

UNIVERSITY OF NAIROBI

Department of Sociology & Social Work

**ROLE OF SOCIAL NETWORKS ON SEXUAL AND HEALTH SEEKING
BEHAVIORS AMONG MEN WHO HAVE SEX WITH MEN (MSMs) IN
NAIROBI, KENYA.**

Collins Mukanya Mudogo

C50/70793/2014

A PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF MA. (MEDICAL SOCIOLOGY)
DEGREE OF THE UNIVERSITY OF NAIROBI.

November, 2016.

DECLARATION

This project report is my original work and has not been presented for a degree in any other University.

Collins Mukanya Mudogo

MA. Candidate, Medical Sociology

Signature.....

Date.....

This project report has been submitted for examination with my approval as University Supervisor.

Mr. Allan Korongo

Lecturer

University of Nairobi

Signature..... Date.....

DEDICATION

I dedicate this piece of work to all individuals and organizations working particularly with key populations to ensure that Kenya and indeed Sub-Saharan Africa goes beyond Zero HIV infections.

ACKNOWLEDGEMENTS

To the four research assistants, thanks a lot for the tireless work you did in ensuring that this study was a success. To my supervisor, Allan Korongo, I am greatly indebted to you for your support. Indeed your counsel, insight, timely response to my many Emails, SMS and calls for review, and encouragement went beyond that which an ordinary teacher gives. Many thanks to my examiners, your critique was thorough and constructive.

TABLE OF CONTENTS

Declaration.....	i
Dedication.....	ii
Acknowledgements	iii
Table of contents	iv
List of tables.....	vi
List of figures	vii
List of Abbreviations and Acronyms.....	viii
Abstract.....	ix
CHAPTER ONE: INTRODUCTION	1
1.0 Introduction to the chapter.....	1
1.1 Background of the study	1
1.2 Statement of the problem	4
1.3 Study questions.....	7
1.4 Objectives of the study.....	7
1.4.1 Main objective	7
1.5 Justification of the study	7
1.6 Scope and Limitations of the study.....	8
CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK.....	10
1.0 Introduction to the chapter.....	10
2.1 Introduction to literature review	10
2.1.1 Sexual orientation and homosexuality.....	10
2.1.2 Factors influencing social networks among MSMs	12
2.1.3 Sexual behaviors within and out of social networks	12
2.1.4 HIV/AIDS epidemiology among MSMs.....	13
2.1.5 Access to services by MSMs and the role of stigma and discrimination	15
2.2 Theoretical framework.....	17
2.2.1 Social networking theory.....	17
2.2.2 Theory of action.....	20
2.3 Conceptual framework.....	22

2.4 Conceptual definition of terms	24
2.5 Operationalization of KEY variables	25
CHAPTER THREE: STUDY METHODOLOGY	26
2.0 Introduction to the chapter.....	26
3.1 Description of the study area.....	26
3.2 Research design	30
3.3 Study population.....	30
3.4 Sampling methods and procedure.....	30
3.6 Data collection method, tools and procedure	32
3.7 Personnel and materials	33
3.8 Ethical consideration.....	34
3.9 Data analysis and presentation	34
CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND PRESENTATION.....	35
3.0 Introduction to the chapter.....	35
4.1 Demographic profile	35
4.2 Exploring social networks	38
4.3 Social networks and sexual behaviors	47
4.4 Social networks and health seeking behaviors	57
CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS	66
4.0 Introduction to the chapter.....	66
5.1 Summary	66
5.2 Conclusion.....	69
5.3 Recommendations.....	70
Bibliography	71
Appendices	78
Appendix I: Letter from the university	78
Appendix II: Consent form	79
Appendix III: Research tool (Questionnaire).....	80

LIST OF TABLES

Table 1: Demographic profile (n=65).....	36
Table 2: Influence of social networks on individual decision making and life (n=65)	46
Table 3: Reasons for disclosure or non-disclosure (n=65)	53

LIST OF FIGURES

Figure 1: MSM estimates in Kenya, Adapted from NASCOP 2013 report on estimating key populations in Kenya.....	2
Figure 2: Conceptual framework.....	22
Figure 3: Age at first anal sex (n=65).....	37
Figure 4: Most frequented hotspot (n=65).....	38
Figure 5: Social network size (n=60).....	40
Figure 6: Factors influencing social networks (n=65).....	41
Figure 7: Duration in social networks (n=60).....	42
Figure 8: Level of trust (n=60).....	43
Figure 9: Time spent together (n=65).....	44
Figure 10: Common activities engaged in with members of social networks (n=65).....	45
Figure 11: Importance of social networks.....	46
Figure 12: Ever had anal sex with members of social networks/close friends (n=65).....	48
Figure 13: Condom use (n=65).....	49
Figure 14: Reasons for condom nonuse (n=18).....	50
Figure 15: Knowledge on HIV status (n=65).....	51
Figure 16: Use of condoms during group sex (n=32).....	52
Figure 17: Willingness to disclose HIV status (n=65).....	53
Figure 18: Forceful sex/rape (n=65).....	55
Figure 19: Condom use during the forceful sex (n=17).....	56
Figure 20: Reactions to HIV disclosure (n=65).....	58
Figure 21: Reactions to a condom burst during sex (n=65).....	59
Figure 22: Linkage to services (n=50).....	60
Figure 23: Point of service access (n=65).....	61
Figure 24: Last time of access to services (n=65).....	62
Figure 25: Willingness to refer to the same point of service access (n=65).....	63
Figure 26: Ever helped or been helped with a condom (n=65).....	64
Figure 27: A comparison of reactions to distress calls (n=60).....	65

LIST OF ABBREVIATIONS AND ACRONYMS

AIDS:	Acquired Immunodeficiency Syndrome
HIV:	Human Immunodeficiency Virus
KAIS:	Kenya AIDS Indicator Survey
KASF:	Kenya AIDS Strategic Framework
KHPR:	Kenya HIV Plan Roadmap
NASCOP:	National AIDS and STIs Control Programme
PLHIV:	People Living with HIV
SMS:	Short messages
US:	United States

ABSTRACT

In Kenya Men who have sex with other Men (MSMs) remain at a higher risk of Sexually Transmitted Infections (STIs) including HIV than the general population. Access to health services among MSMs is still low despite increased efforts in fighting for their rights. These conditions have generally been attributed to stigma, discrimination and marginalization. However, little is known regarding MSMs' behaviors and related underlying factors that continue to put them at the high risk of sexual behaviours and poor health seeking behaviours. This study aimed at i) exploring the existence of social networks ii) describing the association between social networks and sexual behaviors iii) establishing how social networks influence access to, and utilizing of health services among MSMs in Nairobi. The study was a quantitative descriptive survey in which 65 MSMs were recruited using convenience sampling at 20 bars and clubs in Nairobi. Experienced MSM peer educators, trained as research assistants were involved in recruiting, interviewing and filling the questionnaires. Quantitative analysis was done using MS Excel package. Key Findings from the study suggest that majority of MSMs in Nairobi belong to social networks characterized by socio-demographic factors such as age, sexual partnership, tribe and schooling. It was clear that social networks can negatively influence certain sexual behaviors such as condom use, group sex and gender based violence. On the other hand, it appeared that social networks have positive influence on health seeking behaviors including what health services to access, when, where and how frequent. The study concludes that social networks have a key role in the overall wellbeing and health of MSMs.

It recommends the need for information and awareness among MSMs to be able to assess the benefits and disadvantages of specific social networks at both individual and group level thus determine whether to belong to certain social networks or not.

CHAPTER ONE: INTRODUCTION

1.0 INTRODUCTION TO THE CHAPTER

The purpose of this chapter is to provide an introduction to the study. It summarizes the background of the study, statement of the problem to the study, study questions, objectives of the study, justification of the study, scope and limitations of the study.

1.1 BACKGROUND OF THE STUDY

Across the world, MSMs continue to face stigma, poor access to services and vulnerability to poor health. This is attributable to a combination of biological, socio-economical and structural factors (The Global Fund, 2014). Welsing (1990) argued that homosexuality is strategy for destroying black people. For a very long time, researchers, particularly pro-African, argued that homosexuality was a cancer spread by Western capitalist influences. In recent years there has been a paradigm shift towards seeing homophobia as the real cancer and not homosexuality itself. Studies among black American gays revealed that because of homophobia, youth engaging in homosexual behaviors perceived that their friends and neighbors were unsupportive and therefore they were often reluctant to disclose their sexuality (Battle & Bennett, 1990; Butler & Astbury, 2002).

In countries where homosexuality is criminalized, it is difficult to define the actual size of MSMs. This is due to several factors such as heterogeneity of MSMs, the incomplete overlap between identity, behavior and desires, lack of research among MSMs, reluctance among MSMs to participate in research and hostile social, legal and political environments (Read, 2009).

Previous mapping exercises in Kenya estimate the number of MSMs to be between 10,000 and 22, 222 across the country. Nairobi has the third largest number of MSMs estimated to be about

(1500) after Nyanza and Mombasa in the first and second positions respectively (Okal, Geibel&Muraguri et al, 2015;Read, 2009).

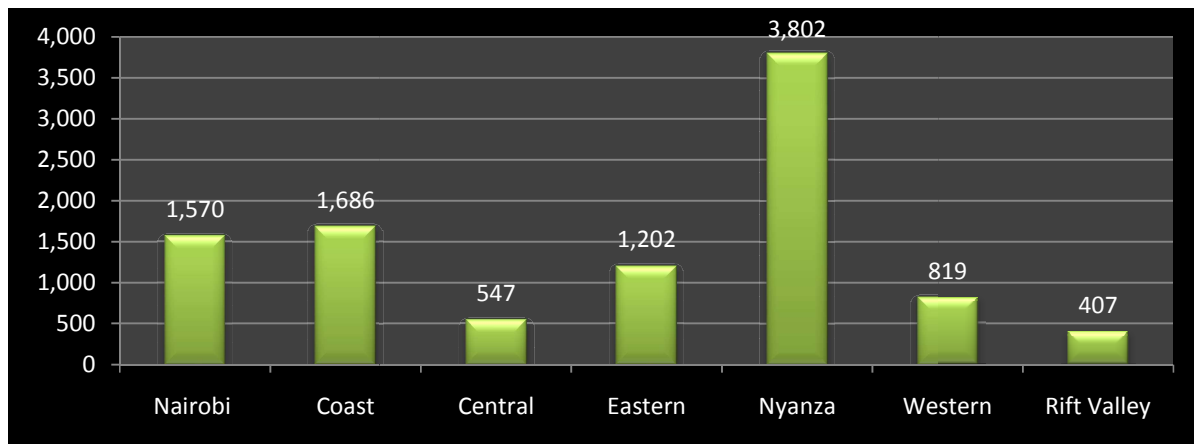


FIGURE 1: MSM ESTIMATES IN KENYA, ADAPTED FROM NASCOP2013 REPORT ON ESTIMATING KEY POPULATIONS IN KENYA.

Since the discovery of the HIV scourge in human populations, anal sex has been considered to be one of the riskiest behaviors in terms of HIV transmission. In addition, MSMs are highly associated with other risk behaviors such as drug abuse and intentional infection. The Kenya Aids Indicator Survey (KAIS) 2012 indicates that HIV prevalence among MSMs in Kenya stands at 18. 2% compared with the HIV prevalence among the general population which stands at 5.6% (National AIDS & STI Control Programme-NASCOP, 2014).

The Kenya AIDS Strategic Framework [(KASF) 2014-2019](Ministry of Health & National AIDS Control Council (NACC), 2015) envisions a Kenya free of HIV infection, stigma and AIDS related deaths. Its main goal is to contribute to achieving vision 2030 through universal

access to comprehensive HIV prevention, treatment and care. In its strategic directions, KASF 2014-2019 outlines the need to prioritize populations and geographical areas for an equitable HIV response. Critical too, is the deliberate effort enshrined in the KASF (2014-2019) to employ a human rights approach to facilitate access to services for people living with HIV (PLHIV), key populations and other priority groups in all sectors. Within KASF (2014-2019) the need to strengthen research so as to increase evidence based planning and implementation of science outcomes to optimize programming and policy changes is emphasized (Ministry Of Health, 2015).

The Kenya HIV Prevention Roadmap (KHPR) (Ministry of Health, 2014) utilizes a “know your epidemic” approach to characterize sources of new infections, coverage of services and identify optimal combination of services and cost requirements to end new HIV infections by 2030. Within the roadmap, evidence based biomedical and structural interventions targeting specific populations including MSMs and locations such as Nairobi are clearly defined (National AIDS and STI Control Programme (NASCO) Kenya, 2012).

Behavior change using interpersonal tools is mentioned as a key intervention in fighting HIV/AIDS among key populations (Ministry Of Health, 2015). This study aimed to explore how social networks influence sexual behaviors such as engagement in risky sex and health seeking behaviors among MSMs, factors which are essential in driving HIV incidence and prevalence rates. Findings emphasize the need for further longitudinal research to be able to either strengthen or break social networks as a result of the effects posed on sexual behaviors and health seeking patterns.

1.2 STATEMENT OF THE PROBLEM

MSMs are faced with many challenges ranging from intrapersonal, social, economic, political and legal. The African Charter on Human and Peoples Rights (Banjul Charter, 1981) obligates governments to protect the health and ensure medical treatment of their people. Kenya became a signatory to the charter in 1992. The Constitution of Kenya guarantees the right to the highest standards of health without discrimination (Government of Kenya, 2010; Mulumba, Kabanda & Nassuna, 2010; GIZ, 2010). However homosexuality is still criminalized and illegal in Kenya.

The hostility, social stigma, unfriendly political and legal environments deny most MSMs human rights, self and social identity, thus remain closeted. Evidence suggest that the fear of coming out among MSMs predisposes them to mental disorders and other psychological conditions. The hostile environments further refrain MSMs from being open about their challenges with other people thus majority of them depend on their peers, who have similar problems, for emotional, sexual and romantic satisfaction or fulfillment (Cochran, 2001).

Across the world, MSM communities are faced with more health challenges compared with the general populations. HIV/AIDS among MSM has for long been considered a major public health concern. Research show that the high levels of HIV incidence and prevalence rates among MSMs are as a result of both per-act and per partner probability and also role versatility of MSMs given that majority of them play the double sexual roles of being receptive and insertive (bottom and top or king and queen). In addition, majority of MSMs are also in heterosexual relationships. HIV, syphilis, gonorrhoea, human papilloma virus, anal cancers are among diseases more prevalent among MSMs than among the general population (The Fenway Institute, 2008.).

About a decade ago, strategists and health policy makers in Kenya started realizing that MSMs including those in prison were to be part of the “most at risk populations”. This was after the

national incidence model indicated that MSMs and prison community accounted for more than 15.2% of new HIV infections. During the same period, the Nairobi model put the same rate at 16.4% while the Coast region model reported well over 20%. Non-governmental programs working with MSMs show even higher figures of HIV prevalence among MSM. For example 25.6% prevalence among MSMs in Nairobi in a study done by the Population Council (Okal, 2012).

The fact that these figures are gotten from just a few MSMs who are able to conquer the stigma, violence and fear so as to come out and participate in studies is disturbing. It is also evident that majority of MSMs in Kenya are not only purely homosexual but bisexual thus presenting the risk of wider, faster and unreported spread of HIV infection within and beyond the MSM social networks (Gelmon et al., 2009). In one study in Nairobi, it was estimated that nearly 40% of MSMs who came out had been married to women while 13 % of all self-identified MSMs were currently married to a woman (Orengo, 2013).

With a HIV prevalence rate of 6.8%, Nairobi is number eight among the first ten counties in Kenya which contribute to about 65% of National HIV prevalence. It is important to note that Nairobi is perhaps one of the few regions in Kenya where majority of MSMs have come out in an attempt to fight for their rights. In addition, Nairobi is perhaps the only region in Kenya with majority of MSM programs involved in human rights, health and economic empowerment.

With very few studies about social networks among MSMs having been conducted in Kenya (Muraguri, 2015a; Okal, 2015; Okal, 2012), not all factors that influence social networks among MSMs have been explored. Of particular interest to this study were factors that have either direct or indirect influence on specific sexual behaviors and health seeking behaviors which may have effects on infection and re-infection of STI's and HIV among MSMs.

Using lead peers, various Programs have been trying to reach out to, enroll and provide STI/HIV screening and treatment services to MSMs in Nairobi (<http://www.galck.org/>). Despite the vibrant peer educator models employed by most programs, it is evidently clear that many MSMs are still at risk of HIV infection and seemingly show poor health seeking behaviors.

In one of the very first studies on profiling MSMs and their networks, Muraguri et al, recommends that in order to understand transmission dynamics among MSMs and other populations in Nairobi, there is need for more sexual network analysis of such populations (Muraguri et al., 2015b). Likewise, this study hypothesizes that the problems regarding risky sexual behaviors and poor health seeking patterns among MSMs could be associated with their social networks.

Given the insufficient studies and little information available on MSMs, understanding behavior patterns among MSMs is still a challenge to researchers and service providers in Kenya. This has the potential effect to compromise designing and implementing effective, relevant and acceptable services for MSMs. In exploring social networks among MSMs in Nairobi, this study brings forth critical information on behavior patterns and practices among MSMs which might be influencing their sexual and health seeking behaviors. It is also important to note that despite the challenges that face MSMs, there has not been vigorous research efforts particularly focusing on internal factors such as social networks. The few available researches have focused on external factors such as violence from police and mob justice.

1.3 STUDY QUESTIONS

1. What are the factors driving social networks among MSMs in Nairobi?
2. Do social networks shape sexual behaviors among MSMs in Nairobi?
3. How do social networks influence health seeking behaviors among MSMs in Nairobi?

1.4 OBJECTIVES OF THE STUDY

1.4.1 MAIN OBJECTIVE

To explore social networks and associated effects on sexual and health seeking behaviors among MSMs in Nairobi.

1.4.2 Specific objectives

- I. To explore the existence of social networks among MSMs in Nairobi.
- II. To establish the association between social networks and sexual behaviors among MSMs in Nairobi.
- III. To establish how social networks influence access to and utilizing of health services among MSMs in Nairobi.

