UNIVERSITY OF KWAZULU-NATAL

CIRCULAR LABOUR MIGRATION NETWORKS AND HIV IN MALAWI

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2015

College of Humanities

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Preface

The work described in this thesis was carried out at the University of KwaZulu-Natal, Howard College Campus, Durban, Republic of South Africa, from 2010 to 2015, under the supervision of Dr. Mvuselelo Ngcoya.

Acronyms

ABC: Abstinence, Being Faithful and Condom use of HIV risk

reduction strategy

AIDS: Acquired Immune Deficiency Syndrome

CEGB: Central Electricity Generating Board of Great Britain

GoM: Government of Malawi

HIV: Human Immunodeficiency Virus

HSAs: Health Surveillance Assistants

IOM: International Organisation for Migration

Malawi Kwacha: Malawi's currency

MDHS: Malawi Demographic Health Survey

Memos: Notes taken in parallel during data collection process

NGO(s): Non-Governmental Organisation(s)

NSO: National Statistical Office

Paladin: Paladin Resource (Africa) Limited - an Australian Uranium

mining Company

SASO: Salima AIDS Support Organisation

SSA: Sub-Saharan Africa

UNAIDS: United Nations Joint Programme on HIV and AIDS

UNGASS: United Nations General Assembly Special Session

USAID: United States Agency for International Development

Dedication

This PhD research thesis is dedicated to my late father. Without him investing in my education, achieving a PhD would have remained unattainable dream for me. I will live to remember him always. May His Soul Rest in Peace!

Acknowledgement

When I was a Master student in Labour, Economic Policies and Globalisation at the University of Kassel and the Berlin School of Economics and Law in Germany in 2006-2007, one of the course readings emphasised a central question of development theory, history, policy and practice. Within the context of a social development problem such as HIV, which intervention practices should be adopted: Formal or informal? This stayed with me – informing both my practical development work and research. It is this arching question that both motivates and guides this research project. One that seeks to understand missed opportunities for preventing the spread of HIV through understanding sexual as well as social networks at the migrant workplace of Kayelekera and migrant sending village of Maganga in Malawi. However, this research would not have been possible without the assistance and support of a great many people and institutions – to whom I offer thanks.

I am indebted to my supervisor, Dr. Mvuselelo Ngcoya. You shepherded me on the PhD path with deft skill and care, allowing me to find my own footing while always providing wise guidance. You made the concept clear and provided input to my earlier drafts.

I warmly thank Mr. Francis Antonio for your interest in and engagement of my work. You took me to Kayelekera so that I could gain an understanding of the environment in which the migrant workers operate. I thank you. Similarly are traditional leaders Mwangolera and Kayelekera, and the leadership of Lusako network. Without you it would have been difficult for me to gain an insight of the informal settlement at Kayelekera – the so-called *Chiphwirikiti*.

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assistants. I am happy to hear that Senoria you are now married and that George you are now studying at the Lilongwe University of Agriculture and Natural Resources. Receive my best wishes!

The period of data collection was, however, bad for George. I thank God that you survived that minibus accident [the accident happened outside this project killing ten passengers on the spot]. I pray that God will continue providing for you especially that you also lost both your father and sister in the very same period [not connected to the accident]. May their Souls Rest in Peace!

I am grateful for funding from the Health Economics and AIDS Research Division – Thanks to Professor Allan Whiteside and his team. The support enabled me to resign from the Centre for Human Rights and Rehabilitation where I was Head of Research and Training.

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for true insight into the experiences of the migrant workers and their sexual partners at Kayelekera and the migrant sending village of Maganga in Malawi.

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I thank colleagues who provided feedback at early presentations of the research concept and findings at such conferences as the Global Health: Multidisciplinary Perspectives of HIV and AIDS at the Brown International Advanced Research Institute, Brown University, Providence, Rhode Island, the US, June 13-25, 2011; the Global Commission on HIV and AIDS and the Law Africa Regional Dialogue at Burgers Park Hotel in Pretoria, South Africa, August 3-4, 2011; the 3rd HIV and AIDS in the Workplace Research Symposium organised by the University of the Witwatersrand Business School, Health Economics and AIDS Research Division, South Africa Business Coalition on HIV and AIDS in Johannesburg, South Africa, November 9-11, 2010; and the Alternative Research Methodologies at the University of the Philippines, Diliman, Quezon City, the Philippines, October 4-15, 2010.

I thank all those who have given me chance to serve in different capacities that exposed me to HIV and AIDS issues. It was through the African Bible College outreach programme that I was involved in raising HIV and AIDS awareness to youths of Area 49 for four years (September 1999-June 2003). For six weeks (May-June 2003), I volunteered with the World Camp for Kids disseminating information about HIV and AIDS to learners in 50 schools of Lilongwe district. My work at the Save Orphans Ministries (September 2003-February 2004) focused on coordinating programmes which were as a result of the HIV and AIDS impact. While teaching Development Studies at Chayamba Secondary School (March-April 2004), one of the topics was on HIV and AIDS. When I

worked for the Teachers Union of Malawi (April 2004-September 2006), I spent most of my time designing and managing projects related to the impact of HIV and AIDS on education. The same when I worked for the Education International in Brussels, Belgium in the Education for All and HIV and AIDS Unit (December 2006-April 2007). Even most of my activities at the Centre for Human Rights and Rehabilitation (October 2007-February 2010) involved defending and protecting the rights of people including those living with HIV and AIDS. Additionally, I coordinated an HIV and AIDS research project on 'Mining and HIV.'

When I was a Visiting Research Scholar at the Balsillie School of International Affairs at the Centre for International Governance and Innovation in Ontario, Canada (June-August 2012) all my research papers focused on HIV. My work at the Medicines Sans Frontiers (June 2014-June 2015) as advocacy and communications manager focused on gathering evidence from the ground and influencing policies related to addressing issues of HIV and AIDS. My recent work as Adjunct Lecturer and thesis advisor for MA leadership programme at the African Bible College (2014-2016) gave me chance to interact with some of the students who are also working in the field of HIV and AIDS in their Organisations as well as in their research projects. Again, I thank all these institutions for giving me such opportunities that enabled me see firsthand information regarding the impact of HIV and AIDS.

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While in Durban, I worshiped at the Bethany Glenmore Church. When I visited Canada I worshiped at Knox Presbyterian Church. The Pastors, sisters and brothers in Christ at these Churches were instrumental on my Christian endeavours.

Yes, it has been a long journey (2010-2015). This research is meant for PhD. However, I would encourage researchers, policy makers and those involved in HIV and AIDS interventions, migration and development, and political economy of southern Africa to utilise the results for research, training, communication, policy formulation as well as advocacy work.

Oh God, my Lord you have been so merciful to me. You have sustained me with good health and intelligence during my PhD research journey. I will praise you always! *Paine ndekha sindingathe* [on my own I cannot make it]. AMEN!

Publications as a Result of this Research



Some Conference Presentations as a Result of this Study

- "Circular Labour Migration Networks and HIV in Malawi; Fieldwork Experiences." Research Conference on Global Health: Multidisciplinary Perspectives of HIV and AIDS at the Brown International Advanced Research Institute, Brown University, Providence, Rhode Island, the US, June 13-25, 2011;
- "Social Inclusions and Exclusions: Challenges to HIV Response in Malawi." Global Commission Meeting on HIV and AIDS and the Law, Africa Regional Dialogue at Burgers Park Hotel in Pretoria, South Africa, August 3-4, 2011;
- 3 "Overview of Social Contexts of Kayelekera Uranium Mine in Malawi."

 3rd HIV and AIDS in the Workplace Research Symposium organised by the University of the Witwatersrand Business School, Health Economics and AIDS Research Division, South Africa Business Coalition on HIV and AIDS in Johannesburg, South Africa, November 9-11, 2010
- 4 "Conversational Observations as Method in Qualitative Research; Fieldwork Experiences." Alternative Research Methodologies at the University of the Philippines, Diliman, Quezon City, the Philippines, October 4-15, 2010.

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Abstract

Circular labour migration is a livelihood strategy for many Malawians regardless that migrant workers and their sexual partners are well known groups to be at risk of HIV infection. Many of these migrant workers and their sexual partners are socially and sexually connected through kinship, friendship and sexuality.

The aim of this research is to explore the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners.

To explore the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners, this research makes use of empirical qualitative data. The data was collected through in-depth interviews, focus group discussions and conversational observations both at the migrant rural workplace of Kayelekera Uranium mine and one of the migrant sending rural village of Maganga in Malawi.

Findings of this research show that HIV and AIDS information was discussed daily within the social networks of the migrant workers and their sexual partners. As a result, knowledge about HIV and AIDS was universal among the migrant workers and their sexual partners. However, most of these social network discussions about HIV and AIDS among the migrant workers and their sexual partners were along gender lines, in that the migrant men talked with their male colleagues while their sexual partners talked with their female friends. Despite the gendered nature of their social networks, their influences on discussions about HIV and AIDS for the migrant men were similar to those for their sexual partners.

In their discussions, the migrant workers and their sexual partners attempted to formulate HIV risk reduction strategies. These HIV risk reduction strategies were socially framed to suit to the local social circumstances of the migrant workers and their sexual partners. Although similar, social network influences on risk perception for both the migrant workers and their sexual partners nevertheless reached quite different conclusions about appropriate HIV risk reduction strategies. Most of the migrant workers talked more about partner selection, partner reduction and remaining faithful. In their discussions, the rural regular sexual partners of the migrant workers focused on how to persuade their migrant partners to remain faithful.

The differences in HIV risk reduction strategies between the migrant workers and their sexual partners could be that social influence plays a greater role in HIV and AIDS conversation networks. In this case, the more dense and homogeneous the HIV and AIDS conversation network is, the more normative the effects are, that is, the social influence. For the rural partners, their HIV and

AIDS conversation partners were usually from the same local village. While for the migrant men, there was greater social integration from different geographical locations meeting at the workplace. All in all, the most important empirical result is that social networks of the migrant workers and their sexual partners have significant and substantial effects on HIV risk reduction strategies.

Despite socially accepted strategies of HIV risk reduction, some of the migrant workers and their sexual partners indulged in risky sexual behaviour. Some of these migrant workers and their sexual partners were involved in, supported and encouraged multiple and concurrent sexual partnerships among their social networks of colleagues and friends. They even assisted each other in identifying potential sexual partners.

With the influence of their social network colleagues, some of the migrant workers used condoms with some of their casual sexual partners especially at the workplace. However, none of the regular sexual partners of the migrant workers used condoms with their casual sexual partners in the migrant sending rural village. Also, the migrant workers themselves did not used condoms with their regular rural sexual partners. The prevailing social norm was that condoms were not acceptable in regular sexual partnerships. It is this sanctioned low level of protection within regular sexual partnerships that is likely to increase the risk of HIV transmission among the migrant workers and their regular sexual partners regardless of some noticeable efforts within their social networks to reduce HIV risk.

Therefore, my findings confirm that social networks have a role both on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. Thus, the consideration of the local social contexts within which the migrant workers and their sexual partners transact their daily life is paramount if HIV interventions are to work.

Key words: Social networks, circular labour migration, multiple and concurrent sexual partnerships, condom use, HIV and AIDS, Kayelekera, Maganga, Malawi, migrant workers and their sexual partners.

Chapter One

Introduction

This research explores the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners at the rural workplace of Kayelekera and migrant sending rural village of Maganga in Malawi. This introductory chapter first provides a background on HIV and circular labour migration in Malawi. Thereafter, it outlines the research problem and justification. The penultimate section describes research assumptions, objectives and methods. The concluding section outlines potential significance of the study. First, background information on HIV and circular labour migration in Malawi is in order.

1.1 Background Information

The existing HIV epidemic is one of the worst health crises facing Malawi today. In Malawi, HIV was first diagnosed at Kamuzu (Lilongwe) Central Hospital in 1985 (Cheesbrough, 1996). Currently, Malawi has a generalised HIV epidemic, with an estimated HIV gender ratio of 1:1, and most HIV infections are through heterosexual contact (Government of Malawi-National AIDS Commission, 2015). Malawi's HIV epidemic is estimated to be eighth highest in the world (UNAIDS, 2010), with approximately, 10.6 percent of Malawians aged between 15 and 49 infected with HIV (Government of Malawi-National AIDS Commission, 2015). However, the levels of HIV prevalence among persons aged between 15 and 49 in Malawi, suggest that the epidemic has been declining steadily from 16.4 percent in 1999 to 11.8 percent in 2004 and then 10.6 percent in 2010 (Government of Malawi-National AIDS Commission, 2015).

HIV infectivity varies substantially within Malawi, with higher HIV prevalence in specific occupational groups such as female commercial sex workers, truck drivers, estate workers, police officers, teachers and female cross-border traders compared with the general population (Government of Malawi-National AIDS Commission, 2015). HIV prevalence is higher in the southern region than central and northern regions. The HIV prevalence among females is high in the southern region at 20 percent and low in the northern region at 10 percent and central region at seven percent (Government of Malawi-National AIDS Commission, 2015). The regional differential in HIV prevalence for males is also high in the southern region at 15 percent and lower in the northern region at five percent and central region at six percent (Government of Malawi-National AIDS Commission, 2015).

There are also higher HIV infection rates in urban areas than in rural areas of Malawi. 18 percent of females and 13 percent of males in urban areas are HIV-positive; while 13 percent of females and nine percent of males in rural areas are living with HIV in Malawi (Government of Malawi-National AIDS Commission, 2015). While HIV prevalence rate is declining in urban areas, it is increasing in rural areas of Malawi (Government of Malawi-National AIDS Commission, 2015). In some parts of Malawi, HIV prevalence rates are higher than 20 percent (Government of Malawi-National AIDS Commission, 2015). In some high risk population groups, HIV infection rates are even higher. For example, statistics show that HIV prevalence among the commercial sex workers, which is one of the most at high-risk population groups in Malawi, is at 70.7 percent (Government of Malawi-National AIDS Commission, 2015).

Although official statistics show that HIV prevalence rate is at 10.6 percent in Malawi (Government of Malawi-National AIDS Commission, 2015), unofficially people say that every fourth to fifth person might be infected with HIV especially when the majority of Malawians are not tested for HIV. Over one million people are infected with HIV in Malawi (UNAIDS, 2010). This figure is higher than the combined total number of those infected in Europe and North America (UNAIDS, 2010). Malawi, like any other southern African country has become

a truism that even if someone is not infected by the HIV, one is certainly affected by it. In other words, the epidemic affects not only those who are infected or die. All those who get sick or die leave a gap in the lives of their families and homes, their businesses or places of work and communities.

There are many possible reasons behind the high HIV prevalence rates in Malawi, and circular labour migration is an important one. Scholars such as Mtika (2007) report that AIDS weakens and kills sexually and economically active Malawian adults. However, according to Mtika (2007), most of these Malawian adults are involved in circular labour migration. In Malawi, this type of migration involves the labourers going to work in the mines, farms and factories "for a certain period of time then returning to reconnect with their regular rural sexual partners and leaving to go to work again" (Mtika, 2007:2454). Although economic in nature, the continuous migration of men from their sexual partners and reconnecting might have effects that go beyond the economic sphere. Apart from placing economic burden on women, labour migration may lead to multiple and concurrent sexual partnerships, a factor in HIV vulnerability (Mah & Halperin, 2009; Clark, 2010).

1.2 Research Problem and Justification

Available studies show that labour migration might be a key factor contributing to the spread of HIV (e.g. Oster, 2005; Coffee, Lurie & Garnett, 2007; Djemai, 2009; Corno & de Walque, 2012). While many of these studies provide a detailed review of the literature, they do not test empirically the relationship between labour migration and HIV infection. Although both labour migration and HIV have been exhaustively and separately examined in the literature, scholars are still far from understanding how labour migration and HIV interact. This poses crucial and unanswered questions in the available literature including whether there is a relationship between migration and HIV infection.

Part of the reason is that studies on labour migration and HIV tend to concentrate on the workplaces or receiving areas (Campbell, 2003; Corno & de

Walque, 2012; Vearey, 2013), with much less attention paid to people living in the rural or sending areas (Dladla *et al.*, 2001; Crush *et al.*, 2010). Other studies focus on returned migrant workers (Clark *et al.*, 2007; Nunez *et al.*, 2011). A few studies that have considered both ends of the migration spectrum are biomedical in nature (Lurie *et al.*, 2003; Anglewicz, 2011). Social, cultural, political and economic studies that examine both ends of the migration spectrum are lacking.

In order to understand the relationship between circular labour migration and HIV, it is critical to study both migrant workplaces and their original rural homes focusing on both the migrant workers, their sexual partners and those that interact with these groups on a daily basis. The high-risk of HIV infection cannot be faced just by the migrant workers themselves, but all members of the migrant communities both at the migrant workplaces and sending areas. Therefore, a focus on the migrant workers themselves as a high-risk group might lead researchers to ignoring others who are not the migrant workers themselves, but are made vulnerable to HIV by being sexual partners of the migrant workers. It is only when the sexual networks and actions surrounding all those affected by circular labour migration are understood and mapped out, then the social, cultural, political and economic forces that create the links in these networks can be brought to the surface and be targeted by more comprehensive and effective interventions. It is for this reason that this research took place at two places: the migrant workplace of Kayelekera and the migrant sending rural village of Maganga in Malawi. The two areas were purposively chosen to represent the migrant workers workplace and sending areas. In both areas, this research targeted the migrant workers, their sexual partners and those that interact with these groups on daily basis.

Also, available studies on migration and HIV have considered a migrant worker as an individual. Not much has been written on the role of the social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. The available literature on the social networks of the migrant workers focuses on how migrants economically assist

potential migrants (Anderson, 2001; Vearey & Myronuile, 2014). Apart from economic support, the social networks might have a role on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners.

This might be so because the theory of social networks rests on the insights that actors do not make decisions in isolation, but rather with other individuals who are connected to one another (Coleman, 1990; Kohler, Behrman & Watkins, 2007). Therefore, these social connections might offer opportunities for individuals to exchange information, to evaluate information and to influence the attitudes and behaviours of one another (Bongaarts & Watkins, 1996; Adams, 2007) including those related to HIV risk reduction strategies and transmission mechanisms.

1.3 Research Assumptions

This research, first, assumes that the migrant workers reside away from their families for a temporary but long period of time. While at their workplace, the migrant workers are accommodated in single-sex company-owned compounds or hostels located close to the workplace. The living environment produces a void of social control such that the migrant workers are less constrained by social norms. The migrant working and living environments are more conducive to alcohol consumption. The migrant workers earn higher incomes than the local residents. Due to poverty and inequalities, the females within the migrant areas rely on the migrant workers for their economic survival. The sex ratio at the migrant workplace is different to normal communities due to labour recruiting practices. The migrant workers are more likely to have multiple and concurrent sexual partners including with the commercial sex workers and local women from areas surrounding their workplace. Because their contracts might span many months, the migrant workers and their sexual partners at the workplace trust each other and are less likely to use condoms.

Second, this research assumes that the regular rural home sexual partners of the migrant workers, who are waiting for their migrant partners to return home also engage in multiple and concurrent sexual partnerships and without using condoms with other men. Upon return, the migrant workers do not use condoms with their regular rural home sexual partners.

Third, the research assumes that the migrant workers and their sexual partners are socially connected to many others through social networks of colleagues, friendships and kinships. These social connections influence both HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners.

1.4 Research Objectives and Methodology

This research has two main objectives, which are:

- To find out the role of the social networks on HIV risk reduction strategies among the migrant workers and their sexual partners both at the rural workplace of Kayelekera and migrant rural sending village of Maganga in Malawi, and
- To explore the role of social networks on HIV transmission mechanisms among the migrant workers and their sexual partners both at the rural workplace of Kayelekera and migrant rural sending village of Maganga in Malawi.

To address these two research objectives, this study uses qualitative research designs. Qualitative data for this study was collected at the rural workplace of Kayelekera Uranium mine site and migrant sending rural village of Maganga in Malawi. **Figure 1** below is map of Malawi showing locations of Kayelekera and Maganga. These two sites were purposively chosen to represent the migrant workers' receiving and sending areas respectively. The two areas provided the research with two axes of comparison: First, between two different sites – the

migrant sending and receiving areas, and second, between the migrant workers and their sexual partners.

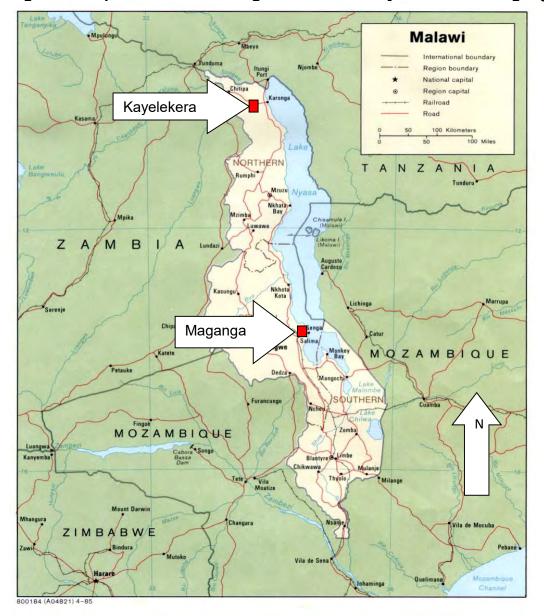


Figure 1: Map of Malawi showing Locations of Kayelekera and Maganga.

1.5 Significance of this Study

This research makes several contributions. It complements the literature that tries to understand the reasons for the high prevalence of HIV in Malawi. Since AIDS was first documented in Malawi in 1985, the growing body of literature has focused on the status of the disease, and much of it is unpublished,

focusing primarily on how HIV is or is not transmitted, prevention measures, counselling, how to use condoms, misconceptions of the disease, and the effects on the country's economic and social structures as well as the demographic and geographical patterns of the disease (e.g. Chirwa, 2002; Mtika, 2007). Other studies have focused on policy implications and guidelines and the public awareness campaigns mounted by the Government of Malawi and other institutions (e.g. Chimbiri, 2007). One major deficiency in this literature is that there are only a few studies that deal with high-risk groups such as the drug users, truck drivers, itinerant traders and tourists (Mtika, 2007; International Organisation for Migration, 2010). However, in a context in which HIV is generalised, it is relevant to examine high-risk groups such as the migrant mineworkers and their sexual partners.

In focusing at migration and the mining sector in particular, the intention of this study is not to say that mines are key HIV industries. Levels of HIV are also high and even higher in other contexts. It should be noted that migrant mine labour is neither the only, nor the major avenue for the spread of HIV, and therefore, it is not the intention of this research to single out migrant mineworkers and their sexual partners as solely responsible for spreading HIV. Truck drivers, tourists, commercial sex workers, cross-border itinerant traders and refugees might play an equally significant role in spreading HIV. However, the mining industry is particularly important for two reasons. First, it gives an opportunity to examine HIV management in the context of an industry which is critical to Malawi's present economy (Chapter Three). Second, it is an industry which has already attempted to implement a range of HIV risk reduction strategies (Crush *et al.*, 2010; Corno & de Walque, 2012).

Although it has been noted that the fast spread of HIV infection in Malawi is predominantly due to the prevalence of multiple and concurrent sexual partnerships (Clark, 2010), there are no comprehensive studies on the topic for high-risk groups. The sexual networking of the high-risk occupational groups remains insufficiently studied. The only exceptions are the commercial sex workers and traders (Chikaphupha, Nkhonjera & Namakhoma, 2009;

International Organisation for Migration, 2010). Therefore, this research attempts to fill some of the existing gaps in the available literature.

In the literature on labour migration and HIV and labour migration in general, international labour migration especially to neighbouring countries receives the most attention (Crush *et al.*, 2010; Vearey, 2011, 2013; Vearey & Myronuile, 2014). Rural-urban migration is also much studied and there is renewed interest in urban-rural movements as a response to urban economic decline (Andersson, 2001; Potts, 2010) or migrant workers returning home as a result of illnesses (Clark *et al.*, 2007; Nunez *et al.*, 2011). Intra-rural labour movement is relatively neglected. Notable exceptions are the past literature focusing on the return of internally displaced people to rural areas in their countries of origin (Wilson, 1992; Koser, 1997) and migration as a result of marriage or divorce (Anglewicz, 2011).

This study also highlights a group at risk for HIV infection overlooked in the previous labour migration and HIV literature, namely the regular rural sexual partners of the migrant workers. Labour migration might also transform the role of women who remain in rural settings without their migrant partners. From a policy perspective, this is important because the study sheds light on a new potential focus for HIV risk reduction programmes. The impact of labour migration on rural areas is multifaceted and extensive. This is so because circular labour migrant workers maintain strong and long-term economic, political, social and sexual relationships with their original rural villages (Chapter Three).

1.6 Research Outline

The chapter that follows reviews literature on the link between labour migration and HIV. Gaps are identified to inform this study. Finally, the research theory that aids to answer the research question – the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners is developed in this chapter.

In Chapter Three, the study provides an overview of migration patterns within Malawi. The movement of people in Malawi has been in response to economic opportunities based on government development policies. Malawi government development policies have ushered in economic activities in few isolated areas. These few isolated areas are attracting the migrant workers. The chapter also describes how Malawian migrant workers maintain connections with their original rural sending areas. This is through land, kinship and family ties. Finally, the chapter focuses on HIV prevalence paying attention to differences between the three administrative regions of Malawi as well as rural and urban areas while taking into account migration patterns.

Chapter Four describes methods used in data collection and interpretation of study findings. As stated earlier, evidence for this study comes from an empirical qualitative investigation at the rural workplace of Kayelekera Uranium mine site and migrant sending rural village of Maganga in Malawi.

Chapters Five and Six are analytic sections of this study. What comes out from these chapters is confirmation that the social networks have a role on both HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. It is through their social networks of colleagues, friends, workmates and relatives that the migrant workers and their partners share information on HIV, advise each other not to indulge in HIV risk behaviour, validate condom use with potential sexual partners. It is also through their social networks that the migrant workers and their sexual partners assist each other to identify potential sexual partners.

Chapter Seven summarises the findings presented in Chapters Five and Six confirming that the social networks have a role on both HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. This last chapter then describes the significance of the research findings.

Chapter Two

Literature Review and Theoretical Framework

2.1 Introduction

The literature reviewed in this research first focuses on the debates regarding the direction of HIV transmission, taking into account the nature of circular labour migration. Thereafter, the chapter discusses why it might be important in HIV research to go beyond the migrant workers as individual vulnerable populations and focus on numerous other groups that are not migrant labourers themselves, but are nonetheless directly or indirectly made vulnerable by interplay between the migration process and HIV. Finally, a social network theoretical framework is developed for this research.

2.2 Migration and HIV Links

Although there is now a large body of literature on the vulnerability of male migrant workers to HIV in southern Africa, the relationship between migration and the spread of HIV to their rural home areas is imperfectly understood especially that most research on migration and HIV cannot empirically compare the HIV status of the migrant workers before and after they migrate. Available studies show that migrant workplaces such as urban centres, mines, farms and factories are hubs for the rapid spread of HIV (Marks, 2006; Anglewicz, 2011). The available studies further indicate that migration links high HIV prevalence places with areas of lower HIV prevalence (Lagarde *et al.*, 2003; Collins, 2006) including transport routes (Ramjee & Gouws, 2002; Oster, 2005; Djemai, 2009).

Data for southern Africa that include information on HIV status at both migrant original homes and their destinations are even less common. The central assumption in much of the literature on migration and HIV is the uni-directionality of transmission. The understanding is that the primary way in

which migration contributes to the spread of HIV into rural areas is through the migrant men, who become infected while working in the urban or mine areas, and return to their rural villages where they infect their regular sexual partners. It is likely that this pattern was particularly true in the early stages of the HIV epidemic, where urban areas and particularly migratory destinations were the areas of high HIV transmission (Coffee *et al.*, 2005; Coast, 2006; Anglewicz, 2011). However, the precise way in which migration contributes to the spread of HIV in rural areas is not well understood. This is partly because few studies have considered both ends of the migration spectrum, to focus on the migrant workers who leave their homes and their regular sexual partners who remain behind.

There are a number of some straight-forward examples on the link between migration and the spread of diseases. Reviewing epidemics such as gonorrhoea and syphilis in the late eighteenth century and neurosyphilis in the late nineteenth century in Africa, Europe and North America, Shorter (1992) concluded that the context of increased human mobility, especially rural-to-urban migration of males, was the most critical factor in these sexually transmitted infections. Males would get infected in towns, then pass the infection on to their partners in the villages. Shorter's aim was to draw a parallel with the contemporary spread of HIV. According to Shorter, the mechanism of HIV transmission is essentially similar to the spread of neurosyphilis, syphilis and gonorrhoea through the migrant men.

Other empirical studies include long-distance truck drivers in southern and east Africa (Ramjee & Gouws, 2002), seasonal migrants in Guinea-Bissau (Lagarde *et al*, 2003) and Zimbabwe (Cassels *et al*, 2013). All these studies show that the migrant workers are more likely to have engaged in high HIV risk sexual behaviour while at their workplaces or be HIV-positive then infect their stay at home sexual partners.

Some studies assess the prevalence of occupational illnesses among the workforce employed in South African mines, such as tuberculosis, silicosis and

lung disease (Hunt, 2007; Corno & de Walque, 2012; Stuckler et al., 2013; Lurie & Williams, 2014). All these authors discuss the role of oscillating migration from the goldmines of South Africa and the neighbouring countries in fuelling silicosis, tuberculosis and other infections, and they conclude that in the early part of the twentieth century, circular population movements patterned the spread of diseases from the migrant men to their sexual partners in rural areas. Therefore, with the advent of HIV, these movements are the main factor in the transmission of HIV, and that men are primary agents of the transmission because they dominate wage-based migrant labour system (Zuma et al., 2003; Collins, 2006; Mtika, 2007). While all these authors provide a detailed review of the literature, they do not test empirically the relationship between labour migration and HIV infection. What is reported by these authors is that HIV is mainly transmitted first to males through sexual contacts made during their migration and second to their regular sexual partners once they are back home. None of these authors make comparisons with the general population or at least with the regular rural sexual partners or the status of the migrant workers before they migrate.

For example, Collins (2006) reports of the case of Mozambique that the higher rate of HIV prevalence in the centre and south compared to other parts of that nation is directly related to the influence of migrant labour to the South African goldmines. Collins (2006:5) states that:

Rising HIV prevalence levels in these regions reflect increased...migrant mineworkers' travel to South Africa. Since the 1992 Peace Agreement, an estimated 50,000 Mozambicans, most from the southern and central regions, currently work in South African mines, where HIV rates are very high. Many of them return home on annual leave infected with HIV and they infect their wives.

Thus, based on available studies, HIV spreads to rural areas purely by infected male migrant workers returning home and infecting their regular sexual partners. These studies show risk sexual behaviour of the migrant workers at their workplaces, thereby, leading to reasonable conclusions that the migrant workers become infected after they live their rural homes and they return to their rural homes to infect their sexual partners. Available studies show that

migrant males separated by migration from their sexual partners often find substitutes, leading to sexual activity with new and potentially riskier sexual partners such as the commercial sex workers and that they do not use condoms with their casual sexual partners (Wolffers, Fernandez, Verghis & Vink, 2002; Campbell, 2003; Krishna, 2004; Kishamawe *et al.*, 2006; Richter *et al.*, 2014.). Absence from home, a culture of macho male sexuality in migration destinations such as on the mines and the readily available commercial sex workers, all place the migrant workers such as the mineworkers at high risk of HIV infection (Stuckler *et al.*, 2013; Richter *et al.*, 2013; Lurie & Williams, 2014). As Shula Marks (2002:1) states, "pre-existing patterns of oscillating labour migration in southern Africa rendered HIV an epidemic waiting to happen".

Darrell Roodt's 2004 award-winning movie 'Yesterday' is a classic representation of this model, accompanied by the expulsion of the migrant worker and his female regular sexual partner from their rural village (Macarow, 2008; Crush et al., 2010). However, the relationship between migration and the spread of HIV is not undisputed. There might not be a causal relationship between migration per se and the transmission of HIV (Kenyon et al., 2014). This strong association between HIV status and migration particularly for migrant men is sufficient to question the common assumption in migration literature that HIV infection typically occurs as a result of migration. Are the migrant workers at greater risk of HIV infection than their stay at home sexual partners?

2.3 HIV, Migrant Workers and their Regular Rural Sexual Partners

Recent studies have begun to challenge earlier models of migration and HIV transmission (Lurie *et al.*, 2003; Anglewicz, 2011). The link between urban and workplace migration and HIV risk has become less clear of late. For example, Anglewicz (2011) gets a different picture for Malawi where his study provides information on the migrant workers and HIV both before and after their migration. According to the study of Anglewicz (2011), it is clear that the migrant

workers are indeed more likely to be HIV-positive. Results show that the migrants are at significantly higher risk of HIV infection than non-migrants. Moreover, the migrants are more likely to be HIV-positive than non-migrants.

In the study of Anglewicz (2011), female migrants have 2.5 times greater odds of being HIV-positive than female non-migrants. Male migrants are more than two times more likely to be HIV-positive than their non-migrant counterparts. However, in the study of Anglewicz, it appears that HIV-infection often precedes rather than follows migration, and therefore HIV-infection is not due to migrants move to an urban area or workplace as previously assumed on the basis of simple comparison between HIV prevalence in rural and urban areas. The Anglewicz study included an indicator for rural or urban destination. If migrants are at greater risk of HIV infection primarily due to rural-urban migration as often assumed, one would expect the indicator for rural-urban migration to be statistically significant. However, this was not the case. It is the indicator for rural-rural migration that was statistically significant. Therefore, the central argument is that while migration may be a risk factor for HIV-infection, some migrant workers originating from rural areas are more likely to be HIV-positive and to have engaged in HIV risk behaviour before migrating. These results show that HIV-positive individuals like those who are HIV-negative can as well as migrate. This supports the hypothesis that HIV-infection is not necessarily due to migration to urban or workplace areas. Instead, it is prior migration HIV risk behaviour.

Another study undertaken in the KwaZulu-Natal province of South Africa by Lurie *et al.* (2003) also sheds light and challenges earlier models of migration and HIV transmission. The study by Lurie and others set out to measure whether migrant workers were at higher risk for HIV than non-migrants, and to quantify the extent to which infections by migrant workers have been a factor in increasing HIV prevalence in rural areas. Lurie and colleagues found migrant males to be more likely to be HIV infected than non-migrant males, 25.9 percent compared to 12.7 percent respectively, and in the multivariate analysis, the main risk factors for being HIV infected among males were being a migrant,

ever having used a condom and having lived in four or more places during the course of lifetime. The findings of Lurie and others are particularly informative given the mature stage of the HIV epidemic in southern Africa. The fact that even against the background of extremely high HIV prevalence, migration was an independent risk factor for males highlights the importance of migration as an explanation for the spread of HIV epidemic in the region. The study of Lurie and others also found high rates of HIV among females. Overall, 17.5 percent of the females were HIV-positive, but females whose sexual partners were migrant workers were as likely to be HIV infected as those whose sexual partners were not migrant workers.

Lurie *et al.* (2003) further examined patterns of HIV discordance, that is, one partner is infected and the other one not infected among migrant and non-migrant couples. These patterns shed light on the issue of directionality of HIV infection. The study found that migrant couples were almost twice as likely as non-migrant couples to have one or both partners infected and to be HIV-discordant (27 percent versus 15 percent). Among the discordant couples in the study of Lurie and colleagues, the female was the infected partner in 29 percent of the cases, which did not differ by migration status. Clearly, a woman who is HIV-positive and whose primary sexual partner is HIV-negative could not have been infected by her partner.

Therefore, having a migrant partner away from home can also change sexual networks for a home sexual partner. While community level constraints on behaviour change less for a home based sexual partner than for the migrant worker, a combination of social, sexual and economic needs can increase risk for sexual networking. The combination of change in the sexual networks at both ends of the migration spectrum and having sex without condoms, could be key links in the spread of HIV among the migrant workers and their sexual partners.

In summary, the studies by Lurie et al. (2003) and Anglewicz (2011) reveal that migration primarily influences the spread of HIV by increasing high-risk

behaviour of both the migrant workers and their sexual partners, rather than by connecting areas of low and high risks. This raises questions about the sexual networks of rural home sexual partners of the migrant workers, and challenges the common assumption of uni-directionality of HIV transmission in the context of labour migration. Therefore, a more nuanced understanding is needed of the risk behaviour of the migrant workers and their regular rural sexual partners. The migrant workers might not only be at greater risk of HIV infection after migration, but they could as well as be at greater risk even in their original rural homes including before migrating or upon their return and visits. This might even mean that HIV risk reduction strategies should concentrate not only in the migrant-receiving areas, but also on the migrant-sending rural villages targeting even those that are not the migrant workers themselves.

2.4 Moving Beyond Individual HIV Vulnerability of Migrant Workers to their Communities

It is clear from the literature reviewed in sections 2.2 and 2.3 that migration not only facilitates the spread of HIV, but causes behaviour and situations, which might facilitate transmission of HIV (see also Caldwell, 2000). However, this thinking about migration and HIV has led to studies that focus on the migrant workers' vulnerability (Lurie, 2000; Coffee, Lurie & Garnett, 2007). Vulnerability in this research refers to social, cultural, economic and political environment of individuals, families, communities and societies, and occurs in situations where people are limited in their ability to make free and informed decisions (Lurie, 2000). In the context of the HIV epidemic, vulnerability is related to environmental factors that leave individuals or groups at risk of HIV infection (Lurie, 2000). These risk situations are "socially and geographically defined zones where the capacity of the individual to respond effectively to an HIV threat is reduced" (Lurie, 2000:343).

As the literature review for this study shows, a number of studies claim that the migrant workers are more vulnerable to HIV infection than are people who do not move. However, this vulnerability is not the direct result of mobility. It is via

circumstances and events related to the migration process that high risk of HIV infection is caused (Coffee, Lurie & Garnett, 2007). In other words, being mobile in itself might not be a risk factor for HIV infection, rather, it is the situation encountered and behaviour engaged in during migration process that increases vulnerability and risk regarding HIV (Caldwell, 2000).

The vulnerability to HIV infection of the migrant, non-migrant and relatively immobile people associated with southern Africa's mobility is poorly understood. Available evidence seems to suggest that the migrant workers are particularly at risk, as Mtika (2007:2454) has summarised:

AIDS weakens and kills sexually and economically active adults that are involved in circular labour migration by going to work in the mines and commercial farms for a certain period of time then returning to reconnect with their rural sexual partners and leaving to go to work again.

It is the assumption of this research that even the non-migrants with whom the migrant workers interact with on a daily basis are vulnerable to HIV infection. Therefore, in drawing connections between migration and HIV, it is important to note that different forms of migration lead to different social and geographical forms of 'migrant community', and where labour migration is institutionalised, regularised and formalised as in the mines, migrant communities and distinctive migrant cultures develop (Campbell, 2003, 2004). However, sex and sexuality are integral components of such cultures, which might include commercial and 'transactional' sex partnerships, in addition to sex with a regular partner at rural home (Campbell, 2003, 2004).

A focus on the migrant workers themselves as a high-risk group has led researchers to largely ignore the numerous groups who are not the migrant workers themselves, but are nonetheless directly or indirectly made vulnerable by the migration process. It should be noted that migration in Malawi, and in southern Africa in general takes many and increasingly complex forms. Each might carry different levels of risk for HIV. For example, a study on temporary migrant workers and permanent residents in the mining town of Carletonville in South Africa, the largest gold mining complex in the world, reveals high levels

of HIV infection among both males and females in the surrounding communities (Williams *et al.*, 2003). This demonstrates the high risk of HIV faced by all members of a migrant community, not just the migrant workers themselves.

As HIV in Malawi, just like in southern Africa in general is spread almost exclusively by sexual contact, addressing the connections between HIV and migration requires a more thorough understanding of the sexual networks of the migrant workers, their sexual partners and their communities (Cassels et al., 2014). These sexual networks may extend deep into the migrant workers original rural villages as well as in the areas of the migrant workers' destinations. Migration studies show that sets of interpersonal ties connect present migrant workers, former migrant workers, potential migrant workers and non-migrants both in origin as well as destination areas through ties of kinship and friendship (Andersson, 2001; Krissman, 2005; Vearey, 2011; Vearey & Myronuile, 2014). These social connections could be key in allowing the migrant workers to maintain contacts including sexual contacts with members of both the migrant sending and receiving areas. Therefore, to reveal the impacts of migration on HIV infection, this study approaches migration as a social phenomenon with complex impacts on many different parties, rather than as a characteristic of an individual that places that person within a high-risk group.

The spread of infectious diseases such as HIV cannot only be the result of individual actions. It could also "be influenced by the political, social and economic organisation of a society" (Lurie, 2000:343). Although HIV is a medical condition restricted to only a few modes of transmission, the political economy of the society might create an environment that induces transmission. For example, regardless of the presence of the Uranium mine plant at Kayelekera, there might be gender and economic inequalities existing in the area. As a result, the Uranium mining activities at Kayelekera might have impact on local communities. Other than opportunities for formal employment that might be created, rapidly rising food prices and a huge increase in migrants might result. Therefore, the existing vulnerability of the local community at

Kayelekera might lead to relationships of 'commercial' transactional sex, including the relationships between the migrant mineworkers and the commercial sex workers, and between the migrant mineworkers and the local women in addition to regular sexual partnerships in migrant sending rural villages such as Maganga. In part, this might be attributed to the wealth that the mineworkers and other migrant men bring both in their sending villages and at the workplace. It is likely therefore that economic opportunities and inequalities might open doors for HIV vulnerability.

Scholars such as Padilla *et al.* (2007), Poulin (2007) and Masebo (2013) report that in situations of dire poverty, women are forced to indulge in multiple and concurrent sexual partnerships. In the available literature, wealthier men are suspected of having multiple and concurrent sexual partnerships because they have money to exchange for sexual favours (Mishra *et al.*, 2007; Tawfik & Watkins, 2007; Sawers, 2010). Available studies indicate that women's financial dependence on their sexual partners due to limited economic opportunities drives women into transactional sex, and that such dependence on men reduces women's ability to leave their unfaithful sexual partners and insist on condom use (Schatz, 2005; Gillespie, Kadiyala & Greener, 2007; Swidler & Watkins, 2007).

Thus, the migrant labour system might be responsible for co-factors that enhance HIV infection. These co-factors could include amongst many others the number of multiple and concurrent sexual partners, condom use, gender inequality, poverty, absence from home, a culture of macho male sexuality on the mine, the readily available casual and commercial sex and the living and working conditions. A focus on migrants themselves as a high-risk group might ignore the numerous groups who are not migrants themselves, but are nonetheless directly made vulnerable by the migration process. This research approaches migration as a social phenomenon with complex impacts on many different parties, rather than as a characteristic of an individual that places that person within a high-risk group. Therefore, this research theorises that HIV transmission mechanisms and risk reduction strategies can be understood by

understanding the role social networks among the migrant workers and their sexual partners.

2.5 Theoretical Framework: Social Networks Analysis, Migration and HIV

As described in Chapter One, change in sexual behaviour occupies a key-position in the response to HIV transmission. Most HIV risk reduction strategies promote abstinence, fidelity and condom use as appropriate ways of avoiding HIV infection (Genius & Genius, 2005; Mtika, 2007; Swidler & Watkins, 2009). One remarkable feature of these strategies is that they have strong theoretical background in models of behaviour change such as the Health Belief Model, the AIDS Risk Reduction Model, the Theory about Stages of Change, and the Theory of Reasoned Action (Denison, 1999; UNAIDS, 1999; Aihihenbuwa & Obregon, 2000; Swidler, 2001; Odutolu, 2005). However, as Hunt (1996:1296) states, "the HIV epidemic...is not definitely explained by any means". The weakness of available explanations is highlighted by the fact that many people continue to be involved in HIV risk behaviour despite having extensive knowledge about HIV, its determinants and consequences (see Campbell, 2003, 2004; Wilson & Halperin, 2008; Swidler & Watkins, 2009; Corno & de Walque, 2012).

A great deal of research that has been done to evaluate the HIV risk reduction strategies indicate that the HIV risk reduction strategies are not sufficiently placed in a broader social contexts (Green *et al.*, 2002; Schatz, 2005). In the social context of the present research, none of the HIV risk reduction strategies are particularly conducive. As described earlier, abstinence is obviously not an option meant for regular sexual partners, but the other two recommendations are also problematic for the migrant workers and their sexual partners. The advice to be faithful is meant for individuals, but the critical issue is that while one may be faithful, the fate is joined to that of the person's regular sexual partner (Schatz, 2005; Painter *et al.*, 2007; Dunkle *et al.*, 2008). Consistent condom use is often at odds with pre-existing notions and norms as well as

cultures and traditions about regular sexual partnerships, reproduction and family organisation in most African societies (Caballero-Hoyos, 2008; Thorntorn, 2008; Zembe *et al.*, 2012). In the case of the migrant workers as well as mining context in the southern Africa, there is no evidence in the available literature that these responses have made any impact on the HIV epidemic. It has become increasingly evident that these efforts do not consider the influence of contextual social factors.

