Exploring The Link Between The Dynamics Of The HIV/AIDS Epidemic And The Practice Of Polygamy In Maiduguri, Borno State Of Nigeria.

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Abstract

This thesis was aimed at exploring polygamy, an age-old cultural practice of many communities, particularly in Africa to examine issues potentially related to the spread of HIV in Maiduguri, Borno State of Nigeria by addressing three main questions:

1. How does the practice of polygamy among the HIV positive individuals in Maiduguri compare to that in the general population?
2. Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?
3. What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

A mixed methodology method of quantitative and qualitative research methods was used. The study was conducted in two stages. One was the use of questionnaires that were administered to patients with the provisional diagnosis of HIV disease (quantitative study). The other was the use of qualitative methods within the community in Maiduguri, using focus group discussions and in-depth interviews. The study involved 102 participants of the qualitative method and 173 of the quantitative methods.

Analysis of the findings of the study revealed that people practiced polygamy to fulfil religious obligation, counter infertility, as a status symbol, to get financial gains, to have political gains, to access cheap labour and/or as a result of fear of HIV infection. What is new is the practice of polygamy as a result of fear of acquisition of HIV infection that is characterised by the use of premarital screening for HIV. A number of social, cultural and economic issues increased vulnerability to HIV infection. The number of HIV positive women reflects their biological vulnerability to the disease as well as a consequence of social constitution of female and male sexuality and inequality that characterise relationships.

It emerged from the study that even though the practice of polygamy is common in many African societies it is not the practice of polygamy per se that was the problem with HIV/AIDS, but the way the polygamous lived their lives. That is where factors like gender roles, religious inclination, educational level and socio-economic status played their roles in determining if a polygamous relationship was likely to lead to vulnerability to HIV/AIDS or not. Further study of sexual negotiation in polygamous relationships and the acceptance, understanding and use of VCT services would improve how the polygamous lived their lives.

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Glossary of Terms and Abbreviations

ARRM: AIDS Risk-Reduction Model

ART: Ant-Retroviral Therapy

ARVs: Anti Retro-Virals

BHSS: Basic Health Services Scheme

CARE: Centre for Actuarial Research

CBO's: Community Based Organisations

CDC: Centre for Disease Control

CEDAW: Convention on the Elimination of all forms of Discrimination against Women

CHGA: Commission on HIV/AIDS and Governance

CORDESRIA: Council for the Development of Social Science Research in Africa is

CSW: Commercial Sex Workers

DFID: Department for International Development

FCT: Federal Capital Territory

FGD: Focus Group Discussion

FGMM: Focus Group for Men in Monogamy

FGMGM: Focus Group for Mixed Group of Men

FGMW: Focus Group for Monogamous Women

FGMGW: Focus Group for Mixed Group of Women

FGPM: Focus Group for Polygamous Men

FGPW: Focus Group for Polygamous Women

FMOH: The Federal Ministry of Health

FRN: Federal republic of Nigeria

GHAIN: Global HIV/AIDS Initiative Nigeria

GDP: Gross Domestic Product

HEAP HIV/AIDS Emergency Action Plan:

HIV/AIDS: Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome

HMB: Hospitals Management Board

HSMB: Hospital Services Management Board

ICRW: International Centre for Research on Women

IDU: Injection Drug User

IGWG: Interagency Gender Working Group

IRIN: Integrated Regional Information Networks

JAAIDS: Journalists against AIDS

LACA: Local Government Action Committee on AIDS

LGAs: Local Government Areas

MDICP: Malawi Diffusion and Ideational Change Project

MDGs: Millennium Development Goals

MSM: Men having Sex with Men

MoH: Ministry of Health

NACA: National Action Committee on AIDS

NASCP: National AIDS and STI Control Programme

NDHS: National Demographic and Health Survey

NEEDS: National Economic Empowerment and Development Strategy

NGOs: Non-Governmental Organizations

NHIS: National Health Insurance Scheme

NHPCDA: National Primary Health Care Development Agency

NHS: Nigeria's Health Service

NIMR: National Institute of Medical Research

NRR: National HIV/AIDS Response Review

NSF: National Strategic Framework

PEPFAR: President's Emergency Plan for AIDS Relief

PHC: Primary Health Care

PHR: Physicians for Human Rights

PLWA: People Living With AIDS

PRB: Population Reference Bureau

RCM: Roman Catholic Church

SACA: State Action Committee on AIDS

SAP: Structural Adjustment Programmes

SIDACTION: Status d'Ensemble Contre le Sida (a French NGO)

SIM: Sudan Interior Mission

SSHM: State Specialist Hospital

STI's: Sexually Transmissible Infections

SUM: Sudan United Mission

TAM: Treatment Action Movement in Nigeria

UBE: Universal Basic Education

UMTH: University of Maiduguri Teaching Hospital

UNAIDS: Joint United Nations Programme on HIV/AIDS

UNDP: United Nations Development Programme

UNDFW: United Nations Development Fund for Women

UNESCO: United Nations Educational, Scientific and Cultural Organisation

UNFPA: United Nations Fund for Population Activities

UNHCR: United Nations High Commissioner for Refugees

UNICEF: United Nations Children's Emergency Fund

USAID: United States Agency for International Development

VCT: Voluntary Counselling and Testing

WHO: World Health Organisation

WMA: World Medical Association

Chapter 1: Introduction

1.0 Introduction:

In this introductory chapter I will give the rationale and background to the main research questions. I will first present the context of the research into the question of polygamous marriage as a possible risk factor to HIV/AIDS transmission – setting the scene. In the second section I will present the theoretical framework of risky behaviour and the understanding of how polygamy and HIV/AIDS interrelationship may or may not be a risky association in the spread of HIV/AIDS. This will then be followed by a presentation of background information about Nigeria and Borno State where the study took place. I will finally give the outline of the chapters that make up this thesis.

1.1 Is polygamy a risk factor to HIV/AIDS transmission?

Polygamy is a marriage practice that I found to have been taken for granted as a routine day-to-day social happening in the communities that practice it. But the advent of the disease HIV/AIDS and the search for ways of curbing its spread globally has made it necessary to look out for ways even in the ordinary social issues that did not seem to matter in the past.

In the early 80's when HIV started spreading around the world, I was a medical student. At that time when a patient was diagnosed to be HIV positive, he/she became a special case for presentation at clinical meetings. Patients were rarely seen, even at the tertiary centres like the teaching hospital where I was a student. About ten years later (in the early 90's) as a medical practitioner in a medical ward, I was surprised to see that at that point in time, patients admitted with HIV infection were as common as those with malaria fever, sometimes even more so. Towards the millennium, most families have had the experience of losing a relative to HIV or nursing one with HIV. There is therefore a clear indication of a persistent rise in the number of patients with HIV in Maiduguri.

Apart from HIV, what is also found in Maiduguri is polygamy. Polygamy is common in Maiduguri, whether legal or as a matter of tradition. Maiduguri is the capital of Borno State in the North-Eastern Nigeria. This is the largest city of the state and a link to three countries – Republics of Cameroon, Chad and Niger. The main religions are Islam, Christianity and a minimal number of Traditionalists. It is cosmopolitan as indigenes of the neighbouring countries have easy access to the country and many of them have settled in the city as well as other tribes from different states of Nigeria (personal observation).

In subsequent chapters of the thesis I will show that the way polygamy was lived by those practising it was associated with the spread of HIV/AIDS. I tried to find this out by looking at the following aims and objectives.

1.1.1 Aim and objectives of the research

The thesis aims to explore and understand the implication of polygamy in the spread of HIV/AIDS in Maiduguri, Borno State of Nigeria by addressing three main questions:

1. How does the practice of polygamy among the HIV positive individuals in Maiduguri compare to that in the general population?
2. Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?
3. What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

To answer these questions, the thesis would look at the following objectives

1. To compare the prevalence of polygamy in the HIV positive population in Maiduguri with the prevalence of polygamy in the general population.

   a. Access and Assess the quality of available estimates of polygamy in Maiduguri

b. Estimate the prevalence of polygamy amongst the HIV positive population in Maiduguri
c. To give a simple comparison of the polygamy situation among the HIV positive population studied and the general population

2. To explore the role of polygamy and marriage practice in the spread of HIV in Maiduguri i.e.,

a. Do people perceive that the marriage of more than one spouse influences vulnerability to acquiring HIV/AIDS?
b. Does sexual negotiation and bargaining occur within marriage and does it differ between the polygamous and monogamous marriage relationship?

3. To understand the practice of polygamy in Maiduguri, Borno State of Nigeria i.e.,

a. To find out the extent of the practice of polygamy,
b. To show experiences from different perspectives (men, women, age group)

I have used a combination of quantitative and qualitative methods to study the aims and objectives of the research.

1.1.2 Background to the Research

This thesis is a presentation of a study that had explored the social, intellectual and moral forces that are responsible in the spread of a relatively new disease (HIV) and changes associated with the spread. The link between this and an age-old cultural practice of many communities, particularly in Africa (polygamy) was examined with the aim of finding if there was an implication of polygamous marriage in the spread of HIV in Maiduguri, Nigeria. The outcome of the thesis would be a reflection of what was happening in communities that practice polygamy.

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) can be considered to be an extraordinary crisis being both an emergency and a long-term issue globally as no region of the world has been spared (UNAIDS, 2004).

Despite improved access to antiretroviral drugs and care, at the end of 2005 the total number of people living with HIV was an estimated 38.6 Million people with an estimated 4.1 Million people being newly infected (UNAIDS, 2006). Infection rates in many sub-Saharan African countries are still on the rise because in 2003 about 3 Million people were newly infected (UNAIDS, 2004) and in 2005 an estimated 2.7 3.2 Million were newly infected (UNAIDS, 2006).

A range of socio-cultural, political and economic factors are thought to favour HIV transmission in many African societies to a much greater extent than elsewhere in the world (Sumartojo, 1997). Within sub-Saharan Africa large differentials in HIV prevalence has been observed between countries, between regions in the same country, between urban and rural areas in the same region and within rural areas (ibid).

Among the factors that facilitate the spread of HIV/AIDS in Africa are what researchers have called 'reported lax sexual behaviour'; the lack of male circumcision; the practice of polygamy; rapid turnover of sexual partners; and multiple sexual partnering (Takyi, 2003). Early in the epidemic, polygamy was identified as a Potential risk factor for the HIV infection (Adeokun and Nalwadda, 1997; Berkley et al, 1989; Kagimu et al 1995 and Isiugo-Abanihe, 1994).

To understand and fight the HIV epidemic we need to question why HIV/AIDS in sub-Saharan Africa is different from HIV/AIDS in other parts of the world; particularly in the way people behave towards and during the spread of the virus (Madsen, 2002). In assessing this, one could mention the traditional religions of Africa that places emphasis on high fertility and the existence of polygamy. Both factors lead to a behaviour that encourages people to have several sexual partners, thereby increasing the risk of HIV infection (ibid).

1.1.3 Paucity of literature on the relationship of HIV/AIDS and polygamy

Studies in Maiduguri as it pertains to HIV/AIDS have been largely on Commercial Sex Workers (CSW) and blood transfusion (Harry, 1993; Chikwem, 1989 and Chikwem 1997). The issue of multiple sexual partnerships and polygamy in particular, seems un-explored. The only literature related to polygamy was a paper presented at the IX International AIDS Conference: Berlin, Germany, 7-11 June 1993 by Gashau et al. In this paper they had examined available records of AIDS patients up to 1993 for the sero-status of consenting spouses. They found 50 cases in the age range of 18-60 years. Thirty-two (64%) of them were married and 2% of them were divorced. Eighty-one percent of the married were polygamous while 19% were monogamous. They had concluded that vigorous community counselling was needed in order to discourage practices like polygamy because they had multiplier effect on HIV/AIDS spread (Gashau et al, 1993). This thesis looked deeper at the relationship between HIV/AIDS and the practice of polygamy in Maiduguri and therefore bridges the literature gap.

A review of available literature on HIV/AIDS and polygamy in chapter 3 revealed varied and complex findings. To help understand these differences I had to look at other bodies of literature including gender and HIV/AIDS prevention. I considered gender because gender, power and negotiation/bargaining power shapes the ways in which polygamy is experienced. I also looked at literature on prevention because of a need to think through different approaches to tackle HIV vulnerability in order to suggest ways of preventing the spread of the epidemic.

There is a case to be made for understanding cultural practices and developing recommendations for HIV/AIDS prevention and 'cure' that are grounded in the realities of the Maiduguri context.

1.2 Theoretical framework of risky behaviour: the relationship of HIV/AIDS and the practice of polygamy

Baxter and Eyles 1999; Edelstein 1988; Baxter et al 1992; and Beck 1992 considered risk as being socially constructed and influenced by multiple factors including the

nature of the hazard, the social and political context in which it occurs and personal values and system of beliefs. Kasperson et al (1988) said, "Risk events interact with psychological, social and cultural processes in ways that can heighten or attenuate public perceptions of risk and related risk behaviours. Behavioural patterns in turn generate secondary social or economic consequences but may also act to increase or decrease the physical risk itself. Secondary effects trigger demands for additional institutional responses and protective action, or conversely (in the case of risk attenuation), impede needed protective action" (Kasperson et al, 1988, pgs 178-179).

When confronted with a risk, people would want to know what it was, what its consequences were and were they likely to be exposed to it (Lion et al, 2002). Modern risks differ from those of the past due to their pervasiveness at the global level and/or the speed at which they diffuse around the world (Haalboom et al, 2006). HIV risk can be defined as "the probability of an individual becoming infected by HIV either through his/her actions, knowingly or not, or via another person's actions (UNAIDS, 2006; pp 105)

It is essential we understand that perceptions of risk differ in the eyes of the public and that of the experts (Fischhoff, 1989). Slovic et al (1980) believed that risk characteristics could explain public perception and described them to include the degree to which an activity's risk were voluntary, controllable, known to science, known to those exposed, familiar, dread, certain to be fatal, catastrophic and immediately manifested (Slovic et al, 1980). That means the public is concerned more with qualitative attributes of a risk in contrast to the experts (scientists) who define risk in narrow quantitative terms by considering the hazard, the probability that it will occur (the risk) and the number of people who may be affected -exposure- (Sandman, 1987).

This difference in the perception of risk has been one reason for the use of a combination of quantitative and qualitative methods described in the methodology chapter to look at the relationship between polygamy and HIV/AIDS in Maiduguri.

Risk behaviour on the other hand is a scientific classification of social behaviour derived from epidemiological analysis indicating that risky behaviours are in reality

risky relationships (Sibthorpe, 1992). By focusing on risky behaviour, risk reduction education conveys the impression that behaviour can be targeted for change apart from the relationship in which they occur.

When risk is considered vulnerability should also be considered in respect of that risk. The WHO first used the concept of "vulnerability" in 1990 to claim social focus for international health in the face of increasing evidence of gender inequality (Schoepf, 2001). Vulnerability to HIV infection reflects an individual or community's inability to control their risk of HIV infection (UNAIDS, 2006).

Craddock (2000) has done a good job of creating a framework that enables the evaluation of vulnerability to diseases including HIV/AIDS thorough enough for the creation of more effective prevention strategies. It was particular in considering risk as the prologue to disease that it must be considered to be historically situated, structured by institutions, households and nations and shaped by global economy and these intertwine with social ideologies and cultural codes of particular times and places (Craddock, 2000).

Vulnerability to HIV/AIDS is a function of class relations and power including gender relationships and also of political relationships and not merely a function of human ecology and biological susceptibility (Gould, 2005). This is outlined in figure 1.1 which is a diagram of the conceptualisation of "vulnerability" that was originally created by Craddock in 1994. The concept of this diagram has been used in the analysis of factors of vulnerability to HIV/AID and the interrelationship of the factors of vulnerability to HIV/AIDS to the practice of polygamy outlined in the literature review (chapter 3) and the factors identified in chapters 5 to 7 from the quantitative and qualitative research work and discussed in chapter 8.

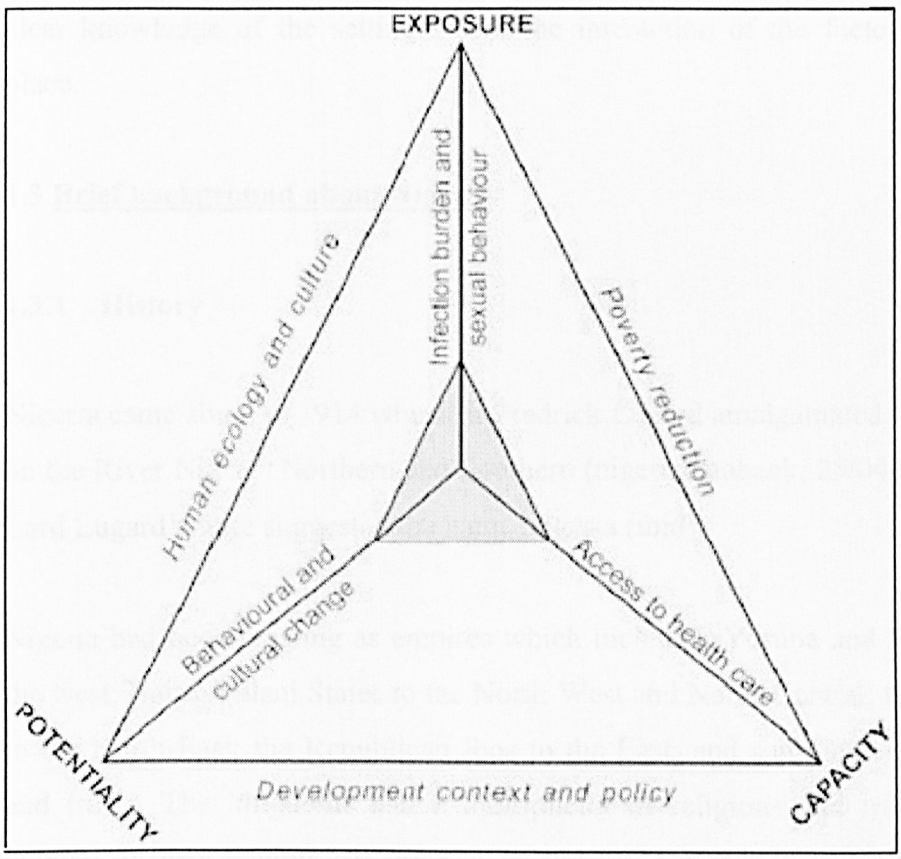

Figure 1.1 The causal structure of HIV/AIDS-related vulnerability (adopted from Gould, 2005).

I have used this theoretical framework to present vulnerability to HIV/AIDS as it gives greater precision in pinpointing vulnerable individuals or groups and it provides the means of analysing the complex interplay of factors involved. At the apex of the triangle (exposure) is the marriage practice in which polygamy is considered a risk for acquisition of HIV/AIDS or not. At the base of triangle is socio-cultural nature of men and women that determines their 'potentiality' for acquiring and/or transmitting HIV/AIDS through ways in which polygamy is lived; and ability to prevent the spread of the disease (Capacity) by individuals and governments. In the middle of this triangle and interrelating with all the angles is the HIV/AIDS epidemic that could be influenced by change in cultural behaviour; individual's access to health care; burden of the infection on the individual and sexual behaviour.

This theoretical framework was pursued in this study that took place in Maiduguri, Nigeria. To better understand it I have discussed Nigeria in brief in order to have a

clear knowledge of the setting where the interaction of the factors observed took place.

1.3 Brief background about Nigeria

1.3.1 History

Nigeria came about in 1914 when Sir Fredrick Lugard amalgamated two protectorates on the River Niger – Northern and Southern (nigeriadatabank, 25/04/03). Flora Shaw, Lord Lugard's wife suggested the name Nigeria (ibid).

Nigeria had been existing as empires which included; Yoruba and Benin empires to the west; Hausa/Fulani States to the North-West and North-Central; the Kanem-Bornu to the North-East; the Republican Ibos to the East; and some other small kingdoms and tribes. The kingdoms had a multiplicity of religions and tribes with a great number of them having had complex systems of government independent of contact with Europe (Foreign affairs and international trade, Canada, 2006).

Despite difficulties arising from its various component groups, Nigeria became a Sovereign Federation on the First of October 1960 (Library of Congress, 2006). Its capital was in Lagos up to December 12th 1991 when it was moved to the Federal Capital Territory (FCT), Abuja (Ibid).

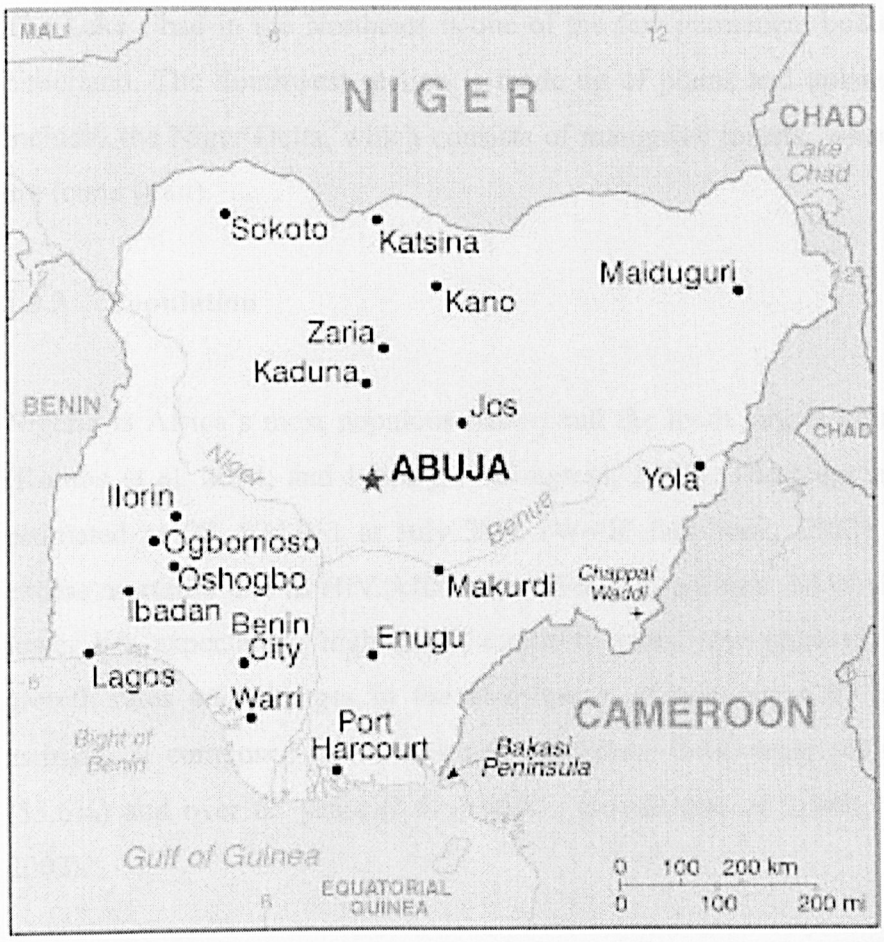

Figure 1.2: Map of Nigeria. Adopted from map collections of the University of Texas

1.3.2 Geography

Located on the West coast of Africa, the Federal republic of Nigeria (FRN), covers an area of 923,768.64 Square Kilometres and is situated between Longitudes 3° and 14° East and Latitude 4° - 14° North (Library of Congress, 2006). The longest distance from East to West is 767 Km and from North to South is 1,605 Km (ibid). Its borders are: Republics of Niger to the North, Chad to the North-East, Cameroon to the East, Benin to the West and the Atlantic Ocean to the South (Gulf of Guinea) as shown in the map above (ibid).

A physically diverse country, Nigeria is divided by the Niger-Benue system of rivers into three sections. The Northern section consists of plains roughly 1500ft (460M) above sea level crossed by rivers and occasionally broken by outranges of granite.

The Lake Chad in the Northeast is one of the few permanent bodies of water in the hinterland. The Southwest section is made up of plains and uplands. The Southeast includes the Niger Delta, which consists of mangrove forests, where the oil deposits are found (ibid).

1.3.3 Population

Nigeria is Africa's most populous nation and the tenth largest country in the world (Kombe et al, 2004; and Library of Congress, 2006). The Nigerian population was estimated as129, 934,911 at July 2002 (World fact book, 2002) and the effect of excess mortality due to HIV/AIDS was taken into account. HIV/AIDS may result in lower life expectancy, high infant mortality rates, low population and population growth rates and changes in the distribution of population by age and sex. The estimate is composed of various age structures: 0-14 years (43.6%), 15-65 years (53.6%) and over 65 years (2.8%) with a growth rate of 2.54% (World fact book, 2002).

Nigeria has a birth rate of 38.8 births/1,000 population; Death rate of 13.8 deaths/1,000 population; infant mortality rate of 71.4 deaths/1,000 population; life expectancy at birth of 51.0 years for total population, (United States Census Bureau, 2004-2005). When compared to some other countries in Africa, Nigeria has a very high birth rate, crude death rate, infant mortality rate and fertility rate (see table 1.1)

Table 1.1: comparison of vital statistics of countries from different regions of Africa

Country	Crude birth rate (per 1,000 persons)		Crude death rate (per 1,000 persons)		Expectation of life at birth (years)		Infant mortality rate (per 1,000 live births)		Total fertility rate per woman	
	2003	2010	2003	2010	2003	2010	2003	2010	2003	2010
Cameroon	35.5	32.5	15.3	15.5	48.1	47.9	70.1	62.7	4.63	4.08
Ghana	25.8	21.4	10.5	11.5	56.5	55.6	53.0	47.6	3.32	2.54
Nigeria	38.8	35.3	13.8	15.7	51.0	47.3	71.4	65.8	5.40	4.79
Chad	47.1	43.4	16.4	16.8	48.5	46.2	95.7	88.6	6.44	5.97
Kenya	28.8	23.6	16.0	18.3	45.2	43.7	63.4	58.0	3.47	2.63
South Africa	18.9	16.4	18.4	30.1	46.6	36.5	60.8	65.1	2.24	1.96
Algeria	18.3	16.7	4.6	4.7	72.5	74.3	33.4	25.7	2.16	1.76

Source: United States Census Bureau, "International Data Base" as of 30 April 2004.

Nigeria is a multi-ethnic and multi-religious country. It is composed of more than 250 ethnic groups (ibid), 29% of the population are Hausa/Fulani, 21% Yoruba, 18% Ijaw, 10% Kanuri and 3.5% Tiv (ibid). These are the most populous and politically influential of the tribes.

The Nigerian population is made up by 50% Muslims, 40% Christians and 10% with indigenous religious belief (Powell, 2002). The religious distribution is such that most Muslims are the Hausa/Fulani and Kanuris in the North and most Christians are the Yoruba and Ibos to the South (ibid).

The official language of Nigeria is English (World fact Book, 2002; and Library of Congress, 2006). There are however three other major languages – Hausa/Fulani in the North, Igbo (Ibo) in the East and Yoruba in the West.

1.4 Borno State in Brief

My presentation in this section is about background to Borno State in which the study took place. It will include a brief review about the state indicating its location, type of people. This will then be followed by a look at health situation in Borno State and health care provision. There will also be a presentation on the HIV/AIDS situation in Borno State.

1.4.1 A General Overview of Borno State

Borno State, one of the 36 States of Nigeria located in the Northeastern part of the country was created in 1976 (onlinenigeria, 2005). It shares borders (see figure 1.2) with Niger republic to the North, Chad Republic to the Northeast and Cameroon Republic to the East as seen in the figure below. Nationally it shares boarders with Adamawa and Gombe States to the South and Yobe State to the West (Sa'ad, 2001). It covers a total landmass of 64,435 Sq Km with a total population of 2,596,589 from the 1991 population census (ibid). The lowest population density of 32.8 people per square kilometer is found in Borno State (Clara et al, 2003).

Borno State comprises twenty-seven local government areas (LGAs) and each LGA serves as a constituency for the State House of Assembly, irrespective of population size while some LGAs have been merged to form federal constituencies for the National Assembly (onlinenigeria, 2005). The state is divided into three senatorial districts: Borno North, Borno Central and Borno South (ibid). Mainly the dominant Kanuris inhabit Borno North and Central districts, while Bomo South is for other ethnic minorities. Furthermore, under the traditional set up, Bomo is made up of three Emirates (Bomo, Dikwa and Biu); and four chiefdoms (Shani, Askira, Uba and Gwoza). These emirates and chiefdoms are sub-divided into about forty Districts and over 200 village units.

The LGAs are subdivided into districts. Some LGAs have only one district while some have more than one. Each district is headed by a district head that is the official representative of the traditional authority in his area of jurisdiction. The districts are

further subdivided into village areas. A village area is a settlement or group of settlements under a village head (Lawan). There are altogether 395 village areas in the state (Bomo State, 1989).

Maiduguri, the capital of Borno State was founded near Yerwa in 1907 as a British Military post. From the 1991 census estimates, its population is 282,000. The city is a rail, road and air transport centre serving the North-eastern part of Nigeria and the neighbouring countries (The Columbia Encyclopaedia, 2001). It is a cosmopolitan society with two main religions – Islam and Christianity, with few Traditionalists. The main tribes are Kanuri, Babur-Bura, Marghi, Fulani and Shuwa–Arabs (Personal Observation).

Maiduguri is comprised of two local government areas – Maiduguri Metropolitan council and Jere and is further divided into Districts and wards (Koln, 2002). A summary of the Districts and wards is shown in the table and map below.

Table 1.2: Districts and wards in Maiduguri. Source (Koln, 2002)

	DISTRICTS			
	Yerwa	**Maiduguri**	**Bolori**	**Gwange**
WARDS	Fezzan	Addamari	Bolori, I, II, III	Bulabulin, I, II
	Gamboru	Alau	Lamisula	Gwange, I, II, III
	Hausari	Bale Galtimari	Mafoni	Maisandari, I, II
	Limanti, I, II	Dala Lawanti	Shehuri North, I, II	
	Shehuri South	Dusman	Jabbamari	
	Zango	Gomari Airport		
		Gongulong		
		Old Maiduguri		
		Mairi		
		Mashamari		
		Ngomari		
		Tuba		

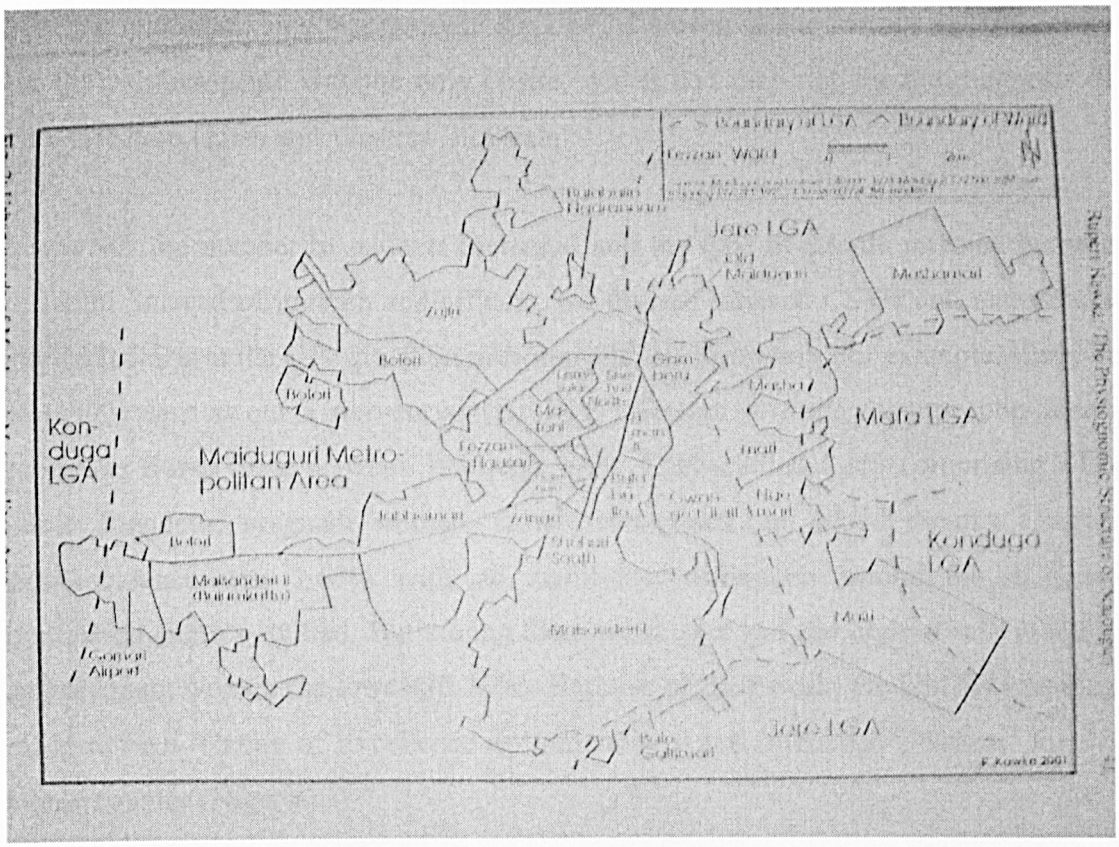

Fig 1.3: Maiduguri township map showing wards and districts (source: Borno State Ministry for Land and Survey).

1.4.2 HIV/AIDS in Borno State: The story so far

There is a paucity of literature regarding HIV/AIDS epidemic in Borno State and the northeast of Nigeria. From a personal experience of being a medical student at the UMTH and practising at the SSHM as a physician as well as working at the Directorate of Medical Services of Borno State Ministry of Health I have witnessed the progress of the HIV/AIDS epidemic. Most of the information is therefore based on personal experience and/or observation.

At the start of the epidemic HIV/AIDS was generally seen in Maiduguri as a disease of the rich and affluent. This was because the early HIV/AIDS patients were mainly those who were rich enough to travel overseas. The disease was then called the white man's disease. Most patients were then seen only at the UMTH and came from all

over the northeast. This was because the UMTH served as the tertiary referral centre for the Northeast and was the only centre, which had facilities for the diagnosis of HIV infection (Elisa and Western blot tests).

In the 90s the number of patients increased and the type of people infected became different. Instead of the rich and affluent, the disease affected CSWs and researchers started looking at the HIV situation in Borno and the Northeast. For example, Harry et al (1993) carried out a sero-survey for HIV infection in three separate population groups in Borno State between 1988 and 1990. They studied 1,259 comprising STD clinic attendees, pregnant women, female prostitutes and blood donors. Overall seroprevalence was 1.67% with no significant difference among the different population centres studied. But among them prostitutes had the highest rate of 4.2% and pregnant women the lowest (0.25%). Because of their work, the UMTH was then made to be a 'Centre of Excellence in Immunology and Infectious Diseases' for the whole country (Nigeria).

In mid to late 90s, the Society for Women and AIDS in Africa, Nigerian chapter (SWAAN), a women's group worked hard to see that the HIV/AIDS situation in Nigeria as a whole was understood. They worked with the CSWs by educating them about the use of male condom and encouraged women to leave the trade and find something else to do. The government at this stage also started AIDS campaigns which centred on avoiding promiscuity (be faithful) and the use of condoms.

In late part of the 90s however, the disease had permeated all strata of the society. Different groups of people for different backgrounds became infected. This meant that it was no longer the disease of the rich or affluent or CSW. It had become an epidemic and no one seemed to be spared. Each family was affected in one way or another. This was because relatives, friends, neighbours, well-wishers became infected and most had died.

I had also observed that at about the time when the disease became an 'epidemic', women who had left their homes to Saudi Arabia illegally and were said to have been involved in some form of CSW started coming back home with 'odd' ailments. These were later diagnosed to be HIV. These women came back relatively rich and some

went back to their former husbands while others got married to new husbands (mostly those who wanted to have access to the affluence the women could provide). I had personally attended to such women while working at the SSHM and most of them died and many of their spouses and co-spouses became infected.

By the time I started this work in 2003, the disease had become so common that churches introduced a system that made any prospective couple that wanted to marry to be screened for HIV. Some voluntarily went for the tests before even going to the churches or even among the Muslims. It was also at this stage that PLWA in Maiduguri and Borno State at large started to come together to fight the disease by forming an association under which umbrella they fought for the government subsidised ARVs and also enlighten members of the public on HIV/AIDS. They formed an association called 'Hope Initiative' (NEPWHAN, 2005).

1.5 Outline of The Thesis

This thesis has 8 chapters. An exploration of the issues at stake in section 1.1.1 shape the organisation of chapters 5, 6 and 7 as outlined below in detail. Chapter 3 gives the literature review, chapter 2 discusses vulnerability to HIV/AIDS, chapter 4 gives the methodology used and chapter 8 is discussion and general conclusion.