1.5 JUSTIFICATION OF THE STUDY

Findings from this study are critical in informing the MSM community on how the social networks they engage in influence their sexual practices and health seeking behaviors. The findings will also inform service providers working with MSMs on the importance of social networks on sexual practices and health seeking behaviors among MSMs. This is key in

providing effective, targeted service to MSMs. Furthermore the findings will inform donors, programmers and policy makers on how to approach MSMs needs in terms of funding and designing programs.

Overall, the study findings are significant in influencing decisions by stakeholders regarding the need to either strengthen beneficial social networks or break maladaptive social networks among MSMs.

1.6 SCOPE AND LIMITATIONS OF THE STUDY

Generally there is a dearth of information on MSMs in Kenya. Specifically, very few studies have been done on social networks among MSMs in Kenya. This affected the depth of literature review necessarily required to draw comparison in research findings. However the researcher reviewed and interrogated as many documents from across the world as possible with a view of contextualizing the results.

Recruitment of participants was by convenient sampling. In addition participants were only recruited from bars and night clubs. These results should therefore be interpreted with caution and they may not be representative of the views of majority of MSMs. However, this approach was necessitated by the facts that MSMs are a hidden, hard to reach and secretive community. Even though there are other hotspots typologies where MSMs hung out, evidence show that large majority of MSMs are venue based particularly bars and night clubs (National AIDS and STI Control Programme (NAS COP) Kenya (2012). However to reduce biases, and in an attempt to increase representativeness, the research assistants who were experienced peer educators picked from four different programs worked together with the researcher in coming up

with a list of hotspots mainly bars and night clubs, peak days and hours when majority of MSMs could be found at the bars and clubs. Through randomization, 20 hotspots were selected for the study. The researchers visited the hotspots on peak days and peak hours. Using experienced peer educators as research assistants was critical in building rapport with participants, assuring the participants privacy and confidentiality. These approaches were to ensure hotspots were visited at the most appropriate times when majority of the MSMs were present. To reduce the chances of participants recruiting just from few hotspots, not more than 4 participants were to be recruited from one hotspot (bar or club).

It is evident that studies on networks mainly rely on recall which is a possible source of inaccurate data and errors in data collection. On the other hand real-time data on networks present other challenges such as being too detailed and presenting chances of erroneous conclusions due to instability and unpredictability of networks (Kadushin, 2004). Nonetheless this study attempted to create a balance between the two approaches in an effort to reduce the errors.

CHAPTER TWO: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 INTRODUCTION TO THE CHAPTER

Chapter two grounds the study in both empirical and theoretical literature. The chapter comprises of literature review on various specific thematic areas such as sexual orientation and homosexuality, factors that influence social networks among MSMs, sexual behaviours within and out of social networks, HIV epidemiology among MSMs and access to services among MSMs. The chapter explores the relevance of two theories namely: social networking theory and theory of social action to the study. The chapter provides both diagrammatic and narrative conceptual framework to the study. The chapter also provides conceptual and operational definition of key terms and variables.

2.1 INTRODUCTION TO LITERATURE REVIEW

A background search was conducted to understand issues of sexual orientation and homosexuality, drivers and effects of social networks among MSMs, HIV epidemiology among MSMs and access to health services by MSMs. More than sixty peer-reviewed and grey literature sources were retrieved and stored in a Mendeley library specifically created for the purpose of writing this paper. Note that not all source contents were mutually exclusive.

2.1.1 SEXUAL ORIENTATION AND HOMOSEXUALITY

Sexual orientation refers to the emotional, romantic and/or sexual attraction towards men, women or both sexes. It is also a person's sense of identity based on the attractions, related behaviors and membership in a community of people who share those attractions. Sexual

orientation occurs in three categories along a continuum ranging from heterosexual (emotional, sexual or romantic attraction towards people of opposite sex), bisexual (emotional, sexual or romantic attraction towards both sexes), to homosexual, gay or lesbian (emotional, sexual or romantic attraction to people of same sex). There are three schools of thoughts in conceptualizing sexual orientation (Interagency Gender Working Group, 2010). The first school of thought views sexual orientation as a biological individual characteristic like biological sex, gender identity or even age. Propagators of the second school of thought critique the first school of thought for being too simplistic. They argue that sexual orientation has a lot to do with relationships and interrelations between and among individuals. That people express their sexual orientation through behaviors towards others. Thus sexual orientation becomes a social characteristic. The third school of thought observes that sexual orientation is neither purely a biological characteristic nor purely a social characteristic. Propagators of the third school of thought argue that sexual orientation is a combination of an individual's biology and social behavior. Further they observe that one's sexual orientation defines the group of people in which one is likely to find satisfying and fulfilling emotional, sexual or romantic relationships. Such relationships are important components of an individual's identity and characteristics. Nonetheless the current scientific or professional understanding on how people know if they are gay/lesbian is that different gay/lesbian people have different experiences regarding their sexual orientation. For example it is evident that some people know that they are gay long time before they actually pursue people of the same sex. On the other hand some people pursue people of the same sex for a long time before they assign themselves the homosexual orientation (American Psychological Association, 2011).

2.1.2 FACTORS INFLUENCING SOCIAL NETWORKS AMONG MSMs

Respondent driven approaches (RDAs) have been used to sample and enroll hard to reach populations. However one underlying requirement is that such a population under study must be connected through social networks. Using RDAs the Population Council in Nairobi was able to estimate the number of MSMs in Kenya. In the study 563 MSMs were recruited through peer networks. The study concluded that RDA worked well with MSM because of the fact that they are closely and widely connected through networks (Okal, 2012). From the lessons learned from the respondent driven sampling recruitment: Hope study, it was clear that diverse groups of MSMs are well networked compared with networks among Female Sex Workers (FSW) whose networks appeared to be large and not well connected. It was also evident that the MSM population is integrated by characteristics such as age, sex and ethnicity (Okal et al., 2011). In a study on the relationship between online sexual networking and sexual risk behaviors among MSMs, Sean argues that the number of sexual partners met from online social networking technologies was associated with increased likelihood of having exchanged sex for food, drugs or a place to stay and frequency of oral sex. Among the variables that were controlled included age, race, education, and total number of sexual partners (Young, Szekeres, & Coates, 2013).

2.1.3 SEXUAL BEHAVIORS WITHIN AND OUT OF SOCIAL NETWORKS

Sexual networking among MSM community members and the general population has been suggested as one of the factors that contribute to high level of HIV prevalence and incidence among MSMs (Gelmon et al., 2009; Beyrer et al., 2012). Principally due to neglect and stigma, social networks among MSMs in Kenya have been found to be increasing the rate of HIV infection (Mlewa, Kamau, Mwangi, & Mburu, 2010). With specific regard to online social

networking, compared to people who do not seek sex on the internet, internet sex seekers tend to have more frequent anal sex, more previously diagnosed STIs, more sexual exposure to men, greater numbers of sexual partners, and high numbers of sexual partners known to be HIV positive (Young et al., 2013). Using chain links techniques, a study among young 158 black American MSMs found that 100 participants could be connected to each other in 86 dyads of social and sexual networks. Within the dyads men perceived that their friends and acquaintances approved of them using condoms but themselves did not use the condoms. Low HIV risky behaviors appeared to be associated with perceived social norms that support the use of condoms. Some of the factors that influence sexual behaviors within and without networks include but are not limited to measures such as connection, confidence, emotion, concern, willingness to live with each other, knowledge of partners whereabouts, willingness to hangout, willingness to see each other, money exchange, trust and honesty. For example whereas trust may lead to high levels of HIV status disclosure, and sharing of information with a partner, it may as well lead to condom non-use which then becomes a risky behavior. Age disparity has also been found to be a critical variable in analyzing behaviors within networks. Young MSMs for example are more likely to engage in unprotected sex with older partners than partners of their age. This is because they may lack the courage and skills to negotiate for condom use (Peterson, et al., 2009; Grant, 2010).

2.1.4 HIV/AIDS EPIDEMIOLOGY AMONG MSMs

In every epidemic assessed, it is clear that HIV infection among MSM is higher than that of the general population adult males. Worldwide pooled HIV prevalence among MSM show that it ranges from a low of 3% in the Middle East to a high of 25.4% in the Caribbean. Although MSM

community comprises only of 2% of the US population, statistics show that MSM account for almost half of all people living with HIV/AIDS. In addition in 2009, MSM contributed almost two-thirds of new HIV infections(Center for Disease Control, 2013). In 2008 World Health Organization (WHO) reported that HIV prevalence among MSM in urban areas in the US exceeded HIV prevalence among the general population in Sub Saharan Africa (SSA) where HIV prevalence is thought to be highest. In the US, black MSM is the only demographic group in which the incidence of HIV is increasing (50% increase between 2006 and 2009) (Ard & Makadon, n.d.). Global epidemiology of HIV infection among MSM showed that in 2012 HIV epidemics in MSM were expanding in countries of all incomes. Samples from Thai, Chinese and Kenya implied that epidemics in MSM were in rapid expansion phases. It was also evident that HIV infection rates among MSM were higher than in general population (Beyrer et al, 2012).Kenya is among top ten countries with the highest levels of HIV prevalence among MSM. It is estimated that 18.9% of MSM in Kenya are HIV positive(Mlewa et al., 2010). In Mombasa a study conducted by Sanders EJ (2007) revealed that men who reported sex with men exclusively had a high HIV prevalence (43.0%), which was significantly higher than bisexual men (12.3%). Men Sex Workers (MSWs)were also more likely than MSMs to have serological evidence of active syphilis (7.0% versus 1.2%).

Receptive anal sex in the past three months was strongly associated with HIV infection (unadjusted OR, 4.7; 95% CI, and 2.4–9.2). This association persisted when adjusted for age group, religious group, partner preference, anal intercourse without condom, intravenous drug use, paying for sex and prior negative testing for HIV-1 (OR, 6.1; 95% CI, 2.4–15.5). Using peer networks, a study conducted by the Population Council estimated the HIV prevalence rate among MSM in Kenya to be 25.6 %(Okal, 2012).

In comparison with persons reporting only insertive anal intercourse, the risk of HIV was significantly higher for those reporting only receptive anal intercourse and higher still for those reporting both (Dawson, 2008). Despite all the evidence available, the importance of working with MSM populations in prevention and treatment of HIV has not been recognized in most African countries.

2.1.5 ACCESS TO SERVICES BY MSMs AND THE ROLE OF STIGMA AND DISCRIMINATION

In Kenya as is in many other African countries sex workers and more so MSMs are barred from accessing services because of the stigma, violence, hostility and criminalization. According to Sullivan and Schneider (1987) in Zere (1992) homophobia has a lot of damage on the lives of gays and lesbians. The fear of being humiliated by being called names and the fear of violence (emotional, physical, sexual) deter most MSMs from accessing services (Butler & Astbury, 2002). It is a fact that in most countries where homosexuality is stigmatized and/or criminalized, the sexual orientation of most gay people is not known. A report by the Justice Resource Institute in Massachusetts US indicated that 60% of young adult members of the GLBT community do not disclose their sexual orientation to their healthcare providers.

In a study among health care providers in San Francisco, over a third of the Physicians respondents believed that homosexuality was a threat to many of the basic social institutions. Further they reported that they would be nervous in a group of MSM (The Medical Foundation, 1997).

In China homosexuality is still regarded as a deviation from the norms and morality. In a study among 300 college students surveyed across China, 82.0 % of male students and 84.5 % of

female students believed that homosexual behaviors were a psychopathic disorder. Prompted on how they would react if they discovered that their best friend were homosexual, 67.5 % would suggest to the friend to seek medical assistance while 11.2 % would break off the relationship. If it were a relative, 30.4% said they would feel ashamed while 38.6 % said they would consider it a serious illness (Feng, Wu , & Detels, 2011).

Due to the stigma, discrimination and unfriendliness, most MSMs remain hidden. Based on the argument that homosexuality is not African, most governments and policy makers in Africa still deny the presence of MSM, their role in HIV transmission, the need to involve them in prevention and treatment and the urgent need for targeted services and interventions. The president of the republic of Zimbabwe has been heard on several occasions threatening to jail, behead or “send to hell” members of LGBT community in his country(Nichols, 2013). After signing the controversial anti-gay laws, the President of the Republic of Uganda said that homosexuality was “disgusting”. In Kenya, the President has termed homosexuality a non-issue (Misiko, 2015).

The overall impact of this is a more hidden gay community to which information about prevention, treatment of STIs/HIV and availability of other services cannot reach. Even when they visit health facilities and they cannot reveal their sexual orientation, it is challenging for the health providers to carry out appropriate case diagnosis and management. Given that MSMs have not yet been recognized as an important group in prevention and treatment of HIV and other STIs there are either few-Civil Society based or Non-Governmental Organization services- or no services at all in most countries. Although an MSM health score card has been developed to help in reminding and encouraging governments and partners of the importance of MSM accessing

various services no government in Africa has adapted the scorecard (African Men for Sexual Health and Rights (AMShER), 2009).

2.2 THEORETICAL FRAMEWORK

Various theories can explain how human beings create behaviors, how they understand the behaviors, acquire behaviors and transmit such behaviors. These are critical aspects of this study. This study is grounded in two main theories: the social networking theory and the Weberian theory of social action.

2.2.1 SOCIAL NETWORKING THEORY

Sociological precursors of social networks in 1800s include Emile Durkheim and Ferdinand Tonnies. According to Tonnies, social groups can exist as personal and direct social ties that either link individuals who share values and belief or impersonal, formal and instrumental social links. Durkheim distinguished between traditional society which exists on mechanical solidarity and modern society which exists on organic solidarity. Mechanical solidarity prevails if individual differences are minimized while organic solidarity develops out of cooperation between differentiated individuals. George Simmel became the first sociologist to directly think in social network terms. His works pointed to the nature of network size on interaction and to the likelihood of interaction in ramified, loosely knit networks rather than groups (Simmel, 1908/1971). Several works and discussions took place until 1950-60s when social network analysis was used in kinship and urbanization studies. Research-wise, social networks have been

used in epidemiology to understand how human contact aid or inhibit the spread of HIV(Wasserman, 1994).

It has been argued that social networks theory is perhaps the only non-reductionist theory. In Social sciences the theory can be applied at various levels from interactions in small sub-cultural groups to interactions among big organizations and institutions. In networking, two Nodes (two human beings) are networked or connected because of a common tie (link). This could be a shared social, political or economic standing in a society (Kadushin, 2004). Social networking theory has provided critical premises on which human population organizations can be understood. It is an approach through which social patterns and processes can be analyzed. Evidence shows that social interaction patterns among human populations have an affinity to deviate from randomness. This is because human beings have a tendency to only interact with particular human beings. Critical too in the analysis of social networks is the fact that there are variations in contact patterns among human populations in terms of number of contacts an individual has in a population (Katz, Lazer, Arrow& Contractor, 2004). These variations have consequences in relation to population level processes such as transmission of information, evolution and diffusion of behavior. There are several directional relationship such like symmetrical where one person likes the other or non-directional where the liking between individuals is purely mutual. Multiplex networks thrive on the basis of how the three individuals relate to each other. Whereas some multiplex networks are transitive or balanced while some are imbalanced(Kadushin, 2004). Beyond directionality, reciprocity and liking of individuals in networks, the flow of goods and services is also important in choosing, shaping and sustaining social networks. The foregoing observations corroborate with Wilson's (1975) argument that

social networking theory is an asset in understanding the sociability of human beings in a society (Krause, Croft, & James, 2007).

The following three propositions in social networks theory are critical to this study:

Homophily: This is the basic concept upon which this study is based. The proposition is that homophilous pairs or individuals have characteristics that match in a greater proportion than in the population from which they are drawn. It is from this understanding that we derive the assumption that given the common social attribute of having sex with other men, MSMs are social-sexually more connected to each other than they are with the heterosexual members of the society. This concept can be interpreted in two ways; i. that it is the common attributes and sexual behaviors (Homophily) among MSMs that make them to network and ii. That the networking among MSMs produces and strengthens common sexual patterns and health seeking behaviors (Homophily).

Propinquity: Field and Carter, (1988) assert that individuals are likely to be friends if they are geographically close. In exploring social networks among MSMs in Nairobi, it was interesting to find out how far social networks among them go. This concept presents an aspect of closeness with regard to the strength of social networks among MSMs in Nairobi. It was assessed by looking at members of social networks, the days spent together and activities engaged in among other variables.

Mutuality: Mutuality in networking is a complex concept with two central theses; i. the extent to which relations are reciprocal otherwise referred to as the rule of give and take and ii. The degree of power or symmetry in relationships. Mutuality is critical in analyzing drivers of networking and choice of partners in terms of possible benefits among MSMs. In addition the idea of power

relations is equally important in analyzing decision making regarding rules of engagement and partnership. This informs the assumption that power dynamics between MSMs (those who sell vis-à-vis those who buy, and bottoms vis-à-vis tops) are critical in determining condom use, disclosure, access to health services and violence.

The bottom line to all perspectives of social network theory is the assumption that individuals consider networks as investments from which they derive payoffs. The payoffs maybe in terms of political, economic, social, or psychological capital (Katz et al., 2004). It is the payoffs and degree of benefit that has effects on power dynamics in interaction and decision making thus affecting sexual and health seeking behaviors among MSMs in a social network.

2.2.2 THEORY OF ACTION

In applying social interaction theory to this study, it is important to consider Max Weber's theoretical strategy and discussions in the *Economy and Society* (Turner, 1988). In his conceptualization of action, interaction and organization, Weber equates action simply to movement in an environment. Sociologically, the movement of an individual in an environment has to be socially and meaningfully oriented to movements by other individuals or actors. Weber offers a typology of how actions are oriented. Actions can be oriented in three ways; one, actions can be 'Rational' and rationality of an action can be analyzed as either being instrumental rationality or value rationality. Secondly actions can be affectual. Affectual actions are determined by feelings and emotions. Thirdly, actions can be traditional, that is, determined or oriented by traditions, customs, beliefs and habits. Weber categorizes relations into two;

1. Communal relations based on either affect or traditions/customs

2. Associative relations based on rationality.

In exploring social networks among MSMs, this study borrows Weber's conceptualization of action. In this regard the perception, establishment and sustenance of social networks among MSMs are based on how different individuals within the MSM community value the benefits derived from social networks. For example whereas some MSMs consider their networks basically based on affection and sexual pleasure, most Male sex workers would create economic networks from which they can derive financial benefits with other MSMs, thus orienting their social networking towards the instrumental or value rationality. The effect of social networks on sexual and health seeking behaviors among MSMs could be largely influenced by whether the social networks are based on rationality or affectiveness. Thus the Weberian conceptualization of action is critical in answering the questions, why and how do MSMs behave the way they behave either within or out of their social networks. This will be critical in drawing a conclusion as to whether social networks among MSMs are built on rationality or not typically based on how they affect sexual behaviors and health seeking behaviors.

