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**Relationship Between Access to Reproductive Health Information  
and Risky Sexual Behaviour Among Secondary School Adolescents  
in Kiambu County, Kenya**

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## Relationship Between Access to Reproductive Health Information and Risky Sexual Behaviour Among Secondary School Adolescents in Kiambu County, Kenya

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### Abstract

**Purpose:** The study aimed to determine the relationship between access to reproductive health information and risky sexual behaviour among secondary school adolescents in Kiambu County, Kenya.

**Methodology:** This was a descriptive cross-sectional study. The study targeted 7002 adolescent students from all the 13 public secondary schools in Thika West Sub-County. The following schools were selected Chania girls' boarding school; Chania boys' boarding school and Broadway mixed day school. Thus, specifically, the study targeted 2047 students. Fisher's formula was used to arrive at 364 respondents which 10% was added to cater for attrition. This gave a sample of 400. Stratified sampling techniques was adopted in selecting participating schools to allocate the sample in the respective strata. The study sampled 400-students, their guidance and counselling teachers as the key informants. The researcher administered questionnaires, interview schedules (KII) and focus group discussions (FGD) were used in data collection. Descriptive statistics such as mean, mode and percentages, and inferential statistics such as chi-square and binary logistic regression were applied. P-value  $\leq 0.05$  was considered statistically significant.

**Results:** Results revealed that the majority of the adolescent students were aware of contraceptives n=220 (64.7%), safe sex n=284 (83.5%) HIV/AIDS and STIs. The main source of information was found to be from parents and social media (n=172, 50.6%) and mass media as well as religious leaders (n=48, 14.1%). Majority of the students n=228 (67.1%) considered the availability of reproductive health information less easy, n=152 (44.7%) found the age-appropriate reproductive information helpful Majority of the students n=288 (84.7%) found age-appropriate reproductive information easy to understand, while n=192 (56.5%) found age-appropriate reproductive information easy to apply. Culture, religion and Poverty were also found to have a great and significant influence on age-appropriate reproductive health information. The study concluded that secondary school adolescents in Thika West Sub-County were aware of the contraceptives, safe sex and HIV/Aids and STIs, but the majority had a first sexual encounter at the age of 15 years

and though they preferred reproductive information from sources they relied on such as their parents, teachers and social environment, what they received from such was minimal. While culture, religious affiliation and economic status greatly influenced their access to age-appropriate reproductive health information.

**Unique contribution to theory, policy and practice:** The study recommends that policymakers should enhance on programmes that advocate for age-appropriate reproductive information through the engagement of all stakeholders like parents' teachers religious and community leaders, who should be sensitized and in training to provide this information as early as six years of age through all stages of life. Adolescents should be imparted with age-appropriate reproductive information at the early stages of life before they start experiencing biological changes so that they can be in control of the changes.

**Keywords:** *Level of awareness, sources, perception, reproductive health information, risky sexual behaviour, secondary school adolescents*

## 1.0 INTRODUCTION

Risky sexual behaviour refers to the acts of involvement in unprotected sexual intercourse, multiple partner's sexual indulgences under influence of substance abuse or an early age sexual initiation (Horowitz, 2019). Age-appropriate reproductive health information is the provision of information relating to body development, sexuality and relationships in all developmental stages, along with skills-building, to help young people communicate, and make informed decisions about sexuality and their sexual health. The information should be appropriate for individual development and cultural background (UNESCO, 2015; CDC, 2013). Significant literature shows that adolescents are faced with exceptional reproductive health challenges (Kipping *et al.*, 2014). The developmental changes they experience influence them to increased risk of unintended pregnancy and contracting HIV/STIs (Ikamari, Izugbara & Ochako, 2013). Worldwide, sixty out of every one thousand female adolescents conceive each year, with up to 4.4 million girls aged fifteen to nineteen undertaking unsafe abortions (WHO, 2012). Adolescents engage in early premarital sex and risky sexual behaviour due to lack of negotiation skills makes them give in to coercion, exposing them to risks of induced abortion under unsafe conditions and sexually transmitted infections including HIV (Bendavid, 2011; UNICEF, 2013).

In Kenya, premarital sex starts early, with first sex debut being at 15 years, yet many do not have adequate knowledge on HIV transmission and prevention (UNESCO, 2013). About 40% of unmarried 15-24-year-old girls have had sexual intercourse, 14% were sexually active and 13,000 high school female adolescents were leaving school every year due to pregnancy. Thika West sub-county was reported to have increased cases of unintended pregnancies, pregnancy-related school dropouts, and spread of STIs, which otherwise could have been prevented through the provision of age-appropriate reproductive health information (NAS COP, 2016). In view of these reproductive health challenges among in-school adolescents, the study assessed the relationship between the availability of reproductive health information and risky behaviour among adolescents in Thika West Sub- County, Kiambu County.

### **1.1 Statement of the problem**

Most adolescents are initiated to sex early, indulge in unprotected sexual activity and engage in sex with multiple partners before receiving adequate information on potential risks (UNESCO, 2013). The move from cultural practices to modernization in Kenya has denied young people informal education systems through which adults imparted sexuality matters (Misati, 2015). The formal education system moved the roles of teaching and enlightening adolescents from the society to the teachers, who might not be trained adequately on skills and extent of sexuality education (Sidze *et al.*, 2017). Hence, adolescents rely on peers and social media for reproductive health information, which is at times inaccurate and limited in scope (Abdullahi & Abdulquadri, 2018). Adults and health providers' attitudes towards unmarried adolescents seeking reproductive health information influence adolescents' perception of reproductive health information (Gordia *et al.*, 2014). Risky sexual behaviours are associated with social-economic factors, making them vulnerable to early sex activities, multiple sexual partners, unprotected sex and mixed-age sexual practices (Kamangu *et al.*, 2017).

In a statement released by one of the high school principals, a total of 7 and 10 students sat for their Kenya Certificate of Secondary Education (KCSE) while pregnant in 2015, 2016 respectively. In her report, poverty and vulnerable backgrounds reportedly contributed to early sex with elderly men who provided economically to the girls (King'ang'i, 2017). Her words were reinforced by then -sub-county director Mr Ronald Mbogo who reported that;” *There is a rise in the number of students dropping out of school to get married to men financing their education*” (Ngare & Ayodo, 2017).

In 2015, Kiambu County contributed to 7.1% of new HIV cases in Kenya, out of which 8% were adolescents aged 10-19 years. There is a high rate of school dropouts related to teenage pregnancy; the spread of STIs in Thika sub-county in comparison to other sub-counties in Kiambu County (NASCO, 2016). Empirically, it has been noted that there is scanty research shedding light on the problem especially in the context provided. This was therefore designed to determine the relationship between the accessibility of reproductive health information and risky sexual behaviour among adolescents in Thika sub-county, Kiambu County.