Chapter 2: Discussion on HIV/AIDS vulnerability and influence of polygamy on HIV/AIDS vulnerability

This chapter discusses findings from the literature on factors implicated in the spread of HIV/AIDS by assessing vulnerability factors that are common to both men and women, those common to men, and those that are common to women. The chapter also discusses existing evidence that polygamy may or may not have influence on HIV/AIDS vulnerability by looking at the epidemiological association of HIV/AIDS to the practice of polygamy.

Chapter 3: Review of Sociological and Cultural literature on the practice of polygamy

This chapter gives a review of sociological and cultural literature related to the practice of polygamy. It also discusses relevant issues in Nigeria and the specific context in which the relationship between HIV/AIDS and the practice of polygamy are explored. This entails looking at the interaction of factors that lead to the vulnerability to HIV/AIDS and a cultural approach at the prevention of HIV/AIDS transmission.

Chapter 4: Methodology

The research Methodology is outlined in this chapter. Here study preparation; identification of study population and the methods used in the research are discussed. A discussion of the quantitative methods followed by the presentation of Qualitative research methods including key informant interviews with religious leaders, community leaders and women opinion leaders and in-depth interviews, Focus Group Discussions (FGDs) and observations with participants (People Living With AIDS [PLWA] and community members). This is then followed by and a look at the ethical considerations of the study.

Chapter 5: Results and Discussion for research question 1: How does the practice of polygamy among the HIV positive individuals in Maiduguri compare to that in the general population?

This chapter presents a discussion mainly of the outcome of the questionnaires administered to HIV positive patients seen in Maiduguri with a view to presenting how the polygamy/monogamy situation among the participants compares to the situation in general population. This is under the following headings:

- Presentation of the assessment of available estimates of polygamy/monogamy from national population commission records.
- Presentation of the Polygamy/monogamy situation amongst the HIV positive population in Maiduguri
- To give a simple comparison of the polygamy situation among the HIV positive population studied and the general population

Chapter 6: Results and Discussion for research question 2: Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?

This chapter presents and discusses the interpretation of the research work as it portrays the role of polygamy in the spread of HIV/AIDS in Maiduguri. Findings of the study that address the following questions are presented

- Do people perceive that marriage of more than one spouse influenced vulnerability to acquiring HIV/AIDS?
- Is the influence of polygamy on the spread of HIV/AIDS any different from that of monogamy?
- Does sexual negotiations and bargaining occur within marriage relationships and is it different between polygamy and monogamy?

Chapter 7: Results and Discussion for research question 3: What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

This chapter addresses the question of the extent of the practice of polygamy in Maiduguri following the analysis of the research work. Views of the various participants of the FGDs and in-depth interviews are discussed. That is views of different groups of people (men, women, traditional leaders, etc) will be presented and interpreted. Three main issues are addressed:

- Who practices polygamy/monogamy in Maiduguri?
- What are the perspectives of different participants on the practice of polygamy in Maiduguri?
- How do the participants think about changes in polygamy/monogamy through time?

Chapter 8 Discussion and General Conclusion

This chapter presents a discussion of findings of the research work presented in chapters 5-7 and conclusions drawn from the research findings. It also discusses implications of the study to research and HIV/AIDS interventions and limitations of the study. The chapter concludes with a summary of the importance of understanding the inter-relationships between HIV/AIDS and cultural practices, particularly polygamy.

Chapter 2: Justification of research questions and objectives: HIV/AIDS vulnerability and influence of polygamy on HIV/AIDS vulnerability

2.0 Introduction

In this chapter I discuss the factors implicated in the spread of HIV/AIDS in the literature by looking at factors that lead to the vulnerability to HIV infection and existing evidence that polygamy may or may not play an influence on HIV/AIDS transmission. The findings justify the research questions and objectives outlined in chapter 1. Factors that lead to the vulnerability to HIV infection is discussed in section 2.1 while section 2.2 discusses epidemiological association of HIV/AIDS and polygamy

2.1 Factors that lead to the vulnerability to HIV infection

Vulnerability simply means "the insecurity or well being of individuals or communities in the face of changing environment (ecological/social/economic/political) in the form of sudden shock, long term trends or seasonal cycles" (Farrington et al, 2002; pp 8). Bates et al, (2004) have reviewed the concept of vulnerability and gave three definitions. I am quoting the most relevant to this study: "the characteristics of a person or group in terms of their capacity to anticipate, cope with, resist, and recover from the impact of a natural hazard" (Bates et al, 2004; pp 268). They have also identified different levels of vulnerability to include individual, household and community and Meso/macro. Loewenson and Whiteside (2001) observed that vulnerability of the society determines the impact while perceptions of vulnerability suggested the cost of the epidemic.

Reversing Africa's vulnerability to HIV infection is fundamental to reversing the spread of the disease and the interrelationship of the risk, vulnerability and impact of the epidemic must be addressed (UNAIDS, 2003) as decreasing vulnerability decreases the risk of infection and the impact of the epidemic. This interrelationship was highlighted in section 1.2 and forms the basis for the discussion chapter.

A number of social, cultural and economic determinants increase women's vulnerability and these are connected with sexual behaviour and economic security (Lee, 2004). Interplay of these with biological factors in women further increases their vulnerability to HIV infection (PRB, 2001). These could be common to both men and women, or could be different for women and men. They could be due to biological, social, behavioural or demographic reasons. After discussing these factors in this section, I will discuss their interaction with the practice of polygamy in section 3.5.

2.1.1 Vulnerability factors common to women and men

The factors that make both women and men vulnerable to getting HIV infection include:

- Sexually transmitted diseases
- Knowledge and beliefs about HIV
- Sexual behaviour patterns
- Migration
- Age difference
- Marital status
- Widowhood
- Geographical risk factors
- Religion

2.1.1.1 Sexually transmitted diseases

Sexually Transmitted Diseases play a role in the dynamics of HIV epidemic because they enhance the transmission of HIV during sexual intercourse (Buvé et al, 2001). Genital ulcerative diseases increase HIV susceptibility by disruption of mucosal barrier associated with ulceration and HIV infectivity through enhanced genital shedding of HIV (Weiss et al, 2000)

In an epidemiological study of men having sex with men vulnerability conducted in Dakar, Senegal, Wade et al (2005) collected data on HIV, STD and sexual behaviours of MSM; 468 men from five study sites were recruited. They found that overall HIV

prevalence was 21.5%. Serological evidence of previous HSV-2 infection was frequent (22.3%) and was strongly correlated with HIV infection. Also, 35.1% had reported sexual activity with women indicating a sexual bridge between high-risk men and low risk women (Wade et al, 2005).

Klouman et al (1997) found a significant association between HIV infection and STDs in women and between HIV infection and a history of STDs in men. This followed a population-based study of a village in rural Kilimanjaro, Tanzania between 1991 and 1992 comprising of 3,235 participants.

In Jos, Nigeria, Sagay et al (2005) examined 2657 pregnant women to determine risk factors for HIV infection among them. They found HIV prevalence to be 8.2% and had concluded that women who had husband that had other partners (spouses) and also had other STDs had increased risk of HIV infection. Thus suggesting that STDs are also a risk factor in HIV transmission but the risk is augmented by the practice of polygamy, particularly in men.

2.1.1.2 Knowledge and beliefs about HIV

People hold many myths, beliefs and misconceptions about HIV despite having some knowledge of the disease. For example in South Africa, a study by the Centre for Actuarial Research (Peltzer et al, 2006) showed that there was good knowledge of basic facts surrounding HIV/AIDS: it is spread sexually and that the risk of infection can be reduced by using condoms. However, there are misconceptions like: HIV can be spread by blood sucking insects; sharing of food with an HIV positive person; using public toilets and fondling HIV positive person can lead to HIV infection. Also, there are beliefs that a person could be cured of AIDS by having sex with a virgin.

Despite having some knowledge about HIV and its associated risk factors, some still engaged in risky behaviours. For example, a study by Sallah et al (1999) of the students of the University of Benin in Togo showed that students were aware of ways in which HIV was transmitted and what construes risky behaviour. But there was a high frequency of high-risk behaviour among them.

But others do not have the knowledge and have increased risk for HIV infection. For example in Burkina Faso, Meda et al (1998) determined population knowledge on AIDS. They used three cross-sectional surveys of 1294 pregnant women, 236 long distance truck drivers and 426 female CSWs. They observed that the level of knowledge of HIV transmission routes and risk factors for HIV transmission was very low. Forty-one percent of the pregnant women, 40% of the long distance truck drivers and 61% of the CSWs did not feel that they were at risk of HIV infection.

2.1.1.3 Sexual behaviour patterns

Indicators of sexual behaviour patterns have been identified to include: age at first sex and adolescence, multiple sexual partnerships, sexual negotiation and condom use (Boerma et al (2002).

2.1.1.3.1 Age at first sex and Adolescence

Young people's first sexual intercourse places them into a group exposed to risks of STDs including HIV and the risk varies with the age at onset of sexual activity (Upchurch et al, 1999). Buga et al, (1997) studied 1025 females from 21 secondary schools in Transkei, South Africa. They observed that 74.6% were found to be sexually active; 18.7% had sex before menarche with mean age of first sex at 14.8years. Only 23.5% of them ever used modern contraception. This also indicated that early sexual maturation and early onset of dating represent risk factors for unprotected sexual activity in this population.

Despite societal efforts to reduce adolescent sexual activity most adolescents have had sexual intercourse by the time they reach adulthood (Manning, 2000). Adolescent sexual activity is a premature relationship that leads to problems that might include infections of the reproductive system, teenage pregnancies and abortion as well as socio-psychological problems (Creatsas, 1995). Sexual relations in adolescence particularly in developing countries are likely to take place without protection against STDs including HIV (Freidman, 1994). And sexually active adolescents tend to have multiple sexual partners and to be unconcerned in their practice of safe sex (CDC, 2000). When these factors are found among adolescents, they are placed at risk for a

variety of problems like unplanned pregnancy and STDs including HIV (Rosengard et al, 2004).

It is important to recognize that earlier age at first intercourse poses increased risks to the health and well being of adolescents, as the initiation of sexual intercourse marks the beginning of exposure to the risk of unintended pregnancy and sexually transmitted diseases. These outcomes have important implications for adolescents, and are among the reasons why programs designed to avert negative consequences among girls and young women focus on delaying sexual intercourse and promoting the importance of contraception (Abma et al, 1998).

Moreover, in polygamous societies, child or adolescent brides become second or third wives and for many of them marriage increased their potential exposure to HIV infection (Clark et al, 2006). This is because it results in a transition from virginity to frequent and unprotected sex.

2.1.1.3.2 Multiple partners

Having multiple sexual partnerships or having a partner who has multiple partners is a behavioural factor that contributes to individual risk for acquisition of STDs including HIV (Finer et al, 1999). Many do not see multiple sexual partnerships as a possible way of spreading HIV.

For example, Ekanem et al (2005) studied 395 intra-city bus drivers, conductors and Motor Park and motor park attendants in Lagos, Nigeria. They found that 74.3% of them had multiple sexual partners. These sexual partners include wives, regular partners, CSWs, young female hawkers, schoolgirls and market women within the park. Many of them said they had STDs at one time or another. But 87.6% of the participants felt it was impossible for them to 'catch' AIDS and they attributed the STDs they had to exposure to sun and their partner remaining in the bath for a long time (Ekanem et al, 2005).

2.1.1.3.3 Sexual negotiation

Sexual negotiation is an important determinant of safe sexual behaviour in a relationship. It is a process that would give appropriate and relevant empowerment to women and men that could be used for HIV/AIDS prevention (Ntseane, 2004; Gausset, 2001; Duffy, 2005 and Odutolu, 2005).

UNESCO and other UN agencies acknowledge that cultural approaches to HIV prevention were better in terms of achieving more efficiency, relevance and sustainability in HIV prevention actions (UNESCO, 2002). But Gausset (2001) had argued that the major problem relating to HIV/AIDS prevention involved negotiation for safe sex rather than 'cultural barriers'.

Based on a 10-month intensive field work using qualitative methods, Gausset (2001) had examined the relative impact of training community heath workers and a drama group in AIDS prevention in rural areas in Zambia. The finding was that cultural barriers to AIDS prevention were compatible with safe sexual behaviour. Since in the context of HIV/AIDS prevention the problem is not polygamy or any other cultural practice as such, rather it is infidelity and unsafe sex, which may transmit the HIV from one sexual network to another (Gausset, 2001).

To address the HIV/AIDS epidemic therefore, appropriate and relevant empowerment skills, particularly the courage to negotiate for safer sex in the context of inter-generational sex should be considered (Ntseane, 2005)

2.1.1.3.4 Condom use

Other than abstinence, consistent condom use is the most effective means of reducing the risk of transmitting STDs including HIV. Situations may arise when couples in consensual unions may be separated for socio-economic or other reason and might have to abstain from sex or use condoms (Lawoyin, 2004).

AIDS knowledge is associated with condom use such that low levels of knowledge about transmission of HIV leads to non-use of condoms. Perceptions important in determining condom use particularly with adolescents include perceived susceptibility

to HIV/AIDS; benefits of condom use, self-efficacy to use or have a partner use a condom and social support for condom use (Adih and Alexander, 1999).

Olayinka and Osho (1997) in a study in south western Nigeria to determine trends in sexual behaviours associated with HIV infection in Nigeria found that 91.4% of the participants knew that HIV was an incurable disease. Despite this knowledge and the fact that over 60% of them had multiple sexual partners, overall condom use was: 25% consistent, 55% inconsistent and 20% non-existent. Significant determinants of condom use were identified to include: being in a stable sexual relationship, having a history of sex with CSW, self perception of testing positive for HIV as well as self-perception of HIV risk in Nigeria (Olayinka and Osho, 1997).

2.1.1.4 Migration

Bhugra and Becker (2005) defined migration "as the process of going from one country, region or place of residence to settle in another". It is a major consequence of globalisation, which holds the promise, real or imagined, of prosperity for all and mass migration can be fuelled by explosive regional developments (Fernandez, 1998). Migration has an effect on health, and women migrants face health problems that are exacerbated by their inferior social status and biological characteristic (Carballoet al, 1996)

Parker et al, (2000) reviewed international literature and identified factors that facilitate HIV transmission and its concentration within particular geographic areas and populations to include: economic underdevelopment and poverty; mobility due to migration, seasonal work; and social disruption due to wars and political instability (Parker et al, 2000; Salama et al, 2001).

"Mobile populations, such as long-distance truck drivers, commercial sex workers, seafarers, migrant workers and irregular or illegal migrants, come in contact with local communities, including those providing informal and formal sexual services often under the guise of restaurants, bars, barbershops and guesthouses. Interaction among diverse sectors of mobile populations forming different patterns may intersect at certain points" (Skeldon, 2000 pp i).

2.1.1.5 Age difference

Age asymmetry in sexual relationships can have influence on sexual activity and vulnerability to HIV infection (Gregson et al 2001). To find out the extent of age differences and transactions in sexual partnerships and the effects of these differences on risk behaviour Luke (2003) reviewed relevant literature. The review indicated that engaging in sexual relationships with older persons was the norm for adolescent girls in Sub-Saharan Africa; large age differences were common; there was a discernable link between greater age asymmetry and unsafe behaviours (Luke, 2003).

Longfield et al (2004) studied the relationship between older men and younger women in Kenya to understand its implication for STDs and HIV using qualitative research methods. They observed that young women perceive older men not to be promiscuous and would be expected to be faithful to the young woman. While men believed that younger women were at low risk for STDS/HIV because of their assumed lack of experience (Longfield et al, 2004).

But Gregson et al (2002) reported findings from a field study in Zimbabwe that older age of sexual partners has been associated with increased risk of HIV infection in men (odds ratio 1.13 [95% CI 1.01-1.25]) and women (odds ratio 1.04 [95% CI 1.01-1.07]). This indicated an empirical evidence of association between age difference between female and male sexual partners and HIV prevalence (Gregson et al, 2002).

To assess whether differences in age between sexual partners affected the risk of HIV infection in female adolescents and young adults Kelly et al (2003) studied 6177 15-29 year olds in rural Uganda. They reported that prevalence of HIV-1 in female participants increased with older male sexual partners. The adjusted risk of HIV infection in the women aged 15-19years doubled among those reporting male partners 10 or more years older.

This relationship is made more risky by the inability of the younger women to negotiate for condom use (Petitfor et al, 2004). Silberschmidt and Rasch (2001) in a qualitative study of 51 adolescent girls in Tanzania revealed that even though they

might be aware of the risk of unprotected sex, they were not in the position to negotiate for the use of condom. This was because they either did not dare request for the use of condom for fear of loosing the older partner, or it did not occur to them that they could propose condom use (Silberschmidt and Rasch, 2001)

2.1.1.6 Marital status

Marriage in countries where HIV is mainly transmitted by heterosexual means may substantially affect HIV infection by increasing or decreasing certain HIV risk factors (Clark, 2004). For example infidelity in marriage is a factor for women's increasing vulnerability to HIV infection. This is because many women are powerless to resist unwanted sex or complain about male adultery due to their economic dependency (Kathawera-Banda et al, 2005).

This kind of link is exemplified by the study of Carpenter et al (1999). They assessed the efficacy of HIV-1 transmission in 2200 adults in Uganda over a seven-year period. Men were found to be twice as likely as women to bring HIV infection into a marriage. That meant married adult women with HIV positive spouses were at very high risk of HIV infection and this clearly has implications for polygamy.

Another predisposing factor for the vulnerability to HIV in marriage is condom use. Condom use was found to be lower within marriage or regular relationship as they are more closely linked to non-marital sex than within marriage (Mehyar, 1995). And in a survey in Northeast Africa (Ethiopia and Sudan) condom use during the most recent sex act was more with non-regular partners than among the married population (Carael et al, 2001).

2.1.1.7 Widowhood

Widowhood in developing countries is dictated by traditional and cultural practices associated with mourning and funeral rights, discrimination and oppression of women (Sossou, 2002; and Ntozi, 1997). The situations widows in Africa find themselves are strongly influenced in all socio-economic levels by patriarchal ideals which revolve around unequal power distribution and domination by men (Sossou, 2002). What is

common to widowhood rites in Sub-Saharan Africa is societal marginalisation and isolation as a result of gender and power relations punctuated by hardship and deprivation (Ibid).

Ntozi (1997) described what might happen to widows in Africa as being one or more of the following:

- As part of funeral rights, widows may be expected to have sexual intercourse with one of the male in-laws (as is the practice in some tribes in Kenya, Zambia and Rwanda)
- May remarry within the husband's extended family (as seen among some tribes in Mali, Burkina Faso, Sierra Leon and Zimbabwe)
- Those who refuse remarriage are thrown out of husband's property and forced to fend for themselves
- In some societies widows are seen as 'bad people' who had killed their husbands and are forced to migrate to cities to find alternative means of livelihood which might be CSW

All these predispose to multiple sexual relationships and/or polygamy.

2.1.1.8 Geographical risk factors

There has been temporal and spatial variation of the HIV epidemic particularly in Sub-Saharan Africa with the highest prevalence rates in the Southern part and lowest in the Western part (Mayer, 2005). Using the vulnerability framework (see section 1.2) in Ghana, Oppong (1998) found that a number of specific factors increased vulnerability to HIV- polygamy, migration and concentration of CSWs in certain rural areas.

Kalipeni, (2000) also using the same vulnerability framework in Sub-Saharan Africa affirmed Oppong's approach to vulnerability and suggested "life circumstances, social power, historical forces, entitlement, disenfranchisement of some groups and empowerment of others, and class relations all influence group and locational vulnerability" (Kalipeni, 2000).

That is why borders and trade routes form physical structural determinants of heightened HIV vulnerability given that they facilitate population movement (Lyttleton and Amarapibal, 2002; Soskolne and Shtarkshall, 2002). Also, geographic factors like climate, weather and environmental conditions interact with changes in HIV/AIDS because they condition the diversity of populations affect their nutrition and health and often trigger seasonal or exceptional movements of people (Gommes et al, 2004).

2.1.1.9 Religion

Lagarde et al (2000) described the association between religion and factors related to HIV/AIDS and other STDs in a cross-sectional survey in rural Senegal. They used questionnaire-based interviews with 858 adults aged 15-59 as well as in-depth interviews with four religious leaders and 50 other people. They found that 86% of men and 87% of women felt that religion was important to them. They reported that men who thought religion was important to them were less likely to see HIV/AIDS as a health problem and so were less likely to feel at risk of getting AIDS. Women who reported that religion was important to them were less likely to protect themselves from AIDS but more likely to feel at risk of getting HIV (Lagarde et al, 2000).

The opposite effect of religion for men and women reported above may be a reflection of the significance of religion for men and women. It may give men a protective feeling while women may associate it with submission and lack of control over their personal risk of HIV infection (Ibid).

Identifying religious factors could be important in helping to understand and predict the course of the HIV epidemic (Gayle and Hill, 2001; Piot et al, 2001). This is because religions may promote well-being by regulating health related conducts in ways that reduce the risk of diseases. Most religious communities have moral and ethical teachings discouraging deviant conducts and providing guidance and practical advice about family life including marriage (Ellison and Levin, 1998; and Lagarde et al, 2000).

Adherence to Islamic tenets may confer protective benefits against sexual transmission of HIV. If followed, Islamic codes against sex outside marriage for both men and women could reduce premarital and extra-marital sex; reduce sex with CSW; and reduce risk from unprotected anal sex by prohibiting homosexual sex (Stanberry and Bernstein, 2000). Prohibition of alcohol consumption, attention to ritual cleansing, which increases penile hygiene as well as circumcision in Islam, protects against sexual transmission of HIV (Weiss et al, 2000; and Williams et al, 2006). Indeed if polygamy was a potent means of spreading HIV, the Islamic countries of North Africa and Middle East should have exhibited larger than usual HIV rates since polygamy is the normative form of marriage of these societies (Kalipeni, et al, 2004).

Gray (2004) tested the hypothesis that "Islamic Religious affiliation negatively associates with HIV seropositivity". This was by using on-line demographic data and a review of published literature for journals linking HIV and risk factors for Islam and HIV. Six of seven studies revealed low HIV prevalence among Muslims.

The use of condoms in reducing individual risk for HIV acquisition may be influenced by the anti-condom stance of some religious groups (Kirby, 1997). For example Catholics and Muslims do not promote condom use because they perceive it as condoning promiscuity (Takyi and Addai, 2002). Pentacostal churches on the other hand encouraged early marriage among their members in order to minimise the risk of immoral behaviour. But such denominations oppose polygamy as opposed to Islam and traditional religions, which allow polygamy (Stanberry and Bernstein, 2000; Takyi and Addai, 2002). For example traditional African religions like Baherero in Zambia condone polygamy as a way of regulating sex and confining it in a specific ethnic group (Ntseane, 2004).

2.1.2 Women's vulnerability

The increase in the number of HIV positive women reflects their biological vulnerability to the disease as well as a consequence of social construction of female and male sexuality and the profound inequalities that continue to characterize many heterosexual relationships (Garcia-Moreno, 1998).

2.1.2.1 Biological factors that lead to women's vulnerability to HIV

Women are biologically more vulnerable than men to infection from HIV during a potentially unsafe sexual encounter (Garcia-Moreno, 1998). This is because the lining of a woman's vagina and cervix contains mucus membranes that provide large area through which HIV and other STIs could pass (PRB, 2001).

The soft tissue in the female genital tract tears easily thereby producing a route for the virus and vaginal tissue absorbs fluid more easily, including sperm which has a higher concentration than found in vaginal secretions (Anderson et al, 2004; and CHGA, 2004). Young girls are biologically more vulnerable because their genital tract is not fully mature (PRB, 2001)

2.1.2.2 Socio-cultural factors that lead to women's vulnerability to HIV

2.1.2.2.1 Introduction

Most socio-cultural factors that make women vulnerable to HIV stem from gender inequality. A general overview of gender inequality and its influence on HIV that is relevant for understanding of the relationship of polygamy and the spread or acquisition of the infection is given.

Gender is one of the forces that contribute to the patterning of social life and by understanding gender more of the social world is understood (Wharton, 2005). And Fletcher and Ely (2003) conceptualised gender as having two inter-related parts- gender identity which is the sense one makes of the fact that one is male or female; and gender relations, which is the way the social world is built in part by making distinction between men and women thereby shaping the material conditions of our lives differently (Ely et al, 2003).

Socio-cultural norms about masculinity and feminity and the unequal power relationship between men and women that arise from these norms, conspire with biological factors to compound individual risk of HIV infection (WHO, 2003).

Cultural features common to most countries in Sub-Saharan Africa have played and still play a role in the spread of HIV infection (Smith and Cohen, 2000). These cultural systems dictate that women have no control over their sex lives or that of their husband's sex life outside marriage. Many cultures have rules that require women to have no sexual experience before marriage and to remain monogamous after marriage (Zulu et al, 2000). And the cultural subordination of women to men creates an unfavourable environment for preventing HIV infection, especially under the recommended strategies of abstinence, mutual fidelity and the use of male condoms (Akinboade, 2005).

Agosin (2002) observed that changes in gender stereotypes and expectations are necessary in strengthening AIDS policies because "when rape, whether within or outside the bounds of marriage, is not considered a crime, when sex is a conquest rather than an act of intimacy and when women are valued as vehicles of pleasure rather than human beings, there is a higher probability for HIV transmission" (Agosin, 2002). And in both developed and developing countries social, political and economic systems that discriminate against individuals based on their gender, race, creed, sexual preference or religion further weaken individual and societal defences against HIV infection and undermine public health policies that target the spread of the infection (ibid).

Gender issues are increasingly being recognised as having critical influences on the HIV epidemic in Africa (UNAIDS, 2001). For women, social norms defining their acceptable behaviour, characteristics and responsibilities, economic dependency and their response to violence translates into a power imbalance in sexual interactions which increases vulnerability to HIV, whereas ideals of masculinity associated with risk-taking and sexual conquest also creates vulnerability in men (ibid).

As regards this study gender issues are seen to include:

- Power imbalance and Socio-economic status of women which makes them vulnerable to HIV
- Reduced ability to negotiate for safe sex
- Gender-based violence
- Access to information

These gender issues are important to consider in relation to the topic because they are issues that could also influence polygamous relationships and are therefore highlighted in subsequent sections of this chapter.

2.1.2.2.2 Power imbalance and Socio-economic status of women that increases vulnerability to HIV/AIDS

A number of social, cultural and economic determinants increase women's vulnerability and these are connected with sexual behaviour and economic security (Lee, 2004). This is because gender norms that create unequal balance of power between men and women are rooted in the socio-cultural context of each society and are enforced by the society's institutions such as schools, work places, families and health systems (WHO, 2003).

Reversing Africa's vulnerability to HIV infection is fundamental to reversing the spread of the disease and the interrelationship of the risk, vulnerability and impact of the epidemic must be addressed (UNAIDS, 2003) as decreasing vulnerability decreases the risk of infection and the impact of the epidemic.

The growing feminisation of the HIV epidemic had been highlighted in a discussion paper for a round table meeting on human rights, gender and HIV/AIDS by UNDP, UNHCR, UNDFW and Global Coalition on Women and AIDS (2005) and has been described as a reflection of social, economic and legal inequities that increase the vulnerability of women and girls to the infection. Hence the recognition by UN member states in signing the Declaration of Commitment on HIV/AIDS affirmed gender inequalities and the empowerment of women are fundamental elements in the reduction of the vulnerability of women and girls to HIV/AIDS.

The power relationship in sex is about who initiates sex, who makes decisions about it and who wears the condom (Lee, 2004). Hence in patriarchal systems women have subordinate status and economically dependent on men since men make all these decisions.

Power imbalance and their associated risks for women can be as a result of:

a. Discrimination and subordination
b. Socio-cultural inequalities
c. Economic inequalities
d. Legal inequalities

a. Discrimination and subordination

Discrimination as described by Piron and O'neil (2005) reflects socially constructed identities and interests which, depending on the situation, operate along lines of gender, religion, class, ethnicity, nationality, age and other dimensions. The convention on the Elimination of all forms of Discrimination against women specified that '"discrimination against women" shall mean any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field.' (CEDAW, Art. 1).

Overlapping forms of discrimination, based solely on membership to a particular group, prevent individuals from accessing and exercising their rights on equal terms and result in disproportionate levels of poverty for particular groups and high levels of horizontal inequality (Piron and O'neil, 2005). Gender encompasses elements of injustice, which stem from dormant values of a society in which the devaluation of women is expressed by trivializing, disparaging and demeaning representation of things coded 'feminine' (Kabeer, 2000).

In a comparative analysis of urban informal street trading in Uganda and South Africa Lee (2004) examined how gendered nature and poor conditions of informal economy employment influenced women's vulnerability to social and economic vulnerability as well as vulnerability to HIV. Exposure of women to discrimination, sex, violence and harassment makes them vulnerable to non-consensual coercive sex which causes/compounds their vulnerability to HIV (Lee, 2004).

b. Socio-cultural inequalities

Culture is a determinant of gender power relationships and is perpetuated through patriarchal structures and systems leading to gender inequalities, discrimination and subordination of women from which men reap unfair benefits and dominate women (Wainaina, 2003). The construction of male and female sexuality has been noted to have implication for women's vulnerability to HIV/AIDS. It reflects inequalities of social and economic spheres of life making it more likely for men to initiate and control sexual activities and decision-making (Weiss et al, 2000).

Throughout sub-Saharan Africa, marriage and sexual unions have long been managed through patriarchal traditions and institutions that have been characterised by bride-price, polygamy, paternal control of the choice of marriage partners, emphasis on women's role in fertility and a powerful marriage mandate for women and perhaps the most significant conjugal variable being the type of marriage-polygamy/monogamy (McCloskey et al, 2005)

Berhane et al (2001) studied 675 women aged 15years and above in Ethiopia in 1998. The study was aimed at addressing the socio-demographic and cultural factors that have potential influence on the health of women in the context of a low-income setting using a combination of qualitative and quantitative research methods. They reported, although women were the major producers and were responsible for the welfare of the family; the entire household resources were controlled and sometimes abused by the husband. In the study 189 (28.0%) were in polygamous marriages and Polygamy was considered as one of the main sources of psychological and social disturbance for the women (Berhane et al, 2001).

The social construction of masculinity on the other hand can compromise men's health by encouraging them to equate risky sexual behaviours with masculinity and they might see reproductive health seeking behaviour as un-manly (Courteny, 1998). Such masculine ideologies encourage multiple sexual partnerships, more sexual activities and negative attitude to condom use (Wood and Jewkes, 2001). Their attitude of being 'superior' to women in knowledge inhibit them form seeking information about sex and protection from diseases (Chege, 2005; and UNAIDS, 1999).

c. Economic inequalities

The World Bank has indicated that economic dependence of women is the root of the problem that fuelled vulnerability as: "it is a systemic issue, where inequity in marital status and property ownership intersect with cultural attitudes and beliefs to create formidable obstacles to change" (World Bank, 2005). Women and men do not have equal economic and legal rights even when equality is enshrined in constitutions and legal codes (UNDP, 2001). Discriminatory laws and economic policies prevent women from getting equal access to resources such as land, property, credit, employment and education, which in turn perpetuate economic dependence and vulnerability (MacNaughton, 2004; and Rankin and Wilson, 2000).

Andreeff (2001) noted that economic inequalities between men and women made the women to be submissive and became economically dependent on men. Gupta (2002) observed that most of the world's women are poor and most of the world's poor are women. Unequal gender relationships and access to economic resources result in women being greater high-risk survival practices that may involve exchange of sex for food, shelter, money or other reason (LeClerc-Madlala, (2001). And women can remain silent on matters of sex and fidelity in relationships because the economic dependence of women leads to a lack of sexual negotiation powers (WHO, 2005).

That was why some women remained in risky relationships in which they do not have control over their sexual activity and the ability to protect them from HIV infection. And poor women might resort to bartering sex for food and maintenance for themselves and their families or trade sex for jobs, promotion, permits and school fees and marks (MacNaughton, 2004)

The traditional gender based division of duties and responsibilities within the home is now changing as women are now joining the work force (Population Reference Bureau, 2001). But instead of gaining control over their lives, women may face many problems as they try to balance their roles at home and at work. Their inability to shed some domestic responsibilities may result in lower economic mobility (Ibid).

d. Legal inequalities

Plural legal systems in most developing nations provide inadequate legal protection for women because religion and customary systems that exist alongside civil law draw on patriarchal and religious principles to sustain and defend male dominance (Albertyn, 2000).

What is crucial in relation to legal inequality/equality is women's personal autonomy, which relates directly to women's ability to protect themselves from HIV infection in sexual relationships (Albertyn, 2000). "Issues of HIV/AIDS and other sexually transmitted diseases are central to the rights of women and adolescent girls to sexual health"(CEDAW recommendation 24). While women lack adequate information and power to refuse sex or insist on safe sex practice and are subject to marital rape and polygamy (MacNaughton, 2004).

This is a reflection of male control of sexuality, which could be viewed in light of women's lack of control over the sexual lives of their partners and the inability of women to insist on condom use (Ackermann and de Klerk, 2002). Many African cultures traditionally sanction a man's need for sex and their right to polygamous relationships while limiting it to those who could afford to maintain it (Manuh, 1998). But urbanisation and modernisation has in many areas rendered the traditional sanction of polygamy and replaced it with sexual partnerships involving mistresses and love affairs in which women are powerless (Basset, 1993). In such situations women are expected to be monogamous while their men continued to be in polygamous relationships (Mwale and Burnard (1992).

2.1.2.2.3 Reduced ability to negotiate for safe sex

The degree to which women are able to control their sexual life is a question worth asking for HIV prevention. Women have some control over their sexuality especially during certain occasions such as during menstruation, breastfeeding, pregnancy and when they are sick. However, only few women could negotiate with their husbands especially by insisting on safe sexual practices. They are often rendered powerless to protect themselves against HIV infection by negotiating for safe sex because of factors like:

a. Unfavourable economic conditions of women

b. Absence of female controlled HIV prevention methods
c. Concern about partner's sexual pleasure
d. Fear of abandonment in the case of multiple sexual partnerships

a. Unfavourable economic conditions of women

Ogunjuyigbe and Adeyemi (2005) studied women's sexual control within conjugal unions in Lagos, Nigeria in order to examine the extent to which women could control their sexuality with marriage and its implication for HIV/AIDS spread. The study involved the use of both qualitative (in-depth interviews) and quantitative methods with a sample size of 244 respondents. It was found that women with improved socio-economic status could exhibit some form of control within conjugal unions; their participation, even in low skilled, low salary jobs conferred a sense of worthiness to the women. It gave them the negotiating power they needed within their homes (Ogunjuyigbe and Adeyemi, 2005).

The low social status of women in many societies encourages discrimination, domestic and sexual violence, coercion and psychological abuse, so that they are less able to negotiate for safe sexual practice which can lead to risky sexual behaviour and low social esteem in women at the long term (Caraël and Holmes, 2001). Sexual relationship between younger women and older men occurs frequently, increasing the likelihood that the woman will encounter a man who is already HIV infected and becoming infected too (Jewkes, et al 2003). Such economic needs and dependency put women at a further risk of HIV infection. It reduces the woman's ability to dictate the terms of exchange and is therefore less likely to succeed in negotiating protection and less likely to have relationships that they perceive to be risky (ibid).

b. Absence of female controlled HIV prevention methods

The subordinate position of African women limits their ability to negotiate for safe sex. A barrier to condom use is that African men control much of the decision making regarding sexual events and as a result of this women find themselves in situations that increase their risk for HIV (Pool et al, 2000).

Women need strategies for preventing the transmission of HIV that would not require male participation, which is problematic for many women (Woodsong, 2004). The need for female controlled protective measures would be of great importance, but the female condom is the only method alternative to the male condom (Hoffman et al, 2004).

Another product that holds promise for women is the use of topical microbicides that could be applied to the vagina or rectum. But their use is only theoretically under women's control. It would require aspects of sexual relationship like intimacy, sexual enjoyment and communication. This would still require male involvement (Woodsong, 2004).

Severy et al (2005) developed a framework for examining the sustained acceptability of microbicides. This was by re-conceptualising long-term acceptability with AIDS Risk-Reduction Model (ARRM) framework, reviewing basic issues and research related to microbicide acceptability, discussing couple relationships and identifying related gender and power factors. What was found in all these issues was the importance of cultural context within various international settings.