2.3 CONCEPTUAL FRAMEWORK

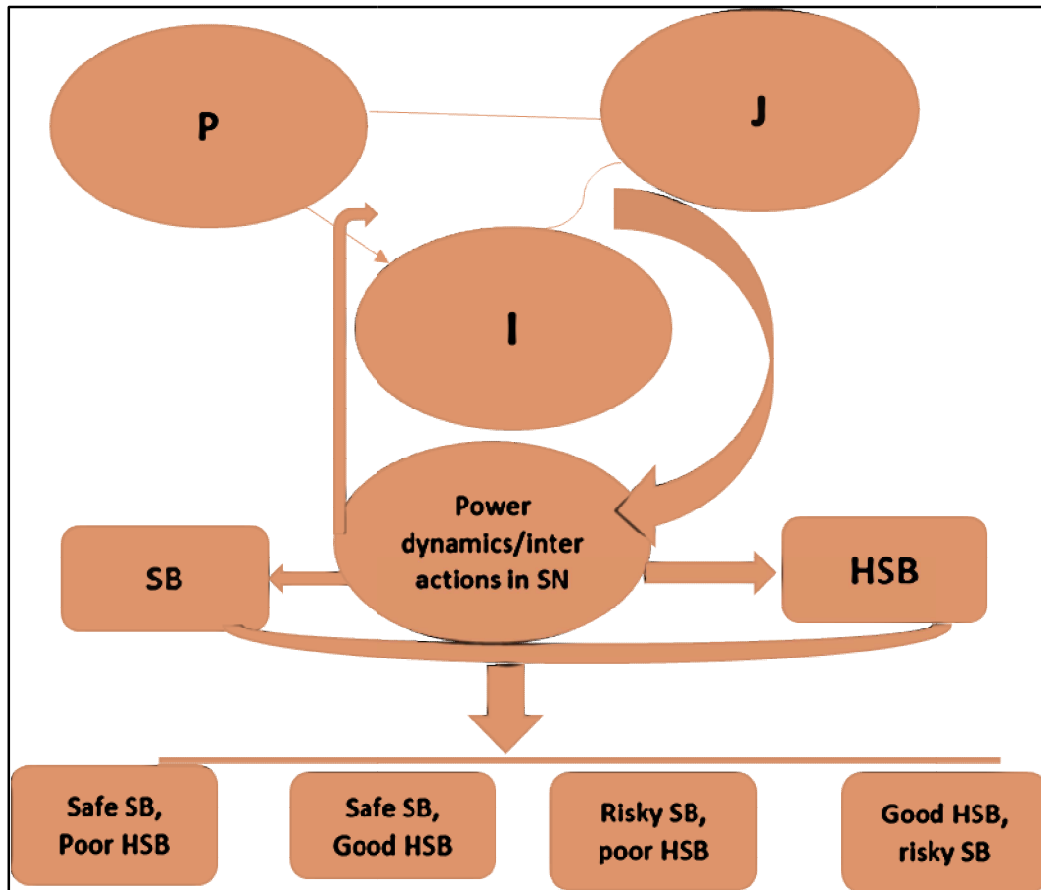


FIGURE 2: CONCEPTUAL FRAMEWORK

Key

PJI-individuals (MSMs selling sex) connected together by different social factors to form a social network

SB-sexual behavior

HSB-health seeking behavior

SN-social network

There are a myriad of factors that drive social networks among MSMs in Nairobi. Different lines are used in the conceptual framework above to illustrate varied factors that connect MSMs. An MSM could form a social network with another MSM depending on how well the partner meets his needs. Such needs could be psychological, social or economic. Depending on the rules of engagement, trust, benefits accrued from the relationship among other factors, the social networks may have either positive or negative effects on an individual's behavior. For example on one hand good interpersonal communication within social networks may lead to healthy sexual practices and good health seeking behaviors. These may be practices such as consistent, correct use of condoms and behaviors such as regular HIV testing. On the other hand desire for money within social networks and drug abuse may lead to risky sexual behaviors and poor health seeking behaviors for example engaging in unprotected sex and underutilization of available health services. Thus in the conceptual framework above, interactions within social networks may result in MSMs possessing four different behaviors: safe sexual behavior, poor health seeking behavior; safe sexual behavior, good health seeking behavior; risky sexual behaviors, poor health seeking behaviors and good health seeking behaviors, risky sexual behaviors.

2.4 CONCEPTUAL DEFINITION OF TERMS

Men who have Sex with Men (MSM) Epidemiological term used in reference to male-male sexual behavior than identity (Terms & Rights, 2010). The term MSMs is used throughout this study whenever there is reference to the male-male sexual behavior. The terms MSMs and Gay men are used differently because not all people who engage in male-male sexual behavior are necessarily self-identified as MSMs for example some married men (bisexual) who buy or sell anal sex may not be willing to be identified as gay despite the fact that they engage in male-to-male sex.

Gay men these are self-identified MSMs. Specifically this study focuses on MSMs who hang out at bars and night clubs to look for sexual partners and clients in Nairobi. The term gay man/men is used throughout this study whenever there is reference to homosexual self-identity.

Social Network among MSMs a relationship established and sustained on socio-demographic factors such as friendship, age, sex, religion among others. This study conceptualizes social networks as relationships amongst MSMs who hung out at bars and night clubs regarded as hotspots by gay community members in Nairobi Kenya. The main focus of the study is on social networks established among MSMs who patronize bars and night clubs in Nairobi to sell sex from other men.

Hotspots generally defined as venues where sex workers hang out searching for clients. In Kenya such venues include bars, streets, clubs, beaches and sex dens. This study focused on bars and night clubs where MSMs hang out looking for clients in Nairobi city.

A Peer educator/outreach worker in this study we consider a peer educator as a member of the gay community who has undergone some basic training based on the NASCOP curriculum and

could be attached to a specific organization where he refers other MSMs for services. In addition a peer educator would also be in charge of distributing commodities such as condoms, lubricants and providing health education and usually in charge of a number of peers at a particular hotspot.

Closeted the term is used to refer to a state whereby MSMs cannot freely be self -identified as gay people. Mainly as a result of hostile environment perpetuated by stigma, discrimination and unsupportive laws.

Coming out this study uses coming out to describe a state whereby MSMs can freely identify themselves as MSMs in a friendly environment and a result of empowerment.

2.5 OPERATIONALIZATION OF KEY VARIABLES

Social networks: This study measured the existence of social networks by analysing social demographic factors that influence relationships among MSMs. Other measures included analysis of time spent together, and activities engaged in by participants.

Sexual behaviors: The study measured sexual behaviours by analyzing safe sexual practices such as use of protection during sex vis-à-vis risky sexual behaviors such as group sex and engagement in unprotected sex within and out of social networks.

Health seeking behaviours: The study measured health seeking behaviours by analyzing how social networks influence behaviors such as visiting health facilities, points of care visited and types of services accessed by MSMs as influenced by social networks.

CHAPTER THREE: STUDY METHODOLOGY

3.0 INTRODUCTION TO THE CHAPTER

The chapter describes the study design, methods and tools that were employed for data collection and analysis. Areas discussed in this section include description of the study site, research design, study population, sampling methods and procedure, sample size, data collection method, tool and procedure, personnel and materials, ethical consideration and data analysis and presentation.

3.1 DESCRIPTION OF THE STUDY AREA

Nairobi is the capital city of Kenya. With a buldging population of close to 4million, Nairobi is perhaps the second largest city by population in the African Great Lakes Region. Nairobi is home to thousands of local business and international companies and organizations, making it both a business hub and home to diverse culture (County Government of Nairobi, 2014).

The study was carried out in Nairobi city. The choice of Nairobi as the research site was based on the following considerations. First Nairobi is very diverse metropolitan city ensuring high level of interactions. The researcher being interested in understanding social networks, Nairobi was the most appropriate in assessing the objective considering the high number of MSMs. Minimal estimates show that Nairobi has the third largest number of MSMs (1500) after Nyanza and Mombasa (Okal et al., 2015). However there could be many other MSMs in Nairobi who are unknown.

Furthermore, Nairobi is perhaps one of the regions in Kenya with majority of programs providing health services to MSMs in Kenya. According to NASCOP's key population

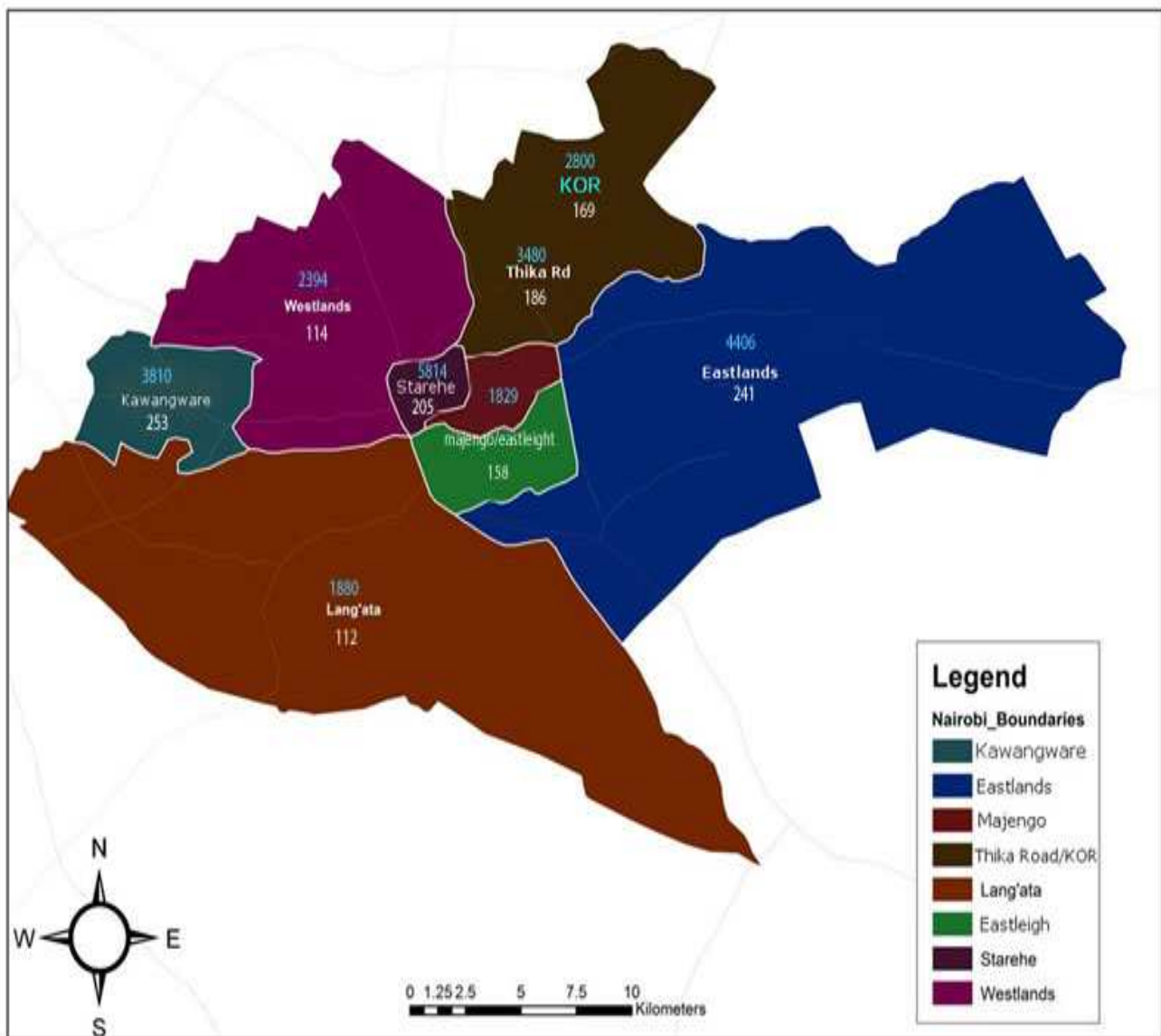
department, major programs involved in research and health services for MSMs in Nairobi include Partners for Health and Development in Africa through the Sex Workers Outreach Programme, Health Options for Young Men on HIV/AIDS/STIs (HOYMAS) and ISHTAR(NASCOP unpublished data).

NAIROBI COUNTY ADMINISTRATIVE BOUNDARIES



NAIROBI COUNTY ADMINISTRATIVE UNITS, SOURCE GOOGLE MAPS 2016

DISTRIBUTION OF MALE AND FEMALE SEX WORKERS IN NAIROBI



Key-Upper number female sex workers; lower number male sex workers. Source NASCOP 2011 Mapping

3.2 RESEARCH DESIGN

This study employed a descriptive survey design. The design as defined by Orodho (2003) is a method of collecting information

n by interviewing or administering a questionnaire to a sample of individuals. The main purpose of using the descriptive survey research design in this study was to be able to describe specific characteristics of social networks among MSMs using a questionnaire. Besides, the design was considered appropriate because it helped the researcher in collecting data from the sample for the purpose of estimating parameters related to social networks, sexual behaviors and health seeking patterns among the gay community.

3.3 STUDY POPULATION

The number of MSMs in Nairobi has never been known. Different programs and studies work with estimates ranging from 1, 500 as lower limit to 10, 000 MSMs as maximum limit (Valley, n.d.; Okal et al., 2015). This is mainly because majority of MSMs are closeted and bisexual. In Kenya MSMs are considered a key population given their risky sexual practices. However homosexuality is still socially stigmatized and legally criminalized hence little is currently known about this population. This study contributes to the little available information and knowledge on MSMs in Kenya.

3.4 SAMPLING METHODS AND PROCEDURE

With the help of the research assistants, the researcher established a list of 45 hotspots where MSMs hang out in Nairobi city. To reduce biases, the researcher then assigned the hotspots

codes for privacy. This was in an effort to blind the researcher during randomization and also blind the research assistants during selection of hotspots to recruit from. Using a computer based random number generator, 20 hotspots were randomly selected from the list of 45 hotspots. To ensure that participants were recruited from all the twenty hotspots and not just a few, only 4 participants were to be recruited per hotspot. To ensure this, the hotspot code and participant code were provided. Participants were recruited through convenient sampling. Literature recommends that research that is field oriented in nature and most often among hard-to-reach populations qualifies to use non-probabilistic samples (Guest, Bunce, & Johnson, 2006).

Given that the research assistants were experienced peer educators, they were able to walk into the hotspots, build rapport with self-identified MSMs, consent them for the study and administer the questionnaire. This worked well since the research assistants and their peers had had long time relationship collecting usual programs' data. In hotspots where the research assistant was not well known, the intervention of program officers was sought who then would link the research assistant to the specific peer educator to the hotspot.

3.5 Sample size

This study recruited 65 MSMs from the hotspots. These were individuals 18 years and above, self-identified as MSMs and willing to participate. Individuals below 18 years, who were not self-identified as MSMs and were not willing to participate, were not recruited.

The following factors explain the study's sampling approach and sample size

1. MSMs remain a highly hidden and hard to reach population in Kenya. This is attributed to social and self-stigma and discrimination associated with being gay.

2. There is no reliable sampling frame for the MSMs in Nairobi given that their actual figures are unknown. Various MSM health programs in Nairobi use estimate figures ranging from 1, 500 to 10,000. However recruited individual MSMs actively accessing services in some of the programs are as low as below 100
3. MSMs in Kenya do not show readiness and willingness to participate in studies or even programs. This is partly attributable to the sensitivity of homosexuality, stigma and discrimination directed at them.
4. Given that this study was field oriented and data collection took place at the hotspots while the participants were going on with their businesses, it was only prudent that a small manageable sample size be targeted using convenient sampling.
5. Due to financial, human and time resource constraints of this as an academic research, recruiting a large sample size would not have been practical.

3.6 DATA COLLECTION METHOD, TOOLS AND PROCEDURE

Using survey method, participants were recruited and interviewed using a questionnaire as the study tool. Research assistants walked into hotspots and interviewed participants using a questionnaire. This was regarded as the most appropriate approach for the study(Key, P.J., (n.d),in view of factors such as predictability of return rate that would hamper the use of self-administered standard questionnaire design alone on one hand and on the other hand, time, financial and human resources that would hamper either standard structured or unstructured interview design. The advantages of interviewing using a questionnaire whereby the interviewers asked and filled in the questionnaire were that questions were clarified if misunderstood, there was higher response/retention rate, little resources were used, and the format and questions

werestandard, leading to a greater amount of data over a broader range of topics being collected within a short time.

3.7 PERSONNEL AND MATERIALS

Four MSMs who have risen through the ranks of peers, peer educators to become peer educator supervisors or outreach workers, working with four different MSM organizations in Nairobi for at least one year were interviewed and recruited as research assistants. These were individuals with at least a diploma level education from a recognized institution. They were required to have a wealth of information on the hotspots where MSMs could be found as well as well vast in collecting data and community mobilization among MSMs in Nairobi. The four research assistants were taken through a three-day training on research ethics, the study overview, methodology and the data collection tool before they could engage in data collection. A pilot study was done to ensure the research assistants were well equipped to carry out data collection. The choice of gay community members to be used as research assistants was important because:

1. They were useful in working together with other peer educators to come up with a list of hotspots frequented by MSMs in Nairobi.
2. It was easy to build rapport with the research participants given that they had been working with them for long.
3. Using experienced gay community members was necessary to assure trust, openness, confidence and privacy among participants given the sensitivity attached to homosexuality in Kenya.

These aspects of research were important in deriving quality data particularly from a stigmatized, hidden, secretive and hard to reach population in their natural setting (hotspot) without infringing on their privacy. Analysis and report writing were done by the candidate.