Due to the significance of the community in everyday life in Malawi, contextual social factors might influence the individual through two pathways. These are through direct effect on the individual as well as via an indirect effect by shaping and changing the structures and contents of social institutions and systems of interaction such as the family, the clan, kinship or the local village community including work and living environments (Watkins, Zulu, Kohler & Behrman, 2003). In order to understand the relevance of contextual social factors for individual behaviour or for behavioural change in the context of HIV, this research considers both the direct as well as the indirect pathways of influence taking into account that the transmission of HIV is determined by a complex interplay of social factors. The assumption is that individuals need more than knowledge about HIV risk in translating awareness into action. Therefore, some actions whether genuine or induced through social influence must exist for a person to change behaviour or adopt some risk reduction strategies (Watkins, Zulu, Kohler & Behrman, 2003; Kohler, Jere & Watkins, 2007).

There is no doubt that HIV has provoked considerable uncertainty about infection risks in societies, accompanied by programmes that advocate for the adoption of what in many contexts might be innovative behaviour – abstinence, fidelity and condom use (Dunkle *et al.*, 2008; Thorntorn, 2008; Caballero-Hoyos, 2008; de Walque, 2011; Zembe *et al.*, 2012). Such uncertainty about HIV risk might be shared and influence decisions that individuals make. In such social context, individuals' knowledge and attitudes might be shaped by their association and conversations with friends, relatives, neighbours or workmates. Therefore, social networks based for example on common language, religion,

place of employment, sporting team support, participation or shared interests might bring different categories of people into daily contact, and most of these social networks of exchange might cross most boundaries including that of tribes, age, socio-economic among others (Kohler, Jere & Watkins, 2007).

Therefore, based on the fact that concerns about the threat of HIV and ideas about how it can be prevented might be shared and evaluated collectively, this research uses the social networks or social interactions or social connections theories borrowed from a number of earlier scholars including Moodie, Ndatshe and Sibuyi (1988, 1994), Harries (1994), Campbell (2003, 2004), Adams (2007) and Kohler, Jere and Watkins (2007).

2.5.1 Background to Social Networks Analysis

Interest in the social network paradigm began in the 1930s and evolved from a number of theories in the fields of sociology, psychology, politics, economics, community development and anthropology (Adams, 2007). Many scholars in the area of social networks trace their roots back to early work in sociometry, particularly the 1934 work of Jacob Moreno (Adams, 2007). Most of the earliest works in this area focused on trying to develop general forms to describe relational structural patterns across differing kinship systems (Adams, 2007). Then, in 1954, John Barnes, a notable anthropologist, began using the phrase "social network" to describe connections between people (Barnes, 1954).

Other classic studies documenting conformity and social influences include Sherif's (1937) experiments on the emergence of group norms when individuals are confronted with an unstable or ambiguous reality. Festinger (1954) also contributed to this development by introducing his theory of social comparisons arguing that individuals are most persuaded by persons in groups with whom they identify leading towards uniform group opinions. Asch (1955) further demonstrated that individuals see what others in the group claim to see although the group's claims contradict the objective reality. Cartwright's (1975) mutual enforcement of delinquent behaviour within similarly tight-knit groups

was also a breakthrough contribution to this conformity literature. For further detailed descriptions of the foundations of social networks, see Wellman and Berkowitz (1988), Wasserman and Faust (1994), Scott (2000), Freeman (2004) and Adams (2007).

Today's social network theorists share many of the central assumptions of earlier theorists. The main similarity is the notion that the structural patterns of relationships affect the material resources available to the individual and, therefore, influence that individual's behavioural responses (Behrman, Kohler & Watkins, 2003). The strength of social network theory lies in the testable assumption that the social network is responsible for shaping the flow of resources or information available to an individual, thereby, determining access to opportunities with other individuals and attitudes as well as support that may influence or constrain behaviour (Behrman, Kohler & Watkins, 2003).

The concept of social networks or interactions or connections holds that the social self consists of a loose association of self-categorisations or group memberships (Moodie & Ndatshe, 1994; Campbell, 2003, 20047, 1999; Adams, 2007). The key to the social network analysis approach is its focus on relationships and relationship patterns instead of a focus on individuals, organisations, systems or nation-states (Adams, 2007). Perhaps the most important factor in social network analysis is the recognition that "actors are not independent..., [instead,] social phenomena arise from inter-dependencies" (Berkowitz, 1988:14).

Therefore, from these descriptions, a social network is a set of people who are connected to one another (Massey *et al.*, 1994). Each individual actor within a social network is considered a node and the relationships amongst these nodes are ties (Coleman, 1990; Adams, 2007). Social networks may have few or many nodes and one or more relationships between the pairs of actors (Coleman, 1990; Adams, 2007). Different types of relationships that may encompass these connections include familial relationships, friendships, sexual partners and service providers (Adams, 2007). Therefore, a social network in this study

should be understood as a social structure made up of a set of actors and the dyadic ties between these actors or that it is the study of how the social structure of relationships around a person, group or organisation affects beliefs or behaviour (Rogers, 1981; Rogers & Kincaid, 1995). Simply, a social network analysis studies "the interpersonal linkages created by the sharing of information in the interpersonal communication structure" (Rogers, 1986:1). In general, social network analysis focuses on the relationships between people, instead of people's characteristics (Adams, 2007). These relationships may comprise the feelings people have for each other, the exchange of information or more tangible exchanges such as goods and money (Adams, 2007).

In the literature, there are two types of social networks. Ego-centric social networks are those networks that are connected with a single individual, in this case, to a study respondent (Wasserman & Faust, 1994). Social-centric social networks go beyond individual connections, such as friend of a friend (Wasserman & Faust, 1994). Burt (1992) points to this as a strategic information advantage that may be enjoyed by individuals who bridge "structural holes," that is, those with ties into multiple networks. Watts (1999) further describes this as a small-world phenomenon, that is, the hypothesis that a short chain of social acquaintances connects most individuals using a few random shortcuts in the midst of locally dense neighbourhoods.

Theorists in the social networks tradition have tended to focus much of their attention on processes underlying group formation, focusing on actions involved in identity formation, while paying attention to the role played by day-to-day life situations in the shaping of identities (Campbell, 2003, 2004). According to Campbell (2003, 2004), choices and actions are structured within dynamically changing social contexts, and that different group memberships are associated with different sets of recipes for living and are shaped in the social contexts of particular life settings. For Campbell (2003, 2004), recipes for living consist of sets of behavioural possibilities and constraints and repertoires of interpretative frameworks through which all behaviour and experience are mediated, and therefore, social identity is never static, but constantly

constructed and reconstructed in response to relevant social and material worlds.

Therefore, identity is a socially negotiated and flexible product, constructed in dynamic interaction with those around (Coleman, 1990; Campbell, 2003, 2004). Simply, actors do not make decisions in isolation, but rather with others who are around (Coleman, 1990; Campbell, 2003, 2004). These social interactions offer opportunities for individuals to exchange information, to evaluate information, to learn about the rigidity or flexibility of social norms and to influence attitudes as well as behaviour of one another (Wellman, 1988). For example, Wellman (1988) emphasises the importance of weak ties that transmit unique and non-redundant information across otherwise largely disconnected segments of social networks, thereby, facilitating the diffusion of new information. According to Wellman (1988), weak ties are more likely to enforce norms and conventions that represent a proper way to behave. In the case of this research, the effects of social interaction processes are likely to be particularly important when the migrant workers and their sexual partners are uncertain about the best response to an HIV threat. Therefore, the social networks of colleagues might have a role on their behaviour and attitudes among the migrant workers and their sexual partners. Therefore, an HIV social network model can be created after the one developed by Bongaarts and Watkins (1996) as well as Adams (2007) to summarise the level of social interactions the migrant workers and their sexual partners have on issues of HIV and AIDS and to determine whether they are socially isolated or embedded within their social groupings.

Whereas many theories view social influence as a dyadic relationship between the source and target of control, the theory of social network in this study should be viewed as influence of relationships that is embedded in social networks that can serve either to amplify or weaken behaviour (Abdul-Quader *et al.*, 2006). This is particularly important as this research is predicated on the insight that the migrant workers' social interactions may create opportunities for HIV risk reduction strategies as well as facilitating HIV transmission mechanisms

including sexual networking. Individuals might seek information about the transmission mechanisms of HIV, the risks of infections and potential risk reduction strategies through social interactions with workmates, friends, neighbours, relatives or other members of an individual's social networks. Again, the mechanisms by which social networks affect the diffusion process could be summarised as social learning, social evaluation of information and social influencing of behaviour.

Using definitions of Kohler, Jere and Watkins (2007), social learning in this research should be understood as the process by which the migrant workers and their sexual partners learn about the existence, epidemiology, risks and prevention approaches of HIV by drawing on the experiences of their social network partners. For example, the migrant workers and their sexual partners might not only be exposed to different HIV risk reduction strategies spread by the media, health workers, religious groups and Non-Governmental Organisations that promote abstinence, condom use and fidelity, but might share local stories with their workmates, friends, acquaintances and relatives (Montgomery & Casterline, 1996; Kohler, Jere & Watkins, 2007). In the case that the migrant workers and their sexual partners might be struggling to decide which protective strategy is most effective for them, social interactions with their colleagues might help in dealing with such struggles (Kohler, Jere & Watkins, 2007).

By joint evaluation, it means that within the social networks, workmates, friends, relatives and neighbours might collectively evaluate HIV risk reduction strategies (Kohler, Jere & Watkins, 2007). The social network members might reinterpret the HIV risk reduction strategies so that they are meaningful to their local social contexts (Kohler, Jere & Watkins, 2007). They might moderate some of the HIV risk reduction strategies so that they are realistic to their local social contexts (Kohler, Jere & Watkins, 2007). The social network members might extend the list of HIV risk reduction strategies with their own innovative strategies (Schatz, 2005). For example, the migrant workers and their sexual partners within their social networks might consider whether fewer and more

carefully selected partners might substitute for abstinence and fidelity (Schatz, 2005). They might consider whether religious communities might provide support for resisting temptations to engage in risky sexual behaviour (Adams, 2007). Also, social network members might find out whether checking on the behaviour of their sexual partners is preferable to consistent condom use within regular sexual partnerships (Schatz, 2005).

Finally, social influence emphasises that preferences regarding sexual behaviour and other HIV-related behaviour are potentially affected by the opinions and attitudes prevailing in one's social environment (Montgomery & Casterline, 1996; Kohler, Jere & Watkins, 2007). For example, social group members might express disapproval of a colleague having sex with the commercial sex workers on the grounds that this exposes the member to the risk of HIV infection (Moodie & Ndatshe, 1994; Latkin, Formanb, Knowltona & Shermanc, 2003). However, the direction of this social influence might differ across social groups (Montgomery & Casterline, 1996; Kohler, Jere & Watkins, 2007).

2.5.2 Strengths and Limitations of Social Network Analysis

This section focuses at two levels: The strengths as well as limitations of using social networks theories in research. In terms of strengths, social networks theories have increasingly been used with populations especially vulnerable to effects of peers. Experimental and empirical studies have demonstrated strong influence of social colleagues on risk assessments and subjective beliefs (Latkin, Formanb, Knowltona & Shermanc, 2003; Scherer & Cho, 2003).

For example, a review of the relationship between social network variables and mutual help groups called *the Alcoholics Anonymous* found that their involvement was associated with multiple positive changes in both qualitative and quantitative aspects of social networks (Groh, Jason & Keys, 2008). The broad goal of mutual help groups was to replace a social network that was

associated with negative behaviour with another that was associated with healthy behaviour. Results show that the individuals who benefitted the most from *the Alcoholics Anonymous* were those who initially had harmful behaviour that encouraged heavy drinking (Groh, Jason & Keys, 2008). Such results demonstrate that positive changes within social groups are an effective mechanism for reducing negative behaviour.

The potential of social networks to affect behaviour could as well as be extended to HIV risk behaviour. Analyses of both qualitative and survey data from Ghana and Kenya provide evidence that women chat with each other about HIV among other topics (Watkins, 2000; Kohler, Jere & Watkins, 2001). A study examining sexual risk reduction in drug users found that having a friend who practised sexual risk reduction was a significant predictor of one's own sexual risk reduction (Latkin, Formanb, Knowltona & Shermanc, 2003). Kelly's (1994, 1995) opinion leader interventions, which taught key individuals in the gay community to encourage condom use, are other examples of a successful social network approach to HIV risk reduction.

Abdul-Quader et al. (2006) report of results of a field experiment that compares a network-based HIV risk reduction intervention, termed a "Peer-Driven Intervention" with the standard form of street based outreach intervention. Results for the experiment suggest that the network intervention outperforms the standard approach with respect to number of people accessed, reductions in self-reported levels of HIV risk behaviour as well as costs for implementing the interventions. However, the results show that certain network features that further the spread of HIV are also the ones that increase the effectiveness of network-based HIV risk reduction interventions. The findings of Abdul-Quader and others show that network interventions work best when they are most needed, that is, when network structures facilitate the spread of HIV. The most important empirical result in this experiment as well as in many other studies is that social networks have significant effects on risk perceptions and the adoption of new behaviour, and that individuals assess their risk of infection through interaction with others.

While social networks might offer a potentially powerful approach to HIV risk reduction, social norms are not unidimensional (Rhodes, Stimson & Quirk, 1996). A qualitative study by Asander *et al.* (2004) focusing on HIV-infected households of African origin in Stockholm finds that regardless of having many friends, their informal social support networks are limited. The HIV-infected individuals instead depend on formal clinical counsellors for support. Another qualitative study in Kenya by Chuma and Molyneux (2009) report that some people who are ill hardly seek support from their social network friends or family members because are afraid of gossips which may result in loss of self-dignity. However, both of these studies do not make comparisons with those who are not HIV-infected or not ill to better provide vivid explanations.

For certain behaviour, individuals might be subjected to multiple and conflicting behaviour norms. For example, peer group and family norms might conflict with each other. As a result of this, although people might know about the behaviour for example, they might be discreet if the behaviour is considered a taboo or disgrace (Moodie, Ndatshe & Sibuyi, 1988; Moodie & Ndatshe, 1994; Harries, 1994). Also, if a network is primarily composed of confidants, new and heterogeneous information is less likely to enter the social network (Granovetter, 1973). Further, the higher HIV risk reduction participators might also likely be more sexually active and higher risk takers (Kohler, Jere & Watkins, 2007).

For example, Kohler, Jere and Watkins (2007) report of men with a greater exposure to conversations influencing not only their attitude towards condom use, which is a favoured protective strategy outside marriage, but also their behaviour, that is, greater use of condoms to the detriment of favouring fidelity as protective strategy. In some cases, HIV might be an infrequent topic of conversation (Smith, Lucas & Latkin, 1999). This lack of HIV-related discussion could lead to the phenomena of a "spiral of silence" in which individuals are hesitant to discuss a topic for fear that others are finding it unacceptable (Smith, Lucas & Latkin, 1999), and hence behaviours are perpetuated (Noelle-

Neumann, 1977). Similarly, pluralistic ignorance may perpetuate HIV risk behaviour. Pluralistic ignorance describes situations in which people personally disapprove of the behaviour of others, while at the same time assuming that most others approve (Prentice & Miller, 1993). Since they believe that the majority holds contrary views, they do not reveal their disagreement nor do their actions reflect their own views, and consequently, the negative behaviour is perpetuated and inadvertently supported by the group norm despite most individuals' lack of support (Prentice & Miller, 1993).

Entwisle *et al.* (1996) states that there might be multiple pathways, both positive and negative, in which social networks can influence behaviour, and these pathways might be based upon various characteristics of the social network. One pathway in which social networks may influence behaviour is whether the members of a social network encourage an individual to engage in healthy or risky behaviour (Entwisle *et al.*, 1996). A second layer within this pathway is how close or tightly knit the network members are, since closer network members are more likely to influence behaviour than network members that are not close (Entwisle *et al.*, 1996). A third layer within this pathway is who are these network members, because some types of relationships might hold more influence over an individual than others (Entwisle *et al.*, 1996). Thus, because of systematic patterns in the selection of social network groups, people are more likely to associate with others who have similar qualities (Manski, 2000; Warriner & Watkins 2000; Watkins & Warriner, 2003).

In contrast, most of the existing literature on social interactions and demographic behaviour assumes that it is acceptable to treat social networks as if they were formed randomly (Montgomery et al., 2001; Behrman, Kohler & Watkins, 2003; Helleringer & Kohler, 2005). Using qualitative data collected in Kenya, Watkins and Warriner (2003) show that social networks with whom respondents discuss issues are characterised by a tendency to discuss with others who are perceived to be similar. In addition, the study by Watkins and Warriner (2003) show that some social network partners might be deliberately chosen because might be believed to have relevant information.

2.5.3 Benefits of Using Social Networks Framework in this Research

The rationale for applying social network analysis to understand HIV transmission mechanism as well as risk reduction strategies among the migrant workers and their sexual partners in this research is strong. It is expected that social interactions or networks or norms or connections constitute necessary determinants of how the migrant workers and their sexual partners develop approaches for HIV risk reduction strategies as well as transmission mechanisms. In particular, the social networks of the migrant workers and their partners may exert systematic and strong influences on risk perceptions about HIV including sexual networking. Therefore, social interactions are likely to have a substantial impact on the course of the HIV epidemic and the magnitude of its consequences.

Available studies have reported associations between social norms and sexual risk behaviour (Organista et al., 2000; Albarracin, Johnson, Fishbein & Muellerleile, 2001). There is a correlation between social networks and decision-making in these studies. Therefore, social norm change may be an important strategy for HIV risk reduction strategies in high-risk populations such as the migrant workers and their sexual partners. Using Kohler, Jere and Watkins (2007) frameworks, this research expects responses to an HIV threat among the migrant workers and their sexual partners to be formulated at a collective level rather than by individuals in isolation. Despite HIV interventions typically targeting individuals, the migrant workers and their sexual partners might participate in social networks with complex interactions, and therefore, concerns about the threat of HIV and ideas about how it can be prevented are expected to be shared and evaluated collectively within their social networks. As stated earlier, actors do not make decisions and act in isolation, but rather with other individuals who are connected to one another. These social interactions might offer opportunities for the migrant workers and their sexual

partners to exchange information, to evaluate information and to influence the attitudes and behaviour of one another.

Whereas many infectious diseases are spread through casual contact and contagion, HIV transmission results from risk behaviour that involve close and often intimate contact, simply, the transmission of HIV is structured by the social relationships within which these contacts are embedded (Thornton, 2008; Hirsch, 2010). An implication is that the social networks can play a dual role in the HIV epidemic, that is, they can serve as both the route of transmission for HIV, and, the route of transmission for HIV risk reduction information and services (Abdul-Quader *et al.*, 2006). Hence, social network analysis is suitable for understanding HIV epidemic among the migrant workers and their sexual partners.

There are many benefits of using social network frameworks in this study. Through mapping of relationships, social network analysis might help to uncover informal HIV communication patterns, which may then be compared to formal structures. These patterns can be used to explain several phenomena. For example, since the patterns of relationships might bring respondents into contact with the attitudes and behaviour of other members, these relationships may also help to explain why people develop certain attitudes (Haythornthwaite, 1996; Pollock, Whitbred & Contractor, 2000).

Latkin, Formanb, Knowltona and Shermanc (2003), attest that the concept of network-based analysis has proven useful for the design of prevention programmes by focusing on the partnerships as well as social groups. Analysis of social networks provides the means to see efficiency of HIV transmission and effective points of intervention. Social network theories and models see individual behaviour embedded in their social and cultural context. Instead of focusing on psychological processes as the basis for sexual behaviour, social network analysis tends to focus on social norms and relationships that create meaning and determinants of behaviour and behavioural change (Campbell, 2003). Latkin, Formanb, Knowltona and Shermanc (2003) and Campbell (2003)

agree that efforts to effect change at the community level will have the most significant impact on individuals who are contemplating changes and on those who have made changes but need support to sustain those changes. While changing social norms has proven to be difficult, new norms once introduced can be self-sustaining (Chapman, 1995). Therefore, altering social norms may be an important approach to introducing and sustaining HIV protective behaviour change.

As Stoneburner and Low-Beer (2004), Green (2006), Thornton (2008) and Green et al. (2013), report that in Uganda, the only country in the sub-Saharan Africa that once experienced a dramatic decline in HIV prevalence, social interactions facilitated the adoption of new behaviour. According to all these authors, the declines of HIV in Uganda were as a result of the positive response of the entire sexual network, itself part of the entire social network. Also, VanLandingham et al. (1998), report that much of the successful HIV campaign in Thailand to reduce visits to the commercial sex workers and increase condom use with them is attributed to the positive influence of the social groups. The social groups have also been found to have a similarly positive effect on the use of condoms with the commercial sex workers in Bali (Ford et al., 2002). Similar positive findings are reported among young men of Roman in Bulgaria (Kelly et al., 2006). Additionally, Nnko et al. (2004), drawing on participant observations in Tanzania to trace the construction of local knowledge about HIV, find that the process require nothing other than an ability to engage in collective creative thought. However, some of the social norms might work against HIV risk reduction strategies. Such practices might include absence of strong pro-condom use norms.

2.5.4 Application of Social Networks Analysis in this Study

It is clear from the studies reviewed in this Chapter that social interactions might effect changes in behaviour. Social networks might provide a natural frame for interventions designed to change values, beliefs and behaviour that can reduce as well as increase risk behaviour among the migrant workers and their sexual partners and their communities. Although there are extended "online" communities developed through telecommunications devices, this study uses John Barnes' classic definition where a 'community' referred to a specific geographic location and studies of communities had to do with who talked, associated, traded or attended church with whom (Barnes, 1954).

Researchers have developed a number of different ways to conceptualise social networks and how they influence health and behaviour, and this is especially true in the literature examining HIV risk behaviour, particularly with regard to the different types of relationships people have within their social networks (Campbell, 2003, 2004). Other researchers have examined risk networks or people with whom one engages with in risk behaviour (Latkin, Formanb, Knowltona & Shermanc, 2003; Abdul-Quader *et al.*, 2006; Groh, Jason & Keys, 2008). In such a case, risk networks are defined as the potentials for disease transmission as well as opportunities for interrupting transmission. Although there might be differences between social risk networks and social support networks, there may also be considerable overlap between them. For example, a close friend or family member in one's social support network may also be involved in risky sexual activities and be in their social risk network. While these categories may help to understand the relationship between social networks and risk behaviour, they are not exclusive.

For purposes of this study, understanding social networks that are not specifically related to risk networks may also play an important role in influencing HIV risk behaviour. Such types of social networks include friendships, membership in a religious community and employment at a company. This research captures such types of relationships by identifying people whom the migrant workers and their sexual partners spend most of their time with or their frequent contacts, that is, the people that they count on and who they discuss important matters with including topics related to HIV. Borrowing from Kohler, Jere and Watkins (2007), personal relationships are examined in this study from the individual perspective in form of the

conversation partners with whom there have been formal or informal discussions on specific topics about HIV. Emotional and kinship ties such as confidants and close friends or relatives, gender homophile, that is, the extent the conversation partners are of the same sex among HIV conversation network partners as well as the geographic proximity of the conversation partners are the most important dimensions structuring this research. These conversation networks are characterised along different dimensions, but one of them in particular is whether the migrant workers and their sexual partners are socially isolated or interacting a lot with those within their social networks compared to those from outside their social networks on matters of HIV. Specifically, this study investigates the composition of social networks in the migrant communities, the attitudes of the social networks towards safer sex, whether the social network provides the necessary support to change behaviour, and whether particular persons within the social network are at particular risk and may put many others at risk of HIV. The structural characteristics of the social network include network members named by the interviewed migrant workers and their sexual partners, the extent to which network members are connected to each other and the nature of the relationships with network members such as family, friends, work colleagues or health care providers.

Social networks are however complex such that a coherent pattern of network analysis of all interpersonal relationships is not feasible and is likely to contain so much information as to be uninformative. Practical limitations of computing power, ethics and participant recruitment as well as finances also limit the scope of a social network analysis of all relationships. The nuances of a local social system may be lost in a large social network analysis, hence, the quality of information may be more important than its scale for understanding social network properties. Therefore, in this study, social networks are analysed at the scale relevant to the research theoretical question: the role of social networks on HIV risk reduction strategies as well as transmission mechanisms among the migrant workers and their sexual partners.

Social networks in this research typically begin with an individual, that is, a migrant worker or a sexual partner, snowballing as social relationships are traced to the broader community. At times, the social networks begin with a small group of individuals in a particular social context, but the smallest unit of analysis is an individual in their social setting, that is, an "actor" or "ego". As described earlier, ego-centric social network analysis focuses on network characteristics such as relationship roles such as isolates, liaisons and bridges. Such analyses are most commonly used in the fields of kinship analysis and other studies of relationships between individuals (Entwisle *et al.*, 1996).

This study assumes that differentiating groups of the migrant workers and their sexual partners according to their relative social connections may yield potentials for analysing social norms. By comparing both the migrant workers and their sexual partners both at original rural home and workplace, experiences in relation to their sexual behaviour and expectations, the study identifies similarities and differences. As the social network theory looks at social behaviour not as an individual phenomenon but through relationships, this research assumes that HIV risk behaviour, unlike many other health behaviour, directly involves more people (Morris & Kretzschmar, 1997). Although the intricacies of relationships and communication within sexual partners, the smallest unit of the sexual network, is critical to the understanding of HIV transmission in this model, the scope and character of one's broader social network, those who serve as reference persons, and who sanction behaviour, are key to comprehending individual risk behaviour (Kohler, Jere & Watkins, 2007).

As described earlier and further borrowing from Kohler, Jere and Watkins (2007) as well as based on the data available for this study, social interactions are limited in this analysis to informal and formal personal relationships and participation in social discussions through which information and ideas about HIV are exchanged, evaluated and acted upon, within the constraints of the local social contexts and the social approval or disapproval of colleagues and community members, and therefore, the impersonal influence of the mass-

media and other broad social cultural influences to which individuals are also exposed to are not part of this research.

The aim of the empirical Chapter Five is to apply the relational perspective to improve understanding of the relationship between the migrant workers and their sexual partners and HIV risk reduction strategies. By drawing on empirical data from both the migrant workers and their sexual partners, this study in particular, addresses the construction and dissemination of HIV risk reduction strategies within the social networks of the migrant workers and their sexual partners and investigates how readily such groups or interactions shape HIV-risk networks. Each of these questions moves away from treating messages, migration and HIV risk as node-level properties, which has been the exclusive approach of existing variable based studies on these topics. As a result, what is found here both reinterprets some of the existing findings about this relationship, and presents new information about the roles the migrant social networks are playing in HIV risk reduction strategies. The study especially highlights the contexts within which HIV risk reduction strategies are developed and implemented.

In describing some of the limitations social networks in HIV risk reduction strategies, Chapter Six provides cases which describe the social, economic and sexual factors that make the migrant workers and their sexual partners susceptible to HIV infection. This is done through conceptualising HIV as a social, political and economic issue addressed not only at the level of a particular migrant workplace or sending rural village or individual actor, but also at the level of the formal and informal communities within which the migrant workplace and sending rural areas are located, and within which the migrant workers and their sexual partners conduct their daily and sexual lives.

2.6 Conclusion

Available studies reviewed in this chapter show that migration might be a key factor contributing to the spread of HIV (Oster, 2005; Coffee, Lurie & Garnett,

2007; Djemai, 2009; Corno & de Walque, 2012). While many of these authors and others provide a detailed review of the literature, they do not test empirically the relationship between migration and HIV infection. Although both migration and HIV have been exhaustively and separately examined in the literature, scholars are still far from understanding how migration and HIV interact. Part of the reason is that studies of migration and HIV tend to concentrate on the workplaces or receiving areas (Campbell, 2003 for South African goldmines; Corno & de Walque, 2012 for Zimbabwean mines), with much less attention paid to people living in the rural or sending areas (Romero-Daza & Himmelgreen, 1998 for rural Lesotho) or people 'on the move' between the two locations (Brummer, 2002 for Basotho; Crush et al., 2010 for rural Mozambique and Swaziland). Even a study that has taken place in Malawi has focused on returned migrant mineworkers from South African goldmines (Chirwa, 1997). A few studies that have considered both ends of the migration spectrum are biomedical in nature (Lurie et al., 2003 for KwaZulu-Natal). Social, political and economic studies that examine both ends of the migration spectrum are lacking.

In order to understand the relationship between migration and HIV, it is critical to study rural settings as well where migration might have long-term impact. When the sexual networks and their actions surrounding all those affected by migration are understood and mapped out, then the social and economic forces that create the links in these networks can be brought to the surface and be targeted by more comprehensive and effective HIV interventions. It is for this reason that this research focuses at two places in Malawi: Kayelekera Uranium mine site representing migrants receiving workplace area and Maganga representing migrants sending area (Chapter Four). Therefore, this study provides an understanding of the social contexts within which the migrant workers and their sexual partners live in at both ends of the migration spectrum.

Most available studies on migration and HIV have considered a migrant worker as an individual. Not much has been written on the role of the social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. The available literature on the social

networks of the migrant workers focuses on how migrants economically assist potential migrants (Anderson, 2001; Vearey & Myronuile, 2014). This research sets to address issues of HIV within migrant communities through understanding the role of social norms in the diffusion of HIV risk reduction strategies and transmission mechanisms. A voluminous literature has recently developed in the area of social networks, particularly as it relates to the transmission and reduction of infectious diseases (Morris & Kretzschmar, 1997; Kenyon, 2010). Some researchers interested in social links and HIV however devote their attention to differences between actors or discussions of specific groups in general terms (Green et al., 2002; Groh, Jason & Keys, 2008). This research applies these perspectives to each of the areas simultaneously. To explore all these, the study uses qualitative research designs, a topic described in Chapter Four. The next chapter is an overview of migration patterns in Malawi. Specifically, the next chapter describes patterns of migration since the colonial period with attention to economic developments and opportunities within Malawi. The migrant workers connections between their rural homes and workplaces are also described in the next chapter. Further differences between HIV prevalence rates across Malawi are discussed in connection to migration patterns.

Chapter Three

Migration, Economic Developments and HIV and AIDS in Malawi

3.1 Introduction

This chapter first describes patterns of migration within Malawi. The patterns of migration in Malawi, are in response to the geography of economic development activities. The chapter then describes social connections between the migrant sending rural villages and the migrant workplaces. An understanding of these social connections will help to answer the research question on the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners.

3.2 Patterns of Migration in Malawi

Administratively, Malawi is divided into three regions. These regions are: North, centre and south. During the colonial period (1891-1964), economic development activities were concentrated in the southern region (McCracken, 2003). At independence in 1964, internal migration patterns reflected levels of development, with net in-migration to the southern region and net out-migration from the northern region (McCracken, 2003). However, recent statistics show that there have been changes in the patterns of migration within Malawi, with the northern region experiencing net in-migration. Therefore, population census data since independence supported by studies of earlier scholars such as McCracken (2003) and Potts (2006), this section traces patterns of migration within Malawi. The section relates the changes in the migration pattern to changes in the geographical location of economic development activities.

There is a long history of Malawian male migrant labourers going to other countries such as South Africa to work in the goldmines (Kalipeni, 1992, 1996). During the colonial period (1891-1964), Malawian males migrated abroad for employments that were not available within Malawi (Kalipeni, 1992, 1996). However, beginning in the early 1970s, this pattern started to change as not only did large numbers of Malawian males return home, but fewer were leaving Malawi (Chirwa, 1995, 1996, 1997). As a result, there was a dramatic rise in the number of Malawian male migrant labourers to South Africa goldmines in the 1960s, followed by a dramatic decline after 1974 (James, 1992). Although a range of factors influenced the return of large numbers of male migrant workers from South Africa, including political and economic, an important factor was economic growth output as well as employment opportunities within Malawi (Kaunda, 1992; Chirwa, 1996; Potts, 2006).

Following independence in 1964, President Kamuzu Banda began to discourage international migration in order to keep workers within Malawi (Chipeta, 1992; Beegle & Poulin, 2013). Banda formalised this sentiment in 1974 with economic policies designed to build Malawi's cash-crop estate agriculture (Chipeta, 1992; Beegle & Poulin, 2013). As Boeder (1974) records, in early 1972, 10 percent of Malawi's population resided abroad. However, a significant portion returned home within the following three years (Christiansen & Kydd, 1983). By 1975, labour migration to the mines outside Malawi had nearly ceased (James, 1992). According to James (1992:47), the number of Malawians under contract with South African mine labour organisations declined from 123,845 in 1974 to 2,711 in 1975. Migration to South African mines completely ceased in 1988 (Allen, 2003). Although migration to South Africa did expand again in the 1990s, it was not under formal contracts (Anderson, 2006; World Bank, 2010; Beegle & Poulin, 2013). Instead, many of Malawian migrant workers to South Africa currently are illegal migrants working as domestic and shop workers. For example, the South African government repatriated a thousand Malawian illegal migrants in 2014 and 4,000 of them in 2015 (Sunday Nation of October 5, 2014; The Daily Times of April 29, 2015).

In more recent years, Malawi has witnessed an increase in internal circular migration, more especially from rural to rural (Anglewicz, 2011; Beegle & Poulin, 2013). Mtika (2007) identifies internal circular migration as a main economic survival strategy for prime-age Malawians, although he does not quantify the extent to which internal circular migration occurs in Malawi. The 2004-2005 Malawi Integrated Household Survey, which collected information on migration including timing of migration and the reason for migration showed that slightly over half of adults (15 years and older) had not always resided in their current location. Among working-age adults, migration rates were even higher. So, while migration is common for Malawians, these are no longer international work related migrations. They are instead internal migrations. Potts (2006) states that the same economic growth which curtailed international migration in the 1970s, has redirected the pattern of internal migration within Malawi. According to Potts (2006), it is economic growth based on structural changes of the economy which have redirected internal migratory responses within Malawi.

The period for which nation-wide migration data can be generated is bounded by the five post-independence population and housing census data: 1966, 1977, 1987, 1998 and 2008. Using the 1966 population and housing census data as a point of departure and comparing this to data for other years, this section is able to trace the pattern of inter-censual migration within Malawi. However, there are some limitations of using the population and housing census data. For example, the population and housing census data were not concerned with the issue of migration. Instead, the data in the population and housing census reports are describing a population rather than the circumstances of the migrant workers and their reasons for migration. All the same, it is possible to generate an overview of migration pattern within Malawi.

In order to provide a clear picture, the section begins with a description of structural changes in Malawi's economy during the 1970s. Again, this has been dealt with in details by earlier scholars such Christiansen (1984), McCracken (2003) and Potts (2006), and therefore, this description intends only to provide

an overview from which to understand migration patterns within Malawi. The section documents the patterns of migration for the periods prior to 1966, 1967-1977, 1978-1987, 1988-1997, 1998-2008 and connects to the on-going economic changes within Malawi. Again, in addition to population and housing census data, this section utilises available studies for causes of migration within Malawi by earlier scholars such as Christiansen (1984), McCracken (2003) and Potts (2006). According to Christiansen (1984:147), estimates of inter-censual internal migration are derived by approximating the number of the migrant workers residing in the region in the previous population and housing census data who survived to be enumerated in the current population and housing census data, and subtracting this value from the number of present migrant workers.

Government of Malawi (1986) and Potts (2006) report that during the administration of President Kamuzu Banda (1964-1994), Malawi government promoted the establishment of large-scale agriculture estates aimed at production of export crops such as tea, tobacco and sugar. However, ownership of all these agriculture estates was in private hands (Christiansen, 1984; Government of Malawi, 1986; Potts, 2006). At the same time, Malawi government provided assistance to peasant agriculture inform of subsidised fertilisers and seedlings (Government of Malawi, 1986). However, this policy framework favoured the agriculture estates in that the agriculture estates had preferential allocation of land, and that Malawi government directed commercial banks to financing the agriculture estates, which also had direct access to the world markets (Christiansen, 1984; Government of Malawi, 1986; Potts, 2006). However, the peasant producers were forced to sell to Malawi government marketing board: the Agriculture Development and Marketing Cooperation -ADMARC (Government of Malawi, 1986; United Nations & Government of Malawi, 1993). As a result, the peasants received substantially lower prices than those received by the agriculture estates (Kydd & Christiansen, 1982; Christiansen, 1984; United Nations & Government of Malawi, 1993). It is such development policy strategy that had an influence on the pattern of migration within Malawi. As a result of the differential pricing policy for agriculture estates

and peasant produced outputs, peasant incomes fell in real per capita terms and relative to estate wages (Christiansen, 1984; Potts, 2006; Mtika, 2007). As incomes fell, so did the self-employment of peasants on their own land holdings (Mtika, 2007). However, estate agriculture employment more than doubled, accounting for at least half of the new wage employment within Malawi (Christiansen, 1984:128). Therefore, the agriculture estate oriented development strategy gave rise to an economically motivated transfer of labour from peasants to agriculture estates (Christiansen, 1984).

What is important in the study of internal migration in Malawi as regards to the agriculture estates is their geographical location. Land settlement and use thereof vary considerably by region within Malawi. Usage of arable land is high in the southern region than in the northern and central regions of Malawi. By 1969, land pressure was felt in many parts of the southern region of Malawi, and two districts in this region, Thyolo and Mulanje had completely exhausted their available arable land (Christiansen, 1984; Government of Malawi, 1986; Potts, 2006). Based on aerial photos of 1971 and 1975, Malawi Ministry of Agriculture estimated that 37 percent of national land was suitable for arable cultivation (Government of Malawi, 1986). However, 86 percent of this land was already cultivated by 1977 (Government of Malawi, 1986). In the southern region, 96 percent of arable land was under cultivation by 1977 (Government of Malawi, 1986). However, this increased to 117 percent by 1983 (Government of Malawi, 1986). The respective figures for the other two regions were 91 percent and 110 percent for the central region, and 68 percent and 83 percent for the northern region of Malawi (Government of Malawi, 1986). Per capita land availability in 1977 was estimated at one acre in the southern region, 1.5 acres in the central region and 3.8 acres in the northern region of Malawi (Government of Malawi, 1986).

From the population and housing census data, population density, which is defined as the number of persons per square kilometre was 85 in 1987, 105 in 1998 and 139 in 2008 in Malawi. However, the southern region has had the highest population density with 125 persons per square kilometre in 1987, while

in the central and northern regions the comparable figures were 87 and 34 respectively. By 1998 these population densities had risen to 146, 114 and 46 in the southern, central and northern regions respectively. Population density in 2008 was 184 in the southern region, 155 in the central region and 63 in the northern region. In 2008, some districts in the southern region such as Chiradzulu and Thyolo had population densities of as high as 376 and 342 respectively, while some districts in the northern region such as Rumphi had population density of as low as 36. However, the geographical location of the agriculture estates has tended to be in those districts with suitably large unused arable land and satisfactory climatic conditions. It is for these reasons that new agriculture estates were located in Kasungu and Mchinji districts of central region early in the 1970s and in Nkhata-Bay, Mzimba and Rumphi districts of northern region late in the 1970s (Christiansen, 1984; Government of Malawi, 1986) as well as in Chitipa district in the northern region in the 1980s (Potts, 2006). As of 1967, sugar estates were located only in Chikhwawa district while tea estates were found only in Mulanje and Thyolo districts all of which are in the southern region of Malawi (Christiansen, 1984; Government of Malawi, 1986; Potts, 2006). It is evident that these events had influence on the pattern of internal migration within Malawi as labour migration would be to those districts containing employment opportunities.

Although there are no comprehensive studies on patterns of migration within Malawi, it is widely accepted that the established pattern has been the migration of people from the northern region to the central and southern regions due to existence of employment opportunities in the latter two regions (McCracken, 2003). For example, Zomba the then national capital city and the commercial centres of Limbe and Blantyre as well as the earlier tea and sugar estates in Mulanje, Thyolo and Chikhwawa are all located in the southern region.

From the 1966 population and housing census data report, based on place of birth and residence at the time of enumeration, the northern region had net out-migration of 20,900, while the central and southern regions had net in-migration of 9,700 and 11,200 respectively. This pattern conforms to Malawi's economic

geography at that time with the southern region as Malawi's most economically developed region. Most of the early colonial plantations and agriculture estates were located in the southern region as was Zomba the administrative capital city and the commercial centres of Blantyre and Limbe, and the southern region had by far the best transport system as all tarmac roads were in that region and that the railway line was not extended beyond the lakeshore district of Salima until after independence (Pachai, 1978; White, 1987). No wonder, the majority of the wage earning opportunities were concentrated in the southern region, particularly around the then capital city of Zomba, the commercial centres of Blantyre and Limbe, the tea agriculture estates districts of Mulanje and Thyolo and the sugar agriculture estates district of Chikhwawa. The central region was far less favoured, although after independence agriculture estates had begun to spread there (McCracken, 2003; Potts, 2006). The northern region, by contrast, was referred to as the 'Dead North' (McCracken, 2003; Potts, 2006). With the exception of missionary educational facilities, the northern region received negligible attention during the colonial period (McCracken, 2002; McCracken, 2003). As McCracken (2002, 2003) observes, the only and main role of Malawi's northern region was as an exporter of migrant workers to other regions. However, in the recent years, the pattern of internal migration has changed within Malawi.

Using studies of Christiansen (1984) and Potts (2006), the 1977 population and housing census data, which measured individuals residing in a region but born in another region, provided the first hand evidence that the pattern of migration had changed within Malawi. Although the northern and central regions remained net labour exporter and importer respectively, the southern region recorded net out-migration of 12,200. This was a reversal of the position for the southern region in 1966. The size of the flow out of the northern region grew and so was that into the central region from both the southern and northern regions. Total out-migration from the northern region grew by 170 percent while in-migration to the central region increased by 500 percent.

In the central region, migration was to the tobacco producing districts of Kasungu and Mchinji and the new capital city of Lilongwe since 1975. The importance of migration from the northern region could be seen from the 1977 population and housing census data. Over three quarters of out of the northern region went to urban areas. This means that the northern region was supplying skilled or relatively well educated migrant workers to business and government rather than unskilled labourers to work in the agriculture rural estates. This indicates that the early missionary education efforts in the northern region resulted in a higher general level of education among the northerners. Current population and housing census data for 2008 show literacy levels, defined as an ability to read and write in any language, high in the northern region at 77 percent compared to 62 percent for both the central and southern regions.

It should be noted that the pattern of migration within Malawi in 1977 was quite focused with some of the individuals migrating to urban areas while others migrating to rural agriculture estate areas. Over 95 percent of net in-migrants went to four districts of Blantyre in the southern region, Kasungu, Mchinji and Lilongwe in the central region. 44.2 percent of net in-migration was to districts containing urban areas. The difference migrated to rural agriculture estate areas. Therefore, the pattern of rural to urban migration which has characterised many developing countries in Africa (Barnes, 1995; Beauchemin & Bocquier, 2004) was present, but did not dominate internal migration within Malawi. Instead, the pattern of internal migration within Malawi in 1977 was more of from rural to rural. For example, the sum for the two rural central districts with the largest in-migration due to agriculture estates, Mchinji and Kasungu was 15,534 or 53.8 percent of total net migration within Malawi.

McCracken (2003) and Potts (2006) discusses the reasons for internal rural flows towards the central region rural districts of Kasungu and Mchinji. The main reason noted by these authors is developments in tobacco agriculture estates. Although tobacco growing was not new in the central region, as it dates back to the 1920s, the post-colonial government of President Kamuzu Banda brought in a series of initiatives which brought changes in central region economic

geography (McCracken, 2002, 2003). One of these changes was that Malawi government sponsored expansion of African-owned tobacco agriculture estates, which was fostered in three ways in that the peasant crop marketing board, ADMARC, diverted at least two-thirds of its profits to developing the tobacco agriculture estates, the commercial banks were required to lend on non-commercial terms to the tobacco agriculture estates, and that all available uncultivated arable land was allocated to the tobacco agriculture estates (McCracken, 2003; Potts, 2006).

It should be noted that the impact of the new tobacco agriculture estates was not felt only in the central region districts at this time, but it was the main area of investment (Government of Malawi, 1986; Potts, 2006). Other relevant development investments were the moving of the administrative capital city from Zomba in the southern region to Lilongwe in the central region in 1975 as well as the extension of the railway line beyond the lakeshore district of Salima through the whole of the central region to the Zambian boarder post (Chirwa, 1996). The agriculture estates districts of Mchinji and Kasungu had population densities below their region's average in 1977, with Kasungu district particularly notable in this respect. The density of Kasungu district was even less than the average for the northern region. In fact, according to McCracken (2002:69) up until 1964, "Kasungu district was part of the labour-exporting northern region." However, availability of arable land and the tobacco estates bias in agriculture policy combined to transform Kasungu district, thereby, attracting a lot of internal migrant workers (McCracken, 2002). The tobacco agriculture estates created a rapid surge in agriculture wage employment, albeit at extraordinarily low rates of pay (Potts, 2006; Mtika, 2007). Between 1969 and 1977, this wage employment in tobacco agriculture estates grew at an average of 13.6 percent per year (Ghai & Radwan, 1983). Both full-time and part-time jobs were created as some of the resultant in-migration would have been seasonal (Ghai & Radwan, 1983). Although the central region districts were the main areas of tobacco agriculture estates investments, the impact of the new tobacco agriculture estates was not felt only in the central region. During this period, there was also emergence of Rumphi and Mzimba districts in the northern

region as clear migrant receiving districts. This was so because these two rural northern districts grew at above average natural population increase, and were probably experiencing in-migration. This shift in the attractiveness of Rumphi and Mzimba northern region rural districts were, as in Kasungu and Mchinji districts in the central region, related to investments in tobacco agriculture estates (McCracken, 2003; Potts, 2006). Therefore, there was increased out-migration from southern region districts and from districts in the south of the central region such as Ntcheu and Dedza, and, at the same time, increasing in-migration to the northern half of Malawi. The more rural, yet commercial districts, dominated young male in-migrant workers. The more urban districts also had young male migrant workers, but not to the same degree as the rural commercial districts. The reasoning could be that economic opportunities in an area encourage population in-migration. Also, greater population density could result into out-migration or less in-migration due to unavailability of arable agriculture land.