Originally developed by Catania et al (1994a), ARRM proposed that people moved through several stages before successfully adopting sexual risk-reduction behaviours. The stages were:

- Labelling oneself 'at risk' of HIV
- Commitment to reducing one's risky sexual behaviours and
- Enactment of risk-reducing behaviours

A fourth was later added (Catania et al, 1994b)- maintenance.

The challenges that face this model include:

- Determining how to examine sustained use of an actual microbicide outside of clinical trials
- Bringing out ways that a couple's sexual relationship will influence microbicide use. That is, we need to better understand the importance gender

and culture influence the perceptions of risk and how couples communicate about sexual issues

- Identifying and using analytical procedures that could account for larger-level aggregated measures

c. Concern about partners' sexual pleasure

Sexuality is a complex process that incorporates familial, social and religious beliefs; interpersonal relationships; and each partner brings unique needs, attitudes and responses into a relationship (Kadri et al, 2002). There are two perspectives to sexual relationships (Hughes and Snell, 1990)-exchange or communal.

An exchange relationship is one in which benefits are given on the assumption that a similar benefit would be anticipated; while a communal relationship orientation is one in which concern for a partner's welfare mediated interpersonal giving rather than anticipating a reciprocal benefit (Clark and Mills, 1979). Hughes and Snell (1990) had observed that an exchange approach by males triggered considerable dissatisfaction, whereas a woman's communal approach to sexual relationship would probably foster greater closeness and sharing, leading to greater relationship satisfaction (Hughes and Snell, 1979).

Commonly, within sexual relationships women are usually expected to give priority to their partners' needs and wishes (UNAIDS, 1999). Women therefore, often decide not to ask men to use condom, or having asked, not to persist in asking, because of concern about men's sexual pleasure (ibid).

d. Fear of abandonment in the case of multiple sexual partnerships

In societies where having multiple sexual partners has been a defining feature of successful manhood (Chatterji et al, 2004); single women are regarded as potential usurpers and are therefore relatively isolated socially (UNAIDS, 1999). Thus in a prevailing climate of multiple sexual partnerships like polygamy with high stakes attached to having a partner, there is an ever-present fear of abandonment and women under such circumstances find dictating condom use or sexual refusal to be difficult

(Buvé et al, 2002). Women often find that they cannot discuss sex openly with their partners, including asking for condom use, for fear of appearing promiscuous (World AIDS Day Campaign, 2004).

2.1.2.2.4 Gender-based violence

Violence against women takes many forms including: the act of killing women, battering, grabbing of property after death of a woman's husband, rape (within and outside marriage), incest and defilement (Women's Commission for Women and Children, 2002). After the declaration on elimination of violence against women the UN General Assembly presented a partial list of what it felt constituted gender-based violence, including:

- Physical, sexual and psychological violence within the family
- Child sexual abuse
- Dowry-related violence
- Marital rape
- Female genital mutilation
- Rape and sexual abuse
- Sexual harassment in the workplace and educational institutions
- Trafficking in women
- Forced prostitution.

(Bott et al, 2005).

Violence against women makes them vulnerable to HIV via three mechanisms (de-Bruyn, 1992). First, forced or coercive sexual intercourse with an infected partner can directly result in HIV transmission. In some cases young girls are targeted for rape because of the belief that sex with a virgin will cleanse a man of HIV infection (ibid). Secondly, there is the fear that asking for a condom use will result in violence. This is because asking for condom use may be seen as tantamount to implying infidelity as condoms are associated with commercial sex workers, promiscuity and disease, or an implicit challenge to a male "right" to have many women (ibid). Finally, sexual violence, particularly early sexual initiation and child abuse has been associated with early sexual debut, drug and alcohol use, multiple sexual partners, trading sex for money and drugs and less contraceptive use (Jewkes, et al 2003).

Rani et al (2004) reported that men and women in polygamous marriages were more likely to accept gender-based violence, although the association may not be very significant. The report followed the study of data from DHS of six African countries (Benin, Ethiopia, Malawi, Rwanda, Uganda and Zimbabwe). The study was aimed at examining the magnitude and correlation of conditional acceptance of gender-based violence among men and women. Results of the study indicate that dominant social and cultural norms created images of ideal women that include definition and widespread acceptance of gender roles and the sanction to use force to enforce those gender roles (Rani et al, 2004).

McClosky et al (2005) observed that many characteristics associated with gender-based violence could be conceptualised in terms of gender inequality in sexual issues. They investigated this within a gender-based framework in Tanzania (Moshi District). Using cluster-sampling method they selected 2,019 women and interviewed them between November 2002 and March 2003. They reported that: polygamous unions were associated with higher odds of violence than monogamous ones (odds ration 2.0); women with primary or lower education were more likely than their better educated peers to suffer abuse (odds ratio 1.7); women who reported problems of conceiving were more likely to experience violence than those who did not have such problem (odds ration 1.9); and women who had five or more children were also at risk of experiencing violence (McClosky et al, 2005).

The study above shows that gender-based violence is associated with polygamous marriage practice, which may also be linked to lower educational level and having no children or too many children. All these are factors also do predispose to the practice of polygamy.

The low social status of women in many societies encourages discrimination, domestic and sexual violence, coercion and psychological abuse, so that they are less able to negotiate for safe sexual practice which can lead to risky sexual behaviour and low social esteem in women at the long term (Caraël and Holmes, 2001). The pattern of HIV transmission, incidence and prevalence are structured by gender and social

inequality within which the violence against women and children is embedded (Kistner, 2003).

2.1.2.3 Access to information

MacNaughton (2004) has observed that unequal access to information puts women and girls at great risk of being infected by HIV than men. They are poorly informed about sexual patterns because many societies exhibit strong cultural gender norms such that female ignorance of sexual matters is seen as a sign of 'sexual purity'. This therefore constrains women and girls from obtaining information about sex and reproduction. The lack of information limits their ability to protect themselves from getting infected with HIV. Even when women are aware of HIV transmission they may not change their behaviour because they are socialised to please men (MacNaughton, 2004).

2.1.3 Men's vulnerability

Boys are socialised from young age to associate prolific sexual activity with masculinity and they are encouraged to be sexually active and knowledgeable regarding sexual issues (Gupta, 2000). Lindblad (2003) observed that vulnerability to infection and risk taking is heightened by cultural attitudes that make it hard for men to admit to gaps in their knowledge about sex; by the link between socializing and alcohol use; by the frequency of drug abuse, including injection; and by the number of predominantly male occupations that entail migration and thus disrupt family life.

2.1.3.1. Inadequate knowledge about sex

Social and cultural systems in Africa dictate that men are supposed to know everything about sex and should not admit ignorance of sex (Buvé et al, 2002). However, they may be often poorly informed but because sexual ignorance is not socially acceptable men are reluctant to admit their lack of knowledge about sex (Weiss et al, 1996). Men therefore become vulnerable they must appear to be knowledgeable and cannot openly seek information (Rivers and Aggleton, 1999).

2.1.3.2. Link between socialising and alcohol use

Socialisation benefits individuals by providing opportunities to relax and even exercise through dancing. But socialisation (e.g. Nightlife) also creates problems that would affect an individual's health like alcohol, tobacco, illegal drug use and risky sexual behaviour (Hughes and Bellis, 2003). And alcohol abuse and sexual risk behaviour may be risk factors to vulnerability to HIV infection.

Morojele et al (2004) found two main dimensions of perceived effects of drinking and sexual encounter: 'enhanced sexual appeal' and 'reduced sexual control'. After a study of 160 participants (65 men and 95 women) aged 24-44 years in South Africa they concluded that "enhanced sexual appeal was negatively associated with age, being married and positively associated with being employed, drinking quantity, problem drinking, and number of sexual partners and frequency of engagement in regretted sex. In contrast condom use was the only significant correlate of the reduced sexual control component (Morojele et al, 2004).

Alcohol abuse also contributes to violence against women as for example seen in Nairobi, Kenya. Ravestijn (2002) reported following a survey of violence against women and victimization that "two in every five abuses were under the influence of alcohol, whilst half of the physical abusers take alcohol before battering their victims"

2.1.3.3. Frequency of drug abuse

Drug usage, including drugs used intravenously is associated with engaging in risky sexual practices (Lollis et al, 2000). They reported that in addition to its direct role in HIV transmission through needle sharing injection drug users (IDU) has played an indirect, yet major role in spreading HIV heterosexually. Also, psychological measures of depression, anxiety and anger/hostility are associated with sexual risk behaviours including increased number of partners, unprotected sex with high-risk partners and trading sex for drugs (Lollis et al, 2000).

2.1.3.4. Male occupations that entail migration

Migration gives people the opportunity to improve their lives, but it can expose them to risky situations like exposure to certain 'health risks' (Piper, 2005). A male occupational group identified to be at such risk has been long distance truck drivers who are involved in the spread of HIV due to their geographical mobility (Rakwar et al, 1999). They demonstrated this in a large prospective cohort study of trucking companies in Kenya. They reported that drivers or assistant drivers had a two-fold increased risk of HIV acquisition due to two interrelated occupational factors-employment as a driver/assistant driver and duration of time on the road. Most men in this study had reported a high-risk sexual encounter (50% of them with CSW) and men of ten years or less experience as a driver/assistant at the time of research had a two-fold increase in risk of HIV (Rakwar et al, 1999).

Morisky et al (2000) identified that such high-risk groups are critical to the spread of HIV as they act as a 'bridge' for the spread of the disease to the community. While Entz et al (2000) have observed that the risk for mobile populations like truck drivers and fisher men for HIV arise because separation from traditional family, loneliness and harsh and boring working conditions are thought to make these men prone to drinking, drug use and patronage of CSW resulting to high possibility of STI and also connect to sexual networks in different geographic locations (Entza et al 2000).

In Nigeria, Orubuloye et al (1993) reported that long distance truck drivers engaged in polygamous marriages and keeping the wives in different locations along their regular routes. This was usually complemented by attention they get from young female traders and CSW that frequent their regular stops.

2.2 Epidemiological association of HIV/AIDS and polygamy

2.2.1 Introduction

To understand and fight the HIV epidemic we need to question why HIV in sub-Saharan Africa is so different to other parts of the world in the way people behave towards and during the spread of the virus (Madsen, 2002). In answering this, one should examine the traditional religions of the area which places emphasis on high fertility and the existence of the highest polygamy in the world and both factors lead

to a behaviour that encourages people to have several sexual partners, thereby increasing the risk of HIV infection (Mwenesi, 1998).

The primary means of HIV transmission – sexual intercourse – has been known for over two decades but that information does not prevent thousands of men and women, including boys and girls, some of who have attained sexual maturity and some not, from contracting the virus every day. Women's inability to influence men's sexual decisions reflects the fact that men usually dominate women's sexual lives; generally it is men not women, who dictate whether sexual intercourse will take place or not and whether condom will be used or not (Foreman, 1998).

Foreman (1998) has observed that men have more sexual partners than women – and therefore more opportunities to contract and transmit HIV. Men are involved in almost every case of sexual transmission of HIV; while most sexual transmission is in-between men and women, at least one in every ten cases may be the result of transmission between men (ibid). Although these factors may mean that men drive the AIDS epidemic, the overall impact is that on a world – wide basis, women are contracting HIV at a faster rate than men. This is because women are physiologically more liable to contract HIV (Foreman, 1998), also because of the ways in which gender roles and relations shape power and the negotiation of safe sex. This could also be explained by another observation by Gupta (2002) that power imbalance in heterosexual interactions leads to a culture of silence that surrounds women's sexuality which restricts women's access to information about their bodies and sex, which in turn contributes to their inability to protect themselves from HIV infection

2.2.2 HIV/AIDS and polygamy- Epidemiological association

The evidence for a clear association between polygamy and HIV prevalence is conflicting. Early in the epidemic, between 1989 and 1991 at Langata clinic in Nairobi, Kenya, investigators enrolled 406 HIV positive women and 407 HIV negative women matched for age and parity and collected demographic, marital, obstetric and sexual information. They found significantly more HIV positive women (60%) than uninfected women (40%) came from the Luo tribe and were involved in polygamous marriages. When the association between HIV infection and polygamy

was analysed by ethnic group, it was recorded that 17% of HIV positive women from the Luo tribe and 22% of HIV positive women from other ethnic groups were involved in polygamous relationships compared to 9% and 8% respectively of Luo women and other ethnic tribes in monogamous relationships (Edwards, 1994).

At about the same time the practice of polygamy was implicated in the proliferation of HIV infection as postulated by Opong (1988) in a study using a vulnerability framework to examine the changing geography of HIV infection in Ghana from 1986-1995 in which he thought that polygamy alone may not be a very important factor in explaining the situation in Ghana. Socio-demographic data on urbanization and polygamy rates used for this study was from Ghana Demographic and Health Survey 1993 which was a nationally representative of survey of 4,562 women and 1,302 men aged 19-49 and the relationship between polygamy and HIV was examined.

Overall, 28% of married women in Ghana were in polygamous unions and contrary to expectation, the regions with the highest rate of polygamy had the lowest rates of HIV. That is, the Eastern region had the least polygamy, but the Northern region with the highest polygamy (44%) had the lowest HIV rate. This was thought to be due to the restraining influences of certain practices of Islam, which included strict sanction against promiscuity, and the promotion of circumcision (Opong, 1988).

Later Fery et al (2001) studied the relationship between HIV prevalence and the practice of polygamy. In this study, key parameters of sexual behaviour in four African countries using a cross-sectional population-based study. Two of these Kissumu (Kenya) and Ndola (Zambia) had a high prevalence of HIV among adults exceeding 20%. While Cotonou (Benin) and Yaoundé (Cameroon) had relatively lower HIV prevelance.1000 men and 1000 women were randomly selected from the general population in each of the four cities. The finding was that the population of men and women who were married or had been married were significantly higher in the high HIV prevalence areas than in the low HIV prevalence area. But polygamy was significantly high in Cotonou (a low HIV prevalence area) and Kissumu (a high HIV prevalence area). The only parameters that were different between the high and low prevalence areas in this study were early marriage and early sexual debut, which were higher in the high prevalence area. The study tends to show that marriage per se

has a higher relationship with a high HIV prevalence than the practice of polygamy and what determines this is age at sexual debut and early marriage.

Caraëla and Holmes (2001) in a supplementary publication to that of Ferry et al (2001) studied factors that facilitated different rates of HIV spread and why they reached different prevalence in these countries by attempting to address these issues at a population level. They also found that young age at first marriage and young age of women at sexual debut were the parameters that are different in the different countries. In addition, thy found that there was a large age difference between spouses. The authors concluded that: the target of preventive intervention that seek to forestall HIV transmission must extend to young people; the findings of the study add weight to the opinion that expanded access to male circumcision in Africa represents an HIV preventive priority; and attention should go to the potential role of genital herpes for enhancing HIV transmission.

From the findings of the literature presented in the various sections of this chapter it is clear that there is an association between the transmission of HIV/AIDS and the practice of polygamy that justifies a further look through the attainment of the objectives outlined in chapter 1 which were aimed at answering the three research question given in section 1.1.1.

Chapter 3: Literature Review

3.0 Introduction

This chapter presents what sociological and cultural literature, particularly from Sub-Saharan Africa says pertaining to the practice of polygamy and its relationship with HIV/AIDS. The main aim is to point out what polygamy is, who practices it, where it is practiced and why. This review also gives a general idea of the HIV/AIDS situation while looking at its history, mode of transmission, and characteristics of the epidemic globally and the possible driving factors for the epidemic particularly in Sub-Saharan Africa, as well as the role of polygamy in HIV/AIDS transmission.

The practice of polygamy in general is presented in section 3.2 by considering its definition, how common it is; its social dimension (i.e. how Kinship, social stratification, sexuality, infertility, socio-economic factors, education and religion influence polygamy); how it is influenced and gender relations; its changes over time; and a critical review of literature on polygamy and HIV/AIDS.

The interaction of polygamy and the factors that lead to vulnerability of HIV infection identified in section 2.1 is discussed in section 3.3. A general overview of preventive measures that would be of use in relation to the practice of polygamy and its possible role in prevention of HIV infection is given in section 3.4, with particular emphasis on the possible use of culture and tradition in preventing HIV infection.

3.1 Search strategies

My main literature review was on polygamy and HIV/AIDS. But literature on polygamy was varied and complex and because of the paucity of literature on polygamy and HIV/AIDS, particularly in Borno State, Nigeria and Sub-Saharan Africa, I also examined literature on gender and HIV/AIDS prevention. The inclusion criteria for the literature reviewed include:

- Studies conducted in Sub-Saharan Africa on HIV/AIDS and polygamy as well as gender relations and HIV/AIDS prevention

- All study types available (e.g. Case studies, surveys, randomised trials) on HIV/AIDS and polygamy as well as on gender relations and HIV/AIDS prevention
- Literature from 1970 to date was included mainly due to the paucity of literature on the main subject

To get materials for the literature review I performed searches of electronic databases and accessed google website. The following key words were used in the search: HIV/AIDS, polygamy, monogamy, vulnerability, risk, epidemiology, gender, culture, religion and sexuality. They were used in various combinations to get relevant articles from sites like AEGIS, Medline, AIDS database, Global HIV/AIDS libraries, HIV in site, WHO, UNAIDS, DFID Publications, UNDP, US Bureau of Census as well as online journals like Social Science and Medicine, JAIDS, AIDS, BMJ and The Lancet. Each material identified and retrieved also led to more sources of information and where necessary and possible it was followed up. Eligible materials that were not found electronically were searched for by hand at the libraries of the University of Liverpool and Liverpool School of Tropical Medicine.

3.2 Polygamy

The subject of polygamy is complex and the presentation of a review of literature on this subject is not straightforward. This section therefore aims to present literature as it pertains to polygamy as described above. Further review is found in other sections while discussing confounding factors and factors that influence the vulnerability to and transmission of HIV/AIDS relating to polygamy are discussed.

3.2.1 Definition

Francour defined polygamy as "practice or condition of having more than one spouse at the same time" (Francoeur, 1995, p. 494), while Anthropologists define polygamy "as a marital relationship involving multiple wives" (Low, 1988, p. 189). For this piece of work polygamy will be considered as the practice of having more than one wife at one time.

3.2.2 How common the practice of polygamy is

Polygamy represents expanded family structures that are based on marriages usually involving a husband with two or more wives. Polygamy, the predominant marriage structure in the pre-industrial societies (Ukwuani et al, 2001) is legally and widely practiced in 850 societies across the globe. It is also practiced in a wide range of non-Western ethnic and religious groups (El-bedour et al, 2002). Widespread polygamy is probably the most distinctive feature of African marriage (Greene and van de Walle, 1989; and Westoff, 2003). The only exception in Africa is Madagascar where very few women are married into polygamous unions. This country has a very different cultural history from the rest of mainland Africa (Timaeus and Reynar, 1998).

White et al (1988) focusing on internal relationships in the organisation of polygamy systems based on ethnographic data looked at comparative dimensions of polygamy as a cultural issue. They described polygamy to be of two major groups and two minor groups. The major groups include: husband-wife residential separation (consisting of prevalent polygamy, wealth stratified polygamy and marriage of female captives) and sororal polygamy (consisting of recruitment of wife's kin as co-wives, co-residence of co-wives). The minor groups include: leadership or despotic polygamy and wealth-depleting polygamy (White et al, 1988).

In Nigeria, the focus of this thesis, where strong economic and social ties are still confined to the family; where mutual understanding, trust and responsibility are concepts often limited to kin; and impersonal relations are still rudimentary, a polygamous marriage with several wives as partners in a husband's enterprise is often considered the most efficient and secure way to establish and carry on a business (Chojnacka, 1980).

As early as 1978, Mack studied eight middle-income families and twelve low-income families in Lagos, Nigeria. Despite the sample size an indication of the type of marriages in Nigeria was observed. It included customary and Muslim marriages that were potentially polygamous and ordinance that was legally monogamous. But

married women in Nigeria lived in a state of potential polygamy because second or additional wives are accepted as a traditional aspect of marriage (Mack, 1978).

3.2.3 Social Dimensions of polygamy

Although the practice of polygamy itself tends to be similar across cultures, it appears that the function it serves, the attitudes towards it, and the value that society attaches to it (Westoff, 2003) differs as seen in the multiple determinants of the practice. These determinants are dynamic and include: kinship, social stratification, sexuality, infertility, socio-economic factors, Educational Status, influence of widowhood and religious beliefs.

3.2.3.1 Kinship

In Africa, a diverse continent in which kinship, marriage and the family tend to share features that distinguish them from equivalent institutions elsewhere, polygamy lies in the heart of this cluster of interrelated practices that shape the family life in sub-Saharan Africa (Timaeus and Reynar, 1998). This life is characterised by original systems of nuptiality, which are embedded in its material culture and shape its fertility patterns. Kurtz (2003) has argued that marriage in most non-Western cultures, was not a union of freely choosing individuals, but an alliance of family groups and so the emotional relationship between husband and wife was attenuated and subordinated to the economic and political interests of extended kin (Kurtz, 2003).

Widespread polygamy has been linked to the existence of kinship groups that share descent from a common ancestor and was found more often in combination with patrilineal than with matrilineal kinship systems (Chojnacka, 1980). In patrilineal societies, relatives who also restrict premarital sex arrange partner choice and marriages. While in matrilineal societies women generally have sexual freedom and the onset of a union is sex related relationship with a partner (Meekers, 1992).

Polygamy leads to formation of extended family structure (Timaeus and Reynar, 1998); this provides links between children and adults, within the family and the community. The message of cooperation, sharing, respect for elders and importance

of family bonds are strongly emphasized in such families (Elbedour, et al 2002). In such collective communities, there are no boundaries separating one family (nuclear or extended) from another family in the community, or each family from the community as a whole (ibid).

In certain circumstances polygamous marital structures are beneficial to children, because large families provide a greater number of adult role models that foster the value of cooperation (Elbedour et al, 2002). In a polygamous family, the older children are usually expected to help raise the younger siblings, and this parental reversal tends to accelerate as the children mature and the parents grow older (ibid). This is particularly important considering that family support networks and traditional safety nets are eroding as households become smaller and in some cases fragmented and sometimes compounded by the AIDS pandemic resulting in fewer and fewer adults able to provide and care for children (UNICEF, 1997).

3.2.3.2 Social Stratification

From two reviews of literature in 1973 and later in 1980, Acker observed that sex stratification involved economic and power inequalities, which were produced and maintained within systems of relationships that contribute to class structure (Acker, 1973; 1980). Marriages are concrete historically rooted institutions that contribute to the maintenance and reproduction of social inequalities and are dependent on the outcome of class formation and class conflict (Haller, 1981).

Nielsen (2004) investigated influential ecological-evolutionary typology of human societies based on previous works of Lenski (1966); Lenski (1970); Nolan and Lenski (1999) and four themes arose from these:

- Ecological-evolutionary typology is exogenous
- Ecological-evolutionary typology is a powerful empirical predictor of evolutionary pattern in a number of dimensions of social inequality
- A measure that represents a quantitative summary of overall degree of inequality in access to resources, power and privilege in society is the degree of sexual and reproductive inequality among men. This may be measured by

the extent to which powerful men monopolized women as wives or concubines

- The existence of agrarian reversals in monotonic inequality trend has implication for understanding the evolution of social inequality

In this study, Nielsen concluded that inequality of distribution of wives among men is a fundamental component of overall inequality in the society. This is measured by the practice of polygamy versus socially imposed monogamy (a measure of skewed distribution of wives among married men). Hence traditional views on significance of multiple wives fall into two- as a mark of high status or as source of labour (Nielson, 2004). Thus polygamy was a major factor in social stratification since men who acquired additional wives found it advantageous, and having achieved that position, they were expected to take more wives than men of lower status (Chojnacka, 1980).

Timaeus and Reyna in 1988 found that polygamous marriage was uncommon both in societies that lack any form of social stratification as well as in highly stratified society. It is far more common in societies with limited social stratification such as found in most of Africa (Timaeus and Reyna, 1988).

3.2.3.3 Sexuality

Sexual relationships occur as a result of marriage (polygamy/monogamy) or could happen outside marriage. Such relationships vary depending on the couple and the society they lived in. Since three quarters of cultures were polygamous, humans were designed for a system of monogamy plagued by adultery (McGoodwin, 2001). Edwards (2004) reported that polygamy has been an integral part of traditional social organization and traditional sexual cultures in which multi-sexual partnerships in the form of the polygamous marriage was male initiated and socially acceptable (Ibid).

This may be related to the fact that traditionally, women in much of sub – Saharan Africa practiced long periods of postpartum sexual abstinence, typically more than one year, except in some parts of East Africa, and three or more years in South-west Nigeria. This results to monogamously married men having sexual relationships with their wives less frequently than they would have wanted to. This was true not only

during wives' post-partum abstinence but also when they were abstaining in later months of pregnancy (Orubuloye, et al 1997). Such practice of abstaining from sexual intercourse during pregnancy and postpartum period is often offset by the prevalence of polygamy in many West and Central African countries as well as by the potential for men to seek sexual relations outside marriage. Nigerian Yoruba women commonly accept that their husbands sought alternative sexual outlets during the postpartum period (Mitsunaga et al, 2005).

3.2.3.4 Infertility

Sub-fertility may lead to polygamy in societies that have tendency for polygamy depending on the circumstances surrounding particular relationships. For example, in a review of the epidemiology of infertility in Nigeria parts of sub-Saharan Africa, Araoye (2003) showed that infertility caused marital disharmony that often led to divorce and because the women were often blamed for the infertility men engaged in polygamy in an attempt to have children (Araoye, 2003).

Also, Bahri (1990) points out that among many societies, it is still wrongly believed that, in case of sterility, only women are at fault. Therefore, some men hasten to find another spouse with the hope of having children. So, it is no surprise that sterility was found to be a cause for systematic remarriage of the husband and this increased the number of the number of wives he had (Bahri, 1990).

The relationship of polygamy with fertility was complex because of the characteristic of the African household that has demand for children (Kritz and Makinwa-Adebusoye, 2001). Therefore to ensure that fertility levels remain high, there is pressure to have more than one wife and this leads men, particularly older ones to recruit young girls into marriage thereby increasing the likelihood of women marrying into polygamous unions usually at an early age (Ibid). Demographers Caldwell et al (1992) observed that because in Sub-Saharan Africa high levels of fertility are sought by men, many monogamous wives know that there was a possibility of them ending up in a polygamous relationship particularly when fertility was a problem (Hayase and Liaw, 1997).

3.2.3.5 Socio-economic

In Sub-Saharan Africa, marriage is a process rather than an event and the most significant conjugal variable is the type of union (polygamous or monogamous) and polygamy can provide advantages like expanded kin network and shared responsibility (McCloskey et al, 2005).

Economic factors may influence the frequency of polygamy, particularly the payment of bride wealth to establish marriages. Other things being equal, relatively wealthy men will be more able than poor men to contract polygamous marriages. To the extent, however, that polygamy is valued because of the access it gives men and their kin group to women's and children's labour, economic success for men may be a consequence as well as a cause of polygamy (Timaeus and Reyna, 1998 and Chojnacka 1980).

Bergstrom (1994) had indicated that in cultures where polygamy was accepted, it was valued and the large family it was associated with was a signifier of high social status. In a description of a pattern of property rights in traditional societies of southern Africa it was seen that 'a house' constituted a major wife and her children with their allocated estates thereby making a homestead head to have several separate estates under different wives.

Obi in 1970 wrote about polygamy particularly as it related to Ibos of Nigeria and said polygamy was widely regarded as a moral virtue; to support as many fellow human beings as possible was not only a mark of wealth, but a form of philanthropy and in its absence many women might be forced to live a difficult single lives (Obi, 1970).

3.2.3.6 Educational Status

Alkrenawi and Lightman (2000) reported evidence of a link between the educational level and marital status. They showed that the educational level attained by monogamous men was significantly higher than polygamous men (ibid). In 2002, Elbedour et al found that a man's educational level was inversely related to the

number of children and wives (Elbedour, s et al 2002). It has also been shown that widespread schooling of girls has tended to undermine plural marriages (Timaeus and Reyna, 1998).

A high level of women's education is associated with short duration of postpartum abstinence, less chances of getting into polygamy and a possibility of more stable marriage (Lee, 1992). But the common occurrence is that women living in polygamous marriage relationships tend to adhere to traditional values and traditionalism which is usually associated with low female autonomy and such women were less likely to be educated (Ukwani et al, 2002).

3.2.3.7 Religious Beliefs

Ali and Mills (2001) have argued that Polygamy is not an institution of Islam hence The Qur'an does not enjoin it, but recommends it in certain circumstances as a better alternative than leaving women helpless and without protectors. Permission is contained in the following verses, revealed at a time when the men of the small Muslim community had been decimated by war, and when there were many women captives, some with children clinging to them:

> *"Give unto the orphans their wealth. Exchange not the valuable for the worthless (in your management thereof) nor absorb their wealth in your own wealth. Verily that would be a great sin. And if ye fear that ye will not deal fairly by the orphans, then marry of the women (i.e., their mothers) who seem good to you,* ***two or three or four; and if ye fear that you cannot do justice (to so many) then one only*** *or (of the female captive) whom your right hand possess. That is better, that ye stray not from the path of justice." [Qur'an 4:2, 3]*

The female captive mentioned above referred to women that were captured during the wars that were fought during the spread of Islam. They were then considered as slaves and so were inferior to the women who were not slaves. Thus if a man could not afford to marry a 'free woman', he could marry such 'slave' women.

It also follows that polygamy in pre-Islamic Arabs was common practice justified by shortage of men caused by frequent tribal wars but Islam limited the number of wives to four under certain conditions:

- No man could have more than four wives at any one time;
- The man must possess financial means to support more than one wife; and
- Treatment and attention given to each wife must be equal

(Al-Krenawi, 1999).

In general, Christian populations are less polygamous than Muslims, while ethnic groups that hold to traditional African belief systems are the most polygamous (Timaeus and Reynar, 1998; and Orubuloye, et al, 1997). However, Rev. Niedermayer and pastor Saskatchewan (2005) observed that many theologians point to childbearing as the main reason for heterosexual relationships and the marriage institution that was essential for early tribal societies of Israel that required a growing population. In the past polygamy was encouraged for childbearing purposes so that tribal populations were maintained because of loss of people due to wars and hunting accidents. But as society advanced, monogamy replaced polygamy. (Niedermayer and Saskatchewan, 2005).

Many African Christian Churches accept polygamy, although some Christian ministers preach that Adam needed only one wife (Orubuloye, et al, 1997). In Nigeria for example, 25% of Catholics and 24% of Protestants had affiliation with wives in polygamous marriages (Elbedour, s et al, 2002). Polygamy has been a sensitive issue for the Christian missionary especially in Africa where they have been hard pressed to explain to Africans how polygamy was a sin when it was widely practiced in the Bible by prophets and this left the impression that insistence on monogamy was more cultural than theological (Nwanunobi, 1976).

3.2.3.8 The influence of widowhood

Marital instability due to involuntary dissolution caused by widowhood is high in Sub-Saharan Africa, but the rates of remarriage through polygamy ensure that more women were in marital union at any point in time relative to widowhood (Bongaarts

et al, 1984). In many cultures in Sub-Saharan Africa the death of a spouse does not dissolve a marriage as the woman was inherited as a 'property' (Sagnia, 2000).

The remarriage rate of widows depends on a selection mechanism that ensured the widow who remarried was less likely to be infected with the HIV virus (Reniers, 2005; and Luke, 2002). As those whose husbands had died of the disease were either avoided or had their HIV status checked before they were remarried (Ibid). The outcome for widows (remarriage, return to family home or remaining as heads of households) is determined largely by behaviours of in-laws and key relatives to the husband (Bird and Shinyekwa, 2005). Rapid remarriage after widowhood enhances the practice of polygamy in Sub-Saharan Africa (Lardoux and Van de Waal, 2003).

3.2.4 Possible Problems Associated With Polygamous Marital Structure

Polygamous marriage is often associated with marital distress, family dissolution, increased chances for divorce, financial distress, lower fertility of individual wives and increased number of sexual partners.

3.2.4.1 Marital Distress

Following a comprehensive review of literature on polygamy that included both qualitative and quantitative studies, Elbedour et al (2002) concluded that polygamous marriages were more likely than were monogamous ones to be torn by spousal conflict, tension and jealousy. Women in polygamous marriages were commonly unhappy, and the addition of second or third wife was typically distressing to the "senior wives" (Elbedour et al, 2002; and Al-Krenawi, 1999).

Men also could be distressed by marriages. For example, Ilika et al (2002) in Nigeria studied 300 married women in a primary health care setting using a pre-tested questionnaire. The aim of the study was to assess the prevalence and characteristics of intimate partner violence. They reported that men in polygamous marriages found it difficult to cope with economic demands and inter-rivalry conflicts in their homes. Some women even reported that they were sometimes beaten because of the 'other woman' (Ilika et al 2002).

Fatoye et al (2004) also in Nigeria, in a cross-sectional survey examined 156 women and matched them with controls. This was to determine the relationship of some obstetric and socio-demographic factors with anxiety and depression. They found that polygamy was a potential source of marital disharmony and constant friction and polygamous women tend to receive less spousal support than monogamous women. They also noted that polygamous women had low intimacy with their husbands and had unsatisfactory relationships (Fatoye et al 2004)

3.2.4.2 Family Dissolution and Increased Chances for Divorce

Family dissolution is a common occurrence in polygamous marriages. For example, men may leave their senior wives and their children in order to live with their later wives and their children. In these cases, the man may not participate in the upbringing of all of his children, and those left behind may experience feeling of grief and abandonment and lower levels of parental supervision. Bird and Shinyekwa (2003) made this observation in Uganda following a study using household surveys, village-level participatory studies, in-depth life history interviews and FGDs. The aim of the study was to understand poverty trajectory and identify what drives and maintains chronic poverty (Bird and Shinyekwa, 2003).

In regions where polygamy was rife and permissible by common religion, divorce was common (Kassam, 1996). For example, in northern Nigeria where Islam permits the marriage of up to four wives, there is increased likelihood of divorce (ibid). This usually follows the competition in polygamy, which produces disharmony, envy, jealousy, rivalry and negative emotions among families (Von Struensee, 2005).

Yusuf (2005) described what this as "the abuse of the divorce clause". This is because Islam allowed divorce only in cases where a marriage has collapsed and cannot be salvaged. However, men married and divorced at will for trivial reasons (Yusuf, 2005). If for example a man already married to four wives fancies a new and probably younger woman than the ones at home, then an elimination process is carried out to create space for the in-coming wife. The divorce will lead to further polygamy within

the wider family or limited options of remarriage may lead to sex work (Kassam, 1996; Oni, 1996).

Hampshire and Randall (2000) found that marital dissolution was also common among the Fulani of Northern Burkina Faso in whom they described polygamous relationships to be 7.6% for men and 13.5% for women. And because of the flexibility offered by the polygamous marriage relationships, most women are immediately remarried into polygamous homes.

3.2.4.3 Increased Number of Sexual Partners

Lawoyin and Larsen (2000) reported that many factors, among which is the desire to have multiple sexual partners, have sustained polygamy, on the scale found in Nigeria. In a study in Oyo State of Nigeria, Lawoyin and Larsen (2000), found that both polygamous and monogamous men have extramarital partners. Polygamous men when compared with monogamous men were more likely to be in high risk multiple sexual partnerships that included regular and non-regular partners (ibid). It was also found that in situations where a polygamous wife does not live with the man, the woman was likely to have other sexual partners, thereby increasing the risk of acquiring and transmitting infections (ibid).

In formally polygamous societies, males can justify extramarital relationships by explaining that these relationships might end up in additional marriages (Laurence, 1994; Mholyi and Mholyi, 1993) leading to polygamy that potentially increased the number of lifetime sexual partners and therefore a possible conduit for heterosexual transmission of HIV infection at population level (Gatrad and Sheikh, 2004).

Such situations occur in places where women's susceptibility to HIV infection could be correlated to the religious and cultural demands of society with regard to sexual relationships in which polygamy was allowed (Isiramen, 2005). Adherence to Islamic tenets for example might confer protective benefits against the sexual transmission of HIV. While Islamic marital codes permitted men to marry as many as four wives and divorce them relatively easily, potentially increasing the number of lifetime sexual partners—a known risk factor for acquiring HIV (Gray, 2003).

