |

Only a small proportion of men reported to be in female-headed households. A relatively larger proportion of unmarried men were in female-headed households, at 30% among youth and 23% among adults, than their married counterparts, at only 9% among youths and 4% among adults. By residential status, 90% and 83% of married youths and adults, respectively, lived in rural communities. Among unmarried men, 82% of youths and 62% of adults resided in rural areas.

### 3.1.1 Condom use among male youths and adults by marital status

Table 3.2 presents percentage distribution of male youths and adults who used condoms during sexual intercourse with a non-marital non-cohabiting partner in the 12 months preceding the MDHS survey in Malawi. Among youths, 93% (1,178) of those who used a condom during sex with such partners were not married, while among adults, 40% (292) were not married. In all, youths constituted 63% (1,263) of the sample that used condoms during sex with non-marital non-cohabiting partners. The table shows that those with incomplete primary education had the highest percentage of condom use among youth (both married and unmarried at around 55%) and among married (43%) youth. For unmarried adults the highest percentage was found for those with secondary or higher level of education.

**Table 3.2 Percent distribution of male youths and adults who used condoms during sex with a non-marital non-cohabiting partner within the 12 months preceding the 2015-16 MDHS**

| Variables   | Youths    |              | Adults     |             |
|---|-----------|--------------|------------|-------------|
|   | Married   | Not married  | Married    | Not married |
|   | (%)       | (%)          | (%)        | (%)         |
| <b>Distribution (%) of male youths and adults who used condoms during sexual intercourse with non-cohabiting partners</b> |           |              |            |             |
| <b>Educational Attainment</b>   |           |              |            |             |
| No education  | 3.7       | 1.2          | 6.6        | 6.1         |
| Incomplete primary  | 54.7      | 54.6         | 43.0       | 28.3        |
| Complete primary  | 9.1       | 5.2          | 13.3       | 5.9         |
| Incomplete secondary  | 20.8      | 24.1         | 16.7       | 22.9        |
| Secondary and higher  | 11.6      | 14.6         | 20.5       | 36.7        |
| <b>Religious Affiliation</b>  |           |              |            |             |
| Catholic  | 23.2      | 21.4         | 15.4       | 15.0        |
| Protestant  | 54.0      | 63.3         | 65.9       | 68.4        |
| Muslims and others  | 22.8      | 15.3         | 18.7       | 16.6        |
| <b>Number of Living Children</b>  |           |              |            |             |
| 0   | 19.8      | 94.8         | 5.3        | 61.2        |
| 1 to 3  | 78.1      | 5.2          | 53.8       | 29.8        |
| 4 and higher  | 2.1       | 0.0          | 41.0       | 9.0         |
| <b>Media Exposure</b>   |           |              |            |             |
| Neither TV nor Radio  | 31.1      | 36.7         | 26.5       | 29.4        |
| Either TV or Radio  | 64.8      | 53.9         | 61.3       | 51.8        |
| Both TV and Radio   | 4.1       | 9.4          | 12.2       | 18.8        |
| <b>Household Wealth</b>   |           |              |            |             |
| Poorest   | 22.2      | 12.1         | 12.2       | 11.0        |
| Poor  | 28.4      | 16.2         | 15.7       | 10.5        |
| Medium  | 18.7      | 22.3         | 20.3       | 9.9         |
| Rich  | 16.7      | 22.4         | 24.8       | 17.6        |
| Richest   | 14.0      | 27.0         | 27.0       | 50.9        |
| <b>Sex of Household Head</b>  |           |              |            |             |
| Male  | 87.4      | 69.9         | 96.3       | 76.7        |
| Female  | 12.6      | 30.1         | 3.7        | 23.3        |
| <b>Place of Residence</b>   |           |              |            |             |
| Urban   | 13.3      | 17.5         | 19.9       | 42.2        |
| Rural   | 86.7      | 82.5         | 80.1       | 57.8        |
| <b>Observations</b>   | <b>85</b> | <b>1,178</b> | <b>436</b> | <b>292</b>  |

## 3.2 Bivariate Analysis Results

### 3.2.1 Determinants of men's engagement in non-marital non-cohabiting sexual partnerships and condom use among youth and adults

Table 3.3 presents results of the unadjusted model estimating factors associated with the number of non-marital non-cohabiting sexual partners the men had. Among male youths age 15-24 who had sex in the past 12 months preceding the MDHS, the major factors significantly associated with increasing relative risk of having a number of non-marital non-cohabiting sexual partners were education, religious affiliation, media exposure, number of living children, sex of the household head, and place of residence. The results reveal that, although similar determinants are significant, the direction of the relationships is the reverse for unmarried youths relative to married youths. Among unmarried adult men age 25-54, almost all determinants, apart from incomplete education, were not significant. The results for married adults were almost similar to the results for married youth.