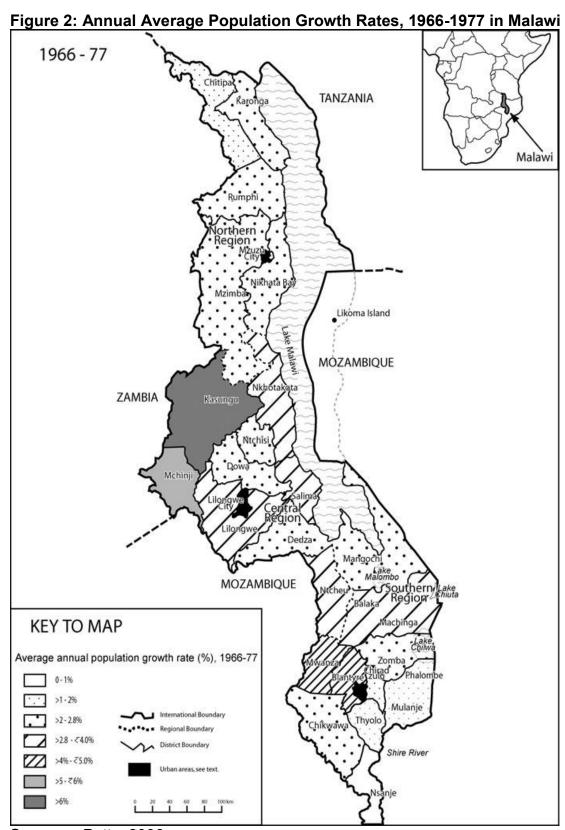
The average regional growth rates for the 1967-1977 and 1978-1987 were similar. However, it is well known that the southern region was inflated by the over one million Mozambican refugees during the 1978-1987 period (Benson, Kaphuka, Kanyanda & Chinula, 2002; Potts, 2006). There were markedly differences in the growth rates for 1978-1987 and 1988-1998. The rate of population growth in the southern region was 1.4 percent, only half that of the northern region. Although there are many factors such as drop in natural increase, AIDS related deaths and return of the Mozambican refugees, taking all these into account means that it is hard to be precise. On the basis of the population and housing census data as well as paying attention to analyses of earlier scholars, based on the fact that the southern region in 1988-1998 experienced growth rates of below 1.5 percent per year can be interpreted as a deepening net out-migration. This out-migration was to locations within Malawi, but outside of the southern region. One of the reasons for out-migration could be as a result of employment shortages in the southern region (Benson, Kaphuka, Kanyanda & Chinula, 2002; Potts, 2006). The southern region districts of Thyolo, Mulanje, Phalombe and Nsanje all experienced annual

growth rate over this period of under one percent. However, all these districts have a border line with Mozambique. This could be due to the Mozambicans refugee return. Zomba and Blantyre districts grew at 1.9 percent and 2.9 percent respectively per year. This could be due to the urban areas they contain. However, the densely populated rural district of Chiradzulu, which is far from the boarders with Mozambique, definitely experienced out-migration as this district grew at only one percent per year, below the natural increase of 1.5 percent per year.

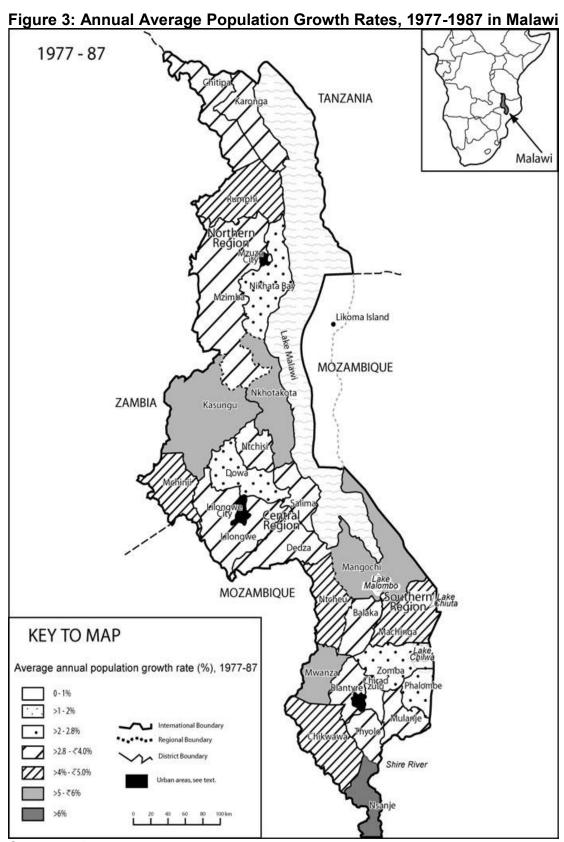
It is possible that many of the areas in the southern region that did not boarder with Mozambique, but had an average annual growth of between zero percent and 1.5 percent, did experience net out-migration which was not associated with the Mozambican refugees return during the early 1990s. This is backed up by the evidence of net in-migration in both the central and northern regions. Since the people in these two regions had to come from somewhere else and areas in the southern region are the likely places. Also indicative is the fact that the northern region by the 1990s was confirmed not only as a region of net in-migration, but as the main region of net in-migration relative to its population.

The population and housing census data further show that there have been changes in the pattern of population regional distribution with population reduction in the southern region from 50 percent in 1987 to 47 percent in 1998 to 45 percent in 2008. However, there have been corresponding increases in the population shares residing in the central region from 40 percent in 1987 to 41 percent in 1998 and to 42 percent in 2008, and for the northern region from 11 percent in 1987 to 12 percent in 1998 and to 13 percent in 2008. In 2008 annual population growth rate was lowest in the southern district of Zomba rural at 0.6 percent. However, the annual growth rate between 1998 and 2008 in the northern region was at 3.3 percent, in the central region was at 3.1 percent and in the southern region was at 2.4 percent. Overall national average annual growth rates were 3.3 percent in 1966, 2.9 percent in 1977, 3.7 percent in 1987, 2.0 percent in 1998 and 2.8 percent in 2008. Again, the high annual growth rate in 1987 might had been influenced by Mozambican refugees. The average

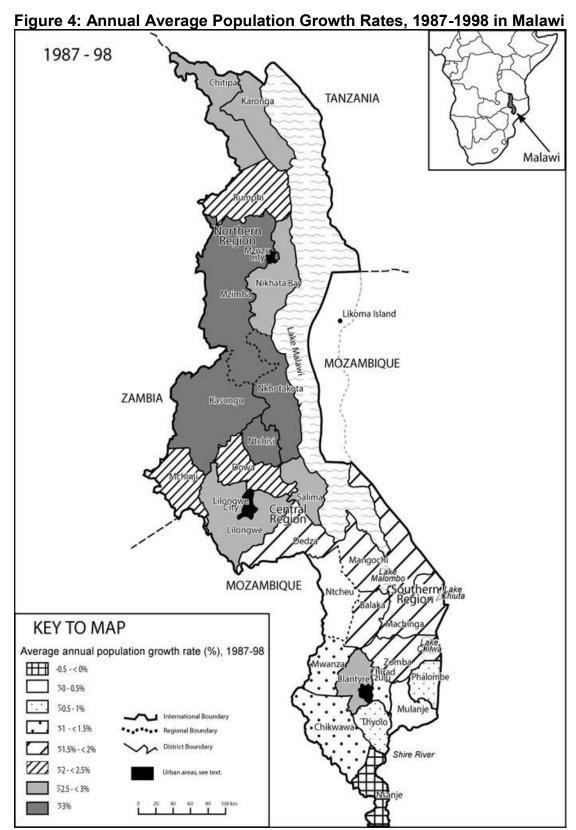
population increase from 1998 to 2008 was 32 percent for Malawi with the northern region at 39 percent, central region at 36 percent and the southern region at 26 percent. Annual growth rates for Lilongwe city in the central region and Mzuzu city in the northern region was at 4.4 percent while Zomba city in the southern region was at 3.0 percent and Blantyre city also in the southern region was at 2.8 percent. These narratives clear show a shift from the situation in and before the 1970s when the southern region was the economic pole for Malawi. Based on population and housing census data as well as analyses of earlier scholars such as McCracken (2003) and Potts (2006), **Figures 2, 3 and 4** therefore summarise the nature of migration within Malawi since 1966.



Sources: Potts, 2006.



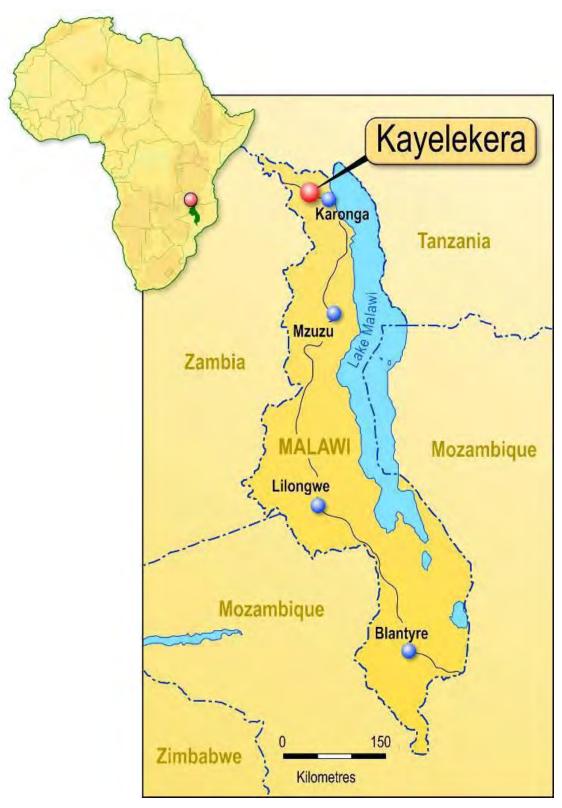
Sources: Potts, 2006.



Sources: Potts, 2006.

The role of economic developments in the central and northern regions of Malawi in fostering internal migration flows is also noted by other earlier scholars such as Englund (2002) and van Donge (2002). Englund (2002) notes that the rural-urban migrants in the capital city of Lilongwe are rarely from the districts of Mchinji and Kasungu. According to Englund, this could be so because the districts of Kasungu and Mchinji are likely to be the destinations for rural-rural migration, and not the sources of rural-urban migration. In noting the significance of tobacco agriculture estates in the northern region, van Donge (2002) highlights how labour demands in that region have been met by tenants from the overpopulated districts of the southern region. Also, it should be noted that the largest man-made forest in southern Africa which is on the Viphya Plateau in the northern Malawi is being harvested currently. Further, Mzuzu city, and Karonga and Chitipa districts of northern Malawi are commercial hubs for goods coming through the port of Dares-Salaam in Tanzania. Additionally, in the 1990s the Government of Malawi began investing in extractive industry (Mudd & Smith, 2006). Government of Malawi records that most of the minerals are concentrated in the northern region of Malawi (Government of Malawi-Department of Mines, 2010). These minerals include Uranium at Kayelekera, one of the study sites for this research, shown in **Figure 5 below.** Therefore, with no doubt, the present economic landscape for Malawi puts the northern region on top level of net in-migration.

Figure 5: Map of Malawi showing the Location of Kayelekera Uranium Mine



Source: Paladin Website

In the available literature, there are other regional patterns which suggest further problems in the southern region compared to the northern and central regions, which could be fostering out-migration from the southern region. Benson, Kaphuka, Kanyanda and Chinula (2002), Potts (2006) and Jul-Larsen (2009), report that the incidence of *ultra*-poverty, defined as consuming less than 60 percent of the poverty line, is much more severe in the southern region than in the northern region as well as in the northern districts of the central region. The poverty headcount map for Malawi indicates that more than twothirds of the people in the southern region are consuming below the poverty line. According to Benson, Kaphuka, Kanyanda and Chinula (2002), Potts (2006) and Jul-Larsen (2009), *ultra*-poverty is shown in nearly all the northern districts of the southern region of Malawi. However, Benson, Kaphuka, Kanyanda and Chinula (2002), Potts (2006) and Jul-Larsen (2009), note that severe poverty is somewhat less prevalent in the southerly part of the southern region of Malawi (Chikhwawa and Nsanje districts). According to Benson, Kaphuka, Kanyanda and Chinula (2002), Potts (2006) and Jul-Larsen (2009), in this southerly part of the southern region pressure on land is lower, thereby, enabling people to grow some crops and raise some herds of animals.

There have, however, been migrations taking place within regions of Malawi (Peters, 2002; Palamuleni, 2005). According to Palamuleni (2005) there has been migration out of overpopulated districts of Mulanje, Thyolo and Chiradzulu to destinations within the southern region such as Machinga and Mangochi districts. Unlike in the southern Malawi where people practise matrilineal, the ethnic groups of the northern part of Malawi practise patrilineal, and such differences in customs could pose as barriers to some of those migrating (Peters, 2002). Differences in languages could also pose as barrier to some potential migrants (Peters, 2002). According to Peters (2002), people's social capital rather than their financial capital might be instrumental determinant of migration as migration is eased if people already have kin or social connections in the places of their destination. Therefore, not all migrants from the southern region might be interested in migrating to the central and the northern regions of Malawi.

In summary, using population and housing census data backed by studies of some earlier scholars, this section concludes that rural-rural migration in Malawi is an important aspect of livelihood. This type of migration is by far the strongest element of internal migration flows within Malawi. Many people are involved in rural-rural migration than the other three categories of migration, which are rural-urban, urban-rural and urban-urban. This section has also shown that there has been a transformation in the intra-rural migratory patterns within Malawi over the years. Initially, migration was predominantly out of the northern region to the central and southern regions, with the majority of people migrating to the southern region. However, with time the southern region, formerly Malawi's economic pole, and a destination for internal migrants, in now the region with highest incidence of poverty due to overpopulation resulting into lack of suitable arable land and lack of employment opportunities, and therefore an area of outflow of migrant labourers to the northern and central regions. Thus, the geographical locations of economic activities are important dynamics in intra-rural migration within Malawi. Therefore, rural-rural migration, just like rural-urban migration, is an important indicator of economic inequalities as well as economic opportunities within Malawi. Regardless of migration patterns, most migrant workers in Malawi maintain connections with their original rural homes, a section which is described next.

3.3 Connections between Migrants Sending and Receiving Areas

Using case materials from study locations of the migrant rural workplace of Kayelekera and the migrant sending rural village of Maganga in Malawi, and supported by studies of earlier scholars such as Andersson (2001) and Potts (2010), this section describes the importance of social connections of the migrant workers in understanding migration practices in Malawi.

Like in the observations of Anderson (2001) in Zimbabwe, at Maganga, it is difficult to ignore that close ties exist between this migrant sending rural village and distant workplaces. The village of Maganga consists of grocery shops selling basic commodities and some bars selling beer, most of them owned by the migrant workers, but ran by their relatives and close friends. The bars are popular meeting places for people of the village. After their work in their fields, a number of males and a few females gather to enjoy beer. During weekends these males and females are joined by some of the migrant workers. These migrant workers come to spend their weekends and holidays at their rural home village. They bring with them such items as clothes, sugar, salt, soap and oil for their households. Others bring items for their grocery shops. Occasionally, village night dances are arranged at this migrant sending rural village. Music systems brought by the migrant workers play an important role in this endeavour.

Again, like in the observations of Anderson (2001) in Zimbabwe, when visiting the migrant rural workplace of Kayelekera, especially on Sunday afternoon, it is difficult to ignore that close ties exist between this rural workplace and sending rural villages. For most of the migrant workers, Sunday is a returning day from their home villages. Taxis come to this area bringing back the migrant workers. They bring with them maize flour, rice, beans, vegetables and roasted meat from their rural villages. Like at Maganga, the migrant workplace of Kayelekera consists of grocery shops selling basic commodities as well as bars. The bars are the meeting places for the migrant workers, the commercial sex workers and other men and local women from the surrounding villages. At night, a number of males and females gather to enjoy beer in these bars. While drinking beer, they discuss their daily affairs. Kayelekera is a lively entertaining place, especially at night when many of the migrant workers visit the bars and enjoy with others including the women in discussions, dancing and drinking beer.

As per the observations at Maganga and at the migrant rural workplace of Kayelekera, it is clear that the migrant workplaces and their sending rural villages are inseparable. Understanding the migrant sending village of Maganga and the migrant workplace of Kayelekera as societies that

encompass both the migrant rural sending areas and migrant workplace receiving areas, challenges conventional perspectives in available literature on migration in southern Africa that populations in the migrant sending areas and migrant workplace receiving areas have distinct behaviour patterns (Ferguson, 1990; de Haan, 1999). Using an example of migrant mineworkers on the Zambian Copperbelt in describing the distinction between the migrants sending and receiving areas, Ferguson (1990:412) observes that the "migrant mineworkers discussions of their rural retirement are in terms of sending and receiving areas oppositions...and that upon retirement the migrant mineworkers attend formal organised courses on how to adapt to their sending rural villages." However, as observed in the study locations for this research, the migrant workers receiving and their sending areas do not exist as separate entities. As scholars such as Carruthers and Babb (2000), Andersson (2001) and (Potts, 2010) observe in the case of circular labour migration, it should be noted in relationship to socio-cultural connections of the migrants including their kinship and identification with land. However, the importance of the migrant workers' social-cultural connections between their original rural homes and their receiving workplace areas might not be important to all categories of the migrant workers. For example, some of the migrant workers may become disconnected from their original rural homes by never returning back resulting in patterns of social life in which kinship and rural home including their identification with land are far less important than what is described in this section.

As described earlier, migration to workplaces and the subsequent maintenance of rural connections are not uncommon in Malawi. Again, most Malawian migrant workers maintain land in their original rural sending homes (see also Chimhowu, 2008 for further details on these). Malawian migrant workers maintain rural land on which they even construct their rural house. Maintenance of rural land as well as construction of a rural house constitutes the focal point for the migrants' social security (Hansen, 1997). Similarly, Eades (1993) observes of Yoruba migrant workers in Ghana and Anderson (2001) observes of the Buhera migrant workers in Zimbabwe whose success serve to build

houses in their original rural sending home villages. For the migrant workers investing in construction of houses in their original rural remote sending villages has to be understood in relationship to their socio-cultural connections as this reflects a sense of belonging (Potts & Mutambirwa, 1990; de Vletter, 1994).

For example, most of the homesteads with a brick and corrugated iron sheets house at Maganga were owned by the migrant workers or their partners or their widows or their parents. To construct such a house in the village such as Maganga requires considerable effort as building materials are often bought and transported from town. While such an investment may seem irrational from an economic point of view, it is not if one acknowledges value of belonging to one's original rural home village (Potts & Mutambirwa, 1990; de Vletter, 1994). The migrant workers who own land and houses are less likely to abandon their rural homes (Cheater, 1986; Anderson, 1999). However, most of the migrant workers, who construct houses in their original rural villages, hardly stay in these houses (de Vletter, 2000). However, such an investment is not simply a matter of economic calculation. Instead, the migrant workers are not confined to their workplaces.

Also, it should be noted that it is the wish of most Malawian migrant workers to be buried at their rural homes, on their homestead and among their own people as well as their ancestors (Anderson, 2001; Potts, 2010). Even after a lifetime of employment away, the migrant workers still want to be buried at their rural homestead (Andersson, 2001). This might be one of the reasons for the migrant workers' efforts to construct houses in their rural villages. It is not uncommon in some parts of Malawi to see homesteads that are occupied by family members of absent migrant workers who leave their fields uncultivated or hire people to till the land for them or lend out at no cost their land to their neighbours, friends and relatives. Building a rural house is an expression of a migrant worker's membership to the rural community and, subsequently, of the naturalness of being buried there. Burial societies do not exist in Malawi. Upon getting sick, most of the migrant workers return home to be cared for by their home relatives as well as die in their own houses among their own people (Clark *et al.*, 2007).

Other migrant workers die in their sojourns. Upon death of a migrant worker in his sojourn, it is not uncommon in Malawi for members from same rural home areas to assist in the transportation of a deceased member. They make contributions to transport the body of the deceased to the rural home area for burial. No wonder even adherence to specific marital customs in Malawi exemplifies one's connection to original rural home area.

Most Malawian adults are married and a few that are not married generally want to marry, and expect to do so as soon as possible (Kaler, 2001). By the age of 30, 95 percent of female and 93 percent of male Malawians are married (Kaler, 2001). However, marital dissolution is frequent in Malawi (Schatz, 2005; Anglewicz, 2011). Nearly half of all first marriages end in divorce within 20 years of marriage (Reniers, 2003; Schatz, 2005). Although divorce is common and can be initiated by either females or males (Kaler, 2001; Schatz, 2005), remarriage remains nearly universal (Schatz, 2005; Anglewicz, 2011). The institution of marriage is perceived as critical for an economically and sexually satisfactory life, a form of mutual assistance in bed as well as on board (Swidler & Watkins, 2007). The females rear children, farm and carry out household tasks (Kaler, 2001). In exchange, the males provide money for necessities and, if possible, luxuries such as shoes and new clothing (Kaler, 2001). Each spouse is expected to do his or her part. Given these views of bed and board as complementary, it is not surprising that majority of Malawian males are involved in cycles of labour migration for them to raise money to fulfil their obligations (Mtika & Doctor, 2002; Swidler & Watkins, 2007). However, traditionally, Malawians marry in their rural home areas (Mtika & Doctor, 2002; Chimbiri, 2007). This signifies that even for a migrant society as a whole, marriage is more than a transaction between individuals as marriage relationships involve families which are in most cases related to one another in a number of ways including rural neighbours or fellow children of the migrant workers (Arnaoldo, 2004; Chimbiri, 2007).

Although it has long been established that Malawian young men leave their rural homes in search of work elsewhere before they are married, marriages in

which both a husband and a wife originate from same rural village or neighbouring villages are not uncommon in Malawi (Chimbiri, 2007; Anglewicz, 2011). The marriage patterns of the migrant workers reveal a preference for women and men originating from same rural home areas (Chimbiri, 2007; Anglewicz, 2011). For example, although the migrant males working at Kayelekera had wives in their rural areas, they also had sexual partners at this rural workplace. However, most of them did not consider their sexual partners at Kayelekera as their real wives. Instead, they considered them as their casual sexual partners. Similarly, although some of the local women at Kayelekera had sexual affairs with the migrant workers, the majority of the women said that they did so for transactional purposes only. They were not after marrying the migrant workers from other places.

While paying attention to studies focusing on migrants' rural orientation, their marriage relationships and their kinship ideology, this section concludes that the migrant receiving workplace areas and the sending rural villages are socially connected. However, these social connections might have consequences for HIV risk reduction strategies as well as transmission mechanisms among the migrant workers and their sexual partners.

3.4 Migration and HIV Situation in Malawi

As described earlier in this chapter, labour migration is a source of income for most Malawians. It is their livelihood strategy. However, apart from economic reasons for labour migration, there are other implications associated with labour migration including contribution to the spread of HIV (Chapter Two). For example, most of the migrant workers in Malawi, come from and work in poor communities where inequalities are high (Beegle & Poulin, 2013; Masebo, 2013). UNDP (2015) reports that in Malawi, 66.7 percent of the population are multidimensionally poor while an additional 24.5 percent live near multidimensional poverty. UNDP further reports that 49.8 percent of Malawians live below poverty line. They consume less than US\$1.25 per day.

Evidence shows that in Malawi, HIV infection increases with wealth quintile. Overall, the infection rate in the highest quintile is two times that in the lowest quintile at 16 percent and eight percent respectively (Government of Malawi-National AIDS Commission, 2015). This relationship is true for both males and females. However, the relationship is much more pronounced for males than for females. Similar studies in other countries show that HIV prevalence is higher in upper income and wealth brackets (Gillespie, Kadiyala & Greener, 2007; Sawers, 2010). Although these studies on the connection between income, wealth and HIV look at a single country or district within a country, Mishra et al. (2007) using nationally representative surveys from eight of the sub-Saharan African countries to examine this issue, conclude that HIV prevalence is higher in the wealthiest quintile than in the poorest quintile in all eight countries, usually by a substantial margin. Wealthier males in all the eight countries are more likely to report of their involvement in multiple concurrent sexual partnerships, having more lifetime sexual partners and having sex with non-regular sexual partners. It is clear from such findings that it is not mostly the poorer who contract HIV in poor places. However, widespread poverty might increase HIV prevalence for both wealthy and poor people (Swidler & Watkins, 2007; Sawers, 2010). This might be the case for the migrant workers who might have higher incomes compared to women they come into contact with both in their workplaces and original rural homes.

Available statistics show that poverty in Malawi affects females disproportionately. Although 84.6 percent of the women are subsistence rural agriculture workers compared to 81.5 percent of men, most females in Malawi are estimated to be poor (UNDP, 2015). The gender-based inequalities for Malawi is 0.611, ranking it 140 out of 155 countries (UNDP, 2015). In Malawi, 16.7 percent of parliamentary seats are held by women, and 11.1 percent of adult women have reached at least a secondary level of education compared to 21.6 percent of their male counterparts (UNDP, 2015). 70 percent of these poor females reside in the southern region of Malawi, a major migrant workers sending region (UNDP, 2015). It is widely believed although with little evidence that poverty forces females into commercial 'transactional' sex as well as into

sexual relationships where they do not have power to negotiate for safer sexual practices (Bouare, 2007). Moreover, affluent males such as the migrant workers can afford to pay for sexual services of poor and desperate females. Evidence from Mishra *et al.* (2007) is that the wealthy males are more likely to engage in sexual relationships outside of monogamous unions. In places with more desperate poor females, both well-to-do males and poor females may be more likely to become infected with HIV. Members of both groups can then pass HIV on to their regular sexual partners (Helleringer, Kohler & Chimbiri, 2007).

In Malawi, there are regional differences in HIV prevalence, with the highest HIV rates in the southern region, which also has the highest population density as well as poverty levels (Peters, 2006; Government of Malawi-National Statistical Office, 2009; Government of Malawi-National AIDS Commission, 2015; UNDP, 2015). Available statistics show that HIV prevalence among females is high in the southern region at 20 percent than in the northern region at 10 percent and central region at seven percent (Government of Malawi-National AIDS Commission, 2015). The regional differential in HIV prevalence for males is also high in the southern region at 15 percent than in the northern region at five percent and central region at six percent (Government of Malawi-National AIDS Commission, 2015). Despite these regional disparities, HIV 'hot spots' are found across Malawi primarily along major transportation routes and in areas where large agricultural or business interests exist. More important for this review, is the fact that more migrant workers in Malawi are from the high density southern region where both poverty and HIV prevalence are high and they migrate yet to other HIV 'hot spot' areas.

Also, available statistics show that paid sex in Malawi is more common in the southern region (Government of Malawi-National AIDS Commission, 2015). Statistics show that males in Malawi who are involved in commercial 'transactional' sex have a higher HIV prevalence at 18 percent than those who do not at 10 percent (Government of Malawi-National AIDS Commission, 2015). In Malawi, both males and females who have had commercial 'transactional' sex are more likely to be HIV-positive than those who have not at 10 percent

and seven percent respectively (Government of Malawi-National AIDS Commission, 2015).

As described earlier, once infected, these people may as well as infect their regular sexual partners. This is so because in Malawi like in the southern Africa region in general, HIV is spread mainly through unprotected heterosexual relationships either regular or non-regular (Lopman et al., 2009). It should be noted that there is virtually no evidence for the existence of sexless regular relationships in Malawi, despite evidence suggesting a high majority of HIVinfections taking place within such relationships within which condom usage is rare (Chimbiri, 2007; Anglewicz, 2011). Only 39 percent of males and 29 percent of females in Malawi, report having ever used condoms (Government of Malawi-National AIDS Commission, 2015). In other words, the vast majority of Malawians are involved in sexual relationships where unprotected sex is a norm. This is problematic because 10 percent of regular sexual partners in Malawi are discordant with six percent having the male infected and the female uninfected, while four percent having the female infected and the male not infected (Government of Malawi-National AIDS Commission, 2015). The vast majority of them do not even know each other's HIV status (de Walque, 2007; Obare et al., 2009). However, when one discovers that a partner is HIV-positive in most cases divorce follows (Schatz, 2005; Anglewicz & Reniers, 2010). The challenge is that HIV-positive individuals might migrate to different places and have new sexual partners (Anglewicz, 2011).

It should also be noted that there are large differences in HIV prevalence between urban and rural areas in Malawi. The urban areas have higher rates of HIV prevalence than the rural areas. For Malawians living in urban areas, HIV prevalence is 17 percent compared with 11 percent in rural areas (Government of Malawi-National AIDS Commission, 2015). While 18 percent of urban females are HIV positive, the corresponding proportion for rural females is 13 percent (Government of Malawi-National AIDS Commission, 2015). For males, the urban-rural difference in HIV prevalence is even greater. Urban males are nearly twice as likely to be HIV infected as rural males at 16

percent and nine percent respectively (Government of Malawi-National AIDS Commission, 2015).

Statistics however show that Malawi's HIV epidemic has been declining from 17 percent in 1997 to 14 percent in 2004 and 12.9 percent in 2009 down to 10.6 percent in 2010 (Malawi Demographic Health Survey, 2010; UNAIDS, 2010; Government of Malawi-UNGASS report, 2014; Government of Malawi-National AIDS Commission, 2015). The HIV prevalence is further declining in urban areas. This could be as a result of the overall growth of the HIV epidemic which appears to have stabilised and naturally declining (UNAIDS, 2010). According to the UNAIDS (2010), the predicted levelling off of the HIV epidemic could be as a result of saturation of the most susceptible groups in the population. This could be explained by the fact that entry of new uninfected group members and exit of infected members due to death as well as factors such as migration could cause equilibrium. However, according to UNAIDS (2010), this does not mean that the incidence of HIV is zero, but it implies that new HIV cases are balanced off by death as well as factors such as migration. While the general as well as urban HIV prevalence rates are declining, the rate of HIV is increasing in the rural areas of Malawi (Figure 6 below). In some population groups such as youth, the HIV prevalence in urban areas is almost the same to that in rural areas at seven percent and six percent respectively (Government of Malawi-National AIDS Commission, 2015). This could be that HIV saturation point has not been reached in rural areas of Malawi. Also, some HIV-positive people might be migrating back to their rural homes (Clark et al., 2007).

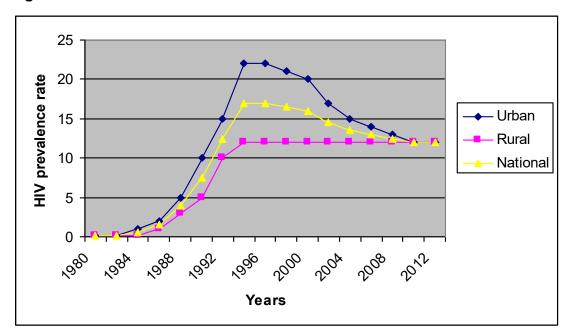


Figure 6: Estimated HIV Prevalence for Malawi from 1980 to 2012

Data Sources: Malawi Demographic and Health Survey, 2004, 2010; UNAIDS, 2010; Government of Malawi-UNGASS Report, 2014; Government of Malawi-National AIDS Commission, 2015.

3.5 HIV Responses and their Related Challenges

As described in Chapter One, since the onset of the HIV epidemic in Malawi, Malawi government supported by donors and development partners has implemented a number of policies and programmes to mitigate the spread of HIV. Malawi National HIV Policy (2003) provides a framework for the strengthening of a coordinated multi-sectoral response to the HIV epidemic. The policy also provides a legal framework for the reduction in vulnerability to HIV. Significant also is the fact that the policy provides a framework for all public and private sector workplace policies and programmes. The policy categorises the migrant workers as a vulnerable group. In addressing the vulnerability of the migrant workers, the policy commits government and the private sector to identify, address and reduce the vulnerability to HIV, including the migrant workers living and working conditions. However, Malawi National HIV and AIDS Action Framework (2012) whose overall goal is to prevent the spread of HIV infection does not directly address the vulnerability of the migrant workers, and no mention is made of the migrant workers in the document. Consequently,

none of its objectives and approaches addresses the need to ensure that the migrant workers have access to HIV and AIDS related services. Furthermore, strategic interventions geared towards impact mitigation in the framework do not mention the migrant workers.

Additionally, Malawi Business Coalition against HIV and AIDS launched in 2004 has become the private sector voice in Malawi on HIV and AIDS matters. The Coalition is made up of large and small scale companies and assists member companies to implement HIV and AIDS workplace policies and programmes. However, a UNAIDS (2010) Malawi country report observes that the Coalition coordinates HIV and AIDS private-sector responses, but is only present in big cities of Blantyre and Lilongwe. The same is observed by the 2010 International Organisation for Migration report. However, as described earlier in this chapter, most economic activities attracting the migrant workers within Malawi are concentrated in rural areas. These migrant workers come from yet other rural areas where cases of HIV infection are increasing. Focusing HIV responses in the urban areas where HIV prevalence is declining means leaving behind many of those working in rural areas, yet are vulnerable to HIV infection.

As described in Chapter One, the main strategy in HIV risk reduction in Malawi has relied on campaigns with the dominant policy discourse centred upon abstinence, being faithful and condom use. Even in the study locations for this research, the Uranium mining company, government and some Non-Governmental Organisations have adopted similar HIV dissemination approaches. Although a great deal of work has been done in Malawi HIV and AIDS National Strategic Plan for 2015-2020 as well as in the available literature (Chimbiri, 2007; Mtika, 2007), to evaluate the approaches, and as described in Chapters One and Two, these approaches are not sufficiently placed in a broader social context. None of these approaches might be particularly conducive especially to the situation of the migrant workers and their sexual partners. As stated earlier, abstinence is obviously not an option meant for regular sexual partners, but the other two recommendations are also problematic. The advice to be faithful is meant for individuals, but the critical

issue for regular sexual partners is that while they themselves might be faithful, their fate is joined to that of their sexual partners (Painter *et al.*, 2007; Dunkle *et al.*, 2008). The challenge with condom use might be related to the type of relationship (Chimbiri, 2007; Caballero-Hoyos, 2008; de Walque, 2011; Zembe *et al.*, 2012).

It should be noted that in Malawi, knowledge about HIV transmission and prevention as a result of the HIV information dissemination programmes among males and females is universal at 99.9 percent (Government of Malawi-National AIDS Commission, 2015). This is true across age group, urban and rural residents, marital status, wealth index and education. However, attitudes and practices have not progressed at the same pace. For example, Malawi Demographic Health Survey (2010), reports that although 70.7 percent of the commercial sex workers are HIV-positive in Malawi, some males still report buying unprotected sex from this group. As stated earlier, use of condoms remains low at 29 percent for females and 39 percent for males in Malawi (Government of Malawi-National AIDS Commission, 2015). Eighteen percent of married males report of having multiple and concurrent sexual partnerships (Government of Malawi-National AIDS Commission, 2015). The uptake of HIV testing remains at below 25 percent (Government of Malawi-National AIDS Commission, 2015). Therefore, the present models of behaviour change in Malawi might suggest that individuals need more than knowledge to translate HIV awareness messages into action. Thus, this study investigates the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners.

According to the Government of Malawi-National Statistical Office (2009), 85 percent of Malawians live in rural areas and are concentrated in small densely settled villages. It is such settlements that might provide a context within which information is shared and decisions are made including about migration and HIV. As described earlier, most Malawian migrant workers come from such rural areas and yet most of them migrate to work in other rural areas. Away from their original rural homes, they might interact intensively across social

categories. As described in Chapter Two, informal social networks based on common languages, religion, place of employment and other shared interests might bring all categories into daily contact. These social contacts might serve as mechanisms for social learning, social evaluation and social influencing among the migrant workers and their sexual partners. For example, individuals might not only be exposed to different HIV risk reduction strategies spread by the government, company, media, health workers, religious groups and Non-Governmental Organisations promoting abstinence, condom use and fidelity, but they might share local stories with their sexual partners, friends, acquaintances and relatives. Social interactions might also play an important role in shaping and reinforcing social norms on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their partners.

For example, social network members might consider having multiple and concurrent sexual partners as a particular status symbol amongst one's friendships and persons might be keen to discuss their conquests with each other (Leclerc-Madlala, 2003; Kaler 2003, 2004; Zembe *et al.*, 2012). Therefore, geographical location of the migrant workers and their sexual partners might be important predictor of social influencing both on HIV risk reduction strategies and transmission mechanisms. Despite claims in the available literature that there is an African sexual system, which is generally accepting of males having multiple and often concurrent sexual partners, some studies consistently find that there is considerable variation in the practice not only across countries in the sub-Saharan Africa, but also by regions within countries (Carael, Cleland & Ingham, 1994; Caldwell, 2000).

As described earlier, in Malawi, males are more likely to report having multiple concurrent sexual partnerships in the southern region than in the northern region (see also Poulin, 2007). Again, one of the reasons could be because the southern region has more male migrant workers to other places leaving behind their sexual partners. However, the review in this Chapter shows that the migrant workers maintain links including sexual relationships with their original rural homes. This could help explain why despite the northern region being the

current destination for most of the migrant workers, high HIV prevalence is in the southern region of Malawi.

For purposes of this research, this strong association between the prevalence of multiple and concurrent sexual partnerships among males and location highlights the importance of local social norms. Although available studies indicate that migration affect HIV risk behaviour because the migrant workers from rural areas frequently go to other places where social constraints on sexual behaviour are weaker than in their original areas (Yang, 2004; Yang, Derlega & Luo, 2007), the emergence and continuation of the HIV epidemic might lead some of the migrant workers and their sexual partners in their social networks to challenge risky sexual behaviour such as multiple and concurrent sexual partnerships and not using condoms.

3.6 Conclusion

Using population and housing census data supported by earlier studies, this chapter has reviewed patterns of migration in Malawi. What comes out of this review is that migration is a main factor in the livelihood processes that the sexually and economically most active Malawians are engaged in. Livelihood demands drive rural Malawians into cycles of migrations. However, migration in Malawi is rooted in the government development strategies. The development approaches have, in the long term, failed to improve the lives of the rural masses. Instead, the approaches have brought about a fragile political economy and economic insecurity for many Malawians. Instead of building up human capital then utilising such capital to unlock the economic growth and problem-solving potential in rural Malawi, the government has been exploiting natural resources both unskilled labour and land. It is this exploitation of natural resources that has resulted into people migrating to areas where new opportunities arise. Initially, these opportunities were concentrated in the southern region, then in the central region and now they are in the northern region of Malawi.

Also, this chapter has reviewed how most of Malawian migrant workers maintain social connections with their original rural homes. The social networks of the migrant workers encompass their original rural homes and their workplaces. However, for the migrant workers participation in these social networks is not a matter of choice. The migrant workers cannot escape from these social networks. The social networks define an expression of a sociocultural pattern for the migrant workers identification with their original rural homes.

It is through these economic insecurities as well as the social networks that an increasing number of people are able to live dual lives, that is, at the migrant workplaces and original rural homes. This dual life has potential for sexual networking for both the migrant workers and their sexual partners through which HIV might be spread. However, the social networks of the migrant workers might also have a role on HIV risk reduction strategies. Therefore, what this research seeks to do, is to examine the role of the social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners using qualitative research designs, which are described in the next chapter.

Chapter Four

Research Methodology and Methods

4.1 Introduction

As mentioned earlier, the aim of this research is to explore the role of social networks on both HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners at one of the workplace area of Kayelekera and one of the migrant sending village of Maganga by employing qualitative research methodology and related data gathering techniques. Therefore, this chapter describes some of the strengths of qualitative research and applicability of qualitative methods for this study. The chapter also describes debates over what it means to do valid research using qualitative methods with main issue focusing on credibility.

4.2 Qualitative Research

According to Strauss (1987:2), qualitative research has its origins in historical emergence of disciplines such as sociology and social anthropology – essentially, studies "rooted in the social..." Qualitative research methodology is generally agreed to be most appropriate for gaining in-depth understanding of social and behavioural phenomena (Strauss, 1987; Charmaz, 1999). Qualitative research methodology refers to the use of interpretive description rather than statistics to explore and analyse underlying meanings and patterns of social relations (Kuhn, 1996; Neumann, 2007).

According to Baxter (1997:1), "words organised into incidents or stories have a concrete, vivid, flavour that proves more convincing to a reader, other researchers, policy makers, practitioners than pages of summarised numbers" because the dominant concern of qualitative research is with understanding meaning within their particular social contexts. As Baxter (1997:506) notes "...to

learn to view the world of individuals and groups as they see it." Qualitative research allows for investigation of relational aspects between individuals and systems, persons and culture (Bailey, 1997). It is "... often the nature of one's experience within particular social contexts that is important to qualitative research" (Kleinman, 2004:269-270).

In studies of health, Giacomin and Cook (2000:358), assert that qualitative research offers "empirically based insights about social and personal experiences." According to Ware (1992:356), "health is an internal perspective that is constructed by the person and not by the physician or external…and there are connections between mind, body and conceptions…" Sen (2004:265) further emphasises the interconnection of the internal and external that:

In getting a grip on what counts, how it arises and what can be done, any kind of exclusive reliance on externally observed clinical symptoms and remedial connections cannot but be at least partly deceptive. If health is rooted in the person then the kind of detached statistic on which economists and medical statisticians frequently rely on may have to be very seriously supplemented by more involved scrutiny of how people comprehend and appreciate what is happening to them and also the social influences that affect these realisations.

Sen (2004:263) points to the limitations of methods that "fail to engage the views of participants who are the objects of study". Sen (2004:264) puts researchers right at the centre of debate between quantitative and qualitative methods and the implications therein that:

There are ways of getting at perceptual information – questionnaires have been a mainstay of the social sciences for a long time – and the enterprise of information-gathering can certainly be redirected if the internal view were to be established as being epistemically superior to external observations...such conceptual debates have major implications.

Reflecting on this research, if it had relied on quantitative approaches, that is, the number of the migrant workers and their sexual partners who tested for HIV, the number of the migrant workers and their sexual partners who used condoms when they last had sex, the number of lifetime as well as concurrent sexual partners the migrant workers and their sexual partners had, the number of close

and distant friends the migrant workers and their sexual partners had without considering the contextual social factors that facilitated or impeded the links between them – the insights for this research would have been far less rich.

It is on the basis of these social dynamics of sexuality that qualitative research was deemed necessary for understanding the social contexts of HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. It was the perceptions of the migrant workers and their sexual partners, and the local social world's insights that allowed for a more textured understanding of the participants' experiences of their sexual behaviour and their social networks as enablers or inhibitors for HIV risk reduction strategies as well as transmission mechanisms. Qualitative techniques in this study helped to examine the meaning of HIV for the migrant workers, their sexual partners and their local communities. This design helped to identify how the experiences of the migrant workers and their sexual partners were socially constructed and situated within their political, economic, social and cultural contexts. Beyond studying conditions that produced vulnerability to HIV for the migrant workers and their sexual partners, this research recognised study participants as interpretive subjects of their own HIV risk reduction and transmission whose identities were constructed in part through their experiences with others.

4.2.1 Debates over Validity and Credibility in Qualitative Research

According to Angen (2000), there is still a great deal of debate over what it means to do 'valid' research using qualitative methods. Angen (2000:378) states that for a long time qualitative methods were accepted in certain fields only "as preliminary results to be subjected to quantitative verification". According to Angen (2000), qualitative approaches to inquiry were seen as exploratory ones that would undergo further validation through quantitative methods. However, Baxter (1997:506) attests that 'rigour' in qualitative studies

still means the satisfaction of the conventional criteria of "validity and objectivity within quantitative research".

According to Lincoln and Guba (1985:300), validity is defined as "the best available approximation to the truth or falsity of a given inference, proposition or conclusion – the relationship between data and theory". There are two types of validity: Internal and external. Internal validity deals with how the research findings match the reality - do the findings capture what is really out there (Lincoln & Guba, 1985). External validity deals with the subject of whether the findings can be generalised to other situations – whether the findings are valid outside the domain studied (Lincoln & Guba, 1985). Lincoln and Guba (1985:300) employ the term "dependability" in qualitative research, which closely corresponds to the notion of "reliability" in quantitative research. According to Lincoln and Guba (1985), reliability is a way of demonstrating that if another investigator can repeat the research conducted will come to the same findings. Therefore, the term reliability in traditional sense can be seen as unsuitable when applied to qualitative research. However, the question is not whether the findings will be found again, but whether the results are consistent with the data collected (Lincoln & Guba, 1985; Golafshani, 2003). Therefore, reliability and validity, if they are relevant research concepts, particularly from a qualitative point of view, have to be redefined in order to reflect the multiple ways of establishing the truth (Golafshani, 2003). According to Angen (2000:380), what researchers want is to be sure that they "have done the right thing...researchers want to claim that because they have made all the right moves they have procured the truth". However, Angen (2000) cautions that the reality of life is characterised by fluidity, context and is relational, and warns that researchers have to continually return to the essential question of what it means to do good qualitative research.