### **1.2 Purpose of the study**

The main purpose of this study was to determine the relationship between access to reproductive health information and risky sexual behaviour among secondary school adolescents in Kiambu County, Kenya. The following specific objectives guided the study:

- i. To determine the relationship between the level of awareness and reproductive health information and risky sexual behaviour among adolescents in Thika West Sub-County, Kiambu County.
- ii. To determine the influence of sources of reproductive health information and risky sexual behaviour among secondary school adolescents in Thika West Sub-County, Kiambu County.
- iii. To assess adolescent perception on reproductive health information and risky sexual behaviour among secondary school adolescents in Thika West Sub-County, Kiambu County.

- iv. To determine the influence of social-cultural constraints on access to age reproductive health information with reference to the prevalence of risky sexual behaviour among secondary school adolescents in Thika West Sub-County, Kiambu County.

### **1.3 Research questions**

- i. What is the relationship between awareness on reproductive health information and risky sexual behaviour among secondary school adolescents in Thika West Sub-County, Kiambu County?
- ii. What is the influence of perceived benefits/usefulness of reproductive health information on risky sexual behaviour among secondary school adolescents in Thika West Sub-County, Kiambu County?
- iii. What is the adolescent perception of reproductive health information on risky sexual behaviour among secondary schools in Thika West Sub-County, Kiambu County?
- iv. What is the influence of social-cultural factors on accessing age reproductive health information with reference to risky sexual behaviour among secondary school adolescents in Thika West Sub-County, Kiambu County?

## **2.0 LITERATURE REVIEW**

### **2.1 Level of awareness and reproductive health information**

Age-appropriate reproductive health information is an essential step in enabling adolescents to practice safe sex. Adolescents who had no access to reproductive health information were less likely to seek or utilize reproductive health services (Banister *et al.*, 2011; Nove *et al.*, 2014). A conducive environment positively influences adolescents' knowledge, attitude, perceptions, and skills on reproductive health, thus reducing their risky sexual behaviour, increases access and use of sexual and reproductive health services (Svanemyr *et al.*, 2015). In the USA, adolescents aged 15-19 years, who had received comprehensive sex education, were 50% less likely to experience pregnancy (Durowade *et al.*, 2017) than those who received abstinence-only-until-marriage programs. Saracoglu *et al.* (2014) found that 3.6% of adolescents were sexually active from the age of 15 years with male adolescents being more knowledgeable than females about sexual health matters, but were less concerned over contracting STIs. In Ethiopia Adinew *et al.* (2013) reported that knowledge on puberty, reproductive health, sexuality and consequences of sexual and reproductive health behaviour enhances responsible decision-making and resistance to peer pressure. The level of knowledge was also low among adolescents. In Kenya, the majority of adolescents are sexually active and with inadequate information on sexual matters (Njoroge *et al.*, 2010; MOH, 2016; KDHS, 2014). They engage in high-risk sexual behaviour including having affair with many partners but have low and inconsistent use of condoms (Njoroge *et al.*, 2010; Chio & Mishra, 2009).



## **2.2 Sources of information on sexual and reproductive health among adolescents**

Globally, most adolescents are initiated to sex early and indulge in unprotected sexual activity before receiving adequate information on potential risks (USAID, 2012; Abdullahi & Abdulquadri, 2018). According to UNESCO (2013) and UNESCO (2015), young people require age-appropriate reproductive and sexual information targeted to their particular needs in all stages of development. Adolescents' sexual health education is an international, regional and national priority that it should be integrated into school curriculums and other ministries activities (UNESCO, 2013; Banister *et al.*, 2011). In Sub Saharan Africa, parent-child communication has remained a challenge as most traditional communities prohibit free sexual communication (Kamangu *et al.*, 2017). Social norms significantly controlled sexuality and plays a big role in shaping adolescents sexual behaviour (UNICEF, 2012; Tesfaye, 2014). Though teachers are expected to provide sexuality education in school, many lack training skills on sexual issues and are embarrassed to have open discussions on sexual matters with the adolescent (APHRC, 2017). This prevents effective communication and so adolescents, discuss their reproductive challenges with their peers who may be misinformed. Source of information significantly influences sexual behaviour (Kajula *et al.*, 2011). Studies in Ethiopia shows those adolescents who received sexual information from parents' practised safer sex than those who sought information from peers (Tefaye *et al.*, 2014). Adolescents today spend much of their time watching and interacting with the media. However, media and internet have significant influence, with both constructive and antagonistic information on adolescents (Victor *et al.*, 2010; Farzaneh *et al.*, 2011).