3.8 ETHICAL CONSIDERATION

The research assistant explained to the participants the purpose of the study in detail, with emphasis on what would be involved, confidentiality, the risks and benefits of participating. Participants were informed that their participation was free and voluntary and that they could leave the interview any time they felt like. The research assistants were required to ensure that they respond to any questions and in case the respondents had more questions, the mobile phone number of the candidate was provided to participants. Due to the sensitivity of homosexuality in Kenya, participants were only required to provide consent by just signing on the consent form and no names were taken. The consent form was separate from the questionnaire to assure participants that responses would not be linked to individual responses on the questionnaire.

3.9 DATA ANALYSIS AND PRESENTATION

After data collection, the researcher cleaned, sorted and coded the data. This was followed by development of a database in Microsoft excel. Data was entered and later followed by analysis using MS Excel package. Simple descriptive analysis was done to determine frequencies, averages, percentages, proportions and ranges.

CHAPTER FOUR: DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.0 INTRODUCTION TO THE CHAPTER

Chapter four provides a description of the study findings. The chapter highlights interpretation of the key findings and presents the findings under various key topical areas. The main areas presented in this section include demographic profile of the participants, exploring social networks, social networks and sexual behaviours, and social networks and health seeking behaviours. Data is presented using graphs and tables.

4.1 DEMOGRAPHIC PROFILE

Age

A total of 65 respondents were recruited into this study. Participants' ages ranged from 18 years to 44 years. Majority of the participants (45%) fell within the age bracket of 25-31 years, followed by 25 % of participants in the age bracket of 18-24 years. Only four participants did not respond to the question regarding their age. This implies that older MSMs (above 39 years) are even harder to reach compared to their younger counterparts.

Marital status

On marital status, approximately 64% of the participants reported that they were single, 28% reported that they were married while 8% did not respond to the question. These findings are within range to findings in an article that showed that nearly 40% of MSMs and 13% of MSMs had been married (Orengo, 2013). Although a slightly smaller percent were married, it still points to the fact that MSMs have networks beyond their MSM community with possibility to spread STIs at a faster rate.

It is also important to note that older MSMs, probably above 39 years would also comprise of the married MSMs who are not self-identified as MSMs.

Level of education

In terms of education, the participants in this study were a relatively knowledgeable group with majority of them reporting complete secondary school education. About 14% of the participants had completed post-secondary education. Only one participant reported no formal education.

TABLE 1: DEMOGRAPHIC PROFILE (N=65)

Demographic indicator	%	n
Age categories (years)		
18-24	28	18
25-31	45	29
32-38	18	12
39-45	3	2
Above 45	0	0
No response	5	3
Total	100	65
Marital status		
single	65	42
Married	25	16
No response	11	7
Total	100	65
Highest level of education		
Complete post-secondary	14	9
Some post-secondary	22	14
Complete secondary	25	16
Some secondary	14	9
Complete primary	15	10
Some primary	9	6
None	2	1
Total	100	65

Age at first anal sex

Asked to state the age at which they had had an anal sex for the first time, the ages reported presented a 13 year age range with the lowest age being reported at 13 years and the oldest age at first anal intercourse being reported at 26 years. The modal age reported for first anal intercourse was 20 years (n=9/65).

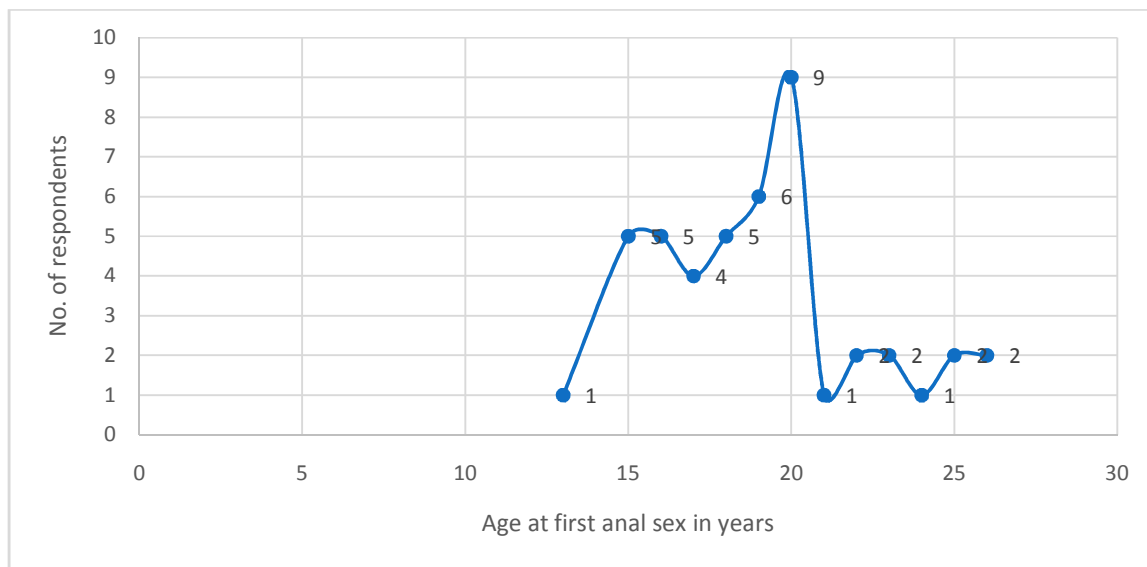


FIGURE 3: AGE AT FIRST ANAL SEX (N=65)

These results indicate that most participants had attained complete primary and complete post-secondary. On the other hand ages at first anal sex range between 13 years and 26 years, normalizing at 19.8 years. During these years, most young men would be in various learning institutions. These findings suggest that most young men become MSMs while in school. Therefore there is need for future research to investigate conditions in learning institutions which contribute to young men having sex with other men.

Most frequented hotspots

Asked to state the hotspots where they mostly hang out, it was evident that majority of respondents (58%) mostly frequented bars and clubs. However this could be attributable to the fact that the study focused on MSMs who hung out in bars and clubs.

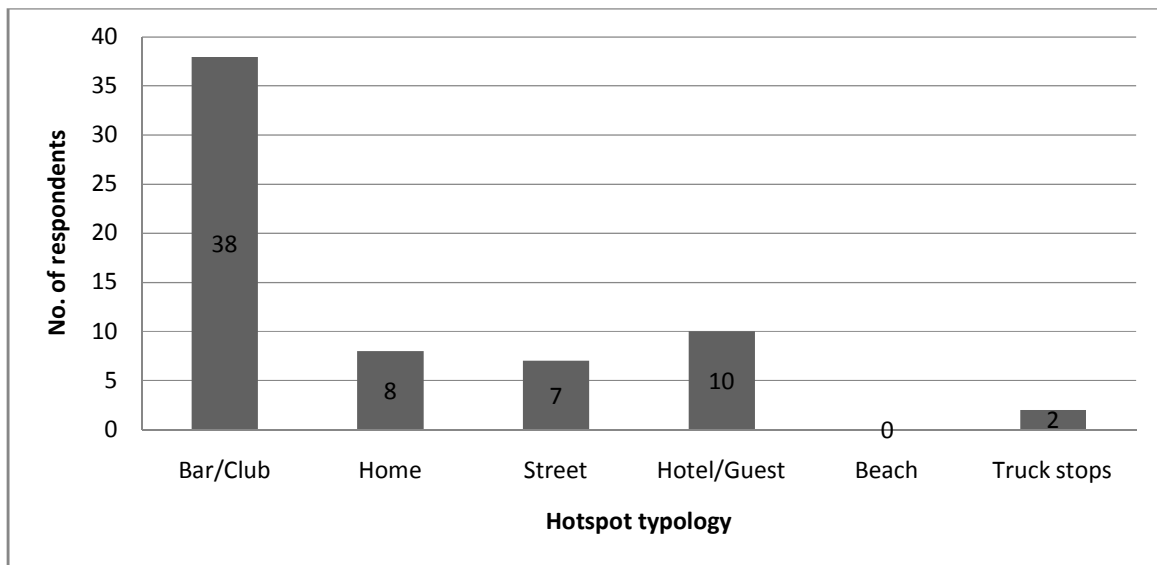


FIGURE 4: MOST FREQUENTED HOTSPOT (N=65)

It is critical to note that other common hotspots where MSMs would patronize include hotel/guest houses, streets and homes. Interventions targeting MSMs need to consider all venue typologies to ensure MSMs in need of services are able to access services.

4.2 EXPLORING SOCIAL NETWORKS

In addressing the first objective of this study on exploring existence of social networks among MSMs in Nairobi city, this section presents data on various variables. Some of the key variables that were of interest to this study and objective 1 include: membership to social networks, size

of networks, factors influencing social networks, duration into social networks, level of trust in members of social networks, time spent together with majority of members of social networks, activities engaged in with majority of members, perceived importance of social networks among MSMs, and overall the influence of social networks in an individual gay man's way of life and decision making.

Membership to social networks

A basic question was asked to find out if the participants would consider themselves as belonging to a social network of MSMs in bars/clubs. The large majority (92%) reported that indeed they belonged to such social networks with other MSMs. Eight percent of the participants believed that they did not belong to any social network. This is an indication that majority of MSMs belong to close ties with particular MSMs within the larger gay community in Nairobi.

Size of networks

In trying to find the size of the networks, respondents who belonged to a social network were asked to give an estimate of members of their social networks. A bigger proportion of the respondents 45% reported that their social networks were made up of between one and ten members. A proportion of 27% stated that members of their social networks were between ten and twenty. A proportion of 22% reported that their social networks comprised of more than twenty members, while 7% did not know the estimate of members of their social networks. The lengths of most of the social networks seem to maximize at ten members. This finding corroborates with findings in another study in which it was estimated that the median personal network size of participants ranged from 4 to 8. In the same study equilibrium on all key aspects

of analysis was reached before the 10 recruitment waves attained in the sample (Okal et al., 2015). The implication of this finding to this study is to create a picture of how far influence of a social can go in the gay community.

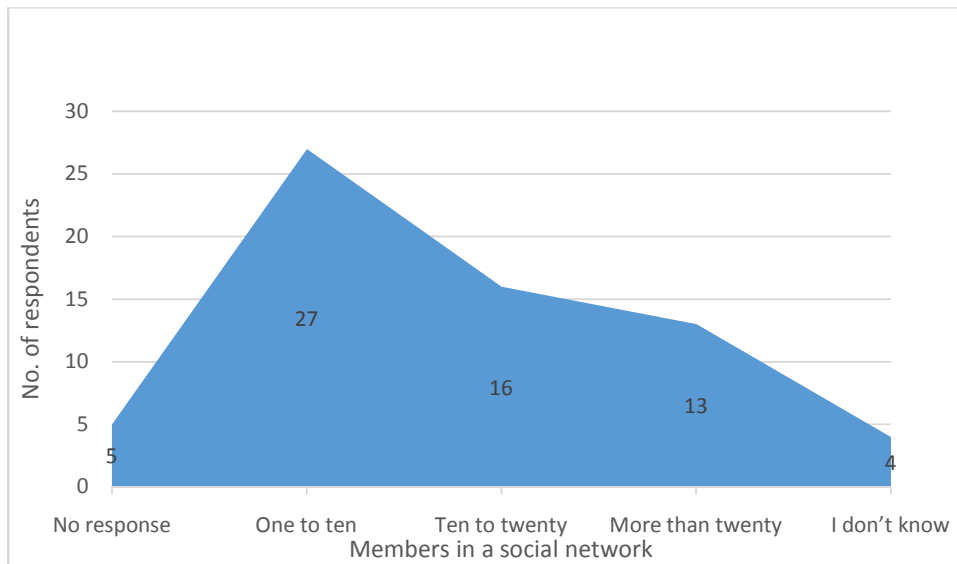


FIGURE 5: SOCIAL NETWORK SIZE (N=60)

Factors that influence membership to social networks

As to what were the main factors pulling them together to form or be part of social network, participants' responses were varied. Majority, 34% indicated that they were part of the social networks because they were age mates with most members of the networks, 15% reported that they were mainly sex mates, 14% reported that they were mainly together because they could receive financial support from members of their social networks, 11% said that majority of their social network members were school mates, 9% said they formed or were part of the social networks because they were either neighbors or lived together while 8% said that they were tribesmen. Only 9% did not respond to this question. These findings are similar to findings in a previous study that employed respondent driven approach to analyze networks among

MSMs(Okal et al., 2011). These findings are critical in understanding the socio-demographic characteristics of social networks among MSMs.

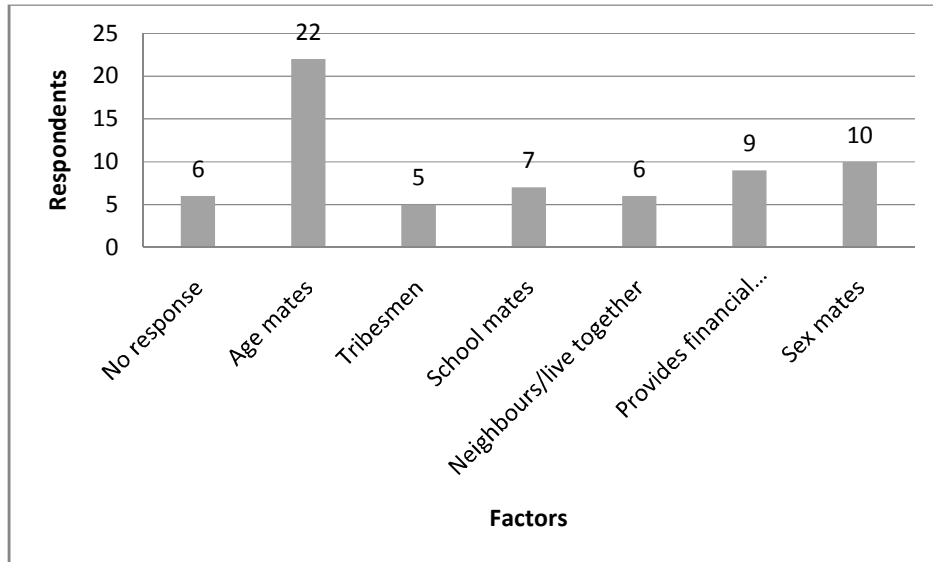


FIGURE 6: FACTORS INFLUENCING SOCIAL NETWORKS (N=65)

Duration in social networks

In terms of duration in their specific social networks with other MSMs, results show that just below half of those who belonged to social networks with other MSMs at bars and clubs, 45% had been in their social networks for more than one year. 23% had been part of the social networks for a period of between six months and one year. Another 20% had been members of the social networks for between one and three months. Only 10% reported having been part of their social networks for between three and six months while 10% of participants who were part of social networks did not respond. These findings suggest that MSMs are capable of being part of social networks for a long period of time. Perhaps there is need for further research to find out reasons that contribute to this.

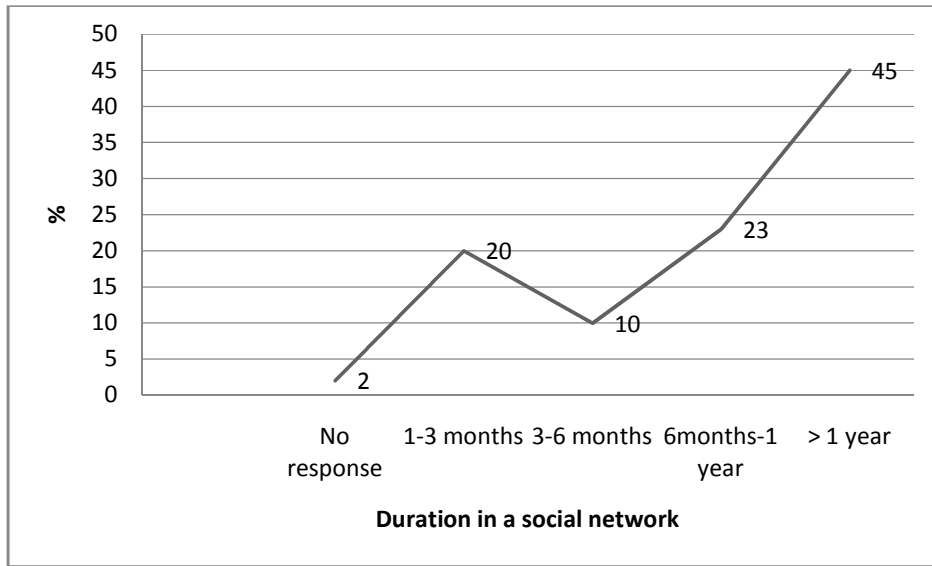


FIGURE 7: DURATION IN SOCIAL NETWORKS (N=60)

Level of trust in the majority of members of social networks

The participants' were asked to rate the level of trust they had in the majority of the members of their social networks. This was gauged on a scale of 100 percent implying complete trust, 50 percent implying not complete but some trust and 0 percent implying absolute lack of trust. Some of the participants (9%) did not respond, 9% reported 0 percent trust, 9% reported 100 percent trust while the majority 72% reported 50 percent trust meaning as much as they could not entirely trust members of their social networks, and they still had some trust in them.

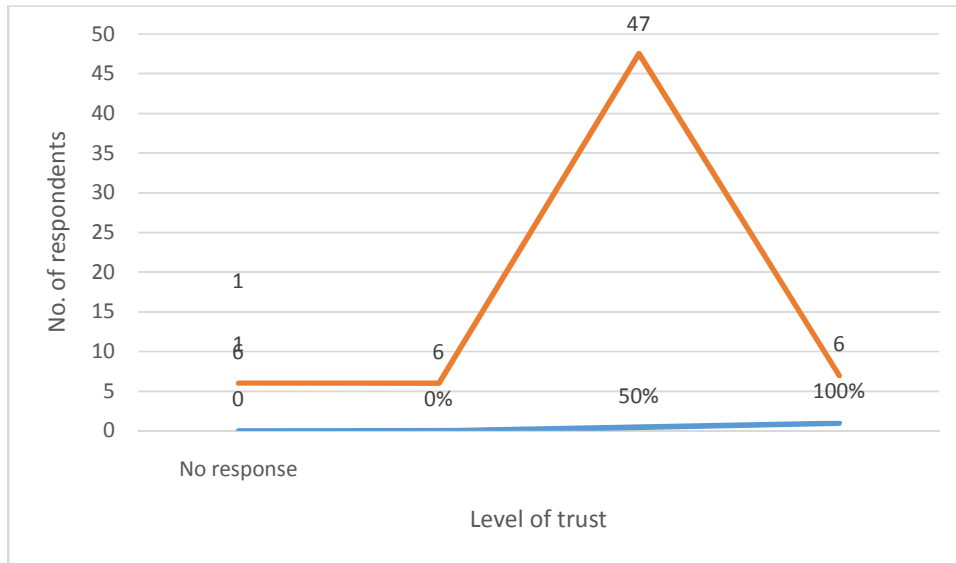


FIGURE 8: LEVEL OF TRUST (N=60)

Time spent together with majority of members of social networks

Participants were also required to report on the amount of time they would spend together with most of the members of their social networks by giving an estimate number of days they spent together in a week. Just above half of the respondents, (52.31%) stated that they would spend between one and three days together in a week, 36.92% reported that they would be together between four and seven days in a week while 10.77% did not respond.