The focus of the debate appears now to have shifted to how validity or credibility can be ensured and to the criteria for evaluating qualitative research. Altheide and Johnson (1994) and Creswell (1998) have written extensively about this question, including a view of evaluating qualitative methods, ensuring validity

and reliability and identifying approaches for ensuring rigour in qualitative research methods as well as interpretation. Baxter (1997:506) stresses that:

We must not forget the general context of rigour around the principles of academic integrity, including responsibility and honesty. Rigour concerns the extent to which a piece of research is believable and hence worthy of attention with a set of evaluative criteria serving as base principles to guide judgments about the integrity of a study.

Giacomin and Cook (2000:357) state that there are four key aspects of qualitative analysis. These key aspects according to Giacomin and Cook, are respondents selection must be justified and their inclusion must be relevant to the research question, data collection methods must be appropriate to the research goals and setting, the data collection process must be comprehensive to support robust and thick descriptions of observed events, and the data must be appropriately analysed with multiple sources of information and member checking of the findings for verification. In line with questions concerning validity or credibility, this research took due cognisance of and sought to address key aspects of qualitative analysis identified by ensuring appropriate respondents selection, rigour in data collection by using multiple sources with a view to generating thick and rich data while ensuring robust interpretation and member checking with key informants.

This section has traced some of the debates taking place among methodologists with the objectives to recall the strengths of qualitative research and their application to this study, to observe that studies of health have the dual dimensions and tensions of the external and the internal and, to note that both are relevant for this particular study, to briefly describe challenges that need to be addressed when employing qualitative techniques, and to point out that the debates are no longer about the superiority of quantitative methods, but about the 'gold standard' for ensuring reliability in qualitative research. The next sections describe techniques applied during data collection. The sections describe choice of study respondents, choice of research sites and procedures followed during data collection. Finally, the sections review some of the main methodological and ethical problems that arose during data collection and how

they were resolved taking due cognisance of the sensitivity and confidentiality required in each instance.

4.3 Study Sites

To answer the research aim, which is to explore the role of social networks in HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners, data for this study were collected in two places, which are: the migrant workplace area of Kayelekera and the migrant sending village of Maganga in Malawi. In order to understand these, the use of qualitative case study approach was deemed necessary as it lends itself to rich data and in-depth interpretation, thereby, allowing for the unearthing of detailed records of a few cases, rather than generating a thinner analysis of a larger sample (Cornwell, 1988; McMillan & Schumacher, 2001).

As described in Chapters One and Two, most of migration and HIV studies have focused on the destinations of the migrant workers (Campbell, 2003; Corno & de Walque, 2012) or areas from which the migrant labourers come from (Romero-Daza & Himmelgreen, 1998; Crush *et al.*, 2010) or the migrant workers in transit (Brummer, 2002). Others have focused on the returned migrant workers (Chirwa, 1997). A few studies that have considered both ends of the migration process are biomedical in nature (Lurie *et al.*, 2003). Social, cultural, political and economic studies that examine both ends of the migration spectrum are lacking. It is for this reason that this research took place at two places: the migrant workplace of Kayelekera and the migrant sending village of Maganga. The two areas were purposively chosen to represent the migrant workers receiving and sending destinations. The working assumption was that the migrant workers and their sexual partners in these two sites might face similar or different barriers to HIV risk reduction strategies.

Maganga by virtue of being rural, constitutes a major labour reserve. The situation fosters continuous mobilisation of people back and forth between this rural village and near as well as distant workplaces. The village of Maganga

has a well-established historical ties of male labour migration as a sending area. As stated in Chapter Three, like many other rural areas in Malawi, male labour migration has long been and continues to be an important source of income at Maganga with which to supplement subsistence agriculture as well as fishing. At the time of data collection, many of the households at Maganga had a member who was involved in labour migration. The majority of men leave their rural village of Maganga in search of work elsewhere. This leaves the majority of households at the village of Maganga female headed. The social landscape for the village of Maganga is one of mobile males and immobile females. Both patriarchal and matriarchal types of marriage exist at Maganga. In the absence of husbands, their families stay either at the husbands or wives sides. The natives of the village of Maganga predominantly speak Chichewa and some Chiyao.

Almost all of the households at the village of Maganga were engaged in subsistence farming. In the absence of males, females were the main labourers. However, gains from subsistence cultivation were minimal. Apart from meaningful labour, this could also be because like any other places in Malawi, the village of Maganga has only one rainy season from November to March. With climate change, drought conditions are not uncommon in the area.

Although economic in nature, the continuous migration of able bodied men has effects that go beyond the economic sphere. Apart from placing economic burdens on women, migration might lead to multiple concurrent sexual partnerships (Clark, 2010; Masebo, 2012), through which HIV might spread. Absence from home of most economically and sexually active men at their rural village of Maganga might bring them and their regular sexual partners into contact with other sexual partners. Such population mobility might have implications for the spread of HIV. In the 2010 Malawi Demographic Health Survey, male respondents were asked whether they spent any time in the past 12 months away from their home, and in the same time period, whether they were away from home for more than one month. The survey results show that males who stayed home had lower HIV prevalence. Males who were away

from home for more than one month had a higher risk at 13 percent of HIV infection than those who were away for less than one month at a time at 11 percent of HIV infection.

In addition to Health Surveillance Assistants as well as Salima AIDS Support Organisation operating at the village of Maganga, the impact of HIV and AIDS in the area is also demonstrated through a number of structures indicated as 'orphan care centres' and 'home based care organisations'. It should be noted that in Malawi, the growth of HIV and AIDS problem and its resultant orphan and patient problems led to a proliferation of organisations of various structure, style, size and activities (Masebo, 2011). This is from less than ten Non-Governmental Organisations before HIV was identified in 1985 that operated in Malawi mainly in relief, health and education sectors and often affiliated to church organisations (Masebo, 2011). There have been a proliferation of organisations, especially those commonly known as community based organisations, most of which tended to be informal and unregistered (Masebo, 2011). However, currently with treatment for HIV, the number of patients requiring home based care has reduced. Even life expectancy in Malawi which had dropped to 43.5 years in 1995 has now increased to 62.8 years in 2014 (UNDP, 2015). However, most of those who were orphans some ten or more years ago are now grown-ups. Therefore, most of these orphan care centres and home based care organisations have been rendered irrelevant. They no longer get financial and material support from the so called 'well-wishers'.

Discussing with one of the founders and directors of orphan care centres at Maganga, he said that initially they used to get a lot of financial and material support from 'well-wishers', but now volunteers have to make contributions. Further in the discussions he said that they used their contributions to support some of the elderly in the village. Again, with HIV treatment these organisations have been rendered irrelevant, but continue to search for activities that can keep them going even if different from their initial core mandate.

It is not the purpose of this research to suggest what these organisations should be doing now. However, it is high time such organisations started reorganising and addressing pertinent issues including economic empowerment for women and youth. The women need support for them to become entrepreneurs. Most of the orphans who needed care then are now youth in need of school and college fees. It is such empowerment that will give independence to most vulnerable groups. Otherwise, in Malawi most people in need of material and financial support are supported through their kinships, which as a result of the impact of HIV and AIDS have kept on broadening and getting strengthened (Masebo, 2011).

On the other hand, Kayelekera is a rural workplace area in the northern region of Malawi close to the boarders of Tanzania in the east and Zambia in the west. The Central Electricity Generating Board of Great Britain (CEGB) discovered Uranium at Kayelekera in the early 1990s (Paladin, undated) in a place whose natives include several language groups predominantly Chitumbuka and Chinkhonde and practise patriarchal type of marriage. Paladin records that CEGB spent US\$9 million working on the project over an eight-year period, culminating into a full feasibility study. However, according to Paladin, the feasibility study indicated that the project was uneconomic using the mining model adopted and the low Uranium prices prevailing at that time, and therefore, the project was abandoned briefly.

The Uranium project at Kayelekera was later acquired by Balmain Resources Limited (Balmain) for one year (Paladin, undated). In February 2000, Paladin a subsidiary of an Australian based Paladin acquired the Kayelekera Uranium project from Balmain under a joint venture agreement, whereby, Paladin could earn an 80 percent interest in the project. In October 2000, Paladin acquired a further 10 percent interest to bring its equity to 90 percent (Paladin, undated). In July 2005, Paladin purchased the remaining 10 percent stake held by Balmain. However, under the 'July 2009 Terms of Development Agreement' signed between Paladin and Malawi government, Malawi has 15 percent equity in the project (Paladin, undated).

As stated in Chapter One, since the commissioning of Kayelekera Uranium mine in April 2009 whose site construction began in June 2007, the area has been a common destination for the migrants. At the mine and surrounding villages, the majority of the residents are the migrants living in single-sex common hostels and informal settlement commonly known as *Chiphwirikiti*. According to Neville Haxihum, Paladin Country Director, during the construction phase, the company employed 3,500 workers and during the time of data collection there were 700 mineworkers at Kayelekera. Other migrants include job seekers, commercial sex workers and traders. The new economic opportunities at Kayelekera have forced a number of males and females to engage in different forms of trade to supplement their household incomes. Globalisation of capital flow, migration and culture are at play at Kayelekera.

Regardless of the presence of the Uranium mine plant at Kayelekera, the local people are poor (Masebo, 2013). Thus, the Uranium mining activities at Kayelekera have impacted enormously on local communities. Other than opportunities for formal employment that have been created, rapidly rising food prices and a huge increase in migrants have resulted in the area. Therefore, the existing vulnerability of the local community at Kayelekera might lead to relationships of 'commercial' transactional sex, including the relationships between the migrant mineworkers and the commercial sex workers, and between the migrant mineworkers and the local women. Discussions with traditional leaders and mine management highlighted a significant increase in 'commercial' transactional sexual relationships occurring in the area. In part, this was attributed to the wealth that the mineworkers and other migrant men have brought to this poor rural workplace area. It is likely that Kayelekera might have opened doors to both economic opportunities as well as new HIV infections. Some of the migrant workers and their sexual partners might potentially become vulnerable to HIV.

Although the referral hospital is 32 km away from Kayelekera, during the time of data collection, Paladin and some Non-Governmental Organisations were

making strenuous efforts to educate the mineworkers and the commercial sex workers as well as the larger community about HIV and AIDS in that huge billboards and posters stating that "AIDS is real," "AIDS *Njakofya* [is dangerous]," "HIV testing and counselling" were not uncommon in the area.

It is such material and social contexts that gives an opportunity to analyse the role of local social networks on HIV risk reduction strategies as well as transmission mechanisms among the migrant workers and their sexual partners. The research results in the next chapters outline that the vulnerability of the migrant workers and their sexual partners is intimately socially connected both to their own material and social circumstances as well as to the sexual behaviour and attitudes of their partners. Hence, a twin focus renders itself conducive to examining the role of social networks in the light of daily prevailing cultural, social, economic and political conditions on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners.

4.4 My Role as a Researcher

McMillan and Schumacher (2001:400-401) state that "strong data should be collected later and after repeated contacts with the population, relying on first-hand information from informal settings...with only respondents and interviewer while carefully observing behaviour and activities in the study location". In line with McMillan and Schumacher, I stayed in each study location for at least three months, that is, from May to August 2011 at Maganga and from October to December 2011 at the mining area of Kayelekera. Although some researchers warn that prolonged fieldwork might influence study respondents, it is believed that long stay enhanced the quality as well as credibility of the research, it helped to access more suitable study respondents and to compare information that was disclosed during interviews with observations (Burawoy, 1998; Creswell, 1998; McMillan & Schumacher, 2001).

I spent initial two weeks in the study locations laying the ground through informal social contacts. It is through these informal social contacts that appropriate key informants were purposively chosen. They included six men and four women at Kayelekera and four men and three women at Maganga, making a total of 17 key informants. These key informants included traditional leaders (in Malawi traditional leaders are gate-keepers for all development activities taking place in villages. They have four main responsibilities: act as custodians of culture, ensuring that peace is maintained at all times, mobilising their village members in the implementation of government policies and of traditional land), former distribution migrant workers, representatives, church leaders and peer educators. These key informants were available the majority of the research time. They informally provided their opinions to the research question from their own perspectives. Most of them personally affected by migration provided rich information about their own as well as their community experiences focusing on HIV risk reduction strategies and transmission mechanisms. Informal discussions with these key informants provided clues to interview techniques, respondents to target as well as key issues to tackle (Yin, 2003:122). The key issues included such information as reasons and type of migration, income status, marital histories and whether study respondents lived with their sexual partners or not, kinship, AIDS knowledge, AIDS impact, AIDS talk, social norms, type of housing whether formal or informal settlements or single sex dwellings, drinking and sexual meeting places, health services whether public or company or traditional, formal and informal economic activities, alcohol consumption, multiple and concurrent sexual partnerships, transactional sex in the study sites. Also, the key informants explained status quo prior to the commencement of Uranium mining at Kayelekera and thereafter.

In addition to key informants, I recruited two teams of two research assistants each. One team from a mixed of Chichewa and Chiyao speakers assisted in conducting interviews at Maganga. The other team from Chinkhonde and Chitumbuka speaking assisted to conduct interviews at Kayelekera. With globalisation taking place at Kayelekera, the population speak several different

languages. However, as stated earlier, original inhabitants are Chitumbuka and Chinkhonde speakers.

I recognised that language was a vital tool in this research. All interviews were done in the languages of the respondents. I am fluent in all Chinkhonde, Chitumbuka and Chichewa languages. Fluency in these local languages had two advantages. First, the research proceeded without spending time learning basics of the languages. Second, there is high possibility that respondents views got to reporting stage without manipulation through the use of interpreters. Although interviews were conducted in the respondents' languages, the interviews were written in English often with phrases in local languages, but with English translations.

The research assistants were all high-school graduates. They had good conversational and writing skills. They were good at all the languages used during data collection. They were 30 years old on average. For purposes of along gender lines, each team comprised a male and a female.

Like the key informants, the research assistants were familiar with the study locations. Similarly, being Malawian, I was an insider with some knowledge of the communities under study. There are benefits of being an inside researcher. Watkins, Swidler and Biruk (2009) observe that interviewers who are from the same communities as respondents produce better data than those who are from other communities. According to Watkins, Swidler and Biruk, this is so because insider-interviewers have an incisive grasp of local knowledge that stranger-interviewers lack, and that the insider-interviewers reduce the social distance between the respondents and themselves, thereby, creating respondents' trust and more truthful reporting. Those considered to be outsiders might be suspected as agents of government and international bodies or agencies. Such outside researchers might be given responses that are good but fake. However, it is possible that the respondents considered the research assistants as their comrades, sons and daughters, brothers and sisters, in-laws among other categories who were closer to the an 'other' – the educated one,

the outsider, the intruder. The respondents might have considered the research assistants as being closer to a government, company or union agent. Such class differences lead to what researchers such as Denzin and Lincoln (2005) call the "halo effect". As a result, the respondents might have minimised their negative issues or experiences.

I oriented the research assistants through interview assimilation focusing on interviewers introducing themselves, introducing the research, asking potential respondents whether they could be willing to be interviewed, establishing ease before delving into sensitive topics, asking follow-up or clarification questions or probing, avoiding an aggressive approach, and removing personal biases and value judgments (see Williams, 1985; Clark, 2010 for details on interviewing skills).

During interviews, the interviewers exchanged, read and critiqued each other's written interviews. The team provided comments and discussed with each other any discrepancies. This helped in alerting interviewers to issues they could have probed further. Contradictory statements were highlighted and issues of honesty and candour of each interview discussed, that is, was the respondent frank? Was the information truthful? Some of the respondents were interviewed twice. The second interviews helped in augmenting initially underdeveloped and confusing statements. During orientation meetings, consensus was made for recruitment and inclusion criteria for the respondents as described in the following sub-section.

4.5 Respondents' Background, Recruitment and Inclusion Criteria

I worked with some key informants and research assistants to recruit respondents who suited the inclusion profile. A simple random selection was used to recruit regular partners of the migrant workers at the rural village of Maganga. At the rural workplace of Kayelekera, the respondents were initially reached through purposive followed by snowballing sampling (Abdul-Quader et

al., 2006). Snowballing sampling is a commonly used method in social networks research (Abdul-Quader *et al.*, 2006). Using snowballing techniques, I relied on research respondents recommending for further respondents.

Any male who had been involved in circular labour migration for at least one year at the time of the research qualified for interview. Any female partner residing at Maganga whose regular partner had been a migrant worker for at least one year was suitable for interview. Absence from home due to labour migration as reported by the respondents or family members or their neighbours was the reason why individuals were considered migrant workers at Maganga. This research defines a 'migrant' as an individual who at one point resided in a location other than the study site (Anglewicz, 2011). Except in special cases, the female respondents were not the actual partners of the interviewed migrant workers. It was technically not possible to interview both partners in a regular sexual partnership especially when they lived apart, that is, either at the workplace elsewhere or at the migrant sending village.

Looking at their social backgrounds, most of the migrant workers at Kayelekera came from remote rural areas. They had worked on the mine for an average of two years. The majority had no regular sexual partners at Kayelekera. They stayed either at *Chiphwirikiti* [the informal settlement] near the Uranium mine plant or they resided in the mine compounds. In the mine compounds, the migrant workers shared rooms, but among different age groups and social backgrounds. They spent their free time together in the compounds or at *Chiphwirikiti* or drinking beer. Others were religious and they were part of different Church groups at Kayelekera.

Like in the histories of Moodie, Ndatshe and Sibuyi (1988), Moodie and Ndatshe (1994) and Campbell (2003, 2004), the migrant mineworkers at Kayelekera categorised themselves in terms of social groups including workmates, roommates, relatives, village mates, friends and colleagues. Those who were engaged in sexual affairs at Kayelekera knew each other, gave advice to each other and helped each other pay the casual sexual partners. They drank and

seduced women in groups. They found casual sexual partners in the company of their colleagues.

The migrant workers at Kayelekera described their work as 50:50 [good and bad]. They got 22,000 Malawi Kwacha on average per month. The amount was small, but still higher than minimum monthly wage in Malawi. Most of their rural sexual partners were subsistence farmers. Their sexual partners also cultivated in other peoples gardens. Their labour heavily depended on five months rain fed agriculture which is vulnerable to drought conditions. They had serious money problems. Most of the migrant-sending households had no other sources of income than money sent home by the migrant workers. The money supported large extended families. The majority of the migrant workers supported between one and four adults in addition to their own children. Five of the migrant workers had 15 or more dependants. These were large families. The 2008 Malawi population and housing census data average family size for Malawi was 4.6 persons. The HIV and AIDS epidemic and poverty might have increased the number of dependants supported by some of the migrant workers.

There were limited economic opportunities for the migrant workers making a living in their rural remote areas. Most of the migrant workers were not satisfied with their working conditions. They frequently had to work much longer than the eight hour shift and during weekends as well as holidays. They were paid for overtime. They did this to make more money.

Some of the migrant workers mentioned having many sexual encounters with casual sexual partners at Kayelekera. They said that casual but commercial sex was easy to find. At *Chiphwirikiti* and at the market as well as in the bars, large numbers of women gathered transacting sex to the migrant mineworkers.

Most of the migrant workers returned to their rural homes regularly. The majority visited their homes monthly. This was corroborated by the female rural partners. Regardless of the intervals between visits, the length of each visit home was

usually short. The majority said that their home visit lasted for no more than two days — "just a weekend." Very few of the migrant workers were sometimes visited by their regular rural sexual partners. Most of the migrant workers did not like their regular rural sexual partners visiting them at the workplace.

All respondents had good knowledge of HIV transmission and risk reduction strategies. Similarly, the 2010 Malawi Demographic Health Survey records that knowledge of HIV and AIDS among males and females in Malawi is almost universal at 99.9 percent. The respondents mentioned that AIDS was a serious disease not curable even by *asing'anga* [the traditional doctors]. They mentioned of antiretroviral drugs as treatment for the condition. However, their knowledge about HIV and AIDS did not translate into behaviour change for most of the respondents. Many of the respondents were involved in multiple and concurrent sexual partnerships and use of condoms was low. **Table below** provides a summary of the respondents' profile.

Respondents' Profile

Description	Male respondents		Female respondents	
	Kayelekera	Maganga	Kayelekera	Maganga
Number of in-depth respondents	20	9	5	16
Number of FGDs respondents (8 FGDs)	13	4	2	15
Average age	31	37	26	28
No more than primary education	21	10	5	29
Above primary education	12	3	2	2
Average monthly income in Malawi Kwacha	22,000	15,000	17,000	5,000
Family size	6	9	7	10
Distance from home in km	170	-	90	-
Years spent in migration	2	5	-	-
Weekly visits back home/rural women seeing their partners weekly	4	1	-	3
Monthly visits back home/rural partners seeing their partners monthly	17	7	-	11
Quarterly visits back home/rural women seeing their partners quarterly	5	2	-	8
Annual visits back home/rural women seeing their partners annually	7	3	-	9
Lengths of visits back home/reports from rural partners on partners visits in days	2	2	-	-2
Average lifetime partners	13	11	7	6
Average partners during study	4	3	4	2
HIV and AIDS knowledge	Good	Good	Good	Good

4.6 Data Collection Techniques

As stated earlier, the research aimed at exploring the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners at the rural workplace of Kayelekera and the migrant sending village of Maganga in Malawi. To address this aim, the study used multiple qualitative data collection techniques. The methods included indepth interviews, focus group discussions and observations of conversations about HIV and AIDS and sexual behaviour.

4.6.1 In-depth Interviews

20 men and five women at Kayelekera and nine men and 16 women at Maganga making a total of 50 participated in in-depth interviews. The in-depth interviews with the respondents were intended to build rapport by mirroring a typical conversation among peers (Williams, 1985; Edwards, 1989, 1996). The interviewer engaged with the respondents to allow them to speak in their own words and to permit them to be loquacious rather than laconic (Clark, 2010). This approach was adopted in response to particular settings in Malawi, where people are relatively unaccustomed to formal interactions and to disclosing their private behaviour to strangers (Clark, 2010). Therefore, the in-depth interviews aimed to replicate characteristics of a normal conversation (Brener *et al.*, 2003; Biemer, 2004).

Using approaches of Harrison (2008) and Clark (2010) in qualitative data collection, the in-depth interviews aimed at eliciting respondents' experiences and perceptions of migration, social and sexual networks and HIV. The in-depth interviews were as social as possible. The interview process recognised the interaction between an interviewer and a respondent as necessarily social and dynamic, one in which the interviewer's role varied and the respondent was a key player. The in-depth interviews were situated social activities in which the interviewer provided respondents with guidelines about how to think and act, and the respondent brought knowledge to the interview. The role of the interviewer was to probe with questions aimed at obtaining more details and stimulating discussions relating to the study with the intention to gather rich indepth qualitative data. Interviewers developed techniques for exhausting topics as long as respondents were willing. An interviewer would say to a respondent, for instance: "Tell me all about the time you proposed love to a woman who was not your regular sexual partners. How did it happen?" The interviewer would take cues from the response to ask further questions such as: "How long ago did you propose her?" "How did the woman respond?" "Was she at that time married to another man?" "Why do you think she accepted you?" "What did your best friends or colleagues say about this?" Use of phrases such as: "Could you further elaborate what you have said?" "Can you tell me more?" or "Would you give me an example?" were not uncommon to obtain in-depth data. The respondents were not constrained from their responses through the need to ask and answer predetermined questions. Focusing on multiple and concurrent sexual partnerships, HIV risk reduction strategies, social network colleagues and their influence, data collectors facilitated open-ended, simple, unbiased and nonthreatening questions to follow respondents own narrative accounts, 'giving voice' to their values and concerns, thereby, obtaining an emic perspective on issues. The goal of the in-depth interviews was to encourage the respondents to talk with their interviewer at great length (Harrison, 2008; Clark, 2010). Length of each in-depth interview varied from 55 minutes to 97 minutes.

All in-depth interviews were done in privacy with only the presence of interviewer and the respondent. Most in-depth interviews at the migrant workplace of Kayelekera were done in a private room made available by Lusako network officials. Lusako is a network of peer educators targeting commercial sex workers at Kayelekera. The network leaders claimed to be former commercial sex workers. Leaders of Lusako network were available most of the time. They provided key information on specific issues. They even assisted in identifying and reaching most of the commercial sex workers who were interviewed for this research. At Maganga, the respondents were reached privately at their homes. Interviews were declined when privacy of the respondents could not be assured. Some respondents at the workplace of Kayelekera even suggested that in-depth interviews take place at about 30 km away at Karonga *Boma* (district headquarters), and their requests were respected.

4.6.2 Focus Group Discussions

Where more than one interviewee were present at the time of the interview, *ad hoc* focus group discussions were carried out. For example, a migrant worker at Kayelekera could come with a friend to an interview. There was no reason of

excluding a colleague who suited the inclusion criteria. An appointment could be made to visit a female respondent at her house at Maganga the following day only to find out that she had called her colleagues waiting to participate in the study. Again, those who fitted recruitment criteria were never turned away.

The focus group setting provided an excellent forum to openly discuss sensitive topics such as reasons for multiple and concurrent sexual partnerships and discussions about HIV risk reduction strategies within social groups. The interaction among focus group discussion members encouraged exchanging of ideas and comments on each other's experiences and points of view, thereby, generating and clarifying group norms, values and beliefs on normative behaviour and peer influences (Harrison, 2008). It was observed that discussing sensitive issues with peers was more comfortable than doing so in more sterile conditions with an interviewer and respondent (Clark, 2010). In the focus group discussions, the respondents were able to question one another and explain their opinions, thereby, providing data collectors with great insights into how respondents viewed HIV, sexuality, migration and social influencing. The questions posed during focus group discussions were general such as: "Why do men have multiple and concurrent sexual partners?" Similarly, "why do women have multiple and concurrent sexual partnerships?" and "do they use condoms in all these sexual partnerships?"..." Why?"

Apart from one focus group discussion at Maganga, all were homogenous, that is, along gender lines. This gender arrangement was considered useful in order to increase respondents' level of comfortability. It was thought that women's interests, concerns and experiences of social life that might differ from that of men could only be discovered through investigation in their social contexts. The only one mixed focus group discussion at Maganga was deliberately arranged. The focus group discussion comprised of returned and visiting migrant workers and those women who had visited their regular partners at their workplaces. The idea of mixing both males and females was to examine the behaviour of the migrant workers who were visited by their regular sexual partners as well as to test assumptions that a conspiracy of silence excludes males from

females' social contexts. The opposite was true in this case. When it came to discussing issues of HIV risk reduction strategies and transmission mechanisms including issues around multiple and concurrent sexual partnerships, the respondents were more open and questioned each other's views while providing their own experiences. The group participants were more interactive including joking, teasing and arguing. Apart from the gender mixed group which had seven respondents, the other seven focus group discussions consisted of between three and five respondents. 13 men and two women at Kayelekera and four men and 15 women at Maganga making a total of 34 participated in a total of eight focus group discussions. After discussions, a summary of opinions was made together with the focus group members.

In addition to in-depth interviews and focus group discussions, the study used conversational observations in data collection. The rationale for using multiple sources of data collection methods was triangulation of evidence. Triangulation served to corroborate data gathered from different sources, thereby, biases and hoaxes of any one method cancelled out by those of others (Creswell, 1998). However, Denzin and Lincoln (2005) warn that mixing different methods within the same paradigm can be problematic as each method has its own assumptions regarding the theoretical framework brought to the research. However, Yin (2003) states that different data sources might be complementary and could be used in tandem, and that a study can use as many sources as are relevant to the research.

4.6.3 Conversational Observations

The unit of analysis for this study was the migrant workers and their sexual partners. However, the unit of conversational observation was the migrant community of interaction. The assumption was that symbiotic relationship between the migrant workers and their sexual partners as well as their communities could increase understanding of the research problem, thereby, shedding fresh light on the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their

partners. To gauge the perceptions of the study respondents vis-à-vis the continuum of their communities, observational conversations about HIV risk reduction strategies and transmission mechanisms were recorded using practices of ethnography.

Borrowing approaches of Dunbar (1996), Watkins and Swidler (2005) and Watkins, Swidler and Biruk (2009), I observed conversations about HIV risk reduction strategies and transmission mechanisms that I overheard or participated in. I recalled and wrote down recollections as soon as possible after the conversation occurred and in as much detail as I could remember. Here my tasks were listen, remember and write.

Using strategies of Watkins and Swidler (2005) and Watkins, Swidler and Biruk (2009), I did not tell the conversation persons that I was taking mental notes for entries. The notes consisted of natural discourses drawn from spontaneous settings where every conversation, casual chats and passing references concerning HIV risk reduction strategies and transmission mechanisms among the migrant workers and their partners were recorded. The conversations were in local languages mainly in Chichewa, Chitumbuka and Chinkhonde in which I am fluent, but they were written in English. 11 conversational observations with a total of 28 participants were transcribed into word files, read thoroughly, coded and interpreted together with the in-depth interviews and focus group discussions data.

The idea of using conversational observations provided some advantages. Three are put forward. First, data was free from interview effects such as the tendency for respondents to give correct answers rather than true ones as respondents often shape their responses towards conformity with the behavioural prescriptions of government and donor programmes (Watkins & Swidler, 2005; Watkins, Swidler & Biruk, 2009). Due to such biases in reporting, in-depth interviews and focus group discussions alone would be unsatisfactory. Second, the method opened up new areas of knowledge and inquiry as opposed to confirming or disconfirming set-up theories of the research (Yin,

2003). The method did permit for dynamism of the conversations as they occurred. It allowed participants to add information or opinions, interrupting each other, agreeing or disagreeing. The technique showed how people can move from particular anecdotes about specific individuals to generalisations about the dangers of the HIV epidemic and to consideration of HIV risk reduction strategies within their social contexts. Finally, the voices of those who were not represented in the in-depth interviews and focus group discussions were included (Watkins & Swidler, 2005; Watkins, Swidler & Biruk, 2009).

The recordings were generally consistent with data from other sources. In most cases, they gave a much more vivid sense of the complexities and contradictions, and the texture of what people said in their everyday conversations about HIV risk reduction strategies and transmission mechanisms. How valid were the conversational observation data? Even in informal social interactions, participants might have managed their presentation of self, just as they do during formal data collection methods (Watkins & Swidler, 2005; Watkins, Swidler & Biruk, 2009). Although these informal presentations of self might not have been more 'true' than those that occur with an interviewer with a clipboard or a tape recorder, they might likely be different. For example, males are presumably more inclined to brag about their sexual conquests to their peers than to an interviewer with a clipboard (Kaler, 2004). Statements such as "only using condoms will protect us" are more credible when made to peers than to an interviewer. In addition, when a participant says something implausible, another participant often challenges it, something interviewers are trained to avoid doing – respecting participants' views by never saying that they are incorrect (Watkins & Swidler, 2005; Watkins, Swidler & Biruk, 2009). Thus, this method was a key advantage of the ethnographic side of this work.

4.7 Data Capturing, Organisation and Interpretation

The methods for capturing, organising and grouping of data were informed by a range of qualitative sources (Baxter & Eyles, 1997; Denzin & Lincoln, 2005). A four-step analytical process was used for all in-depth interviews, focus group discussions and conversational observation data (Harrison, 2008). The initial step involved structured reading of transcripts. The actual words and behaviour of the study respondents were the basis to answer the research question. Therefore, a verbatim transcript of the entire discussion was produced. As stated earlier, for having an advantage in understanding Malawian local languages, the transcripts were recorded direct into English. The complete transcript was for several times compared with handwritten notes in which nonverbal communications including where respondents appeared uncomfortable, noting the tone of discussion, non-verbal expressions such as facial expressions or hand movements were noted. All these formed part of the research database.

After transcribing, coding of the data in the transcripts was done. Across the indepth interviews, focus group discussions and conversational observations, drawing on the role of social network on HIV risk reduction strategies and transmission mechanisms, data was coded along key themes and core categories. These were recorded as they emerged. Records of interviews were compared with memos. The memos were notes written in parallel during the data collection. These were ideas and questions that would occur across interviews. Memos were also made about any relationships or links across categories.

The actual data interpretation process was done at two levels. The first level of analysis involved a descriptive account of the data, that is, an explanation of what was said and no assumption was made. The second level of analysis was interpretative one, which involved the comprehension of the themes or perspectives, creating links between themes and linking them to theory (Yin,

2003). In linking the data to theory, the study followed pattern-matching technique, that is, where "several pieces of information are related to some theoretical proposition" (Yin, 2003:106).

My field knowledge and experience enhanced data interpretation. Questionable data were not included in the data interpretation. In the interest of triangulation of evidence, secondary data served to corroborate the evidence from in-depth interviews, focus group discussions and conversational observations. Throughout data collection period, attention was paid to Newspaper Articles on HIV and AIDS in Malawi and migration in particular. The 2010 Malawi Demographic Health Survey, 2010 UNAIDS report, 2010, 2014 Government of Malawi-UNGASS report, 2015 Government of Malawi-National AIDS Commission report and 2015 UNDP Human Development Index report were reviewed in order to understand the general epidemiology of HIV and socioeconomic contexts. It should be noted that since the Malawi Demographic Health Survey in 2010, no recent nationally representative survey is available in Malawi to estimate HIV prevalence. As I am writing, the report for the Malawi Demographic Health Survey for 2015 is yet to be released.

In reporting findings, the results are presented in the context of the discussions from a series of in-depth interviews, focus group discussions and conversational observations rather than from a single session. This enhances comparison between respondents (Ingham & van Zessen, 1997). The results are expressed in impressionistic terms with statements such as "many said that..." and "almost none had ever..." Where necessary, the findings are supported by direct quotes. These are cited anonymously.

4.8 Methodological Limitations

There is a range of limitations in this study design and execution. Two are put followed. First, this study had an interest in the regular sexual partners of the migrant workers left in the sending rural village. The choice of migrant workplace and sending village proved useful. However, the approach resulted

in a complex study. Staying true to the research design was ambitious. Thus, by widening the lens for viewing the circular labour migration resulted into losing in probing the depth of individual's experiences. While two population groups were chosen, at times the migrant workers' perceptions and experiences were the dominant emphasis rather than those of their sexual partners. This was a deliberate decision made to circumscribe the scope of the study. The sexual partners of the migrant workers could have occupied the sole focus of this study. They did not. This poses a limitation when there is so little HIV social research on the regular rural sexual partners of the migrant workers. However, I was able to gain knowledge on the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners. These population groups are entirely linked. The study proved to be appropriate lens. It generated genuine insights and clarity into the choices and constraints, which inevitably impact on the lives of the migrant workers and their regular rural sexual partners.

Second, it is possible that the respondents might have provided answers to questions and not their real life experiences. The respondents might have under-reported socially unacceptable behaviour while over-reported acceptable ones. The respondents might have revealed or hid true information based on the circumstances they were going through. As Chirwa (1997) observes that asking about individuals' sexual behaviour, beliefs or preferences, marital stability or instability, multiple and concurrent sexual partnerships and condom use entails treading on personal ground and involves a high risk of offending and alienating respondents, and therefore, although the respondents might have been ready to talk, they might not have avoided being sensitive to some of the questions put to them. Therefore, it should be noted that although the respondents were physically and readily accessible, the wider stocks of the information they possessed might not as some of the respondents might have been of the view that "you are here to assess our life" (Chirwa, 1997:11). The result is that such respondents might have reported partial information.

4.9 Methodological Challenges

The deployment of a rigorous methodological approach depends in part on gaining access to research sites and respondents. Getting access to the Uranium mine site was a challenge. Mining officials were not keen to open up their facility to the scrutiny of research. With assistance of local stakeholders who included Chief Kayelekera, Lusako network leaders and mineworkers' representatives this hurdle was overcomed. All interviews at Kayelekera took place at the informal settlement, *Chiphwirikiti* where most of the migrant workers reside, buy their items and drink beer. By the way, conducting interviews in the mining company facilities could have resulted into biased data by virtue of my association with company personnel.

Another challenge was regarding initial in-depth interviews that were recorded digitally. The interviews were inaudible. Interviewers reported that the respondents were uncomfortable with the recorders. It is of course possible that the interviewers or the research assistants themselves were uncomfortable with the recorders. However, even if this was the case, the resulting data would still be compromised. Therefore, the interviewers were asked to recording the indepth interviews as well as take brief notes. Immediately after each interview the interviewers found a secluded place to sit and write. With the aid of their brief notes, they reconstructed entire interviews. I read each written interview immediately upon completion. This allowed for an expedient clarification of any confusions with translations, sentences or words.

Finally, as Watkins and Swidler (2005) and Watkins, Swidler and Biruk (2009) observe, the conversational records could be treated as texts that recorded hearsay evidence. However, these ethnographic data gave extraordinary access to the perspectives on the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners at Kayelekera and Maganga. The conversational data tell how talks on HIV risk reduction strategies and transmission mechanisms are infused within the social networks of the migrant workers and their sexual partners. One

of the most important aspects of this study was the range of ethical questions and dilemmas that arose and had to be managed carefully.

4.10 Ethics Protocol

Conducting HIV research in Malawi requires ethics approval from a range of stakeholders including the University with which the research is affiliated to. The research ethics application and protocol including interview guides, informed consent form were developed, reviewed and revised over a period of nine months (from February to October 2010) in close consultation with the research Supervisor, internal as well as external reviewers. Also, the concept benefited from oral presentations made at the University of KwaZulu-Natal as well as at international conferences. Ethics approval and clearance by the University of KwaZulu-Natal Human Research Ethics Committee was received in December 2010 – protocol number HSS/0232/011D.

4.10.1 Ethical Considerations

There are numerous ethical concerns to be addressed whenever human subjects are objects of the study. This is a common dilemma in social research. McMillan and Schumacher (2001), note that the possible risk of respondents feeling like a means to an end is balanced by the benefits associated with understanding the needs of the target population group more broadly. McMillan and Schumacher (2001:422) further note that open discussion and negotiation can promote fairness to the individuals involved in research... "and that this knowledge can empower respondents in interview setting".

In line with McMillan and Schumacher (2001), every respondent was informed of the purpose of the study – the role of social networks on HIV risk reduction strategies as well as transmission mechanisms among the migrant workers and their sexual partners. The respondents were informed of confidentiality and that their names were not going to be used in the research report. Informed consent was sought from all the respondents. The respondents were asked for their written consent. Only those who felt comfortable and consented to be

interviewed participated in the research. If interviewees appeared uncomfortable and doubtful they were told that it was okay not to speak with the interviewer essentially giving them permission to leave. The consent form had separate approval clauses to be interviewed and taped. Although a number of respondents agreed to be interviewed, they refused to give consent to be tape recorded. Their decision was respected.

Beyond those clearances, ethical complication arose at Maganga. A long-term migrant worker was at his home sick. The migrant worker had married six times. Each time he visited his home village he got married to a new wife. The wife would divorce after waiting for a year or more without communication from her migrant partner. The moment this research project was introduced to some of the key informants in the area, they requested that the man be interviewed. Not only was this sick person vulnerable, he might have thought he needed to acquiesce to an interview as a condition of support - an assumption the research team worked hard to dispel at the beginning of the research project. Despite the emphasis, the key informants who were advising on which people to recruit for interview in about three other instances wanted people who were in visible pain to be interviewed. The research team delicately, but firmly refused. However, the key informants kept on insisting that the migrant workers be interviewed. Therefore, it was decided to visit them. Gifts were arranged. It was during these visits that a decision was made to escort them to hospital where they were treated, counselled and tested for HIV. By the end of fieldwork, they were all on antiretroviral treatment and recovering well. Most importantly, they all became key informants for this research project.

Another ethical question that arose was regarding confidentiality. During the interviews, it became clear that for some of the female respondents especially in the absence of their migrant partners their parent in-laws made decisions about them. Such female respondents were requesting to get interview permission from their parent in-laws. Would they really request for permission from their parent in-laws? Whether they would act on it was another question altogether. This experience was an eye-opener. The majority of the parent in-

laws wanted to know more about the questions, thereby, defeating the whole purpose of confidentiality. Such potential female respondents were not interviewed. Frustrating as it was, participation was voluntary and that one could withdrew at any time with no negative repercussions. However, by selecting only those who appeared strong in body and mind, not in visible pain and willing to speak meant interviewing a smaller sample. This was discussed with the key informants. The key informants suggested that in such cases parent in-laws be interviewed as far as they have been migrant workers before or sexual partners of the migrant workers. The arrangement proved useful. Such respondents provided useful information on the role of social networks in HIV risk reduction strategies and transmission mechanisms among the migrant workers and their partners. They also assisted in recruiting more respondents.

Speaking of the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners is social research at its most intimate and complex. This research project took me into confidential conversations with the migrant workers and their sexual partners most of them vulnerable to HIV. Sharing their personal experiences remains an untold act of trust. Interviewing became an invitation, a dance to be executed with care, with deft skill, a process of empathic listening, probing, clarifying and speaking when necessary (Klee, 1986). Questions: "Are you not worried of contracting HIV from your sexual partner for not using condoms especially that you do not know your status and that of his or her?" and "why do you think your social network colleagues encourage you to doing such risky behaviour?" often prompted genuine reflections and pouring forth of emotions. The respondents were often very willing to reflect on their life experiences. In many cases, they had not disclosed their private lives to any other soul may be only to some of their social network colleagues. The conversation became an opportunity to communicate what they were thinking and feeling as well as their experiences in HIV risk reduction strategies and transmission mechanisms within their social contexts.

In terms of lows, there were many to recount. I felt honoured by the trust the respondents placed in me. They unburdened themselves on complex and highly sensitive issues surrounding their private lives. It is this courage of the respondents that injected new inspiration and hope into the study on the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners in Malawi. That the majority of the respondents unfolded themselves in front of my eyes and ears was a testament of their faith into the study. Whatever the case, I was allowed behind a curtain that is normally drawn. It cannot be stressed enough how profound a privilege it was.

4.11 Conclusion

This chapter has noted the evolution in qualitative methodology and the growing confidence in qualitative methods by researchers. The chapter has highlighted the dominance of quantitative methods in studies of health, observing that the debate vis-à-vis qualitative research revolves around the 'gold standard' for ensuring reliability in qualitative methods. Also, the chapter has described strengths of qualitative research and its applicability for a study such as this one. Further, the chapter has described methodological techniques utilised in this research. The designs include choice of target population and key informants, choice of research sites and rationale for their selection as well as procedures followed in data collection. Finally, the chapter has described a range of methodological and ethical challenges that arose during the excursion of the study and actions taken to resolve them. The next two chapters provide research findings. The findings in Chapter Five focus on the role of the social networks on HIV risk reduction strategies among the migrant workers. The findings in Chapter Six focus on the role of social networks on HIV transmission mechanisms among the migrant workers and their sexual partners.

Chapter Five

Research Findings: Part One

5.1 Introduction

This chapter describes sources of HIV risk reduction strategies among the migrant workers and their sexual partners at Maganga and Kayelekera. As described in previous chapters, the study explores the role of social networks in HIV risk reduction strategies among the migrant workers and their sexual partners. Therefore, the qualitative data for this research, using Kohler, Jere and Watkins (2007) definitions include information from egocentric social networks, that is, social networks that contain the migrant workers and their sexual partners and their social network colleagues with whom they discuss about HIV risk reduction strategies. An exploration of the role of social networks on HIV risk reduction strategies provides an understanding of whether the migrant workers and their sexual partners' social groups are empowered to deal with HIV. This is done by examining how the migrant workers and their sexual partners see HIV as a problem and respond to HIV risk reduction strategies.

5.2 Dissemination of HIV and AIDS Information

The starting point for this analysis is to document exposure to HIV and AIDS information from formal sources then compare with the informal local social sources of the migrant workers and their sexual partners. Before focusing on the formal and informal sources of HIV and AIDS information, the following subsection describes the social categories of the migrant workers and their sexual partners at Maganga and Kayelekera. This will help to compare and contrast sources of HIV and AIDS information from formal and informal channels.

5.2.1 Social Categories of Migrant Workers and their Sexual Partners

Like in the observations of Romero-Daza and Himmelgreen (1998) in rural Lesotho, at Maganga, the regular sexual partners of the migrant workers categorised themselves in such social groups as neighbours, fellow partners of the migrant workers or as friends. They said that they shared "everything". They reported that they assisted each other with household chores including caring for children, fetching for water and firewood as well as gardening. They said that at times, the assistance involved their whole families. The sexual partners of the migrant workers said that together with their relatives and their children they helped their friends and neighbours with certain types of work including farming, construction of houses, fetching for water and firewood. They said that they were involved in doing piecework together. They said that they lent money to each other. They shared food. They reported that they turned to their friends and neighbouring colleagues for a piece of advice when they had problems. The problems included marital and resources. Some of the sexual partners of the migrant workers said that they even identified casual sexual partners for their social network colleagues. They were 'good' friends or 'good' neighbours or 'good' colleagues. The common phrase used to describe their social relationships was:

We are good friends [at times good neighbours] who share everything including our inner lives.