## **2.3 Perception of information on reproductive health among adolescents**

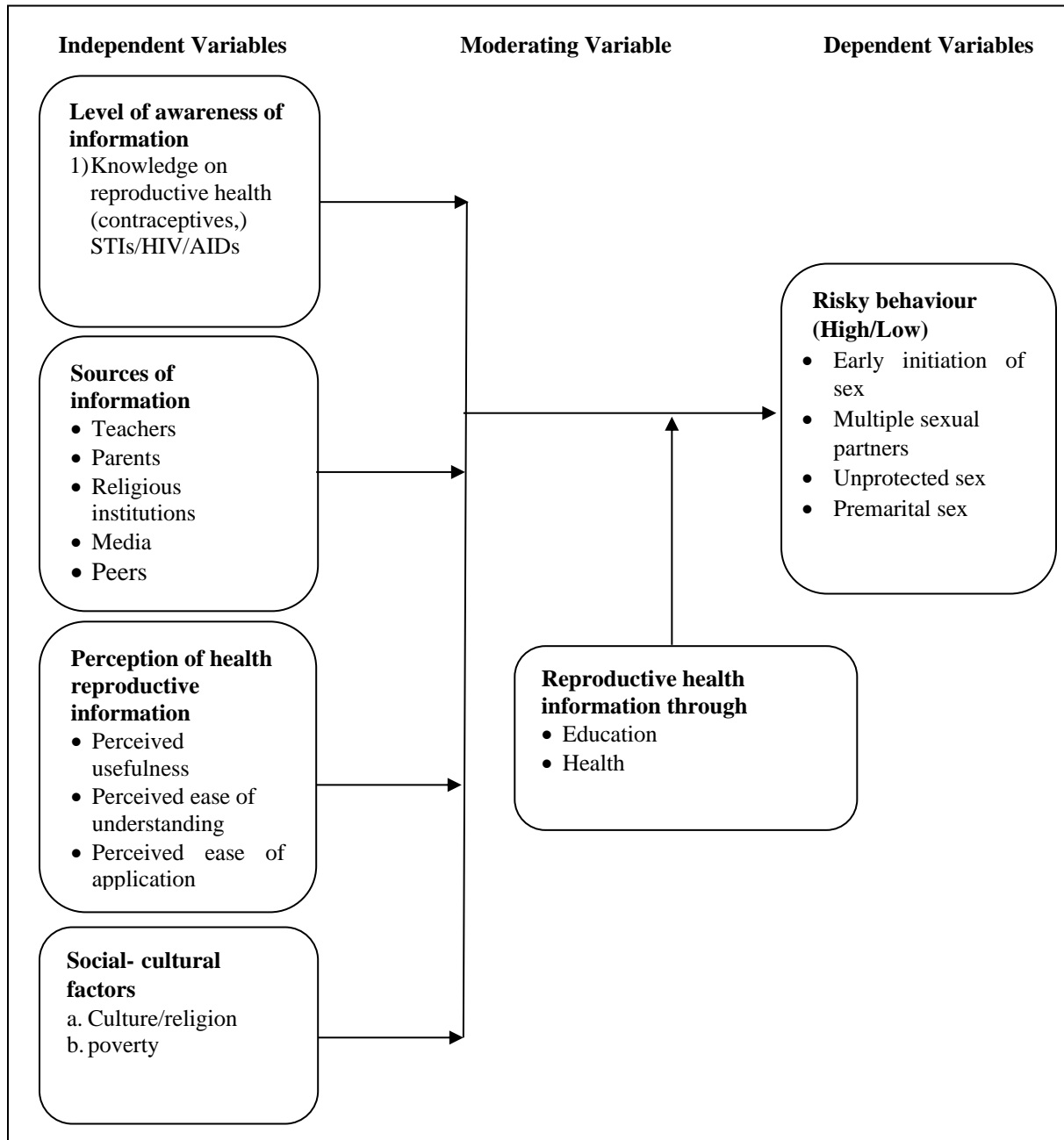
In this study, the deduction may be that perceptions would influence the adolescents' everyday experiences and determine their sexual behaviour in relation to age-appropriate reproductive health information (Houck & Brown, 2014). According to a study done in the United States of America (USA) by Lindberg *et al.* (2016), adolescents portrayed negative attitudes and perceptions on reproductive health information and services attributed to lack of appropriate information from the parents and the health service providers who handled them suspiciously. In Botswana, adolescents desired to seek information on reproductive health, but they perceived service providers who portrayed negative attitude towards the unmarried adolescents as barriers to quality age-appropriate reproductive health information (Lesedi *et al.*, 2011). In Nigeria, a review of information and reproductive health services and perception among adolescents indicated that the most regularly reproductive issues reported were menstrual-related distress, undesirable pregnancy, HIV/AIDs and absence of adequate sex education (Omubuwa *et al.*, 2012). In Kenya, KPSA (2013) established that the majority of health providers were not aware of adolescents' friendly services nor supported national strategy and guidelines to adolescent sexual and reproductive health. According to reports by Gordia *et al.* (2012) and the government of Kenya (2013) on Kenya Population Situation Analysis, it was revealed that health service providers imposed their attitudes, social and religious constraints rather than to consider desired adolescent rights of accessing and acquiring age-appropriate reproductive health information. Most schools lacked health office and the few with centres had deficient staff medications. This discouraged adolescents from seeking and obtaining timely age-appropriate reproductive health information. (UNESCO, 2015).

## **2.4 Social-cultural factors influencing reproductive health information**

Norms, culture, taboo, religion and economic status in a few social orders are among obstacles to provision and utilization of reproductive health information among adolescents. Religion plays a significant role as adolescents associated their delay in premarital sex to religious beliefs unlike those who were sexually active (Hussain, 2012). Some religious groups like Protestants support the teaching of reproductive health information to young people (Arousell & Carbom, 2015), while others like the Catholic Church and numerous Islamic pioneers contradict any approach and program components related to sex education (Smith *et al.*, 2007). These may make adolescents have little information that would make them have control over their sexual life so they can avoid engaging in risky sexual behaviour. In Africa, the area of settlement influenced early sexual debut. Adolescents living in slums, which are normally congested, reported having early sexual debut compared to those who lived in better and uncongested estates (Robinson & Yeh, 2011). Individuals living in slum areas reported insufficiency of sexual information and peer emotional attachments and relationships influenced risky sexual behaviour (Ali & Dwer, 2011; Markham *et al.*, 2010). In Kenya, many communities perceive that boys cannot control their sexual urge (Ministry of Education, 2010). A study done in Nairobi, among teen boys and girls in public secondary schools indicated that; 11% of young girls and 50% of young boys were sexually active (Vught, et al., 2016). The study also revealed that these adolescents had sexual affair with more than one partner. This level of sexual exposure related to perceived parental religiosity, attitude on sex, and living arrangements.

## **2.5 Conceptual framework**

A conceptual framework is a diagrammatic representation of variables in order to show their existing relationships (Casanave & Li, 2015). The dependent variable is the risky behaviour that is early sexual initiation, sexual intercourse with many partners, and unprotected sex. The independent variables in this study as shown in Figure 1.1 below are the level of awareness, sources of information, perception, and social-cultural factors influencing the accessibility to reproductive health information.



**Figure 1: Conceptual Framework**

**Source: Adapted from Mekonnen (2015), Modified by Peris Mureithi (2019).**



## **2.6 Summary and gaps identified**

Reproductive health information is critical in preventing risky sexual behaviour. Lack of comprehensive, accurate and adequate reproductive health information increased the likelihood of risky sexual behaviour while access to the information enhanced risk reduction strategies. Conceptually, the reviewed studies showed inconsistent results regarding the influence of awareness, sources, perception and social-cultural factors in relation to reproductive information and risky sexual behaviour. Therefore, there was a need for further study to address these concerns. Identification of the relationship between reproductive health information and risky sex is an important factor in enhancing reproductive health information aimed at preventing risky sexual behaviour. Besides this, limited studies are conducted in this area of the geographical scope of the current study. Coupled with these inconsistencies and in conclusions, the current study seeks to fill the conceptual and contextual gaps by carrying out a study on the relationship between access to reproductive information and risky sexual behaviour among secondary school adolescents in Thika west sub-county, Kiambu county.

## **3.0 RESEARCH METHODOLOGY**

This was a descriptive cross-sectional study. The study targeted 7002 adolescent students from all the 13 public secondary schools in Thika West Sub-County. The following schools were selected Chania girls' boarding school; Chania boys' boarding school and Broadway mixed day school. Thus, specifically, the study targeted 2047 students. Fisher's formula was used to arrive at 364 respondents which 10% was added to cater for attrition. This gave a sample of 400. Stratified sampling techniques were adopted in selecting participating schools to allocate the sample in the respective strata. The study sampled 400-students, their guidance and counselling teachers as the key informants. The researcher administered questionnaires, interview schedules (KII) and focus group discussions (FGD) were used in data collection. Descriptive statistics such as mean, mode and percentages, and inferential statistics such as chi-square and binary logistic regression were applied. P-value  $\leq 0.05$  was considered statistically significant.