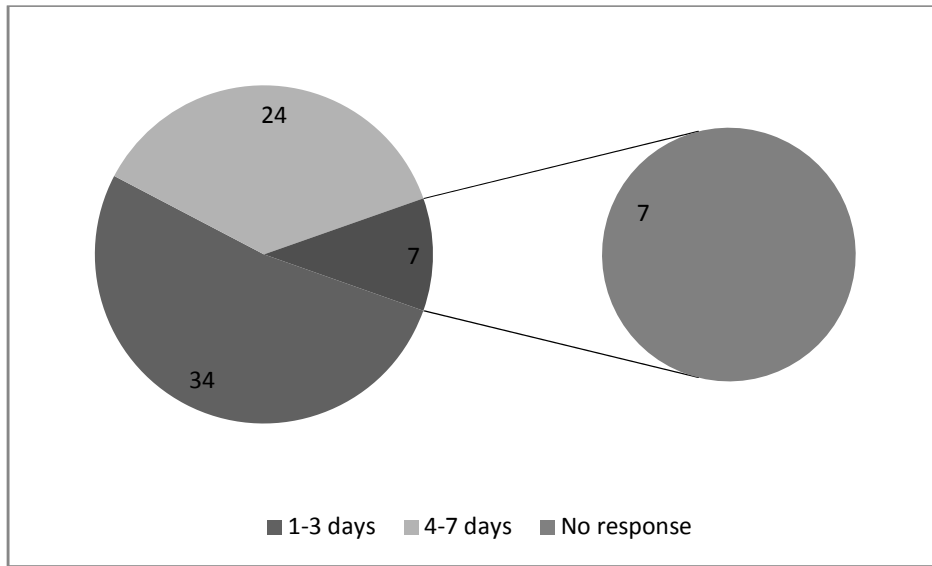


FIGURE 9: TIME SPENT TOGETHER (N=65)

Activities engaged in with members of social network

In trying to find out what they would be doing together when they meet as members of a social network, participants were asked to state the number one activity they would most likely engage in when they meet with the majority of members of their social networks. The activities reported were as follows: having fun (31%); looking for clients (20%); doing/discussing business (15%); chatting online (12%); having sex (9%); other things (5%). Five respondents (8%) representing those who did not have social networks did not respond.

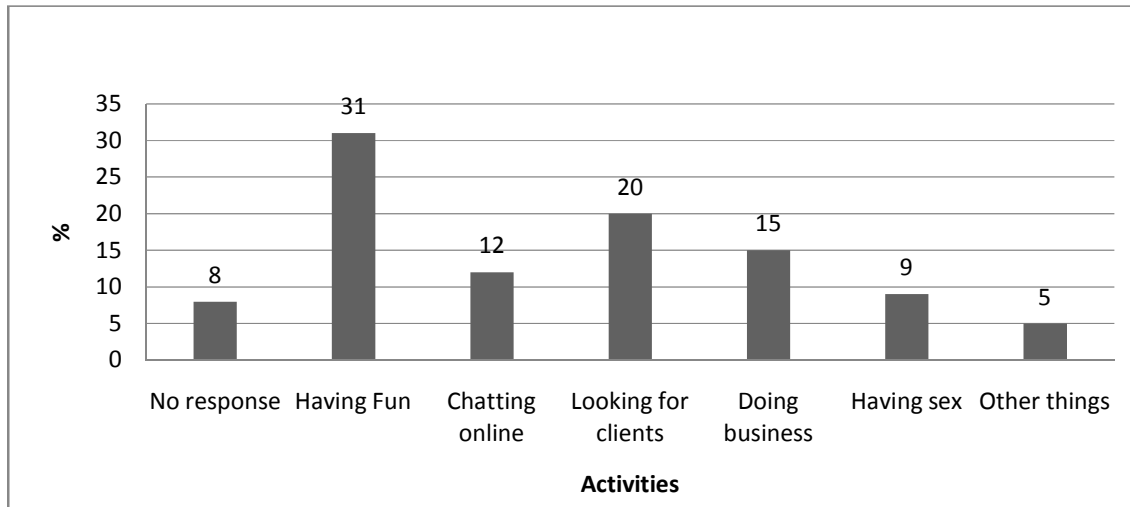


FIGURE 10: COMMON ACTIVITIES ENGAGED IN WITH MEMBERS OF SOCIAL NETWORKS (N=65)

Perceived importance of social networks

The participants' perception regarding the importance of social networks was measured by asking them to rate the importance of social networks in a gay man's life. The majority, 40% said it was important, 37% said it was very important, while 23% reported that social networks were less important.

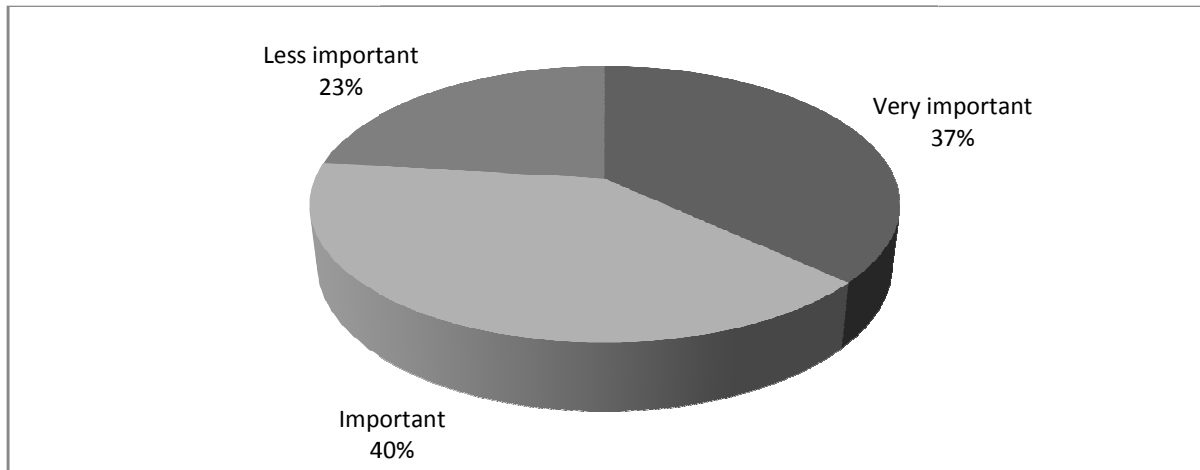


FIGURE 11: IMPORTANCE OF SOCIAL NETWORKS

Importance of social networks in the way of life, sexual behavior and decision making

Further the level of participants’ agreement with the statement that social networks were critically important in an gay man’s way of life, sexual behavior and decision making was assessed. The majority, 60% agreed, 22% strongly agreed, 11% did not agree while 8% reported that they did not know.

TABLE 2: INFLUENCE OF SOCIAL NETWORKS ON INDIVIDUAL DECISION MAKING AND LIFE (N=65)

Level of agreement	Respondents (n=65)	%
Strongly agree	14	22%
Agree	39	60%
Do not agree	7	11%
I do not know	5	8%
Total	65	100%

Even though MSMs within social networks have a lot in common, it is interesting that they do not strongly trust members of their social networks. Seemingly their lukewarm opinion on the importance of social networks and its influence in their lives and decision making are issues that require further research. This is important given that they seem to spend a lot of time together for as long as more than one year and engage in many activities together including some that are risky to their health such as unsafe sexual encounters yet they do hold their networks with high esteem.

4.3 SOCIAL NETWORKS AND SEXUAL BEHAVIORS

Objective 2 of this study sought to establish the association between social networks and sexual behaviors among MSMs in Nairobi. In this section we explore the influence—either real or perceived—of social networks on various sexual behaviors and try to explain the implication of such influence in practicing safe or unsafe sexual behaviors. Some of the sexual behaviors studied in relation to social networks include involvement in sexual activities with members of social networks or close friends, practice of safe or unsafe sex with members of social networks, knowledge of HIV status and willingness to disclose among members of social networks, sexual and gender based violence among MSMs within same social networks.

Anal sex with members of social networks

Participants were prompted on whether within the last three months they had ever had anal sex with a member of their social network or otherwise a member from within a circle of close friends. An overwhelming majority (88%) agreed, 11% disagreed while 2% did not respond. This finding is an indication that a lot of anal sex happens within gay social networks. This shows that with studies showing that anal sex continues to be the main way through which sexually transmitted infections including HIV are transmitted (Adebimpe, Olugbenda Bello, & Akindele,

2012; MacKellar et al., 2007; Okal, 2012), perhaps this suggests the need to target social networks in an effort towards behavior change among MSMs.

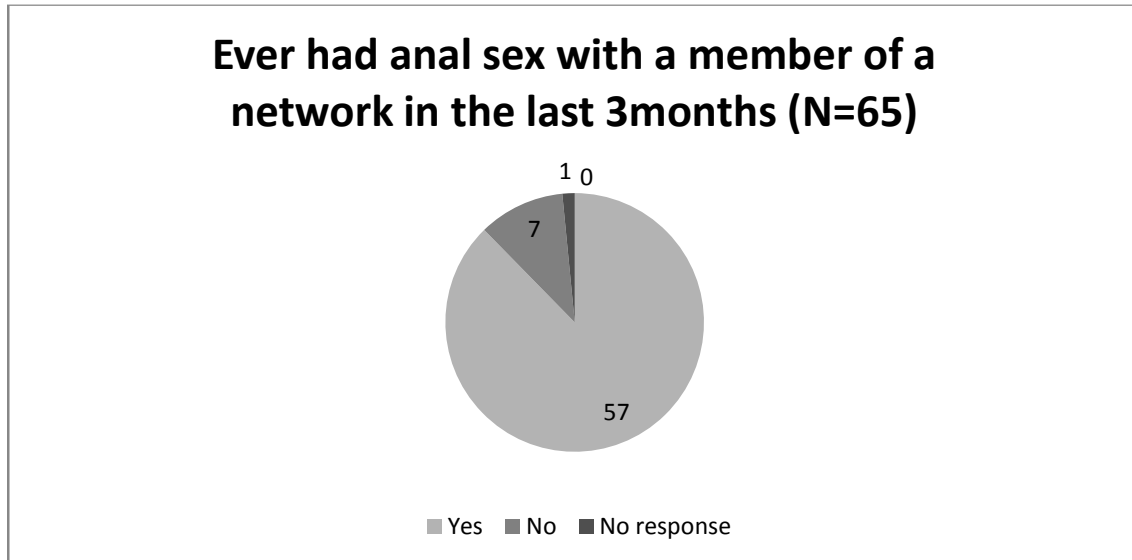


FIGURE 12: EVER HAD ANAL SEX WITH MEMBERS OF SOCIAL NETWORKS/CLOSE FRIENDS (N=65)

Condom use during last sexual encounter with a member of social network

It was also important to find out whether participants had used a condom in their last sexual encounter with a member of their social network or a close friend. The majority, 63% said that they had used a condom. Some participants, 28% reported condom nonuse. Just a few 9% did not respond. Although majority reported condom use which is a plus in efforts aimed at fighting STIs including HIV, findings still show that a substantial number of MSMs do not use condoms with members of their social networks, an indication of poor sexual behavior within social networks.

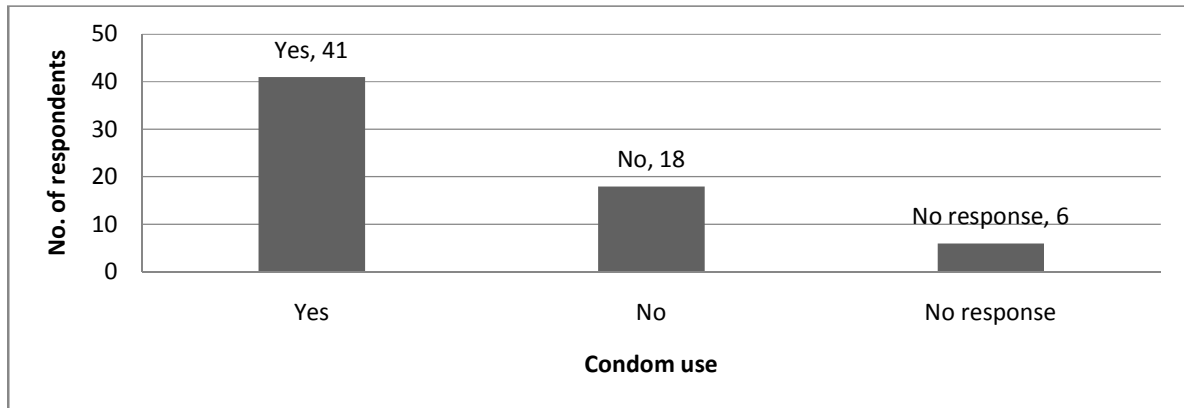


FIGURE 13: CONDOM USE (N=65)

Reasons for condom non-use

Among those who had not used a condom, a follow up question was asked to determine why they had not used a condom. Some respondents, 28% said it was because they were friends, another 28% said they were drunk or high on something, 17% said it was because of trust, another 17% said that they had been paid good money while 11% reported that they did not have a condom at the time of having sex. Factors such as friendship and drug abuse during sex, which are characteristics of social networks, seem to be the highest contributors to condom non-use than other factors. However there is need for programs involved in providing condoms and other commodities to MSMs to ensure adequate supply so as to reduce cases of unprotected sex.

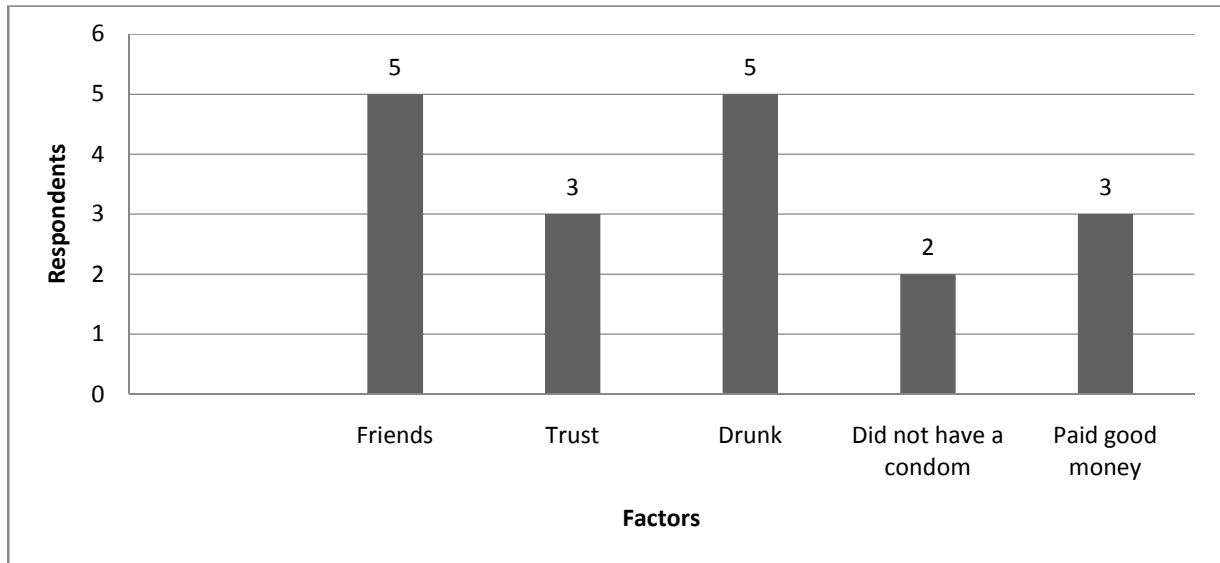


FIGURE 14: REASONS FOR CONDOM NONUSE (N=18)

Knowledge of HIV status

As to whether they knew the HIV status of the individual they had had last sex with having been a member of their social network and regardless of whether they had used a condom or not, 54% reported that they did not know the HIV status, 28% said they knew the individual’s HIV status while 18% did not respond. The fact that majority of the participants did not know the HIV status of their sexual partners from their social networks with whom they had had sex with is worrying. This indicates that participants did not bother about the transmission of HIV given that some did not use condoms when indeed they did not have knowledge and information about their partner’s HIV status. This finding implies that there is either poor disclosure or assumptions of safety among members of social networks.

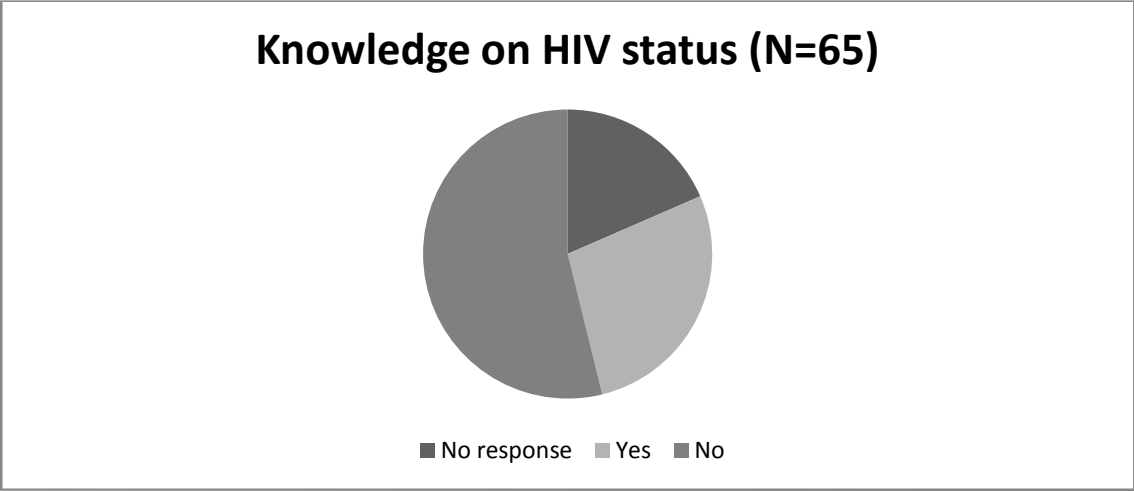


FIGURE 15: KNOWLEDGE ON HIV STATUS (N=65)

Participation in group sex

Asked to state whether they had ever participated in group sex with members of their social networks or close friends, 49% reported having participated while another 49% said they had never participated. Only 1% did not respond.