In such cases women are not expected to assume that their husbands would show fidelity, after all women were supposed to be submissive to their men (Isiramen, 2005). Social control of sexuality by religion and tradition attached value to behaviours like sexual abstinence prior to marriage and mutual fidelity within monogamous or polygamous marriages (Meda et al, 1999), but polygamy was reported to be one of the cultural practices through which society approved multiple sexual partnerships particularly for men (Hunter, 2005).

However, in certain circumstances and with certain tribes (the Baganda of Uganda for example) women would sometimes have affairs if their husband was polygamous and this was done to avoid sexual deprivation (Kisekka, 1989; Sengendo and Sekatawa, 1999). However, nowadays traditional polygamy has gradually given way to informal polygamy in which men's right to more than one wife is interpreted as their right to have sex with as many women as they wished without obligation of fidelity or family responsibility as all women are seen as sexually available regardless of age and marital status (SAFAIDS, 2001; Goearcke, B, 2004).

3.2.5 Polygamy and gender relations

The increasing feminization of the epidemic is one case where women's attainment of "equality" cannot be celebrated. Nearly half of all people living with HIV worldwide (almost 20 million) are women; and increasingly, they are younger and poorer (UNAIDS, 2005). In sub-Saharan Africa, the worst affected region of all, 57% people infected with HIV are women and girls – among young women the rate is a staggering 76%. Tragically, the number of women being infected is on the rise in every region of the globe (Ibid).

Traditionally men were trained to view sex as a conquest with the number of conquests serving as an indicator of their manliness while female sexuality was related to marriage and reproduction (Heitlinger, 1991). That means polygamy has to be the type of marriage practice that would be attractive to demonstrate masculinity according to traditional socialisation (Campbell, 1995).

In general in Sub-Saharan Africa males tend to dominate marriages by controlling property, having authority over family members and benefiting from 'male superiority' (Eze, 1993; Isuego-Abanihe, 1992). Thus polygamous marriages were "male dominant" (Dodoo, 1998; Feyisetan, 2000; Kimuma and Adamchak, 2001; Rene and Bankole, 1996; Hollos and Larsen, 2004).

For example in a study of two Pare villages in Tanzania using a combination of ethnographic study and in-depth interviews Hollos and Larsen (2004) examined the relationships between male attitudes towards reproduction and marital relationship. They found that men's decisions were influenced by level of education, religion and whether they chose their partners or not. In a subsequent survey using questionnaires derived from the qualitative work, they observed that polygamy in Muslim families was related to the value of male superiority. They found that 81.5% of the participants believed that 'most important decisions should be made by the husband'; fewer than half of the polygamous men had ever talked to their wives, for example about number of children (Hollos and Larsen, 2004).

3.2.6 Changes in polygamy over time

Literature on changes in polygamy/monogamy over time was relatively scarce. Welch and Gullick (1981) explained this to be most likely due to fact that polygamy was no longer recorded officially as a marriage type in many countries; the UN statistical office does not recognise it as an independent form of marital practice; census questionnaires developed in the West being administered by poorly trained and over-burdened enumerators; and even if available such information would have to be adjusted for any statistical application to be possible (Welch and Gullick, 1981).

Hayase and Liaw (1999) did a study using Demographic and Health Surveys conducted in the 1980s on women aged 15-49years in Senegal, Ghana, Kenya and Zimbabwe. The sample sizes were: 2393 for Senegal, 2676 for Ghana, 4563 for Kenya and 2303 Black Zimbabweans. They had positioned these countries as per level of modernisation of the countries with Senegal being the most traditional and Zimbabwe the most modernised. They found that there was a reduction in polygamy tendencies with increase in the level of modernisation (Hayase and Liaw, (1999).

They also found that the negative effect of urbanisation on the practice polygamy was more marked in modernised countries; in the more modernised countries less educated women were more likely to be polygamous than those women who were married to men with secondary level of education; for the less modernised countries, an increase in educational level higher than secondary level was not accompanied by a decrease in polygamy because of greater ability of the more educated to pay for polygamy (Hayase and Liaw, (1999).

In Nigeria, Nnorom (2006) observed that polygamy was still a status symbol indicating wealth particularly in urban areas. Men practicing the religion of Islam or traditional African religion often practiced it. Even in the rural areas, polygamy was used as a source of labour force for the family economic unit (Nnorom, 2006).

3.2.7 Polygamy and HIV/AIDS - A Critical Review

Polygamy has been studied for demographic reasons to look at its implication on fertility and population, but literature on the relationship between polygamy and HIV/AIDS transmission is scarce. Literature found pertaining to polygamy and HIV/AIDS mainly considered polygamy as a high-risk sexual behaviour because of multiple sexual partnerships (Auvert et al, 2001; with supplements by Ferry et al (2001) and Crael et al (2001); Olayemi et al, 2002; Lawoyin, 2000; Sagay et al, 2005; Isiugo-Abanihe, 1994; Clark, 2004; and Oppong, 1998. while Adeokun and Nalwadda (1997) considered polygamy as a form of serial marriages that predisposed to HIV/AIDS because of increased rates of marital dissolution.

Auvert et al (2001) and the supplements by Crael (2001) and Ferry (2001) used a cross-sectional survey to identify factors that could explain the different rates of spread of HIV infection in different regions of Sub-Saharan Africa. They carried the study in two cities each in regions with high HIV prevalence (Kissumu in Kenya and Ndola in Zambia); and two cities in regions with low HIV prevalence (Cotonou in Benin and Yaoundé in Cameroon).

They studied 1000 men and 1000 women aged between 15 and 45 years by interviewing them about their socio-demographic background and sexual behaviours and tested for HIV infection as well as other STDs. They found that high-risk sexual behaviour (including polygamy) was not more common in high prevalence cities than in the low prevalence cities. They then concluded that differences in efficiency of HIV transmission as mediated by biological factors outweighed differences in sexual behaviours (Auvert et al, 2001; Crael, 2001; and Ferry, 2001). This casts doubt as to whether polygamy should be considered a risk factor for HIV/AIDS spread at all.

Olayemi et al (2002) in Nigeria studied 1000 participants in Ibadan using a cross-sectional survey. The aim was to evaluate the determinants of knowledge of transmission of HIV among African populations of antenatal clinic patients. I classed this as a study of polygamy and HIV/AIDS because the population was studied based on marital status of polygamy and monogamy. They considered polygamy as a high-risk sexual behaviour, which they found to reduce with increased level of knowledge.

They found that 97.5% of the study participants were in monogamy and 2.5% were in polygamy; and most of them (76.1%) had tertiary education and only 0.6% had no formal education. After analysis of the data they concluded that high education attainment improved knowledge of HIV/AIDS transmission and reduced chances of high individual risk behaviours like polygamy (Olayemi et al, 2002). But this study did not show clear indication of polygamy as a risk factor in the spread of HIV/AIDS.

Lawoyin (2000), in a study that was not directly looking at the relationship of polygamy and HIV/AIDS in Oyo State of Nigeria, also found that both polygamous and monogamous men had extramarital partners. Polygamous men when compared with monogamous men were more likely to be in high risk multiple sexual partnerships that included regular and non-regular partners. It was also found that in situations where a polygamous wife does not live with the man, the woman was likely to have other sexual partners, thereby increasing the risk of acquiring and transmitting infections including HIV (Lawoyin, 2000). The risk observed here was due to extramarital sexual relationships rather than the practice of polygamy suggesting that multiple sexual partnerships for those in polygamy or monogamy were the high-risk factors.

Clark (2004) although examining the effects of girl's early marriage as a risk factor of acquiring HIV infection in Zambia and Kenya had also found some relationship of polygamy to HIV/AIDS. The study was conducted between 1997 and 1998 and 1000 men and 1000 women aged 15-49years were randomly selected from the general population. To supplement these data, the nationally representative 1998 Zambia Demographic and Health Survey and 1998 Kenya Demographic and Health Survey were also used. It was found that data from Kisumu, in 18% of the unions girls aged 15-24 were polygamous suggested that girls in polygamous unions had higher HIV rates than did girls in monogamy. This study showed that married adolescent girls and young women in Kenya and Zambia had higher HIV prevalence rates than did their sexually active unmarried counterparts (Clark, 2004).

The explanation for this was that marriage increased frequency of sexual intercourse, decreased condom use and eliminated girl's ability to abstain from sex (Ibid). But these factors could be found among those practicing polygamy or monogamy. In fact, theoretically the frequency of sexual intercourse would be reduced in polygamous relationship as compared to monogamy.

Quigley et al (1997) examined the association between HIV infection and patterns of sexual behaviour in a case-control study in rural Tanzania. There were 338 cases (HIV positive) and 1078 controls (HIV negative) and they were interviewed about risk factors for HIV using a questionnaire. They found an association between reported numbers of lifetime sexual partners with HIV infection. There was a higher prevalence among Muslims but this could not be attributed to polygamy as in this study polygamy was not strongly associated with being a Muslim or HIV positive.

Adeokun and Nalwadda (1997) found information that allowed them to explore the link between HIV/AIDS and serial marriages while studying the functioning of households in three districts of Uganda (Masaka, Kabarole and Rukungiri). It was not a straightforward study of polygamy and HIV/AIDS but information collected about marital history of persons aged 12years and above who had been involved in a regular union was used to describe the pattern of serial marriages, causes of the dissolution of such marriages and the relationship between the observed patterns and selected social

and demographic features (sex, residence, education, household experience of HIV/AIDS related illness and death).

They illustrated a relationship, which implicated multiple sexual partnerships in the HIV epidemic by showing how multiple marriages increased marital dissolution, which in turn led to remarriages of the divorcees and/or widows, even those who might have been in a relationship with a suspected HIV positive partner. The risk in this study was marital dissolution as against the number of persons in a relationship as was considered by studies mentioned earlier.

A look at the relationship of polygamy and HIV/AIDS from a different angle was by Mitsunaga et al in Nigeria when they explored the 2003 DHS of the country by focusing on polygamy and peri and post partum sexual abstinence. This was like looking at this relationship through a cultural window by studying associated factors like religion, region, wealth, and sexual debut. But this was not a study dedicated to looking at the relationship of polygamy and HIV/AIDS per se; rather it is a study of the data of a huge nationwide research, the DHS.

Recently Utulu and Lawoyin (2006) using a cross-sectional survey studied women attending antenatal clinics in Benue state of Nigeria. The aim of the study was to identify risk factors for HIV/AIDS. They recruited 404 women and followed them until after delivery. They were interviewed using semi-structured questionnaire and tested for HIV infection. Analysis showed that being single, having a partner with low level of formal education, living in rural centres, being in polygamy/multiple partner union, being higher order polygamous wife, being married more than once, reporting history of STI were significantly associated with HIV infection. The study though not specifically meant for the association of polygamy and HIV/AIDS shows that polygamous relationship and being in higher order polygamous wife were considered risk factors for the acquisition and transmission of HIV infection.

Meanwhile the only study that attempted to look at polygamy and HIV/AIDS in Maiduguri where my study took place was by Gashau et al (1993), which was early in the era of the HIV/AIDS epidemic. But it was only a review of medical records to find out the serostatus of consenting spouses. They had then highlighted the need to

consider polygamy in the preventive measures against the spread of HIV infection considering the multiplier effect of the practice. The paucity of literature warrants a closer look at the relationship of polygamy and HIV/AIDS. This study was a step in that direction.

Further discussion on literature about the relationship between polygamy and HIV/AIDS is given in section 3.4 by looking at their epidemiological association as well as different sections of this chapter while presenting different factors like gender relations and HIV/AIDS prevention that come into play in the relationship of polygamy and HIV/AIDS. But what can be deduced from the above review is that polygamy is generally considered a relationship that predisposed those involved in the practice to high-risk sexual behaviour, mainly because of increased number of people involved in the relationship.

Because of the complexity of the findings from literature on polygamy/HIV/AIDS, I have developed a theoretical model that shows the hypothesised process through which polygamy might facilitate the transmission of HIV infection. This is shown diagrammatically in fig 3.1 below.

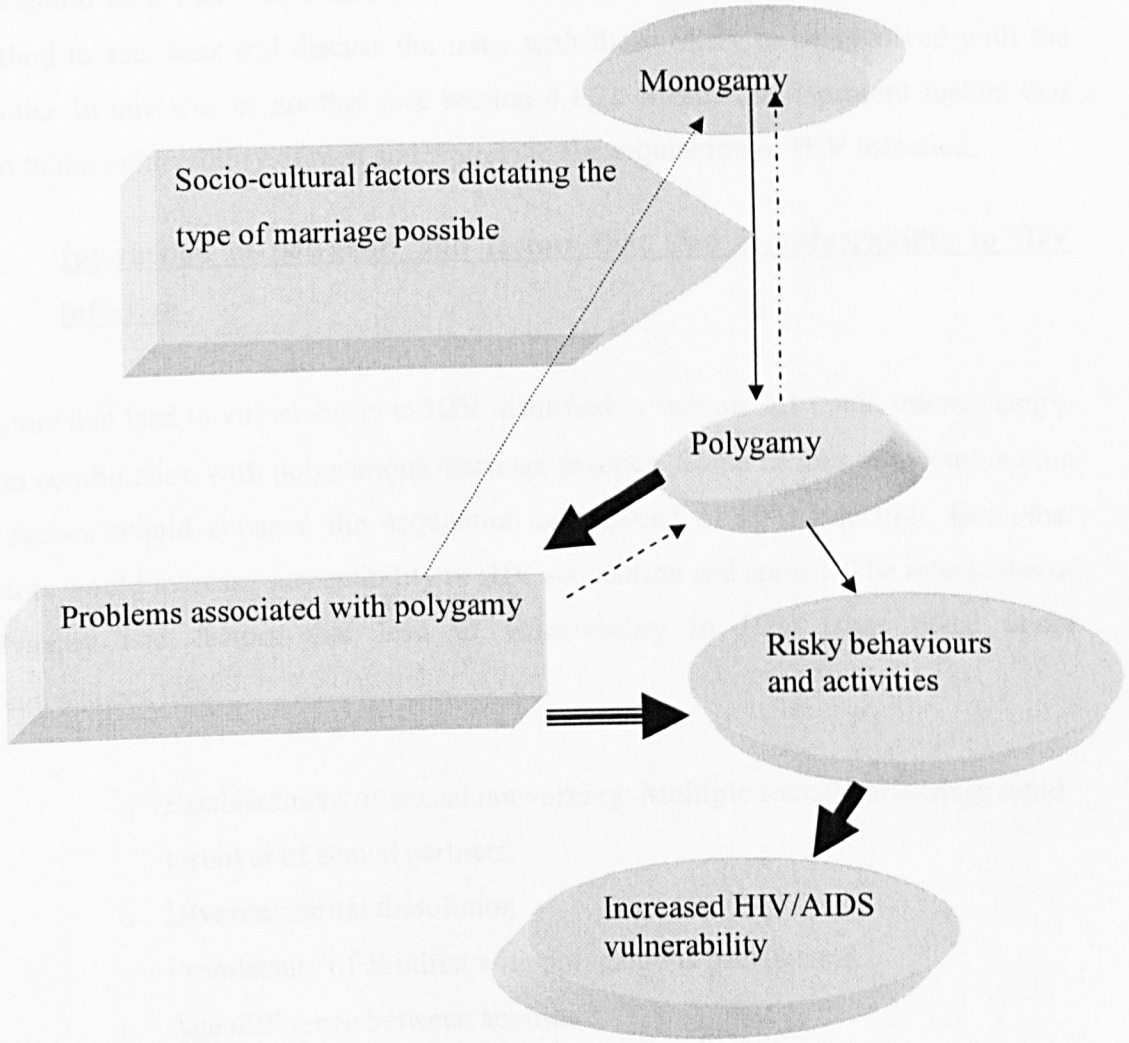

Fig 3.1: Theoretical model of a hypothesised process through which polygamy might facilitate the transmission of HIV infection (Self).

This model shows that polygamy and monogamy can be interchangeable in the African set up. This would depend on the level of interaction of Socio-cultural factors identified in the literature (section 3.2.3). The practice of polygamy is associated with problems identified in section 3.2.4, which could lead to risky behaviours or set up a cycle of polygamy, divorce and remarriage. Both situations could be risky and lead to vulnerability of those involved in the polygamous relationships like this to be HIV infection

That is why I have looked at the relationship of polygamy to HIV/AIDS spread in Maiduguri bearing in mind that it is culturally common in that area and so its

perception as a risk was unlikely. Hence the significance of the use of qualitative method to see, hear and discuss the issue with those likely to be involved with the practice in one way or another (see section 4.1.2). Meanwhile I present factors that lead to the vulnerability of men and women to the acquisition of HIV infection.

3.3 Interaction of polygamy and factors that lead to vulnerability to HIV infection

Factors that lead to vulnerability to HIV identified in section. 2.1 could interact singly or in combination with polygamous marriage practice. Some factors or a combination of factors would enhance the acquisition and spread of HIV infection. But other factors would increase susceptibility to HIV acquisition and spread. The interaction of polygamy and factors that lead to vulnerability to HIV takes place under circumstances like:

- Establishment of sexual networking: Multiple sexual partnering; rapid turnover of sexual partners;
- Divorce/marital dissolution
- Promiscuity of children with polygamous background
- Age difference between spouses
- Early age at first marriage
- Early sexual debut
- Educational level

There are also some confounding factors identified to lead to vulnerability to HIV infection:

- Male circumcision
- Religious inclination

3.3.1 Establishment of sexual networking: Multiple sexual partnering; rapid turnover of sexual partners

It is noteworthy that HIV has been able to spread because, in order to replicate, it exploits one of the most complex areas of human life: our sexual relationships. Our

knowledge and beliefs, our customs and habits of authority as well as the basic economies of individual lives in turn shape these relationships. And sexual behaviour is not just based on the relationships between two individuals, but it also reflects expected roles for men and women (UNAIDS, 2005)

Sexual networking is generally as a result of cultural proscription against sex in pregnancy, breastfeeding and delay in young men's first marriage (ibid). This led to Polygamous men in Nigeria to have unprotected vaginal sexual intercourse with extramarital partners when their wife/wives is/are pregnant or during the prolonged postpartum abstinence (Lawoyin and Larsen, 2002)

Another form of sexual networking that is seen in polygamous societies is that it is common for single men to have sexual intercourse with women married into the family lineage: Older brother's wife, Father's younger wives (except their own mothers), uncle's wives or cousin's wives. Men also do have sexual relation with other men's wives; especially the younger wives in polygamous marriages where the husband was old, and particularly if they had had some previous relations before marriage (Caldwell, et al 1992).

Poly partner sexual activity was implicated in the spread of HIV infection and in Africa the one that is due to For example Oppong and Agyie-Mensah indicated that polygamy was the norm in Senegal and the practice was thought to promote poly-partner fidelity since nearly half of all married women in Senegal were in polygamy and they rarely had partners other than their husbands (Kalipeni et al, 2004).

But anyone who was sexually active even with only one partner was at risk of contracting HIV infection and the more sexual partners people had, the more they were at risk of contracting HIV infection and passing it on to others (Foreman and Scalway, 2000). At any one moment therefore, most men and women were either faithful to their partners or did not have sex and over a lifetime most women were faithful to their partners but most men go through a period when they had casual sex; as pointed out by Baumeister (1991) and showed that research in adultery had generally found that women had fewer extramarital partners than did men and that if

women strayed, it tended to be an emotional intimate and lasting affair, whereas unfaithful husbands were more prone to be content with a one-night stand offering nothing except sexual variety. And because the more sexual partners they had the more the opportunity to transmit HIV to women than the other way round (Foreman and Scalway, 2000). This was explained by Epstein et al (2002) to be because women who had sex with infected men were 10-14 times more likely to get infected with HIV than were men who had intercourse with infected women because the virus was more concentrated in semen than in vaginal fluid, but the situation is reversed by sexual intercourse during menstruation.

Gausset, (2001) had argued that polygamy might be responsible for accelerating the spread of HIV infection. If one partner was infected within a polygamous family, the number of persons at risk becomes higher than in monogamous family. But polygamy in itself was not what spread HIV, and the absence of polygamy would only slow the epidemic down, not stop it (ibid). A polygamous family in which all partners were faithful to each other or in which all partners practiced safe sex in their extramarital affairs was no more at risk than a monogamous family, which had the same practices. What was important was not monogamy or polygamy, but fidelity or the practice of safe sex in extramarital relationships (Hackney, 2002; and Gausset, 2001).

However, in Nigeria, extramarital sexual relationships leading to multiple sexual partnerships were common among polygamous men (Isuogo-Abanihe; and 1994, Timaes and Reyna, 1998). The traditional process of taking additional wives might increase such extramarital relationships as men may have sex with prospective brides before they marry (Isuogu-Abanihe, 1994; and Orubuloye et al, 1991).

However, in contrast, a study that interviewed 3200 couples in five Nigerian towns Isiugo-Abanihe (1994) demonstrated that extramarital relationships did not differ significantly between women in monogamous unions and those in polygamous unions; but male monogamists were significantly more likely to be engaged in extramarital relationships than their polygamous counterparts.

3.3.2 Divorce/marital dissolution

Marital dissolution establishes a formal sexual network through which the epidemic may be propagated because of the rapidity of marital turnover (Adeokin and Nalwadda, 1999). Reiners (2005), using data from the Malawi Diffusion and Ideational Change Project (MDICP) investigated two hypotheses- behaviour associated with the risk of HIV infection has a destabilising effect on unions and whether characteristics associated with the risk of infection are an important criterion for spouse selection.

The study involved 1500 women and their husbands who had been interviewed three times between 1998 and 2004 in three districts (Rumphi, Balaka and Machinji) of Malawi and found that: the suspicion that the husband had extra-marital affairs was positively correlated with divorce in the period when AIDS had materialised as a threat; and this depended on educational status of the respondent, age at marriage, polygamy and co residence of spouses. This was because these factors were considered *as* empowering tools for women (Reiners, 2005).

It has also been observed that divorce was likely to be more common among those that married at young age. For example Alam et al (2000) examined determinants of divorce in traditional Muslim communities in Bangladesh by studying 1762 Muslim marriages recorded between 1982 and 1983 in Teknet. They found that 17% of current marriages were polygamous and 20% of them were in their twenties and 40% of them were in their thirties. The report was that divorce was more common among couples that were poorly prepared to undertake the responsibility of marriage and that young age at marriage may be associated with poor role performance as a spouse (Alam et al, 2000).

Widowhood, another form of marital dissolution has increased in countries of Sub-Saharan Africa that are afflicted by the HIV/AIDS epidemic (Ntozi, 1997). Studying a sample of 1797 households in South and Western Uganda revealed that over half of the widows involved remarried; and widows aged 20 -34 years migrated out of the country; and most widows remarrying did so into polygamous settings (Ntozi et al, 1999).

3.3.3 Promiscuity of children with polygamous background

Sexual involvement is influenced by family structure (Young et al, 1991). But not much work has been done on the relationship between promiscuity of children with polygamous backgrounds. However, Slap et al (2003) sought to find out whether family structure (polygamy/monogamy) was associated with sexual activity among school students in Nigeria. They studied 4218 students who were aged 12-21 attending 39 schools in Jos, Nigeria. There were 2705 respondents. Overall, 34% reported ever having had sexual intercourse. Out of the proportion reporting sexual activity 42.3% were from polygamous families while 27.5% were from monogamous families (Slap et al, 2003).

3.3.4 Age difference between spouses

In Sub-Saharan Africa, a significant spousal gap is often tied to the practice of polygamy (ICRW, 2005). In order for polygamy to work in a society where marriage is nearly universal for men and women, there must be marked difference in age between the spouses and paring older men with younger women accounts for the transmission of HIV between generations (Velyvis, 1998). With large age difference between spouses women are frequently widowed and these widows remarry quickly with a potential for spreading HIV within families in the traditional marriage systems (Ibid).

Also such spousal age difference is a common cause of limited autonomy for women in decision-making ability (Population Council, 2005). The younger the wife is the greater the age difference between her and her husband. In Nigeria for example, the mean age difference between spouses is 12years if the wife marries before age of 15years and 8.5years if she marries after the age of 20years. The spousal age difference is greater when the girl is second or third wife of the man when the age difference is 15years compared to 8.8years in monogamy (Population Council, 2005).

Oyediran and Isiugo-Abanihe (2005) studied data from the 2003 National Demographic and Health Survey of Nigeria in which a total of 9810 women aged 10-49years and 3,082 men aged 15-64years were interviewed. They identified a mean spousal age difference of 11years (which is not much different from the finding above) and observed that the large age-difference between spouses may make it more difficult for women to express their views that may be contrary to their husbands' even when they felt strong about these views (Oyediran and Isiugo-Abanihe, 2005).

In another survey conducted in Nigeria with 496 respondents, it was found out that age disparity between most men and their wives, particularly polygamous ones, led to extramarital relationships to achieve more sexual satisfaction (Boroffice, 1995) and large age gap between a husband and his wife/wives is inherent to the practice of polygamy (Kuate-Defo, 2004)

3.3.5 Early age at first marriage

When considering early age at first marriage and its consequent problems it should be remembered that it is this age group (15-24 years) that are now getting more infected and most of them are women (UNAIDS/UNIFEM/UNFPA, 2004). They account for 7.5% of the 6.2million young people living with HIV and globally young women are more likely to be living with HIV/AIDS than men (Population Council, 2005).

In most countries sexual intercourse during teenage years occurred predominantly outside marriages among men but largely within marriage among women (Singh et al, 2000). And results from surveys conducted in several WHO regional countries indicated that women were more infected than men with HIV and young women aged 15-24 were about two times more likely to be infected than young men of the same age group (WHO, 2005).

The Population Council undertook a multilevel investigation on child marriage and HIV and reported that young age at marriage and large age differentials in the context of the growing HIV epidemic present three issues of concern: husbands of child brides are older; age gap between spouses intensify power differential between

husband and wife leading to a lack of negotiation for safe sex; and young girls may be forcibly initiated into sexual relationship thereby making them susceptible to HIV infection (Population Council, 2005).

Also, Clark (2004) reported that married adolescent girls and young women in Kenya and Zambia had higher HIV prevalence rates than did their sexually active unmarried counterparts (Clark, 2004). The explanation for this was that marriage increased frequency of sexual intercourse, decreased condom use and eliminated girl's ability to abstain from sex (Ibid).

3.3.6 Early sexual debut

Young age at sexual debut was one of the parameters of risky sexual behaviour that was consistently more common in high HIV prevalence areas (Caraël and Holmes, 2001). Early sexual debut and early age at first marriage are closely linked in most areas as for example in a community-based study in Ethiopia (Gambella Town), 372 participants were interviewed. Analysis of the results showed that most of the participants (66.3%) were married. The mean age of first sexual contact was 16.6years for females and 18.4years for males and the earliest age of sexual contact was 11years (Negarsh et al, 2003).

Early sexual debut is often associated with having multiple sexual partners as reported by Mnyika et al (1997). This was following a population-based study to assess condom use in urban, semi-urban and rural areas in Arusha, Tanzania. It involved 151 adults aged 15-54 years between 1993 and 1994. Also in another study by Petitfor et al (2004) sexual power and HIV in South Africa was assessed. This was in a nationally representative household survey of men and women 15-24years. A total of 11,904 participants were selected through stratified disproportionate systematic sampling. After analysis of the data they reported that HIV positive among them were 24.1% and reported that the HIV positive women were significantly more likely to be inconsistent condom users due to low condom use efficacy and this was found to be associated with having experienced early sexual debut (Petitfor et al 2004).

An observation by Mathur and Gupta (2004) indicated that ignorance about sex, reproductive anatomy and HIV prevention increased young women and girls' vulnerability to HIV infection by making it difficult for them to reduce their HIV risk.

3.3.7 Educational level

I mention educational level here because I think that being in polygamous or monogamous marriage relationship may be associated with the educational level of those involved in the practice. This is because knowledge of the risk factors (including polygamy) for HIV/AIDS increases as the level of education increased (Isiugo-Abanihe, 1994). And education affects individual's lives and is associated with one's knowledge and perceptions about health and enhances one's ability to manipulate and explore opportunities available for improved welfare (Mugambe, 2006).

Deji and Enuenwemba (2005) investigated the level of awareness of HIV/AIDS among rural dwellers in Ife Zone of Osun State of Nigeria. Two rural communities were selected from each of the four Local Government Areas in the Zone and 240 respondents were recruited through systematic random sampling and then interviewed using structured interview schedule. They found that 17.1% of the respondents had no formal education, 32.1% completed secondary education, and 7.1% had post secondary school education while 4.6% had university education. After analysis of the data obtained they concluded that the level of education (P=0.02) and marital status (P=0.02) were significantly related to the awareness of HIV/AIDS (Deji and Enuenwemba, 2005).

In another study in Nigeria, Olayemi et al (2002) studied correlation of knowledge of antenatal patients about HIV/AIDS transmission in Ibadan, Nigeria, and reported that high education attainment improved knowledge of HIV/AIDS transmission and reduced chances of high individual risk behaviours like polygamy (Olayemi et al, 2002).

A factor that is related to bigger HIV epidemics is the disparity in educational levels between husband and wife (Benz et al 2005) as inequality in education may cause subordinate wives to remain socially and materially dependant of their much older husbands who, as a sign of virility may be involved in polygamy.

3.3.8 The practice of male circumcision

A review published in the third issue of the Cochrane Library, 2003 is a comprehensive analysis of studies on male circumcision and HIV. Siegfried et al (2003) sought to elucidate and appraise the global evidence from published and unpublished studies that circumcision can be used as an intervention to prevent HIV infection. They had searched for randomised and quasi-randomised controlled trials of male circumcision or observational studies that compared acquisition rates of HIV- 1 and HIV-2 infection in circumcised and uncircumcised heterosexual men. They found 35 observational studies (16 in general population and 19 in high risk population). The results from these studies show strong epidemiological association between male circumcision and prevention of HIV infection, but found no sufficient evidence to support an international effect of male circumcision on HIV infection (Siefried et al, 2003).

But Auvert et al (2001) identified factors that could explain differences in the rate of HIV between different regions in Sub-Saharan Africa and found a strong association between HIV and HSV-2 and male circumcision. They concluded that from their findings male circumcision should be considered a preventive strategy in non-circumcising population (Auvert et al, 2001).

Also in 1999, Kelly et al had studied the age of male circumcision and risk of prevalent HV infection in rural Uganda. This was a cross-sectional population based cohort study in Rakai District of Uganda in which 6821 men aged 15-53 years were screened. They were grouped into those who had the circumcision before puberty and those who had it after. The HIV-1 prevalence rate was14.1% in uncircumcised men, 16.2% for men circumcised after the age of 21years, 10% for those aged 13-20years and 6.9% for men circumcised at age less than 12 years. They therefore concluded that pre-pubertal circumcision is associated with reduced HIV risk, whereas

circumcision after the age of 20 was not significantly protective against HIV infection (Kelly et al, 1999).

But following a randomised control trial in Southern Africa, Williams et al (2006) showed that male circumcision reduced sexual transmission of HIV from women to men by 60%. This suggests that male circumcision could be equivalent to a vaccine or the use of condoms in the prevention of HIV transmission. This argument complements that of Auvert et al (2005) who found that male circumcision was equivalent to a vaccine with a 63% efficacy of preventing HIV transmission from women to men. A reduction of male infection would indirectly protect women and children from getting infected

However, there is need for caution about the practice of circumcision as it has been reported as a risky practice because of the way it is carried out in some places. The risk is associated with the use of sharp knives and merry making before and during the festival of circumcision (Asiimwe et al, 2003). The advice is of harm reduction of the circumcision process by utilising a hospital or clinic for the surgery (Loosli, 2004).

3.3.9 Religious inclination

Religion is a cultural factor influencing sexual behaviour and it can make a difference in the intimate behaviour of individuals (Lagardé et al, 2000). It has been observed for example in Nigeria that religion was a significant force in enhancing human sexuality and the time to promote the understanding of human sexuality via religion is now (Akintunde and Ayantayo, 2005).

Traditional religions of Africa placed emphasis on high fertility, a factor that led to the highest polygamy in the world being found in Africa (Mwenesi, 1998). Caldwell et al (1989) conceptualised religious moral value as a social organising principle for regulating behaviours, including sexual behaviour but did not attach religious moral value to sexuality in Africa. However, moral formulation are organised and expressed differently in different cultural and religious systems (Ahlberg, 1994).

Trinitapoli and Regnerus (2005) examined married men from rural Malawi to see whether or not AIDS risk behaviour and perceived risk are associated with religious affiliation or religious involvement in 2001. They reported that regular attendance at Christian religious service was associated both with reduced odds of reporting extramarital partners and with lower levels of perceived risk of infection.

For clarity I present the influence of the different religions separately

3.3.9.1 Inclination towards Christianity

Assimwe et al (2003) argued that historically, polygamy has been an accepted practice in most of Sub-Saharan Africa and this belief has led to an acceptance of multiple sexual partners but it has been reported as a cultural practice that increased the chances of HIV infection at the community and individual level (Assimwe et al, 2003). In addition to strong Christian influence in some countries, many tend to retain their traditional values separate from Christianity and as a result the practice of polygamy continued to exist in places like Malawi. This high polygamy was observed following a project that investigated behavioural determinants of high prevalence and incidence of HIV in Malawi (Hackney, 2002)

Also, sometimes HIV risk is equated with religious immorality as was reported following a study in Nigeria in which a description and analysis of how young Nigerians used a Christian moral framework to make sense of the epidemic (Smith, 2004). This study took place between 2001 and 2003 involving 863 young migrants into Nigerian cities- Aba in the south and Kano in the north. Thirty-five percent of the respondents in Kano and 26% in Aba said that AIDS was God's punishment. Thus interpreting HIV as a consequence of immorality (Smith, 2004).

3.3.9.2 Inclination towards Islam

While polygamy is the norm in Islam, participants may not be as vulnerable as those involved in commercial sex work or a long series of monogamous relationships.

Kelly et al (1999) in a cross-sectional study of a population-based cohort in Rakai district of Uganda in which 79% of 6821 men were found to be Muslims. These Muslims were observed to have the preference of entering polygamy instead of having extramarital relationships. And it was noted that HIV prevalence increased with increase of sexual partners.

But the relationship between AIDS and religion had been ambiguous (Legardé et al, 2000). For example Gray (2004) reported a study in which a hypothesis that Islamic religious affiliation negatively associates with HIV sero-positivity. In this study a multivariate analysis of demographic and AIDS data bases for 38 Sub-Saharan African countries and a review of published literature for journals linking HIV, risk factors for HIV and Islam. The findings were that six out of the seven studies revealed low HIV prevalence among Muslims; Islam appeared to but not always associated with a reduction in sex outside marriage; Muslims had low alcohol consumption and high rate of circumcision; but Islam's permission for polygamy and discouragement of condom use could work against reduced sexual transmission of HIV (Gray, 2004).

Also the association between Islam, circumcision and HIV prevalence was studied in the Rakai STD Control for AIDS Prevention Study that was a community-based randomised trial that involved consenting adults aged 15-19years, which took place between November 1994 and October 1998 (Gray et al, 2000).

In this study the association between circumcision and HIV incidence was examined in 5507 men observed for 10,231 person years in the whole cohort population. The difference observed between the circumcised and uncircumcised were: the circumcised men were "predominantly Muslims, significantly older, less frequently monogamous and more often polygamous ... alcohol consumption was less common; there was a higher frequency of dysuria but not other STDs in among the circumcised men". They observed that religion was highly correlated with circumcision. Circumcised men had a significantly lower HIV incidence in those aged 20 to 29years but no significant difference in the younger and older age groups. The association between circumcision and HIV acquisition was noted to be a reflection of behavioural difference between Muslims and non-Muslims rather than an effect of circumcision *per se* (Gray et al, 2000).

3.3.9.3 Inclination towards traditional African religions

Mbiti (1989) described the functioning of a traditional African as fundamentally a religious function because religion influenced all levels of their lives: "Where the African is, there is religion: he carries it to the fields where he is sowing seeds or harvesting a new crop; he takes it with him to the bear parlour or to attend a funeral ceremony; and if he is educated, he takes his religion with him to the examination room at school, or in the community; if he is a politician he takes it to the parliament" (Mbiti 1989).

A typical country where the society is influenced by tradition in Africa is Swaziland, a traditionally polygamous society (Tobias, 2001), which is due to a cultural heritage that is deeply rooted with traditions carefully protected and sustained. With 40% of the population practicing indigenous African religion, there is great emphasis on virginity of women (Ibid).