## 4.0 FINDINGS AND PRESENTATION

### 4.1 Level of awareness of age-appropriate reproductive health information among adolescents in Thika West Sub-County, Kiambu County

The results in Table 1 revealed that 64.7% of the respondents had listened to information on contraceptives more than once, 83.5% had listened to information on safe sex more than once and 90.6% had listened to information on HIV/AIDS and STIs more than once.

**Table 1: Level of awareness of reproductive health information**

Frequency of information on	Indicator	Frequency	Percentage
<b>Contraceptives</b>	zero times	120	35.3
	1-3 times	104	30.6
	more than 3 times	116	34.1
<b>Safe sex</b>	zero times	56	16.5
	1-3 times	104	30.6
	more than 3 times	180	52.9
<b>STIs</b>	zero times	32	9.4
	1-3 times	92	27.1
	more than 3 times	216	63.5

Respondents were asked to indicate other reproductive health information; the study established a theme of “*Abstaining from sex*”. While another stated that “*I have heard about menstruation in girls, which can make her pregnant if she meets with a boy. my friends say a person can use pills, a condom... But I have never known how they are used to prevent pregnancy.*”

*“I think there are diseases that a person can get when they have sex with a person who is sick especially HIV because these infections are transmitted through sexual contact.”*

During the discussion on awareness of risky sexual behaviour, the majority expressed the following, “*It is very risky to have sex without protection. You can get AIDS or the girl will become pregnant. but sometimes you just do it and hope nothing will go wrong because you don’t have something to use*”

*“The respondents’ responses to whether they are able to access reproductive health information easily was that; we get this information, yes but we are not able to sort it out it’s sometimes hard to know what is right to do”*

The guidance and counselling teachers were further asked to rate the adolescents’ awareness of appropriate age information on reproductive health. Their responses were as follows:

Informant 1 “*moderately aware through biology and life skills lessons*”

Informant 2 “*most don’t have information*”

Informant 3 “*fair due to exposure*”

The guidance and counselling teachers were further asked the kind of information that adolescent and access. Their responses are as follows:

Informant 1 “*Not possible to know but adolescents are guided accordingly*”

Informant 2 “*Pornographic, unfiltered information. Biology, religious education*”

Informant 3 “*Pornography, abortion all kind*”

The guidance and counselling teachers described how adolescents accessed reproductive health information. Their responses were as follows:

Informant 1 “*School curriculum has lessons on reproductive health information*”

Informant 2 “*technological devices like internet*”

Informant 3 “*Mobile phones, movies and from their peers*”

#### 4.1.2 Helpfulness of reproductive health information

In regard to the helpfulness of reproductive health information, 75.3% of the students, found reproductive health information useful while 8.2% of the respondents found reproductive health information not helpful (Table 2).

**Table 2: Helpfulness of reproductive health information**

The usefulness of reproductive health information	Frequency	Per cent
Very helpful	148	43.5
Helpful	108	31.8
Moderately helpful	56	16.5
Less helpful	16	4.7
Not helpful	12	3.5
<b>Total</b>	<b>340</b>	<b>100</b>

#### 4.1.3 Relationship between the level of awareness on reproductive health information and risky sexual behaviour

The results indicated that there is a high likelihood of risky sexual behaviour (by 0.626 times) for those students listening to contraceptive information more than 3 times compared to those who listen to contraceptive information less than three times. The relationship was found to be significantly represented by  $\chi^2=1.761$  and  $p = 0.020$ .

There is a less probability of risky sexual behaviour (0.648 times) for those students listening to information on safe sex more than 3 times compared to those who listen to information on safe sex less than three times. The relationship was found to be significantly represented by  $\chi^2 11.794$  and  $p = 0.003$ .

There is less probability of risky sexual behaviour (by 0.629 times) for those students listening to information on STIs for more than 3 times compared to those who listen to information on STIs less than three times. The relationship was found to be significantly represented by a chi-square value of 3.812 and a p-value of 0.019 (Table 3).

**Table 3: Presentation of the results of the relationship between the levels of awareness on reproductive health information and risky sexual behaviour**

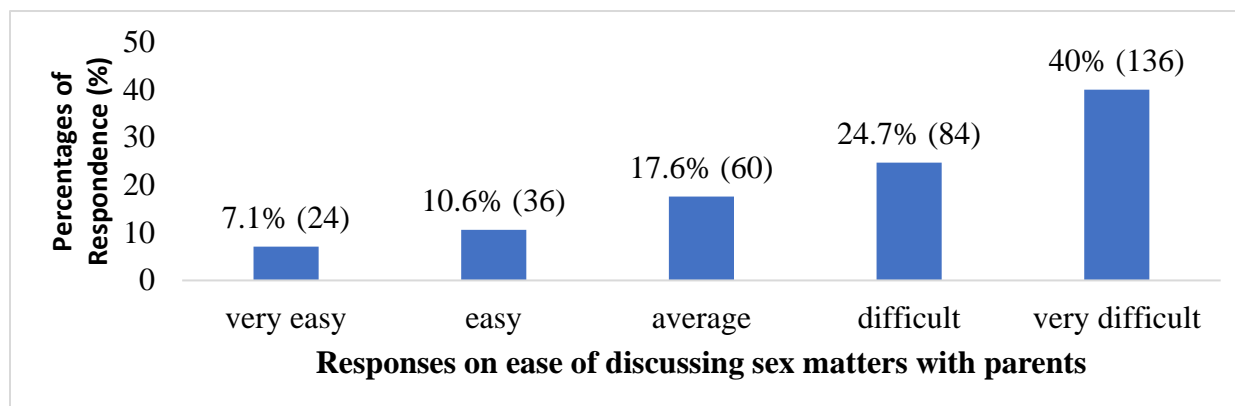
Level of Awareness (No of times you listen to information on :)	Risky sexual behaviour		Chi-Square ( $\chi^2$ )	P-value	OR (95% CI)
	Low	High			
<b>Contraceptives</b>	less than 3 times	72(38.3%)	48(31.6%)	1.761	0.020
	more than three times	116 (61.7%)	104(68.4%)		
<b>safe sex</b>	less than 3 times	28(14.9%)	28(18.4%)	11.794	0.003
	more than three times	160(85.1%)	124(81.6%)		
<b>STIs</b>	less than 3 times	16(8.5%)	16(10.5%)	3.812	0.019
	more than three times	172(91.5%)	136(89.5%)		

\*The first category was used as a reference category

## 4.2 Influence of sources of reproductive health information among secondary school adolescents in Thika West Sub-County, Kiambu County

### 4.2.1 Ease of discussion on sexual related issues with parents

As shown in figure 1, 64.7% (220) of the students had difficulties in discussing sex-related issues with their parents/guardians, 17.7% (60) of them found it easy to discuss with parents.