**Table 3.3 Unadjusted model results estimating determinants of number of non-marital non-cohabiting sexual partnerships among youths and adults by marital status**

Incidence rate ratios for acquisition of non-marital, non-cohabiting sexual partners

| Variables                        | Youths  |           |             |            | Adults  |           |             |           |
|----------------------------------|---------|-----------|-------------|------------|---------|-----------|-------------|-----------|
|                                  | Married |           | Not married |            | Married |           | Not Married |           |
|                                  | (IRR)   | [95% CI]  | (IRR)       | [95% CI]   | (IRR)   | [95% CI]  | (IRR)       | [95% CI]  |
| <b>Educational Attainment</b>    |         |           |             |            |         |           |             |           |
| No education                     | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| Incomplete primary               | 0.2***  | [0.1-2.7] | 1.4*        | [1.1-1.8]  | 0.1***  | [0.1-0.2] | 1.0         | [0.8-1.3] |
| Complete primary                 | 0.2     | [0.1-0.3] | 1.2***      | [1.1-1.3]  | 0.1***  | [0.1-0.2] | 0.9         | [0.7-1.1] |
| Incomplete secondary             | 0.3     | [0.2-0.5] | 1.6*        | [1.1-2.1]  | 0.1***  | [0.1-0.2] | 1.4*        | [1.1-1.8] |
| Secondary and higher             | 0.2     | [0.1-0.4] | 1.2***      | [1.1-1.3]  | 0.2***  | [0.1-0.2] | 1.1         | [1.0-1.2] |
| <b>Religious Affiliation</b>     |         |           |             |            |         |           |             |           |
| Catholic                         | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| Protestant                       | 0.2***  | [0.1-0.2] | 1.2***      | [1.2-1.3]  | 0.1***  | [0.1-0.2] | 1.1         | [1.0-1.2] |
| Muslims and others               | 0.4***  | [0.2-0.7] | 2.4***      | [1.4-4.2]  | 0.2***  | [0.1-0.3] | 1.1         | [0.9-1.4] |
| <b>Media Exposure</b>            |         |           |             |            |         |           |             |           |
| Neither TV nor Radio             | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| Either TV or Radio               | 0.2***  | [0.2-0.3] | 1.3***      | [1.1-1.6]  | 0.2***  | [0.1-0.2] | 1.1         | [1.0-1.3] |
| Both TV and Radio                | 0.1*    | [0.1-0.3] | 1.5*        | [1.1-1.9]  | 0.2***  | [0.1-0.3] | 1.1         | [0.9-1.4] |
| <b>Household Wealth</b>          |         |           |             |            |         |           |             |           |
| Poorest                          | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| Poor                             | 0.2***  | [0.1-0.3] | 1.2***      | [1.1-1.2-] | 0.1***  | [0.1-0.2] | 1.1         | [0.8-1.4] |
| Middle                           | 0.2***  | [0.1-0.4] | 1.2***      | [1.1-1.3]  | 0.1***  | [0.1-0.2] | 1.2         | [0.8-1.7] |
| Rich                             | 0.3***  | [0.1-0.5] | 1.3***      | [1.2-1.6]  | 0.2***  | [0.1-0.3] | 1.2         | [0.9-1.5] |
| Richest                          | 0.2***  | [0.1-0.4] | 1.8***      | [1.2-2.7]  | 0.2***  | [0.1-0.2] | 1.1         | [1.0-1.3] |
| <b>Number of Living Children</b> |         |           |             |            |         |           |             |           |
| 0                                | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| 1 to 3                           | 0.2***  | [0.2-0.3] | 1.4         | [0.9-2.2]  | 0.2***  | [0.8-1.2] | 1.0         | [0.1-0.2] |
| 4 and higher                     | 0.4     | [0.1-1.5] |             |            | 0.1***  | [0.5-1.4] | 0.9         | [0.1-0.2] |
| <b>Sex of Household Head</b>     |         |           |             |            |         |           |             |           |
| Male                             | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| Female                           | 0.3***  | [0.2-0.4] | 1.8*        | [1.2-2.6]  | 0.1***  | [0.1-0.2] | 1.2         | [0.9-1.4] |
| <b>Place of Residence</b>        |         |           |             |            |         |           |             |           |
| Urban                            | 1.0     |           | 1.0         |            | 1.0     |           | 1.0         |           |
| Rural                            | 0.2***  | [0.1-0.3] | 1.3***      | [1.2-1.3]  | 0.1***  | [0.1-0.2] | 1.0         | [0.9-1.2] |