Condom use in last group sex activity

Among those participants who had participated in group sex, only 56.25% reported that in their most recent group sex activity condoms were used while 43.75% reported that condoms were not used.

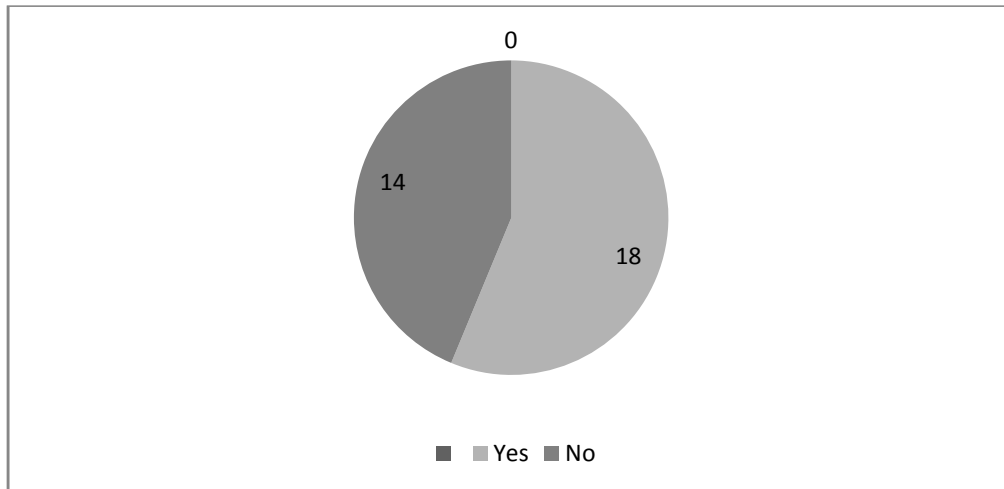


FIGURE 16: USE OF CONDOMS DURING GROUP SEX (N=32)

Group sex seems to be rampant within gay social networks. Alarmingly there are reported high rates of condom nonuse during group sex. This situation is worrying given the high levels of poor knowledge on HIV status of their partners or members of their social networks. Inconsistent condom use has been identified by other studies as a key contributor to high prevalence and incidence rate of HIV among MSMs(Adebimpe et al., 2012). These findings call for urgent need to look into dynamics of group sex among MSMs and mechanisms to be put in place to curb STIs through such behaviors.

Willingness to disclose HIV status to members of social networks

As to whether they would disclose their HIV status to members of their social networks or to close friends, 38% confirmed that they would. Only 15% were adamant that they would not disclose while 46% said they did not know whether they would or not.

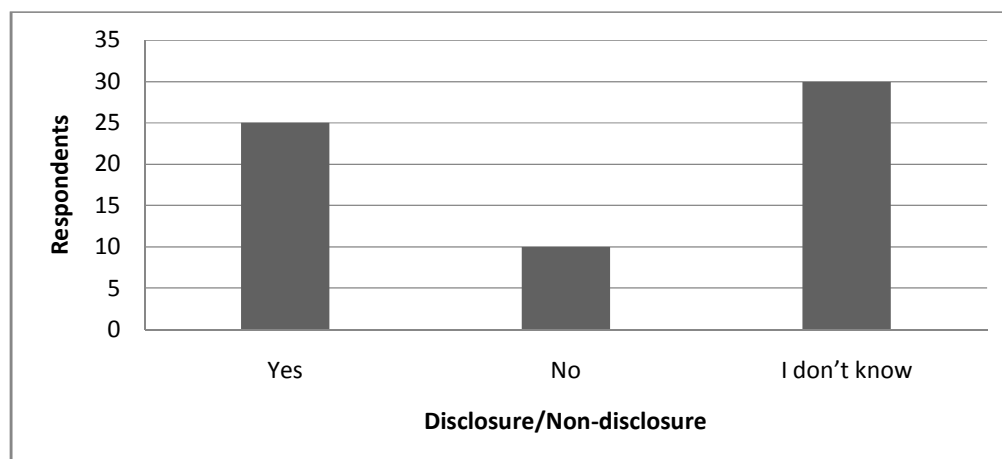


FIGURE 17: WILLINGNESS TO DISCLOSE HIV STATUS (N=65)

Reasons for or against disclosure

Reasons for disclosure or non-disclosure varied among participants. Majority of those who would disclose said that they would do so because they cared for their partners. Among those who would not disclose the major reasons were due to fear and lack of trust. Among those who did not know whether they would disclose or not, the main reasons expressed were fear, lack of trust and care for them.

TABLE 3: REASONS FOR DISCLOSURE OR NON-DISCLOSURE (N=65)

Disclosure or non-disclosure	Trust	Care for them	Fear	I don't trust them	No response	Total
Yes	7	16	0	0	2	25
No	0	0	4	4	2	10
I don't Know	0	2	4	4	20	30

The revelation that some participants would disclose their HIV status to members of their social networks particularly based on the feelings of care and trust is an indication that social networks can somehow lead to safer sexual behaviors. This is because people who are close within a social network tend to have some trust and care for each other. Conversely it is also evident that for those who would not disclose, their main reasons were fear and lack of trust. This study did not segregate participants to be able to clearly state whether participants who would not disclose did not belong to social networks. It would be interesting for future studies most particularly randomized trials to find out if indeed specifically members of close social networks would disclose more than those who did not belong to any social networks. However, these findings corroborate with findings in other studies in which evidence suggest that social networks among MSMs have specific effects on behaviors such as condom nonuse thus at times putting themselves at a higher risk of engaging in risky sexual behaviors(Young et al., 201; Adebimpe et al., 2012; Geibel, 2009.)

Sexual and gender based violence among members of social networks

In response to the question on sexual and gender based violence among members of the social networks, 26% reported that they had ever been forced to have sex by a person they would consider a member of their social network or a close friend. Nonetheless the majority, 71% said they had never experienced forceful sex from an individual they would consider a member of their social network, 3% did not respond.

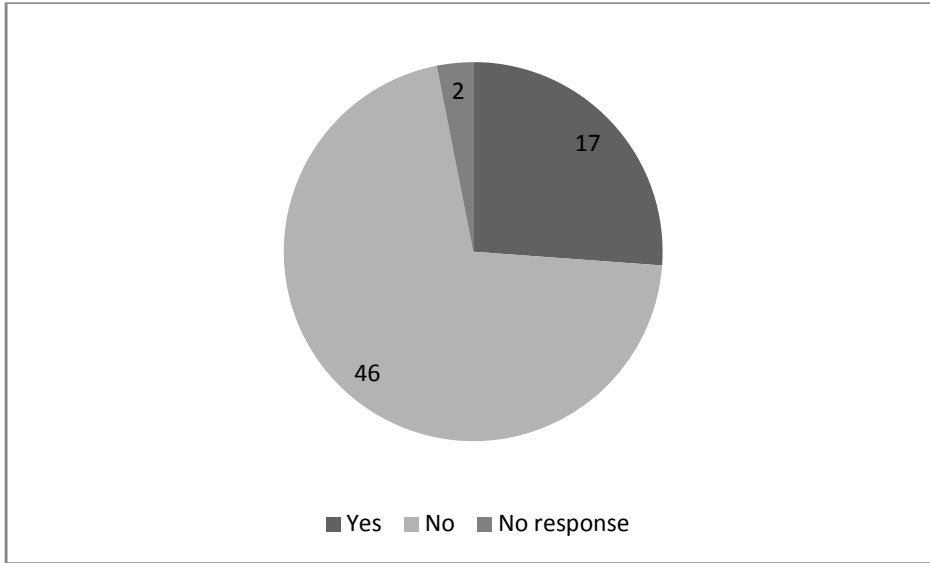


FIGURE 18: FORCEFUL SEX/RAPE (N=65)

Condom use during forceful sex

During the reported forceful sex from the member of the social network or otherwise close friends, 53% of the participants reported that a condom was used. On the other hand 35% reported that a condom was not used while 12% did not respond.

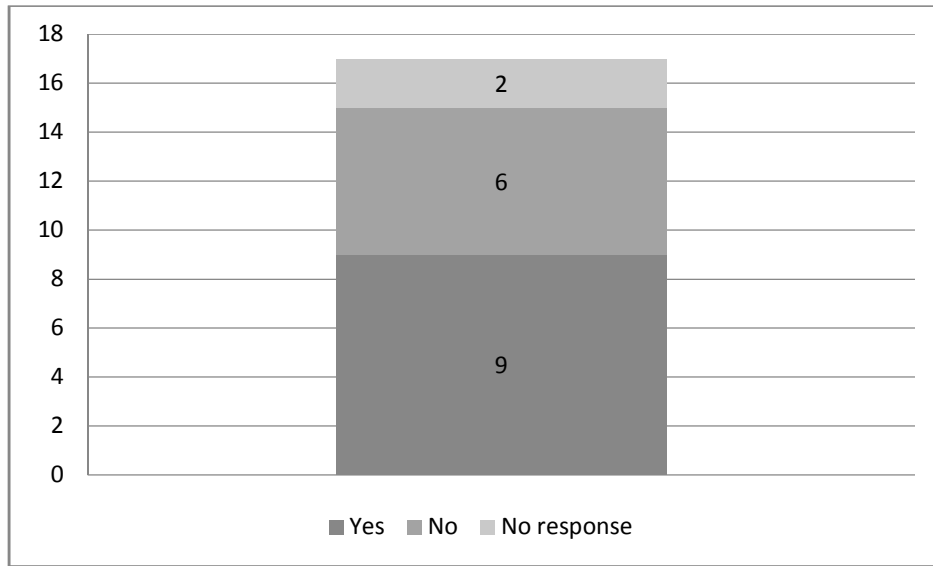


FIGURE 19: CONDOM USE DURING THE FORCEFUL SEX (N=17)

Although majority of the participants had not experienced any sexual violence from members of their social networks, 26% who reported sexual violence cannot be overlooked. With the possibility of social bias that might have led to many participants not reporting experiences of sexual violence in this study, it is important to note that there is need for efforts to address sexual violence within social networks. It is possible that perpetrators take advantage of the trust members of their social networks to rape them. Previous studies and findings have only shown that a lot of violence among MSMs is external with majority of perpetrators being cited as police, county council Askaris, public members and clients (African Men for Sexual Health and Rights (AMSHeR), 2009; American Psychological Association, 2008; Betron, Gonzalez-figueroa, Agency, & Development, 2009; Blvd, 2007; Dunkle, Jewkes, Murdock, Sikweyiya, & Morrell, 2013; Scorgie et al, 2012; Luchters S, Ritcher, Bosire, & et al, 2013; Yeka, Michie, Prybylski, & Colby, 2006).

4.4 SOCIAL NETWORKS AND HEALTH SEEKING BEHAVIORS

Objective 3, of the study sought to establish how social networks influence access to and utilizing of health services among MSMs in Nairobi. Therefore this section attempted to provide evidence of the influence of social networks on various behaviors which ultimately indicate effect on health seeking behaviors or not. Some of the key variables explored in this section include willingness to provide support to members of social networks, readiness to access services as partners, linkage to services and willingness to share commodities with members of their social networks.

Reactions to HIV status disclosure by a member of social network or close friend

On how they would react if a member of their social network or a close friend disclosed to them that he was HIV positive, responses differed largely. Nonetheless most participants (47%) reported that they would counsel them. 33.8% would refer them to a health facility. The rest would dump them (4.62%), ignore them (3.08%), did not know what they would do (9.23%), and 1.52% did not respond. These findings imply high level of willingness to provide help such as counseling and referral to members of social networks. This is indicative of the positive influence of social networks on access to and utilization of health services.

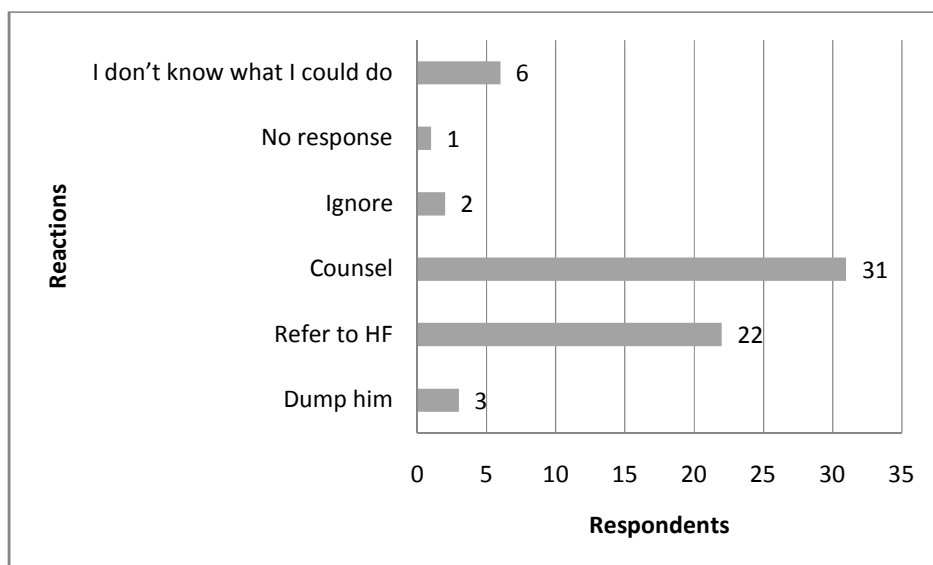


FIGURE 20: REACTIONS TO HIV DISCLOSURE (N=65)

Possible reactions to a condom burst during sex

Respondents were asked to describe what exactly they would do if they were having sex with a member of their social network then accidentally they experienced a condom burst. Majority (65%) said they would go for STI and HIV testing together with their partner. Some participants 18%, thought they would go for STI/HIV testing alone then inform their partner or friend. A few participants 12%, would ignore the condom burst and continue with life while 5% would go for STI/HIV testing and dump the partner or friend.

These are clear indications that participants were quite well informed on what to do and that they were ready and willing to go for STI and HIV testing with their partners or members of their social networks. These results suggest that social networks can positively influence access to health services. Such a gesture is encouraging in the sense that if MSMs would be encouraged to access services with their partners then the spread of STIs within and without social networks would be curbed.

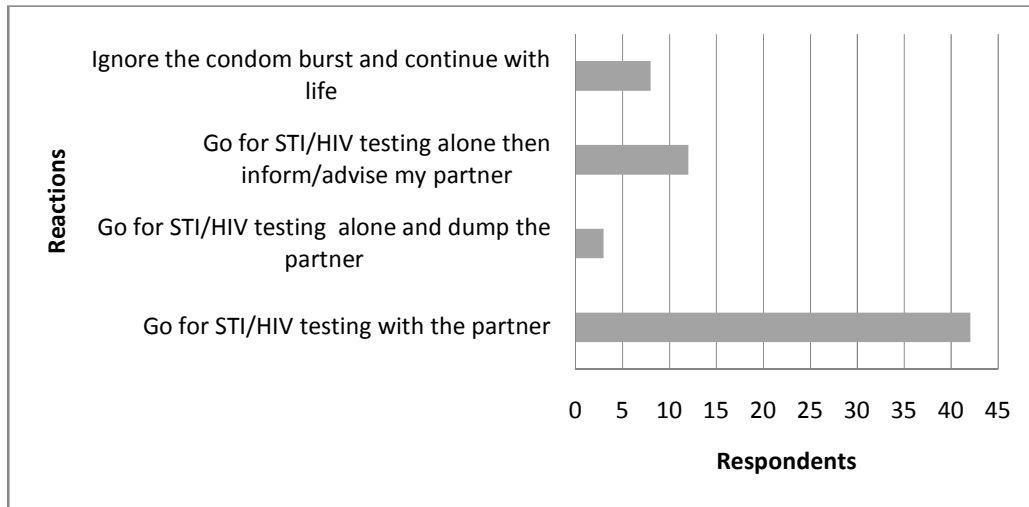


FIGURE 21: REACTIONS TO A CONDOM BURST DURING SEX (N=65)

Linkage to services

As to whether they had ever referred a member of their social network or close friends to a health facility, 77% reported having send or referred their friend(s) to health facilities. On the other hand 21% had never referred their friend(s) while 2% did not respond.

Among those who had referred their friends, majority seemed to have referred most of their friends for HIV testing and counseling (58%), followed by 26% who had referred their friends or members of their social networks for STI screening and treatment. The rest had referred members of the social networks or friends for health education (8%) and other services (4%). Some participants (4%) did not respond to the question. These results are an indication that among participants of this study, HIV was a priority. Whereas this is important, it is critical awareness be done so that members of the gay community can link their friends and partners to other services including screening for other STIs and behavior change interventions such as reduction in alcohol and substance abuse. . Interestingly none of the respondents had referred a

member of their social networks or friends for condoms. This could be because all the programs providing services to MSM were distributing condoms through peer educators.