3.4 HIV/AIDS prevention: a cultural approach

3.4.1 Introduction

The fight against HIV/AIDS poses enormous challenges worldwide, generating fears that success may be too difficult or even impossible to attain (Okware, et al 2001). The issue of HIV/AIDS prevention is a vast topic and beyond the scope of this work. However I would touch on issues that would be relevant to polygamy/HIV and how this would help stop the spread of HIV infection. Of particular relevance in considering cultural approach to HIV/AIDS prevention would be changing risky cultural practices and addressing marriage as a risk factor as well as introducing and maintaining voluntary counselling and testing (VCT).

The best strategies for preventing the transmission of HIV virus aim to modify behaviours that place persons at risk for infection and transmission (Sumartojo, et al 1997). The concern however is whether behavioural interventions should target individuals who are at the greatest risk for infection or a broader range of individuals

within the general population (ibid). That is why the USAID (2003) suggested that "one size does not fit all" such that in countries with generalised epidemics integration of prevention efforts may occur across a range of interventions, while in more concentrated epidemics, integration of prevention efforts should be focused on ensuring access to HIV prevention for higher risk population.

Before individuals and communities can reduce their level of risk or change their behaviours they must first understand basic facts about HIV and AIDS, adopt key attitudes, learn a set of skills and be given access to appropriate products and services (USAID AND FHI, 2002). It is also worthwhile to note that since the start of the HIV/AIDS epidemic, stigmatisation and blame have characterised the manner in which people are seen and this has a consequence for the provision and receipt of care (Rivers and Angleton, 1999). Therefore men are less likely to be blamed for HIV infection than women and are more likely to be afforded care by their partners, families and communities (Ibid).

It is reasonable to argue that targeting of risk groups focuses resources on those with the highest potential for infections in order to maximise the chances of success in reducing high-risk behaviours and lowering the incidence of infection (ibid). On the other hand, targeting may fail to identify or influence the behaviour of persons who are at some level of risk but may not identify themselves with the targeted group (ibid). General population interventions reach large numbers of people with differing levels of risk for infection and may prevent it from becoming a major threat in lower risk population. However, general population approaches may fail to address the specific needs and characteristics of individuals, and therefore fail to influence the behaviours that put those individuals at risk of acquiring or transmitting HIV (ibid). But in low prevalence epidemics HIV infection is usually concentrated in higher risk groups and targeted, evidence-based HIV prevention must reach this group quickly (Gayle, 2005).

When a society includes persons at high risk as well as low risk but not zero risk simultaneously and over time, a complex mix of intervention is needed. Both types of interventions are appropriate at different points of the epidemic. That is, when individuals who are at risk cannot be distinguished, general population interventions

are appropriate (ibid). Targeting will be appropriate when sexual mixing patterns are selective and those at risk can be distinguished (ibid). If the epidemic moves into the general population, universal interventions become appropriate because evidence strongly suggests that the most efficient method to reduce the speed of HIV in the general population is to reduce its transmission among groups at high risk and such targeted intervention is more effective when combined with programmes to change social norms and reduce stigma (Zewdie et al, 2003).

In most areas of the world, HIV infection is an established disease and new groups of vulnerable individuals continue to emerge, necessitating a comprehensive approach which should include both targeted and general population interventions (Sumartojo, et al 1997). Comprehensive efforts include efforts at the level of the environment and social structures .For example regulatory strategies to limit high risk behaviour, policies on needle exchange, social policies to increase the economic power of women so that they can make safer choices about their sexual behaviour and strengthened approaches to STI prevention and control (ibid).

Ultimately prevention requires more than having sufficient funds to offer information and services argues Salomon et al (2005). They said it also requires an environment that encourages people to internalise meanings about risky behaviour and adopt actual behaviour changes and allows people to utilise services such as test and counselling without fear of stigma and discrimination. These could be through changing risky cultural practices and addressing marriage in HIV prevention.

3.4.2 Changing Risky Cultural Practices

To be effective, HIV prevention programmes should address the contexts in which people live their lives; engage men and boys in prevention efforts for longstanding impact on gender inequalities; address people of all ages for prevention efforts to be fully effective (UNAIDS, 2005). One way of reversing the spread of the disease would be to adopt the cultural approach to HIV/AIDS prevention as it addresses the realities of those cultural practices that promote the spread of the epidemic (Somma and Bodiang, 2003). In this approach, effort should be made to identify those practices such as polygamy that might endanger communities and tackling them by

stimulating community members to engage in a process of critically analysing those traditional practices and beliefs to seek local solutions that encourage risk reduction (ibid).

As far back as 1997 Tavli had identified the challenge of prevention to be the development of measures tailored to the specific needs of each community. This was because prevention experts have learned through trial and error over the course of the HIV/AIDS epidemic that programs that worked for one population may not be effective for other populations (Tavli, 1997). Factors that were identified to fuel the HIV spread within a population include unprotected sex, networks of multiple sexual partners, sharing of drug paraphernalia and increasing vulnerabilities that lead to behaviour patterns with high individual risks of getting HIV infection (Hsu and du Guemy, 2000). Traditional practices like polygamy may therefore be seen as some factor related to the spread of HIV virus (Ibid).

Cultural beliefs and practices resulting to fertility, sexuality and gender may present significant barriers to the adoption of HIV prevention strategies (Piot et al, 2002). The beliefs and practices influence women's vulnerability to HIV (Ulin, 1992). Some changes in certain practices are already happening (Malungo, 2000), as for example, in Zambia most widowed persons are supposed to undergo sexual cleansing following which they are expected to contract levirate marriage. If the new partner was already married, a polygamous union results (ibid). The two factors (sexual cleansing and polygamous levirate marriage) predispose to multiple partnering. However, with the advent of HIV/AIDS and the implication of such practices in its transmission, alternative rituals of cleansing have emerged, while levirate marriages are declining (ibid).

Where cultural norms are considered within the formation of behaviour change campaigns, they were often only considered obstacles to overcome rather than determinants of behaviour that could be harnessed for health prevention policies and programmes and should be understood as a resource to strengthen communication as a vehicle for empowerment and change (Somma and Bodiang, 2003).

Three countries (Kenya, Uganda and Tanzania), UN Agencies, NGOs and PLWA have in March 2003, in Arusha, Tanzania, issued a statement in which they agreed that the centrality of culture must be addressed more rigorously in each of these countries, recognising that culture needs to be reformed if the pandemic is to be halted (IRIN, 2003). They also agreed to strengthen gender and HIV/AIDS policies since gender-based approaches can help orient programs towards promoting social changes supportive of HIV prevention and care (KIT, SAfAIDS and WHO: 1995). This was because they would create an environment that would enable women and men to protect themselves and each other and collaborate equally in providing adequate care and support for those directly affected by the epidemic (ibid).

Hence of particular interest and possible importance is the issue of prevention in the Muslim countries that is a complex problem requiring a multifaceted approach with particular attention to cultural norms because in the Muslim world religion defines culture and culture gives meaning to every aspect of an individual's life (Hasnain, 2005). The existing social, cultural and religious frameworks in Muslim countries do not provide an environment for any safe disclosure for persons who are infected. These societies are characterised by gender imbalance, stigma and discrimination, ignorance and misinformation as well as poverty, economic instability, conflicts, intimidating role of religious leaders and activists and lack of healthcare resources and infrastructure (Hasnain, 2005).

But, HIV preventive methods tend not to be observed because socio-cultural religious and economic determinants operate as constraints on self-protective behaviour (Fylkesnes et al, 2001). It is important to always acknowledge that sexuality is already structured by various social factors, meaning that HIV impinges on an already structured area (Bajos and Marquet, 2000). Consequently, HIV prevention should be placed within the larger scheme of sex education. It is important to work on sexual norms so that it becomes socially acceptable for women to ask for condom to be used for preventive purposes (ibid).

To understand the complex findings about the possible way polygamy might protect against HIV transmission I have developed a hypothetical model to show this. It is illustrated in figure 3.2 below. This model shows that some socio-cultural factors like

increased educational status; women empowerment may act on the individual's potentiality of adopting behavioural change which could ultimately reduce the chance of getting HIV infection.

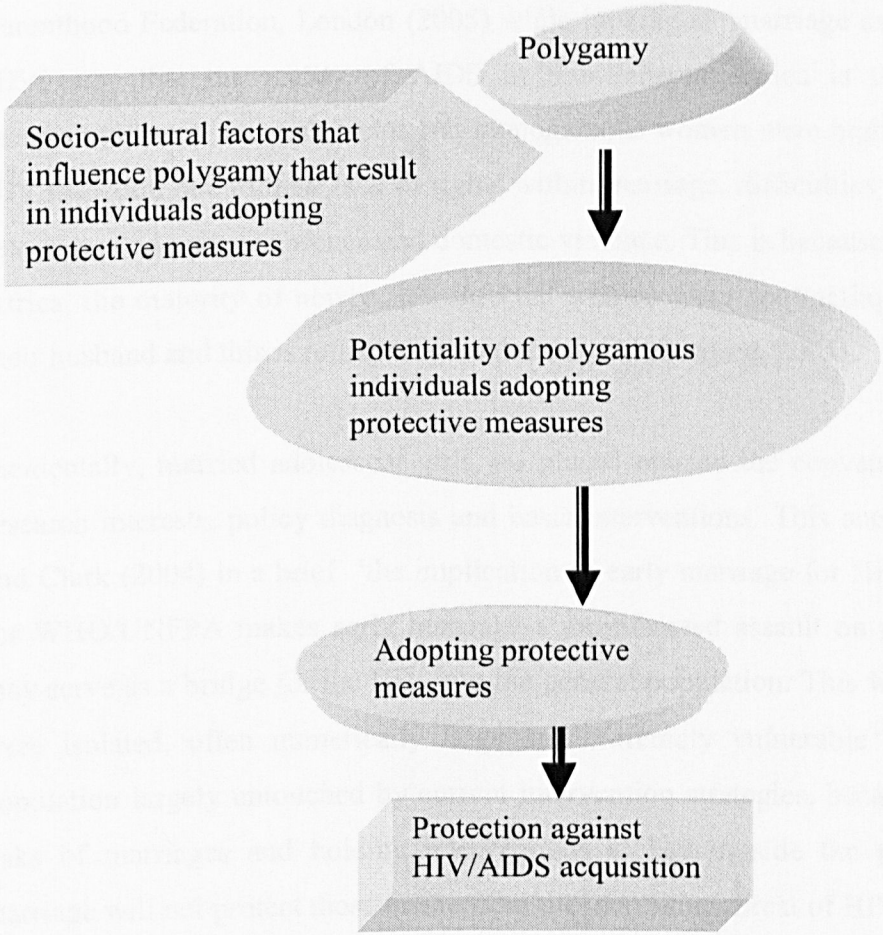

Fig. 3.2: Theoretical model of the possibility of polygamy protecting against HIV/AIDS vulnerability

3.4.3 Addressing Marriage in HIV/AIDS prevention

To curb the epidemic, marriage should be squarely addressed as a major risk factor for women in many societies (KIT, SAfAIDS and WHO: 1995). Polygamy, usually meaning multiple wives rather than multiple husbands can be a safe practice if no partner has sex outside the group, but if anyone is infected, all may be at risk (KIT, SAfAIDS and WHO: 1995). The simplistic message of lifelong monogamy is a poor

one if one partner already has HIV infection and will not use condoms as some men who learn to fear that they have HIV infection marry to insure someone will care for them when they become ill (ibid).

For example, a viewpoint by Sinding, the Director General of International Planned Parenthood Federation, London (2005) while looking at 'marriage as a risk factor in HIV' was that the reality of AIDS in Sub-Saharan Africa is that marriage is increasingly seen as a risk factor and monogamous women were highly vulnerable to HIV infection due to their lack of rights within marriage, difficulties negotiating safe sex, extended partner absence and domestic violence. This is because in Sub-Saharan Africa, the majority of newly HIV infected women were contracting the virus from their husband and this is reflected around the world (Sinding, 2005).

Incidentally, married adolescent girls are placed outside the conventionally defined research interests, policy diagnosis and basic interventions. This according to Bruce and Clark (2004) in a brief 'the implication of early marriage for HIV/AIDS policy' for WHO/UNFPA makes early marriage a multifaceted assault on girls' rights and may serve as a bridge for the HIV into the general population. This was because they were isolated, often numerically large and extremely vulnerable segment of the population largely untouched by current intervention strategies, because denying the risks of marriages and holding interventions at bay outside the private place of marriage will not protect those inside from the increasing threat of HIV.

However, Glynn et al (2003) have argued that although marriage was a risk factor for HIV infection in areas where the prevalence of HIV infection among the population is very high, a substantial proportion of HIV infection among men, even those with an HIV infected wife may be acquired outside marriage. And they thought that this could help explain discrepancies in male-female and female-male transmission probabilities in studies of discordant couples.

Promotion of marriage would appear to be a logical intervention based on the assumption that faithfulness is easier to be practised by married people (Kalibala, 2000). Existing cultural norms in many communities, however permits males to have multiple partners (polygamy) and this could be a major hindrance to this strategy

(ibid). Therefore, increased awareness of risk among single, separated, divorced or widowed people and counselling and testing if desired should be encouraged in order to enable them to be faithful or abstain from risky practices (Kalibala, 2000). Married people who were polygamous or had extramarital sex should be counselled about condom use (ibid).

3.4.4 The practice of voluntary counselling and testing (VCT).

Voluntary counselling and testing is defined as "the process whereby an individual or couples undergo counselling to enable him/her/them to make an informed choice about being tested for HIV. This decision must be entirely the choice of the individual/s and he/she/they must be assured that the process will be confidential" (Boswell and Baggaley, 2002, pp 2). Thus offering a holistic approach to addressing HIV in the broad context of people's lives, including the context of poverty and its relationship to risk practice (Ibid).

There was a high probability that in couples intending to marry or starting a new sexual relationship, an HIV positive person would develop sexual relationship with an HIV negative person unknowingly and transmit it (Baryarama et al, 2000). In Nigeria, Akani et al (2005) established that VCT including a pre and post- test counselling should form the basis for premarital HIV screening. This was because they found that out of a total of 84 heterosexual couples who required pre-marital HIV testing, 20.8% of the total individuals were found to be HIV positive.

Matovu et al (2003) found that there was varied acceptance of VCT. There was lower acceptance among persons with no prior VCT and individuals who had only primary level education. It was however higher among HIV positive individuals, persons reporting condom use as well as concomitantly married or previously married persons. They had however highlighted that there was no impact of VCT on subsequent risk behaviour or HIV incidence (Matovu et al, 2003). But Allen et al (2003) found that joint VCT prompted sustained, even though imperfect use of condoms in HIV discordant couples. And the HIV-1 Counselling and Testing Efficacy Group (2000) confirm that VCT promoted behaviour change.

Juma et al (2002) found that among the young, more females got VCT than did males and more females had partner support in doing the VCT. But Matovu et al found no significant association between age, gender and self-perception of HIV risk with acceptance of VCT.

Painter et al (2001) observed that attention to couple-focused VCT provided higher leverage in HIV prevention activities. But to be effective VCT need to be strengthened by:

- Media-based information programmes
- Community interaction
- Pre and post test counselling
- Post counselling follow up
- Community based support
- Post test support and
- Periodic assessment

For best results VCT should be associated with broader range of health services (Painter et al, 2001).

There was no much literature on polygamy and VCT but the need for VCT before entering a polygamous relationship was demonstrated in a case study by Dada-Adegbola (2004) in Nigeria. It was a case of a man marrying two wives within four months without any pre-marital screening. One of the wives was even a virgin at the time of their marriage and none of the women had symptoms suggestive of any STDs. But on visiting a clinic all three of them were found to be HIV positive, the man in addition had genital herpes, while women had genital herpes and candida infection (Dada-Adegbola, 2004).

Chapter 4: Research Methodology

4.0 Introduction

The methodology used in this study was guided by the desire to look at the objectives of the study in order to find out the relationship between the practice of polygamy/monogamy and the spread of the disease HIV/AIDS in Maiduguri. A mixed methodology comprising of quantitative and qualitative methods was used in this study. These methods can be combined because both share a unified logic and the same rules of inference apply to them. Mixed methods research is defined as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (Johnson and Onwuegbuzie, 2004 pp. 17).

These methods shared: "tenets of theory-ladenness of facts, fallibility of knowledge, indetermination of theory by fact and a value-laden enquiry process. They are united by a shared commitment to understanding and improving human condition, a common goal of disseminating knowledge for practical use and a shared commitment for rigor, conscientiousness and critique in the research process" (Sale et al, 2002; pp 46)

This form of research is more than simply collecting both quantitative and qualitative data; it indicates that data will be integrated, related or mixed at some stage of the research process. Neither quantitative nor qualitative methods are sufficient in themselves to capture the trends and details of the situation (Creswell et al, 2004). In combination, both quantitative and qualitative data yield a more complete analysis and complement each other (Ibid).

The study was conducted in two stages. One was the use of questionnaires that were administered to patients with the provisional diagnosis of HIV disease (quantitative study). The other was the use of qualitative methods within the community in Maiduguri, using focus group discussions and in-depth interviews.

The study was carried out in Maiduguri, the capital of Borno State in North-eastern Nigeria. This is the largest urban centre and borders three countries-the Republics of Cameroon, Chad and Niger (see figure 1.2). It is a cosmopolitan setting as a result of the presence of federal government establishments and the bordering countries. Different tribes from within the country and around the state settle in Maiduguri. There is a lot of cross-border trading and intermingling between Borno State and the neighbouring countries, including intermarriages.

Previous research work on HIV/AIDS in Maiduguri had been limited to serological surveys of pregnant women coming for antenatal visits and commercial sex workers. Those coming in for screening for blood donation were also included in such work. However polygamy is a very common marriage practice in Maiduguri. As a clinician when practicing in Maiduguri I had seen cases of patients becoming ill after getting married or remarried to an additional spouse. It was therefore important to find out the relationship of the common practice of polygamy in Maiduguri to the spread of HIV/AIDS. This is most interesting considering the common incidence of people going into marriages (most of the time polygamous marriages) around the Muslim fasting period and the marriages ending soon after the fasting. This is peculiar to Maiduguri.

Findings in Maiduguri are a good representation of the situation in the North-eastern part of Nigeria. But there is the need to note "findings from a qualitative study are not thought of as facts that are applicable to the population at large, but rather as descriptions, notions, or theories applicable within a specified setting" (Malterud, 2001; pp 486). However, "the end product of qualitative research may be elucidation of a new concept, construction of a new typology mapping of the range of phenomena within a subject area, generation of new ideas or hypotheses, development of an explanatory framework, or the basis for an intervention strategy" (Britten and Fisher, 1993; pp 271).

Findings of this study therefore could be generalized to represent societies with similar settings to Maiduguri and thus help in finding intervention strategies that would help in slowing down or stopping the spread of HIV infection.

4.1 Data Collection

Quantitative and qualitative methods were used for data collection to answer the three research questions. For ease of reference I have summarised the methods used for attaining the objectives that aimed to answer each question in table 4.1

Table 4.1: research methods for the different research objectives

Objective	Method used	Participants involved
1. To compare the prevalence of polygamy in the HIV positive population in Maiduguri with the prevalence of polygamy in the general population	Quantitative research method- questionnaire administration	PLWA in Maiduguri
2. To explore the role of polygamy and marriage practice in the spread of HIV in Maiduguri	Mixed Qualitative and quantitative research methods including in-depth interviews and FGDs and questionnaire administration	Religious leaders, Traditional leaders, PLWA, women opinion leaders, civil servants and members of the public
3. To understand the practice of polygamy in Maiduguri, Borno State of Nigeria	Qualitative research method including in-depth interviews and FGDs	Religious leaders, Traditional leaders, PLWA, women opinion leaders, civil servants and members of the public

4.1.1 Data collection for research question one (quantitative method)

This method was used to attain the first objective of the study (To compare the prevalence of polygamy in the HIV positive population in Maiduguri with the

prevalence of polygamy in the general population) that answered the first research question.

4.1.1.1 Study preparation

4.1.1.1.1 Piloting of questionnaires

Piloting or pre-testing of questionnaires is meant to review questions in order to establish referential and connotative meaning of each question and the appropriateness of each question to ensure validity of a study (Bowden et al. 2002; and Williams, 2003). I piloted the questionnaires using two male and two female PLWA at the SSHM and The UMTH (see section 4.1.1.2).

I initially piloted the questions with the head of department of community medicine of the University of Maiduguri and the head of department of Medicine of the same institution before piloting the questionnaire with PLWA. I recruited the respondents at the outpatient departments of the two centres to give me a general idea of how it would be when recruiting the respondents and administering the questionnaires for the HIV positive cohort.

At the end of the piloting I discussed with each respondent to get their opinion about the questions by considering what they thought of the questions, that is to find out if the questions were easily understood, if there were odd or unusual questions involved, if there were questions they thought should not be asked and who would best administer the questionnaires (male/female).

Following the piloting of the questionnaires I revised the questions and this resulted in the final questionnaire as it is in appendix 2. The piloting also informed my choice of a woman as the research assistant for administering the questionnaire. Most had advised that I have a man and a woman available for administering the questionnaires, as some might prefer a particular gender to associate with. Only one assistant was recruited mainly due to logistic constraints.

4.1.1.1.2 Training of research assistant for the quantitative study

The research assistant whom I worked with on the quantitative research was a female and had training at the State School of Health Technology. The training from this institution allowed individuals to interact with patients effectively because it was aimed at the community directly. They are taught to be the first contact with patients at rural and semi-rural settings in Primary Health Care settings. They are also taught to work as community health workers. She had a good understanding of many of the local languages as well as English language.

I had trained her for the study and this had taken two days. The area of concentration for the training was getting informed consent from respondents, ensuring confidentiality throughout the procedure involved including keeping information obtained secure. She was also trained to understand the questions and how to record responses from respondents accurately.

4.1.1.2 Selection of the participants for the quantitative research

The study group for the quantitative method was drawn from patients with provisional diagnosis of HIV infection who were referred to the tertiary centres for the confirmation of their diagnosis. These are the SSHM and the UMTH.

On arrival in the hospitals, a physician who further explained what was meant by being HIV positive first saw these patients. The significance of the confirmatory test was then explained to them before relevant laboratory forms were filled and then sent to the laboratories for the test. They were contacted for this study after they had seen the physician but before going in for the test. This setting was the same in both study sites.

After getting informed consent, questionnaires were administered in strict confidentiality in secure locations within these hospitals. The participants were recruited before service use as they were aware of their status before being referred and it is the point at which maximum recruitment was possible. The work in the two centres was carried out concurrently. This was because there was just one clinic day for HIV

patients at the UMTH. Therefore with the help of a research assistant I was able to cover the two centres at the same time period. The recruitment was done over a period of three months.

Children were excluded from the study population, as only those old enough to get married were considered. However in Maiduguri, girls as young as 14years were included in the study population because some marry around that age and in such cases additional consent was obtained from their husbands.

4.1.1.3 Sample size

A total of 173 participants were recruited. Due to the sensitive nature of HIV in Maiduguri, no formal sample size calculation was done. I got as many participants as I could. I would point out that the sample obtained was representative of HIV positive in Maiduguri at that point in time because the two centres were the only places that HIV positive could go for confirmation of their HIV status in Maiduguri.

4.1.1.4 Study setting

The UMTH and the SSHM are the tertiary referral health centres serving the whole of Borno State (see also section 5.1.1). The UMTH is a federal government owned health establishment situated in the heart of Maiduguri. It is one of the two places in the state that have facilities for confirmatory tests for HIV infection. It is also one of the few centres chosen by the federal government of Nigeria where HIV/AIDS patients could have access to the subsidised antiretroviral drugs supplied by government.

The setting in the Teaching hospital was that there was a fixed day for HIV/AIDS patients to be seen. As at the time of the research, it was every Wednesday. That was set aside as the clinic day at which time all HIV/AIDS patients that come direct to the hospital or referred from other places are seen. That means all patients seen at that clinic were aware of their HIV status. The doctors referring them for the confirmatory test would have explained their HIV status to them.

It was at this point that patients for this study were recruited. Informed consent was obtained from them to access their test results. This was by introducing the research process, the topics involved in the questionnaire and the fact that this had no effect on the quality of care they would get from the hospitals. That means they were told the purpose of the study, the questions involved and the fact that only the HIV positive was administered the questionnaires. Those with false positive results were therefore to be excluded.

At the SSHM, the arrangement was a little different from that of the Teaching hospital. The patient load of this hospital was much higher than the Teaching hospital. This was because apart from serving as a referral centre, it doubled as a primary care provider for most people who knew the place as the only general hospital in the area.

The arrangement was therefore that all patients with a provisional diagnosis of HIV/AIDS were referred to the doctors running the clinics for the internal medicine department of the hospital. All such patients were referred to a specific section of the immunology laboratory of the hospital for the confirmatory test. In order not to miss out any patient during the period of study, it was at this point that patients were recruited at the SSHM. After getting informed consent as described above (see appendix 2), their test results were accessed to know their final HIV status.

At the SSHM, I was given an office that was secured and offered privacy to enable me to recruit the patients for the study. It was located close to the laboratory where the test was to be done. It had a lock and drawers with locks where I kept any documents or materials to do with the research. At the UMTH I was given one of the consulting rooms at the specialist medical clinic that was just for the HIV positive patients. This office too had a lock and a drawer that was lockable and therefore secure.

For effective coverage of the two centres concurrently I had the services of a research assistant. Routinely we worked together, but in case of the clinic day of the UMTH, one of us will stay back at the SSHM and the other goes to the UMTH.

The figure obtained was higher than that was initially estimated. This might not be unconnected with the introduction of subsidized anti-retroviral therapy by the federal

government. This made patients to volunteer to come out and present themselves as opposed to the past when it would have been difficult to get people to accept to come out for any HIV treatment or care.

4.1.2 Data collection for research questions 2 and 3 (qualitative method)

4.1.2.0 Introduction

When we want to explore how people made sense of their social world in order to provide insights into people's health related-behaviour that was not readily accessible through surveys, qualitative research methods can be used (Harding and Gantley, 1998). This is because qualitative research is especially valuable when we are examining behaviours as such methods are well suited to investigating topics about which little was known (Shears, 2002) since the unstructured or semi-structured approaches allowed researchers to explore issues participants raised during the study.

Qualitative researchers believe that the technique offers a means of understanding the authentic perceptions, sentiments and understanding of the participants in such research (Chew-Graham et al, 2002). It had in the past enabled researchers to appreciate the subtlety and complexity of HIV/AIDS-related behaviours and the importance of lifestyle and culture in determining crucial factors such as risk and negotiation (Power, 1998).

Both polygamy and HIV/AIDS are sensitive issues, hence the choice of qualitative methods to get the relevant information. Qualitative interviews are interactive and sensitive. Good interviews are open ended, neutral, sensitive and clear to the interviewee. Patton (1987) and Britten (1995) have shown that qualitative interviews are good for finding out about behaviour or experience, feelings, opinions or belief and knowledge.

Focus group discussion is essentially a group interviewing that involves more than one interviewee, usually at least four (Bryman, 2004) They usually emphasize a specific theme or topic that is explored in depth and show how people responded to each other's views and help to build up a view out of the interaction that takes place

within a group (ibid). A focus group usually contained elements of two methods: the group interview, in which several people discuss a number of topics; and a focused interview, in which interviewees are selected because they were known to have been involved in a particular situation and are asked about their involvement (ibid). When applied to this study, the participants shared a common background of the experience of marriage, polygamous or monogamous.

Focus group discussions are useful because: people who are known to have had a certain experience could be interviewed in a relatively unstructured way about that experience; the technique allows the researcher to develop an understanding why people feel the way they feel; participants are able to bring to fore issues in relation to a topic that they deem important and significant; in conventional one-to-one interviews, interviewees are rarely challenged while in FGDs individuals will argue with each other which may at the end lead to realistic account of what people think; FGD offers the researcher the opportunity to study the ways in which individuals collectively make sense of a phenomenon and construct meanings around it (Bryman, 2004).

Qualitative interviewing used semi-structured or unstructured questioning to create knowledge in the interaction between interviewer and interviewee (Bryman, 2004). The absence of prescribed rules allowed for an open-ended field of opportunity for the interviewers skills, knowledge and intuition (ibid).

Face to face interviews, the most common form of qualitative interviewing were used. This was because they could cover situations and feelings in depth (Bauer et al, 2004, 2004). They are also a form of an exchange of dialogue that is interactive; relatively informal; thematic, topic centred; and the perspectives that knowledge is situated and contextual are brought into focus (ibid).

The target population for this study objective included Key informants (Religious leaders, Community leaders, women activists, civil servants) and Participants (HIV patients and community members). Four each of these individuals were purposively selected and interviewed in-depth with the aim of finding out how common the practice of polygamy is in Maiduguri and its implication in the spread of HIV/AIDS.

The procedure was purposive because the target population was deliberately chosen based on the possible information they were to provide, i.e., I deliberately selected religious leaders from Muslim and Christian Faiths, community leaders, women leaders and civil servants. Additional interviews were conducted with other groups like people living with AIDS, housewives, lectures, drivers, water vendors, mechanics, politicians, and traders.

There were Focus Group Discussions (FGDs) with women; men; women in polygamous marriage; women in non-polygamous marriage; men in polygamous marriage and men in non-polygamous marriage. The FGD did not explore the link between HIV/AIDS and polygamy but instead explored the concept of polygamy/marriage and changes through time. This was due to the sensitive nature of the issue of polygamy and HIV/AIDS. However the issue of the relationship of marriage practice to the spread of HIV infection did come up from the participants.

For areas that were addressed in the interview see a checklist in Appendix 1. This includes types of marriages; influence of religion on type of marriage; advantages and disadvantages of polygamy/monogamy and changes in marriage practice through time. I will now describe the FGDs and the in-depth interviews in further detail.

4.1.2.1 Focus Group Discussions

4.1.2.1.1 Selection of participants for the FGDs

Those selected for the FGDs were done purposefully in order to get those willing to participate in a group discussion. Considering that marriage and the possible discussion of sexual relationships are intimate topics demanding sensitivity on the side of the person recruiting the participants and a degree of willingness on the side of the participant.

Participants for the FGD were recruited from different wards of Maiduguri in order to get relevant information. The FGDs were for: women in polygamous marriage; women in monogamous marriage; a mixed group of women in polygamous and monogamous

marriages; men in polygamous marriage, men in polygamous marriage and a mixed group of men in polygamous and monogamous marriages.

To get the participants I had to get in contact with various ward heads that were traditional rulers closest to the community. They knew their locality very well and to get to recruit people into a study like this one had to inform the ward head. The ward head then advised those recruited to go ahead and join the research. If this was not done one may not be able to recruit anybody into a study. This was because they looked upon such traditional rulers to give them the go ahead to attend such studies.

At various wards the ward head helped in identifying those who were polygamous and those who were monogamous. An invitation letter (see appendix 3) was written to those selected informing them of what the study was all about, that their contribution to the study would be kept confidential and they were free to opt out of the study at any point. The letter also gave the time and possible location of the FGD session and served as a form of consent. These letters were hand delivered and any further questions raised were answered. The research assistant or I delivered such letters.

For each category of participants twelve were selected but not all turned up for the sessions.

4.1.2.1.2 FGD sessions

The sessions for the women groups took place at a maternity centre, Yerwa clinic. It was more difficult getting a place where women could hold the sessions. After a rigorous search and discussions, it was finally agreed that the best place was Yerwa Maternity and Child welfare Clinic. This was centrally located and most women knew its location. It was also the place where the women felt at home. The sessions took place only during clinic hours in the day as the offices and rooms were not available after closing.

The sessions for the men took place in different residential homes that the participants found suitable and easily accessible. Such houses were usually of people they respected in the community, not traditional leaders. Sessions took place at times of

their choice. This was because the groups were made up of different classes of people whose daily schedules varied. There were sessions in the mornings, afternoons and even at night without electricity, using bush lamps. All these were in an attempt to make the participants feel free in their own surroundings for maximum output.

Sitting arrangements for men was such that they sat in a semi-circle facing the facilitator and the recording equipment was placed where it was accessible to all. They preferred sitting on the floor rather than on chairs. They felt more comfortable that way. They were all then asked to sign a joint consent for the FGD following which the facilitator of the session (the research assistant or I) introduced the occasion. Each participant introduced himself to create a more comfortable environment for the session to be carried out.

A facilitator introducing discussion points and allowing participants to talk about the topic convened the session. Most volunteered to contribute to the discussion freely while others needed to be prompted directly to contribute. An observer then took notes (which the participants had consented for) apart from the tape recording of the session.

4.1.2.2 In-depth interviews

4.1.2.2.1 Selection of participants for in-depth interviews

The study group for the in-depth interview was selected among the different Mosques, Churches and wards of the city. They were chosen because of their knowledge of types and frequencies of marriages practiced in the city. They were usually involved in marriages in one way or another as they usually officiated in the marriages and were sometimes involved in marital counselling. Women opinion leaders were expected to be aware of marriage traditions in Maiduguri, as they were also involved with the act of marriage as they participated in bridal preparation and counselling.

For the interviews the participants included a selection of: Muslim leaders, Christian leaders, Traditional rulers, Women opinion leaders, PLWA, Civil servants, Housewives, lecturers, politicians, political party followers/supporters otherwise commonly called Ecomog (these are unemployed youths used by politicians in

confronting their opponents in politics; they are usually on some kind of social drug and alcohol), water vendors, mechanics, drivers and traders. This gave a clear representation of the population of Maiduguri as well as giving insight into marriage from different perceptions of these individuals. They have different orientations, educational backgrounds and position in the society, different age groups and gender. Four each of the groups were interviewed.

The choice of these participants bears in mind addressing gender roles and power dynamics between women and men, and how they impact on sexual relation and decision-making, is critical for effective prevention and ultimately halt the HIV/AIDS pandemic. Socio-cultural reasons, beliefs and practices that apply to and affect women and men differently have effect on vulnerability to HIV infection (UNFPA, 2002). It was with this in mind that the participants were selected for this study. Gender roles and relations have a significant influence on the course and impact of the HIV/AIDS epidemic in every region of the world (UNAIDS 1998). Understanding the influence of gender roles and relations on individual and communities' ability to protect them from HIV and effectively cope with the impact of AIDS is critical for expanding the response to the epidemic (Ibid).

The justification for selecting these participants was dependent upon their knowledge of the society and marriage practices. The different groups of participants included:

- Religious leaders
- Traditional leaders
- Women opinion leaders
- Civil servants
- People living with HIV/AIDS
- Housewives
- Lecturers
- Other members of the community – Drivers, Water- vendors, Mechanics Politicians, Political party "supporters" and Traders.

4.1.2.1.1 Religious leaders

The main religions of Maiduguri are Islam and Christianity. These religions have leaders and followers. The followers of such leaders are guided by the religious teachings and supervised by the religious leaders.

For the Muslims in Maiduguri there are different sects and such sects may be identified with certain mosques. The selection for this work was made to reflect the different sects so that a representation of the different sects' and their opinions were obtained. The sects tend to reflect whether the followers were hardliners, reformists, conservatives etc. The leaders are involved in the marriages of their followers in which they officiate during the ceremonies and do serve as counsellors when there are problems before and within a marriage relationship. They have a fair knowledge of the marriage types that their followers were involved in and the problems that might be associated with these marriage types.

The Muslim leaders were of different hierarchies depending on their level of knowledge of Islamic religious knowledge. The ones selected for this study were of the highest status of their various sects, which include Jamatul Izalatul bidi'a wa ikamatus-sunna, Tijjaniyya group, Qadiriyya and the Sunni group.

For the Christian leaders, the ones selected represented different Christian denominations found in Maiduguri. The denominations are mainly the Roman Catholic, the Protestants and the Pentecostals. Just like in the case of Muslims, the Christians also are guided by the teachings of their religion as well as the church leaders. Such leaders are involved in most marriages of their followers including officiating during ceremonies and serving as counsellors before and within the marriage relationship. They tend to have knowledge of the type of marriage their followers are involved in. For example (from personal experience) if a church member decided to be polygamous, his first wife, her relatives or the man's relatives are most likely to seek the advice of the church leaders in order to dissuade the man from becoming polygamous.

4.1.2.1.2 Traditional leaders

Traditional leaders are members of the community that are recognised by government and people to represent such communities and lead them in their day-to-day activities.