Note: \*p<0.05, \*\*p<0.01, \*\*\*p< 0.001; IRR: incidence risk ratio

Concerning condom use among men with non-marital non-cohabiting sexual partners (Table 3.4), the study found that the models for both married and unmarried male youths and adults had predictors that significantly increased the odds of using condoms during sexual intercourse with non-marital non-cohabiting sexual partners. Based on the analytical results, all the variables except for sex of household head showed some level of significance in all of the groups examined. The unadjusted odds ratios for condom use was not significant by sex of household head for married youth and adults.

**Table 3.4 Unadjusted model results estimating determinants of condom use among the youths and adults with non-marital non-cohabiting partners in Malawi**

| Odds of condom use               |         |            |             |            |         |            |             |            |
|----------------------------------|---------|------------|-------------|------------|---------|------------|-------------|------------|
| Variables                        | Youths  |            |             |            | Adults  |            |             |            |
|                                  | Married |            | Not married |            | Married |            | Not Married |            |
|                                  | (OR)    | [95% CI]   | (OR)        | [95% CI]   | (OR)    | [95% CI]   | (OR)        | [95% CI]   |
| <b>Educational Attainment</b>    |         |            |             |            |         |            |             |            |
| No education                     | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| Incomplete primary               | 4.8***  | [2.3-10.2] | 2.1***      | [1.7-2.6]  | 2.0***  | [1.4-2.8]  | 2.8**       | [1.5-5.3]  |
| Complete primary                 | 2.6     | [0.3-21.4] | 8.9**       | [2.6-3.9]  | 2.6**   | [1.3-5.3]  | 1.1         | [0.4-3.3]  |
| Incomplete secondary             | 2.6     | [0.6-11.8] | 5.5***      | [3.8-8.1]  | 1.9*    | [1.1-3.3]  | 6.4***      | [2.8-14.6] |
| Secondary and higher             | 3.3     | [0.8-13.8] | 5.3***      | [3.2-8.9]  | 10.6*** | [4.7-24.1] | 7.1***      | [3.1-16.0] |
| <b>Religious Affiliation</b>     |         |            |             |            |         |            |             |            |
| Catholic                         | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| Protestant                       | 2.1**   | [1.0-4.4]  | 3.3***      | [2.6-4.1]  | 2.5***  | [1.8-3.4]  | 5.3***      | [3.2-8.8]  |
| Muslims and others               | 5.3**   | [1.6-18.7] | 2.1**       | [1.4-3.3]  | 1.8**   | [1.0-3.2]  | 1.3         | [0.4-2.9]  |
| <b>Media Exposure</b>            |         |            |             |            |         |            |             |            |
| Neither TV nor radio             | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| Either TV or radio               | 5.4***  | [2.7-11.2] | 3.3***      | [2.6-4.2]  | 3.0***  | [2.1-4.2]  | 3.5***      | [2.1-5.9]  |
| Both TV and radio                | 1.9     | [0.3-11.6] | 5.7***      | [2.9-11.2] | 2.3**   | [1.1-4.7]  | 7.1***      | [2.6-19.2] |
| <b>Household Wealth</b>          |         |            |             |            |         |            |             |            |
| Poorest                          | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| Poor                             | 5.9**   | [1.7-20.1] | 2.3***      | [1.6-3.3]  | 2.4**   | [1.1-3.7]  | 1.9         | [0.8-4.5]  |
| Middle                           | 3.1     | [0.8-12.7] | 2.5***      | [1.8-3.5]  | 2.4**   | [1.5-4.0]  | 3.5**       | [1.1-11.7] |
| Rich                             | 11.0**  | [2.1-57.3] | 2.8***      | [2.0-3.9]  | 3.0***  | [1.7-5.2]  | 3.3**       | [1.4-7.3]  |
| Richest                          | 1.5     | [0.3-7.8]  | 5.1***      | [3.4-7.7]  | 3.3***  | [1.9-5.6]  | 7.2***      | [3.7-14.0] |
| <b>Number of Living Children</b> |         |            |             |            |         |            |             |            |
| 0                                | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| 1 to 3                           | 4.4***  | [2.3-8.4]  | 3.1**       | [1.5-6.4]  | 3.0***  | [2.0-4.3]  | 3.6***      | [2.1-6.3]  |
| 4 or higher                      |         |            |             |            | 1.9***  | [1.3-2.8]  | 1.3         | [0.3-4.8]  |
| <b>Sex of Household Head</b>     |         |            |             |            |         |            |             |            |
| Male                             | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| Female                           | 2.5     | [0.5-13.2] | 3.7***      | [2.7-5.1]  | 2.6     | [0.6-10.9] | 4.6***      | [2.2-9.6]  |
| <b>Place of Residence</b>        |         |            |             |            |         |            |             |            |
| Urban                            | 1.0     |            | 1.0         |            | 1.0     |            | 1.0         |            |
| Rural                            | 4.5***  | [2.5-8.0]  | 2.8***      | [2.3-3.3]  | 2.1***  | [1.6-2.8]  | 2.8***      | [1.8-4.3]  |