**Figure 1: Responses on ease of discussing sex-related issues with parents/guardians**

### 4.2.2 Sources of information reproductive information

Table 4 indicates that 48.24% of the respondents got great content of information from their teachers and school counsellors. The results also revealed that 45.89% of the respondents got less content of information from their parents. The results revealed that 54.12% of the respondents got great content of information from mass media. Study results further, revealed that 62.35% of the respondents got the great content of information from social media and the internet. The results also revealed that 42.36% of the respondents got the great content of information from their friends and age mates. The results also revealed that 42.36% of the respondents got the great content of information from their religious leaders.

**Table 4: Sources of information on reproductive health information**

Statement	no content	less content	moderate content	great content	very great content
Teachers and school counsellors	9.41	7.06	35.29	17.65	30.59
Parents	24.71	21.18	22.35	11.76	20
Mass media and newspapers	10.59	18.82	16.47	12.94	41.18
Social media and internet	17.65	14.12	5.88	18.82	43.53
Friends and age mates	15.29	27.06	15.29	17.65	24.71
Religious leaders	18.82	16.47	22.35	21.18	21.18

#### 4.2.3 Preference and importance of sources of reproductive health information

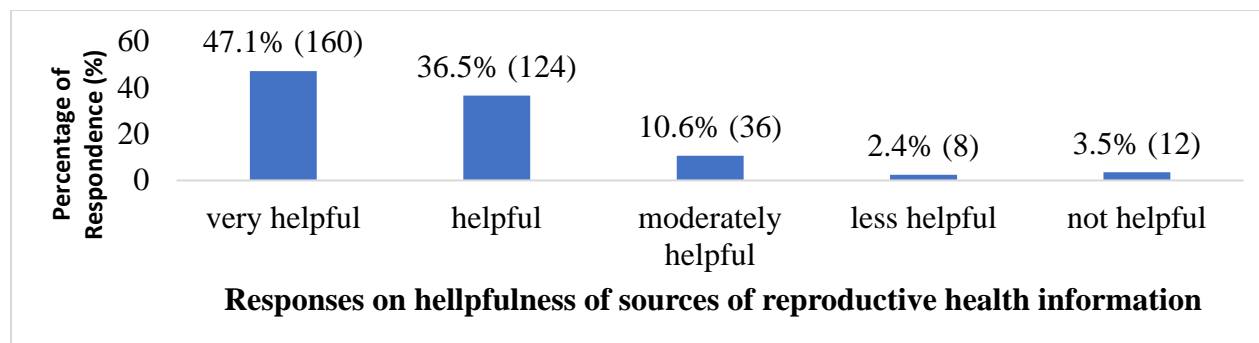
Most of the students, that is, 50.6% preferred reproductive health information from parents and social media, 16.5% from friends and age mates while 14.1% of the respondents preferred reproductive health information from mass media as well as religious leaders (Table 5).

**Table 5: Preference of sources of reproductive health information**

Statement	Indicator	Frequency	Percentage
	Parents	100	29.4
	mass media	48	14.1
	social media	72	21.2
	friends and age mates	56	16.5
	religious leader	48	14.1
Preference	none of the above	16	4.70

#### 4.2.4 Helpfulness of the sources of reproductive health information

The proportion of 47.1% (160) of the students found sources of reproductive health information very helpful, 36.5% (124) helpful, 10.6% (36) moderately helpful while 5.9% (20) of the students found the sources unhelpful (Figure 2).

**Figure 2: Responses on the helpfulness of sources of reproductive health information**

The respondents also indicated other sources of reproductive health information. Majority of the respondents indicated “*the internet*” as an alternative source of reproductive health information. Further to where they received the reproductive health information from, “*majority from the groups had this to say; we mostly share with our peers or check the internet because we have*

*phones.” About their most preferred source of reproductive health information, the respondents had the following to say;” I usually find it better if being taught issues about sexuality by my parents at home but none of my parents tell me anything about what I go through. In fact, my parents avoid discussing anything sexual related even when I ask questions related to that”.*

The guidance and counselling teachers indicated how the sources that play a great role in providing reproductive health information. Their responses are as follows:

Informant 1 *“Peers internet and social media since it is easily accessible”*

Informant 2 *“internet and peers as most of them have mobile phones”*

Informant 3 *“Through counsellors in school, religious education and biology as a subject”*

Besides, the guidance and counselling teachers described how adolescents perceive reproductive health information from different sources. The following were their responses:

Informant 1 *“According to individual students’ background in relation to values and beliefs”*

Informant 2 *“Depends on individual perception and attitudes towards the information”*

Informant 3 *“Hard to rate but they are observed to have misleading information because today is not like our days where we depended on relatives to give us relevant information and we were monitored properly”*

#### **4.2.5 Relationship between sources of reproductive health information and risky sexual behaviour**

The results indicated that there is a less likelihood of risky sexual behaviour (by 0.571 times) for those students who received information from teachers and school counsellors more than 3 times compared to those who received information from teachers and school counsellors less than three times. The relationship was found to be significantly represented by a chi-square value of 13.754 and a p-value of 0.001.

There is less probability of risky sexual behaviour (by 0.349 times) for those students who received information from parents more than 3 times compared to those who received information from parents less than three times. The relationship was found to be significantly represented by a chi-square value of 28.171 and a p-value of 0.004.



**Table 6: Relationship between sources of reproductive health information and risky sexual behaviour**

Receipt of information from:	Risky sexual behaviour		Chi-Square ( $\chi^2$ )	P-value	OR (95% CI)
	Low	High			
Teachers and School Counsellors	less than 3 times	44(28.9%)	13.754	0.001	1 0.571
	more than three times	164(87.2%)			
Parents	less than 3 times	76(51.4%)	28.171	0.004	1 0.349
	more than three times	144(76.6%)			

\*The first category was used as a reference category

### 4.3 Perception of reproductive health information among secondary school adolescents in Thika West Sub-County, Kiambu County

#### 4.3.1 Perception on the availability of reproductive health information among secondary school adolescents

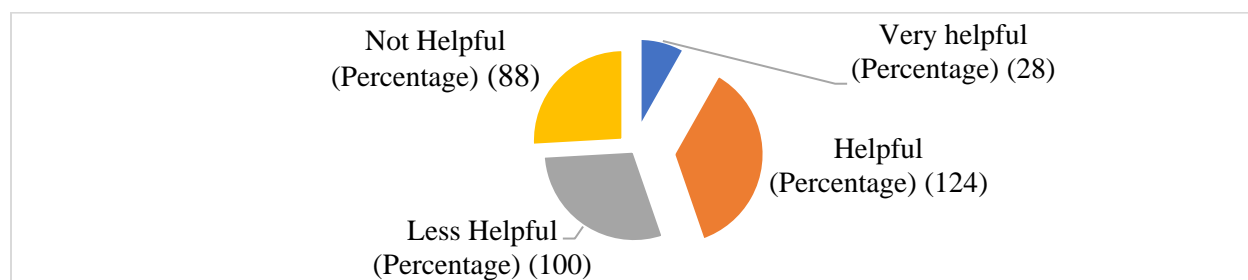
The results in Table 7 showed that 67.1% of the students considered the availability of reproductive health information less easy while 16.5% of the students considered the availability of reproductive health information very easy.