They are not voted by the people but are from a ruling family that dates back in history. The ruling family in Maiduguri is the El-Kanemi family (Dynasty). They decide on who will lead a certain community. Such traditional leaders include ward heads, village heads, district heads and the highest is the Shehu who may be described as the 'king' of the empire. They have influence on the communities they live in and lead. They are involved in all marriages that take place in their domain because they must be informed of any marriages going on because they keep records and issue some form of receipt that may act as a marriage certificate for any that got married. They are involved in settling any marital problems within their communities. They therefore have knowledge of goings on in marriages in their localities. Such leaders are all Muslims.

4.1.2.1.3 Women opinion leaders

I had initially wanted to seek out women activists in Maiduguri for this work. But what I found out was that they were more opinion leaders than activists. They have different women groups set up to serve different purposes. They have an umbrella organisation called National Council of Women's Societies (NCWS) that is made up of all the women groups in Nigeria. This organisation has branches in all the 36 states of Nigeria. The most prominent group in Maiduguri is the federation of Muslim women's societies (FOMWAN). It is an organisation that serves the interests of Muslim women.

Christian women on the other hand form associations called 'Zumunta' that comprise married women of particular Church denominations. Via this association they help each other out and are seen as women leaders in these churches and it is this association that represents Christian women interest in the NCWS. These women are also involved in marriages of their families and members of their churches.

Such women opinion leaders are usually the educated amongst them; they may be older and have knowledge of their local area. If women have any problems, particularly marital ones, they tend to seek the advice of such women who could then serve as counsellors to them. These women also guide women at different levels in the community about marriages and many social functions and activities. They have a general knowledge of the types of marriages in Maiduguri and their associated problems.

4.1.2.1.4 Civil servants

Civil servants are a distinct group of people in Maiduguri. They are the educated (western/formal education) of the community and have a distinct way of life in the communities they lived in. Most of their life is taken up by the work they do. They live a routine of going to work from Monday to Friday and resting over the weekend during which time they organise social events including marriages.

The civil servants included in this study were those working in the shari'a courts, Area courts and magistrate courts. They deal with marriage issues brought to these courts and so have a general knowledge of the types of marriages in Maiduguri and the problems associated with them since they settle many disputes arising from such marriages. In many cases because most of the time they were learned in Islamic religious knowledge, they also officiated in marriages in the communities they lived in. They were also looked upon by their communities as elders of the society and so might be involved in some form of guidance or counselling in case of marital problems in such societies.

4.1.2.1.5 People Living with HIV/AIDS

Since I wanted to examine the relationship of the practice of polygamy/monogamy to the spread of HIV/AIDS I found it necessary to include this group of individuals in the research with a view to finding out if there was anything in the marriage process of these people that might have contributed to their getting the disease. Those involved in the study are of different backgrounds; sex, age, religion and they came from different parts of Maiduguri. The only common factor to them was their HIV status.

4.1.2.1.6 Housewives

Women who were housewives were part of the study groups. They came from different wards of Maiduguri and were of different backgrounds. The only common factor to this group was that they were married. They could have been polygamous or monogamous.

Housewives are involved in new marriages as counsellors and organisers of the social part of the process. They therefore have knowledge of how common polygamy/monogamy was in Maiduguri and the possible problems that might be associated with the marriage processes as they were mothers, sisters and relatives of those involved in marriages.

4.1.2.1.7 Lecturers

Lecturers are a group of people whom in addition to having local knowledge of the area also are highly educated. As academicians the society viewed them as different. They had views and opinions about polygamy and monogamy that were different from other members of the community they lived in. It was therefore useful to include them in this study.

4.1.2.1.8 Other members of the community

Different groups of people that made up the majority of the rest of the community in Maiduguri were also part of this study. This group was made up of drivers, water-vendors, mechanics, politicians, political party supporters and traders. These participants are a cross-section of the community in Maiduguri. They were made up of peoples of different ages and sex. They form the bulk of the society as they live within their communities and work with and close to the community. They attend most if not all marriages taking place around them. They may have had an experience of polygamy/monogamy that was peculiar to people of similar backgrounds.

For ease of reference, a summary of the justification for the selection of participants for the study is given in a table 4.2 below.

Table 4.2: Summary of justification for the selection of the participants of the qualitative research

	Participants	Justification
1	Religious leaders	In Islam or Christianity the clergy officiates upon marriages. They also counsel married persons when the need arises. They also have local knowledge of their followers and their marital status.
2	Traditional leaders	Like the clergy, they form part of those who officiate and counsel in marriages. They are close to the people socially and have local knowledge of their subjects.
3	Women leaders	These are opinion leaders who are informed and do know about marriages by being part of those who guide the young and counsel them when necessary
4	Civil servants	They form a distinct class of individuals and have distinct ways of life because of their secure source of income and educational status. They have their own perceptions of marriages. The civil servants who participated were those whose jobs involved marriages (those in the judiciary)
5	People Living with HIV/AIDS	These may have different backgrounds and orientation. Their being HIV positive and living with the disease and its influence on their perception of polygamy/monogamy was a factor that was considered
6	Housewives	Housewives are either in polygamy/monogamy. They experience the marriage process. Their perception of polygamy/monogamy is important for consideration in the possible role of the marriage process in transmission of HIV infection
7	Lecturers	They are the highly educated. Because of their educational status and exposure, their experience and perceptions of HIV/AIDS and polygamy/monogamy will be important
8	Others: Drivers Water- vendors, Mechanics Politicians, Political party "supporters" and Traders	These participants are a cross-section of the community in Maiduguri. They are made up of peoples of different ages and sex. Their occupations make them to have peculiar perceptions that may be slightly different from that of the majority of the population in Maiduguri. But they form the bulk of the society.

The actual process of recruitment involved writing an introductory letter (see appendix 4) to the intended participants informing them of the research work including the

purpose of the study and types of issues to be discussed with the aim of getting informed consent. These letters were then personally taken to them either by the research assistant or I. Those who did not understand English were given the translated version of the letter and any further information required was given to them.

HIV patients were recruited in the outpatients departments of the University of Maiduguri Teaching Hospital (UMTH) and the State Specialist Hospital Maiduguri (SSHM) after getting informed consent, while the different community members from different wards were purposively selected for the in-depth interview and the FGDs.

4.1.2.2.2 In-depth interview sessions

The interview sessions took place at different locations depending on the interviewee. Most religious leaders were interviewed in their mosques or churches while the others preferred either their houses or their offices if the participant was a worker who had an office. Those without offices like the water vendors, traders, political party supporters and mechanics interviewed in public places like schools nearest to them and these usually took place when the schools were not in session. The drivers had union offices that were used for the sessions.

The sessions were tape recorded except a few who did not consent to have the sessions tape-recorded. They however consented to taking of notes. At the start of the session the purpose of the study was introduced to the participants and the confidentiality of what they contributed was re-affirmed to them. The session then went on by the interviewee asking questions based on the guideline given in appendix 1.

4.1.2.3 Sample size

The sample for the qualitative method is reflective of the community in Maiduguri regarding the topic. Qualitative studies do not generally seek to enumerate. Qualitative research was best if the principle of Purposive Sampling was followed, i.e., not a random or probability sampling but criteria – based sampling. Such sampling was essentially strategic and entailed an attempt to establish a good correspondence between research questions and sampling, i.e. sampling on the basis of wanting to

interview people who were relevant to the research questions (Bryman, 2004). This depends on the researchers inquiry and judgement about which sample would lead to the clearest understanding of the situation (Tite, 1998). In this context I sought to understand the inter-relationship between the practice of polygamy and the HIV/AIDS epidemic.

The sample size obtained for the qualitative work was 49 participants in six groups for the FGDs and 57 for the Interviews making a total number of 106 participants. Only six FGDs were conducted because of time constraints and the fact that interviews were found to yield more relevant information and participants for the interview were easier to recruit than for FGDs. It appeared most of the participants preferred to speak on one to one basis rather than in a group.

A contributory factor to the low number of participants was the crisis over polio vaccine that was going on in Nigeria at the time of conduct of this study. Most members of the public viewed any research in the field of healthcare suspiciously as they thought the government might be using the researchers to find out about views on the polio vaccine issue.

One of the difficulties of qualitative research is the difficulty to establish at the outset how many people will be interviewed if theoretical considerations guide selection. Also as the investigation proceeds, it may become apparent that groups will need to be interviewed who were not anticipated at the outset. However, the broader the scope of a qualitative study, the more the interviews will need to be carried out (Bryman, 2004). But overall, numbers are less important in qualitative work (Pope and Mays, 1995).

The process of collection of data and analysing it should ideally continue until one reaches a point where one is not learning anything new (Ibid). This was reached in this study because the opinions or perceptions obtained from the participants were becoming similar and repetitive towards the end of the work.

4.2 Data Management, analysis and quality assurance

4.2.1 Quantitative research

4.2.1.1 Quality assurance

In preparation for this research I had attended modules on quantitative research at the Liverpool School of Tropical Medicine to up date my knowledge on the use of the method for research. I had the experience of using the method in my Masters research. This is in addition to my knowledge of bio-statistics that was part of my training in the medical school.

I had a research assistant whom I worked with on the quantitative research. She was a female and had training at the State School of Health Technology (see section 4.1.1.1.2 for details on training and experience of the assistant).

The questionnaires were piloted at the outpatient departments of the SSHM (see section 4.1.1.1.1). This was to ensure validity of the study.

Attempts were made to identify data from National Population Commission and relevant source of information to get data to compare polygamy in the general population to that of HIV positive individuals in Maiduguri.

4.2.1.2 Data Management and analysis

The questionnaire covered the following areas:

- Personal data
- Marital history
- Practice of sexual negotiation/bargaining in the marriage relation
- Practice of safe sex
- Other possible causes of HIV infection

The data generated from the questionnaires were then entered into Epi-info for analysis. Results and discussions on the analysis are found in chapter 5 in more detail.

4.2.2 Qualitative research

4.2.2.1 Quality assurance

With the permission of the participants, interviews were tape-recorded and then transcribed. In case of translation problems, the Languages and linguistics Department of the University of Maiduguri was contacted. In addition I had a research assistant who was a linguistics lecturer from the University of Maiduguri and he had experience of participating in qualitative research works for the department of community medicine of the College of Medical Sciences of the University.

This research assistant was a male lecturer at the languages and linguistics department of the University of Maiduguri. He is a Kanuri, who had been in Maiduguri since early childhood. He had a commanding knowledge of Kanuri, Hausa as well as English. Apart from lecturing, he is involved in translations that the department does for people. The translation could be from local language to English or English to a local language. He did the translations for me. That is the translation of transcripts from local languages to English and questionnaires and letters for introduction from English to local languages. He was involved in the FGDs and the interviews. He conducted sessions that were necessary to be conducted in local languages. Using his experience in conducting FGDs, he had helped in organising many of the sessions including location and selection of some of the participants. He also interviewed participants who did not understand English.

I believe that what I am could have also played a role in the quality of the research work. I was born in a town not far from Maiduguri and had my university education in Maiduguri. I had lived in Maiduguri since 1981 and have interacted in different ways with different types of people in Maiduguri. Thus I have a good idea of life in Maiduguri and northeast of Nigeria. I have also travelled to most states of Nigeria, which gives me the idea of life of other people who were originally from other parts of Nigeria living in Maiduguri.

I have the experience of the use of both qualitative and quantitative research methods because I have used them in combination for my Masters Thesis in Health Planning and Management that was in Maiduguri as well. Also my experience in practicing in a

public hospital was beneficial in making it easy for me to present questions to participants in such a way that the participants would understand the questions. This would then help in getting best possible response, particularly in sensitive areas sexual negotiation.

As a staff of the Borno State Ministry of Health and having worked within the community and having established a good rapport both at work and out of it, it was easy for me to organise interviews and meetings. Because of the rapport I was even able to conduct interviews with Christian leaders in their Churches which otherwise would have been difficult or impossible for a Muslim to do. It had also helped in my accessing facilities at the two sites for the questionnaire administration (SSHM and UMTH).

However, the issue of 'power' in research might make some participants not to feel completely comfortable if they thought the researcher was in a position to judge their responses (Stevenson et al, 2001). This might have influenced responses to some questions like those involving sexual negotiation (see sections 6.3 and 5.3.3).

Questionnaires, transcripts, tapes and any material used during the course of the study were kept in a safe and secure place.

Other ways of quality assurance for this study included:

- Gender and equity analysis: Gender influences how women and men seek out information about sexuality and HIV risk, the sexual behaviours and practice that predisposes to HIV infection and how women and men cope with HIV/AIDS related illness once infected or affected. This was put into consideration during the research process.
- Triangulation: Comparing information from different data sources e.g. outcome of in-depth interviews versus FGD; comparing information from in-depth interview of Key informants versus participants; comparing all these data sources forms the bulk of the analysis process of this work. This led to developing themes from the interviews and discussions that were necessary for the development of the questionnaire for the quantitative part of the research.

Information from the National Population Commission of Nigeria was used in the analysis process to compare with the findings of the study.

- Clear exposition of methods of data collection and analysis including the quantitative methods. This is reflected in how this chapter is written out.
- Paying attention to negative cases, i.e. cases that is outright contradiction to the majority of the cases, for example participant IIEL01 who believed that HIV is not a new thing that it is caused by sexual intercourse during menstruation.
- Intense engagement: I was fully engaged in all stages of the study to ensure quality of work.

4.2.2.2 Data Management and analysis

The qualitative methods used in this thesis include Focus Group Discussions (FGDs) and Key informant and in depth interviews were the qualitative methods. The analysis process was adopted from the thematic framework type of analysis. The analysis process included: transcribing all the recorded sessions of the FGDs and interviews; studying the transcripts, identifying themes arising from the transcripts; identifying core areas; comparing views from different categories of participants and drawing up conclusion.

4.2.2.2.1 Analysis of focus group discussions

The focus group discussions involved six groups totalling 49 participants as summarised in the table below. The groups include men in polygamous marriages (FGPM), men in monogamous marriages (FGMM) and mixed group comprising those in polygamy and monogamy (FGMGM). Similarly there were women in polygamous marriages (FGPW), women in monogamous marriages (FGMW) and mixed group of women in polygamy and monogamy (FGMGW). These groups comprised men and women of various age groups (see age range in table below). In Maiduguri, girls as young as 14 years may be married because early marry is a common practice.

They discussed issues of polygamy and marriage practice in Maiduguri like types of marriage, advantages and disadvantages of polygamy/monogamy, changes in marriage practice through time reflecting the dynamic nature of polygamy, the

possibility of sexual negotiation and bargaining in the marriage relationship and making recommendations

Table 4.3: summary of respondents of the focus group discussion

Code	Sex	Age range	Number of participants
FGPM	Men	26-68	7
FGMM	Men	24-43	9
FGMGM	Men	19-71	10
FGPW	Women	17-49	7
FGMW	Women	16-35	8
FGMGW	Women	18-56	8

a. Transcription

There were a total of six sessions for the FGDs and all six were recorded on audiocassette. All the six sessions were done in the common language of the area, Hausa and Kanuri being used by participants. The research assistant who is a lecturer in linguistics at the Languages and Linguistics Department of the University of Maiduguri therefore did the transcription. The transcription went along with translation into English. The transcripts were then written by hand before a detailed study.

b. Detailed study of the transcripts

After the transcripts were translated into English, they were then coded each transcript was studied in detail in order to identify themes arising from the transcript. It was clear from the outset that the groups involving male participants were more involved and provided more information than the female groups. The study led to identifying themes arising from the discussions and writing them out.

c. Themes arising from the FGDs

The themes were grouped based on the question guidelines used for the discussion as in appendix 1. These themes were then charted. A further detail of the analysis is given in chapters 6 and 7.

4.2.2.2.2 Analysis of in-depth interviews

The interviews conducted with 57 participants comprising key informants as well as participants. The key informants were: Muslim leaders, Christian leaders, Traditional leaders, women leaders and civil servants. The participants included: people living with AIDS, housewives, lectures, drivers, water vendors, mechanics, politicians, and traders.

They had been interviewed based on the issues discussed in the FGDs mentioned above. The participants in the in-depth interview in addition had discussed the influence of polygamy/monogamy on the spread of HIV/AIDS, implication of polygamy/monogamy for sexual health and suggestions for health interventions. This was not discussed in the FGDs because of the sensitive nature of the issues (polygamy and HIV/AIDS).

a. Transcription

There were a total of fifty-seven interviews of the key informants and participants. Most agreed to have the sessions tape-recorded, while a few of them refused recording but allowed taking of notes. All the cassettes were then transcribed. The research assistant transcribed those requiring translation, while I transcribed those that did not require any translation.

b. Detailed study of the transcripts

The transcripts were then studied thoroughly with the aim of identifying themes arising from the interviews based on the discussion guidelines used for the interviews. The themes were then coded and charted.

Results and discussions on the analysis are found in chapters 6 and 7 in further detail

4.3 Ethical considerations

The basic principles of ethically sound research that are used to guarantee the protection of human rights is: autonomy, beneficence, nonmaleficicence and justice (Kylmä et al, 1999). This study is an ethically sensitive research area because of the individuals concerned and the topic. In qualitative research the focus of the study is often the inner feelings and thoughts of participants, the researcher should act with sensitivity and diplomacy. In general qualitative research is a dynamic and process-oriented method with close collaboration between the researcher and the participants. The participants' willingness to participate, their compliance in the research, and the depth and validity of the material obtained, are to a large extent based on trust and co-operation developed between the researcher and the participants.

The World Medical Association (WMA) policy statement on HIV/AIDS and the medical profession adopted by the WMA general assembly in Pilanesbers, South Africa in October 2006 identified HIV/AIDS as a pandemic that was fundamentally a human rights issue and fear of discrimination against PLWA was a driving force behind the spread of the disease (WMA policy statement, 2006).

The interaction of legal, social, economic and human rights functions affect the public health dimension of HIV/AIDS as well as physician/health worker and patient choice and relationship. Therefore all standard ethical principles and issues relating to confidentiality and protection of patients apply in the context of HIV/AIDS (WMA policy statement, 2006). For example MacQueen and Buehler (2004) reported that people at high risk of HIV infection were socially, economically or politically vulnerable. The vulnerability heightens the importance of ensuring that public health research is conducted ethically.

Approval for the research work was sought from the ethical committee of the Liverpool School of Tropical Medicine. There was initial concern as to the issue of consent, translation/translators and mode of participant recruitment. This was clarified in that all participants will have an introduction in which the kinds of questions and

the topics covered were to be explained to them before asking for their consent. On the issue of translation, the committee wanted to know the number of translators involved and it was explained to them that if there was any need for any translation to and from any language, it was to be done by the languages and linguistics department of the University of Maiduguri. I was fortunate to work with one of the translators as my assistant during the research. Ethical approval was then given to me after the explanation.

In Nigeria, there was no formal ethical committee like that of the Liverpool School of Tropical Medicine. But there was a set up similar to it in directorate of medical services of Borno State Ministry of Health. It is a board comprising members from different backgrounds that decide on whether a study should be allowed to go on or not regarding research on humans. I had a letter from my supervisors to this board and was given permission to go ahead with the research after reviewing the research proposal.

Approval was also obtained for research at the UMTH. It is a tertiary health institution of the FMOH. I also got approval from a similar committee called the Medical Advisory Committee, which decides whether research could be carried out in the UMTH, or not.

The informed consent for the focus group discussion was sought by introducing the research process through a letter outlining reasons for research and stressing confidentiality (see appendix 3). Most of them agreed that their response by attending the sessions served as consenting to participating in the research. Before commencing any session group consent was sought. This was given verbally as all of them thought that by appearing for the session, it was assumed that their consent was granted.

Consent for the interviews was sought in a similar manner through an introductory letter as seen in appendix IV and their consenting to participate after receipt of the letter served as an informed consent. It should be remembered that some of the female participants were young, less than 14years. Since they were under aged the consent was sought with their permission from their husbands. With the permission of the participants, most of the sessions were tape-recorded and notes were taken.

The questionnaires for the quantitative part of the study were introduced in such a way that the participants/patients understood the contents and consented to go ahead with the research before he/she was recruited. See appendix 2 for the introduction and the full questionnaire for the quantitative aspect of the research.

The following measures were taken to protect the participants' privacy:

- Interviews and any discussions were carried out in places identified to be suitable and private enough for the participants.
- Codes rather than numbers were used in qualitative analysis or reporting.
- Materials generated were kept in a secure place, under lock and key. Only those involved in the research work had access to them.
- The questionnaires were administered in such a way that the participant will not be identified.
- Code numbers rather than names were used for identification on the questionnaires.
- Completed questionnaires were also kept under lock and key.

Chapter 5: Results and Discussions for research question 1: How does the practice of polygamy in the HIV positive individuals in Maiduguri compare to that in the general population?

5.0 Introduction

In this chapter I aim to explain and analyse the findings of the extent and frequency of the practice of polygamy in the HIV positive cohort studied in Maiduguri and where possible, compare data from this cohort with data from the national demographic and health survey, 2003 for Nigeria in three major sections.

Section 5.1 describes data from the HIV positive cohort studied in Maiduguri (subsequently referred to as the HIV positive cohort) and the source of data about national and northeast population used for comparison, the National Demographic and Health Survey, 2003 (NDHS, 2003). In section 5.2 I analyse and give a broad comparison of Demographic features, the extent of the practice of polygamy/monogamy, perceptions of sexual negotiation and the practice of safe sex.

Section 5.3 discusses the findings and how they influence the acquisition and/or transmission of HIV infection. While section 5.4 gives the summary of the presentations of the chapter.

5.1 Source of data for comparison of polygamy situation among the HIV/AIDS positive population and the general population

I have described in two separate sections the source of data used for the comparison in sections 5.2. The aim was to elaborate on how my study data (HIV positive cohort) from Maiduguri and the 2003 NDHS were obtained. It also includes the limitations of the data, particularly the NDHS data as a comparator to the HIV positive cohort.

5.1.1 Data from the HIV positive cohort

A quantitative study of HIV positive patients was undertaken in Maiduguri. Questionnaires were administered to patients who had a provisional diagnosis of HIV

attending the tertiary referral centres in Maiduguri - The University of Maiduguri Teaching Hospital (UMTH) and The State Specialist Hospital Maiduguri (SSHM).

The main aim of getting such information was to study the HIV positive population in Maiduguri in order to understand the nature of this group of people by looking at their personal details, marital history, practice of sexual negotiation in marital relationships, general practice of safe sex among the group and looking at possible causes of HIV infection. This information was obtained using a questionnaire (see appendix 2).

The questionnaire was in six sections (sections A-F in appendix 2). Section A was to obtain personal details of the participants like age, sex, marital status, religion; section B was about marital history (being in polygamy/monogamy, number of marriages ever had, divorce, widowhood); section C was to get the perception of the HIV positive population about the practice of sexual negotiation in a marital relationship; section D explored the practice of safe sex which included the use of condoms, awareness of STDs and their treatment, their awareness of the screening for HIV/AIDS; section E was to examine their perceptions of possible routes of acquiring HIV infection other than through sex; and section F was to obtain their consent to access the result of the confirmatory tests they were doing as an indication of their final HIV status.

The SSHM and UMTH are the tertiary referral centres in Maiduguri (see section 4.1.1.4) and the only officially recognised centres that carry out confirmatory tests for HIV provisionally diagnosed patients. Any person with a provisional diagnosis of HIV infection would go to either of the two for a confirmatory test of the diagnosis. The UMTH is a federal government run institution that serves as a training centre of the University Of Maiduguri College Of Medical Sciences and has been designated by the federal government as a Centre of Excellence in immunology and infectious diseases. It is also one of the centres chosen by the federal government for the provision of the subsidised ARV programme.

The SSHM on the other hand is the highest referral hospital run by the state government and was the only hospital serving the whole state and Northeast region in

that capacity before the establishment of the UMTH in 1983. It is also a training ground for the State schools of nursing, midwifery and health technology and has specialised departments.

Patient attendance at either of the centres depended on its proximity to them, as well as the person's educational and social background. Most people in Maiduguri are quite used to the SSHM and all types of people go there for different ailments without any hesitation or fear of anything. However, people with a low level of education and low social background are less likely to attend the UMTH, as it was thought to be a place where people go in and never come out alive. This is because many of the cases of referred to this hospital are terminal cases. Using participants from both sources ensured that the population was representative.

At the time of this study, there was an important motivating factor for patient attendance – the provision of subsidised ARVs by the FGN. This not only encouraged patients to come to the UMTH but also encouraged HIV positive patients to come forward and seek help and treatment. Without this motivation, the total number of patients recruited for the study might have been less than obtained. I had, with the help of a research assistant (described in section 4.1.1.1.2) recruited and given questionnaires to a total of 173 HIV positive patients from both centres that had fulfilled the inclusion criteria for the study (see section 4.1.1.4).

5.1.2 Data of the general population from the 2003 National Demographic and Health Survey of Nigeria

The ideal comparator data for the HIV positive cohort would have been a study of the general population of Maiduguri. I had originally planned to carry out such a survey in Maiduguri. However I was informed that a similar survey that would give me similar information had already been conducted in Maiduguri by the Community Medicine department of the University of Maiduguri. Unfortunately, this data was never analysed and by the time this became clear, there was no time to carry out the desired survey.

Other potential sources of accurate data were explored (The University of Maiduguri, Federal office of Statistics, Borno State Ministry of information, National Population Commission of (NPC) and International Planned Parenthood Federation of Nigeria). The only reliable data available was NDHS, 2003 data from the National Population Commission of Nigeria.

I have used the 2003 NDHS because the Nigerian National Population Commission has described the survey to be based on "nationally representative sample and ... provides up to date information on the population and health situation in Nigeria" (NDHS, 2003; pg xxiii). This may not be completely true, but it is the only source of information that is available for the comparison and despite its drawbacks, I have used some data from this survey for comparisons with my study group.

The 2003 NDHS (NPC and ORC Macro, 2004) was meant to provide estimates for key indicators like fertility, contraception use, infant mortality rates, immunisation levels, use of family planning facilities, Maternal and child health, breast feeding practices, nutritional status of mothers and young children, use of mosquito nets, female genital cutting, marriages, sexual activity and awareness of and behaviour towards HIV/AIDS and other STDs were also asked about.

It included a representative sample of 7864 households selected in two stages. The first stage was a selection of 365 clusters from a list of enumeration developed from the 1991 population census. A complete listing of households in each selected cluster then followed. Households were then systematically selected for incorporation in the survey.

All women aged 15-49years, permanent or temporary residents of any household and in 1/3 of all households selected all men aged 15-49 were included. This means there were three times more women in the data used for the comparison with the HIV positive cohort from Maiduguri (7620 females as compared to 2346 men, table 5.1).

The survey used three questionnaires: the household questionnaire, the female questionnaire and the male questionnaire. These questionnaires were translated into the three major languages of the country (Hausa, Igbo and Yoruba). The main purpose

of the household questionnaire was to identify men and women eligible for the individual questionnaires.

The individual questionnaire for women was used to collect information from women aged 15-49years by asking them about:

- Background characteristics
- Birth history and childhood mortality
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal and delivery care
- Breast feeding and child feeding practices
- Marriage and sexual activity
- Women's work and husband's background characteristics
- Awareness and behaviour regarding HIV/AIDS and STDs
- Female genital cutting

The men's questionnaire was similar excluding reproductive history and questions on Maternal and child health and nutrition (NPC and ORC Macro, 2004). I had studied these questionnaires before commencing my study and they informed the development of my own questionnaire.

For the purposes of comparison with my work I have used data about the following characteristics of the general population that was studied by the National Population Commission during the survey:

Age distribution of the participants of the survey

Marital History

Religious inclination

Polygamy/monogamy relationship

The possibility of sexual negotiation in a relationship

Attitude towards the negotiation for safe sex

Having sexual partners apart from spouses

Unfortunately, not all of the parameters in the NDHS were made available broken down by geographic region of Nigeria. I have therefore presented the comparison in two subsections: In the first, the age distribution of respondents, marital history and religious inclination of the Maiduguri HIV positive cohort is compared to national data. There is no information about the northeast of Nigeria on these parameters. The second section deals with comparison with available data on certain parameters that were available about North-eastern Nigeria, the zone where Maiduguri is situated.

5.2 Analysis of the findings from the HIV positive cohort and Simple comparison with the general population

This section presents the analysis of the findings from the HIV positive cohort studied in Maiduguri and where possible such findings are compared with the general population findings from the 2003 NDHS described above. The following factors were examined

- Demographic features
- The extent of the practice of polygamy/monogamy
- Perceptions of sexual negotiation
- The practice of safe sex

This simple comparison of the findings in the study group (HIV positive cohort) and the general population was to see if there were any similarities and/or differences between the study group and the general population that might be related to polygamy or vulnerability to acquiring HIV infection. This approach is clearly subject to flaws that are outlined below. In view of these potential flaws, broad comparisons only are made and statistical tests have not been used

5.2.1 Flaws in the comparison of the HIV positive cohort and the 2003 NDHS

5.2.1.1 Different geographic area

There is a great difference in the geographic coverage of the two data sets. The Maiduguri HIV positive population data covers only HIV positive men and women

who presented to the SSHM and UMTH at the time of the study. The best data to be compared with this would have been a study of the general population in Maiduguri. However what is available is the result of a survey that was conducted to cover all of Nigeria including Maiduguri and Northeast region

5.2.1.2 Different areas of concentration for survey

The HIV positive cohort was aimed at looking at HIV/AIDS and polygamy while the NDHS was aimed at providing key indicators like fertility, contraceptive use, infant mortality rates, immunisation levels (section 5.1.2) using a large population sample. This entailed the use of large number of people to do the survey, thus introducing the possibility of poor quality control in interviewing techniques and errors.

5.2.1.3 Difference in methodology

The Maiduguri study population had been administered only one questionnaire as described in section 5.1.1 while the NDHS survey used three different questionnaires. The fact that I was not part of the NDHS survey I have a limited idea of how the whole survey had been conducted and how efforts against bias were made.

With the above observations in mind I outline the comparison of the Maiduguri study data to the NDHS, 2003 in two subsections for clarity.

5.2.2 Comparison with national data from the NDHS, 2003: Demographic features

The NDHS is representative of the general population of Nigeria. In the absence of such information specifically regarding Maiduguri and the North-east of Nigeria, I have used national data to compare the following with the data from the HIV positive cohort

- Age distribution of respondents
- Marital status
- Religious inclination

5.2.2.1 Age distribution

I have examined the age distribution of the comparator data to the HIV positive cohort by comparing

- Female to female
- Males to males and
- Males to females within the HIV positive cohort.

And discussed fully below

Table 5.1: showing the comparison of data from the HIV positive cohort, national data (NDHS 2003) and data relating to the northeast from the NDHS 2003

Characteristic	HIV positive cohort	National data	Northeast data
Age			
Female (%)			
11-20	4 (4.9)	1716 (22.5)	
21-30	46 (56.2)	2876 (37.7)	
31-40	19 (23.1)	1757 (23.1)	
41-50	10 (12.1)	1271 (16.7)	
50 and above	3 (3.7)	na*	
Male (%)			
11-20	1 (1.1)	453 (19.4)	
21-30	23 (25.3)	754 (32.1)	
31-40	36 (39.5)	519 (22.1)	
41-50	23 (25.3)	367 (15.6)	
50 and above	8 (8.8)	253 (10.8)	
Marital Status			
Female (%)			
Never married	29 (35.4)	1925 (25.2)	
Married	35 (42.7)	5336 (70.0)	
Divorced	7 (8.5)	218 (2.9)	
Widowed	11 (13.4)	141 (1.4)	
Male (%)			
Never married	23 (25.3)	1049 (44.8)	
Married	66 (72.5)	1143 (52.9)	
Divorced	2 (2.2)	41 (1.8)	
Widowed	0	11 (0.5)	
Religious inclination			
Islam			
Female (%)	56 (68.3)	3863 (50.7)	
Male (%)	71 (78.0)	1180 (50.2)	
Christianity			
Female (%)	26 (31.7)	3650 (47.9)	
Male (%)	20 (22.0)	1138 (48.5)	
Others			
Female (%)	0	107 (1.4)	
Male (%)	0	33 (1.3)	

na*: no data available

Table 5.1 (continuation)

Characteristic	HIV positive cohort	National data	Northeast data
Condom use			
Female			
Used condom (%)	0		48(4.2)
No condom used (%)	41(37.3)		1074(95.8)
Male			
Used condom (%)	6(5.4)		90(31.5)
No condom used (%)	63(57.2)		196(68.5)
Other sexual partners			
Female			
Yes	1 (1.2)		7 (1.2)
No	36 (43.5)		536 (98.8)
Male			
Yes	12 (13.2)		19 (15.8)
No	56 (61.5)		99 (84.2)
HIV/AIDS awareness			
Female			
Aware	47 (57.3)		1036(75.7)
Not aware	35 (42.7)		332(24.3)
Male			
Aware	67 (73.6)		367(97.3)
Not aware	24 (26.4)		10(2.7)

5.2.2.1.1 Comparing female of the NDHS, 2003 to females of the HIV positive cohort

There were a significant proportion of the participants of the NDHS, 2003 (22.5%) in the age group 11-20. The highest proportion of the women in the NDHS was in the age group 21-30 and subsequently reducing with increase in age. This may indicate a young population with the possibility of entry into early marriages. It also signifies that a huge proportion of these participants would be sexually active as the highest proportion was in the most sexually active age group (21-40).

In contrast, in the HIV positive cohort, the proportion of those in the age group 11-20 was very low (4.9%). The age group 21-30 formed the biggest proportion of the women in the HIV positive cohort; although there were more women in this age group in the HIV positive cohort than there were in the NDHS population. The proportions reduced with increase in age similar to that seen in the NDHS population.

This could mean that early marriages in the age group 11-20 predisposed them to acquiring HIV infection that was manifesting at a later date (in the age group 21-30) and the possibility of getting HIV infection reduced with increase in age.

5.2.2.1.2 Comparing male of the NDHS and the males of the HIV positive cohort

The age distribution of men in the NDHS was similar to the age distribution of women in that population. Those in the age group 11-20 formed a large proportion (19.4%) and the largest proportion was in the age group 21-30. the proportions reduce with increase in age.

In the HIV positive cohort however, the proportion of men in the age group 11-20 was low. Lower than even that of the women. The largest proportion of men was found in the age group 31-40 and reduced with increase in age such that only 8.8% were over fifty years.

These findings suggest that men got married at a later date than did women and they married younger women. They then manifested their HIV status at a later date and would have died by late ages of over fifty.

5.2.2.1.4 Comparing males to females of the HIV positive cohort

There were few among those in the HIV positive cohort in the youngest age group of 11-20 for both men and women. But there were fewer men. This could indicate an earlier sexual debut for women than for men. The largest proportion of women was in the age group 21-30 (56.2%), while the largest proportion for men was in the age group 31-40 (39.5%). For both men and women the proportions reduced with increase in age with only 3.7% of women and 8.8% of men in the age group 51 and above.

In summary, both the national population and the HIV positive cohort show that the population was generally a young one. This reflects the generally low life expectancy in Nigeria (see section 1.3.3) with the bulk of the population aged between 20 and 50 years. A young population indicates the possibility of high level of sexual activity and the potential of practicing unsafe sex and ultimately higher risk for HIV acquisition and transmission in the population in general. But what was apparent was that young people do not get HIV. Even if they did it manifested at a much later age.

5.2.2.2 Marital status

Another factor that was studied in relation to HIV acquisition and transmission was marital status. In this section I present the analysis and/or explanation of marital status of the HIV positive cohort and compare this with national data. The statuses include: never married, married, divorced, and widowed.

5.2.2.2.1 Never married

In the national data (table 5.1), the 'never married' group formed a significant proportion for both women and men. Most of them were younger than 30 years and majority were between 11 and 20 years. This proportion reduced with increase in age such that there were very few non-married men and women after the age of 50years.

Numbers are small in the HIV positive cohort in the age group 11-20years and none recorded after the age of forty for both men and women. The largest proportion was in the age group 21-30years. This finding signified that those under 20years of age were less likely to be married or sexually active as was suggested by the higher number of the unmarried in the national data. But those between 21 and 30years of age were likely to be sexually active in marriage or out of it. When compared to the proportion of the same age group in the married category, the proportion of never married in the HIV positive cohort was higher: 56% for females and 65.2% for males as against 30.4% for females and 34.8% for males in the married group.