Like in the histories of Moodie, Ndatshe and Sibuyi (1988), Moodie and Ndatshe (1994), Harries (1994) and Campbell (2003, 2004) in the South African goldmines as well as in the observations of Anderson (2001) in Zimbabwean factories, the social groupings of the migrant workers were not only peculiar to the migrant sending rural village of Maganga, but as well as to the migrant rural workplace of Kayelekera. The migrant workers at Kayelekera categorised themselves along social groups as workmates, roommates, drinking colleagues, fellow church members, relatives, original rural home village neighbours and friends. The migrant workers reported of others within their social groups who were referred to as "uncles" or "abambo" [fathers] or "agogo"

[grandfathers]. These were elders in the groups who had years of work experience having worked for some time elsewhere before migrating to work at Kayelekera Uranium mine.

Again, like in the histories of Moodie, Ndatshe and Sibuyi (1988), Moodie and Ndatshe (1994), Harries (1994) and Campbell (2003, 2004) in the South African goldmines as well as in the observations of Anderson (2001) in Zimbabwean factories, the migrant workers social groupings provided opportunities for sharing of resources. The migrant workers reported of sharing information. They reported of sharing food. They reported of sharing beer. They mentioned of lending money to each other. They said that they shared clothes and shoes. Others said that they shared condoms. They reported of sharing accommodation. The migrant workers shared almost everything they had within their social networks of colleagues.

The migrant workers reported that after work, groups of the migrant workers residing at *Chiphwirikiti* ate together. They said that they drank beer together. They reported that usually, even those residing at the mine compound joined their colleagues at *Chiphwirikiti* for beer, meals and girlfriends. Most of the migrant workers interviewed at Kayelekera said that they liked this rural workplace not only because it provided them with employment opportunities, but also because they had many friends from different places.

Although Kayelekera attracted migrant workers not only from short distances, but also from far places, the migrant workers at Kayelekera were good at a mixture of languages, and therefore, it was not uncommon for the migrant workers at Kayelekera to speak Chitumbuka and Chichewa among other languages. This made it easy for the migrant workers to interact with many groups of people at Kayelekera who included work colleagues, drinking colleagues, neighbours at *Chiphwirikiti* and surrounding villages.

Despite having good friends, colleagues and neighbours at Kayelekera, the migrant workers were still very well connected to their original rural homes. For

example, although migrant males working at Kayelekera had wives in their rural areas, they also indicated having sexual partners at their workplace. However, the migrant workers did not consider their sexual partners at Kayelekera as their real wives. They said that their regular partners were at their original rural homes taking care of their homestead. It should be noted that although it has long been established that Malawian young men leave their rural homes in search of work elsewhere before they are married, marriages in which both a husband and a wife originate from same rural village or neighbouring villages remain common (Chimbiri, 2007; Anglewicz, 2011). The marriage patterns of migrant workers in Malawi, reveal a preference for partners originating from same rural home areas.

The migrant workers were also very connected to their original rural homes in that when more workers were needed at the Uranium mine, the migrant workers said that the information was spread through them from the mine management to the job seekers residing at *Chiphwirikiti* as well as those in their rural home villages of the existing employment opportunities. The migrant workers said that they telephoned their relatives, their neighbours and their friends in their original rural home villages when such opportunities arose. Others while visiting their rural home villages during weekends or holidays, they informed their neighbours, relatives and friends about such employment opportunities. Some of the migrant workers even assisted their home colleagues, friends, relatives and neighbours with money for transport to Kayelekera to look for employment.

Some of the migrant workers reported of their stories that upon their arrival at Kayelekera they stayed with their relatives or friends at *Chiphwirikiti*. Upon visiting one of the shelters at *Chiphwirikiti*, in the corners there were additional mats and blankets. The migrant workers reported that they used these additional mats and blankets to accommodate their relatives and friends who had no accommodation while seeking for work at Kayelekera. The migrant workers said that attracted by employment opportunities, an increasing number of their rural friends, relatives and colleagues were coming to Kayelekera. The migrant workers said that the new comers were squeezed into small informal

settlement shelters at *Chiphwirikiti* until they found work and got their own accommodation. The occupational status of the informal settlement shelters at *Chiphwirikiti* were, therefore, highly dynamic. The mobilisation of personal social networks in finding accommodation at this rural workplace made the migrant workers flexible, as reported by one of the migrant workers at Kayelekera saying that:

There is always someone you might stay with if you are searching for work here.

Although some of the migrant workers at Kayelekera stayed at the mine compound and others lived in rented huts at Chiphwirikiti, others said that had constructed their own shelters. Few mentioned that had extra shelters at Chiphwirikiti that they rented out to their fellow migrant workers. Others were fully involved in constructing and lending as well as selling of shelters at Kayelekera. At the time of data collection, price for rent for a one roomed shelter at Kayelekera was 1,500 Malawi Kwacha. The same shelter could as well as be sold for good at 10,000 Malawi Kwacha. However, this did not make those who had constructed their own huts at Kayelekera permanently move out of their original rural homes to this rural workplace. This is in contrast of some of the literature on migrant workers in southern Africa (see Ferguson, 1990 for Zambia; Anderson, 2001 for Zimbabwe for opposing views on this). The migrant workers who had constructed their own shelters at Kayelekera still had connections with their original rural home villages where they had their families tilling land and raising animals (Chapter Three). They lived at Kayelekera as single men and on a temporary basis. They said that they believed that they would one day quit employment or be fired or be retrenched, rent out or sell their shelters and return to their original rural home villages.

Most of the migrant workers at Kayelekera said that they maintained their social relationships even with those who had returned to their original rural home villages. They were their landlords. They wanted to pass on information regarding employment opportunities to their home village friends, colleagues, relatives and neighbours. Therefore, the migrant workers at Kayelekera were connected both to their rural workplace and their rural sending villages through

sharing of accommodation, information about employment opportunities and other resources including food, beer, clothes and money with their relatives, friends and other colleagues. The majority of the migrant workers considered this an advantage, as reported by one of the migrant workers at Kayelekera saying that:

This is good because people know me here as well as at home.

Ferguson (1990:412) describes the significance of sending and receiving distinctions in the lives of migrant mineworkers on the Zambian Copper belt, stating that:

[Migrant] mineworkers' discussions of rural retirement are often phrased in terms of sending and receiving areas oppositions. Upon retirement [migrant] mineworkers even attend formally organised crash courses on how to adapt to sending rural life.

Findings from this research, however, contrast common perspectives on migrant sending and receiving areas relationships described by Ferguson (1990) and other scholars such as de Haan (1999) on workplace and sending areas as separate entities. Findings from this research indicate of social situations in which the sending area and workplace constitute a single social universe. Instead, these findings confirm literature that migrant workplace and sending areas are inseparable (Andersson, 2001 for Zimbabwe; Potts, 2010 for Malawi). It is such social connections that made it possible for the migrant workers and their sexual partners to share information including HIV risk reduction strategies both at Kayelekera and Maganga.

5.2.2 Informal Sharing of HIV and AIDS Information

Although during one of the discussions with the District AIDS Coordinator for Karonga [Kayelekera Uranium mine site is located in Karonga district], he had said that "it is [was] too early to talk about HIV risky behaviour at Kayelekera Uranium mine site as mining activities only began in 2007", it was no secret that at Kayelekera, Paladin and some Non-Governmental Organisations were

making efforts to educate the migrant workers, their sexual partners and others about HIV and AIDS.

According to Paladin country director, Neville Haxihum, the Uranium mining company viewed HIV as a huge risk to its operations as any impact of HIV on its personnel would also impact on its business. Although, HIV testing for the mineworkers was not compulsory, Paladin had an HIV testing clinic at *Chiphwirikiti*. However, the HIV testing clinic was right at *Chiphwirikiti* market. This could be a potential reason to prevent most of the migrant workers and their sexual partners from accessing HIV testing services. They might have been afraid of being seen by their sexual partners or their clients or their friends. **Figure 7 below** shows location of HIV testing clinic at Kayelekera market.



Also, huge information billboards stating: "AIDS is real", "AIDS *njakofya* [is dangerous]", "AIDS kills" and "AIDS *yikukola bazyaghali* [AIDS attacks those who are promiscuous]" were not uncommon at Kayelekera (**see Figures 8 & 9 below**). However, looking at the content of the information on the billboards, they were not action oriented. Instead, the messages were stigmatising and did not offer hope. The messages only stressed that AIDS was "real", it was "dangerous" and that it "killed". The messages also stressed the dangers of risky sexual behaviour - "yikukola bazyaghali [it attacks those who are promiscuous]". No mention was made of the fact that some of the sexual contacts with HIV-positive persons did not result into an HIV-infection.

Although such a mention could promote promiscuity, available studies have shown that HIV is not an inevitable result of sex (Wawer *et al.*, 2005; Miller *et al.*, 2010; Hughes *et al.*, 2012). For example, the Rakai Project in Uganda reports of a transmission rate per act with an HIV infected partner to be 0.11 percent or one transmission for every thousand sexual acts (Wawer *et al.*, 2005). In a more recent study of HIV contraction between heterosexual HIV-serodiscondant couples, where one partner is HIV-positive and the other is HIV-negative, Hughes *et al.* (2012) found the average rate of HIV infection to be one per 900 coital acts. The results of Wawer *et al.* (2005), Miller *et al.* (2010) and Hughes *et al.* (2012) show that it is the HIV load in the HIV infected sexual partner that is the main driver of HIV transmission. In other words, according to Wawer *et al.* (2005), Miller *et al.* (2010) and Hughes *et al.* (2012), the vast majority of sexual acts with HIV infected sexual partners do not result in HIV transmission.

Figures 8 & 9: Some photographs showing HIV campaign messages at Kayelekera





Apart from HIV testing and the billboards, HIV risk reduction strategies at Kayelekera were also promoted through video documentaries and training workshops. Paladin management and some of the Non-Governmental Organisations working in the area reported providing behaviour change lessons to the mineworkers and the commercial sex workers, as reported by one of the NGO officials:

Apart from the billboards that we have mounted at Kayelekera, we have also showed video documentaries and provided lecture lessons to some selected mineworkers and commercial sex workers on behaviour change to prevent HIV.

According to this NGO official, the idea of training and showing video documentaries on HIV and AIDS to some selected individuals was that the multiplier effect would ensue. The individuals would then pass the information on to their colleagues, friends and relatives. Some of the interviewees reported having seen the HIV testing clinic and the billboards as well as attending training workshops on HIV and AIDS at Kayelekera. However, none of the respondents said that they had been to an HIV testing clinic at Kayelekera. They hardly recalled messages on the billboards. They did not recall topics covered during the HIV and AIDS training workshops either organised by Paladin or the Non-Governmental Organisations. Others even denied having received any information on HIV and AIDS from Paladin or other organisations working in the area, as reported by one of the migrant workers at Kayelekera saying:

You mean from Paladin or other organisations? Ah! Ah! [Laughs] No! Never! No! Never before! Not for HIV. Never at all!

Available formal sources of HIV and AIDS information at Maganga included Health Surveillance Assistants, orphan care centres and Salima AIDS Support Organisation. However, these institutions were hardly mentioned as sources of HIV and AIDS information by the respondents at Maganga. The respondents mentioned that both the orphan care centres and Salima AIDS Support Organisation only distributed some relief food items to some of the orphans and their caretakers during acute food shortages. None of the respondents for this

study mentioned the Health Surveillance Assistants as being source of HIV information. One of the female respondents at Maganga summarised this as follows:

HSAs [Health Surveillance Assistants] only talk of mosquitoes...and diarrhoea... As for orphan care centres and SASO [Salima AIDS Support Organisation], they only provide some relief food items to the elderly and those households with orphans.

Instead, most of the migrant workers and their sexual partners said that they discussed about *kachirombo* [HIV] with their friends, relatives, neighbours, workmates and their sexual partners. These research findings suggest that the migrant workers and their sexual partners were more connected to their social network colleagues who included their friends, their neighbours, their relatives, their sexual partners and their workmates even on matters of HIV and AIDS. This does not necessarily mean that the migrant workers and their sexual partners were disconnected from the formal sources of HIV information dissemination as presented in some earlier studies (Smith & Watkins, 2005; Adams, 2007; Kohler, Jere & Watkins, 2007; Tawfik & Watkins, 2007). Instead, it means that HIV and AIDS information from formal sources such as from Paladin, Non-Governmental Organisations and the Health Surveillance Assistants found its way to the migrant workers and their sexual partners through the local social networks.

Some of the migrant workers and their sexual partners' social network colleagues on issues of HIV and AIDS included some local villagers who were not the migrant workers themselves or sexual partners of the migrant workers. For example, at Kayelekera, the migrant workers and their sexual partners discussed about HIV and AIDS with such social network colleagues who included barmen, watchmen and grocery owners. These were people who knew their community areas well. Some of the migrant workers consulted such persons even when they were looking for potential sexual partners. Some of the commercial sex workers at Kayelekera mentioned members of Lusako network as their discussion colleagues on HIV and AIDS issues. Simply, the respondents discussed issues about HIV and AIDS with their social network

colleagues who included their fellow migrant workers, former migrant workers, their workmates, their beermates or their fellow sexual partners of the migrant workers, former commercial sex workers, peer educators and those who were familiar with the local area, as one of the migrant workers at Kayelekera said:

I talk about HIV and AIDS everyday with my friends at work and during our free time. You see women come every day to this area and we sleep with them at will. The big question that we pose is that: 'Are all these women we are sleeping with free from HIV?'

At times, the migrant workers and their sexual partners said that they discussed about HIV and AIDS with elders who included their parents. Of course, in such cases the information came from the elders in a form of advice, such as:

I am still alive today because my very own mother told me to avoid sleeping with different women to avoid HIV. My very own mother told me kudzitsunga [avoid being promiscuous].

Regardless of the respondents who had attended a training workshop organised by Paladin or some of the Non-Governmental Organisations or got information through the billboards or from their friends, relatives, workmates and others, HIV and AIDS knowledge among the migrant workers and their sexual partners was universal both at Maganga and Kayelekera. Similarly, Malawi Demographic Health Survey (2010) records that HIV transmission and prevention knowledge in Malawi is universal at 99.9 percent. The migrant workers and their sexual partners knew that HIV was transmitted through unprotected sex. Most of the migrant workers said that avoiding having sex with the commercial sex workers was necessary to avoid contracting HIV. The commercial sex workers might have been mentioned because statistics show that 70.7 percent of the commercial sex workers are living with HIV in Malawi (Government of Malawi-National AIDS Commission, 2015). However, such findings are similar to the findings of Crush *et al.* (2010) in Mozambique and Swaziland.

The migrant workers and their sexual partners said that "AIDS was incurable even by asing'anga [the traditional doctors]" whom they trusted to cure other infections, as mentioned by one of the visiting migrant workers at Maganga

during one of the focus group discussions with other members agreeing with hand clapping and ululating:

Asing'anga [the traditional doctors] tell us that they can cure AIDS. They say that the government does not want to recognise them because they will be making more money...but that is not true...they are cheating.

When asked if at all the migrant workers and their sexual partners were aware of anyone of their friends or relatives or neighbours who had HIV or AIDS, most of the migrant workers and their sexual partners said that they had friends, neighbours and relatives living with HIV. The majority mentioned that they had seen their relatives, neighbours and friends who had died from AIDS related illnesses (see Kaler, 2004 for similar findings in Balaka, southern Malawi). The migrant workers and their sexual partners mentioned that some of their acquaintances died slowly after painful illnesses while others died quickly from diarrhoea and other illnesses. The most commonly cited symptoms of AIDS by the migrant workers and their sexual partners included coughing, loss of weight, diarrhoea and sores on the body.

As Swidler and Watkins (2009) report that joint evaluations of illness and death often document the presence of these symptoms and supplement this information with local knowledge of the sexual behaviour of the sufferer, the migrant workers and their sexual partners who experienced an AIDS-related illness or death of friends or relatives seemed to have an increased awareness about HIV and AIDS. This led them to increased social interaction about HIV and AIDS topics including using euphemisms in describing AIDS such as: "this disease of nowadays" or "this incurable disease" or "this kaliwondewonde" [slim or AIDS] such as:

I lost most of my friends. I have seen with my own eyes how people suffer from kaliwondewonde and die. I tell this to most of my work colleagues everyday we chat... I simply narrate the behaviour of my old friends who passed away as a result of kaliwondewonde

These findings suggest that despite the migrant workers living in isolated remote rural workplace of Kayelekera, they were socially connected through their social networks of work colleagues, friends and relatives at the workplace

and surrounding villages as well as in their original rural homes. The migrant workers social connections were through sharing of information about employment opportunities, sharing of accommodation and other resources as well as family ties. It is through such social networks that the migrant workers were exposed to a variety of HIV and AIDS information. On the other hand, although the regular rural sexual partners of the migrant workers at Maganga were tied within their rural village setting tilling land, doing domestic and piece work as well as raising children, they talked about HIV and AIDS with their friends, relatives and neighbours as well as their sexual partners. It is from such social connections that the migrant workers and their sexual partners developed some HIV risk reduction strategies as described in the following subsection.

5.3 HIV Risk Reduction Strategies among the Migrant Workers and their Sexual Partners

As described in Chapter Two, in much of the available HIV risk reduction literature, the migrant workers and their sexual partners are considered as not responding to the fight against HIV even in institutionalised migrant communities like in the mines and sending rural villages (see also Campbell, 2003, 2004; Crush *et al.*, 2010; Corno & de Walque, 2012). However, some of the migrant workers and their sexual partners who participated in this research showed that they were not weak in responding to HIV risk reduction strategies. Within their informal local social networks of friends, relatives, workmates, neighbours and colleagues, some of the migrant workers and their sexual partners were contributing to the response against HIV.

This section focuses on some of the HIV risk reduction strategies that some of the migrant workers and their sexual partners in support of their social network colleagues were using in avoiding HIV infection. In order to stay away from HIV infection, some of the migrant workers and their sexual partners discussed within their social networks the dangers of HIV. They advised each other to remain faithful to their regular rural sexual partners even when they were living

apart. Others consulted *asing'anga* [traditional doctors] to prevent their sexual partners from having other sexual partners. They even encouraged their social network colleagues to do the same. Others with the support of their social network colleagues, carefully selected and switched their sexual partners. While others advocated for being religious.

The HIV risk reduction strategies among the migrant workers and their sexual partners although supported by their social network colleagues could not be the most effective ones in avoiding HIV. However, such findings shade light on what the migrant workers and their sexual partners with the support of their social network colleagues at Kayelekera and Maganga were doing to reduce the risk of contracting HIV. Some of the earlier scholars such as Porter *et al.* (2004), Schatz (2005), Smith and Watkins (2005) and Zaba (2007) have studied some of the social approaches in HIV risk reduction. Although these authors focus on the non-migrants, this study does not aim to replicate the same, but to shade light on what the migrant workers and their sexual partners with the support of their social network colleagues at Kayelekera and Maganga said were doing to avoid HIV infection.

5.3.1 Checking and Discussing with Partners the Dangers of HIV

As theorised in Chapter Two, the social networks theory looks at social behaviour not as an individual phenomenon but through relationships, and therefore HIV risk behaviour unlike many other health behaviour, involves more people including relationships and communications within sexual partners, the smallest unit of the sexual network (see also Morris & Kretzschmar, 1997). When asked if at all the migrant workers and their sexual partners discussed about HIV and AIDS, most of them said that they talked with their regular sexual partners about HIV and AIDS, as reported by one of the regular sexual partners of the migrant workers at the village of Maganga:

After learning from my friends that our husbands indulge in sexual behaviour with other women at their workplaces, I telephoned my

husband warning him to avoid sleeping with other women because he could get HIV and then pass it on to me.

Another regular sexual partner of a migrant worker also at Maganga who was informed by other migrant workers from the same rural village that her migrant partner was sleeping with other women at his workplace said that she telephoned her husband, saying:

I was told by his friends who were on holiday whom they work together that he was sleeping with different other women at his workplace. So I telephoned him saying: 'I am told that you are sleeping with other women there. I am afraid you will contract HIV and infect me. Please stop that behaviour'.

Like in the findings of Schartz (2005), the conversations between the migrant workers and their partners in this category were, however, characterised by considerable diplomacy. Rarely did the migrant workers and their partners in this category accuse each other of infidelity. This was even when the migrant workers or their partners told the interviewer that they did not believe their partners commitment to fidelity especially during periods of their separation. Instead, the migrant workers and their partners in this category said that they showed great concern for them becoming infected with HIV.

At other times, the migrant workers and their partners said that they questioned their partners about their concurrent sexual lives. For example, the partners of migrant workers who were informed by other migrant workers from the same village that their migrant partners were seeing other men said that they raised the issue with their migrant partners. After confronting their migrant partners, most of these female respondents said that they learnt that their migrant partners stopped having sex with the women. They said that they were told that their migrant partners no longer spent their nights at the drinking places. They reported that through discussions with their migrant partners they felt had successfully protected themselves from contracting HIV.

Similarly, most of the migrant workers reported on checking on their regular rural sexual partners in their rural homes through phoning their social networks colleagues including relatives, friends and neighbours. Such narratives demonstrate how workplaces and sending rural areas are connected in that sexual partners check on each other through their informal social networks in order to avoid HIV. More of these social networks were social-centric in nature. They were ties into multiple social networks resulting into a small-world phenomenon—that is, most social acquaintances were connected to most individuals—using a few random shortcuts such as partners, friends, relatives, neighbours, work colleagues, friends of partners among others.

For example, one night while taking coke at one of the bottle stores at Kayelekera, I heard two men discussing about one of their colleagues who had gone home to spend his weekend. One of the men said that upon arrival of their work colleague at his rural village, he was told by his village friends that his regular rural sexual partner was sleeping with other men. He said that their colleague then beat up his regular rural sexual partner to the point of collapsing. When the matter was reported to police, their colleague got arrested and was later sentenced by the court of law to five years imprisonment with hard labour. The other man then agreed that it was a good idea for their work colleague to enlist his village social network friends to check on his regular sexual partner. He said that the arrangement was good especially in these days of HIV. However, he said that it was bad that after getting the information from his village friends that his regular rural sexual partner was unfaithful for sleeping with other men he resorted to beating her up to the point of collapsing resulting into his arrest and sentencing for five years imprisonment. He said that it would have been better just to divorce the woman and not beat her up. At times, HIV risk reduction strategies went beyond the migrant workers and their regular sexual partners to confronting colleagues as well as other sexual partners.

5.3.2 Confronting Colleagues of their Partners

Some of the female respondents at Maganga said that they confronted colleagues of their migrant partners. These female respondents said that the colleagues of their migrant partners were responsible for the risky sexual behaviour of their migrant partners. The female respondents in this category said that they warned the colleagues of their migrant partners to avoid involving their partners in their risky sexual behaviour.

For example, while taking dinner one evening at Maganga, I heard a woman shouting at a man along the route passing by the house I was residing in. The woman accused the man who was a migrant worker on his holiday that he was responsible for the risky sexual behaviour of her migrant partner while at the workplace. She said that she was told by other migrant workers from the same village that this man was misleading her migrant partner at the workplace to go for beer and have sex with other women. She accused the man that he wanted her migrant partner to get HIV and then pass the virus on to her.

The man however responded that he was only good at drinking beer. He said that if any of his colleagues wanted to join him to drinking places he could not stop them. He said that if those who joined him for drinking beer saw women and wanted to sleep with them he had no control over them. Although this man said that he had no control over his colleagues who wanted to sleep with women, the woman had made her case anyway. She had gone beyond her migrant partner in trying to avoid contracting HIV. She had included the work colleague of her migrant partner in the discussions for avoiding HIV infection.

These findings demonstrate how workplaces of the migrant workers and their original rural sending villages are connected in that the sexual partners check on each other through their social networks of colleagues, friends, relatives and neighbours in order to avoid HIV infection. Using Kohler, Jere and Watkins (2007) definitions, most of the social networks of the migrant workers and their sexual partners were social-centric in nature in that they were ties into multiple social networks resulting into a small-world phenomenon. As a result, most of the migrant workers and their sexual partners were connected through their sexual partners, friends, relatives, parents, neighbours, colleagues and friends of partners. Because of these social connections, although some of the respondents said that they wanted to have other sexual partners especially in

the absence of their regular sexual partners, it was difficult for them to do so. They were afraid of their in-laws. They were afraid of people in their villages. They were afraid of their relatives. They were afraid of their neighbours. They were afraid of their workmates. They were afraid of their colleagues and friends. They were afraid of the colleagues and friends of their sexual partners. They were afraid of all these people that they would not only consider them as being unfaithful to their regular sexual partners, but would also report to their regular sexual partners and many others that they had other sexual partners.

The migrant workers and their regular partners talked about avoiding HIV risky sexual behaviour. They confronted social network colleagues of their partners who they thought were misleading their partners. This demonstrates agency in avoiding HIV infection. They checked on each other's sexual behaviour. However, others tracked and confronted the other sexual partners of their regular sexual partners.

5.3.3 Confronting Concurrent Sexual Partners

It was not infrequent in the study locations especially in the sending village for the migrant workers and their partners to track each other's concurrent sexual partners. In most cases, these concurrent sexual partners were abused verbally and physically and sometimes violently in the presence of other people. Some of the migrant workers and their partners told stories of confronting others, being confronted or knowing someone who had been on one side or another of such disagreements. The migrant workers and their partners described the scenario as a means of curbing their partners' infidelity.

It might be tempting to dismiss respondents claims of confronting and beating up concurrent sexual partners as wishful imaginations something that they would like to do, but not act upon. Several of the migrant workers and their partners, however, told stories about their colleagues they knew who had done so. Seven of the female respondents at Maganga reported that they found themselves on the other end of such confrontations. However, all of these

seven women were partners of the migrant workers. This confirms how labour migration contributes to the risky sexual behaviour of the regular rural sexual partners of the migrant workers while they live apart.

One example was that of a woman of five children at Maganga who had divorced her first migrant partner after he had left the village for work and never telephoned or sent letters or money. In order to support herself and her children, she was having sexual partnerships with men most of them visiting or returned migrant workers. The woman explained that on several occasions other women came to shout at her. They told her to leave their partners. They threatened to beat her up. She said that she then decided to remarry because she was tired of other women suspecting her of sleeping with their partners. The women's suspicions that their colleague in the neighbourhood was sleeping with their partners were not unwarranted, however. The man who eventually became her second husband was a retired migrant married man. Efforts were made to carefully interview the retired migrant workers who had remarried this woman. He collaborated with the story.

This story reveals how the partners of the migrant workers were able to control their partners' infidelity by confronting concurrent sexual partners rather than or in addition to challenging their own partners directly. Also, the story depicts the dangers that some singles whether widowed or divorced or staying alone in the absence of their migrant partners seem to pose to other members of the migrant community. However, like in the findings of Schartz (2005), their dangers are discussed and challenged through local social networks of colleagues, friends and relatives.

Another way that the migrant workers and their regular sexual partners especially their regular sexual partners were using was seeking the support of others, the social network friends, relatives, parents and colleagues to advise their partners to avoid HIV risky sexual behaviour.

5.3.4 Soliciting Advice from Others

As further theorised in Chapter Two, concerns about the threat of HIV and ideas about how it can be prevented are expected to be shared and evaluated collectively within social networks, and thus actors do not make decisions and act in isolation, but rather with other individuals who are connected to one another. These interactions might offer opportunities for individuals to influence the attitudes and behaviour of one another. Similarly, some of the migrant workers and their partners mentioned requesting advice from or giving solicited advice to or receiving advice from friends, neighbours or relatives. The migrant workers and their partners in this category told stories about other people who they knew had drawn on social networks enlisting the support of their friends, relatives, workmates or neighbours when caught in a situation with an unfaithful partner. It was not uncommon for the migrant workers and their regular sexual partners to mention that they had received some advice from or gave some advice to friends, neighbours and relatives to avoid HIV infection. Most of the migrant workers and their regular sexual partners in this category reported on how their parents, uncles, sisters, brothers and friends told them to change their risky sexual behaviour to avoid HIV infection, as reported by one of the migrant workers at Kayelekera:

My uncle came to me during one of my holidays at home. He advised me not to sleep with other women to avoid getting HIV...but after some months, this uncle of mine telephoned me saying that it was my wife who requested him to advise me to avoid sleeping with other women.

Another migrant worker also at Kayelekera said:

My mother told me to avoid sleeping with any other women apart from my wife in order to avoid getting kaliwondewonde [HIV]... she said that is my wife who requested her to say so.

Another migrant worker again at Kayelekera said:

My aunt told me to avoid sleeping with different women to avoid HIV...but I think is my wife who requested her to do so.

One of the female respondents at Maganga said:

I called bothers-in-laws, sisters-in-laws and parents-in-laws to talk to my migrant husband...and when I checked with his friends I was told that he stopped sleeping with the women at his workplace.

One of the partners of the migrant workers at Maganga said that when she suspected that her migrant partner had a concurrent sexual affair, she first asked him about it. When the migrant partner admitted to having another woman, she told him to stop. The respondent, however, said that when she learnt that her migrant partner continued seeing other women is when she engaged others as advocates. In this case, the partner of a migrant worker was not optimistic about success, but took action to stop her migrant partner's suspected infidelity. She first spoke with her migrant partner. When this did not change his behaviour, she enlisted the support of others.

Talking to one's sexual partner or soliciting advice from friends and relatives were not the only HIV risk reduction strategies among the migrant workers and their sexual partners at Maganga and at Kayelekera. Others with the support of their friends and relatives divorced their sexual partners who had other sexual partners.

5.3.5 Divorcing Unfaithful Partners

Some of the migrant workers and their regular sexual partners said that when they heard that their regular sexual partners were having other sexual partners, they would divorce them, as reported by one of the migrant workers at Kayelekera:

I have already told you that I divorced my first three wives because I was getting reports from my relatives that they were having other sexual partners. I was afraid that they could give me kaliwondewonde [HIV].

Considering the high value of marriage in Malawi, the use of divorce as a strategy of avoiding HIV among the migrant workers and their regular sexual partners shows an endorsement within their local social networks. The respondents in this category were in support of their colleagues divorcing their sexual partners who were having other sexual partners, such as:

...one of my friends when he went to visit his family last month, his village friends told him that his wife was sleeping with other men. He told her to leave before infecting him with HIV. When he told us about this, we said he had done a good thing to avoid contracting HIV.

It was clear from the study respondents that divorce as one of the HIV risk reduction strategies among the migrant workers and their regular sexual partners had some effect. For example, some regular sexual partners of the migrant workers at Maganga said that they wanted to have other sexual partners to support them financially and meet their sexual desires in the absence of their migrant partners, but they were afraid of divorce, as reported by one of the female respondents, saying:

It is difficult because my mother in-law acts like a policewoman. Several times she has threatened to tell his son to divorce me should she hear that I have a boyfriend [other sexual partner].

Stories showed that kin were supporting divorce in infidelity relationships. Most of the respondents' narratives in this category showed that their neighbours, friends and relatives were supporting those who wanted to divorce partners who could bring HIV into the family. One of the female respondent explained that her migrant partner tried to convince her to return, but her relatives supported her refusal to return saying:

Our relative can't go back because you can give her HIV.

The discourse around infidelity and divorce was marked with fears of HIV not only by the partners of the migrant workers but even the migrant workers themselves. Although divorce was an extreme strategy, some of the migrant workers and their partners were using it to protect themselves from HIV infection. Neighbours, friends and relatives sanctioned it. The strategy, however, seemed to be a last resort in most cases. Divorce was more difficult than persuasion. It involved assets, including access to land, house and children described in Chapter Three. This could be the reason why the migrant workers and their partners sought divorce after sitting and discussing the dangers of infidelity. They sought divorce after enlisting the social networks of

friends and relatives for advice and support. It was after confronting concurrent sexual partners.

As described in Chapter Three, marriage in Malawi is perceived as necessary for sexual and emotional fulfilment as well as for economic reasons (for further details on these see Kaler, 2001; Schatz, 2005). By the age of 30, 95 percent of female and 93 percent of male Malawians are married (Kaler, 2001). However, 50 percent of first marriages in Malawi end in divorce within 20 years (Kaler, 2001; Reniers, 2003; Anglewicz, 2011). Divorce rates are higher in Malawi than in other sub-Sahara African countries for which these rates are available (Reniers, 2003). The frequency of divorce suggests that although it is considered undesirable and there are traditional systems such as marriage counsellors for mediating marital disputes (Chimbiri, 2007), divorce has long had a variety of social justification under specific circumstances (Kaler, 2001), and one of these circumstances and social justifications for divorce could be fear that a partners would bring HIV into the family. Divorce as a means of avoiding HIV infection is also reported in other districts of Malawi such as Rumphi, Mchinji and Balaka (see Schatz, 2005) as well as in other countries such as Uganda (see Porter et al., 2004) and Tanzania (Zaba, 2007).

Although some of the migrant workers and their regular sexual partners believed that discussing about HIV and AIDS with their sexual partners or divorcing their sexual partners who had other sexual partners with the endorsement of their social networks colleagues, others said that they consulted *asing'anga* [the traditional doctors] to prevent their partners from having other sexual partners.

5.3.6 Consulting Traditional Doctors

Literature on migration in southern Africa, indicate that some of the migrant workers consult traditional doctors in order for them to avoid accidents at their workplaces and avoid contracting diseases including sexually transmitted infections (Moodie & Ndatshe, 1994; Campbell, 2003; Crush *et al.*, 2010).

Similarly, some of the respondents said that *asing'anga* [the traditional doctors] assisted them to prevent their sexual partners from sleeping with other persons. One of the female respondents at Maganga, who said that she had no concurrent sexual partner and that she made sure that her migrant partner also had no other sexual partners where he was working said:

My friends told me to go to asing'anga [the traditional doctors] so that my husband doesn't sleep with other women...simply to avoid HIV.

At times the respondents mentioned of asing'anga [the traditional doctors] who rocked partners together. It was not uncommon to hear from the study respondents and the key informants that they had seen men and women fixed together especially at Maganga. When such things happened, the asing'anga [the traditional doctors] were informed to separate those fixed together. Some of the respondents for this study said that consulting asing'anga [the traditional doctors] was a better way of avoiding HIV and a lesson for those who liked sleeping with others' sexual partners.

The migrant workers and their regular rural sexual partners discussed about avoiding HIV infection. The migrant workers and their regular sexual partners consulted their colleagues, parents, relatives, friends and neighbours to advise their sexual partners to avoid HIV. The migrant workers and their regular sexual partners divorced sexual partners who were considered unfaithful lest they brought HIV into the family. At times, the migrant workers and their regular sexual partners consulted *asing'anga* [the traditional doctors] so that their partners did not have other sexual partners. However, some of the migrant workers and their regular sexual partners especially the young ones thought that fewer carefully selection of their concurrent sexual partners would protect them from contracting HIV.

5.3.7 Careful Selection and Switching of Concurrent Sexual Partners

With the support of their social network colleagues, they developed ways of knowing potential sexual partners who were considered free from HIV. As such,

it was not uncommon to hear from some of the migrant workers and their regular sexual partners that they switched from one sexual partner to another in order for them to find those that were considered free from HIV infection. During one of the focus group discussions with men, members summarised partners who were low risk. The migrant workers and their regular sexual partners in this category considered those that had no symptoms of sicknesses for selection as their other sexual partners. For example, one of the migrant workers at Kayelekera said that:

In addition to my wife at home, I only have one sexual partner here. My friends assisted me to choose... so I don't think she is infected with HIV.

Another migrant worker also at Kayelekera describing selection of sexual partners said that:

I met a certain woman at Kayelekera market. I then asked for her telephone number. In the evening I telephoned her to join me at a drinking place. But when my working colleagues saw me with her they sent an SMS reading: 'Avoid having sex with her as she is believed to have HIV...'

Another migrant worker again at Kayelekera said that:

When I accompanied my friend with whom we work together for beer drinking we passed by his girlfriend. We found his girlfriend with another woman. We invited both of them for beer drinking. While drinking I negotiated that I spend a night with the other woman. But upon helping ourselves in a bathroom, my work colleague warned me not to sleep with the woman saying, 'the woman has HIV'. He said that he was told by his girlfriend.

Although some of the migrant workers and their regular sexual partners thought that choosing partners considered free from HIV would protect them from contracting HIV, this was not easy. For example, at Kayelekera, the only places for the migrant workers to meet women were bars, market place and informal homes at *Chiphwirikiti*. However, the migrant workers used their social networks of friends who included their work colleagues, barmen, grocery men, village men and men and women at *Chiphwirikiti* to achieve this. Looking at these social network colleagues, they included both the migrant workers and the non-migrants. Therefore, sets of interpersonal ties connected the migrant

workers and the non-migrants at Kayelekera. For example, some of the migrant workers at Kayelekera mentioned on how they avoided HIV by consulting local friends to assist them in identifying women considered free from HIV.

Similarly, some of the female respondents in the village of Maganga said that they checked on the health of their potential sexual partners through their social network colleagues. As a result of AIDS educational campaigns, these respondents knew that a healthy-looking person could be carrying HIV. However, physical appearance was mentioned by some of the respondents as one of the criteria for choosing sexual partners. They suggested that the main way of preventing HIV was avoiding having sex with infected partners. They said that they checked on the health of their potential sexual partners in order to find out if at all they were free from HIV. They mentioned of the information they shared within their social networks in order to achieve this. Such information included how their potential sexual partners looked like:

Not sickly or not visiting the clinic regularly.

Similar to careful selection of sexual partners, other respondents especially the migrant workers at Kayelekera mentioned of switching sexual partners from those considered to be on high risk to those considered to be on low risk as one way of avoiding HIV. For example, one of the migrant workers in this category at Kayelekera said that at first he was in a sexual partnership with one of his female co-workers at the Uranium mine, but later on changed to another woman, saying that:

At first, I was in a sexual relationship with a woman who also works for Paladin. However, I realised from my friends at work that my girlfriend was having another sexual partner. I was advised by my friends to leave her and so I did. More so because the person she was sleeping with had other sexual partners both at the company and in town. I now have another sexual partner. I got the new one through my local friends whom we drink together. They are neighbours. They update me on daily basis of her behaviour. Also, I even stopped going for the commercial sex workers. So, I am now safe from contracting HIV.

The migrant worker's preference of selecting other sexual partners beyond his co-workers as well as the commercial sex workers confirms the review of literature in Chapter Two that even the non-migrant workers with whom the migrant workers interact with on a daily basis are vulnerable to HIV infection (see also Campbell, 2003; Williams et al., 2003; Crush et al., 2010). Simply, the high-risk of HIV infection is faced by all members of a migrant community and not just the migrant workers themselves, and therefore, a focus on the migrant workers themselves as a high-risk group might lead researchers to ignoring others who are not the migrant workers themselves, but are made vulnerable to HIV by being sexual partners of the migrant workers (see also Campbell, 2003; Williams et al., 2003; Crush et al., 2010) including through processes of careful selection as well as switching of sexual partners. Although some of the migrant workers and their sexual partners carefully selected their concurrent sexual partners and that others even switched from one sexual partner to another, a few others did completely condemned multiple concurrent sexual partnerships. They completely stopped having other sexual partnerships. Most of those that completely stopped having other sexual partners advocated for being religious.

5.3.8 Stopping Multiple Concurrent Sexual Life and Being Closer to God

Most of the migrant workers and their sexual partners in this category tended to be elders and those who had witnessed their social network colleagues suffering from AIDS related illnesses. For example, one of the migrant workers at Kayelekera who adopted stopping having other sexual partners said that he would have been HIV-positive or dead by now if he would not had left his multiple concurrent sexual partnership behaviour after being aware of HIV. He narrated stories of his friends, neighbours and relatives whom he witnessed dying as a result of *kaliwondewonde*. For this migrant worker, witnessing sicknesses and deaths of his friends, neighbours and relatives as a result of *kaliwondewonde* was his main motivating factor towards behaviour change. This migrant worker said that he did not like to drink beer together with the commercial sex workers because he was afraid of getting HIV from them and transmitting the same to his regular rural sexual partner back home, saying that:

I know the commercial sex workers do all sorts of things in order to tantalise men so that to have sex with them...but I will not commit that sin...and I don't want to get kaliwondewonde from them...and that is why I even stopped drinking beer with them.

The migrant workers in this category decided to stick to their rural home regular sexual partners as a means of HIV risk reduction strategy. The migrant workers who adopted stopping multiple concurrent sexual affairs justified their decisions on the basis of their status as "family men" who were responsible partners and fathers. As described earlier on, witnessing illness or death of friends and relatives as a result of AIDS was their main motivating factor towards behaviour change. The migrant workers in this category said that they did not like to drink beer together with the commercial sex workers because they were afraid of getting HIV and transmitting the same to their regular sexual partners back home. For these migrant workers, their strength to resist other women was provided by their responsibilities to their families.

One day, while I was travelling in a minibus from Karonga *Boma* to Kayelekera, a group of three mineworkers travelling together were busy talking. One of them reported of what happened to him the previous night. He said that his wife who was visiting him at *Chiphwirikiti* had left a week ago for their rural home village. A single neighbouring woman realising that his wife was not around that night she knocked on his door. He said that he thought was one of his colleagues knocking. Upon opening the door, he got surprised that the woman entered without saying a word. While inside the shelter, when asked what she was after, the woman said that he could sleep with her at a discounted price as well as pay her at the end of the month. He said that he told the woman that he was at Kayelekera to work in order to support his family and relatives and not to sleep with women. He said that he told the woman that he was committed to his regular rural sexual partner and that would remain faithful to her alone. He said that he further told the woman that it would be committing sin sleeping with her as she was not his wife. He said that the woman then walked out. Although his two colleagues laughed at him, saying he was stupid failing to sleep with a woman who had surrendered herself to him, they finally praised him saying he

had not only protected his money but also protected himself and his regular rural sexual partner from HIV infection as well as did not commit sin against God.

There were a good number of the migrant workers at Kayelekera who said that had stopped having multiple concurrent sexual partnerships and that they had further trusted upon the Lord for them to completely resist risky sexual temptations especially in the absence of their regular rural sexual partners such as:

Upon my arrival here, I had two girlfriends at the same time. I got sexually transmitted diseases. I don't know out of the two women who infected me. Soon after getting treated, one of my colleagues at work told me to start worshiping God. He told me how his past behaviour was and how he changed after accepting God to guide his life. Since then, I consider being closer to God the only solution to preventing diseases including AIDS, and I also tell this to my friends.

As theorised in Chapter Two, evidence described here, shows that replacing a social network that is associated with negative behaviour with another one that is associated with healthy behaviour might be useful in the fight against HIV. For example, most of the respondents that benefitted the most from the religious social networks were those that initially had or had witnessed harmful sexual behaviour. They now considered religious communities to provide support for resisting further temptations of engaging in risky sexual behaviour. They were actually members of different church groups existing at Kayelekera such as the one shown in Figures 10 and 11 below. This confirms theories of Abdul-Quader et al. (2006) and Groh, Jason and Keys (2008) that positive changes in social support groups are an effective mechanism for reducing negative behaviour including HIV risky behaviour. However, there were other respondents in this category who mentioned that they had changed their "past bad behaviour", as one way of avoiding HIV, but they said that they never revealed their "past bad behaviour" to their colleagues, friends and relatives. As described in Chapter Two as well as in qualitative studies done in Sweden by Asander (2004) and in Kenya by Chuma and Molyneux (2009), some people might not reveal some information to their social network colleagues, friends or

family members because might be afraid of gossips, thereby, losing self-dignity. Certain behaviours could be concealed from fellow members of groups because they could be considered disgrace or taboo (see for example Moodie, Ndatshe & Sibuyi, 1988; Moodie & Ndatshe, 1994; Harries, 1994 on such behaviours in South African goldmines).

Figures 10 & 11: Some photographs showing some churches at Kayelekera





5.4 Conclusion

Findings for this research show that although there was marked variation in the proportion of the migrant workers and their sexual partners who had received HIV messages from formal sources and informal sources, their knowledge about HIV and AIDS was however universal. They all knew of their colleagues, friends, neighbours and relatives who had died as a result of AIDS-related illnesses. They all knew that everyone was at risk of HIV infection. HIV and AIDS were among the issues they discussed daily within their social networks. However, the social networks members whom the migrant workers and their sexual partners discussed issues about HIV and AIDS were similar to each other.

For the regular rural sexual partners of the migrant workers, their HIV and AIDS discussion partners were usually from the same local village. While for the migrant men, there was usually greater social integration from different geographical locations meeting at the workplace and surrounding villages as well as in their original rural villages. However, most of these social network discussions about HIV and AIDS among the migrant workers and their sexual

partners were along gender lines, in that the migrant men talked with their male colleagues while their sexual partners talked with their female friends. Despite the gendered nature of their social networks, their influences on discussions about HIV and AIDS for the migrant men were similar to those for their sexual partners. In their discussions, the migrant workers and their sexual partners, attempted to formulate HIV risk reduction strategies. These HIV risk reduction strategies were socially framed to suit to their local social circumstances.

Although similar, social network influences on risk perception for both the migrant workers and their sexual partners nevertheless reached quite different conclusions about appropriate HIV risk reduction strategies. Most of the migrant workers talked more about partner selection, partner reduction and remaining faithful. In their discussions, the rural sexual partners of the migrant workers focused on how to persuade their migrant partners to remain faithful.