Note: \*p<0.05, \*\*p<0.01, \*\*\*p< 0.001; OR: odd ratio

### 3.3 Multivariable Analysis Results

#### 3.3.1 Determinants of men's engaging in sex with non-marital non-cohabiting sexual partners among unmarried and married male youths and adults

The study explored the factors associated with male youths and adults in Malawi with the number of non-marital non-cohabiting sexual partnerships they had. Table 3.5 presents negative binomial results of two models fitted for the outcome among unmarried and married youths and adults. Religion and number of children in the household were the key factors associated with the number of non-marital non-cohabiting sexual partnerships for unmarried youths and for married adults. Unmarried Muslim youths and those of "other religious beliefs" had a greater number of non-marital partners compared with Roman Catholics (IRR=2.3; p<0.001). The number of non-marital partners increased by 130% for Muslims and others compared with Catholics. Regarding the number of living children, the study found that unmarried male youths in households with 1-3 children had a significantly higher number of non-marital non-cohabiting sexual partners compared with households with no children (IRR=2.2; p<0.01), implying that the number of non-marital partners among this category was 1.2 times higher than among those in households without

children. For married adult men, the study found that being Protestant or Muslim and others was significantly associated with having a higher number of non-marital non-cohabiting sexual partners compared with Catholics (IRR = 1.4; p<0.05 and IRR = 2.5; p<0.001 respectively). Married adult men in households with four or more children had relatively low odds for number of non-marital non-cohabiting sexual partners compared with their counterparts without children (IRR = 0.3; p< 0.01).

The study found that among unmarried adult men, education and household wealth were the determinants significantly associated with their number of non-marital non-cohabiting sexual partners. The number of non-marital non-cohabiting partners significantly increased by 90% among adult men with incomplete secondary education compared with men with no education (IRR=1.9; p<0.05). By household wealth quintile, unmarried adult men in the rich and richest households, respectively, had significantly higher incidence risk ratios for number of non-marital non-cohabiting sexual partners compared with those in the poorest households (IRR = 1.6; p<0.05). Adult men in the rich (IRR = 1.7; p<0.05) and the richest (IRR = 1.8; p<0.05) household quintiles had significant incidence risk ratios for higher number of non-marital non-cohabiting sexual partners compared with the poorest group.

**Table 3.5 Negative binomial regression results estimating determinants of number of non-marital non-cohabiting sexual partners among youths and adults**