**Table 7: Percentages of respondents indicating various degrees of ease on the availability of reproductive health.**

Indicator	Frequency	Percentage
less easy	228	67.0
Easy	56	16.5
very easy	56	16.5
Total	340	100

#### 4.3.2 Perception of helpfulness

When asked on assessed on their perception on the helpfulness of reproductive health information 37% (124) of the students said it was helpful, 29% (100) less helpful, 26% (88) not helpful with only 8% (28) who reported it was very helpful.



### Figure 3: Responses on the helpfulness of reproductive health information among secondary school

During focused group discussion on whether the reproductive health information was helpful, the respondents stated the following; *“it is very helpful when you know what is right and you can be able to decide what to do, but sometimes we do not have the correct information to rely on.”*

#### 4.3.3 Perception of the complexity of reproductive health information among secondary school

On the perception of complexity on reproductive health information 57.6% of the students reported the information easy to understand, 27.1% found it very easy to understand, while only 15.3% of the students found the information difficult to understand (Table 8).

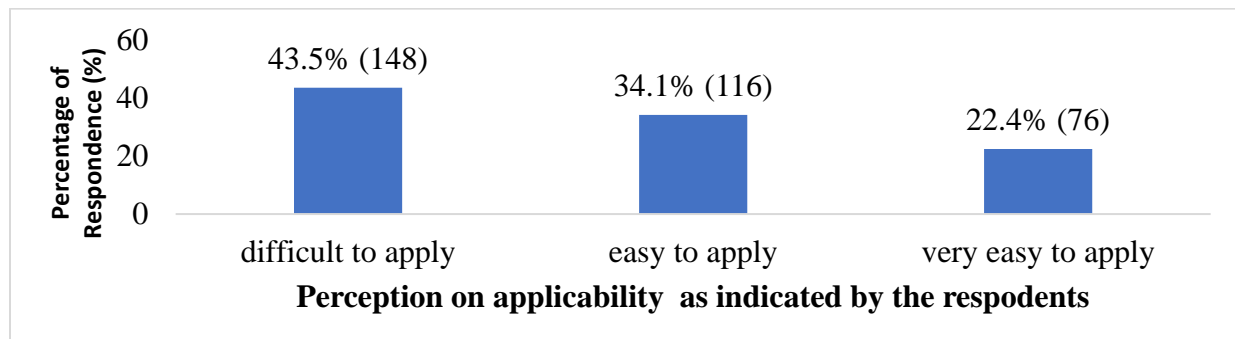
**Table 8: Results on the Complexity of reproductive health information among secondary school**

Indicator	Frequency	Percentage
Difficult to understand	52	15.3
Easy to understand	196	57.6
Very easy to understand	92	27.1
<b>Total</b>	<b>340</b>	<b>100</b>

During FGD on perception, on whether it was easy to understand the reproductive health information. The majority expressed that; *“it is easy to understand when you have someone experienced to advise you and then make a personal decision on whether to use the information or not”*.

#### 4.3.4 Perception on the applicability of reproductive health information among secondary school

The responses on the applicability of reproductive health information revealed that majority of the students 43.5% (148) found it difficult to apply, 34.1% (116) found it easy to apply while 22.4% (76) reported was very easy to apply (Fig. 4).



**Figure 4 Responses on the application of reproductive health information**

The guidance and counselling teachers were asked to rate how adolescents utilize reproductive health information. Their ratings are as follows:

Informant 1 *“It seems most of them do not utilize, have early sexual debut”*

Informant 2 “*It seems utilization is low*”

Informant 3 “*Low utilization if any*”

#### 4.3.5 Perception of reproductive health information and risky sexual behaviour

Among the respondents, 70.59% agreed with the statement that the information they get on reproductive health is very helpful while 64.70% reported the information was readily available, to adolescents. The results also indicate that 67.06% chose what to do with the information, 55.29% made decisions based on the information received, 56.47% were eager to learn more about reproductive health but 44.70% disagreed with the statement that they do volunteer and teach their friends and age mates on their reproductive health (Table 9).

**Table 9: Perception of reproductive health information**

Reproductive health information	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Very helpful	3.53%	10.59%	15.29%	32.94%	37.65%
Readily available to adolescents	4.71%	12.94%	17.65%	35.29%	29.41%
Freedom of choice	9.41%	7.06%	16.47%	24.71%	42.35%
Eases decision making	12.94%	14.12%	17.65%	22.35%	32.94%
Eager to learn	5.88%	10.59%	27.06%	22.35%	34.12%
Easy to share	32.94%	11.76%	11.76%	18.82%	24.71%

#### 4.3.6 Level of attitudes on reproductive health information

The results in Table 10 showed that 47.1% of the students indicated that their attitudes towards reproductive health information influenced them to risky sexual behaviour to a high extent, 41.2% had moderate extent, while 11.8% was to low extent.

**Table 10: Extent of attitudes on reproductive health information**

Extent of Attitudes	Frequency	Per cent
Low extent	40	11.8
Moderate extent	140	41.2
High extent	160	47.1
<b>Total</b>	<b>340</b>	<b>100</b>

#### 4.3.7 Relationship between the perception of reproductive health information and risky sexual behaviour

The results indicate that there is less likelihood of risky sexual behaviour (by 0.2012 times) for those students who find reproductive health information very easy to be available compared to those who find age reproductive health information less easy. The relationship was likewise found to be significant as represented by a chi-square value of 25.902 and a p-value of 0.000.

There is likewise less likelihood of risky sexual behaviour (by 0.591 times) for those students who find reproductive health information very useful compared to those who find age reproductive health information less useful. The relationship was, however, found to be statistically insignificant as represented by a chi-square value of 0.788 and a p-value of 0.375.

There is less probability of risky sexual behaviour (by 0.6211 times) for those students who find reproductive health information very easy to understand compared to those who find reproductive health information difficult to understand. The relationship was, however, found to be statistically insignificant as represented by a chi-square value of 0.052 and a p-value of 0.820.

There is less probability of risky sexual behaviour (by 0.359 times) for those students who find reproductive health information very easy to apply compared to those who find reproductive health information difficult to apply. The relationship was found to be significant as represented by a chi-square value of 9.265 and a p-value of 0.002.