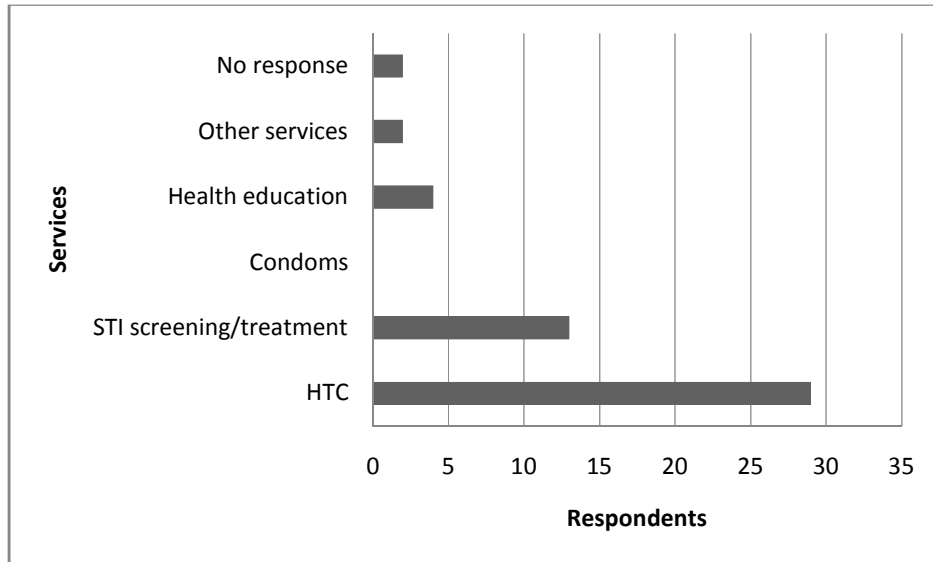


FIGURE 22: LINKAGE TO SERVICES (N=50)

Health service access point

It was also important to assess individual health seeking behaviors among the participants. With regard to point of service access, the large majority (80%) reported that they access services from Non-governmental based facilities. Other points of service access included 9%, private facilities, 8%, public facilities while 3% others. None of the participants interviewed reported not going for services.

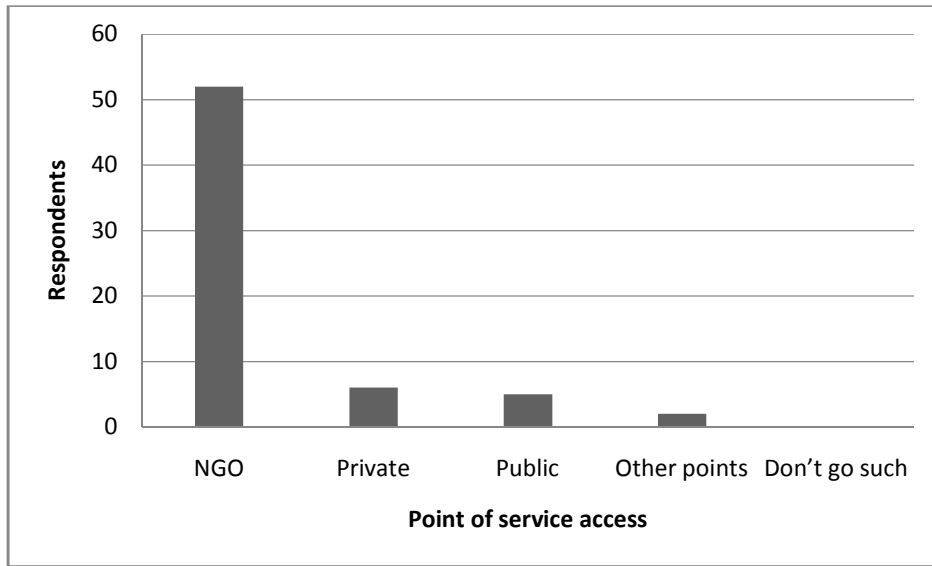


FIGURE 23: POINT OF SERVICE ACCESS (N=65)

Last time of health service access

As to when they had last gone for services, a large proportion of about 0.62 reported that they had last gone for services within the last one to three months. Another proportion of 0.27 reported that they had last gone for services within the last three to six months. The minority 0.11 reported having last gone for services more than six months ago.

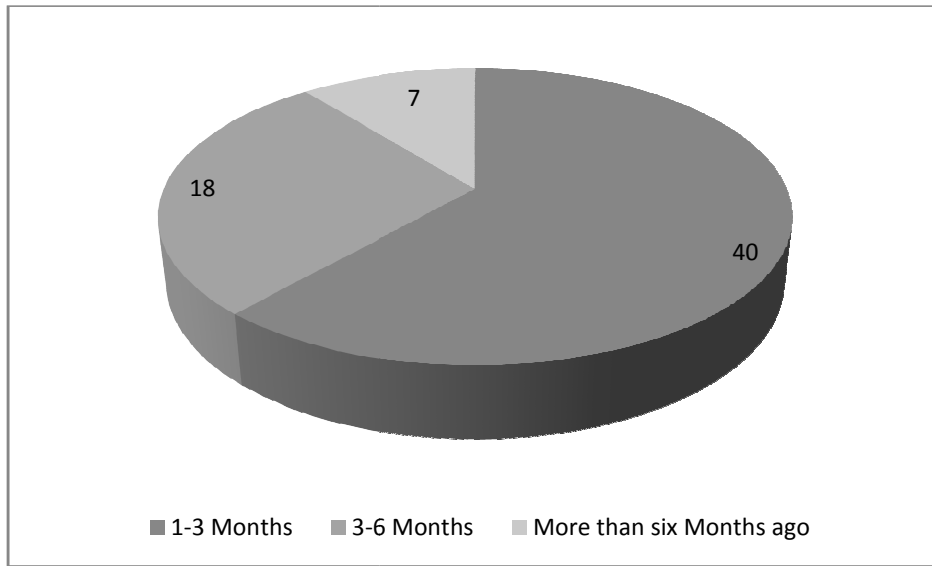


FIGURE 24: LAST TIME OF ACCESS TO SERVICES (N=65)

Linkage of friends or members of social networks to the same points of service access

Regarding their willingness to refer members of their social networks or generally friends to the same point of care they accessed services, 65% said they would, 6% would not while 29% did not know whether they would or not.

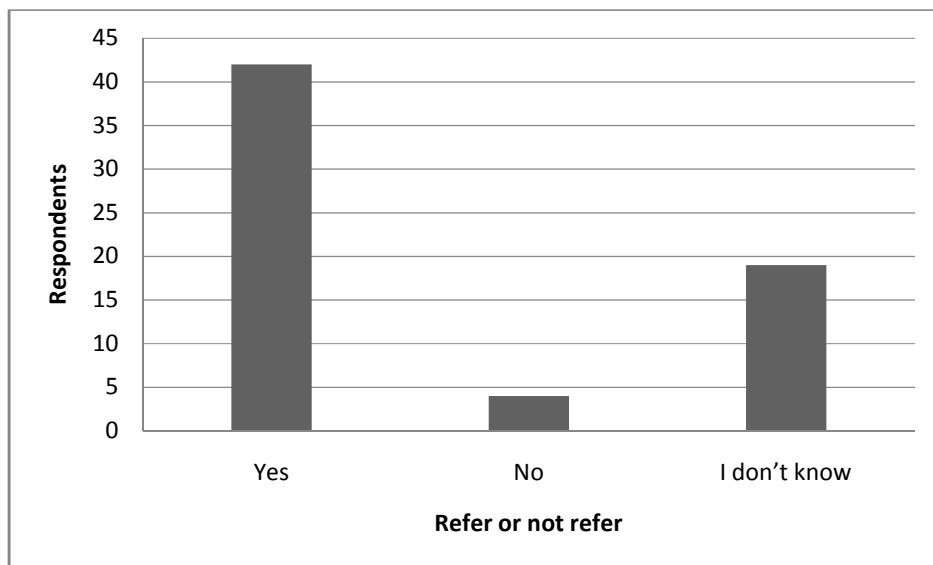


FIGURE 25: WILLINGNESS TO REFER TO THE SAME POINT OF SERVICE ACCESS (N=65)

Most participants reported that they access services from non-governmental based facilities and more encouraging is the finding that majority of them had accessed services within the last three months as per the national guidelines. Moreover majority were willing to refer members of their social networks to points of care where they personally accessed services. These findings point to the fact that participants were quite well informed with good health seeking behaviors and that they had confidence in their service providers. Whereas there is need for non-governmental facilities to continue providing services to this underserved population, it is critical for public and other categories of facilities to make their services friendlier and of quality care to enable more MSMs and other key populations' access services.

Sharing of sexual commodities

Interested in finding out how members of social networks or friends among the MSM community share commodities, participants were asked to state if they had ever helped or been helped with condoms and lubricants. The large majority, 84% scored yes, they had been helped

or had helped while 14% scored no, implying they had not helped or been helped. Few participants, 2% did not respond.

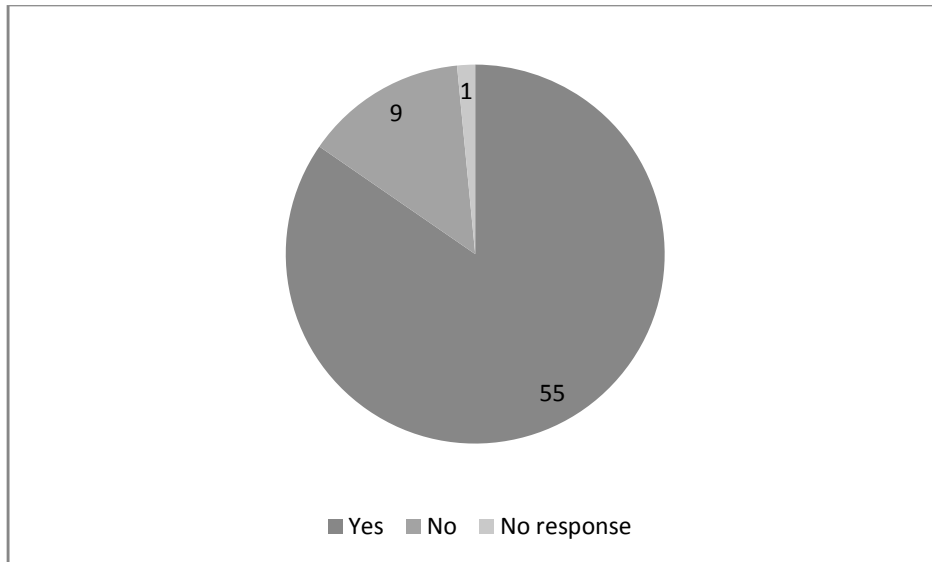


FIGURE 26: EVER HELPED OR BEEN HELPED WITH A CONDOM (N=65)

Reaction to distress calls

In an attempt to gauge reactions to distress calls from members of social networks in comparison to non-members, participants were prompted to say what they would do if they found a member of their social network beaten and sexually assaulted at the hotspot. Majority (69%) would take him to a health facility. Some participants 23% felt they would just give or show him direction to the health facility while 8% would ignore and walk away. A comparison was drawn with reactions to a gay man who is not necessarily a member of the social network but found in a similar situation. Just below half, 46% would react in the same way, 20% would not react in the same way while 34% did not know how they would react.

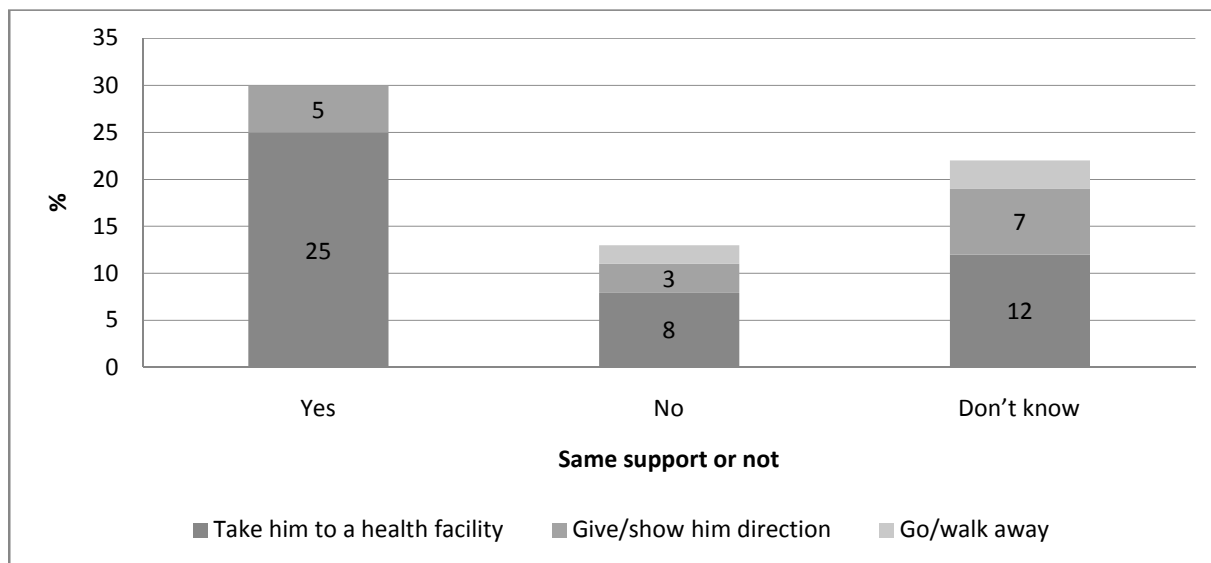


FIGURE 27: A COMPARISON OF REACTIONS TO DISTRESS CALLS (N=60)

It is evidently clear that social networks have ability to positively influence linkage to health services; information and education thus improve health seeking behaviors among MSM. Literature on evaluating peer education approaches in programmes among female sex workers and those aimed at preventing HIV have shown that peer education is an approach widely used with potential for success(Luchters, Chersich, Rinyiru, & et al, 2008; Ministry of Public Health, 2010; Rimal & Shattuck, 2010). However the argument held by this study is that whereas social networks on which peer networks are built among MSMs could be critical in improving health seeking behaviors, it is important for programmes using such approaches to ensure a high sense of self efficacyamong those who provide education services to enhance meaningful interpersonal communication and service rendering among members of social networks. In this study for example most participants said that if members of their close social networks revealed to them that they were HIV positive, the most recurrent thing they would do would be to provide counseling. This then demands capacity building, testing and approval of their self-efficacy to do peer counseling so as to ensure they provide the correct information or counseling services.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION TO THE CHAPTER

Chapter five summarizes the key findings of the study, provides a conclusion to the study and highlights recommendations both programmatic and for future research. This section summarizes findings under each objective of the study.

5.1 SUMMARY

Demographics

Most participants were young and unmarried. Participants in this study were relatively knowledgeable with majority having achieved at least secondary school level education. These results neither defeat nor support the argument that most young men engage into sex work or into being gay because of high levels of unemployment. On one hand majority of our participants were quite educated with ability to get some employment. On the other hand it could also imply that given their not very high level of education participants would have chosen to sell sex out of frustrations. However the as to what led the participants into male-male sex was not explored in this study. The age at first anal sex varied but averaged at 19.8 years. Implying that most young people become MSMs slightly just after entering adulthood. Whereas this finding would mean that most MSMs recognize their sexual orientation at a mature age of above 18 years, it does not say when they first have feelings of being gay or rather having attractions to people of same sex. However it is important for programs to engage young people in their adolescence ages and teenage years so as to curb possible confusion resulting from discovering individual sexual orientation.

Exploring existence and dynamics of social networks among MSMs

Most MSMs belong to social networks. The social networks are influenced by many socio-demographic characteristics including age, education and tribe. This implies that social networks among MSMs vary as wide as possible. There appears to be a lot of sex among members of gay social networks. Whereas the general understanding would be that MSMs particularly who hung out at bars and clubs would basically be waiting for clients to buy sex from them, this study shows that MSMs form social networks for sex amongst themselves. We postulate that sex within social networks would be more influenced by psychological and sexual needs rather than money. Evidence imply a lot of risky sexual behaviors amongst members of social networks who in this case would be defined as emotional partners. As such, there is need for concerted efforts to ensure that sex within social networks or generally with friends is safe among MSMs.

Nonetheless financial assistance also seem to influence social networks among MSMs. A combination of these factors would actually compromise an individual's decision making towards practicing safe sex. Most MSMs tend to spend most of their time with members of their social networks. They involve themselves in many activities but most likely having fun together. The results showed that MSMs have ability to stay in social networks for as long as one year. Furthermore most social networks optimize at between one and ten individuals. However findings reveal that participants neither strongly think social networks are important neither in their lives nor in decision making at individual level. This finding suggests that two things. One, that social networks among MSMs are close and tight. Two, that such networks among themselves could be largely influenced by societal stigma thus they do not view them as being very important but would just spend a lot of time having fun together as a way of settling

psychological battles. This would also explain why majority reported that they would not say that they trust members of their social networks fully or rather one hundred percent yet as indicated, they would spend a lot of their time together.

Association between social networks and sexual behaviors among MSMs in Nairobi

Social networks appear to have negative effects on sexual behaviors. Data analysis and interpretation reflect negative effects on various sexual behaviors associated with membership to social networks among MSMs in Nairobi. Participants reported a lot of sexual encounters with members of their social networks both as individuals and through group sex. Worryingly many MSMs do not use condoms while having sex with members of their social networks. Moreover some would engage in unprotected sex with members of their social networks without knowledge of their partners' HIV status. In addition some respondents reported unwillingness to disclose HIV status among members of social networks. This is an indication that MSMs are not worried about HIV whenever they are having sex with members of social networks. Worse still was evidence of sexual violence among members of social networks. Unfortunately, condoms are rarely used during such instances of forceful sex by members of social networks. This suggest higher levels of risk to STIs and HIV within social networks among MSMs in Nairobi bars and clubs.

Role of social networks on access to, and utilization of health services among MSMs

Summarily findings in this study show that social networks have positive influence on health seeking behaviors. Participants showed willingness to offer varied peer support to members of their social networks. Most participants reported that they would provide peer counseling to members of social networks if they revealed to them that they were HIV positive. In regards to

reaction to a condom burst when having sex with a member of social network most MSMs would go for STI screening together with their partner. Most participants reported that they would refer members of their social networks for health services to the same point of care where they individually receive services. Another critical finding was that a large majority of MSMs interviewed reported having shared commodities such as condoms and lubricants with members of their social networks. Results also suggest that MSMs are more likely to provide assistance to members of their social networks than social network nonmemberMSMs. These findings imply that programs involved in providing services to MSMs would encourage MSMs already enrolled in their programs to build stronger social networks. Such networks would then be used to ensure that those already accessing services and commodities would be used to enhance provision of services and commodities to those not enrolled in an effort to ensure as many MSMs are reached with services as possible. However as indicated earlier in this report, it is important for such programs to invest in capacity building to enhance self-efficacy among peers.