| Incidence risk ratios for number of non-marital, non-cohabiting sexual partners |         |            |             |           |         |           |             |           |
|---|---------|------------|-------------|-----------|---------|-----------|-------------|-----------|
| Variables   | Youths  |            |             |           | Adults  |           |             |           |
|   | Married |            | Not married |           | Married |           | Not married |           |
|   | IRR     | [95% CI]   | IRR         | [95% CI]  | IRR     | [95% CI]  | IRR         | [95% CI]  |
| <b>Educational Attainment</b>   |         |            |             |           |         |           |             |           |
| No education  | 1.0     |            | 1.0         |           | 1.0     |           | 1.0         |           |
| Incomplete primary  | 1.5     | [0.6-3.7]  | 1.0         | [0.6-1.8] | 0.9     | [0.5-1.8] | 1.5         | [0.9-2.4] |
| Complete primary  | 1.1     | [0.4-3.5]  | 1.2         | [0.7-2.2] | 1.0     | [0.5-2.0] | 1.0         | [0.5-1.9] |
| Incomplete secondary  | 1.7     | [0.6-5.0]  | 1.0         | [0.6-1.9] | 0.8     | [0.4-1.7] | 1.9*        | [1.1-3.2] |
| Secondary and higher  | 1.2     | [0.4-3.9]  | 1.1         | [0.6-2.0] | 0.8     | [0.4-1.6] | 1.3         | [0.8-2.0] |
| <b>Religious Affiliation</b>  |         |            |             |           |         |           |             |           |
| Catholic  | 1.0     |            | 1.0         |           | 1.0     |           | 1.0         |           |
| Protestant  | 0.8     | [0.4-1.3]  | 1.0         | [0.8-1.1] | 1.4*    | [1.0-2.0] | 0.8         | [0.6-1.2] |
| Muslims and others  | 2.1     | [1.0-4.4]  | 2.3***      | [1.5-3.4] | 2.5***  | [1.5-4.0] | 1.4         | [0.9-2.2] |
| <b>Media Exposure</b>   |         |            |             |           |         |           |             |           |
| Neither TV nor radio  | 1.0     |            | 1.0         |           | 1.0     |           | 1.0         |           |
| Either TV or radio  | 1.4     | [0.9-2.3]  | 1.1         | [0.9-1.4] | 1.3     | [0.9-1.7] | 1.2         | [0.9-1.6] |
| Both TV and radio   | 0.7     | [0.2-1.8]  | 1.1         | [0.7-1.5] | 1.2     | [0.7-2.1] | 1.0         | [0.7-1.4] |
| <b>Household Wealth</b>   |         |            |             |           |         |           |             |           |
| Poorest   |         |            |             |           |         |           |             |           |
| Poor  | 1.1     | [0.6-2.1]  | 1.1         | [0.8-1.4] | 1.1     | [0.6-1.7] | 1.4         | [0.9-2.3] |
| Middle  | 1.3     | [0.6-2.9]  | 1.2         | [0.9-1.5] | 1.2     | [0.8-1.9] | 1.2         | [0.7-2.0] |
| Rich  | 1.9     | [0.8-4.3]  | 1.2         | [0.8-1.6] | 1.7*    | [1.0-2.7] | 1.6*        | [1.0-2.5] |
| Richest   | 1.6     | [0.6-4.0]  | 1.3         | [0.8-1.9] | 1.8*    | [1.1-3.1] | 1.6*        | [1.1-2.5] |
| <b>Number of Living Children</b>  |         |            |             |           |         |           |             |           |
| 0   | 1.0     |            | 1.0         |           | 1.0     |           | 1.0         |           |
| 1 to 3  | 1.6     | [0.9-2.7]  | 2.2**       | [1.3-3.5] | 0.6     | [0.3-1.2] | 0.9         | [0.7-1.2] |
| 4 and higher  | 2.6     | [0.4-16.8] | -           |           | 0.3**   | [0.1-0.7] | 0.9         | [0.5-1.5] |
| <b>Sex of the Household Head</b>  |         |            |             |           |         |           |             |           |
| Male  | 1.0     |            | 1.0         |           | 1.0     |           | 1.0         |           |
| Female  | 1.4     | [0.7-2.7]  | 1.2         | [1.0-1.6] | 0.9     | [0.5-1.5] | 1.1         | [0.8-1.4] |
| <b>Place of Residence</b>   |         |            |             |           |         |           |             |           |
| Urban   | 1.0     |            | 1.0         |           | 1.0     |           | 1.0         |           |
| Rural   | 1.0     | [0.5-2.2]  | 0.9         | [0.6-1.2] | 1.1     | [0.7-1.8] | 0.8         | [0.6-1.1] |
| <b>Observations</b>   | 541     |            | 2,685       |           | 3,743   |           | 509         |           |

Note: \*p<0.05; \*\* p<0.01; \*\*\*p<0.001; IRR= incident risk ratio



There were no significant factors among married male youth associated with their likelihood of having multiple non-marital non-cohabiting sexual partners.

### 3.3.2 Determinants of condom use with non-marital non-cohabiting sexual partners among male youths and adults in Malawi

Table 3.6 presents results of logistic regression analysis on the determinants of condom use during sexual intercourse with non-marital non-cohabiting partners among unmarried and married male youths and adults in the 12 months preceding the 2015-16 Malawi DHS.