The reduced number in the age group forty and above is most likely because there were few people of that age group due to low life expectancy in Nigeria or they were married, divorced or widowed.

5.2.2.2.2 Married

Those that were married among men and women of the national data (table 5.1) formed the largest proportion of the participants (70% of women and 52.9% of men). The proportion increased with increase in age such that for those aged 40years and above were mostly married.

In the HIV positive cohort, the number of women and men who were currently married was highest between age 21 and 40years (see table 5.1). No men were married under the age of 20years while only a few (3) women were married at that age. This indicated that early marriage was not common for men and only slightly for women. This was slightly different in the national data since there were a significant number of women (31.7%) that were married in this age group in the general population and much lesser number of men (1.1%) in this age group that were married. Also, marriage rate was also low after the age of forty. This could be explained by the increase in number of divorce and widowhood with increase in age as well as reduced number of people in that age group due to reduced life expectancy (section 1.3.3).

A closer look at the married sub-group is given by looking at polygamy and monogamy in the two data sets.

Table 5.2: Polygamy/monogamy situation of the national data (females)

	Polygamy/monogamy situation of the national data (females)		
Age	Monogamy (%)	Polygamy (%)	Total
11-20	394 (72.8)	147 (27.2)	541*
21-30	1431 (70.1)	609 (29.9)	2040*
31-40	937 (68.6)	662 (41.4)	1599*
41-50	628 (56.2)	488 (43.7)	1116*
51 and above	NA	NA	
Total	3390 (64.0)	1906 (36.0)	5296

Note: (1) * Denotes that the figures are lower than the overall figures because in the study it was reported that the ones missing were not identified as polygamous or monogamous. This applies to the table below as well

(2) NA means data not available

Table 5.3: Polygamy/monogamy situation of the national data (males)

	Polygamy/monogamy situation of the national data (males)		
Age	Monogamy (%)	Polygamy (%)	Total
11-20	0	0	0*
21-30	191 (94.6)	11 (5.4)	202
31-40	356 (80.2)	88 (19.8)	444*
41-50	248 (70.7)	103 (29.3)	351*
50 and above	163 (79.5)	42 (20.5)	205*
Total	958 (79.7)	244 (20.3)	1202

Table 5.4: Polygamy/monogamy situation in the HIV positive cohort (females)

	Polygamy/monogamy situation in the HIV positive cohort (females)		
Age (years)	Polygamy (%)	Monogamy (%)	Total
11-20	1 (33.3)	2 (66.7)	3
21-30	5 (31.3)	11 (68.7)	16
31-40	4 (33.3)	8 (66.7)	12
41-50	4 (66.7)	2 (33.3)	6
51&above	0	0	0
Total	14 (37.8)	23 (62.2)	37

Table 5.5: Polygamy/monogamy situation in the HIV positive cohort (males)

	Polygamy/monogamy situation in the HIV positive cohort (males)		
Age (years)	Polygamy (%)	Monogamy (%)	Total
11-20	0	0	0
21-30	0	9 (100.0)	9
31-40	8 (27.6)	21 (72.4)	29
41-50	9 (40.9)	13 (59.1)	22
51&above	4 (50.0)	4 (50.0)	8
Total	21 (38.9)	47 (69.1)	68

The proportion of monogamy for both women and men in the national data (64.0% for women and 79.7% for men) were higher than that of polygamy (36.0% for women and 20.3% for men). The rate of polygamy generally increased with increase in age for both women and men with peaks in the middle aged (30-50years) and a reduction after the age of 50 years.

In contrast (breakdown of male and females) the age group 41 to 50 were the most polygamous while the age group 21-30 were the most monogamous. However the same trend of increasing polygamy with age was seen in the HIV positive cohort, a finding that was confirmed by what the participants of the qualitative section of the study said about polygamy being more common above age 40years (see section 7.2.2).

It was also noticed that there was at least one polygamous woman and two monogamous women in the age group 11-20years. Men did not report marriage (polygamy/monogamy) in this age group. This showed that marriage was rare in the young age, particularly among men who did not report any marriage in this study among the age group 11-20 talk less of polygamy.

Using the findings above I have calculated the relative risk for polygamy in HIV/AIDS vulnerability. This was done separately for females and males as indicated by the 2 by 2 tables below.

Figure 5.6: 2 by 2 tables for females

HIV/AIDS	Polygamy	Monogamy	Total
HIV positive cohort	14	23	37
National data	1906	3390	5296
Total	1920	3413	5333

At 95% confidence level and df of 1, it was calculated that:
Chi-square = 0.05 p = 0.81

Figure 5.7: 2 by 2 tables for males

HIV/AIDS	Polygamy	Monogamy	Total
HIV positive cohort	21	47	68
National data	244	958	1202
Total	265	1005	1270

At 95% confidence level and df of 1,

Chi-square = 4.37 p = 0.03

The above findings indicate that there is an association of high rate of polygamy in males but not in the females in the HIV positive cohort.

The peaking of polygamy in the 'middle age' reflects the reasons given by men for entering polygamous relationships. It is this age group that is supposed to be active physically and more financially stable which generally favoured polygamy. Participants had their different reasons for entering into polygamous relationships. These reasons were different for men and women. The reasons ranged from desire for more women (for men only), fulfilling religious obligation and others. The 'other' reasons put forward were: to get political benefit, to get economic benefit or as a status symbol in the society.

Table 5.8: showing reasons for polygamy in the HIV positive cohort

	Reasons for polygamy			
Sex	Desire for more women (%)	To fulfil religious obligation (%)	Other (%)	Total
Female	NA*	11(78.6)	3(21.4)	14
Male	8(38.1)	9(42.9)	4(19.0)	21
Total	8(22.9)	20(57.1)	7(20.0)	35

(NA* means not applicable)

Fifty percent (N=22) of the men in polygamous relationships went into it to fulfil religious obligation. A good number of them (9) making 37.5%, were in polygamous relationship to fulfil their desire for more women. Only 12.5% had other reasons for entering polygamous relationships (see table 5.1). But one of the questions regarding reasons for polygamy that was used in the study does not apply to women, which is "the desire for more women". Of the 13 women in polygamous relationships, 10 (76.9%) entered polygamous relationships to fulfil religious obligations while the remaining 23.1% had one of the 'other' reasons for getting into polygamous relationships. There was no information from the national data for comparison with these findings from the HIV positive cohort.

5.2.2.2.3 Divorced

Table 5.1 revealed that the proportion of divorced women and men from the national data were generally low (2.9% of women and 1.8% of men). The findings in the HIV positive cohort (table 5.1) showed that 8.5% of women and 2.2% of men having been divorced. This also indicates the low rate of divorce among the HIV positive cohort.

These findings indicate either there were stable marriage relationships or rapid remarriage of those divorced. Remarriage of those divorced could be a risk factor for HIV transmission if those divorced were HIV positive.

5.2.2.2.4 Widowed

Generally the national population (table 5.1) showed low rates of widowhood. However, more women were widowed than men (1.4% for women as compared to 0.5% for men). Widowhood was highest amongst women of age group 41-50 years.

In the HIV positive cohort (tables 5.1) there was a high rate of widowhood amongst women (13.4% of the total number of women). None was reported for men. The high number of widows may reflect possible infection from husbands who had died from

the disease. This has potential implications for the spread of HIV should they remarry, particularly within a polygamous family.

5.2.2.2 Religious inclination

The religious inclinations of the general population from the 2003 NDHS included those that were Muslims, Christians or other. 'Other' here meant any belief other than the two major religions (Islam and Christianity) practiced in the general population. The distribution is seen in the table 5.1.

The obvious difference is the higher proportion of Muslims in the HIV cohort than in the general population. However, it is very difficult to interpret this in view of the considerable differences in religion throughout Nigeria. The North East of the country has a much higher proportion of Muslims than in the country overall: the frequency of Muslims in Maiduguri was also confirmed by discussion in the FGDS.

5.2.3 Comparison with data from 2003 NDHS relating to northeast Nigeria

Some data was available that were specifically related to the North-east of Nigeria. Data was available for comparison on the following about the Northeast and the study group:

- Sexual negotiation
- Condom use
- Having sexual partners apart from spouses
- HIV/AIDS awareness

5.2.3.1 The possibility of sexual negotiation in a relationship

Sexual negotiation had forms a great part of chapter 6, but on presentation of the possibility of sexual negotiation in the two data sources it appeared that the subject of sexual negotiation was a sensitive one to approach in both groups. I have discussed this in this section to point out the attitude of the participants towards sexual negotiation

5.2.3.1.1 *Attitude towards sexual negotiation among the HIV positive HIV positive cohort*

In order to obtain data on the issue of sexual negotiation I had asked the participants if the practice of sexual negotiation was possible or not; possible but not practiced; possible and practiced or if they did not know what it was. Almost 70% of the female participants (table 5.7) indicated they did not know what sexual negotiation was. From the practical point of view during the questionnaire administration it was observed that they actually did not want to answer that question. They did not even want to listen to any explanation about it. The outcome from such a response was not of any use for a comparison or drawing up any conclusion. But it was worth reporting as 'an interesting' response.

More than 30% of men had similar attitude and response to the question, as females. And 38.5% of those who answered thought it was possible to practice sexual negotiation in Maiduguri and that it was actually practiced by people.

Did this have anything to do with the age of the respondents? I tried finding this by looking at the practice of sexual negotiation in relationship by sex and found that (see table 5.13) the young age group of 21-30years most commonly refused to answer (68.1%) of them said they did not know. These are the age group that should be at school, watching TV (where messages about sexual behaviours would have been given) and possibly reading magazines and newspapers.

Table 5.9: Sexual negotiations in relationships by age in the HIV positive cohort

	Sexual negotiations in relationships by age in the HIV positive cohort				
Age	Does not know (%)	Sexual negotiation not possible (%)	Sexual negotiation possible but not practiced (%)	Sexual negotiation possible and practiced (%)	Total
11-20	5 (100)	0	0	0	5
21-30	47 (68.1)	3 (4.3)	8 (11.6)	11 (15.9)	69
31-40	17 (30.9)	7 (12.7)	10 (18.2)	21 (38.2)	55
41-50	15 (45.5)	2 (6.1)	5 (15.2)	11 (33.3)	33
51 & above	4 (36.4)	0	2 (18.2)	5 (45.5)	11
Total	88 (50.9)	12 (6.9)	2 (14.5)	48 (27.7)	173

Another possible explanation would be that many of them might not have been married at that age and so would not pay any attention to what did not concern them.

Also, religion might come into play in this situation. I remember that when I asked the very religious amongst the participants they were clear in showing me that I was not even supposed to ask them that question because they believed Islam did not allow women to negotiate anything with their husbands. They were supposed to be submission to the wills of their husband. A situation reflected in the response among the participants of the qualitative part of this study (see section 6.3).

5.2.3.1.2 Attitude towards sexual negotiation among the general population

The response to questions about sexual negotiation among the general population of the northeast was better than that of the HIV positive cohort. But the question was linked to STDs. Both men and women had responded better to the questions, which were attitudinal. The quality of these findings is unclear

They were asked that if a woman knew that her husband had an STD, was she able to refuse having sex with him or ask for condom use? The response was that a woman could do either of the options. She could request for condom use or she could request not to have sex with the man. Both men and women in the study had agreed that it was possible for such a negotiation by women with more men reporting this than women.

Table 5.10: sexual negotiation in a relationship by sex in HIV positive cohort

	Sexual negotiation in a relationship by sex in HIV positive cohort				
Sex	Does not know about it	Not possible	Possible, not practiced	Possible and practiced	Total
Female	57 (69.5)	3 (3.7)	9 (11.0)	13 (15.5)	82
Male	31 34.1)	9 (9.9)	16 (17.7)	35 (38.5)	91
Total	88 (50.5)	12 (6.9)	25 (14.5)	48 (27.7)	173

Results from the HIV positive cohort were different. Many of the participants refused to answer the question on sexual negotiations. This was more common with women, more than 50% of whom even refused to answer the question talk less of assessing what type of sexual negotiation was possible in Maiduguri (see table 5.8). This is further discussed in the section on attitudes towards sexual behaviour. This may reflect either that sexual negotiation is a sensitive issue in the HIV positive cohort or that there are considerable flaws in the general population data.

Another potential reason for not getting response from the women might have something to do with me being a male asking the women about sexual negotiation. But a significant number of the questionnaires administered to the women were by a research assistant who was a female

5.2.3.2 Condom use

Level of condom use among the participants of the NDHS of 2003 was obtained by ascertaining those who were sexually active in the twelve months before the survey. They were asked if they had high-risk sexual intercourse (described as sex with non-marital, non cohabiting partner). Those who had high-risk sex were then asked if they had used condom or not. The outcome is detailed in table 5.1. In the NDHS of 2003 the use of condoms among the participants of the survey was found to be generally low but men reported use more commonly than did women

In the HIV positive cohort, similar to the northeast general population, condom use was reported to be rare, with only six participants reporting use (table 5.1), all of them males – five in monogamous and one in polygamous relationship.

The rarity of condom use in the HIV positive cohort might be attributed to the Muslim nature of the population. Islam has been shown to be against the use of condom. But even in the general population that was said to be having about the same distribution of Islam and Christianity condom use was still very low. It therefore seems to be a trend in the region in general but augmented by Islam in Maiduguri.

Another possibility for the rare report of condom use could be the fact that it is a HIV positive population. That means they are already infected and so might have the feeling of 'why condom use again?' since they are already infected they do not have anything to be afraid of getting again.

5.2.3.3 Having sexual partners apart from spouses

The NDHS assessed the likelihood of having sexual partners other than one's spouse in the group that was thought to be the most sexually active by the researchers, those aged between 15 and 24years. They were asked if they had any partners other than their spouses. Few women had other partners (1.2%) of those aged 15-24). 15% of men had partners other than their spouse.

Respondents in the HIV positive cohort were asked if they had any sexual partners apart from their spouses. Only 7.5% of the participants overall volunteered that they

had any partners other than their spouses (table 5.1). The proportion of males and females with other partners (13.2% and 1.2% respectively) was similar to that of the general population.

Men were likely to have more sexual partners other than their spouses. Such an outcome could be explained by the fact that men were socially supposed to initiate such a relationship. And so were more likely to report it than women as it might be before marriage (section 3.2.4.3). Those engaging in polygamous relationships might have sexual relationships with women before they marry them or a relationship could continue from an extramarital relationship to being a married relationship.

5.2.3.4 HIV/AIDS awareness

HIV/AIDS awareness in the form of availability and use of VCT in the northeast from the NDHS was asking if participants were aware and tested, not tested or not aware completely (table 5.1). A large proportion of both males and females were aware of the VCT but only 4.2% of them did the screening while 19.6% said they were not even aware of that. However, the proportion of those who were not aware was mainly made up of women. This was because only 2.7% of men had indicated that they were not aware of the VCT while 24.3% of women had indicated that they were not aware of the process.

Of the married participants, only 2 participants had ever had any screening before marriage, 69.9% of them said no and 28.2% were not married (see table 5.1).

The findings mentioned above show that a large proportion of the participants were aware of HIV infection but there was no effort at screening for it before getting into a marital relationship. This study however did not show any specific reason for not doing the screening despite the awareness.

5.3 Discussion

The comparison in the preceding sections of the chapter indicates that other factors might have more influence in acquisition and/or spread of HIV among the study

group rather than marriage practice. The similarities and/or differences identified form the baseline for the discussion section of this chapter under the following subsections:

- Demographic characteristics of participants
- Number of sexual partners
- Sexual negotiation
- Condom use
- HIV/AIDS awareness amongst the participants

5.3.1 Demographic characteristics of the participants

Certain demographic characteristics of the participants of the HIV positive cohort as well as the general population have been identified to be of importance in influencing the acquisition of HIV/AIDS as it relates to marriage practice (polygamy/monogamy). They are: age, marital history and religious inclination.

5.3.1.1 Influence of age in the possibility of HIV/AIDS acquisition

Nigerian population can be described to be a young one since more than 40% are less than 15years old and more than 50% are between 15 and 65 years of age (section 1.3.3). Therefore it is possible that age, as a factor could be a contributory to HIV acquisition with or without any relation to the practice of polygamy. For example Drain et al (2004) did an ecological analysis of social and development correlates of country-level HIV sero-prevalence using regression analysis for 123 countries. This was to compare variable measures between highest and lowest HIV prevalence rates. They found that countries with behaviours associated with young age like early sexual debut, higher teenage pregnancies and high fertility rates had higher HIV prevalence rates (Drain et al, 2004).

Studies have shown that age difference between young wives and their husbands in Sub-Saharan Africa was significant risk factor for HIV infection (Kelly et al, 2003 and Glynn et al, 2001). The practice of polygamy tends to augment such an association as reported by Clark et al (2006), Peterson (1999) and Glynn et al (2001).

They attributed this to the fact that young wives in polygamy were usually married to older men as well as being junior wives in the home. A situation that is most likely characterised by the man being already HIV infected.

I agree with the explanation for the above relationship that was put forward by Luke (2003) and Longfield et al (2004). They reported that such sexual relationships were associated with unsafe sexual behaviors including non-use of condom and lack of discussion on HIV and condom use mainly because of association of age difference in relationships with economic dependency (Luke, 2003 and Longfield et al, 2004). This was apparent in the findings of the Maiduguri study because condom use was reported to be rare. Even in the NDHS 2003 population condom use was generally low and more so with women.

Even though the HIV positive cohort was a relatively young one, polygamy seemed to have been practiced by those aged 31years and above. This would therefore suggest that even if the younger women were married, they did not engage in polygamy. This might be explained by the desire for young women to delay marriage process as a whole and get into polygamous marriage later as described in sections 7.2.2 and 7.3.2.

The findings of the HIV positive cohort tends also to confirm that HIV/AIDS influenced the life expectancy of Nigerians thereby rendering the population to be a young one (see section 1.3.3).

5.3.1.2 The influence of marital status on the possibility of acquiring HIV/AIDS

Apart from the possible influence of age on HIV described above, marital history also may have a role to play in the acquisition of the disease. I have presented marital status as vulnerability factor to getting HIV/AIDS in section 2.1.1.6 where Clark (2004), Kathawera-Benda et al (2005) and Newman et al had shown that being married as a risk factor in HIV/AIDS acquisition since it is an association that involves heterosexual relationship between spouses in both polygamous and monogamous relationships. And marital status has been found to have effect on the HIV/AIDS acquisition (World Bank, 2005; and Clark, 2005). Most of them report that being married increased the possibility of acquiring HIV by women.

But not all the HIV positive cohort was in a marriage relationship, yet they were all HIV positive. In fact the overall 'never married' were as high as 35% for women and 25% for men. In this study the proportion of widows was about 13% of the population of women with no men reported as widowers. Clearly HIV transmission is therefore occurring outside marriage and there is a potential for them to be of greater risk to the society since they might decide to get married or form sexual relationships that might increase the risk of spreading HIV infection. The only way to possibly curtail this would be the screening for the disease before any marriage relationship as well as the use of condoms.

Even though monogamous relationships were more common than polygamous ones, men were found to be more polygamous than women in the study population. And in the general population too there were more monogamous relationships than polygamous ones but women were more polygamous than men. The Chi-square tests indicated an association of high rate of polygamy in males but not in the females in the HIV positive cohort (section 5.2.2.2.2).

Considering that the Northeast of Nigeria is reporting the highest polygamy rate in Nigeria (NPC and ORC Macro, 2004) and the result of the Maiduguri study showing men to be more polygamous than women, it would be worthwhile to mention the possible multiplier effect that would cause a further rise in HIV acquisition in the region.

5.3.1.3 The influence of religious inclination on the acquisition of HIV/AIDS

Section 2.1.1.9 shows that the major religions of the world influence the practice of polygamy with Islam being inclined towards allowing polygamy while Christianity mainly against the practice. The HIV positive cohort was found to be comprised more of Muslims than other religions (Christianity and Traditional religions). Since the population are all HIV positive it does not reflect the general population of Maiduguri. Therefore it would be difficult to draw conclusions as to the influence of religion on the spread of HIV in Maiduguri since the population of the northeast and Nigeria show that Islam and Christianity are about equal in the general population.

Literature has shown that Islam per se is protective against the acquisition of HIV infection (Lagarde et al, 2000, Niang, 2001 and Trinitapoli and Regnerus, 2004). Considering the fact that studies have shown that Islam as a religion has teachings that promote well-being of those practicing it as described in section 2.1.1.9 if these are followed they could be protective against acquisition of HIV infection. The finding in Maiduguri of the slightly higher proportion of Muslims might be worth further investigation.

This is important because most of the participants were said to have entered into polygamy to fulfil religious obligation as indicated in section 5.2.2.2.2. This was so for both men and women. In fact most women (76.9%) entered polygamous relationships to fulfil religious obligation and about 50% of men entered polygamy to fulfil religious obligation.

5.3.2 Number of sexual partners in marriage relationships

Men in Sub-Saharan Africa want and do have large families (Bankole et al, (2004) and a substantial number of them had more than one sexual partner but majority did not like the use of preventive measures like the use of condom to prevent HIV and other STDs. Campbell (1997), Abdoolkarim et al (1992) and Macphal and Campbell (2001) reported that such behaviour is an implication of masculinity in men and this is associated with heightened sexual desire that drove them into seeking multiple sexual partners. But the more sexual partners persons have, the greater the chances of HIV infection (Finer et al, 1999).

In both the HIV positive cohort and the general population in the Northeast it was found that there were some extra-marital relationships. It was more common in men than in women. This type of situation has been identified as one of the negative pathways of the influence of polygamy on marriage relationship (section 6.2.2.2) and could possibly influence the chance of individual and community in HIV acquisition and/or spread.

5.3.3 Sexual negotiation

In order to practice effective HIV/AIDS prevention measures couples must work together to practice safe sex (Alvarez, 1995). This would entail sexual negotiation and bargaining in the relationship. But sexual negotiation has been identified to be associated with vulnerability to the acquisition of HIV infection (section 2.1.1.3.3). The association between vulnerability to HIV/AIDS and the ability to bargain for safe sex may be affected by the age of those involved in the relationship as described in section 3.3.4.

When the issue of sexual negotiation and bargaining in a marriage relationship was raised in the HIV positive cohort the outcome was not what was expected. This was because even the definition of sexual negotiation and presenting that definition was not what was envisaged. I had defined sexual negotiation in the light of this study in section 6.3 but that was not what it turned out to be. Instead of the expected situation of couples deciding together on what a course of action, it was found that women were only making an attempt at asking their husbands for safe sex.

A peculiar outcome on the issue of sexual negotiation in the HIV positive cohort was the refusal of women to answer the question on sexual negotiation. They would rather say they did not know instead of offering any answer as regards negotiation. The inadequate sexual negotiation situation in the HIV positive cohort seems to echo the varied responses about the perception of the participants of the qualitative part of this study described in section 6.3.on sexual negotiation.

5.3.4 Condom use

Condom use is a sign of behaviour change directed towards risk reduction (section 2.1.1.3.4). The finding in the HIV positive cohort was of total absence of condom use by women and very limited use by men. Since the study population are all HIV positive the attitude towards condom use may not reflect the attitude of the general population of Maiduguri. This is because being HIV positive might make the decision on condom use to be different from that of the general population. As they were already infected they might decide not to use condom again because it would not be

of any protective benefit to them. It has been reported that reduced condom use may occur among the sero-concordant (HIV positive couple) compared to those that have different HIV status (Lambert et al, 2005). This was not explored in my study.

This finding could also be a reflection of the absence of behaviour change in the population at large and Maiduguri in particular. On the one hand it can be as a result of lack of economic empowerment and/or dependence on men, which is a sign of gender in-equality (section 2.1.2.2). But it should also be remembered that Islam tends to be against the use of condoms generally (section 2.1.1.9).

The problem with using condom that accompanies the absence or inability to negotiate for safe sex may be a confirmation of the interrelated nature of the possibility to negotiate for safe sex in a relationship, age of the population being studied (section 3.3.4) and their religious inclination (section 3.3.9). This may then explain the outcome in Maiduguri since the study group was a relatively young one and were mainly Muslims.

5.3.5 Awareness of HIV/AIDS screening

Both the HIV positive cohort and the general population in the Northeast showed a large proportion of participants were aware of the existence of the disease as indicated by their response to the question on HIV screening (section 5.2.3.4). The question was aimed at finding out if the participants were aware of the availability of screening facilities (VCT) anywhere and if they had patronised them. The expectation was that if any participant was aware of this facility/service and had patronised it, then that individual would have been told all about HIV. However of the married participants of the HIV positive cohort, only two participants had any screening for HIV before getting into a marital relationship. This might be a sign of unwillingness to go for the test, which could be because of cultural reasons or inability to pay for the tests that might all be as a result of gender inequality and/or discrimination (section 3.3.2.2.2) since in both groups men were more aware of the availability as well as the possibility of HIV screening.

A large proportion of the HIV positive cohort had indicated that they were not aware of the availability and use of VCT (more than 42% of women and 27% of men) as shown in section 5.2.3.4 and only two participants having ever had HIV screen before marriage. Trying to point out the possible reason for this would be mere speculation suffice it to say though that it could be due to the culture of people trying to avoid blame by refusing to give a positive or negative response to a question.

I had encountered similar circumstances in Maiduguri while practicing at the SSHM where people would rather say they did not know the answer to any question, which they thought, would lead to any kind of blame for not accessing a health service. A situation that is common in Africa, for example might not want to be blamed for bringing HIV into a family, she would cope silently with her problems without accessing healthcare and support services (van Dyk and van Dyk, 2003). People felt threatened and are scared of blames from healthcare providers in such circumstances.

What is worth discussing as regards HIV/AIDS awareness is the claim by a good proportion of the HIV positive cohort that they were not aware of HIV screening before their visit at the time of study. Efforts were made to make the questions clear to them, yet the answer had remained the same. Even though not a reflection of real awareness the poor response may be attributed to the culture of avoiding blame that is common in Maiduguri which I had encountered before while practicing at the SSHM.

The provision of subsidised ARV treatment for PLWA by the FGN may help in countering such behaviours. This was because many that had attended healthcare facilities now might not have done so without such an incentive. Before then most avoided hospitals and publicity because of the stigma associated with HIV infection. Also, some women have little or no access to information not only of HIV/AIDS but most other disease conditions (section 2.1.2.3).

Chapter 6: Results and Discussion for research question 2- Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?

6.0 Introduction

Marriage plays a role in regulating sexual activity in most societies (Luke and Munshi, 2003). Although women can be only in one marriage at any particular time, their marital status can change several times over their life course because of the fluidity of marriage particularly in Sub-Saharan Africa where, for instance currently monogamous unions can become polygamous and currently polygamous unions can become monogamous due to widowhood or divorce (Ezeh, 1997). AIDS is forcing African culture to change because the virus in Africa was spread mainly heterosexually, thus the social transformation may well be in the relationship between men and women (Quinn, et al 2000).

This chapter is presented in 3 main sections. Section 6.1 presents People's perceptions of the role of polygamy in HIV/AIDS transmission by looking at the pathway through which people think polygamy might make people more vulnerable to HIV infection; and pathways through which people think polygamy might protect against the acquisition of HIV infection in Maiduguri; factors influencing people's perception of the role of polygamy in HIV transmission are identified and discussed in section 6.2; and then a discussion on the findings presented is given in section 6.3.

6.1 People's perceptions of the role of polygamy in HIV/AIDS transmission

Results and analysis of the findings of the various participants and discussants of the in-depth interviews and FGDs revealed that there were two ways they saw the possible influence polygamy could have on the spread of HIV in Maiduguri. One way is that polygamy was likely to increase people's vulnerability to HIV acquisition and transmission. The other is that polygamy might protect people from acquiring HIV infection. I will discuss this by looking at the two pathways by exploring the theoretical models identified in chapter three.

6.1.1 Perceived pathways through which polygamy might increase people's vulnerability to HIV infection

Polygamy was thought by the participants to increase people's vulnerability if it led to:

- Marital infidelity;
- Increased possibility of divorce and marital dissolution
- Breeding of children who might be promiscuous;
- Gender inequality
- If HIV was introduced into a polygamous home more people would be infected

6.1.1.1 Marital infidelity

Marital infidelity by men or women emerged strongly as a theme from the different groups and individuals in the FGDs and interviews. It was considered a feature of both polygamous and monogamous relationships with the majority of participants having the view that it is more common in polygamy than in monogamy but that amongst women differs from that among the men.

6.1.1.1.1. Marital infidelity among females

Two differing opinions and assumptions regarding female marital infidelity came up from the FGDs and the in-depth interviews. The differing opinions are because of religious reasons as the views, opinions and assumptions of Muslims and Christians; particularly their leaders were completely different. According to the Christian clergy, one of the assumptions was that in polygamy, the husband might not be able to sexually satisfy all the wives when they need to be satisfied sexually. Because of the number of women involved. This they thought predisposed to female marital infidelity: when the women are not sexually satisfied, they might look elsewhere for it. A typical example is what participant IICL04 said:

"Polygamy predisposes to promiscuity as it will be difficult for the man to take care of many women in all aspects, financial, sexual and any other. If the women are not taken care of, they will take care of themselves from outside. This will therefore increase the probability of spreading the disease."

(Reverend father in in-depth interview)

The views and assumptions of Islamic scholars however differed from the Christian clergy. The Muslim scholars were of the view that teachings of Islam show that a woman could be patient enough for weeks or months without having sexual intercourse. That means waiting for their turns in a polygamous home may not necessarily make them promiscuous. This was reflected by what a scholar and participant IIML02 said:

"Because women's desire for sex is less than that of men, they can be patient enough to be satisfied in a polygamous home"

(Male Muslim leader in in-depth interview)

And participant IIML03 said:

"So, socially, naturally, it is known that a human being, a man or a woman, must be having sexual urge. Man will not be able to stay without this urge so long he is a man and healthy. He eats and drinks; he will definitely require a partner to relieve him of this urge. And Allah knows that by nature some were made with extreme desire for women that one woman will not be OK for them, and Allah knows that women have several 'obstacles' like you will find some menstruating for a maximum of fifteen days. It is possible that the man may not be able to be patient for these fifteen days without having sex... you know woman 'by nature' Allah knows that she can be patient for at least six months, the majority of them can be patient for up to six months without meeting a man (sex). That's why Allah has not ordained them to marry more than one man. But for the man, because he cannot be patient for even fifteen days ... that is why Allah has permitted man to marry up to four".

(Male Muslim leader in in-depth interview)

6.1.1.1.2 Marital infidelity among males

Like female promiscuity, male promiscuity also came up during the interviews but not all participants had much to say about male promiscuity. However, Muslim leaders, Christian leaders, community leaders and many lectures thought that male promiscuity was controlled in a polygamous relationship thereby theoretically reducing chances of HIV infection. They were of the assumption that because the man in a polygamous relationship may have a number of women he could approach sexually, the chance of him going out to get sexual satisfaction was reduced and so marital infidelity was reduced.

The Islamic religious leaders/scholars were of the view that women were more likely to control themselves than men when sexually aroused. Participant IIMLO2 indicated that:

> *"...a woman can be patient according to the teachings of Islam. But the man cannot be as patient. He must satisfy his urge once the need arises. He has to satisfy his biological need. That is why you will see a man having sex with another man, in case he does not find a woman. You will also find a man masturbating to get a release."*
> (Male Muslim leader in in-depth interview)

6.1.1.2 Increased possibility of divorce and marital dissolution predisposing to HIV infection

Most Islamic scholars in the in-depth interviews had pointed out that divorce was allowed in Islamic marriages whether polygamous or monogamous. Marriage could be dissolved at the request of either the husband or the wife. There was a perceived tendency for increased divorce by request from women who never liked getting into polygamous unions. For example, participants of the FGDs (women in mixed group) as exemplified by a statement of one of the participants point out that:

> *"A woman will prefer to be alone in her home, but has no choice since polygamy is prescribed by religion"*
> (Young housewife in polygamous relationship).

They pointed out that some women might not be patient enough to endure polygamous relationships which many participants described to be full of jealousy, rivalry, fear, suspicion and lack of sexual satisfaction and the marriage might end up in a divorce. For example participant IITL04 said:

"Disadvantages of polygamy will include misunderstanding and lots of dispute in the family, increases chances of divorce and likelihood of exposure to diseases"

(Male traditional ruler (district head) in in-depth interview).

If such women did not re-marry, the participants were of the perception that they might take up commercial sex work to make ends meet.

6.1.1.3 Breeding of children who might be promiscuous

Many of the participants thought that breeding of children who might be promiscuous was a possibility in a polygamous relationship. For example the Christian leaders, women leaders and housewives had identified an indirect way in which polygamy might cause promiscuity in children of the polygamous and therefore increased the likelihood of HIV infection for these children. For example participant IICL02 pointed out that:

"In polygamous marriages there is no love, no sincerity ...girls become prostitutes..."

(A reverend father in in-depth interview)

And participant IICL04also said:

"Polygamy tends to breed of thieves and prostitutes"

(A reverend father in in-depth interview)

That, the participants believed was a way that was perceived to indirectly increase the chances of spread of HIV infection for such children.

6.1.1.4 Gender inequality

There was also a perception among the majority of participants of the in-depth interview and FGDs that gender inequality amongst participants of polygamous

relationships might predispose to acquiring and spreading of HIV infection for those involved. For example participant IIPO03 said:

"For the man, he will always get somebody to take care of him. For women, sometimes they quarrel, fight each other; abuse each other, leading to a broken home"

(Male politician in in-depth interview)

Views, opinions and observations emanating from the FGDs and in-depth interviews about the role of gender in influencing the relationship of polygamy to the acquisition or spread of HIV infection seemed to centre on the perception that:

- There was the possibility of introducing HIV infection into a group
- Polygamous women may be forced to fend for themselves
- Women were supposed to be submissive to their men causing gender inequality
- It would be difficult for women to request for sexual negotiation
- Lack of cooperation between co-wives could encourage HIV infection

6.1.1.4.1 There was a possibility of introducing HIV infection into a group

Many participants thought that polygamy curbed sexual desire for men. However some participants believed that despite being polygamous, some men went out of wedlock to seek sexual satisfaction. Youths, civil servants, Muslim leaders and Christian participants of the in-depth interview mainly expressed this view. They thought this was a result of the nature of some people who would always engage in extramarital relationships despite being aware of the individual and community risks of transmitting HIV infection. The usual belief was that if one was destined to die, he/she was going to die anyway - with or without HIV. This was because some of the participants thought that getting HIV was the will of Allah. That is He (Allah) would give the infection to anyone he so wished. For example, participant IIEc02, said:

"Getting infected by HIV/AIDS is the will of Allah, because you may be faithful in your marriage, yet you may be infected"

(A male political youth in in-depth interview).

But participant IIML03 on the other hand advised that:

"If a polygamous man is promiscuous, there are increased chances of HIV infection".

(Male Muslim leader in in-depth interview)

This means that even though the acquisition of HIV could be the will of Allah, marital infidelity would cause the man to increase the exposure to the likelihood of getting HIV infection.

And participant IICS03 said:

"If the husband in a polygamous relationship is promiscuous, there is increased tendency for STIs"

(Male civil servant in in-depth interview).

6.1.1.4.2 Polygamous women might be forced to fend for themselves

All the Christian leaders, Christian participants, the youth and some women participants in the FGDs and in-depth interviews were of the opinion that women in polygamous union might be forced to fend for themselves because their husbands might not be able to cater for them, leading to an informal form of sex work. They might be forced by circumstances to give themselves up to men in return for sexual satisfaction and/or economic benefit. This, they said, would indicate how polygamy predisposed to promiscuity. For example participant IICL04, said:

"Polygamy predisposes to promiscuity as it will be difficult for the men to take care of many women in all aspects – financial, sexual or any other. If the women are not taken care of, they will take care of themselves from outside. This therefore will increase the possibility of spreading the disease"

(A reverend father in in-depth interview)

Civil servants like participant IICS03 also expressed a similar view:

"... Because they give themselves up to men irrespective of whom they are in the name of trying to make ends meet."

(Male civil servant in in-depth interview)

6.1.1.4.3 The perception that women were supposed to be submissive to their men being a sign of gender inequality

Many ordinary members of the public like the drivers, mechanics, water-vendors, traders and some politicians, as well as a few housewives and women leaders believed that women in polygamous relationships, or any relationship for that matter were supposed to be subservient to their men. For example participant IIWL04, said:

"A woman is expected to obey her husband whatever the circumstance"

(A woman leader in in-depth interview)

While participant IIPO03 was of the view that:

"Islam recommends that a woman should be totally submissive to her husband..."