**Table 11: Relationship between the perception of reproductive health information and risky sexual behaviour**

Perception of:	Risky sexual behaviour		Chi-Square ( $\chi^2$ )	P-value	OR (95% CI)
	Low	High			
Availability	less easy	80(52.6%)	25.902	0.000	1
	very easy	40(21.3%)			
Usefulness	very helpful	72(47.4%)	0.788	0.375	1
	less helpful	108(57.4%)			
Complexity	difficult to understand	24(15.8%)	0.052	0.820	0.6211
	easy to understand	160(85.1%)			
Application	difficult to apply	80(52.6%)	9.265	0.002	0.359
	easy to apply	120(63.8%)			

\*The first category was used as a reference category

#### 4.4 Influence of social-cultural factors in accessing reproductive health information

42.4% of the students felt that culture moderately influenced their access to reproductive health information, 28.2% culture had a large influence on accessing to the information. Thirty-four per cent (34.1%) of the respondents were greatly influenced by religion while 28.2% felt that religion had a low influence on access to health information (Table 12).

**Table 12: Influence of social-cultural factors on access to reproductive health information**

Social-cultural factors	Indicator	Frequency	Percentage
Culture	low extent	100	29.4
	moderate extent	144	42.4
	large extent	96	28.2
Religion	low extent	96	28.2
	moderate extent	128	37.6
	large extent	116	34.1

In FGD on how poverty influences the utilization of reproductive health information. Majority of the respondents stated that:

*“Lack of basic needs exposes the adolescents, especially girls, to give in to incentives from older men to meet their basic needs”.*

*“Lack of parental monitoring. My mom is a casual labourer and leaves me with no care and older men take advantage of me.”*

On whether religion influenced reproductive health information majority revealed that;

*“My pastor always tells us to abstain from sexual activity before marriage.”*

*“In our church, our religious leaders say that sexual issues are for adults, they do not teach us this topic because we are young but we feel bad because we face a lot of problems and we do not know what to do”*

When the respondents were asked whether norms and cultural values influenced the access to reproductive health information, they reported that. *“You see we are Africans; adults don’t want to discuss reproductive issues openly with their children they hid the truth from us. When I was young, I was told my young sister was bought in a supermarket when my aunt brought them home”*

The key informants on the influence of religion and cultural values in reference to in the provision of reproductive health information reported that;

Informant 1 *“Some religious and cultural values have hindered sexual education amongst adolescents”*

Informant 2 *“It influences both positive and negative. as religion teaches sexual values at the same time prohibits sex education to young people”*

Informant 3 *“Restricts a lot of information to adolescent, leaving adolescent curios to explore for themselves”*

The key informants’ expression on whether religion and culture hindered access to reproductive health information. Reported that;

Informant 1 *“Yes. Greatly because most religious groups think its evil to talk about sex issues openly”*

Informant 2 *“To some extent yes for religion has been rejecting sexuality education in schools yet adolescents are far ahead in sexual matters through the internet”*

Informant 3 *“To a great extent and yet these adolescents are sexually active”*

#### **4.4.1 Social-cultural factors and risky sexual behaviour**

The findings show that 38.82% of the respondents reported that the religious and cultural beliefs greatly dictated the kind of information they received and would hold on to their religious and cultural belief on matters of reproductive health, 40.00% agreed that the cultural and religious groups helped in the dispersion of reproductive health information, 49.42% reported that even when they get information from other sources, they stick to their religion and culture teaching to less extent while 62.35% revealed that their culture and religion, to a less extent, contradicts the perception of other sources about reproductive health information (Table 13).

**Table 13: Social-cultural factors**

Statement	No extent	Less extent	Moderate extent	Great extent	Very great extent
My religious and cultural beliefs dictate the kind of information I receive	20	17.65	23.53	11.76	27.06
Stick to religious and cultural belief	20	17.65	23.53	11.76	27.06
Cultural and religious groups disperse information	23.53	16.47	22.35	11.76	25.88
Follows what religion and culture	28.24	21.18	23.53	16.47	10.59
Culture and religion contradict the perception of other sources.	45.88	16.47	12.94	8.24	16.47

The Key informants described social-cultural status in reference to adolescents' sexually risky behaviour as the following;

Informant 1 "*Greatly influencing, due to poverty and poor parental guidance*"

Informant 2 "*Sexual exploitation due to poverty, drug abuse*"

Informant 3 "*Environment dictates a lot, poverty levels and lack of parental monitoring*"

#### 4.4.2 Government policy and risky sexual behaviour

The respondents were requested to indicate their thoughts on what the government should do to enhance the provision of reproductive health information. Majority of the respondents indicated that "*the government should provide more education and awareness on reproductive health information through campaigns and TV programs.*"

They were further asked to indicate whether health care providers provide satisfactory information on reproductive health information. Most of the respondents indicated that "*the health care providers were not ready to answer their sex-related questions but mostly ignored them.*"

The respondents were also asked to indicate how the effectiveness of government policy influencing risky sexual behaviour. Majority of the respondents indicated that government policy "*provided education and awareness on reproductive health especially when educative programme are channeled through media by the ministry of health or ministry of education.*" "*Also, when the government jails rapists when they rape minors*".

#### 4.4.3 Relationship between social-cultural factors and risky sexual behaviour

The findings revealed that there is less probability of risky sexual behaviour (by 0.982 times) for those students who perceive norms and beliefs to largely influence risky sexual behaviour compared to those who perceive that culture has no influence risky sexual behaviour. The relationship was, however, found to be statistically insignificant as represented by a chi-square value of 0.622 and a p-value of 0.430 (Table 14).

There is likewise less probability of risky sexual behaviour (by 0.465 times) for those students who perceive religion to largely influence risky sexual behaviour compared to those who perceive



that religion has no influence risky sexual behaviour. The relationship was found to be significant as represented by a chi-square value of 10.050 and a p-value of 0.002.

**Table 14: Presentation of the results of the relationship between social-cultural factors and risky sexual behaviour**

Influence of:	Risky sexual behaviour		Chi-Square ( $\chi^2$ )	P-value	OR
	Low	High			
Culture	low extent	52(27.7%)	48(31.6%)	0.622	0.430
	large extent	136(72.3%)	104(68.4%)		
Religion	low extent	40(21.3%)	56(36.8%)	10.050	0.002
	large extent	148(78.7%)	96(63.2%)		

\*The first category was used as a reference category

#### 4.5 Risky sexual behaviour

The results revealed that 44.7% (152) of the students had had sexual relationships while 55.3% (188) had not engaged in a sexual relationship (Table 15).

**Table 15: Sexual relationships**

Sexual Relationships	Frequency	Per cent
Did not have sexual intercourse	188	55.3
Had sexual intercourse	152	44.7
<b>Total</b>	<b>340</b>	<b>100</b>

##### 4.5.1 Age at first sexual debut

Approximately 50% (76) of the students had their first sexual experience at the age of 14 and 16 years, 47% (72) at the age of below 14 years while 3% (4) at the age of above 16 years (Table 16).