**Table 3.6 Logistic regression results estimating factors influencing condom use among unmarried and married youths and adults**

| Odds of condom use               |         |              |             |            |         |            |             |            |
|----------------------------------|---------|--------------|-------------|------------|---------|------------|-------------|------------|
| Variables                        | Youths  |              |             |            | Adults  |            |             |            |
|                                  | Married |              | Not Married |            | Married |            | Not married |            |
|                                  | OR      | [95% CI]     | OR          | [95% CI]   | OR      | [95% CI]   | OR          | [95% CI]   |
| <b>Educational Attainment</b>    |         |              |             |            |         |            |             |            |
| No education (R)                 | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| Incomplete primary               | 5.9     | [0.1-354.7]  | 1.7         | [0.5-5.5]  | 2.2     | [0.8-6.0]  | 3.5         | [0.6-19.2] |
| Complete primary                 | 27.0    | [0.5-1334.2] | 6.5*        | [1.3-34.2] | 2.7     | [0.8-8.9]  | 1.2         | [0.2-9.2]  |
| Incomplete secondary             | 4.7     | [0.1-485.7]  | 3.7*        | [1.1-12.1] | 1.8     | [0.6-5.1]  | 4.7         | [0.5-47.4] |
| Secondary and higher             | 2.7     | [0.0-334.3]  | 3.2         | [0.9-11.0] | 11.7*** | [3.1-44.2] | 4.2         | [0.4-39.0] |
| <b>Religion Affiliation</b>      |         |              |             |            |         |            |             |            |
| Catholic (R)                     | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| Protestant                       | 0.1*    | [0.0-0.6]    | 1.0         | [0.7-1.5]  | 0.9     | [0.4-1.9]  | 1.4         | [0.6-3.6]  |
| Muslims and others               | 0.2     | [0.0-2.7]    | 0.7         | [0.4-1.3]  | 0.8     | [0.3-1.9]  | 0.5         | [0.1-2.2]  |
| <b>Exposure to Media</b>         |         |              |             |            |         |            |             |            |
| Neither TV nor radio (R)         | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| Either TV or radio               | 2.5     | [0.7-8.9]    | 1.1         | [0.8-1.6]  | 2.1*    | [1.1-3.9]  | 1.0         | [0.4-2.2]  |
| Both TV and radio                | 0.5     | [0.0-9.9]    | 1.4         | [0.6-2.9]  | 0.7     | [0.3-1.8]  | 0.9         | [0.3-2.8]  |
| <b>Household Wealth</b>          |         |              |             |            |         |            |             |            |
| Poorest (R)                      | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| Poor                             | 1.3     | [0.2-7.4]    | 0.7         | [0.4-1.3]  | 1.7     | [0.6-4.7]  | 1.2         | [0.3-4.6]  |
| Medium                           | 1.0     | [0.2-6.3]    | 0.8         | [0.5-1.4]  | 2.1     | [0.9-5.0]  | 2.7         | [0.6-11.2] |
| Rich                             | 16.8    | [0.2-1474.1] | 0.8         | [0.4-1.4]  | 2.0     | [0.8-4.8]  | 2.2         | [0.5-9.3]  |
| Richest                          | 1.6     | [0.1-25.9]   | 1.1         | [0.5-2.2]  | 1.3     | [0.5-3.5]  | 2.3         | [0.5-10.9] |
| <b>Number of Living Children</b> |         |              |             |            |         |            |             |            |
| 0 (R)                            | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| 1 to 3                           | 2.8     | [0.6-12.5]   | 1.0         | [0.4-2.3]  | 3.5*    | [1.0-12.4] | 0.8         | [0.3-1.7]  |
| 4 and higher                     | -       | -            | -           |            | 2.1     | [0.6-7.6]  | 0.4         | [0.1-2.1]  |
| <b>Sex of Household Head</b>     |         |              |             |            |         |            |             |            |
| Male (R)                         | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| Female                           | 0.3     | [0.0-2.3]    | 1.4         | [0.9-2.1]  | 1.8     | [0.4-7.8]  | 1.6         | [0.6-4.5]  |
| <b>Place of Residence</b>        |         |              |             |            |         |            |             |            |
| Urban (R)                        | 1.0     |              | 1.0         |            | 1.0     |            | 1.0         |            |
| Rural                            | 4.8     | [0.5-47.8]   | 0.9         | [0.4-1.6]  | 0.5     | [0.2-1.1]  | 0.8         | [0.3-1.8]  |
| <b>Observations</b>              | 85      |              | 1,178       |            | 436     |            | 292         |            |