The differences in HIV risk reduction strategies between the migrant workers and their sexual partners could be that social influence plays a greater role in HIV and AIDS conversation networks. In this case, the more dense and homogeneous the HIV and AIDS conversation network is, the more normative the effects are, that is, the social influence. For the rural partners, their HIV and AIDS conversation partners were usually from the same local village. While for the migrant men, there was usually greater social integration from different geographical locations meeting at the workplace. All in all, the most important empirical result is that social networks of the migrant workers and their partners have significant and substantial effects on HIV risk reduction strategies.

Despite being aware of HIV and AIDS as well as informal socially accepted approaches of HIV risk reduction, some of the migrant workers and their sexual partners indulged in risky sexual behaviour. These migrant workers and their sexual partners were involved, supported and encouraged multiple and concurrent sexual partnerships while living apart. Others did not even use condoms with their sexual partners. Therefore, the following chapter focuses on these groups of the migrant workers and their sexual partners.

Chapter Six

Research Findings: Part Two

6.1 Introduction

This chapter provides findings of those social networks of the migrant workers and their sexual partners that did not promote adoption of HIV risk reduction strategies. Such social networks included having influence of such behaviour as having multiple and concurrent sexual partnerships as well as not using condoms. As described in Chapters One and Two, Stratford et al. (2007:123) define multiple concurrent sexual partnerships as "a collection of individuals directly or indirectly through mutual sex partners connected by sexual activity." According to Thornton (2008), these partnerships can as well as vary in duration from one day to decades-long partnerships. Several studies conclude that multiple concurrent sexual partnerships facilitate the transmission of HIV (see Lagarde et al., 2001; Mah & Halperin, 2008; Mah & Halperin, 2009; Mishra & Bignami-Van Assche, 2009). Reasons given in all these studies include that multiple concurrent sexual partnerships compared to serial partnerships increase the size of an HIV epidemic, the speed at which it infects people and its persistence within the population. Therefore, individuals who are involved in multiple concurrent sexual partnerships directly increase their own risk of contracting HIV and, indirectly, increase the risk that they might pass on HIV along to their sexual partners.

Again, as stated in Chapters One and Two, Malawi Demographic Health Survey (2010), reports that women who are in multiple concurrent sexual partnerships have higher HIV prevalence at 16 percent than their counterparts in monogamous partnerships at 12 percent in Malawi. The same report shows that men who have multiple concurrent sexual partnerships are also more likely to be HIV-positive at 10 percent than those who have only one sexual partner

at seven percent. To examine multiple concurrent sexual partnerships, this research explored the existence of multiple as well as concurrent sexual partnerships at the migrant workplace of Kayelekera and the migrant sending village of Maganga and how some of the migrant workers and their sexual partners were involved, reasons for the same, and how their social networks encouraged or discouraged such HIV risk behaviour. Also, the study explored if at all the migrant workers and their sexual partners used condoms or not within these sexual relationships, and how their social networks influenced or inhibited use of condoms.

6.2 Multiple Concurrent Sexual Partnerships

The migrant workers and their sexual partners were asked whether they knew any of their colleagues who had multiple or concurrent sexual partnerships and how they were involved themselves. Some of the migrant workers and their sexual partners said that they were involved in multiple as well as concurrent sexual partnerships. Others said that they had been involved in multiple or concurrent sexual partnerships before. However, most of the migrant workers and their sexual partners said that they knew their colleagues within their social networks who were involved in multiple as well as concurrent sexual partnerships. Some of the respondents even provided general statements such as: "...everyone is involved in such behaviour". However, based on the results reported in the previous Chapter, some of the migrant workers and their sexual partners said that they had changed their risky sexual behaviour. They were not involved in multiple or concurrent sexual partnerships at the time of data collection. They had created strategies aimed at even changing the sexual behaviour of their sexual partners as well as their social network colleagues. As theorised in Chapter Two, such behaviour could as well as be encouraged and supported by social network members. However, it seems that some of those individuals who were involved in multiple and concurrent sexual partnerships thought that most of their colleagues approved and practised the same ... "everyone is involved in such behaviour", thereby, contradicting actual reality.

Key informants at the migrant workplace of Kayelekera mentioned of many groups that were involved in multiple as well as concurrent sexual partnerships. They mentioned of a group of female traders who were involved in exchanging sex for resources with many of the migrant workers. The key informants said that the female traders were selling their goods in combination with commercial 'transactional' sex with multiple migrant workers at Kayelekera. The key informants said that these female traders were not there before the beginning of mining activities in 2007. They said that the female traders came to Kayelekera because of the mining activities. The key informants said that these female traders claimed to be selling merchandise at *Chiphwirikiti*, but in actual sense they were after the migrant mineworkers. Some of the female traders at Kayelekera collaborated with the key informants saying that they supplemented their trade with sleeping with many different migrant mineworkers.

The key informants also reported that even local women from surrounding villages at Kayelekera were involved in multiple and concurrent sexual partnerships with the migrant mineworkers. These local women included married and unmarried women from surrounding villages at Kayelekera. According to these key informants, some married local women lied to their regular partners that they were looking for work at the Uranium mine. Others misled their regular partners that they were selling goods at *Chiphwirikiti*. Even those local women working for the mine as cleaners among others were said to be sleeping with many of the migrant mineworkers. The key informants said that this was done in competition with full-time commercial sex workers as well as female traders at Kayelekera. One of the key informants summarised multiple and concurrent sexual partnerships at Kayelekera as follows:

Everyone is involved in these relationships. They have both casual and regular sexual encounters with many of these mineworkers... Even some married and unmarried women and those selling goods are sleeping with the migrant mineworkers in turns. The married ones cheat on their husbands that they are looking for work at the mine or selling goods at Kayelekera market. Some are caught redhanded having sex with the migrant mineworkers. Cases of that nature are not uncommon at the traditional leader's court. The cleaners [workers] also do it. The truth is that they are sleeping with

many of these migrant mineworkers who also sleep with the commercial sex workers...is like they are in competition.

The key informants also mentioned of a group of visiting regular sexual partners of the migrant workers who were also involved in multiple concurrent sexual partnerships at Kayelekera. Some of these visiting regular sexual partners of the migrant workers were carefully interviewed. Some of the interviewed visiting regular sexual partners of the migrant workers said that working colleagues of their migrant partners especially neighbours at *Chiphwirikiti* and friends of their migrant partners as well as those from same rural geographical place of origin insisted on sleeping with them. The visiting regular sexual partners of the migrant workers said that some of the migrant workers absented themselves from work pretending that they were unwell, but with an agenda of sleeping with their colleagues' regular sexual partners. Some of the interviewed migrant workers collaborated with these reports saying that they slept with the regular sexual partners of their colleagues either at *Chiphwirikiti* or away at Karonga Boma. This finding contradicts some of the findings reported in Chapter Five that neighbours, friends, relatives and colleagues were assisting in checking on the sexual behaviour of their partners. Instead, some of the social groups of comrades were involved in HIV risk behaviour by sleeping with partners of their colleagues, friends, neighbours and relatives.

The migrant workers at Kayelekera said that they got connected to the women through drinking at bars, meeting at *Chiphwirikiti* market, cell phones, women friends as well as fellow workers. They identified shelters at *Chiphwirikiti* as meeting places for sex. The migrant workers exchanged money and other gifts for sex with the women. The women who were interviewed said that at times the gifts could be generous. They mentioned of such gifts as cell phones, money for opening bars and other business entities, constructing houses and paying school fees for their children. The women said that one could sleep with several of the migrant workers in a day including boyfriends and casual partners. Discussions with key informants indicated that there were many single migrant men at Kayelekera, thereby, giving women a readily available market for transactional and commercial sex including casual and regular. Some of the

migrant workers said that they knew that they exchanged the women with their colleagues, but they said there was nothing they could do as they were not married to these women.

In some cases, the migrant workers at Kayelekera paid the women at the end of the month when they received their salaries. Most of the women at Kayelekera kept notebooks. In these notebooks, they had the migrant workers sign against their names as an agreement to pay at the end of the month. Three of the women respondents at Kayelekera allowed me to have a look in their notebooks. Names of some of the migrant workers appeared in all of the three notebooks. In fact, the women said that they compared their notebooks on several occasions for three main reasons. First, they wanted to know how much their colleagues had made in a particular period. Second, they wanted to find out the migrant workers who paid more or spent more money on sex. Third, they wanted to find out the migrant workers that defaulted payment. By knowing the migrant workers that defaulted payment, the women were able to avoid such clients. By knowing those that did pay or paid more, the women were able to find ways of getting connected to such men. These findings demonstrate that the women were not passive agents. They were instead empowered with an ability to identify and decide which men to sleep or not to sleep with. Therefore, from these findings is clear that the migrant workers and the women at Kayelekera were sexually connected either as clients or as providers of sex.

As theorised in Chapter Two as well as observed by Romero-Daza and Himmelgreen (1998) that stay-at-home sexual partners of the migrant workers are likely to have other sexual partners in the absence of their regular but migrant sexual partners, some of the regular rural sexual partners of the migrant workers at Maganga said that they were involved in multiple and concurrent sexual partnerships. Such findings challenge what earlier studies show that the migrant men get infected with HIV at their workplaces and then they infect their stay at home partners. The reports from the partners of the migrant workers at Maganga even contradicted assumptions in existing studies that respondents are reluctant to disclose their own infidelity within their social networks (Twafik

& Watkins, 2007). The female respondents at Maganga said that they discussed their own multiple and concurrent sexual lives with their social network colleagues who included 'best' friends and 'good' neighbours. The knowledge of these respondents about others multiple and concurrent sexual live were quite detailed. They reported hearing of their colleagues' multiple and concurrent sexual partnerships from within their social networks of colleagues. They mentioned of their own observations of their colleagues' multiple and concurrent sexual behaviour, as reported by one of the female respondents at Maganga that:

Each time I visit her I find a man...and these are different men who include local men and migrant workers on their holidays. When I asked her, she told me that she sleeps with several different men because her husband is a migrant worker who is always away...

Based on these findings, it was clear that some of the migrant workers and their sexual partners were involved in multiple and concurrent sexual partnerships both at Kayelekera and Maganga. These findings also indicate that even those who are not migrant workers or regular partners of the migrant workers are sexually connected to these groups. As theorised in Chapter Two as well as in the findings of Williams et al. (2003) and Cassels et al. (2014), therefore HIV vulnerability not only for the migrant workers in the migrant communities but all those who interact with them on daily basis. Therefore, the next sub-sections trace some of the main reasons for some of the migrant workers and their sexual partners engagement in multiple and concurrent sexual partnerships. This is important especially when some of the migrant workers and their sexual partners within the same localities did condemn such behaviour. The migrant workers and their sexual partners reported many reasons for engaging in multiple and concurrent sexual partnerships. However, this research focuses on the main reasons that were commonly mentioned by the migrant workers and their sexual partners. These reasons included changes in social reproduction due to migration for the migrant workers, poverty and inequalities, desire for sex and resentment for their sexual partners.

6.2.1 Poverty, Desire for Sex and Resentment

Some regular sexual partners of the migrant workers at Maganga mentioned poverty, desire for sex and resentment as some of the reasons for their involvement in multiple and concurrent sexual partnerships. The female respondents who had other sexual partners said that they received little or no money from their migrant partners. The female respondents said that it was because of lack of money that they engaged in multiple concurrent sexual partnerships for them to supplement their income to support their families (see also Romero-Daza & Himmelgreen, 1998 for similar findings in Lesotho). However, some of the migrant workers were aware that their regular rural sexual partners were sleeping with other men for money, as reported by one of the migrant workers at Kayelekera:

...I think they do so because they want more money.

However, some of the female respondents reported that:

Our husbands are not here. They are living and sharing their money with other women at their workplaces. So we encourage each other to have other men.

Statements such as "our husbands... are living and sharing their money with other women at their workplaces" indicate that the women were aware that separation of their migrant partners resulted in establishment of new sexual partnerships at their workplaces. It is such behaviour that implied fewer remittances to the migrant workers' rural families and heavier responsibilities for the regular sexual partners left home. Although as described in Chapters One, Two and Three that migrant labour constitutes a major source of revenue for most rural villages in Malawi, respondents narratives for this study showed that most families left behind did not always benefit. Most of the migrant workers did not send enough money to their rural families on regular basis. This could be that the migrant workers incomes were not good enough. It could also be because the migrant workers were spending part of their income on alcohol consumption and extramarital sexual affairs. That is why for some of the regular rural sexual partners of the migrant workers having multiple and concurrent sexual partnerships was one of their strategies for earning money and other

goods for their living. However, the multiple and concurrent sexual behaviour were supported by their social network colleagues, as stated by one of the female respondents of one of her colleagues at Maganga that:

Her migrant husband does not send her money, and that's why we encouraged her to find substitutes [other sexual partners].

Most of the female respondents at Maganga said that their migrant partners only visited them. The men were most of the times absent in their households. Like in the findings of Romero-Daza and Himmelgreen (1998), it is this continuous absence of the men in their households that made the women responsible for their families. The women were involved in subsistence farming. During acute food shortages, the women worked in other people's gardens for cash or food, as reported by one of the female respondents at Maganga:

The money I receive from my migrant husband is not enough. I do piece work such as cultivating in other people's gardens. They pay me money. At times they give me food. It's not easy. That's why my friends encouraged me to have a spare wheel [another sexual partner].

At times, the women were engaged in intensive manual labour such as drawing water and moulding bricks for construction of other people's houses for which they received cash or food. Other income-generating activities included selling of vegetables and sugarcanes. Others brewed and sold beer. However, the women did not generate enough income from these activities. Therefore, it was not uncommon to find that multiple and concurrent sexual partnerships which were in most cases supported by social network colleagues constituted an alternative form for economic survival for some of the regular rural sexual partners and their families at Maganga.

Similar to the findings of Romero-Daza and Himmelgreen (1998), in most cases, the multiple and concurrent sexual partnerships involved the migrant workers. The women were not powerless victims of multiple and concurrent sexual partners. The female respondents at Maganga said that they preferred visiting and just returned migrant workers because they had money in their pockets and were zealous to spend some of their money on many sexual

partners. Hence, these sexual networks provided a route along which the migrant workers wage-earnings were diffused within their sending rural village, as one of the female respondents at Maganga said:

My friends told me that if the men are migrant workers, they usually have more money to spend on their sexual partners...they said that these were the men to target.

Some of the migrant workers on their holiday at Maganga collaborated the story that they were being targeted by the women, as reported by one of the migrant worker saying:

I think because they think I came with a lot of money from work, most women are attracted to me. When I greet them, they say that they are not well because good things are with me and that I don't want to share with them these good things. Others directly beg for money, sugar, salt, body lotion among other items. They are approaching me directly.

The key informants at Maganga collaborated that women were not powerless victims of multiple and concurrent sexual partnerships. They said that it was not uncommon for the women to approach men. They said that in most cases women would beg for money for weddings, night dances, groceries and food. The key informants said that such behaviour meant that the women were sexually available. They said that it was up to the men to provide what the women were asking for and have them for sex. The key informants gave examples such as a man giving money to a woman for night dance. They said that that would not be the end of the story but its beginning. The key informants said that in this case, the man would follow the woman at the night dance and thereafter. Therefore, the women of Maganga were not weak agents in as far as multiple and concurrent sexual partnerships were concerned. In fact, the women encouraged and gave tips to each other and they even approached men.

On the other hand, most of the female respondents at Kayelekera regardless of age and socio-economic backgrounds said that they were determined to benefit from the migrant mineworkers. They said that they had become "Dobadobas" [attractors] in order for them to benefit from the migrant workers. Like at

Maganga, the descriptions of the female respondents at Kayelekera of their sexual partnerships with the migrant workers were related to money. They said that they looked for men who had money. They specified most categories related to income levels and preferred those working for the Uranium mining company. The female respondents said that they were acting to access resources from the Uranium mining company. As in the writings of Mtika (2007), in a male-dominated migrant political economy, the only way for the women to improve their economic status was for them to become incorporated into a vicious cycle of multiple and concurrent sexual partnerships. The women at Kayelekera said that multiple and concurrent sexual partnerships with the migrant workers were the only way of uplifting themselves out of poverty. Because of poverty, the female respondents said that there was temptation that those involved in multiple and concurrent sexual partnerships with the migrants working for the Uranium mining company were having their lives improved, and therefore encouraged each other to follow suit:

To lift myself out of poverty, my friends told me that it was easy to make money by sleeping with more migrant men here. They said that having sex with the migrant mineworkers was the only way out. Every woman here says so.

The key informants at Kayelekera said that people's expectations from the Uranium mining company were not met. They said that most local men and women did not secure jobs at the Uranium mining company. They reported that, however, prices of goods and commodities had gone up. The key informants said that because of these economic hardships, the local women made a living through transactional sex with the migrant mineworkers. They said that the women preferred the mining workers because they were considered to have money to spend on sex. Money and the acquisition thereof were therefore perceived to be more of a pressing priority than ensuring safety even from HIV for some of the women at Kayelekera. Some of the female respondents at Kayelekera said that they had even mastered techniques of knowing the men who had money to spend on sex, as said by one of the respondents:

The moment a man comes here I will know whether he has money or more money or not. His behaviour will tell. Even his approach to me will reveal a lot. We recognise them easily.

The link between poverty and multiple and concurrent sexual partnerships may not be explicit. However, scholars such as Gillespie, Kadiyala and Greener (2007), Padilla *et al.* (2007), Poulin (2007), Swidler and Watkins (2007), Tawfik and Watkins (2007) and Masebo (2013) report that in situations of dire poverty and in the presence of consumer goods, women may be forced to indulge in multiple and concurrent sexual partnerships. Similarly, female respondents at Kayelekera claimed that with the opening up of the Uranium mine, they were exposed to more consumer goods than before. The female respondents at Kayelekera also said that prices of most essential goods escalated, thereby, forcing them as well as supporting colleagues to having multiple and concurrent sexual partnerships especially with the migrant workers who were perceived to have money in order for them to survive economically. One of the female respondents at Kayelekera summed the link between poverty and having sex with different migrant workers as follows:

The reason is poverty. Prices for food, clothes and everything else have become expensive. This is so because the migrant mineworkers are monopolising everything. By the way, they also monopolise women. So we encourage each other not to resist sleeping with as many of them [migrant workers] as possible to make money in order to alleviate our poverty.

Although the majority of the female respondents mentioned lack of money as reason for their involvement in multiple and concurrent sexual partnerships, at Kayelekera, money was not only for their survival, but as well as for consumer goods. For example, it was clear for the female traders at Kayelekera who combined with transactional sex that money was not only for their basic survival. Instead, they wanted more money by sleeping with many of the migrant mineworkers. They said that they needed fashionable clothing, cell phones as well as money for business entities and construction of houses. Some of the migrant workers collaborated what the female respondents at Kayelekera mentioned, saying that they supported the women with cash, business capital, in addition to buying them food, clothes, soap, airtime, cosmetics and paying for school fees for their children as well as housing rent.

Although the female respondents at Kayelekera said that they were aware that the migrant workers had other sexual partners, they said that they never complained. They said that those who would complain would lose out because the migrant workers would find other women. The migrant workers collaborated this arguing that there were so many easy going women at Kayelekera and that they had them at will (see similar findings by Chirwa, 1997; Campbell, 2003, 2004 in South African goldmines). However, the migrant workers were also aware that their sexual partners at Kayelekera had other men, but they said that they did not care, as stated by one of the respondents:

My friends told me that the woman might have other men, but why should I care. I am not married to her anyway.

The female respondents at Kayelekera expressed a sense of hopelessness as far as changing their risk sexual behaviour was concerned in the presence of economic hardships. Many felt that it was near impossible because the socio-economic environment presented no alternatives. They perceived a lack of economic opportunities. They said that transacting sex was the only way for their survival. Some of the female respondents even accused women championing Lusako network of peer educators saying they were of double standards. They said that although those championing Lusako network of peer educators claimed to be former commercial sex workers now involved in behaviour change campaign, they were in actual sense still practicing commercial sex work secretly.

A certain group of the female respondents especially at the migrant sending village of Maganga, however, mentioned desire for sex in the absence of their migrant partners as their reason to engage in multiple and concurrent sexual partnerships. For example, one of the female respondents at Maganga who reported her involvement in multiple and concurrent sexual partnerships reported of sexual desire as her reason, saying:

My husband is away. When I discussed this with my friends they said I should find a spare wheel [other sexual partner]. That is why I am going out with this other man...the spare wheel [other sexual partner].

In general, there were a number of reasons why some of the regular rural sexual partners of the migrant workers at Maganga indulged in multiple and concurrent sexual partnerships. Some groups of the female respondents at Maganga said that their migrant partners did not send enough money home and so they sought assistance in form of transactional sex from other men. Other groups of the female respondents at Maganga reported that they had desire for sex in the absence of their migrant partners. Such findings show that when the regular rural sexual partners of the migrant workers talked about having multiple concurrent sexual partners, they tended to blame their migrant partners. They had multiple and concurrent sexual partnerships because they were materially and sexually unsatisfied with their partners who were away.

In the available literature, wealthier men are suspected of having multiple and concurrent sexual partnerships because they have money to exchange for sexual favours (see Mishra et al., 2007; Tawfik & Watkins, 2007; Sawers, 2010). However, available literature does not provide information on poor men who also have sexual favours from the women. As a result of realities of daily life, some of the poor men in the study locations became more regular partners of the partners of the migrant workers, thereby, challenging existing social norms. For example, the female respondents at Kayelekera mentioned of a group of poor men who slept with them. In fact, the women shared some of their money they got from the migrant workers with these poor men. The female respondents said that the poor men identified the migrant workers for them. These poor men were well connected to the migrant workers. As described earlier, most of the migrant workers consulted such men when they were looking for potential sexual partners at Kayelekera. The female respondents at Kayelekera said that they made sure to be in good terms with such poor men or else they will be out of transactional sex business with the migrant mineworkers. However, the rationale of the female respondents at Kayelekera sleeping with these poor men remained to make money. The poor men identified the migrant workers with money for the women. The poor men also offered security to the women.

Similarly, at Maganga, some of the female respondents reported of poor men who slept with women whose migrant partners sent home good sums of money. Unlike at Kayelekera where the poor men identified the migrant workers for women, at Maganga the women said that the poor men met their desire for sex especially when their migrant partners were away to their workplaces. Some of the female respondents at Maganga even reported sharing their money and other goods received from their migrant partners with these poor men. At times, even clothes left home by the migrant workers were given to these poor men. The female respondents said that they lied to their regular migrant partners that they gave the clothes as payment after the poor men assisted them tilling land or maintaining houses. Therefore, it is difficult to conclude that women in the migrant areas are involved in multiple and concurrent sexual partnerships because of poverty especially in the absence of their migrant partners. For example, one of the female respondents at Maganga reported of her friend, saying:

You see her migrant husband provides her with everything. She told us that her migrant husband sends her MK10, 000 every month. But he only visits her once annually for two weeks...and when he comes he is busy visiting other women in other villages. He cheats [lies] that he is visiting his relatives. Then his two weeks holiday will be over leaving behind his wife here at home. So when she shared her story with us, we encouraged her that since her migrant husband is always away sleeping with other women she should also be sleeping with other men. By the way, many men here love her because her migrant husband is always away...but also because she shares some of her money and items with these other men.

One of the female respondents at Maganga was straight to the point, saying: Even if my migrant husband sends me MK40, 000 monthly, it is not enough compared to having a man.

Another category of the female respondents at Maganga said that they resented the infidelity behaviour of their migrant partners. Because of the social connections between the migrant workers places of work and their places of origin through contacts with friends, neighbours, relatives and workmates, it was easy for the female respondents to report that they were aware that their migrant partners had other sexual partners at their workplaces. The female

respondents said that their migrant partners did the same when they visited their home village. The migrant workers had other sexual partners in their rural home village as well as in the neighbouring villages. These female respondents said that they discussed with their social network colleagues that when their migrant partners turned to other women for sex, they should also be involved in multiple and concurrent sexual partnerships. As a result, these women pursued their sexual desires often in support of their social network colleagues. They said that they gave clues to each other. They said that they even identified other sexual partners for their fellow women. Most of these other sexual partners were friends, relatives or neighbours within the village or neighbouring villages as one of the female respondents at Maganga said:

At times we help men to propose sex to our women friends as I did yesterday.

The female respondents in this category said that they so no reason to be concerned with contracting infections including HIV. They argued that because their migrant partners were not concerned of avoiding diseases, there was no reason for them to be concerned with avoiding contracting diseases as reported by one of the female respondents at Maganga, saying:

I have a spare wheel [other sexual partner] who supports me with money...but what is more important is that he also meets my sexual desires... [Laughing]. Without this spare wheel [other sexual partner], I will starve and get sick with high blood pressure. I cannot live without a man while my migrant husband is busy sleeping with other women at his workplace...and because he is not afraid of HIV I also don't care.

The regular rural sexual partners resented the sexual behaviour of their unfaithful migrant partners who had other women at their migration destinations as well as in their original rural village and neighbouring villages. For a regular rural partner of a migrant worker having multiple and concurrent sexual partnerships could be a sign of resistance to her migrant partner's behaviour which included failure to provide basic needs, sexual satisfaction and being faithful. Reports were not uncommon of the migrant workers who returned to their home villages and got information from their relatives, neighbours and friends that their regular rural sexual partners were sleeping with other men. In

such cases, some of the migrant workers proposed other women and spent all their money and holidays with these other women as a way of further punishing their regular rural sexual partners, as reported by one of the female respondents at Maganga:

He came only once and was not staying at home. He was instead moving from one village to another claiming to be visiting his relatives, but was seeing his girlfriends. After his one month holiday he had his money finished and he left for work again leaving his wife with nothing saying he had punished her because he got reports from his friends and relatives that she was sleeping with other men in his absence.

In the available literature, women are considered inferior relative to men leading women to submit themselves to men's demands for sex, thereby, impeding their ability to protect themselves against HIV infection (Poulin, 2007; Swidler & Watkins, 2007). Available studies indicate that women's financial dependence on their sexual partners due to limited economic opportunities drives women into transactional sex (Gillespie, Kadiyala & Greener, 2007; Swidler & Watkins, 2007), and that such dependence on men reduces women's ability to leave their unfaithful sexual partners as well as insist on condom use (Schatz, 2005; Swidler & Watkins, 2007). However, this was not the case for all female respondents for this study. It was true that women were poorer than men. It was also true that labour migration put money and other resources used in sexual transactions and sexual networking in the hands of the migrant men. However, the women said that they were involved in sexual partnerships with the migrant workers at Kayelekera not only for purposes of survival, but as well as for consumer goods (see Padilla et al., 2007 for similar findings). Some of the regular rural sexual partners of the migrant workers at Maganga said that their reasons to seek other sexual partners were not only based on survival, but as well as on desire for sex while their migrant partners were away as well as resenting the infidelity sexual behaviour of their migrant partners (see Hirsch et al., 2007; Cassels et al., 2014; Huang, 2015 for similar findings). Social influence supported their cause including identifying potential sexual partners.

While the partners of the migrant workers mentioned poverty, desire for sex and resenting the infidelity sexual behaviour of their partners as reasons for engaging in multiple concurrent sexual partnerships, some of the migrant workers said that they were involved with other sexual partners as a result of changes in social reproduction of their daily life due to migration. Therefore, the following sub-section provides an analysis of these migrant workers involvement in multiple and concurrent sexual partnerships.

6.2.2 Changes in Social Reproduction of Daily Life due to Migration

Some of the migrant workers mentioned changes in social reproduction of their daily life due to migration as one of their reasons for being involved in multiple and concurrent sexual partnerships. As described earlier and similar to the histories of Moodie, Ndatshe and Sibuyi (1988) and Moodie and Ndatshe (1994) and in the narratives of Campbell (2003, 2004), most of the migrant workers at Kayelekera said that they moved in groups of friends and colleagues to *Chiphwirikiti*. The migrant workers at Kayelekera said that those that engaged with women at *Chiphwirikiti* knew each other. They said that they drank and seduced women in groups. They said that they advised each other on how to win women to have sex with them. For example, one of the migrant workers at Kayelekera provided a description of his working colleagues giving tactics to each other as follows:

They mentioned of making introductions of the work they did at the mine. They talked of buying beer for the women and giving them some money for breakfast or airtime. They said if that was done, the next step was to get their phone numbers, and if that was done then the women would agree to any sexual advances made.

Like in the histories of Moodie, Ndatshe and Sibuyi (1988) and Moodie and Ndatshe (1994) and in the narratives of Campbell (2003, 2004), in most cases, the migrant workers at Kayelekera went to find women at *Chiphwirikiti* in the company of friends and colleagues. In most cases, the migrant workers were introduced to the women by mining or drinking colleagues or bar attendants or watchmen or local friends – including the poor men mentioned earlier. The

migrant workers at Kayelekera shared their telephone numbers with as many people as possible. These social connections of the migrant workers played an important role in as far as multiple and concurrent sexual partnerships were concerned at Kayelekera, as described by one of the interviewees, saying:

My working colleagues and friends I met here introduced me to the women and encouraged me to sleep with them, saying this was the only medication for the tiresome job that we are doing here. So, when I received my first salary, my friends we were staying together suggested that we go for drinking...and while there, there were women. Some of the women were girlfriends to my friends who encouraged me to have one...and so I did...and I continue to doing so...

Although the migrant workplace of Kayelekera was far away from town, it had a lot of bars where the commercial sex workers and some of the local village women transacted sex. Therefore, the migrant workers gave the commercial sex workers and some of the local village women a readily available market for transactional sex at this rural workplace. The commercial sex workers and some of the local village women transacted sex with as many migrant workers as possible in order to uplift themselves out of poverty. As reported earlier, these women had even mastered techniques of knowing the migrant workers who had money in their pockets to spend on sex. The migrant workers at Kayelekera had money for the purchase of beer as well as sex. For some of the migrant workers at Kayelekera taking beer and having sex with the commercial sex workers and the local village women were forms of available and easy entertainment (see also Chirwa, 1997; Campbell, 2003, 2004 for similar findings on these in the South African goldmines).

At Kayelekera, some of the migrant workers had even invested their earnings in bars where their migrant colleagues and locals drank beer. Some of the women followed suit. As described earlier, some of the women reported brewing beer as a source of their income. It was not uncommon to find women patronising these beer houses. However, by far the main clientele were the migrant workers. The brewing and selling of beer allowed for the redistribution of the migrant workers wage-earnings to the women. At Kayelekera, the Uranium mining company supported this.

According to Neville Haxihum, Paladin Country Director, the Uranium mining company provided two beer coupons to each mineworker per day. However, most of the migrant workers said that they banked their coupons and used them at weekends with their girlfriends and local friends from the surrounding villages including *Chiphwirikiti*. They said that they preferred drinking together with others in groups. They said that beer was tasty when drinking with others especially with women and the locals who knew the area well. However, these beer coupons could as well as have impact on the migrant workers and the general community risk to health including HIV risk behaviour. The beer coupons had potential to create, fuel and strengthen unhealthy risk sexual behaviour. Such an impact could as well as reverse potential gains of HIV campaigns championed by the Uranium mining company and some Non-Governmental Organisations at Kayelekera. The migrant workers said that in most cases, sexual acts were preceded by alcohol consumption such as:

It is through beer drinking that we meet new girlfriends. At Chiphwirikiti there are always a lot of women drinking with men and sleeping with them.

The migrant workers reported that there were so many easy-going women at Kayelekera. As reported earlier, even when the migrant workers did not have money, the women agreed to be paid at the end of the month when the migrant workers received their salaries. The migrant workers said that they knew that they shared the women. The female respondents at Kayelekera confirmed what the migrant men said, as reported by one of the women, saying:

A man picked me at one of the bars one night. The following night he picked my friend. I reported this to his work colleague who was also drinking at the same place. His colleague told me not to worry. He picked me instead. But the other day this man again picked my other friend. What matters here is a man. Having a man means money here at Kayelekera.

The connections between multiple concurrent sexual partnerships and social reproduction of daily living at a migrant rural workplace of Kayelekera, highlights the importance of local social norms (Campbell, 2003, 2004; Yang, Derlega & Luo, 2007; Clark, 2010). Like in the histories of Moodie, Ndatshe and Sibuyi

(1988) and Moodie and Ndatshe (1994) and Campbell (2003, 2004), the migrant workers social networks were forged in response to their daily work, leisure and interpersonal relationships within impoverished living environment. An aggressive and macho masculinity formed a pillar of identity formation for some of the migrant workers at Kayelekera. The migrant workers had to creatively deal with integration of their daily indignities of their lives. It was against this background of social constructions of identities within socially impoverished context of life that made some of the migrant workers involved in multiple concurrent sexual partnerships with the commercial sex workers as well as with the local village women at Kayelekera in addition to their regular rural sexual partners in their original rural home villages.

The findings of this research show that some regular rural sexual partners of the migrant workers were involved in multiple and concurrent sexual partnerships because they needed money to support themselves and their families, they had desire for sex in the absence of the migrant partners, and they resented the infidelity sexual behaviour of their migrant partners. The research findings show that some of the migrant workers involvement in multiple and concurrent sexual partnerships was due to changes in living as a result of migration. In all cases, the findings of this research show that their social networks of workmates, friends, colleagues, neighbours and relatives played an important role in shaping and reinforcing multiple and concurrent sexual partnerships. Like in the writings of Campbell (2003) and Kaler (2004), having multiple and concurrent sexual partners was a particular status symbol, the yardstick by which masculinity and success were measured among some of the migrant workers local social networks. Their definitions of masculinity were closely entwined with demonstrating sexual prowess through multiple concurrent sexual relationships. The migrant workers were keen to discuss their 'conquests' with each other. Their sexuality was defined by how many sexual partners they had at a time.

The migrant workers and their sexual partners who believed that their best friends had multiple and concurrent sexual partners were themselves more likely to report being involved in the practice. It might not only be the case that the migrant workers and their sexual partners who had multiple and concurrent sexual partners chose social network friends who were also involved in the practice. It might also be that seeking multiple and concurrent sexual relationships aided in the formation of close friendships, as it has been suggested that drinking together and then subsequently visiting commercial sex workers may serve as a bonding experience among the migrant workers (Moodie & Ndatshe, 1994). Such findings suggest that there was a considerable homogeneity in friendships in terms of their sexual behaviour both at Kayelekera and Maganga. However, if one of these migrant workers or their sexual partners was infected with HIV, chances of spreading the virus further to their sexual partners were high. Therefore, the following sub-section provides an analysis of results on condom use or non-use among the migrant workers and their sexual partners especially those residing in their original rural home areas.

6.3 Condom Use

The migrant workers and their sexual partners were asked if at all they discussed about condom use with their sexual partners and their social network colleagues. The respondents were also asked if at all they used condoms with both their casual and regular sexual partners. From their responses, both the migrant workers and their sexual partners did not use condoms within their regular sexual partnerships. Most of the respondents associated condom use with the commercial sex workers. For example, when asked about using condoms with her migrant partner, one of the female respondents at Maganga said:

No, that will mean there is no marriage. I am not a commercial sex worker.

It was clear from the views of the migrant workers and their sexual partners that they did not use condoms within their regular sexual partnerships. In other words, unprotected sex was a norm within their regular sexual partnerships. In the existing literature, the most fundamental objection to condom use within regular sexual partners is that condoms are intruders in a domestic sphere (Chimbiri, 2007; Caballero-Hoyos, 2008; Thornton, 2008; Hirsch, 2010). Social norms at Maganga encouraged and supported this: "...cannot use condoms because are in marriage" or "...condoms are for the commercial sex workers".

As Chimbiri (2007) reports, condom use among regular sexual partners when mentioned within social networks, the subject provokes streams of objections because condom use is associated with the commercial sex workers and that introducing condom use into a relationship that is considered to be based on love and trust might be viewed as communicating to a partner that the relationship is not exclusive, but commercial or transactional and that there is fear of contracting infections including HIV. Such an association of condoms with the commercial sex workers is clear in the Government of Malawi policy guidelines which have always recommended condom use as a method for disease prevention in casual sexual relationships (see Chimbiri, 2007 for policy descriptions).

As such, some of the social norms could be barriers to altering some of the behaviour including in the fight against HIV. This is especially true because as evidence presented in this study shows, some of the regular rural sexual partners of the migrant workers at Maganga had other sexual partners. However, the regular rural sexual partners of the migrant workers did not use condoms even with their casual sexual partners. None of the female respondents at Maganga reported having ever used condoms. Many of the regular rural sexual partners of the migrant workers said that they could try protecting themselves by using condoms with their casual sexual partners, but would get HIV from their migrant partners anyway. They said that they were aware that their migrant partners had other sexual partners while at their workplaces and when they visited their rural homes. When asked if she would suggest using condoms with her casual sexual partners, one of the female respondents at Maganga said:

No, no, that cannot happen. I cannot use condoms with them. After all, I may try to protect myself, but I will get HIV from my migrant

husband anyway. We know that our migrant husbands have other women at their workplaces just like they do when they come here.

Other regular rural sexual partners of the migrant workers said that condom use would hinder their enjoyment for sex even with their casual sexual partners, as reported by one of the female respondents at Maganga:

It is the sexual fluids that make sex enjoyable...using condoms will hinder my desire to enjoying sex.

Other female respondents even thought that their casual sexual partners had no diseases and therefore there was no need to insist on using condoms, as reported by one of the respondents at Maganga who said that did not use condoms with her casual sexual partner:

By the way he looks, I don't think he has HIV. He doesn't look sickly. He doesn't even visit the clinic regularly. So, there is no point of using condoms with him.

Such findings confirm that HIV-vulnerability in the migrant sending rural villages is not simply a function of exposure of the female partners to HIV infection through their migrant partners championed by most of the earlier studies reviewed in Chapter Two. From the findings of this research, it was clear that some of the regular rural sexual partners of the migrant workers had other sexual partners. However, they did not use condoms with these casual sexual partners. Yet, it was also clear from the findings of this study that the migrant workers did not use condoms with their regular rural sexual partners saying that they were in "marriage" and that their regular rural sexual partners "were not the commercial sex workers".

These findings are similar to other findings in the southern Africa. For example, Crush *et al.* (2010), reporting of migrant workers in Mozambique and Swaziland and Corno and de Walque (2012), reporting of migrant workers in Zimbabwe state that the migrant workers view their casual sexual partners as having a greater risk of HIV infection than their regular rural partners and therefore are less likely to perceive a need to discuss and use condoms with their regular rural partners. As a result, for many of the migrant workers talking about safer

sex with a regular rural partner is a lower priority compared to having sex after a period of separation.

Although they did not use condoms with their regular rural sexual partners, majority of the migrant workers did not know their HIV status and that of their sexual partners. Most of those who tested as individuals did not even reveal their status to their sexual partners. They said that they were afraid of mistrust. They said that they were even afraid of suggesting going for HIV testing together before having sex, as argued by one of the female respondents at Maganga:

In case my partner will test HIV-negative and I will test HIV-positive...what will I do?

Unlike at Maganga, some of the migrant workers always used condoms with some of their casual sexual partners at Kayelekera. These migrant workers said that they always used condoms with their casual sexual partners at Kayelekera because they did not trust them. The migrant workers in this category even urged their social network colleagues to use condoms. They even shared condoms within their social groupings. In the absence of condoms, they urged their social network colleagues to forgo sex. Such findings are similar to the study of Chimbiri (2007) that social norms among peers are associated with condom use but with some specific populations. The migrant workers advice to use condoms was specifically related to local knowledge about sexual behaviour of potential sexual partners. If the partner was considered risky by having multiple and concurrent sexual partners such as the commercial sex workers at the workplace, a condom was required. For example, one of the migrant workers at Kayelekera narrated as follows:

...my friends who were coming from drinking beer that night saw me going into the house of one of the women at Chiphwirikiti. The following morning when we were taking tea at the mine they said that I did not do the right thing the previous night. They said that it would have been better if I had used a condom with her because she is a commercial sex worker.

Also, listening to one of the discussions among three migrant workers talking about condoms at one of the bars at Kayelekera, their conversation ended with

an encouragement to use condoms especially with the commercial sex workers in order to avoid contracting HIV. Therefore, for some of the migrant workers, their social groups provided opportunities for social learning, social evaluation as well as social influencing on condom use although with some of their casual sexual partners especially the commercial sex workers. Therefore, this confirms theories that have identified significance of what others say one should do and what they are actually doing (Latkin, Formanb, Knowltona & Shermanc, 2003; Kohler, Jere and Watkins 2007; Zembe *et al.*, 2012). However, not all the migrant workers used condoms with their casual sexual partners at Kayelekera.

Although all female respondents at Kayelekera said that they had used condoms, none of them said that had used condoms regularly. The reasons most often mentioned included trusting partners and unavailability of condoms. The respondents said that with time, some of their casual sexual partners became their regular sexual partners. In such cases, the sexual partners trusted each other. They stopped using condoms. For example, one of the migrant workers at Kayelekera reported that could only use condoms for a maximum of three times with same woman, thereafter, would consider it regular sexual relationship that would not require using condoms.

Some key informants at Kayelekera said that some men did not like using condoms. The key informants also reported of some men who preferred sleeping without using condoms with women taking antiretroviral drugs. The key informants said that such men argued that those women on antiretroviral drugs were sweet sexually. The key informants said that men at Kayelekera had information on women who were taking antiretroviral drugs through interactions with the locals around the area. Even leaders of Lusako network of peer educators had records of some of the persons who were living with HIV including those who were taking antiretroviral drugs. However, such risky behaviour could as well as be key for new HIV infections as well as reinfection among these men and women. Efforts were made to talk to some of the men. They argued that they did not fear contracting HIV especially now that antiretroviral drugs were easily available and accessible, such as:

Even when I contract HIV I will continue living a healthy life because there are free [antiretroviral] drugs nowadays in most of the clinics.

For others, condoms were hardly available at Kayelekera. Discussions with grocery shop and bar owners revealed that condoms ran out quickly. However, the migrant workers and their sexual partners at Kayelekera said that they feared accessing condoms from the HIV testing clinic at Chiphwirikiti. They said that they could be seen by their potential sexual partners. Although leaders of Lusako network supplied condoms to the commercial sex workers at Kayelekera, they said that the supplies ran out quickly. Therefore, findings from this research suggest that in the absence of condoms as well as in the presence of trust, some of the migrant workers had unprotected sex with some of their sexual partners at Kayelekera. Similarly, Campbell (2003) writing about the commercial sex workers on a Johannesburg mine, states that it was not uncommon to find sex workers with up to 30 mineworker sexual contacts a month who had never used a condom despite fears of HIV because their clients were unwilling to pay for protected sex. This could be because the migrant workers reinforced sense of macho identity as a coping mechanism for dealing with their everyday life.

In summary, some of the migrant workers used condoms with some [not all] of their casual sexual partners at their workplace. The regular rural sexual partners of the migrant workers did not use condoms with their rural casual sexual partners. However, the migrant workers did not use condoms with their regular rural sexual partners. Therefore, these research findings suggest that if one of these sexual partners had HIV, chances were high of transmitting the virus on to their sexual partners.

6.4 Conclusion

The findings of this research show that some of the migrant workers were involvement in multiple and concurrent sexual partnerships due to the changes in social reproduction of their daily life as a result of labour migration. For them, multiple and concurrent sexual partnerships were forms of easy available

entertainment. They had money in their pockets for sexual transaction with different partners. Their social networks of colleagues, friends and workmates were also involved in the practice and encouraged the same.

The findings also show that most of the female respondents at the migrant workplace of Kayelekera slept with different migrant workers in order for their economic survival. They encouraged each other to doing so. The findings further show that some needed money and other goods from their other men. The regular rural sexual partners of the migrant workers at Maganga were highly dependent on remittances from their migrant partners. If the money sent home was on irregular basis or insufficient, household poverty deepened, and therefore, the partners of the migrant workers at Maganga resorting to transactional sex with different men for cash or goods. They wanted money and other goods to support their families. However, other regular rural sexual partners of the migrant workers at Maganga had desire for sex in the absence of their migrant partners. These regular rural sexual partners of the migrant workers at Maganga rarely saw their migrant partners. Others were resenting the infidelity sexual behaviour of their migrant partners. In all these cases, the regular rural sexual partners of the migrant workers who had other sexual partners encouraged and supported each other to doing the same. However, if one of these migrant workers or their sexual partners was infected with HIV, chances of spreading the virus further to their sexual partners would be high. Therefore, this study sought to explore chances of spreading HIV within the migrant workers and their sexual partners by finding out if at all the migrant workers used condoms with their sexual partners.

Some of the migrant workers at Kayelekera used condoms, but with some of their casual sexual partners. The migrant workers in this category shared condoms among their social networks of colleagues and encouraged each other to use condoms, but with some of their casual sexual partners especially the commercial sex workers. This might have influenced group membership thinking and actual use of condoms, but with specific sexual partners.

Although there was some evidence of the acceptability of condom use in casual sexual encounters at Kayelekera, some of the migrant workers still had unprotected sex with some of their casual sexual partners at this rural workplace. For them, condoms were not always available. With time, others had trusted their casual sexual partners. Their casual became their regular partners.