5.2 CONCLUSION

Majority of MSMs have close social networks with their peers. Many factors influence social networks. Based on the theory of social network as applied in this study, these factors are determined by common characteristics (Homophily), closeness to each other, probably peers within Nairobi and in the same hotspots (propinquity) and benefits derived from such networks (mutuality). In turn social networks seem to have negative effects on various sexual behaviors such as increased levels of unprotected sex with members of social networks, unwillingness to disclose HIV status to members and rape cases perpetrated by members of social networks. On the other hand evidence show positive effects on various health seeking behaviors such as providing peer counseling, willingness to refer members of social networks for health services,

sharing commodities and providing support during violence. Whether continued membership into these social networks is based on rationality or affectiveness as postulated in the theory of action is inconclusive by findings in this study because of the two divergent effects on sexual behaviors on one hand and on health seeking behaviors on the other hand.

5.3 RECOMMENDATIONS

1. Given that most MSMs appear to belong to social networks which are apparently based on peer characteristics such as age, schooling, tribe there is need for more innovative programmatic and research efforts to strengthen the peer models in programs providing services to MSMs. Concerted efforts are needed in reaching out to older and married MSMs given their suggestive hard to reach and closeted lifestyles.
2. Further longitudinal research is required to determine the cause-effect relationships between social networks, sexual behaviors and health seeking patterns. This would greatly inform programming, influence behaviors among MSMs and boost efforts in fighting HIV and STIs among MSMs as a key population group in Kenya.
3. Intensive education and awareness on social networking and its effects is required among MSMs for them to be able to assess and make rational decisions as to whether it is beneficial to belong to particular social networks or not. This would particularly be important with regard to knowledge and information that can enable MSMs assess impact of social networks on their sexual behaviors thus make informed decisions.

BIBLIOGRAPHY

Adebimpe, W., OlugbendaBello, A., & Akindele, R. (2012). Sexual Risk Behaviour and Consistency of Condom Use Among Men Having Sex With Men in South Western Nigeria. *International Journal of Tropical Medicine and Public Health*, 1 (1), 30-37.

African Men for Sexual Health and Rights (AMSHeR). (2009). *The MSM health Scorecard*. Nairobi, Kenya.

American Psychological Association. (2011). *Answers to your questions about transgender people, gender identity, and gender expression*. Retrieved from <http://www.apa.org/topics/lgbt/transgender.aspx>.

Battle, J, & Bennett, M. (1990). Research on Lesbian and Gay Populations Within the African American Community : What Have We Learned ? *Perspectives*, 35–46.

Becker, G. S., (1974). A Theory of Social Interactions. *Journal of Political Economy*. 82(6): 1063-1093.

Betron, M. & Gonzalez-Figueroa, E. (2009). *Gender Identity, Violence, and HIV among MSM and TG: A Literature Review and a Call for Screening*. Washington, DC: Futures Group International, USAID |Health Policy Initiative, Task Order 1.

Beyrer, C. et al. (2012). Global epidemiology of HIV infection in men who have sex with men. in *Lancet Special Issue on HIV in Men who have Sex with Men (MSM)*. *Lancet*, 380 (July), 367-377.

Center for Disease Control. (2013). HIV in the United State: At a glance. Retrieved from http://www.cdc.gov/hiv/pdf/statistics_basics_factsheet.pdf \npapers2://publication/uuid/F512D84F-CAA0-4519-B9AA-D23FBCD1EBD9.

Cochran, S. (2001). Emerging Issues in Research on Lesbians' and Gay Men's Mental Health: Does Sexual Orientation Really Matter? *The American Psychologist*, 56(11), 931–47. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/11785169>.

Dunkle, K. L., Jewkes, R. K., Murdock, D. W., Sikweyiya, Y., & Morrell, R. (2013). Prevalence of Consensual Male – Male Sex and Sexual Violence , and Associations with HIV in South Africa : A Population-Based Cross-Sectional Study, 10(6). <http://doi.org/10.1371/journal.pmed.1001472>.

Feng Y, Wu Z, & Detels R. (2011). Evolution of MSM community and experienced stigma among MSM in Chengdu, China. *J Acquir Immune Defic Syndr*, 23(2), 145–158. <http://doi.org/10.1521/aeap.2011.23.2.145>.

Fiona, S. et al. (2012). Socio-demographic characteristics and behavioral risk factors of female sex workers in sub-Saharan Africa: A systematic review. *AIDS and Behavior*, 16(4), 920–933. <http://doi.org/10.1007/s10461-011-9985-z>.

Geibel, S. (2009). Same-Sex Sexual Behavior of Men in Kenya: Implications for HIV Prevention, Programs and Policy (Unpublished doctoral thesis). Ghent University.

Gelmon, L. et al. (2009). Kenya: HIV prevention response and modes of transmission analysis, (March), 83. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Prevention+Response+and+Modes+of+Transmission+Analysis#0>.

GIZ. (2010). Promising Practices On the human rights-based approach in German development cooperation Health: Ensuring inclusion and access to quality health care in Kenya.

Government of Kenya. (2010). Kenya Constitution: Chapter IV The Bill of Rights. 52-57.

Grant, J.M. (2010). Outing age 2010: Public Policy issues affecting Lesbian, Gay, Bisexual, and Transgender elders.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough?: an experiment with data saturation and variability. *Field Methods*, 18(1), 59–82. <http://doi.org/10.1177/1525822X05279903>.

Interagency Gender Working Group (2010). Sexual orientation and gender identity definitions and myths. USAID, Washington DC.

Kadushin, C. (2004). Introduction to social network theory. Boston, MA. Retrieved from <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Introduction+to+Social+Network+Theory#0>.

Katz, N., Lazer, D., Arrow, H., & Contractor, N. (2004). Network Theory and Small Groups. *Small Group Research*, 35(3), 307–332. <http://doi.org/10.1177/1046496404264941>.

Key, P.J., (n.d). Questionnaires and Interviews. Oklahoma State University. Retrieved from http://cbdd.wsu.edu/e/dev/nettom_tot/Resources/Other/TOM614/page62.htm.

Krause, J., Croft, D. P., & James, R. (2007). Social network theory in the behavioural sciences: Potential applications. *Behavioral Ecology and Sociobiology*, 62(1), 15–27. <http://doi.org/10.1007/s00265-007-0445-8>.

Lazer, D. (2008). *An introduction to social network analysis*. Harvard University. Cambridge Massachussetts.

Luchters, S., Chersich, M.F., Rinyiru, A., & et al. (2008). Impact of five years of peer-mediated interventions on sexual behavior and sexually transmitted infections among female sex workers in Mombasa, Kenya. *BMC Public Health*, 8(1), 143. <http://doi.org/10.1186/1471-2458-8-143>.

Luchters, S., Ritcher, M.L., Bosire, W., & et al. (2013). The contribution of emotional partners to sexual risk taking and violence among female sex workers in Mombasa, Kenya: A cohort study. *PLoS ONE*, 8(8), 1–10. Retrieved from <http://doi.org/10.1371/journal.pone.0068855>.

MacKellar, D. A., Gallagher, K. M., Finlayson, T., Sanchez, T., Lansky, A., & Sullivan, P. S. (2007). Surveillance of HIV risk and prevention behaviors of men who have sex with men--a national application of venue-based, time-space sampling. *Public Health Reports (Washington, D.C. : 1974)*, 122 Suppl , 39–47.

Malebranche, D. J. (2003). Black Men who Have Sex with Men and the HIV Epidemic: Next Steps for Public Health. *Am J pUBLIC hEALTH*. 93(6): 862–865.

Ministry of Health, & National AIDS Control Council (NACC). (2015). *Kenya AIDS Strategic Framework 2014/2015-2018/2019*. Nairobi.

Ministry of Health. (2014). *Kenya HIV Prevention Revolution Road Map: HIV Prevention Everyone's Business*. Nairobi.

Ministry of Health. (2015). *Kenya AIDS Strategic Framework*. Nairobi.

Ministry of Public Health. (2010). *Standards for Peer-Education and Outreach Programs for Sex Workers*. Nairobi.

Misiko, H. (2015). Uhuru Kenyatta dismisses Gays rights as a non-issue in Kenya. Nairobi: Daily Nation.

Mlewa, K., Kamau, P., Mwangi, J., & Mburu, R., (2010). Injecting drug users, MSM and HIV-facts and challenges. KANCO. Nairobi.

Mulumba, M., Kabanda, D., Nassuna, V. (2010): Constitutional provisions for the right to health in east and southern Africa; EQUINET Discussion Paper 81. Centre for Health, Human Rights and Development, Regional Network for Equity in Health in East and Southern Africa (EQUINET): Harare.

Muraguri, N., Tun, W., Okal, J., Broz, D., Raymond, H. F., Kellogg, T., ... Geibel, S. (2015b). HIV and STI prevalence and risk factors among Male Sex Workers and other Men Who Have Sex With Men, 68(1), 91–96.

Muraguri, N., Tun, W., Okal, J., Broz, D., Raymond, H. F., Kellogg, T., Geibel, S. (2015a). HIV and STI prevalence and risk factors among Male Sex Workers and other Men who have sex with men, 68(1), 91–96.

National AIDS & STI Control Programme-NASCOP. (2014). Kenya AIDS Indicator Survey (KAIS) 2012 adult data sheet. Nairobi.

National AIDS and STI Control Programme (NASCOP) Kenya. (2012). Kenya AIDS Indicator Survey 2012; Final Report. Nairobi, NASCOP.

National Alliance on Mental Health. (2007). Mental Health Issues among Gay , Lesbian , Bisexual , and Transgender (GLBT) People. NAMI Multicultural Action Center. Arlington.

Nichols, J. M. (2013). Robert Mugabe, Zimbabwe President threatens to Behead Gay Citizens. Huffington Post, p. 1.

Okal J, Geibel S, Muraguri N, & et al. (2015). Estimates of the size of key populations at risk for HIV infection : men who have sex with men , female sex workers and injecting drug users in Nairobi , Kenya. ResearchGate .net/publication/237199975, (June). <http://doi.org/10.1136/sextrans-2013-051071>.

Okal J. (2012). Bio-behavioral surveillance for Most At-risk Populations in Nairobi and Kisumu Kenya. Nairobi.

Okal, J., Geibel, S., Tun, W., Sheehy, M., Kalibala, S., Mutua, H., ... Raymond, H. F. (2011). Lessons Learned from Respondent-Driven Sampling Recruitment : Nairobi Hope.

Orengo P. (2013, July 9). Kenya's Gay Movement. The Standard Xtra, p. 2. Nairobi.

Peterson, J. L., Rothenberg, R., Kraft, J. M., Beeker, C., & Trotter, R. (2009). Perceived condom norms and HIV risks among social and sexual networks of young African American men who have sex with men. Health Education Research, 24(1), 119–127. <http://doi.org/10.1093/her/cyn003>

Read, E. (2009). Kenya : New survey to inform HIV programming for MSM.

Rimal, N., & Shattuck, D. (2010). Literature Review of Evidence for Effective Peer Education and Outreach Programs to Protect Sex Workers from HIV, (July).

The Fenway Institute. (2008). Improving the health care of lesbian, gay, bisexual and transgender people: Understanding and eliminating health disparities.

The Medical Foundation. (1997). *Health Concerns of the Gay, Lesbian, Bisexual, and Transgender Community* 2nd edition.

Trianni, F. (2014). Uganda ' s President Calls Homosexuality “ Disgusting ” After Approving New Anti-Gay Laws. Atlanta: CNN.

Wasserman, S. (1994). *Social network analysis: Theory and applications*. Retrieved from <http://doi.org/10.1525/ae.1997.24.1.219>.

Yeka, W., Michie, G. M., Prybylski, D., & Colby, D. (2006). Application of Respondent Driven Sampling to Collect Baseline Data on FSWs and MSM for HIV Risk Reduction Interventions in Two Urban Centres in Papua New Guinea, *83*(7), 60–72. <http://doi.org/10.1007/s11524-006-9103-0>.

Young, S. D., Szekeres, G., & Coates, T. (2013). The Relationship between Online Social Networking and Sexual Risk Behaviors among Men Who Have Sex with Men (MSM). *PLoS ONE*, *8*(5), 15–18. <http://doi.org/10.1371/journal.pone.0062271>.

APPENDICES

APPENDIX I: LETTER FROM THE UNIVERSITY



UNIVERSITY OF NAIROBI
DEPARTMENT OF SOCIOLOGY & SOCIAL WORK

Fax 254-2-245566
Telex 22095 Varsity Nairobi Kenya
Tel. 318262/5 Ext. 28167

P.O. Box 30197
Nairobi
Kenya

December 19, 2015

TO WHOM IT MAY CONCERN

COLLINS MUKANYA MUDOGO – C50/70793/2014

Through this letter, I wish to confirm that the above named is a bonafide postgraduate student in the Department of Sociology & Social Work, University of Nairobi. He has presented his project proposal entitled; "Effects of social Networks on Sexual and Health seeking Behaviors among men who have Sex with men (MSM)in Nairobi".

Collins is required to collect data pertaining to the research problem from the selected organization to enable him complete his project paper which is a requirement of the Masters degree.

Kindly give him any assistance he may need.

Thank you. CHAIRMAN
DEPARTMENT OF SOCIOLOGY
4 1 1 4 2015

Dr. Robinson Ocharo
Chair, Dept. of Sociology & Social Work

cc: Mr.Korongo

APPENDIX II: CONSENT FORM

Good day, my name is

I would like to invite you to participate as a respondent in this study whose aim is to explore **Social networks and associated effects on sexual and health seeking behaviors among MSMs in Nairobi County**. The purpose of this study is for the partial fulfillment of the requirements for the award of the degree of Masters in Medical Sociology of the University of Nairobi. Your participation will be free and voluntary. The risk of participating is minimal but may include the possibility that some questions may be embarrassing to you. The benefit is that you will help generate information that will significantly be used by programmers, partners, service providers and other members of the MSM community to understand the existence and role of social-sexual networks among MSMs. This is important in planning and delivery of services to the MSM community. You may decide to leave the interview at any anytime you feel like or if you feel uncomfortable.

Do you have any questions now? (If yes I would like to answer) If later or for more inquiries please contact Mr. Collins Mudogo 0726095677

Would you be willing to participate? If yes sign



The interview may take between 30-45 Minutes

APPENDIX III: RESEARCH TOOL (QUESTIONNAIRE)

Section 1: Demographics

Date ||||||||

D D M M Y Y Y Y

Participant telephone no/pseudonym ||||||

1. How old are you?

|| Years old

[IF below 18 YEARS OR does not identify self as an MSM, give thanks and end interview]

2. What is your relationship status? *[Read responses; Check one response]*

Married

Single

No response

3. What is the highest level of school you have attended? *[Check one response]*

None

Some primary school

Completed primary school

Some secondary school

Completed secondary school

Some post-secondary school

Completed post-secondary school

No response

4. How old were you the first time you got attracted to or were attracted to by another man?

|_|_| Years old

No response/have no idea

5. Where do you usually hang out or meet your partners/clients? [*Check one response*]

Bar or nightclub

Home

Street

Hotel or guest house

Beach

Truck stops/rest stops

No response

Section 2: Exploring Networks

6. Are there members of the MSM community in Nairobi you would consider closer to you than others?

Yes No

7. If yes How many?

(If No Q 13)
 1-10 Above 20
 10-20 I do not know

8. Why would you consider them to be closer to you than others?

Age mates Live together
 Come from the same tribe Lend/give each other money
 Schooled together Sex mates
 Other reasons explain.....

9. For how long have you been connected to the majority of your close MSM friends?

1-3 months 6-1year
 3-6 months More than 1 year

10. How much would you say you trust your closest MSM friend (s)?

100% 50% 0%

11. How much time would you say you spend/catch up with your closest MSM friend (s) in a week?

1-3 days 4-7days

12. During those days (6) what would you be doing?

Having fun Doing/discussing business
Chatting online Having sex
Looking for clients Other things

13. How would you rate the importance of MSM friends/social networks?

Very important Important Not important

14. Would you agree that MSM friends/networks play a major role in an MSM's life and how they make decisions in life?

Strongly agree Agree Do not agree Not know

Section 3: Association between social networks and sexual behavior

15. Have you had anal sex with any of your closest friends/ members of your close networks within the last 3 months?

Yes No

16. If yes (Q10) did you use a condom?

Yes NO

17. If No (Q10) why?

He is a friend Did not have a condom
I trust him He/I was high on drugs or alcohol
He/I paid a good amount of mount

18. Could you be knowing his HIV status?

Yes No

19. Have you ever participated in group sex with members of your close MSM networks/ friends?

Yes No

20. If yes (Q15) did you and all your friends use condoms?

Yes No

21. Would you disclose your HIV status to your friends/ members of your close networks?

Yes No

22. If yes why?

I trust them I care for them

23. Has any member (s) of your close network of friends ever forced you to have sex with him/ them against your will?

Yes No

24. Did you use a condom?

Yes No

Section 4: Social networks and health seeking behaviors

25. If any member(s) of your close networks/friends disclosed to you that he was HIV positive, what would you do?

Dump him Counsel/advise him

Refer him to a health facility Ignore him

I do not know what I would do

26. What steps would you take if you were having sex with your friend/ a member of your close networks then the condom got broken/busted?

Go for STI/HIV testing with my friend

Go for STI/HIV testing alone and dump the friend

Go for HIV/STI testing alone then inform/advise my friend

Ignore the condom burst and continue with life

27. Have you ever referred any of your close friends/members of your networks to any health facility for services?

Yes

No

28. If yes, for which services?

HIV Testing, Counseling and treatment

STI screening and treatment

Condom information and provision

General health education

Other services

29. Where do you personally access health services and commodities

NGO facility

Public facilities

Private facilities

Other points of care

I don't go for such

30. (If any in Q23) When did you last go for checkup or any other service at the facility

1-3 months ago

3-6 months ago

More than 6 months ago

31. Would you refer any of your friends or members of your close networks to access services from where you go?

Yes

No

32. Have you ever helped out or been helped out by members of your close MSM networks with commodities such as condoms and lubricants?

Yes

No

33. What action would you take if you found a close friend/ member of your MSM networks who does not access health services beaten and raped in a lodging by a client?

Take him to the facility

Give him direction

Go away

34. Would you react in the same manner to an MSM who is not your friend/member of your close networks in a similar situation?

Yes

No

Thank you very much for your time.