Note: \*p<0.05, \*\* p<0.01, \*\*\* p<0.001; OR=odds ratio

The results show that unmarried youths who had completed primary school education and higher were more likely than those with no education to use condoms with a non-marital non-cohabiting sexual partner. The odds of condom use during sexual intercourse with non-marital non-cohabiting partners were significantly higher among unmarried youths who had completed primary school education (OR = 6.5, p<0.05) and those with incomplete secondary education (OR = 3.7; p<0.05) compared with those with no education. However, by religious affiliation, Protestant married youths had lower odds of condom use with a non-marital non-

cohabiting partner relative to their Catholic counterparts (OR = 0.1,  $p < 0.05$ ), implying that Protestant youths were about 90% less likely to use condoms during sex with a non-marital non-cohabiting partner.

Among adults, factors significantly associated with condom use were found only among married men. Such determinants included education, exposure to media, and number of living children. Married men who had completed secondary education and higher had greater odds of condom use with a non-marital non-cohabiting partner compared with those who had no education (OR=11.7;  $p < 0.001$ ). The study also revealed that married adult men who were exposed to family planning information on either television or radio had increased odds of condom use with a non-cohabiting partner (OR=2.1;  $p < 0.05$ ). The results also show that married male adults with one to three living children had 3.5 times greater odds of condom use with a non-marital non-cohabiting partner compared with married male adults with no children (OR=3.5;  $p < 0.05$ ).

## 4 DISCUSSION

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The study identified various factors that influence the behavior of married and unmarried youths age 15-24 and adults age 25-54 in Malawi concerning non-marital non-cohabiting sexual partners. The study also found factors associated with condom use during sexual intercourse with non-cohabiting sexual partners.

By religious affiliation, the study revealed that male Muslim youths and those of other undefined religions were generally associated with having a greater number of non-marital and non-cohabiting sexual partners compared with Protestant and Catholic youths respectively. Related studies have found that, on the contrary, Muslim youths were less likely to behave in a risky manner on sexual matters compared with Christian youths (Coleman and Testa 2008). Such contradictions could be attributed to diverse cultural beliefs at household and community levels that tend to exacerbate sexual and reproductive behavioral choices among youths (Tenkorang et al. 2011; Coleman and Testa 2008). Among adult men, the study found that both Protestants and Muslims and others who were married were more likely to have multiple non-marital non-cohabiting sexual partners compared with Catholics. This implies that issues of male infidelity in marriage cut across religions. Therefore, this finding renders it difficult to pinpoint one religion as a single major culprit associated with risky sexual behavior over other religions in Malawi. Nevertheless, the fact that among male youths both unmarried and married Muslims and the “other” religious groupings were found to exhibit increased relative risk to engage in non-marital non-cohabiting sexual partnerships implies that something must be done to counter the behavior among the Muslim youths relative to those affiliated with Christian religious beliefs. Indeed, the unique behavior of people with different religious beliefs towards sexual matters could be attributed to their differential belief systems and frameworks at household and community levels among the varying religious affiliations (Mahoney et al. 2008; Mahoney et al. 2010) and sexual experiences (Exavery et al. 2011; Takyi 2003).

On the number of living children, the study noted that adult married men who had four or more children were significantly less likely to have had a number of non-marital non-cohabiting sexual partnerships compared with their counterparts in households with no children. This could be explained by the fact that with more children comes increased social and economic responsibility and household obligations related to child care, which eventually leads men to change their sexual behavior toward family care with one sexual partner. On the contrary, among unmarried youth age 15-24 the study found that those with 1-3 living children had a higher incidence risk in the number of non-marital non-cohabiting partners they had than their counterparts in households with no children. This finding is supported by Adu-Mireku (2003), who observed that the family is a fundamental primary agent of socialization that has a direct influence on the sexual behavior of youth, especially those who are not married and are still resident within the household. Lack of commitment and reduced sense of responsibility that tends to be common among unmarried male youths in community settings could be associated with this finding. Compared with married men in Malawi, most unmarried men who have children generally tend to leave the responsibility of child care in the hands of the children’s mother.

Regarding determinants of condom use in Malawi, the study revealed that condom use was significantly higher among unmarried male youths who completed primary education but did not complete secondary education than among male youth with no education. This implies that education can play a crucial role in informing society against contracting sexually transmitted infections. It is evident that among people who

can read and write, the chances of using condoms with non-cohabiting sexual partners could be improved. The study further showed that condom use among youth in Malawi was significantly lower for married Protestants than their Catholic counterparts. This implies that many married young Protestant men have a serious high-risk lifestyle with regard to sexual behavior. Such differential behavioral patterns among people could be attributed to cultural practices and religious beliefs, which affect their choices in seeking and using preventive health products such as condoms.