Although some of the migrant workers used condoms with their casual sexual partners at their workplace, this did not render them invulnerable to HIV-infection. The migrant workers did not use condoms with their regular rural sexual partners. Social norms did not support use of condoms within regular partnerships. Therefore, the migrant workers were subjected to multiple, but conflicting and contradicting social norms on the use of condoms. Peer workplace norms which encouraged use of condoms among the migrant workers and their casual sexual partners as well as rural home family norms which discouraged use of condoms among the migrant workers and their regular sexual partners.

Again, as evidence for this research shows, if either the migrant workers or their regular rural sexual partners become infected with HIV, the virus might easily be spread within their sexual partnerships especially that they did not use condoms regularly. The next chapter concludes this research journey.

Chapter Seven

Conclusions and Significance of Research Findings

7.1 Introduction

The aim of this research was to explore the role of social networks on HIV risk reduction strategies and transmission mechanisms among the migrant workers and their sexual partners at the rural workplace of Kayelekera and one of the migrant sending rural village of Maganga in Malawi. Findings from this research confirm that the social networks have a role on both HIV risk reduction strategies as well as transmission mechanisms among the migrant workers and their sexual partners both at Kayelekera and Maganga. After presentation of an overview of the research findings, this last chapter then concludes by discussing the significance of the study findings which is that by applying a social network perspective can help HIV intervention programmes among the migrant workers and their sexual partners both at Kayelekera and Maganga.

7.2 Key Research Findings

This section summarises main research findings presented in Chapters Five and Six. The section first summarises the social networks of the migrant workers and their sexual partners at Kayelekera and Maganga. Thereafter, the section summarises the role of social networks on HIV risk reduction strategies among the migrant workers and their partners. Then, the section summarises the role of social networks on HIV transmission mechanisms among the migrant workers and their partners.

Findings from this research show that the migrant workers and their sexual partners were connection socially and sexually both to the migrant workplaces

and migrant original rural villages. These findings are in line with the observations of Andersson (2001) that social networks connect migrants in the host society and friends, partners and relatives in their original sending areas. Like in the observations of Anderson (2001), the social networks of the migrant workers and their sexual partners were neither individuals, but sets of persons who included their relatives, friends, neighbours, workmates, sexual partners and many others with whom they interacted with on daily basis.

Like in the histories of Moodie, Ndatshe and Sibuyi (1988), Moodie and Ndatshe (1994), and Campbell (2003, 2004) in the South African goldmines, the migrant workers in the mining area of Kayelekera categorised themselves in a range of informal social groupings which included workmates, roommates, drinking colleagues, fellow church members, friends, brothers and uncles among others. At Kayelekera, the migrant workers shared accommodation, ate together, drank together and visited their sexual partners together. They also shared information about their sexual lives. The migrant workers were socially embedded in an interactional pattern of social cooperation and sharing.

Like in the observations of Romero-Daza and Himmelgreen (1998) in rural Lesotho, the social groupings of the migrant workers were not only peculiar to the workplace of Kayelekera, but as well as in the migrant sending village of Maganga where the regular rural sexual partners of the migrant workers categorised themselves as neighbours, fellow sexual partners of the migrant workers or as friends. The regular rural sexual partners of the migrant workers together with their relatives and children assisted their friends or neighbours with different kinds of household work, which included fetching for water and firewood as well as gardening. They lent money to each other. They shared food. They advised each other. They shared information including their sexual lives. They linked each other to potential sexual partners.

As mentioned earlier, the migrant workers and their sexual partners not only had connections at the workplace or the migrant original rural villages, but were connected both to the migrant workplace as well as original rural sending villages socially and sexually. While at workplace, the migrant workers were in contact with their sexual partners, friends, relatives and parents in their original rural villages. These contacts were through sharing of information, telephone calls, sexual affairs, sending and receiving of money and other gifts as well as regular visits. The regular rural partners of the migrant workers were also in contact with their partners, friends, relatives and colleagues of their partners at the migrants' workplaces. Both the migrant workers and their sexual partners lived dual lives that characterised their social and sexual networks. The migrant workers and their sexual partners were connected socially and sexually to as many persons as much as possible both at the migrants' workplaces and sending village.

It is such social networks of the migrant workers and their sexual partners that had a role on both HIV risk reduction strategies as well as transmission mechanisms. The social networks of colleagues were the main dissemination channels for HIV information among the migrant workers and their sexual partners both at Kayelekera and Maganga. These social network colleagues included workmates, roommates, neighbours, friends, sexual partners and relatives. Such findings suggest that the formal HIV information from the Uranium mining company, government and Non-Governmental Organisations was finding its way into the migrant workers and their sexual partners through the social networks of the migrant workers and their sexual partners. As a result, HIV related behaviour among the migrant workers and their sexual partners were influenced by their social networks of colleagues. The influence was through discussions that took place alongside other daily life activities. For the regular rural sexual partners of the migrant workers, their HIV and AIDS discussion partners were usually from the same local rural village. While for the migrant workers, there was usually greater social integration from different geographical locations meeting at the workplace as well as in their original rural homes. Therefore, HIV information was socially constructed, socially disseminated and socially practised among the migrant workers and their sexual partners. It was therefore not surprising to find out that knowledge about HIV and AIDS was universal among the migrant workers and their partners.

The social networks influenced HIV risk reduction strategies among the migrant workers and their sexual partners. The migrant workers and their regular sexual partners were able to check on the sexual behaviour of their sexual partners through the support of their social network of colleagues, workmates, friends and relatives whilst living apart. Others encouraged their social network colleagues to consult asing anga [the traditional doctors] to prevent their regular sexual partners from having other sexual partners. Others consulted their social network of relatives and friends to advise their regular sexual partners not to have other sexual partners. Others advised their social network colleagues to trust upon the Lord to avoid temptations of getting indulged in HIV risky sexual behaviour. Others encouraged each other to use condoms with their casual sexual partners especially the commercial sex workers. Within the social networks of the migrant workers and their sexual partners, they scrutinised their concurrent prospective sexual partners including checking symptoms of sicknesses as well as finding out if at all they visited clinics regularly. Within their social networks some of the migrant workers encouraged each other to shift from sleeping with certain groups of sexual partners considered on be on HIV high risk to others considered to be on HIV low risk such as from the commercial sex workers to women working at the mine, then to traders and finally to local women and school girls.

Within their social networks, the group members monitored each other. On the other hand, the formal channels of HIV risk reduction efforts through for example the Uranium mining company, government and Non-Governmental Organisations could only observe a small fraction of sexual behaviour. In contrast, the social networks of the migrant workers and their sexual partners were able to monitored their colleagues through their mobilised local social networks, and that the members of the social groups had to abide by the sanctioned behaviour or else would be considered hypocrites (see Clark, 2010 for affirmation of commitment and monitoring of sanctioned behaviour in social groups). However, the very same social networks had potential for HIV risk

transmission mechanisms among the migrant workers and their sexual partners.

The social networks of the migrant workers and their sexual partners had potential for sexual networking through which HIV could be spread. Available studies show that the risk of HIV infection can be reduced if sexual networking especially multiple and concurrent sexual partnerships is eliminated (Mishra & Bignami-Van Assche, 2009; Kretzschmar, White & Caraël, 2009). However, from the findings of this research, the attainment of such a goal is unlikely for some of the migrant workers and their sexual partners both at Kayelekera and Maganga.

Some of the migrant workers and their sexual partners had additional sexual partners while living apart. However, such HIV risk behaviour were supported by the social networks of the migrant workers and their sexual partners. For example, when the migrant workers or their sexual partners wanted additional sexual partners, their social networks of friends, colleagues, workmates, relatives and neighbours played an important role in approving as well as identification of potential additional sexual partners.

While at Kayelekera, with the support of their social network colleagues, some of the migrant workers had sexual partnerships with the female traders. They also slept with their female co-workers. They further had sexual partnerships with the women from the surrounding villages. Additionally, they slept with the commercial sex workers. The impact of extended separation among the migrant workers and their regular rural sexual partners as well as the impact of the high-risk living environment that characterised the migrant workplace of Kayelekera facilitated HIV high risk sexual behaviour that could increase the chances of HIV infection among the migrant workers and their regular sexual partners and many others.

For example, after working, some of the migrant workers at Kayelekera had nothing else to do apart from drinking beer and having sex with different women

in support of their social network colleagues. Several women preferred the migrant workers both at the migrant sending area of Maganga as well as at the workplace area of Kayelekera. For the women who had limited economic opportunities, transactional sex was their main option for making a living. For example, several women settled at *Chiphwirikiti* near the Uranium mine at Kayelekera in order for them to transact sex with many different migrant workers. The mining hostels as well as the informal shelters at *Chiphwirikiti* housed many single migrant workers who were potential clients for the women at Kayelekera.

Just like some of the migrant men, some of the women encouraged each other to indulge in sexual transaction with many different migrant workers at Kayelekera. The women hung around bars where the migrant workers drank beer. The women were also available at the marketplace where the migrant workers bought their groceries. The women were also neighbours of most of the migrant workers residing at *Chiphwirikiti*. Within such living environment, it was not uncommon for some of the migrant workers reporting that in addition to their regular rural sexual partners at their rural home village, they were sleeping with many other different women including those working at the mine, traders, local village women and the commercial sex workers at Kayelekera.

In the available literature (Chapter Two), regarding the migrant workers and their rural sexual partners, the understanding is that HIV is spread from the commercial sex workers at the workplaces through the migrant workers to the rural sexual partners. However, my research findings show that casual sex was not only easily available at the workplace of Kayelekera, but as well as at the migrant sending village of Maganga. Some of the regular rural sexual partners of the migrant workers at Maganga had unprotected multiple and concurrent sexual partnerships when their migrant partners were away to their workplaces.

Although the additional sexual partners of the migrant workers at Kayelekera mentioned desire to benefit from the Uranium mining company through sexual partnerships with many of the migrant workers, the regular rural sexual partners

of the migrant workers at Maganga said that they had other sexual partners due to poverty because their migrant partners did not send them enough money, desire for sex in the absence of their migrant partners and that they were resenting their migrant partners infidelity. Although some of the regular rural sexual partners of the migrant workers worried of contracting HIV, others argued that even if they avoided HIV they would get it from their unfaithful migrant partners anyway. Like at Kayelekera, social influence at Maganga encouraged and supported attitudes towards multiple and concurrent sexual partnerships among some of the regular sexual partners of the migrant workers. Such support and encouragement within social networks to have additional sexual partners suggests that there was homogeneity in terms of friendships for multiple and concurrent sexual behaviour. However, if one of these migrant workers or their sexual partners was infected with HIV, chances of spreading the virus further to their sexual partners were high.

As Collins (2006) and Crush *et al.* (2010) observe in the case of rural Mozambique and Swaziland that the reason for continued spread of HIV is the continuation of low-wage migrant labour system that continues to fragment family life, and thereby help sustain HIV epidemic, the findings of this research support Collins, Crush and others observations and confirm that rural migrant-sending villages like workplaces are high-risk places for HIV infection for both the migrant workers and their sexual partners. HIV-vulnerability in the migrant sending villages is not simply a function of exposure of female sexual partners to HIV infection through their migrant partners championed by most of the earlier studies reviewed in Chapter Two. This is especially true because although some of the migrant workers used condoms with their casual sexual partners at their workplace, none of the regular rural sexual partners. Yet, none of the migrant workers used condoms with their regular rural sexual partners.

The social networks of the migrant workers and their sexual partners made the use of condoms within regular sexual partnerships a complex process. They

were in "marriage". Condoms were meant for "the commercial sex workers". As a result, the migrant workers were subjected to multiple and conflicting sexual behaviour norms on the use of condoms. The workplace norms and family norms on the use of condoms contradicted each other. Available literature document that condoms are considered intruders within regular sexual partnerships (Chimbiri, 2007; Caballero-Hoyos, 2008; Thornton, 2008). It is such social norms that might present as barriers in the response against HIV.

Social norms in favour of condom use at Kayelekera resulted into some of the migrant workers discussing about condom use, sharing of condoms and even encouraging using condoms. This might have influenced use of condoms among the migrant workers and their sexual partners especially the commercial sex workers. For some of the migrant workers at Kayelekera, their social networks not only provided information about using condoms, but influenced the use of condoms although with certain types of their sexual partners especially the commercial sex workers. The social influence for the migrant workers to use condoms with the commercial sex workers at Kayelekera was based on their social evaluation of their potential sexual partners. If a potential sexual partner was considered being at high risk of HIV such as a commercial sex worker, then it was required to use a condom. This confirms theories that have identified significance of what others say one should do and what they are actually doing about using condoms (Latkin, Formanb, Knowltona & Shermanc, 2003; Zembe et al., 2012). However, not all of the migrant workers used condoms with all of their sexual partners at Kayelekera. For some, condoms were not always available. For others, over time their casual sexual partners became their regular sexual partners whom they trusted (see also Campbell, 2004 for South African goldmines; Crush et al., 2010 for Mozambique and Swaziland; Corno & de Walque, 2012 for Zimbabwe for similar findings on nonuse of condoms among the migrant mineworkers and their sexual partners).

7.3 Significance of Research Findings

In the existing literature on migration and HIV, some researchers have examined the content of messages that are prescribed for avoiding HIV (Mtika, 2007; Crush et al., 2010). Other scholars have examined the multivariate or sometimes bivariate relationships between migrations or types of migration and individuals' HIV-risk behaviour or actual HIV status (Anglewicz, 2011; Corno & de Walque, 2012). However, such studies have approached the migration-HIV link by selecting a particular factor to investigate such as one's number of lifetime sexual partners or use of condom at last sexual encounter. The outcomes have then been compared with the non-migrants to see which group of people is comparatively better at protecting themselves than others (Lurie et al., 2003; Anglewicz, 2011). By framing the questions in such either or terms, researchers do not consider potential mechanisms that may simultaneously produce beneficial and detrimental effects coinciding with the same factors. Instead, most of previous studies targeting the migrant workers and their sexual partners have provided results that are described as singular perspectives that rarely vary within the social groups and are sometimes painted with such broad strokes as to apply to all the migrant workers and their sexual partners regardless of social contexts (Campbell, 2003; Genius & Genius, 2005). However, using qualitative designs with multiple methods, this research has demonstrated that the social and sexual networks of the migrant workers and their sexual partners do not exist in a void.

Therefore, the individual targeted approaches leave room for the importance of social contexts among the migrant workers and their sexual partners. The individual targeted approaches fail to incorporate the negotiations and potentially complex nature of such process within any given social groupings of the migrant workers and their sexual partners. The migrant workers and their sexual partners live as members of social groups. The migrant workers and their sexual partners are socially and sexually connected both to the migrants' workplaces as well as to the migrants' original rural homes. The migrant workers and their sexual partners are embedded in social-cultural norms that

characterise their daily living. It is through these social interactions that the migrant workers and their sexual partners have potential to simultaneously protect themselves and their colleagues against HIV while at the same time put themselves and many others at risk of contracting HIV.

Therefore, it is necessary to understand the social contexts within which the migrant workers and their sexual partners learn, evaluate and utilise HIV risk reduction messages. This would help remove some of the existing presuppositions about the contribution of the migrant workers and their sexual partners to the spread of HIV. It is necessary to move the focus from the actors, in this case, the migrant workers and their sexual partners, to the relationships between them. As this research has demonstrated that social networks of group members in collective establishments of new norms of sexual behaviour are important to the migrant workers and their sexual partners. Social networks of the migrant workers and their sexual partners are stronger advocates of HIV risk sexual behaviour as well as HIV risk reduction strategies.

Therefore, in order to understand the dynamics and diffusion of behaviour change in response to HIV among the migrant workers and their sexual partners, it is essential to incorporate the impact of their daily social life. Otherwise, high-risk sexual behaviour such as unprotected sex with multiple and concurrent sexual partners of the migrant workers and their sexual partners both at the migrant workplace of Kayelekera and the migrant sending rural village of Maganga are far too complex to be changed by simply distributing some few condoms and by providing HIV and AIDS information through posters, billboards, videos and training workshops to some selected participants.

As Campbell (2003), Kaler (2004) and Thorntorn (2008) note, sexuality consists not of isolated items of sexual behaviour, but of a complex of actions, emotions and relationships, whereby, persons are incorporated into social relationships of colleagues, friends, relatives, workmates and sexual partners. It is clear from the findings of this research that HIV is a social problem, and therefore, the

challenge for the migrant workers and their sexual partners at Kayelekera and Maganga is not necessary to have increased knowledge about HIV and AIDS through posters, billboards, videos and lectures, but to change their risky sexual behaviour.

The findings from this research suggest that an HIV intervention programme targeting the migrant workers, their sexual partners and their communities has to be community led and not championed by the mining company or Non-Governmental Organisations or government officials as is the case now both at Kayelekera and Maganga. The results of this research suggest that social influence must exist for the migrant workers and their sexual partners to adopt some HIV risk reduction strategies. Therefore, the HIV intervention programmes aimed at the migrant workers, their sexual partners and the larger community that interacts with them on daily basis should be structured along social networks existing both at the migrant workplace and migrant original rural village. The entry point should be the influential persons within the social networks of the migrant workers and their sexual partners. These influential persons should be utilised as avenues for delivering behaviour change messages within their social groupings (Kelly et al., 2006; Kohler, Jere & Watkins, 2007).

The findings from this research suggest that the behaviour change messages should focus on discouraging multiple and concurrent sexual partnerships as well as promotion of consistent condom use among the migrant workers and their partners. The behaviour change messages should further promote HIV testing among the migrant workers and their sexual partners. However, for the behaviour change messages to yield desired results, it would be necessary to also incorporate economic empowerment especially for women both at the migrant workplace and sending village. The economic empowerment should as well as be situated within the social groups. In doing so, members will have space to simultaneously further learn, influence and monitor behaviour related to HIV risk reduction strategies while involved in economic empowerment initiatives.

More work needs to be done to outline specific HIV interventions in the study sites. As a starting point, my findings suggest that an HIV intervention study could be conducted with an aim of evaluating the effectiveness of an HIV intervention programme targeted at the migrant workers, their sexual partners and the larger community. Such an HIV intervention study could determine the levels on economic empowerment and behaviour change, that is, sexual networking and consistent condom use at baseline phase and at final stage. The HIV intervention study could further examine rates of HIV-infection both at the baseline phase and at final stage. Examining rates of HIV-infection among the migrant workers, their sexual partners and the larger community that interacts with them on daily basis would help in the identification of who to target further with HIV intervention activities.

For a longer term solution, these findings suggest that efforts should be made to curtail low-wage labour migration in which men migrate without their regular sexual partners. To achieve this, the Malawi Government development strategies have to go beyond natural resources with economic activities concentrated in a few 'economic islands' (Carruthers & Babb, 2000; Mtika, 2007; Lurie & Williams, 2014) to places where labour is produced. Provision of technical skills and start-up capital for both men and women would be a good starting point.

References

- Abdul-Quader, A.S., D.D. Heckathorn, C. McKnight, H. Bramson, C. Nemeth, K. Sabin, K. Gallagher & D.C. Des Jarlais. 2006. "Effectiveness of Respondent-Driven Sampling for Recruiting Drug Users in New York City: Findings From a Pilot Study." *Journal of Urban Health*, 83(3):459-476.
- Acharya, R., K. G. Santhya & S. J. Jejeebhoy. 2013. "Exploring Associations Between Mobility and Sexual Experiences among Unmarried Young People: Evidence from India." *The Annals of the American Academy of Political and Social Science*.
- Adams, J. 2007. "Religious Networks and HIV and AIDS in Malawi." PhD Dissertation. University of Pennyslevenia.
- Adimora, A.A., V.J. Schoenbach & I.A. Doherty. 2002. "Concurrent Sexual Partnerships among Women in the United States." *Epidemiology*, 13(3):320-327.
- Adimora, A.A., V.J. Schoenbach & I.A. Doherty. 2007. "Concurrent Sexual Partnerships among Men in the United States." *American Journal of Public Health*, 97(12):2230-2237.
- Aggleton, P., K. O'Reilly, G. Slutkin & P. Davies. 1994. "Risking Everything? Risk Behaviour, Behaviour Change and AIDS." *Science*, 265(5170):341-345
- Aihihenbuwa, C.O. & R. Obregon. 2000. "A Critical Assessment of Theories And Models Used in Health Communication for HIV and AIDS." *Journal of Health Communication*, 5:5-15.
- Albarracin, D., B. T. Johnson, M. Fishbein & P.A. Muellerleile. 2001. "Theories of Reasoned Action and Planned Behaviour as Models of Condom Use: A Meta-analysis." *Psychological Bulletin*, 127:142-161.
- Alderson-Smith, G. 1984. "Confederations of Households: Extended Domestic Enterprises in City and Country." In; N. Long & B. Roberts (Eds.). *Miners, Peasants and Entrepreneurs*. Cambridge: Cambridge University Press.
- Allen, V. 2003. "The History of Black Mineworkers in South Africa." (2nd Edition). Keighley: Moor Press.
- Altheide, D.L. & J.M. Johnson. 1994. "Criteria for Assessing Interpretive Validity in Qualitative Research." In; N. Denzin & Y. Lincoln (Eds.). Handbook of Qualitative Research. Sage: Thousand Oaks.
- Anarfi, J. K. 1993. "Sexuality, Migration and AIDS in Ghana: A Socio-Behavioural Study." *Health Transition Review*, 3(7):1-22.
- Anderson, J. A. 1999. "The Politics of Land Scarcity: Land Disputes in Save Communal Area in Zimbabwe." *Journal of Southern African Studies*, 25(4):553-78.
- Anderson, J. A. 2001. "Reinterpreting the Rural-Urban Connection: Migration Practices and Socio-Cultural Dispositions of Buhera Workers in Harare." *Journal of the International African Institute*, 71(1):82-112.
- Anderson, J.A. 2006. "Informal Moves, Informal Markets: International Migrants and Traders from Mzimba District, Malawi." *African Affairs*, 420:375-397.

- Angen, M.J. 2000. "Evaluating Interpretive Inquiry: Reviewing the Validity Debate and Opening the Dialogue." *Qualitative Health Research*, 10(3):378-395.
- Anglewicz, P. & G. Reniers. 2010. "Remarriage and Migration in Rural Malawi." Mimeo.
- Anglewicz, P. 2011. "Migration, Marital Change and HIV Infection in Malawi." Demography, DOI 10.1007/s13524-011-0072-x
- Appadurai, A. 1996. "Modernity at Large: Cultural Dimensions of Globalisation." Minneapolis: University of Minnesota Press.
- Arnaoldo, C. 2004. "Ethnicity and Marriage Patterns in Mozambique." *African Population Studies*, 19(1):143-64.
- Asander, A.S, Belfrage E, Pehrson P.O, Lindstein T, Björkman A. 2004. "HIV-Infected African Families Living in Stockholm, Sweden: Their Social Network, Level of Disclosure and Knowledge about HIV." *International Journal of Social Welfare*, 13:77-88.
- Asch, S. 1955. "Opinions and Social Pressure." *Scientific American*, 193:31-35.
- Bailey, P.H. 1997. "Finding Your Way around Qualitative Methods in Nursing Research." *Journal of Advanced Nursing*. 25:18-22.
- Barnes, J. 1954. "Class and Committees in a Norwegian Island Parish." Human Relations, (7):39-58.
- Barnes, T. 1995. "So that a Labourer Could Live with his Family: Overlooked Factors in Social and Economic Strife in Urban Colonial Zimbabwe, 1945-1952." *Journal of Southern African Studies*, 21(1):95-113.
- Barongo, LR, M. Borgdorff, F. Mosha, A. Nicoll, H. Grosskurth, K. Senkoro, J. Newell, J. Changalucha, A. Klokke, J. Killewo. 1992. "The Epidemiology of HIV-1 Infection in Urban Areas, Roadside Settlements and Rural Villages in Mwanza Region, Tanzania." *AIDS*, 6(12):1521-1528
- Bates, R. H. 1988. "Governments and Agricultural Markets in Africa." In; R. H. Bates (Ed.). *Toward a Political Economy of Development: A Rational Choice Perspective*. Berkeley: University of California Press.
- Baxter, J. & J Eyles. 1997. "Evaluating Qualitative Research in Social Geography: Establishing Rigor in Interview Analysis." *Transactions of The Institute of British Geographers*, 22(4):505-525.
- Beauchemin, C., P. Bocquier. 2004. "Migration and Urbanisation in Francophone West Africa: A Review of the Recent Empirical Evidence." *Urban Studies* 41(11): 2245-2272.
- Beegle, K. & M. Poulin. 2013. "Migration and the Transition to Adulthood in Contemporary Malawi." The Annals of the American Academy of Political and Social Science.
- Behrman, J., H. Kohler & S.C. Watkins. 2003. "Social Networks, HIV/AIDS And Risk Perceptions." Centre for Population Studies: University of Pennsylvania.
- Bemelmans, M., S. Baert, E. Goemaere, et al. 2014. "Community-Supported Models of Care for People on HIV Treatment in sub-Saharan Africa." Tropical Medicine International Health, 19:968-977.
- Benson, T., J. Kaphuka, S. Kanyanda & R. Chinula. 2002. "Malawi: An Atlas Of Social Statistics." Zomba: National Statistical Office.
- Berkowitz, S.D. 1988. "Afterword: Toward a Formal Structural Sociology." In;

- B. Wellman & S.D. Berkowitz (Eds.). *Social Structures, a Network Approach.* London: Jai Press.
- Bignami-Van Assche, S., L.W. Chao & P. Anglewicz. 2005. "The Validity of Self-Reported HIV Infection among the General Population in Rural Malawi." Population Studies Centre, University of Pennsylvania, Philadelphia.
- Bilsborrow, R.E. 1998. "The State of the Art and Overview Chapters:

 Migration, Urbanisation and Development: New Directions and Issues."

 New York: UNFPA & Kluwer Academic Publishers.
- Boeder, R. B. 1974. "Malawians Abroad: The History of Labour Emigration From Malawi to its Neighbours. PhD Dissertation." Michigan State University.
- Bongaarts, J. & S.C. Watkins. 1996. "Social Interactions and Contemporary Fertility Transitions." *Population & Development Review*, 22(4):639-682.
- Bouare, O. 2007. "Internal Migration and the Spread of HIV/AIDS in South Africa." *The Social Sciences*, 2(4):405-411.
- Bourdieu, P. 1989. "Social Space and Symbolic Power." *Sociological Theory*, 7(1):14-25.
- Bourdillon, M. F. C. 1977. "Labour Migrants from Korekore Country." *Zambezia*, 5(1):1-29.
- Broadhead, R.S., D.D. Heckathorn, D.L. Weakliem, D.L. Anthony, H. Madray, R.J. Mills & J. Hughes. 1998. "Harnessing Peer Networks as an Instrument for AIDS Prevention: Results from Peer-Driven Intervention." *Public Health Reports*, 113 (1):42-57.
- Brockheroff, M. & A. Biddlecom. 1999. "Migration, Sexual Behaviour and the Risk of HIV in Kenya." *International Migration Review*, 33(4):833-856.
- Brummer, D. 2002. "Labour Migration and HIV and AIDS in Southern Africa." International Organization for Migration, Pretoria.
- Burawoy, M. 1976. "The Functions and Reproduction of Migrant Labour: Comparative Material from Southern Africa and the United States." *The American Journal of Sociology*, 81(5):1050-1087.
- Burawoy, M. 1998. "The Extended Case Method." Berkeley: University of California Press.
- Burt, R.S. 1992. "Structural Holes: The Social Structure of Competition." Cambridge, MA: Harvard University Press.
- Caballero-Hoyos, R. 2008. "Between Tradition and Change: Condom Use With Primary Sexual Partners among Mexican Migrants." *AIDS and Behavior.*
- Caldwell, J.C. 2000. "Rethinking the African AIDS Epidemic." *Population and Development Review*, 26(1):117-135.
- Campbell, C. 1997. "Beyond the Biomedical and Behavioural: Towards an Integrated Approach to HIV risk reduction strategies in the southern African Mining Industry." Social Science & Medicine.
- Campbell, C. 1999. "Understanding the Impact of a Community-led HIV Prevention Program in South Africa: Context, Conceptual Framework And Methodology." *Australian Journal of Primary Health.*
- Campbell, C. 2003. "Letting Them Die: Why HIV/AIDS Prevention Programmes Often Fail." London: James Currey.

- Campbell, C. 2004. "Migrancy, Masculine Identities and AIDS: The Psychosocial Context of HIV Transmission on the South African Gold Mines." In: E. Kalipeni, S. Craddock, J. Oppong & J. Ghosh (Eds.). HIV & AIDS in Africa: Beyond Epidemiology. Oxford: Blackwell.
- Caraël, M., J. Cleland & R. Ingham. 1994. "Extramarital Sex: Implications of Survey Results for STD/HIV Transmission." *Health Transition Review*, 4:153-172.
- Carter, M.W. 2007. ""A Bull Cannot be contained in a Single Kraal": Concurrent Sexual Partnerships in Botswana." *AIDS and Behavior*, 10(17).
- Cartwright, D.S. 1975. "The Nature of Gangs." In; D.S. Cartwright, B. Tomson & H. Schwartz (Eds.). *Gang Delinquency*. Monterey, CA: Brooks/Cole.
- Carruthers, B. G., & S. Babb. 2000. "Economy or Society: Markets, Meanings and Social Structure." Thousand Oaks: Pine Forge Press.
- Cassels S, Manhart L, Jenness S, & Morris M. 2013. "Short-term mobility and increased partnership concurrency among men in Zimbabwe." *PLoS ONE*, 8(6): e66342.
- Cassels S, Jenness SM, Biney AAE, Ampofo WK & Dodoo FN. 2014. "Migration, sexual networks, and HIV in Agbogbloshie, Ghana." Demographic Research, 31: 861-888
- Chapman, S. 1995. "Great Expectorations: The Decline of Public Spitting: Lessons for Passive Smoking?" *British Medical Journal*, 311:1685-1686.
- Chauncey, G. 1981. "The Locus of Reproduction: Women's Labour on the Zambian Copperbelt, 1927-1953." *Journal of Southern African Studies*, 7(2):135-64.
- Charmaz, K. 1999. "Stories of Suffering: Subjective Tales and Research Narratives." *Qualitative Health Research*, 9(3):362-382.
- Cheater, A. P. 1986. "The Politics of Factory Organization." Gweru: Mambo Press.
- Cheesbrough, J.S. 1986. "AIDS in Malawi." *Journal of the Medical Association Of Malawi*, 3(1):5-13.
- Chikaphupha, K., P. Nkhonjera, I. Namakhoma, R. 2009. "Access to HIV Treatment and Care amongst Commercial Sex Workers in Malawi." REACH Trust: EQUINET, Harare
- Chimbiri, A. 2007. "The Condom is an 'Intruder' in Marriage: Evidence from Rural Malawi." *Social Science & Medicine*, 64:1102-1115.
- Chimhowu, A. 2008. "Communal Tenure and Rural Poverty: Land Transactions in Svosve Communal Area, Zimbabwe." *Development & Change*, 12155X (301).
- Chipeta, C. 1992. "The Economic Policy Framework." In; G. C. Z. Mhone (Ed.). *Malawi at the cross-roads: The Post-Colonial Political Economy.* Harare: SAPES Trust.
- Chirwa, W.C. 1995. "Malawian Migrant Labour and the Politics of HIV, 1985-1993." In; J. Crush and W. James (Eds.). *Crossing Boundaries: Migrancy in a Democratic South Africa*. Ottawa: IDRC and Cape Town: IDASA.
- Chirwa, W.C. 1996. "Malawi Government and South African Labour Recruiters, 1974-1992." *The Journal of Modern African Studies,* 12.

- Chirwa, W.C. 1997. "Migrant Labour, Sexual Networking and Multipartnered Sex in Malawi." *Health Transition Review*, 7(3):5-15.
- Christiansen, R & J. Kydd. 1983. "The Return of Malawian Labour from South Africa and Zimbabwe." *Journal of Modern African Studies*, 21:311-326.
- Christiansen, R. 1984. "The Pattern of Internal Migration in Response to Structural Change in the Economy of Malawi 1966-1977." *Development And Change*, 15(1):125-151.
- Chuma, J. & C. Molyneux. 2009. "Coping with the Costs of Illness: The Role Of Shops and Shopkeepers as Social Networks in a Low-Income Community in Coastal Kenya." *Journal of International Development*, 21:252-270.
- Clark, S. 2003. "Suspicion, Infidelity and HIV among Married Couples in Malawi." Paper Presented at the Annual Meeting of the Population Association of America. Minneapolis, 1-3 May.
- Clark, S.J., M.A. Collinson, K. Kahn, K. Drullinger & S.M. Tollman. 2007. "Returning Home to Die: Circular Labour Migration and Mortality in South Africa." *Scandinavian Journal of Public Health*, 35(3):35-44.
- Clark, S. 2010. "Extra-Marital Sexual Partnerships and Male Friendships in Rural Malawi." *Demography*, 22(1):1-28.
- Coast, E. 2006. "Local Understandings of, and Responses to, HIV: Rural-Urban Migrants in Tanzania." *Social Science and Medicine*, 63:1000-1010.
- Coffee, M., G. Garnett, M. Mlilo, H. Voeten, S. Chandiwana & S. Gregson. 2005. "Patterns of Movement and Risk of HIV Infection in Rural Zimbabwe." *Journal of Infectious Diseases*, 191(1):159-167.
- Coffee, Lurie & Garnett, 2007. "Modelling the Impact of Migration on the HIV Epidemic in South Africa." *AIDS*, 21(3):343-350.
- Coleman, J. 1990. "Social Theory, Social Research and a Theory of Action." American Journal of Sociology, 91:1309-1335.
- Collinson, M.A. 2010. "Striving Against Adversity: The Dynamics of Migration, Health and Poverty in Rural South Africa." *Global Health Action*, 3:10.3402/gha.v3i0.5080.
- Collins, C. 2006. "Mozambique's HIV/AIDS Pandemic: Grappling with Apartheid's Legacy." UNRISD Programme on Social Policy and Development, Paper No. 24.
- Corno, L. & D. de Walque. 2012. "Mines, Migration and HIV/AIDS in southern Africa." Centre for Research and Analysis of Migration: University College London, Department of Economics.
- Cornwell, J. 1988. "A Case Study Approach to Lay Health Beliefs: Reconsidering the Research Process." In; J. Eyles & D. Smith (Eds.). Qualitative Methods in Human Geography. Oxford: Basil Blackwell: 219-232.
- Craddock, S. 1996. "AIDS in Malawi: A Critical Analysis of Transmission and Prevention." *African Rural and Urban Studies*, 3(2):35-59.
- Creswell, J. 1998. "Qualitative Inquiry and Research Design: Choosing Among Five Traditions." Thousand Oaks: Sage.
- Crush, J., A. Jeeves & D. Yudelman. 1991. "South Africa's Labour Empire: A History of Black Migrancy to the Goldmines." Boulder: Westview Press.

- Crush, J. & W. James. 1995. "Crossing Boundaries. Mine Migrancy in a Democratic South Africa." Institute for Democracy: Cape Town & International Development Research Centre: Ottawa.
- Crush, J., B. Williams, E. Gouws & M. Lurie. 2005. "Migration and HIV and AIDS in South Africa." *Development Southern Africa*, 22(3):293-318.
- Crush, J., I. Raimundo, H. Simelane, B. Cau & D. Dorey. 2010. "Migration-Induced HIV and AIDS in Rural Mozambique and Swaziland." Pretoria: Southern Africa Migration Project.
- De Haan, A. 1999. "Livelihoods and Poverty: The Role of Migration: A Critical Review of the Migration Literature." *Journal of Development Studies*, 6(2): 1-47.
- Denison, J. 1999. "Behaviour Change: A Summary of Four Major Theories." Arkington: Family Health International.
- Denzin, N.K., & Y.S. Lincoln. 2005. "Qualitative Research." Sage: Chicago.
- De Vletter, F. 1994. "The Implications of Changing Migration Patterns in Southern Africa." Paris: OECD. Also in; J. Crush, W. James, F. de Vletter & D. Coplan (Eds.). Labour Migrancy in southern Africa: Prospects for Post-apartheid Transformation. Cape Town: University of Cape Town Labour Law Unit.
- De Vletter, F. 2000. "Labour Migration to South Africa: The Lifeblood for Southern Mozambique." In; D. McDonald. (Ed.) *On Borders: Perspectives on International Migration in Southern Africa.* New York: St Martin's Press.
- De Walque, D. 2007. "Sero-Discordant Couples in Five African Countries: Implications for Prevention Approaches." *Population and Development Review*, 33(3):501-23.
- De Walque, W. 2011. "Variations in Condom Use by Type of Partner in 13 Sub-Saharan African Countries." *Studies in Family Planning*, 3.
- Djemai, E. 2009. "How Do Roads Spread AIDS in Africa? A Critique of Received Policy Wisdom." Mimeo: Toulouse School of Economics.
- Dladla, A., C. Hiner, E. Qwana & M. Lurie. 2001. "Speaking to Rural Women: The Sexual Partnerships of Rural South African Women whose Partners are Migrants" *Society in Transition*, 32(1).
- Doctor, H.V. & A. Weinrebb. 2003. "Estimation of AIDS Adult Mortality by Verbal Autopsy in Malawi." *AIDS*, 17:2509-2513.
- Dodson, B & J. Crush. 2004. "Mobile 'Deathlihoods': Migration and HIV and AIDS in Africa." Geneva: UNAIDS.
- Dunbar, R. 1996. *Grooming, Gossip and the Evolution of Language*. London: Faber & Faber.
- Dunkle, K., R. Stephenson, E. Karita, E. Chomba, K. Kayitenkore, C. Vwalika, L. Greenberg & S. Allen. 2008. "New Heterosexually Transmitted HIV Infections in Married or Cohabiting Couples in Urban Zambia and Rwanda: An Analysis of Survey and Clinical Data." *The Lancet*, 371(9631):2183-2191.
- Eades, J. S. 1993. "Strangers and Traders: Yoruba Migrants, Markets and the State in Northern Ghana." Edinburgh: Edinburgh University Press.
- Edwards, M. 1989. "The Irrelevance of Development Studies." *Third World Quarterly*, 11(1):116-135.
- Edwards, M. 1996. "Development Practice and Development Studies:

- Working Together." *Development in Practice*, 6(1):67-69.
- Ellman, T. 2015. "Demedicalising AIDS Prevention and Treatment in Africa." *Perspective*, 372:4.
- Englund, H. 2002. "The Village in the City, the City in the Village: Migrants in Lilongwe." *Journal of southern African Studies*. 28(1):137-54.
- Entwisle, B., R.D. Rindfuss, D.K. Guilkey, A. Chamratrithirong, S.R. Curran & Y. Sawangdee. 1996. "Community and Contraceptive Choice in Rural Thailand: A Case Study of Nang Rong." *Demography*, 33:1-11.
- Feeley, T.H., & Barnett, G.A. 1996. "Predicting Employee Turnover from Communication Networks." *Human Communication Research*, 23:370-387.
- Ferguson, J. 1990. "Mobile Workers, Modernist Narratives: A Critique of the Historiography of Transition on the Zambian Copperbelt." *Journal of Southern African Studies*, 16(3):385-412.
- Ferguson, J. 1999. "Expectations of Modernity: Myths and Meanings of Urban Life on the Zambian Copperbelt." Berkeley: University of California Press.
- Festinger, L. 1954. "A Theory of Social Comparison Processes." *Human Relations*, 7:117-140.
- Fiske, S.T. & S.E. Taylor. 1991. "Social Cognition." New York: McGraw-Hill.
- Ford, K., D.N. Wirawan & P. Muliawan. 2002. "Social Influence, AIDS/STD Knowledge and Condom Use among Male Clients of Female Sex Workers in Bali." *AIDS Education and Prevention*, 14(6):496-504.
- Freeman, L. 2004. "The Development of Social Network Analysis: A Study in The Sociology of Science." Empirical Press.
- Genius, S.J. & Genius, S.K. 2005. "Primary Prevention of Sexually Transmitted Diseases: Applying the ABC Strategy." *Postgraduate Medical Journal*, 81:299-301.
- Geschiere, P. & J. Gugler. 1998. "The Urban-Rural Connection: Changing Issues of Belonging and Identification." *Africa*, 68 (3):309-319.
- Ghai, D. & S. Radwan. 1983. "Growth and Inequality: Rural Development in Malawi, 1964-1978. In; D. Ghai (Ed.). *Agricultural Development and Rural Poverty in Africa*. Geneva: International Labour Office.
- Gillespie, S., S. Kadiyala & R. Greener. 2007. "Is Poverty or Wealth Driving HIV Transmission?" *AIDS*, 21(7): S5-S16.
- Giacomin, M. & D. Cook. 2000. "Users' Guides to the Medical Literature.

 Qualitative Research in Health Care: Are the Results of the Study
 Valid?" *Journal of the American Medical Association*, 284(3):357-362.
- Golafshani, N. 2003. "Understanding Reliability and Validity in Qualitative Research." *The Qualitative Report*, 8(4):597-607.
- Government of Malawi. 1967. "Malawi Population and Housing Census data 1966 Final Report." Zomba: Department of Population Statistics.
- Government of Malawi. 1978. "National Rural Development Plan: Policies, Approaches and General Features." Zomba: Government Print.
- Government of Malawi. 1980. "Malawi Population and Housing Census Data 1977 Final Report." Zomba: National Statistical Office.
- Government of Malawi. 1986. "Statement of Development Policies, 1987-1996." Office of the President and Cabinet, Department of Economic

- Planning and Development. Lilongwe, Malawi.
- Government of Malawi. 1998. "Population and Housing Census Data: 1998 Final Report." Zomba: National Statistical Office.
- Government of Malawi. 2005. "Integrated and Household Survey." Zomba: National Statistical Office.
- Government of Malawi. 2009. "2008 Population and Housing Census Data Main Report." Zomba: National Statistical Office.
- Government of Malawi. 2010. "Demographic and Health Survey Report." Zomba: National Statistical Office.
- Government of Malawi-Department of Mines. 2010. "Quarterly Mining Bulletin, January-March 2010." Lilongwe.
- Government of Malawi. 2014. "UNGASS Country Progress Report for 2013." Lilongwe.
- Government of Malawi-National AIDS Commission. 2015. "Malawi AIDS Response Progress Report for 2015." National AIDS Commission: Lilongwe.
- Granovetter, M.S. 1973. "The Strength of Weak Ties." *American Journal of Sociology*, 78:1360-1380.
- Granovetter, M.S. 2005. "The Impact of Social Structure on Economic Outcomes." *The Journal of Economic Perspectives*, 19(1):33-50.
- Green, E. C., V. Nantulya, R. Stoneburner & J. Stover. 2002. "What Happened in Uganda? Declining HIV Prevalence, Behaviour Change, And the National Response." In; J.A. Hogle (Ed). *Project Lessons Learned Case Study*. Washington: USAID.
- Green, E.C. 2003. "Rethinking AIDS Prevention: Learning from Successes in Developing Countries." Westport, CT: Praeger Publishers.
- Green, E.C. 2006. "Uganda's HIV risk reduction strategiesSuccess: The Role of Sexual Behavior Change and the National Response." *AIDS and Behavior*, 7.
- Green, E. C., P. Kajubi, A.Ruark, S. Kamya, N. D'Errico & N. Hearst. 2013. "The Need to Reemphasise Behavior Change for HIV risk reduction strategies in Uganda: A Qualitative Study." *Studies in Family Planning*.
- Greener, R. 2004. "The Impact of HIV and AIDS on Poverty and Inequality." In; M. Haacker (Ed.). *The Macroeconomics of HIV and AIDS*. Washington: International Monetary Fund.
- Gregson, S., T. Zhuwau, R. M. Anderson & S.K. Chandiwana. 1998. "Is There Evidence for Behaviour Change in Response to AIDS in Rural Zimbabwe?" *Social Science and Medicine*, 46:321-330.
- Groh, D.R, L.A. Jason & A. Keys. 2008. "Social Network Variables in Alcoholics Anonymous: A Literature Review." *Clinical Psychology Review*, 28(3):430-450.
- Halperin, D.T. & H. Epstein. 2004. "Concurrent Sexual Partnerships Help to Explain Africa's High HIV Prevalence: Implications for Prevention." *The Lancet*, 364(9428):4-6.
- Hammersley, M. 1995. "Theory and Evidence in Qualitative Research." *Quality and Quantity*, 29:55-66.
- Hansen, K. T. 1997. "Keeping House in Lusaka." New York: Columbia University Press.
- Harries, P. 1994. "Work, Culture, and Identity: Migrant Labourers in

- Mozambique and South Africa, c. 1860-1910." Portsmouth NH: Heinemann.
- Harrison, A. 2008. "Hidden Love: Sexual Ideologies and Relationship Ideals Among Rural South African Adolescents in the Context of HIV/AIDS." *Culture Health and Sexuality*, 2.
- Haythornthwaite, C. 1996. "Social Network Analysis: An Approach and Technique for the Study of Information Exchange." *Library and Information Science Research*, 18:323-342.
- Hearst, N. & S. Chen. 2004. "Condom Promotion for AIDS Prevention in the Developing world: Is it working?" *Studies in Family Planning*, 35:39-47.
- Heckathorn, D.D., R.S. Broadhead, D.L. Anthony, & D. Weakliem. 1999. "AIDS and Social Networks: HIV risk reduction strategiesthrough Network Mobilization." *Sociological Focus*, 32(2):159-179.
- Helleringer, S. & H.P. Kohler. 2005. "Social Networks, Risk Perceptions and Changing Attitudes towards HIV/AIDS: New Evidence from a Longitudinal Study Using Fixed-Effect Estimation." *Demography*, 59:265-282.
- Helleringer, S., H. P. Kohler, A. Chimbiri. 2007. "Characteristics of External Bridge Relationships by Partner Type and Location Where Sexual Relationship Took Place." *AIDS*, 21(18):2560-2561.
- Helleringer, S., & G. Reniers. 2009. "Selective Mixing Based on HIV Status in Sub-Saharan African Populations? Some Indirect Evidence from Demographic and Health Surveys and Implications for HIV Prevention." Presented at *the Annual Meeting of the Population Association* of America, Detroit, MI, and April/May.
- Hirsch, J.S., H. Wardlow, & D. Smith. 2010. "The Secret: Love, Marriage and HIV." Vanderbilt University Press: Nashville.
- Hirschman, D. 1990. "Malawi's 'Captured' Peasantry: An Empirical Analysis." The Journal of Developing Areas, 24:467-488.
- Horwitz, S. 2001. "Migrancy and HIV/AIDS: A Historical Perspective." *South African Historical Journal*, 45.
- Huang CE, Cassels S, & Winer RL. 2015. "Self-reported sex partner dates for use in measuring concurrent partnerships: Correspondence between two assessment methods." *Archives of Sexual Behavior*, 44(4): 873-883.
- Hughes, J.P., J.M. Baeten, H.R. Lingappa. 2012. "Determinants of Per-Coital-Act HIV-1 Infectivity among African HIV-1-Serodiscondant Couples." *Journal of Infectious Diseases*, 205(3)358-365.
- Hunt, C.W. 1989. "Migrant Labour and Sexually Transmitted Diseases." Journal of Health and Social Behaviour, 30(4):353-373.
- Hunt, C. 1993. "The Social Epidemiology of AIDS in Africa: Migrant Labour And Sexually Transmitted Disease." In; P. Conrad & E. Gallagher (Eds.). *Health and Health Care in Developing Countries*. Philadelphia: Temple University Press.
- Hunt, C.W. 1996. "Social versus Biological: Theories on the Transmission of AIDS in Africa." *Social Science and Medicine*, 42(9):1283-1296.
- Ingham, R. & G. Van Zessen. 1997. "From Individual Properties to Interactional Processes." In; L. Van Campenhoudt, M. Cohen, G.