**Table 16: Age at first sexual debut**

Age	Frequency	Per cent
Below 14 years	72	47
14 - 16 years	76	50
Above 16 years	4	3
<b>Total</b>	<b>152</b>	<b>100</b>

##### 4.5.2 Pregnancy prevention

A number of respondents, 44.7% used other measures to prevent pregnancy, 53% of the students who had had sex were somewhat concerned about STIs and HIV/AIDS Infection, while 98.4% had sexual partners with n=96 (63.2%) having more than two partners (Table 17).

**Table 17: Pregnancy prevention, concern on STIs and sexual partners.**

Sexual Relationships	Indicator	Frequency	Percentage
Pregnancy Prevention	Used a Condom	44	28.9
	Took an After Pill	12	7.9
	Periodic Abstinence	28	18.4
	Others	68	44.7
The concern of Infection by STIS	very much concerned	40	26
	very concerned	32	21
	somewhat concerned	80	53
	None	8	5.2
No of sexual Partners	only one	48	31.6
	Two	24	15.8
	more than two	72	47.4

#### 4.5.3 Relationship between gender and risky sexual behaviour

The female students 55.3% (104) had never had sex as compared to 44.7% (84) of their male counterparts. However, the study found that 18.4% (28) of the female students have had sex as compared to 81.6% (124) of their male counterparts. The relationship was found to be statistically significant  $\chi^2 = 48.18$ ,  $p = 0.020$ .

**Table 18: Relationship between male and female students and risky sexual behaviour.**

	Category	No	Yes	Chi-square	P-value
<b>Gender</b>	Female	104 (55.3%)	28(18.4%)	48.178	0.002
	Male	84(44.7%)	124(81.6%)		

## 5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

### 5.1 Summary of the findings

#### 5.1.1 Level of awareness on reproductive health information and the risky sexual behaviour

The results indicated that majority of the secondary school adolescents had information on contraceptives, safe sex as well as STIs; and that the secondary school adolescents in Kiambu County considered reproductive health information helpful, easy to understand but was difficult to access. The study found that there is a high likelihood of risky sexual behaviour for those students listening to reproductive health information more times compared to those who listen to contraceptive information fewer times. The chi-square results indicated that the relationship between reproductive health information and risky sexual behaviour is statistically significant. These findings agreed with studies that found out that it is significant to create a conducive environment that would positively influence adolescents' knowledge, attitude, perceptions, and skills on reproductive health (Svanemyr *et al.*, 2015). This will reduce their sexual risk behaviour, and enable them to increase the access and use of sexual and reproductive health services. The results also agreed to other studies that concluded that adolescents who had received

comprehensive sex education were 50% less likely to experience unintended pregnancy than those who received abstinence-only-until-marriage programs (Durowade *et al.*, 2017).

### **5.1.2 Influence of sources of reproductive health information**

The results revealed that the secondary school adolescents in Kiambu County preferred reproductive health information from parents and teachers as sources they relied on, when asked their main source of reproductive health information, the results indicated that majority of the secondary school adolescents received reproductive health information from mass, social media and internet. The findings indicated that there is a less likelihood of risky sexual behaviour for those students who receive information from teachers and school counsellors as well as from parents. The chi-square relationship proved that all the selected sources of reproductive health information had a significant association with risky sexual behaviour among adolescents. These findings corroborated with other studies that stated that adolescent's sexual health education is an international, regional and a national priority and integrated into school curriculums and other ministries activities (UNESCO, 2013, Banister *et al.*, 2011). Additionally, the findings corroborated those of (Tesfaye *et al.*, 2014) who found that adolescents, who received reproductive health information from parents, practised safer sex than those who sought information from peers.

### **5.1.3 Adolescents' perception of reproductive health information**

The findings indicated that those students who found reproductive health information as easily available, useful, easy to understand and apply had less likelihood of risky sexual behaviour. The relationship between the perception and risky sexual behaviour was statistically significant except for the perceptions on usefulness and complexity which was found to be insignificant. The findings corroborated that of (Houck and Brown, 2014) who deduced that perceptions would influence the adolescents' everyday experiences and determine their sexual behaviour in relation to age-appropriate reproductive health information, and Omubuwa who reported that a third (28.9%) of the subjects aged 15 years had experienced sexual intercourse, sexual experience increased with age, and more than a third of his respondents perceived pre-marital sex as normal (Omubuwa, 2012).

### **5.1.4 Influence of social-cultural factors in accessing reproductive health information**

The results showed that culture and religion were social demographic characteristics that had a significant relationship to reproductive health information among a majority of the secondary school adolescents in Kiambu County. The findings revealed that there is less probability of risky sexual behaviour among students who perceived norms and beliefs largely influenced risky sexual behaviour compared to vies. There is less probability of risky sexual behaviour for those students who perceive religion to largely influence risky sexual behaviour compared to those who perceive that religion has no influence on risky sexual behaviour. These findings corroborated that of Arousell and Carbom (2015) who found out those socio-cultural factors played a significant role, as adolescents who are not sexually active reported their connections to religious friends unlike those who were sexually active. Some religious groups like Protestants support the teaching of reproductive health information to young people and this is a protective factor against pre-marital sex indulgence. The results also corroborated those of Vught *et al.* (2016) who found that adolescents' level of sexual exposure in public secondary schools was related to perceived parental

religiosity, attitude on sexual matters and living arrangements. In Africa, the area of settlement influenced early sexual debut. Adolescents living in slums, which are normally congested, reported having early sexual debut compared to those who lived in better and uncongested estates (Robinson & Yeh, 2011).

## 5.2 Conclusions

- i. The awareness of reproductive information significantly reduced the prevalence of risky sexual behaviour
- ii. The likelihood of risky sexual behaviour decreases for Secondary school adolescents who received reproductive information from sources they relied on such as their parents, teachers and religious leaders.
- iii. There was less likelihood of risky sexual behaviour for adolescents who perceived reproductive health information as easy to access, useful, easy to understand and easy to apply compared to the vies.
- iv. The probability of risky sexual behaviour increases for adolescents who perceived that culture and religion are barred from accessing reproductive information.

## 5.3 Recommendations

Based on the findings the study recommends the following;

- i. The Ministry of Health and Ministry of Education should actively involve adolescents in a reproductive information awareness campaign for ensuring positive attitudes and promoting more progressive practices
- ii. The Government through Ministry of Education and Ministry of Health should come up with programmes that enhance full participation of all stakeholders such as parents, teachers and religious leaders to communicate reproductive information to adolescents effectively at different developmental stages.
- iii. The Ministry of Education should provide adequate and comprehensive age-appropriate reproductive information to the adolescents which are made easy to access, understand and apply at different developmental stages
- iv. The Ministry of Health should come up with policies that advocate for the importance of reproductive information through religious and community institutions.

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