Concerning adult men, this study observed that those who were married and had attained secondary and higher education had increased odds of using condoms with non-cohabiting sexual partners compared with married adults with no education. This is attributed to the fact that higher education improves one's knowledge and level of understanding. Facilitated within school settings, higher education also enhances people's exposure to various modes of information about sex and sexual behaviors, which in the long term have a significant impact on improving use of condoms among men (Garofalo et al. 1998). In a related study, Akwor and Olaseha (2010) pointed out that, if they were well informed, men with more formal education tended to be more likely to possess positive health-seeking behaviors, including increased use of condoms. In line with education, the study also found that male adults who were exposed to and accessed sexual and reproductive health information on television or radio were more likely to understand the communicated messages and to use condoms during sex with non-cohabiting partners compared with those with neither radio nor television exposure. This indicates that effective multi-media reproductive health campaigns could have a significant impact on preventing irrational sexual behavior (Bessinger et al. 2004). Media exposure becomes more effective if targeted programs are consistently scheduled to inform society about the consequences of risky sexual practices toward one's health (Shapiro et al. 2003).

In the discussion on men's engagement with non-marital non-cohabiting sexual partners, the study indicated that married male adults with four or more children had significantly decreased incidence risk to have non-marital non-cohabiting sexual partners. Related to this, on condom use, the study found that married adult men with 1-3 children had significant positive odds to use condoms with non-marital non-cohabiting sexual partners. As already stated, some married men would be mindful of the expanded roles and responsibilities that arise with more children in the household. Such men would therefore be eager to use condoms with non-cohabiting sexual partners to avoid contracting sexually transmitted infections and the risk of getting implicated in extra-marital pregnancies, and to shun the financial burdens associated with maintenance of extra-marital non-cohabiting sexual partnerships.

## 5 CONCLUSIONS

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Using data from the 2015-16 Malawi Demographic and Health Survey, this study identified the determinants of risky sexual behavior among men in Malawi. The study found that regardless of the interventions aimed at promoting good sexual and reproductive health behavior, a significant number of men, both youths and adults, engage in non-marital non-cohabiting sexual partnerships across the country. The study has shown that among men in Malawi, education, religion, media exposure, and number of living children were significantly associated with men's engagement with non-marital non-cohabiting sexual partners.

Formal educational attainment has been found to be a significant determinant of reducing risky sexual behavior involving men's engagement with non-marital non-cohabiting sexual partnerships in Malawi. Education was also found to positively influence men's behavior with regard to use of condoms during sex with non-marital non-cohabiting sexual partners. Religious affiliation has been found to be significantly associated with men's likelihood of having non-marital non-cohabiting sexual partnerships in general, and also associated with reduced condom use among married youths. Furthermore, it can be concluded that access to family planning information on either television or radio could influence adult men to minimize risky sexual behavior. Therefore, this study asserts that extensive pro-men sexual and reproductive health educational campaigns to tackle key sexual reproductive topics would facilitate behavioral change among men in Malawi. It is envisaged that successful implementation of such campaigns would reduce vulnerability to sexually transmitted infections, and this would, in the medium-to-long term, contribute to improved socioeconomic development of communities and the nation as a whole.



## 6 POLICY RECOMMENDATIONS

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Considering the fact that the male youth have been engaged in non-marital non-cohabiting sexual partnerships, there is need for Malawi to promote campaigns that will help to prevent men from initiating sex at a young age. Such campaigns would have the potential of helping young men to improve their sexual and reproductive health-seeking behavior and could reap significant health dividends for the socioeconomic development of the country.

The study also advocates for the promotion of sexual and reproductive health education among men through a diversity of avenues, including religious institutions, where large numbers of people gather regularly at one place. This could be implemented using a community-based approach in which the danger of engaging in non-marital non-cohabiting sexual partnerships would be thoroughly addressed across age groups, including both youths and adults.

Acknowledging that this study targeted men only, it is imperative for the country to institute community-based sexual reproductive health programs and campaigns, which would promote modern knowledge of sexual and reproductive behavior among men. The country would likely gain from such initiatives by improving the level of health among its citizens and increasing the productive capacity of men to contribute positively toward Malawi's socioeconomic development.





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