- Guizzardi & D. Hausser (Eds.). Sexual Interactions and HIV Risk: New Conceptual Perspectives in European Research. London: Taylor and Francis.
- International Organisation for Migration. 2010. "Briefing Note on HIV and Labour Migration in Malawi." Pretoria: IOM Office.
- James, W. 1992. "Our Precious Metal: African Labour in South Africa's Gold Industry, 1970-1990." Cape Town: David Philip.
- Jewkes, R.K. 2006. "Factors Associated with HIV Sero-Positivity in Young, Rural South African Men." *International Journal of Epidemiology*, 35:1455-1460.
- Jochelson, K., M. Mothibeli & J. Leger. 1991. "HIV and Migrant Labour in South Africa." *International Journal of Health Services*, 21(1):157-173.
- Jul-Larsen, E. 2009. "Security for Many or Surplus for the Few? Customary Tenure and Social Differentiation in southern Malawi." *Journal of Southern African Studies*, 3.
- Kaler, A. 2001. "Many Divorces and Many Spinsters: Marriage as an invented Tradition in southern Malawi, 1946-1999." *Journal of Family History*, 26(4):529-556.
- Kaler, A. 2003. "My Girlfriends Could Fill a Yanu-Yanu Bus: Rural Malawian Men's Claims about their Own Sero-status." *Social Science & Medicine*, 59(2):285-297.
- Kaler, A. 2004. "AIDS-Talk in Everyday Life: AIDS in Men's Informal Conversation in southern Malawi, 1999-2001." *Demography*, 59(2):285-298.
- Kalipeni, E. 1992. "Population Redistribution in Malawi since 1964." Geographical Review, 82(1):13-28.
- Kalipeni, E. 1996. "Demographic Response to Environmental Pressure in Malawi." *Population and Environment*, 3.
- Kaunda, J. 1992. "The Administrative Organisation and Processes of National Development Planning in Malawi." In; G. C. Z. Mhone (Ed.). *Malawi at the Cross-Roads: The Post-Colonial Political Economy*. Harare: SAPES
- Kelly, J. A. 1994. "HIV risk reduction strategiesamong Gay and Bisexual Men in Small Cities." In; R. D. DiClemente, & J. L. Peterson (Eds.). Preventing AIDS: Theories and Methods of Behavioural Interventions. New York: Plenum Press.
- Kelly, J.A. 1995. "Changing HIV Risk Behaviour: Practical Approaches." The Guilford Press: New York.
- Kelly, J, A. Murphy, K. Sikkema, T. McAuliffe, R. Roffman, L. Solomon, R. Winett, S. Kalichman. 1997. "Randomised, Controlled, Community-Level HIV risk reduction strategiesIntervention for Sexual Risk Behaviour among
 - Homosexual Men in US Cities." Lancet, 350:1500-1505
- Kelly, J.A., Y.A. Amirkhanian, E. Kabakchieva, S. Vassileva, B. Vassilev, T.L. McAulifee, W.J. DiFranceisco, R. Antonova, E. Petrova, R.A. Khoursine & B. Dimitrov. 2006. "Prevention of HIV and Sexually Transmitted Diseases in High Risk Social Networks of Young Roma Men in Bulgaria: Randomised Controlled Trial." *British Medical Journal*, 333(7578):1098-1101.

- Kengeya-Kayondo, J.F., L.M. Carpenter, P.M. Kintu, J. Nabaitu, R. Pool & J.A.G. Whitworth. 1999. "Risk Perception and HIV-1 Prevalence in 15000 Adults in Rural South-West Uganda." *AIDS*, 13:2295-2302.
- Kenyon, C. 2010. "A Network-Level Explanation for the Differences in HIV Prevalence in South Africa's Racial Groups." *African Journal of AIDS Research*, 4(9).
- Kenyon C, Colebunders R, Voeten H, & Lurie M. 2015. Migration intensity has not effect on peak HIV prevalence: an ecological study. *Biomed Central Infectious Diseases*, in press.
- Khanna. A. 2009. "Circular Migrations and HIV Transmission Dynamics." MA Thesis. University of Washington.
- Kim, H. & P.S. Bearman. 1997. "The Structure and Dynamic of Movement Participation." *American Sociological Review*, 62:70-93.
- Kippax, S. & J. Crawford. 1993. "Flaws in the Theory of Reasoned Action." In; D. Terry, C. Galloios & M. McCamish (Eds.). The Theory of Reasoned Action: It's Application to AIDS Preventative Behaviour. United Kingdom: Pergamon Press.
- Kishamawe, C., D. C. Vissers, M. Urassa, R. Isingo, G. Mwaluko, G. J. Borsboom, H. A. Voeten, B. Zaba, J. D. Habbema & S. J. De Vlas. 2006. "Mobility and HIV in Tanzanian Couples: Both Mobile Persons and Their Partners Show Increased Risk." *AIDS*, 20(4):601-608.
- Kishindo, P. 1995. "Sexual Behaviour in the Face of Risk: The Case of Bargirls in Malawi's Major Cities." *Health Transition Review,* 5:153-160.
- Klandermans, B. 1992. "The Social Construction of Protest and Multiorganisational Fields." In; A.D. Morris and C. McClurg Mueller. *Frontiers in Social Movement Theory.* New Haven, CT: Yale University Press.
- Klee, P. 1968. "The Diaries of Paul Klee 1898-1918." Berkeley: University of California Press.
- Kleinman, A. 2004. "Ethics and Experience: An Anthropological Approach to Health Equity." In; Anand, P. & A. Sen (Eds). *Public Health, Ethics, and Equity.* Oxford: Oxford University Press: 269-282.
- Klepinger, D. H., J.O. Billy, K. Tanfer & W.R. Grady. 1993. "Perceptions of AIDS Risk and Severity and their Association with Risk-Related Behaviour among US Men." *Family Planning Perspectives*, 25:74-82.
- Kohler, H.P., R.J. Behrman & S. C. Watkins. 2001. "The Density of Social Networks and Fertility Decisions: Evidence from South Nyanza District, Kenya." *Demography*, 38:43-58.
- Kohler, H.B, R. Jere & S.C. Watkins. 2007. "Social Networks and HIV and AIDS Risk Perceptions." *Demography*, 44(1):1-33.
- Koser, K. 1997. "Information and Repatriation: A Case of Mozambicans in Refugees Malawi." *Journal of Refugee Studies*, 10:1-10.
- Kreiss, J.K., D. Koech, F. Plummer, K. Holmer, M. Lightfoote, P. Piot, A. Ronald, J.O. Ndinya-Achola, L. D'Costa, P. Roberts, E. Ngugi & T. Quinn. 1986. "AIDS Virus Infection in Nairobi Prostitutes: Spread of the Epidemic to East Africa." *New England Journal of Medicine*, 314(7):414-418.
- Kretzschmar, M. & M. Morris 1996. "Measures of Concurrency in Networks

- And the Spread of Infectious Disease." *Mathematical Biosciences*, 133: 165-195.
- Kretzschmar, M., R. White & M. Caraël. 2009. "Concurrency is More Complex Than it seems." *AIDS*, 23:1-3.
- Krishna C. P. 2004. "Migrants' Risky Sexual Behaviour in India and at Home In Far Western Nepal." *Tropical Medicine and International Health*, 8.
- Kuhn, T. 1996. "The Structure of Scientific Revolutions." Chicago: University Of Chicago Press.
- Kydd, J. & R. Christiansen. 1982. "Structural Change in Malawi since Independence: Consequences of a Development Strategy Based on Agriculture." World Development, 10(5):355-375.
- Kydd, J. 1984. "Malawi in the 1970s: Development Policies and Economic Change." University of Edinburgh: Center of African Studies.
- Lagarde, E., Auvert, B., Caraël, M., Laourou, M., Ferry, B., Akam, E., Sukwa, T., Morison, L., Maury, B., Chege, J., N'Doye, I. & Buvé, A. 2001. "Concurrent Sexual Partnerships and HIV Prevalence in Five Urban Communities of sub-Saharan Africa." *AIDS*, 15(7):877-884.
- Lagarde, E., M. Schim van der Loeff, C. Enel, B. Holmgren, R. Dray-Spira, G. Pison, J. Piau, V. Delaunay, S. M'Boup, I. Ndoye, M. Coeuret-Pellicer, H. Whittle, and P. Aaby. 2003. "Mobility and the Spread of Human Immunodeficiency Virus into Rural Areas of West Africa." *International Journal of Epidemiology*, 32:744-752.
- Latkin, C.A., V. Formanb, A. Knowltona & S. Shermanc. 2003. "Social Norms, Social Networks and HIV Related Risk Behaviour among Urban Disadvantaged Drug Users." *Social Science & Medicine*, 56:465-476.
- Leclerc-Madlala, S. 2003. "Transactional Sex and the Pursuit of Modernity." Social Dynamics: A journal of African studies, 29(2), 213–233.
- Leger, J. P. 1992 "Occupational Diseases in South African Mines: A Neglected Epidemic?" *South Africa Medical Journal*, 81:197-201.
- Le Grand, J., C. Propper & R. Robinson. 1992. "The Economics of Social Problems." Third Edition. London: MacMillan Press.
- Lincoln, Y. & E. Guba. 1985. "Naturalistic Inquiry." Beverly Hills (CA): Sage.
- Long, N. 1977. "An Introduction to the Sociology of Rural Development." London: Tavistock.
- Lopman, B.A., C. Nyamukapa, T. B. Hallett, P. Mushati, N. Spark-du Preez, F. Kurwa, M. Wambe & S. Gregson. 2009. "Role of Widows in the Heterosexual Transmission of HIV in Manicaland, Zimbabwe, 1998-2003." Sexually Transmitted Infections, 85:i41-i48.
- Lurie, M., A. Harrison, D. Wilkinson & S. Abdool Karim. 1997. "Circular Migration and Sexual Networking in KwaZulu-Natal: Implications for the Spread of HIV and Other Sexually Transmitted Diseases." *Health Transition Review*, 3(7):17-27.
- Lurie, M. 2000. "Migration and AIDS in Southern Africa: A Review." *South African Journal of Science*, 96:343-347.
- Lurie, M.N. 2002. "The Impact of Migration on HIV-1 Transmission in South Africa." Working Paper. Durban: South African Medical Research Council, HIV risk reduction strategies and Vaccine Research Unit.
- Lurie, M., B. Williams, K. Zuma, D. Mkaya-Mwamburi, G. Garnett, M. Sweat,

- J. Gittelsohn & S. Karim. 2003. "Who Infects Whom? HIV-1 Concordance and Discordance among Migrant and Non-Migrant Couples in South Africa." *AIDS*, 17(15):2245-2252.
- Lurie, M.N. 2004. "The Epidemiology of Migration and AIDS in South Africa." Working Paper. Oxford: University of Oxford, Centre on Migration Policy and Society.
- Lurie, M.N. & S. Rosenthal. 2009. "Concurrent Partnerships as a Driver of the HIV Epidemic in sub-Saharan Africa? The Evidence is Limited." *AIDS and Behaviour*, 14(1).
- Lurie, M., S. Rosenthal & B. Williams. 2009. "Concurrency Driving the African HIV Epidemics: Where is the Evidence?" *Lancet*, 374(9699):1420.
- Lurie M, & Williams BG. 2014. Migration and health in southern Africa: 100 years and still circulating. *Health Psychology and Behavioural Medicine*, 2(1):34-40.
- Macarow, K. 2008. "Transmission Routes: The Global AIDS Epidemic in South Africa and France." *Global South*, 2(2):92-111.
- Mah, T.L. & D.T. Halperin. 2008. "Concurrent Sexual Partnerships and the HIV Epidemics in Africa: Evidence to Move Forward." *AIDS and Behaviour*, 14(1).
- Mah, T.L. & D.T. Halperin. 2009. "The Evidence for the Role of Concurrent Partnerships in Africa's HIV Epidemics: A Response to Lurie and Rosenthal." AIDS and Behaviour, 14(1).
- Maharaj, P. 2004. "Perception of Risk of HIV Infection in Marital and Cohabiting Partnerships." *African Journal of AIDS Research.*
- Mann, J., H. Francis, T. Quinn, P. Asila, N. Bosenge, N. Nilambi, K. Bila, M. Tamfum, K. Ruti, P. Piot, J. McCormick & J. Curran. 1986. "Surveillance for AIDS in a Central African City." *Journal of the American Medical Association*, 255(23):3255-3259.
- Manski, C.F. 2000. "Economic Analysis of Social Interaction." *Journal of Economic Perspectives*, 14:115-136.
- Marks, S. 2002. "An Epidemic Waiting to Happen? The Spread of HIV/AIDS in South Africa in Social and Historical Perspective." *African Studies,* 61:13-26.
- Marks, S. 2006. "The Silent Scourge? Silicosis, Respiratory Disease and Gold Mining in South Africa." *Journal of Ethnic and Migration Studies*, 32(4):569-589.
- Masebo, W. 2011. "The Impact of Social Inclusion and Exclusion on Orphan Care and Support in Malawi." A paper presented at *the Global Commission on HIV and AIDS and the Law,* Africa Regional Dialogue, Burgers Park Hotel, Pretoria, South Africa, August 4, 2011.
- Masebo, W. 2012. "Agency, Sexual Partnerships in Malawi's Migrant Communities." Centre for International Governance Innovation.
- Masebo, W. 2013. "Uranium Mining at Kayelekera and Economic Developments in Malawi." Centre for International Governance Innovation.
- Massey, D.S., J. Arango, G. Hugo, A. Kouaouci, P. Adela & J.E. Taylor. 1994. "An Evaluation of International Migration Theory: The North American Case." *Population and Development Review*, 20:699-751.
- Mattson, C., R. Bailey, K. Argot, J. Ndinya-Achola and S. Moses. 2007. "A

- Nested Case-Control Study of Sexual Practices and Risk Factors for Prevalent HIV-1 Infection among Young Men in Kisumu, Kenya." *Sexually Transmitted Diseases*, 34(10):731-736.
- McCracken, J. 1983. "Planters, Peasants and the Colonial State: The Impact Of the Native Tobacco Board in the Central Province of Malawi." *Journal of Southern African Studies*, *9:172-*192.
- McCracken, J. 1985. "Share-Cropping in Malawi: The Visiting Tenant System In the Central Province, 1920-1968." University of Edinburgh: Centre Of African Studies.
- McCracken, J. 2002. "The Ambiguities of Nationalism: Flax Musopole and the Northern Factor in Malawian Politics, 1956-1966." *Journal of Southern African Studies*. 28:67-88.
- McCracken, J. 2003. "Conservation and Resistance in Colonial Malawi: The 'Dead North' Revisited." In; W. Beinart & J. McGregor (Eds). Social History and African Environments. Oxford: James Currey.
- McMillan, J. H. & S. Schumacher. 2001. "Research in Education: A Conceptual Introduction." New York: Addison Wesley Longman, Inc.
- McNulty, M. L. 1995. "The Contemporary Map of Africa." In; P. M. Martin & P. O'Meara (Eds.). *Africa*. Bloomington: Indiana University Press.
- McPherson, M., Smith-Lovin, L. & Cook, J.M. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology*, 27(1):415-444.
- Miller, W., N. Rosenberg, S. Rutstein & K. Powers. 2010. "Role of Acute and Early HIV Infection in the Sexual Transmission of HIV." *Current Opinion In HIV & AIDS*, 5(4):277-282.
- Mishra, V. S. Bignami-Van Assche, R. Greener, M. Vaessen, R. Hong, P.D. Ghys, J.T. Boerma, A. Van Assche, S. Khan & S. Rutstein. 2007. "HIV Infection Does Not Disproportionately Affect the Poorer in sub-Saharan Africa." *AIDS*, 21(7): S17-S28.
- Mishra & Bignami-Van Assche. 2009. "Concurrent Sexual Partnerships and HIV Infection: Evidence from National Population-Based Surveys."

 Working Paper. Geneva: USAID.
- Mitchell, J. C. 1987. "Cities, Society and Social Perception: A Central African Perspective." Oxford: Clarendon Press.
- Montgomery, M.R. & J.B. Casterline. 1996. "Social Learning, Social Influence, And New Models of Fertility." *Population and Development Review*, 22(1):151-175.
- Montgomery, M.R. & W.S. Chung. 1998. "Social Networks and the Diffusion of Fertility Control in the Republic of Korea." In; R. Leete (Ed.). *The Dynamics of Values in Fertility Change*. Oxford: Oxford University Press.
- Montgomery, M., G.-E. Kiros, D. Agyeman, J.B. Casterline, P. Aglobitse & P.C. Hewett. 2001. "Social Networks and Contraceptive Dynamics in Southern Ghana." Population Council, New York.
- Moodie, T.D., V. Ndatshe & B. Sibuyi. 1988. "Migrancy and Male Sexuality on The South African Goldmines." *Journal of Southern African Studies*, 14(2):228-256.
- Moodie, T. & Ndatshe, V. 1994. "Going for Gold: Men, Mines and Migration." Berkeley: University of California Press.

- Morris, M. & M. Kretzchmar. 1995. "Concurrent Partnerships and Transmission Dynamics in Networks." *Social Networks*, 17(3-4):299-318
- Morris, M. 1997. "Sexual Networks and HIV." AIDS, 11(A):S209-S216.
- Morris, M. & M. Kretzschmar. 1997. "Concurrent Partnerships in the Spread of HIV." *AIDS*, XI: 641-648.
- Mtika, M. & H. Doctor. 2002. "Matrilineal, Patrilineal and Wealth Flows in Rural Malawi." *African Sociological Review*, 6(2):71-97.
- Mtika, M.M. 2007. "Political Economy, Labour Migration, and the AIDS Epidemic in Rural Malawi." *Social Science & Medicine*, 64, 2454-2463.
- Mudd, G.M. & H. D. Smith. 2006. "Comments on the Proposed Kayelekera Uranium Project Environmental Impact Assessment Report." Monash University: Clayton, Australia.
- Mutambirwa, C. C. & D.H. Potts. 1987. "Changing Patterns of African Rural-Urban Migration and Urbanisation in Zimbabwe." *Eastern and Southern Africa Geographical Journal*, 1(1):26-39.
- Neaigus, A., S.R. Friedman, B. Jose, M.F. Goldstein, R. Curtis, G. Ildefonso & D.C. Des Jarlais. 1996. "High Risk Personal Networks and Syringe Sharing as Risk Factors for HIV Infection among New Drug Injectors." *AIDS*, 11, 499-509.
- Neumann, L. 2007. "Social Research Methods: Qualitative and Quantitative Approaches." Fifth edition. Boston: Allyn and Bacon.
- Nnko, S., J.T. Boerma, M. Urassa, G. Mwaluko & B. Zaba. 2004. "Secretive Females or Swaggering Males? An Assessment of the Quality of Sexual Partnership Reporting in Rural Tanzania." *Social Science & Medicine*, 59(2):299-310.
- Noelle-Neumann, E. 1977. "Turbulences in the Climate of Opinion: Methodological Applications of the Spiral of Silence Theory." *Public Opinion Quarterly*, 41(2):143-158.
- Nunez, L., Vearey J., & Drimie S. 2011. Who cares? HIV-related sickness, urban-rural linkages, and the gendered role of care in return migration in South Africa. *Gender and Development*, 19(1), 105-114.
- Nunn, A., H. Wagner, A. Kamali & J. Kengeya-Kayondo. 1995. "Migration and HIV-1 Seroprevalence in Rural Ugandan Population." *AIDS*, 9:503-506.
- Obare, F., P. Fleming, P. Anglewicz, R. Thornton, F. Martinson, A. Kapatuka, M. Poulin, S. Watkins, H. P. Kohler. 2009. "HIV Incidence and Learning One's HIV Status: Evidence From Repeat Population-based Voluntary Counseling and Testing in Rural Malawi." *Sexually Transmitted Infections*, 85:139-44.
- Obbo, C. 1993. "HIV Transmission through Social and Geographic Networks In Uganda." *Social Science & Medicine*, 36(7):949-955.
- O'Laughlin, B. 1998. "Missing Men? The Debate Over Rural Poverty and Women-Headed Households in southern Africa." *Journal of Peasant Studies*, 25:1-48.
- Odutolu, O. 2005. "Convergence of Behaviour Change Models for AIDS Risk Reduction in sub-Saharan Africa." *The International Journal of Health Planning and Management*, 7.
- Organista, K. C., P.B. Organista, J.R. Bola, G. de Alba, E.G. Javier & M.A.C. Moran. 2000. "Predictors of Condom Use in Mexican Migrant

- Labourers." American Journal of Community Psychology, 28:245-265.
- Orubuloye, I.O., P. Caldwell & J.C. Caldwell. 1993. "The Role of High Risk Occupations in the Spread of AIDS: Truck Drivers and Itinerant Market Women in Nigeria." *International Family Planning Perspectives*, 19(2):43-48.
- Oster, E. 2005. "Sexually Transmitted Infections, Sexual Behaviour and the HIV/AIDS Epidemic." *Quearterly Journal of Economics*, 120:467-515.
- Oster, E. 2011. "Routes of Infection: Exports and HIV Incidence in Sub-Saharan Africa." *Journal of the European Economic Association*.
- Oucho, J. O., & W.T.S. Gould. 1993. "Internal Migration, Urbanization and Population Distribution." In; K. A. Foote, K. H. Hill, & L. G. Martin (Eds.), *Demographic Change in sub-Saharan Africa*. Washington, DC: National Academy Press.
- Pachai, B. 1978. "Land and Politics in Malawi 1875-1975." Limestone Press: Kingston, Ontario.
- Paladin Website: www.paladinenergy.com.au
- Palamuleni, M. E. 2005. "Estimates of Net Internal Migration for Regions and Districts in Malawi." Paper presented at *the Joint Population Conference* held at the University of Free State, Bloemfontein, and 28-30 September 2005
- Packard, R. 1989. "White Plague, Black Labour: Tuberculosis and the Political Economy of Disease in South Africa." University of California Press, Berkeley.
- Packard, R., & D. Coetzee. 1995. "White Plague, Black Labour Revisited: Tuberculosis and the Mining Industry. In; J. Crush & W. James. (Eds.) Crossing Boundaries: Mine Migrancy in a Democratic South Africa. Cape Town/Ottawa: Institute for Democracy in South Africa/International Development Research Centre.
- Painter, T.M., L.B. Kassamba, D.M. Matia, L.S. Lin *et al.* 2007. "Faithfulness To Partners: A Means to Prevent HIV Infection, a Source of HIV Infection Risks, or Both? A Qualitative Study of Women's Experiences In Abidjan, Co'te d'Ivoire." *African Journal of AIDS Research*.
- Parrado, E.A. & A.C. Flippen. 2004. "Use of commercial sex workers among Hispanic migrants in North Carolina: Implications for the spread." *Perspectives on Sexual and Reproductive*, 7-8.
- Peters, P. 2002. "Bewitching Land: The Role of Land Disputes in Converting Kin to Strangers and in Class Formation in Malawi." *Journal of Southern African Studies*, 28:155-178.
- Peters, P. 2006. "Rural Income and Poverty in a Time of Radical Change in Malawi." *Journal of Development Studies*, 42:322-345.
- Pike, J.G. 1968. "Malawi: A Political and Economic History." London: Pall Mall Press.
- Pison, G., B. Le Guenno, E. Legarde, C. Enel & C. Seck. 1993. "Seasonal Migration: A Risk Factor for HIV in Rural Senegal." *AIDS*, 6:196-200.
- Pollock, T.G., R.C. Whitbred & N. Contractor. 2000. "Social Information Processing and Job Characteristics: A Simultaneous Test of Two Theories with Implications for Job Satisfaction." *Human Communication Research*, 26:292-330.
- Porter, L., L. Hao, D. Bishai, D. Serwadda, M.J. Wawer, T. Lutalo & R. Gray.

- 2004. "HIV Status and Union Dissolution in sub-Saharan Africa: The Case of Rakai, Uganda." *Demography*, 41(3):465-482.
- Potts, D. & C. Mutambirwa. 1990. "Rural-Urban Linkages in Contemporary Harare: Why Migrants Need Their Land." *Journal of Southern African Studies*, 16(4):677-698.
- Potts, D. H. 1995. "Shall We Go Home? Increasing Urban Poverty in African Cities and Migration Processes." *Geographical Journal*, 161 (3):245-64.
- Potts, D. 2006. "Rural Mobility as a Response to Land Shortages: The Case Of Malawi." *Population, Space & Place,* 12:291-311.
- Potts, D. 2010. "Circular Migration in Zimbabwe and Contemporary sub-Saharan Africa." Boydell & Brewer: London.
- Poulin, M. 2007. "Sex, Money and Partnerships in southern Malawi." University of Pennsylvania: Centre for Population Research.
- Prentice, D. A., & D.T. Miller. 1993. "Pluralistic Ignorance and Alcohol Use on Campus: Some Consequences of Misperceiving the Social Norm." Journal of Personality and Social Psychology, 64(2):243-256.
- Preston, S. 1979. "Urban Growth in Developing Countries: A Demographic Reappraisal." *Population and Development Review*, 5(2):195-215.
- Pryor, F. L. 1990. "The Political Economy of Poverty, Equity and Growth: Malawi and Madagascar." New York: Oxford University Press.
- Quinn, T.C. 1994. "Population Migration and the Spread of Types 1 and 2 HIV." *Social Science and Medicine*, 91:2407-2414.
- Rabin, M. 1998. "Psychology and Economics." *Journal of Economic Literature*, 36(1):11-46.
- Ramjee, G. & E. Gouws. 2002. "Prevalence of HIV among Truck Drivers Visiting Sex Workers in KwaZulu-Natal, South Africa." Sexually Transmitted Diseases, 29.
- Reniers, G. 2003. "Divorce and Remarriage in Rural Malawi." *Demographic Research*, 1(6):175-206.
- Richter M.L., Chersich M.F., Vearey J.L., Sartorius B.K., Temmerman M. Luchters S. 2014. Migration status, work conditions and health utilization of female sex workers in three South African cities. *Journal of Immigrant and Minority Health*, 16 (1): 7-17.
- Rhodes, T., G.V. Stimson & A. Quirk. 1996. "Sex, Drugs, Intervention and Research: From the Individual to the Social." *Substance Use and Misuse*, 31:375-407.
- Rogers, E.M. & D.L. Kincaid. 1981. "Communication Networks: Toward a New Paradigm for Research." New York: Free Press.
- Rogers, E. M. 1986. "Communication Technology: The New Media in Society." New York: Free Press.
- Rogers, E.M. 1995. "Diffusion of Innovations." New York: The Free Press.
- Romero-Daza, N. & D. Himmelgreen. 1998. "More than Money for Your Labour: Migration and the Political Economy of AIDS in Lesotho." In; M. Singer (Ed.). *The Political Economy of AIDS*. New York: Baywood Publishing Company: 185-204.
- Rutenberg, N. & S.C. Watkins. 1997. "The Buzz outside the Clinics: Conversations and Contraception in Nyanza Province, Kenya." *Studies in Family Planning*, 28:290-307.
- Sawers, L. 2010. "Understanding the Southern African 'Anomaly': Poverty,

- Endemic Disease and HIV." Development and Change, 3.
- Schatz, E. 2005. "Take Your Mat and Go! Rural Malawian Women's Approaches in the HIV and AIDS Era." *Culture, Health and Sexuality,* 7(5):479-492.
- Scherer, C.W. & H. Cho. 2003. "A Social Network Contagion Theory of Risk Perception." *Risk Analysis*, 23:261-267.
- Scott, J. P. 2000. "Social Network Analysis: A Handbook (2nd edition)." Thousand Oaks, CA: Sage Publications.
- Sen, A. 2004. "Public Health, Ethics, and Equity." Oxford: Oxford University Press.
- Setel, P.W. 1999. "A Plague of Paradoxes: AIDS, Culture and Demography in Northern Tanzania." Chicago: University of Chicago Press.
- Shelton, J.D., D.T. Halperin, V. Nantulya, M. Potts, H.G. Gayle & K.K. Holmes. 2004. "Partner Reduction is Crucial for Balanced ABC Approach to HIV Prevention." *British Medical Journal*, 328(7444):891-893.
- Sherif, M. 1937. "An Experimental Approach to the Study of Attitudes." *Sociometry*, 1:90-98.
- Shorter, E. 1992. "What Can Two Historical Examples of Sexually Transmitted Diseases teach us About AIDS?" In; T. Dysan (Ed.). Sexual Behaviour and Networking: Anthropological and Socio-Cultural Studies on the Transmission of HIV. Editions Derouaux: Ordina, Belgium.
- Smith, L. C., Lucas, K. J., & Latkin, C. 1999. "Rumour and Gossip: Social Discourse on HIV and AIDS." *Anthropology and Medicine*, 6(1):121-131
- Smith, K.P. 2003. "Why Are They Worried? Concern about AIDS in Rural Malawi." *Demographic Research*, 1(9):279-317.
- Smith, K.P. & S.C. Watkins. 2005. "Perceptions of Risk and Approaches for Prevention: Responses to HIV/AIDS in Rural Malawi." *Social Science & Medicine*. 60:649-660.
- Sprague, C. 2005. "New Approaches in the Battle against HIV/AIDS." *African Studies Review*, 48(3):143-146.
- Sprague, C. 2008. "Women's Health, HIV/AIDS and the Workplace in South Africa." *African Journal of AIDS Research*, 7(3):341-352.
- Stillwaggon, E. & L. Sawers. 2010. "Twenty Years is enough: Sexual Behaviour and HIV in Africa." Working Paper. Washington, DC: American University.
- Stockdale, J. 1995. "The Self and Media Messages: Match or Mismatch?" London, Harwood.
- Stoneburner, R.L. & Low-Beer, D. 2004. "Population-Level HIV Declines and Behavioural Risk Avoidance in Uganda." *Science*, 304(5671):714-718.
- Stratford, D., T.V. Ellerbrock & S. Chamblee. 2007. "Social Organisation of Sexual-Economic Networks and the Persistence of HIV in a Rural Area In the USA." *Culture, Health & Sexuality*, 9(2):121-135.
- Strauss, A. 1987. "Qualitative Analysis for Social Scientists." Cambridge: Cambridge University Press.
- Strauss, A. & J. Corbin. 1990. "Basics of Qualitative Research. Grounded Theory Procedures and Techniques." London or Thousand Oaks (California): Sage Publications.

- Stuckler D, Steele S, Lurie M, & Basu S. 2013. "Dying for Gold" The effects of mineral mining of HIV, tuberculosis, silicosis, and occupational diseases in Southern Africa. *International Journal of Health Services*, 43(4):639-649.
- Swidler, A. 2001. "Talk of Love: How Culture Matters." University of Chicago Press.
- Swidler, A. & S.C. Watkins. 2007. "Ties of Dependence: AIDS and Transactional Sex in Rural Malawi." Studies in Family Planning, 38(3):147
- Swidler, A. & S.C. Watkins. 2009. "Responding to AIDS in sub-Saharan Africa." University of Pennsylvania.
- Tamiru, M., H.Damen, M. Getnet & H. Jemal. 2011. "HIV Related Sexual Behaviour among Migrants and Non-migrants in Rural Ethiopia: Role Of Rural to Urban Migration in HIV Transmission." *International Journal Of Biomedical Science*.
- Tawfik, L., S.C. Watkins. 2007. "Sex in Geneva, Sex in Lilongwe and Sex in Balaka." Social Science and Medicine, 64(5):1090-1101.
- Thornton, R.J. 2008. "Unimagined Community: Sex, Networks and AIDS in Uganda and South Africa." University of California Press.
- UNAIDS. 1997. "Epidemics and Behaviour: A Review of Changes in Sexual Behaviour in Uganda in the Early 1990s." Geneva: UNAIDS.
- UNAIDS. 1999. "Sexual Behavioural Change for HIV: Where Have Theories Taken Us?" Geneva: UNAIDS.
- UNAIDS. 2010. "Global Report of HIV and AIDS." Geneva: UNAIDS.
- United Nations & Government of Malawi. 1993. "Situation Analysis of Poverty In Malawi." Lilongwe, Malawi.
- UNDP. 2015. Briefing note for countries on the 2015 Human Development Report. NewYork: UNDP.
- USAID. 2002. "What Happened in Uganda: Declining HIV Prevalence, Behaviour, Change and the National Response." Washington, USAID.
- Valente, T.W. & R. Fosados. 2006. "Diffusion of Innovations and Network Segmentation: The Part Played by People in Promoting Health." Sexually Transmitted Diseases, 33(7):23-31.
- Van Donge, J.K. 2002. "Disordering the Market: The Liberalisation of Burley Tobacco in Malawi in the 1990s." *Journal of Southern African Studies*, 28:89-115.
- VanLandingham, M., J. Knodel, C. Saengtienchai & A. Pramualratana. 1998. "In the Company of Friends: Peer Influence on Thai Male Extramarital Sex." *Social Science & Medicine*, 47(12):1993-2011.
- Van Velsen, J. 1960. "Labour Migration as a Positive Factor in the Continuity Of Tonga Tribal Society." *Economic Development and Cultural Change*, 8(3):265-278.
- Vearey, J. Nunez L., Richter, M. & Moyo, K. 2011. HIV prevention in the workplace and beyond: the importance of engaging with migration, urban livelihoods and the "informal economy" in South Africa. *African Journal of AIDS Research*, 10:381–391.
- Vearey, J. 2013. Migration, urban health and inequality in Johannesburg. In: Bastia, T. (Ed). *Migration and Inequality*. Routledge: London: 121-144.
- Vearey, J. & Myronuik, T. 2014. Social Capital and Livelihoods in

- Johannesburg: Differential Advantages and Unexpected Outcomes among Internal Migrants, Foreign-Born Migrants, and Long-Term South African Residents. *International Migration Review*, (48)1: 243-273.
- Warriner, I. & S. Watkins. 2000. "How Are Networks Selected?" Philadelphia, PA: University of Pennsylvania, mimeo.
- Wasserman, S. & K. Faust. 1994. "Social Network Analysis: Methods and Applications. Structural Analysis in the Social Sciences." Cambridge: University Press.
- Watkins, S.C. 2000. "Local and Foreign Models of Reproduction in Nyanza Province, Kenya, 1930-1998." *Population and Development Review,* 26:725-60.
- Watkins, S.C. & E. Schatz. 2001. "Avoiding AIDS: Global Advice and Local Approaches." Paper Presented at the Annual Meeting of the Population Association of America, Washington, DC, and March 28-31.
- Watkins, S.C. & I. Warriner. 2003. "How Do We Know We Need to Control for Selectivity?" *Demographic Research*, 1(4):109-142.
- Watkins, S.C., E.M. Zulu, H.P. Kohler & J.R. Behrman. 2003. "Introduction to Social Interactions and HIV/AIDS in Rural Africa." *Demographic Research*. 1:1-30.
- Watkins, S. C. 2004. "Navigating the AIDS Epidemic in Rural Malawi. Population and Development Review, 30(4):673-693.
- Watkins, S.C. & A. Swidler. 2005. "Hearsay Ethnography." Paper Presented At the Annual Meeting of the Population Association of America, Philadelphia, March 21-April 1.
- Watkins, S.C., A. Swidler & C. Biruk. 2009. "Hearsay Ethnography: A Method For Learning about Responses to Health Interventions." The Handbook Of the Sociology of Health, Illness and Healing.
- Watts, D.J. 1999. "Small Worlds: The Dynamics of Networks between Orders And Randomness." Princeton, NJ: Princeton Studies in Complexity.
- Wawer, M.J., R.H. Gray, N.K. Sewankambo, D. Serwadda, X. Li, O. Laeyendecker, N. Kiwanuka, G. Kigozi, M. Kiddugavu, T. Lutalo, F. Nalugoda, F. Wabwire-Mangen, M. P. Meehan & T.C. Quinn. 2005. "Rates of HIV-1 Transmission per Coital Act, By Stage of HIV-1 Infection, in Rakai, Uganda." *Journal of Infectious Diseases,* 1403-1409.
- Weeks, J.R. 1996. "Population: An Introduction to Concepts and Issues." New York: Wadsworth.
- Wellman, B. & S.D. Berkowitz. 1988. "Social Structures: A Network Approach.

 Structural Analysis in the Social Sciences." Cambridge: University

 Press
- White, L. 1987. "Magomero: Portrait of an African Village." Cambridge: Cambridge University Press.
- Williams, B. 1985. "Ethics and the Limits of Philosophy." Cambridge: Harvard University Press.
- Williams, B., D. Taljaard, C. M. Campbell, E. Gouws, L. Ndhlovu, J. Van Dam, M. Carael & B. Auvert. 2003. "Changing Patterns of Knowledge, Reported Behaviour and Sexually Transmitted Infections in a South African Gold Mining Community." AIDS, 17:2099-2117.
- William, S. & C.S. Stokes. 2006. "Rural-Urban Resilience, Migration, HIV

- And AIDS, and Safe Sex Practices among Men in Zimbabwe." *Rural Sociology*, 71(2):183-211.
- Wilson, K. 1992. "Internally Displaced Refugees and Returnees from and in Mozambique." Oxford: University of Oxford.
- Wilson, F. 2001. "Minerals and Migrants: How the Mining Industry has shaped South Africa." *American Academy of Arts and Sciences*, 130(1):99-122.
- Wilson, D. & D.T. Halperin. 2008. "Know your Epidemic, Know your Response: A Useful Approach If we get it Right." *Lancet*, 372:423-26.
- World Bank. 2010. "Malawi Country Economic Memorandum: Seizing Opportunities for Growth through Regional Integration and Trade." Report No. 47969-MW.
- Wolffers, I., I. Fernandez, S. Verghis & M. Vink. 2002. "Sexual Behaviour and Vulnerability of Migrant Workers for HIV Infection." *Culture, Health and Sexuality*, 4 (4):459-473.
- Yang, X. 2004. "Temporary Migration and the Spread of STDs/HIV in China: Is there a link?" *International Migration Review*, 3.
- Yang, X., V.J. Derlega & H. Luo. 2007. "Migration, Behaviour Change and HIV/STD Risks in China." *AIDS Care*, 19(2):282-288.
- Yin, R. 2003. "Applications of Case Study Research, Design and Methods." Second Edition. Thousand Oaks (CA): Sage Publications.
- Yudelman, D. & A. Jeeves. 1986. "New Labour Frontiers for Old: Black Migrants to the South African Goldmines, 1920-1985." *Journal of Southern African Studies*, 13(1):101-124.
- Zaba, S. 2007. "HIV and Marital Outcomes: Dissolution and Remarriage in Kisesa, Tanzania." Paper Presented at the Annual Meeting of the Population Association of America, March 29-31, New York.
- Zembe, Y.Z., L. Townsend, A. Thorson & A.M. Ekström. 2012. "Predictors of Inconsistent Condom Use among a Hard to Reach Population of Young Women with Multiple Sexual Partners in Peri-Urban South Africa." *PLoS ONE.*
- Zinyama, L., D. Tevera, D. & S. Cumming. 1993. "Harare: The Growth and Problems of the City." Harare: University of Zimbabwe Publishers.
- Zucker, L. G. 1977. "The Role of Institutionalisation in Cultural Persistence." *American Sociological Review,* 42(5):726-743.
- Zulu, E.M. & G. Chepngeno. 2003. "Spousal Communication about the Risk of Contracting HIV in Rural Malawi." *Demographic Research*, 1(8):247-277.
- Zuma, K., M. Lurie, B. Williams, D. Mkaya-Mwamburi, G. Garnet & A. Sturm. 2003. "Risk Factors of Sexually-Transmitted Infections among Migrant and Non-migrant Sexual Partnerships from Rural South Africa." *Epidemiology and Infection*, 133:421-428.

Interview Guide

Introduction

My name is ______. I am working on a research project on the interaction between migration and HIV. I am interviewing people here at Kayelekera/Maganga in order to find out more about their knowledge, experiences, attitudes and behaviour. If you agree to participate in this research, I will ask you some questions. Your answers are important for the research project. Anything you say is completely confidential. Your name will not be written on this form. Your name will never be used in connection with any of the information you give me. You don't have to answer any question you don't want to. I will skip that question and continue with the following questions. You can end the interview any time you want to. Our discussions will take about one hour. Would you be willing to participate? Do you mind if I record the discussion on tape? The tape will be used if I have problems recollecting parts of the interview at a later stage. I will be the only person to have access to the tape.

Demographics/Profile

How old are you? (Age in years)

Where were you born? (District)

Where do you live at the moment? (District)

For how long have you been living here? (Number of years living in the district) What is your marital status?

Have you got a regular sexual partner?

Are you living together with your regular sexual partner?

Would you like your regular sexual partner to be with you at workplace?

How many children do you have? (Number of live children)

How many years have you been in school? (Number of years)

At what grade did you leave school? (Highest grade completed)

What kind of work do you do at the moment and where? (Nearest city/town/village)

How much do you earn per month?

Is anyone except yourself dependent on your income?

How many people are dependent on your income? (Number of people)

Additional questions – Income spending (basic needs, entertainment, sending home, saving, etc.)

Migration life

At what age did you leave your home village for work elsewhere for the first time? (Age in years)

For how long have you been a migrant worker? (Number of years)

Why did you leave instead of staying in your village?

When you were/are at the mine/away from home, what type of accommodation did/do you have?

How often do you contact or visit your home? Have you got a rural homestead?

When you were/are at the mine/away, who was/is taking care of the homestead?

What kind of responsibility, financial or something else that is expected from you to your sexual partner, children, family, friends, relatives and others?

Are you feeling different being away from home compared to living at your rural home village?

Additional questions: Difference between home and workplace, and associated behaviour including effects of migration on relation (separation, stress, financial situation).

HIV and AIDS and sexual networking

Do you think you are at risk of contracting HIV?
What are your primary risks for contracting HIV?
Why do you think you are at risk of HIV infection?
Who are, according to you, at high risk of HIV infection?
How are you protecting yourself from HIV infection?
Have you ever paid or received money for sex? Why?
Have you ever offered or received other gifts for sex? Why?

Social Networks or interactions or connections

With whom do you talk about sexual issues? HIV and AIDS issues?

Why do you chose these people to talk with about sexual issues? HIV and AIDS? If names in sexual issues and HIV and AIDS matters are different, ask why they talk with different people about these things.

What do these people say about how to avoid getting HIV?

Have you talked with your sexual partner about HIV and AIDS and what was the conversation like?

Who else do you discuss with about issues concerning HIV and AIDS?

What do HIV and AIDS educators from company, government or Non-Governmental Organisations tell you? – Formal versus informal channels of HIV and AIDS information dissemination.

Do you think your social interactions encourage you to have multiple concurrent sexual partners? Use condoms with your sexual partners? How?

Do you use condoms with your sexual partners? Which ones? Regular versus casual sexual partners.

The End

This is the end of the interview. If you have got any questions about the research you can always contact me later on the following number... Thank you very much for taking your time to answer the questions.