(Male politician in in-depth interview)

This might not be an official religious view but it was one that was held by many men and women in Maiduguri, possibly because of gender role and cultural upbringing of viewing women as subordinates, and this might influence polygamy/monogamy and its relationship to HIV infection. This perception was contrary to the religious recommendation as pointed out by Muslim leaders. The Muslim leaders said that Islam gave room for mutual understanding between couples in a marriage relationship and some even advised or recommended for the involvement of the wives in the marriage process of subsequent co-wives. For example participant IIML04 said:

"Involvement of the first wives in the process of marrying another one will reduce the chances of problems of disease as pre-marital HIV screening can be carried out on all of the parties involved."

(Male Muslim leader in in-depth interview)

6.1.1.4.4 The perception that it would be difficult for women to request for sexual negotiation

There was the perception by participants of the study that there was some form of sexual negotiation in polygamy/monogamy in Maiduguri. Women in FGDs were of

the general consensus that: There was sexual negotiation in a marriage relationship, but those doing it were thought to be the ones doing the 'bad' things. Bad things here meant they might be thought to be promiscuous if any of the partners involved made such a request. They also pointed out that: it was possible for women to ask for safe sex like the use of condoms, abstinence, etc. but men did not usually agree to such requests.

Individual interviews indicated that only the Muslim scholars agreed that there was sexual negotiation in a relationship and Islam, as a religion does not prohibit it. For example: The view of a Muslim leader, IIML01 was that:

"Islam allows for negotiation in the marriage relationship because it gives room for mutual understanding between couples"

(Male Muslim leader in in-depth interview)

Another Muslim leader, IIML02 had this to say:

"Negotiation and bargaining in the relationship is possible if the reason advanced for it is tangible as Islam allows choices"

(Male Muslim leader in in-depth interview)

The majority of participants of in-depth interviews and FGDs were of the general consensus that useful though it might be, the negotiation for safe sex by women was difficult. They thought that any such request would lead to suspicion of marital infidelity. But many participants, particularly the women in mixed group (comprising women in polygamous relationships and those in monogamous relationships) FGD thought that if the co-wives understood and cooperated with each other; they could negotiate for safe sex. This was not any different from the views of some participants of the in-depth interviews like a lecturer, participant IILT04 who said:

"Negotiation is more likely to be practiced in polygamous situation and this is more so when women are campaigning for something from the man"

(Male lecturer in in-depth interview)

6.1.1.4.5 Perceived lack of cooperation between co-wives

The majority of the participants of the FGDs and in-depth interviews pointed out that there was usually a stiff competition between co-wives over the care of their man. Most participants thought that men benefited from such competitions as the women out-did each other to gain favour from the man. Many participants even thought that this competition between co-wives made some men enter into polygamous relationships. For example participant IIMLO2 said:

"Polygamy encourages competition between co-wives thereby making the marriage a lively affair always"

(Male Muslim leader in in-depth interview)

A similar view was the general consensus of the participants of FGD (men of mixed group of polygamous and monogamous), which was exemplified by what one of them said:

"Polygamy encourages competition between the co-wives in taking care of the husband and the family"

(Young man in polygamous relationship taking part in a FGD).

However, there might be times when such cooperation would be lacking in a polygamous relationship because the wives were not cooperating with each other. That would be when the women might be tempted to go out of wedlock to have sex with other men thereby exposing the family to the likelihood of introduction and/or spread of HIV infection. For example, participant IIPO3, said:

"Sometimes there is no unity among the women. They can quarrel, they can be jealous; some of them will go out and sleep with men if he is not lucky to have good wives. They can bring diseases. It can affect the husband and the other wives especially the modern day disease called HIV/AIDS"

(Male politician in in-depth interview)

Considering that there was the view by many participants as mentioned earlier that women would rather remain monogamous, as they did not like to have co-wives, the participants perceived that polygamous relationships might be associated with broken homes, which might lead to divorce, and possible predisposition to commercial sex

work, which in the end might lead to increased individual and community risk of HIV infection.

6.1.1.5 If HIV was introduced into a polygamous home more people would be infected

A polygamous marriage would involve not less than three individuals. This would lead to the potential for infection to spread to more than one person in a polygamous union compared to a monogamous one, indicating the possibility of a multiplier effect in polygamy. For example Participant IIHW04 said:

"Because polygamy involves many people, the chances of spreading the disease is there"

(A housewife in in-depth interview).

To easily understand the pathway through which theoretically polygamy is perceived to increase the vulnerability to HIV in Maiduguri, it is illustrated in the modified model earlier given in chapter 3 (figure 3.1) as shown in figure 6.1 below.

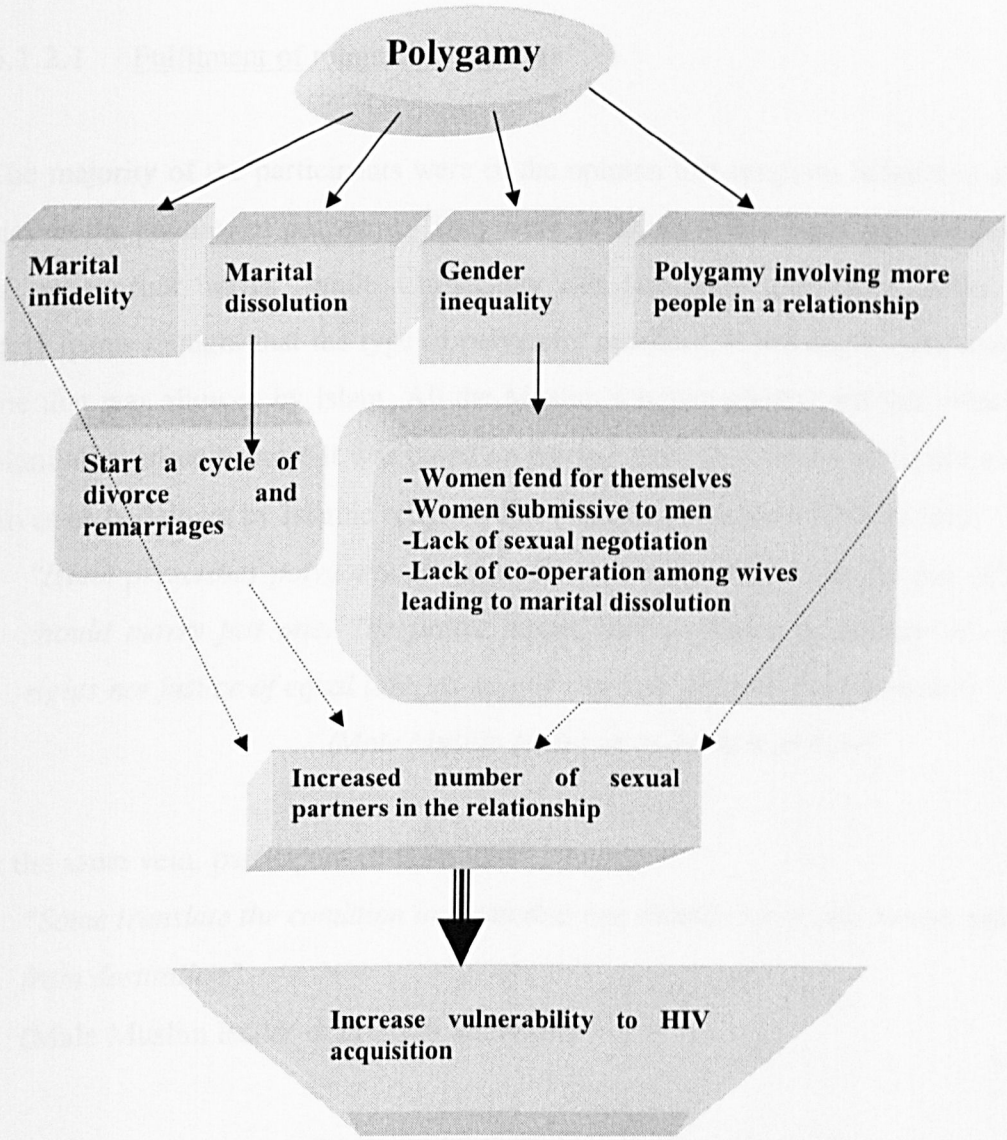

Figure 6.1: Theoretical model of possible involvement of polygamy in HIV/AIDS vulnerability (Self)

6.1.2 Pathways through which polygamy is perceived to be protective against the acquisition of HIV infection

Many participants on the other hand thought that polygamy could be protective against HIV acquisition and spread if the following influenced it:

- Fulfilment of religious obligation
- Giving the chance to more women in the society to get married
- Attainment of reasonable level of education

6.1.2.1 Fulfilment of religious obligation

The majority of the participants were of the opinion that religious belief had a role to play in the practice of polygamy. They were of the view that Islam allowed polygamy of up to four wives, while Christianity did not allow polygamy. Most of the participants thought that the type of polygamy practiced in Maiduguri was mainly the one that was allowed by Islam. All the Muslim scholars pointed out that even though Islam allowed polygamy, it was based on the fact that there should be justice to all the wives as laid down by Islamic religion. For example participant IIML02 said:

> *"Islam prescribes polygamy of up to four wives if the man can be just. If not he should marry just one. The justice meant here is justice in sharing of conjugal rights not justice of equal love, as no one can love different people equally"*
>
> *(Male Muslim leader in in-depth interview)*

In the same vein, participant IIML04 said:

> *"Some translate the condition to mean that one should marry only one to safeguard from destitution"*
>
> (Male Muslim leader in in-depth interview)

That is to say that some people translate this prophetic saying to mean that marrying more than one wife may lead to destitution for some people. Therefore to avoid that, they should marry only one wife.

The majority of the Islamic scholars and traditional leaders thought that those engaging in polygamy in Maiduguri did not follow the guidelines and so might have a polygamous marriage that would predispose to promiscuity which they thought might be a factor in HIV infection acquisition and/or spread. Participant IIML04 pointed out that about 95% of polygamous relationships in Maiduguri were entered without following the guidelines laid down by religion. They (the Muslim clergy and traditional leaders) thought that this type of polygamous relationships might predispose to the spread of HIV infection. This was because of the view the participants had that if the individual in a polygamous relationship were God-fearing

the chances of acquiring and spreading HIV infection was limited while the opposite was true in the case of those that were not 'God-fearing'. What participant IICS03 said exemplifies this.

"God-fearing individuals keep to their families and so limit the chances of STIs in general and HIV in particular. When non God-fearing individuals tend to be promiscuous and so have increased chances of acquiring and spreading STI and HIV."

(A male civil servant in in-depth interview)

Regarding Christians who practiced polygamy, the majority of the participants of the interviews and FGDs were of the general consensus that it was against the religious injunction and this was thought to be a form of adultery by some of the Christian leaders like participant IICL04 who said:

"Any Christian that follows Christian teachings is not allowed to marry more than one wife. Any woman after the first wife is not considered a wife, it is adultery."

(Roman Catholic Reverend Father in in-depth interview)

All the Muslim leaders, traditional leaders and Muslim participants of the FGDs and in-depth interviews believed that Islam allowed the practice of polygamy. They believed that there was a prophetic injunction on Muslim men to marry as many as four wives in order that the Muslim community (Umma) in the hereafter would be more than any other. Typical of such was what participant IIML03 pointed out:

"Prophetic tradition (Hadith) prescribes that those who are able should marry or else fast as fasting reduces sexual desire and so reducing promiscuity"

(Male Muslim leader in in-depth interview)

Also in line with this call, the Islamic guidelines allowing the polygamy of up to four wives were strict and also called for justice to the wives. That gave room for those interested in fulfilling their religious obligations to enter polygamous relationships. In fact participants like IICS03, pointed out that a Muslim man who could not engage in a polygamous relationship might be perceived to be weak in his belief, as it would be

assumed that he might not be able to be just to the wives, that was why he might not engage in polygamy.

A common observation amongst participants was that if those engaging in polygamy did it to fulfil religious obligation, they were supposed to follow the guidelines outlined by the religion. If this was so, participants believed that such a polygamous relationship would protect against male and female promiscuity, allow for negotiation for safe sex, encourage involvement of wives in the marriage of subsequent ones and possibility of 'justice' among the wives. All in all, they thought that might lead to the polygamous relationship preventing the spread of HIV infection. What participant IILT03, said was true to a certain extent even though it was not what everyone says:

> *"If the husband is religiously inclined, he wouldn't like to do what is against his religion and may not go out to seek for women and thereby reducing the HIV infection and spread".*
>
> (Male lecturer, in-depth interview participant).

However, since polygamy gave room for men who might need more than one woman for sexual relief, the majority of traditional leaders, Muslim scholars, politicians and the ordinary people (traders, water-vendors, etc) were of the opinion that the best way out for such men would be to go in for a polygamous relationship. A Muslim leader, IIML02, however points out that:

> *"To avoid promiscuity marry only those women you are in love with and this according to the teachings of Islam"*
>
> (Male Muslim leader in in-depth interview)

The majority of the participants, particularly the religious leaders, traditional leaders, women opinion leaders and housewives thought that polygamy was a way of curbing sexual desire for men as they might find sexual satisfaction from any of their polygamous wives when they needed to. They perceived this to reduce chances of infidelity in a polygamous relationship and ultimately reduce the chances of HIV infection among the polygamous partners. A typical view was that of participant IIHW03 who said:

"Polygamy prevents men from going after women outside in case of problems like the illness of one of the wives and this reduces the chances of getting and spreading the disease"

(A housewife in in-depth interview).

Another view was by participant IIMC03 who said:

"Polygamy curbs sexual desire for men thereby reducing the act of promiscuity"

(Male mechanic in in-depth interview).

Participant IITR01 also said:

"Polygamy helps in preventing men from going out to look for sexual satisfaction outside the home"

(A male trader in in-depth interview).

And participant IIML03 said:

"...Polygamy provides an outlet for sexual satisfaction for those with excess urge for sex, prevents illegitimate children, controls social ills..."

(Male Muslim leader in in-depth interview)

In addition to curbing sexual desire, many participants of the in-depth interviews thought that a polygamous relationship also improved a man's health as increased frequency of sexual intercourse was viewed as a form of physical exercise. For example participant IIML02 said:

"A polygamous man is healthier because it is like he is always exercising himself"

(Male Muslim leader in in-depth interview)

And participant IITRO3, a trader said:

"Polygamy controls man's sexual desire and gives him good health"

(Male trader in in-depth interview)

In the same vein, some Christian leaders also pointed out that polygamy was a source of release of sexual tension. For example a Christian leader, IICL03 said:

"Polygamy is advantageous in that it will be a source of release of sexual tension, to procreation, polygamy is a social function"

(A reverend father in in-depth interview)

6.1.2.2 Giving the chance for more women in the society to get married

There was a general perception amongst the participants of the FGDs and in-depth interviews that there were more women in Maiduguri than there were men. They therefore usually described them as 'excess women in the society'. The majority were of the belief that if such women were not taken care of by marital relationships they might be living as free women or as commercial sex workers. Free women lived in houses and in groups commonly under a leader in the city. These houses are described as "women's house" and it is from these houses that the women hoped to get remarried because commercial sex work did not take place in such places but they used to have relationships similar to boy-friend/girl-friend situation. This was perceived as a possible way of acquiring and spreading HIV infection.

The majority of Islamic scholars (Muslim leaders), most Muslims participants were of the view that the polygamy prescribed by Islam took care of this. Participant IIML04 points out that the 'excess women' issue used to be seen in times of crisis like wars when men were killed leaving women without husbands. Such women were supposed to be absorbed by polygamy. The perception therefore was that if more women were absorbed by marriages like polygamy, the possibility of them becoming commercial sex workers would be reduced and so possibly reduced the possibility of getting and/or spreading HIV infection.

6.1.2.3 Attainment of reasonable level of educational

Many of the participants in the research work were of the view that formal educational level and the level of religious knowledge of participants of polygamous relationships might influence how people perceived the influence whether polygamy increased the risk of getting HIV infection or not.

6.1.2.3.1 Level of formal education

Participants of the FGD, the mixed male group, were of the general consensus that the level of western education attained by those in a polygamous relationship had influence on the practice and its possible association with acquiring and/or spreading HIV infection. They thought that the educated tend to remain monogamous even if they could afford to be polygamous. The majority of the traditional leaders interviewed express a similar view. For example participant IITL03 said:

"The educated avoid polygamy due to the increased liability associated with it"

(Male, district head in in-depth interview)

6.1.2.3.2 Level of religious education

All the Muslim leaders, traditional leaders, Muslim participants and civil servants and the majority of the ordinary people were of the view that the level of religious knowledge of participants of polygamous relationships had an influence on the practice of polygamy and its possible relationship with HIV infection. They were of the opinion that those with good Islamic religious knowledge would be aware of the Islamic guidelines of a polygamous relationship. For example, participant IIML04 said:

"Polygamy of up to four wives is allowed in Islam, but with strict conditions... About 95% of the population go into polygamy without following the laid down guidelines.... If Islamic guidelines of polygamy are followed, then the resulting polygamous family will have no problems ... If polygamous marriages are contracted anyhow, there is every likelihood of spreading HIV ... Everyone should lean towards their religion as this will keep the society free of ills ..."

(Male Muslim leader in in-depth interview).

What emerged to be common to those having western education and those having Islamic religious knowledge as observed by the majority of participants was the issue of keeping the polygamous relationship safe. A calculated attempt at making the polygamous relationship safe was the screening for HIV before getting into a polygamous relationship. This was done whether the marriage was to a young girl, a divorcee of widow and was becoming typical nowadays in Maiduguri as noted by participant IIML02 when he said:

" ... Inform your wife that: I will marry from so and so family, she is called so and so. Your wife will know your future bride and marriage date is fixed. So if the three of you, your wife, future bride and yourself should go for blood test. You will get a certificate indicating you are HIV free; your future bride is also free. You will then show this to your wife at home. This is what is happening nowadays. It is not from the scriptures; this is emanating from the enlightenment by medical personnel to the scholars and we advice the community to do so."

(Male Muslim leader in in-depth interview)

The majority, if not all the participants gave this practice as a recommendation as a possible way of curbing the spread of the disease in Maiduguri. Some even want it made as a law.

In order to understand the possible ways that polygamy might theoretically protect people from getting HIV infection I have illustrated it in figure 6.2 below. This shows how certain factors influence the practice of polygamy in a way that it becomes protective for those practicing it.

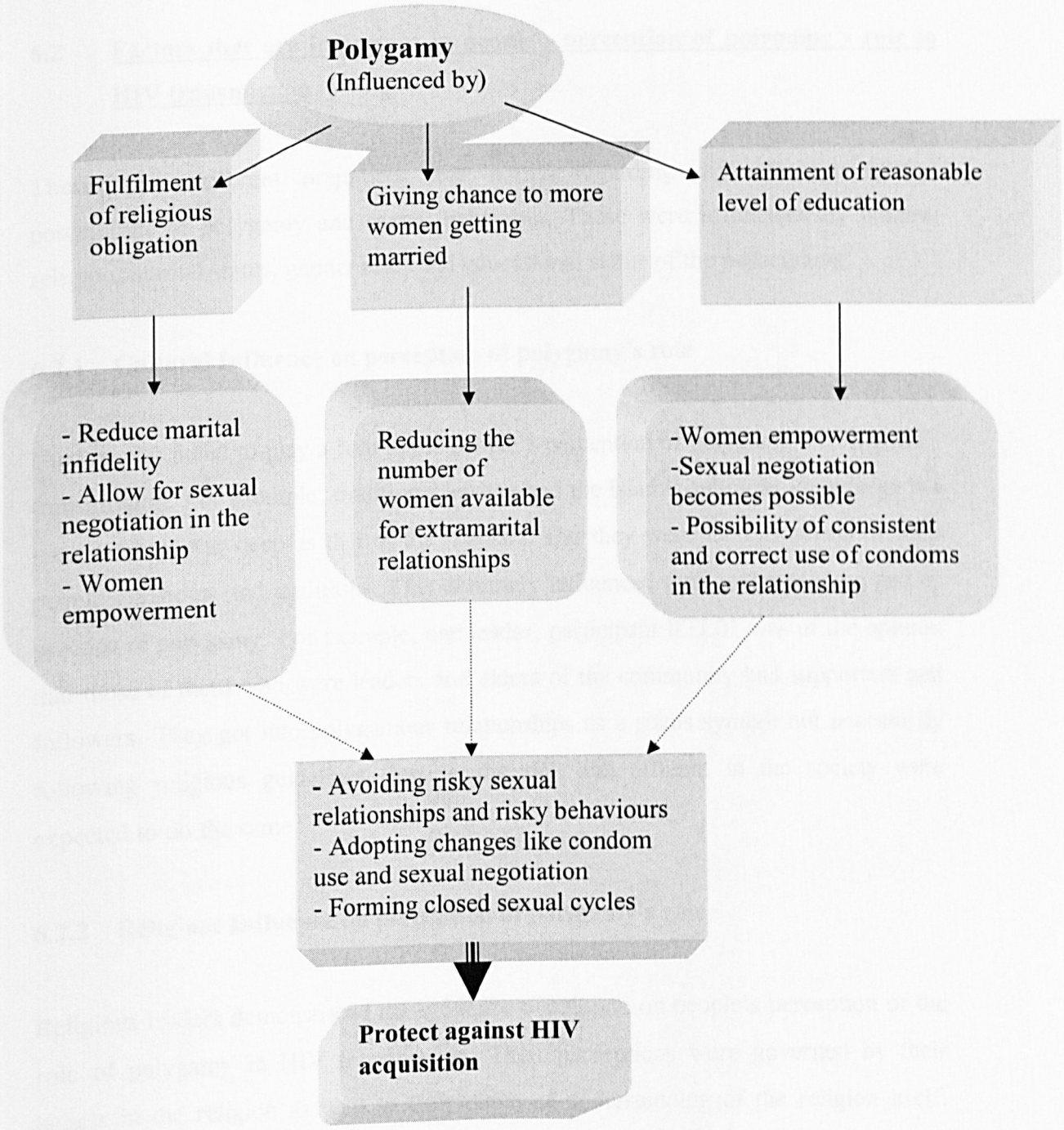

Figure 6.2: Theoretical model of the possible pathway through which polygamy might protect against HIV acquisition (Self)

The ways in which the pathways identified above will influence the acquisition of HIV/AIDS and any form of marriage practice would be modified by the acceptance and the practice or otherwise of sexual negotiation in such a relationship.

6.2 Factors that are important in people's perception of polygamy's role in HIV transmission

There were different prejudices and norms regarding different participants' perceptions of polygamy and sexual behaviour. These were influenced by culture, religion, marital status, gender roles and educational status of the participants.

6.2.1 Cultural Influence on perception of polygamy's role

Culture was noted to play a role in the people's perception of polygamy's role in HIV transmission. For example, traditional leaders had the Islamic religious knowledge but not necessarily as deep as that of the scholars. But they were the custodians of their people's customs and traditions. This definitely influenced their understanding and/or practice of polygamy. For example, one leader, participant IITL01 was of the opinion that those of them who were leaders and elders of the community had supporters and followers. They got into polygamous relationships as a status symbol not necessarily following religious guidelines; just as the rich and affluent in the society were expected to do the same.

6.2.2 Religious Influence on perception of polygamy's role

Religious leaders demonstrated the influence of religion on people's perception of the role of polygamy in HIV transmission. Their perceptions were governed by their beliefs in the religion as well as their depth of understanding of the religion itself. Since Islam as a religion allowed polygamy, the Muslim scholars pointed out that one was not supposed to go into a polygamous relationship just for the sake of it; there were guidelines that were supposed to be followed while doing that. If such guidelines were followed, then a polygamous marriage might not be complicated for example by promiscuity/marital infidelity.

Religious background also influenced the perceptions of the Christian clergy and the Christians among the participants of the study. One of the participants, a Christian religious leader, IICL04 clearly stated that any marriage other than the first church

wedding for a man or a woman was considered adultery. This influenced how they viewed the polygamy by Muslims and those amongst their followers whom they acknowledged to have gone into polygamy. They term such followers as having 'gone astray' and could not be considered to be Christian believers any more.

6.2.3 The influence of marital status on the perception of polygamy's role

Marital status seemed to have influence participant's perception of the role of polygamy on HIV/AIDS. This was demonstrated by the observation that some of those in polygamous relationships (e.g. participants IITL02, IITL03 and IICS03) having the perception that promiscuity rather than polygamy were responsible for the influence of polygamy on HIV infection. Participant IICS01 thought that polygamy actually reduced HIV incidence in the community. It was also observed that some of those in monogamous relationships (for example IIDR01, IIDR02, IIPO04 and IILT04) thought that polygamy increased the vulnerability to HIV acquisition. However, a large number of the participants thought that marital infidelity rather than polygamy/monogamy influenced HIV acquisition.

6.2.4 Influence of level of education on the perception of the role of polygamy in HIV acquisition.

This was observed in the case of academics and civil servants. Their level of western and Islamic religious knowledge influenced their views and opinions. They also had the experience of being brought up in an environment where polygamy and its associated features was a common occurrence. They therefore knew the religious teachings about polygamy, the effect of western education and/or Islamic education on the practice as well as the influence of customs and traditions on the practice. These groups of participants were considered a group that tended to be monogamous. For example participant IITL01 said:

"They can be considered to be wealthy, but they don't practice polygamy. They hardly marry more than two wives... The reason is because they have western education"

(A male traditional leader in-depth interview).

Because of that they were often termed to be 'weak' spiritually in that they often remained monogamous even if they became rich enough to afford polygamous marriages. For example participant IICS03 said:

"In the instance the prospective husband feels that he cannot be just to the wives, to the two, three or four wives that individual is given the option to marry only one wife. Which goes to show that marrying one wife, somehow shows some degree of weakness...

Weakness in the sense that it (the Qur'anic Verse allowing polygamy) didn't say marry two, three or four if you will be just. So any person that cannot be just, certainly there is something wrong with that individual"

(A male civil servant in in-depth interview).

The views and opinions of other participants like drivers, water-vendors, mechanics, the youth were likely to be influenced by their experience of the relationship as being part of a family in polygamy or their being polygamous themselves. Their level of education and religious awareness was relatively limited but they had the local knowledge of what was going on around them in the community from day to day.

6.2.5 Influence of gender role on the perception of the role of polygamy on HIV acquisition.

Most of the women in the study were of the opinion that women were supposed to be totally submissive to their husbands whatever the situation. For example participant IIWL04 has said that:

"A woman is supposed to be totally submissive to her husband whatever the circumstance"

(Muslim woman leader in In-depth interview)

The men believed that women should not question their men even if they thought they are promiscuous; they should not ask for safe sex and if they did, they might be considered to be promiscuous just like participant IIWV02, a male water vendor, said:

"If there is any sexual negotiation, then it is either the woman is not sure of the man, or she is not sure of herself because a woman refusing sexual advances from her husband is considered un-Islamic"

(A male water-vendor in in-depth interview).

Thus because of such beliefs and how women are seen in the community, the way they would perceive polygamy and sexual negotiation would be different and peculiar to their situation.

6.3 Discussion on the perception of the role of polygamy/monogamy in the spread of HIV

Drawing together all the work that had been presented several common themes emerged:

- Marital infidelity plays a role in the relationship between polygamy and the practice of polygamy
- Gender-role has a possible influence on the relationship between polygamy and HIV infection
- Sexual negotiation in marriage practice influences the relationship between polygamy and HIV infection
- There was a perceived increase in HIV screening before marriages

6.3.1 Marital infidelity plays a role in the relationship between HIV infection and the practice of polygamy

Marital infidelity, i.e. engaging in sexual relationships other than with one's spouse whether by men or women might play a significant role in the likelihood of the influence of polygamy in HIV infection acquisition and transmission. Marital infidelity in a polygamous situation by men and women was seen as different.

In Sub-Saharan Africa wives had little control over their husband's extramarital sexual affairs (Lawoyin, 2004). Polygamy was found to provide additional sexual outlet for men so that the number of sexual relationships outside of marriage by

polygamous men was lower than monogamous ones (Caldwell et al, 1992). But men acquired the polygamous wives over time and sometimes through substitution thereby making polygamy an avenue of perpetuating promiscuity (UNESCO, 2002).

Almost all categories of participants of the FGDs and interviews had pointed out promiscuity in a marriage relationship, whether polygamous or monogamous might have effect on the chances of increasing the acquisition and spread of HIV infection for those involved in the relationship. They had pointed out that the reason for marital infidelity among the polygamous could be because it was difficult for the man to take care of many women in all aspects – financial, sexual, etc. and in the event of lack of satisfaction such women would tend to be promiscuous. While the promiscuity associated with monogamy usually followed the absence or illness of the only wife at a time the man needed sexual relief.

The practice of polygamy is entered into for different reasons. Some go for it because of infertility of the first wife, some to curb desire to have sex with more than one woman, some due to acquired wealth, and the majority of those in polygamy in Maiduguri might be said to be in polygamous relationships in order to fulfil religious obligation (see sections 5.2 and 5.4.3). The possibility of marital infidelity might therefore depend on the individual involved and reasons for the polygamy.

6.3.1.1 Individuals involved in polygamy

A discussion of the dimensions of polygamy in section 3.2.3 gives the general overview of the determinants of polygamy; hence it gave an idea of types of individuals involved in the practice of polygamy. Polygamy is a marriage practice that has been promoted by patrilineal kinship societies (Chojnacka, 1980 and Meekers, 1992) and religious inclinations (Ali and Mills, 2000); upheld by those of noble and royal background (Schwimmer, 2003; and Timaeus and Reynar, 1988).

No two people were the same. Therefore there were individual differences in people who engaged in polygamy. The difference could be age, sex, educational level, ethnicity, etc. all these factors might come together to make up what an individual

was and how he/she would handle polygamy. Apart from these characteristics individuals might differ because of their physiological make up. All these also came together to determine reasons for polygamy.

Isuogo-Abanihe (1994) in Nigeria found that there were varied incidences of extramarital sexual relationships since marriage: for both men and women infidelity increased with increase in age; religion influenced extramarital relationships showing that Roman Catholics and followers of traditional religions were more unfaithful and protestants and Muslims more faithful; and polygamy was associated with increase in extramarital relationships than monogamy.

It has been reported in section 7.2.2 that men usually went into polygamous relationships from the age of forty years. Therefore situations of increased age and the practice of polygamy would augment each other to increase the likelihood of extramarital sexual relationships.

Another finding that supports the findings of Isiugo-Abanihe above was that most of the participants in polygamous relationships in Maiduguri were noted to be Muslims (see section 7.2.1). Muslims were supposed to be engaging in polygamy to fulfil a religious obligation, which was mainly to curb marital infidelity. Thus engaging in polygamous relationship would be influenced by individual sexual behaviour to increase or reduce infidelity.

6.3.1.2 Reasons for polygamy

A man may take a second or additional wife on religious grounds (Islam); if the existing wife was infertile, physically or mentally ill; the woman cannot satisfy the husband sexually; or to enhance family status or increase the number of sons (Ozkan et al, 2006; and Juma, 1991). Women on the other hand would generally prefer the status of being a sole wife to being an additional wife; but many would prefer being additional wife to remaining unmarried, widowed or divorced (Chamie, 1986).

It has emerged from the study that in Maiduguri, many of those in polygamous relationships might be in it to fulfil a religious obligation. As seen from the discussion earlier, there was a prophetic tradition enjoining Muslims to marry many wives in order to bear children so that the Muslim community might be the largest in the hereafter.

This is similar to the finding above but depending on why an individual decides to be polygamous their reason for engaging in polygamy could predispose to marital infidelity.

6.3.1.3 Differing opinions on polygamy and marital infidelity based on religion

Belief systems surrounding sexuality range from condemnation of premarital sexual relationships and homosexuality to the celebration of sex as a form of enlightenment (Cheemeh et al, 2006). Mitsunaga et al (2005) report that some studies (Orubuloye et al, 1977 and Smith, 2004) found that Muslim men engaged in extramarital sexual relationships than others of different religions. Other studies were indeterminate (Gray, 2004). But Mitsunaga et al (2005) in Nigeria had after correcting for number of wives and the use of condom in polygamy concluded that there was a significant reduction of the likelihood of extramarital sexual relationships among Muslim men.

There was a clear difference of opinion on the relationship of marital infidelity and polygamy or any other marriage relationship that came up from the study. The Muslims and Muslim leaders in the FGDs and in-depth interviews generally believed that polygamy took care of men with urge for sex with more than one woman as well as pointing out that a women might could suppress their desire for sex and so be patient enough in a polygamous relationship and at the same time avoid infidelity in the marriage relationship. Because of these, the general opinion of Muslims and Muslim leaders was that polygamy reduced marital infidelity and therefore possibly reduced the individual risks of acquiring and transmitting HIV infection. These group of participants thought that Islam allowed polygamy of up to four wives with a precondition that they be just to the wives or else should not engage in polygamy.

Christian leaders and other Christian participants of the study on the other hand had an opinion, which was contrary to that of the Muslim leaders and Muslim participants. The Christian clergy in particular were of the opinion that polygamy itself should not be practiced at all since Christianity, which termed polygamy as a process of adultery, did not allow it. They believed that in a polygamous situation where there were two or more women in the marriage relationship, they assumed that the men might not be able to cope with the demands for the sexual satisfaction by all the wives. This according to the Christian leaders might predispose to female promiscuity. They tended to be in extramarital sexual relationships when they were not satisfied by the husband sexually as they would tend look for the satisfaction elsewhere.

In view of participants, what appeared to be helpful in a polygamous relationship that might help in slowing down HIV infection and spread would be a situation whereby an individual who was a Muslim and desired polygamy because of the religious teachings - being just to the wives and avoid marital infidelity; or a Christian should not engage in polygamy since it was not allowed by Christianity.

6.3.1.4 Marital infidelity may increase or decrease for men and women due to polygamy

In Sub-Saharan Africa, women's faithfulness to their husband is viewed as essential in family lineages while men's infidelity is seen as a way of extending family lineage and hence the practice of polygamy (David, 1997). Social, legal and religious sanctions tend to be made to curb female infidelity, there seemed to be hardly any against the husband except if the relationship involved another man's wife (Awosubo-Asare, 1993). Since men were inherently polygamous, in order to prevent infidelity society allowed men to bring more than one wife into their households (David, 1997)

In Maiduguri there were perceived problems of polygamy identified by the various participants of the study particularly the Christian clergy and women opinion leaders.

Polygamous relationships might cause broken homes, improperly brought up children, lack of female sexual satisfaction, jealousy, mistrust, suspicion and the inability of the men to cater for the women might all cause female infidelity and this might increase the likelihood of HIV infection and transmission.

Marital infidelity in men might however be reduced in polygamous situations since they might have the number of women they desired to satisfy their sexual urge and desire and not go out to look for it. This was in addition to boosting the social status of the man and the guarantee of having children in case the other wife had none.

6.3.2 Gender has possible influence on the relationship between HIV infection and the practice of polygamy

Being a man or a woman had differing influence on the relationship of polygamy and HIV. Men were the ones who initiated polygamy since they were the ones to request for the hand of a woman in marriage. They could decide to be polygamous or monogamous. They entered polygamous relationships to get different results – satisfying sexual needs, fulfilling religious obligation, for political gains, etc. most of the time they had a choice to go in for polygamy or remain monogamous. For the man there would only be a single man per any marriage relationship whether it was a polygamous or a monogamous marriage. This is outlined in the section on Polygamy and gender relation (section 3.2.5). So when we talk of numbers, women were more in polygamous relationships than men.

Gender relationships are determined by social norms, values and beliefs (Olawoye et al, 2004). Consequences of social construction of female and male sexuality and inequality characterise many heterosexual relationships in Africa (Aniekwu, 2002). Cultural disparity in defining sex in terms of male desire with passive women recipients of the passion indicate that social norms, relationships and gender imbalances determine the meaning and determinants of sexual behaviour (Odutolu, 2005). Gender situations and/or disparities can influence the relationship between HIV/AIDS and the practice of polygamy through:

- Sexual abstinence due to pregnancy and breastfeeding

- Economic dependence of women on men
- Different educational levels of men and women
- Lack of options for second/subsequent wives

6.3.2.1 Sexual abstinence due to pregnancy and breastfeeding

Traditional beliefs in African societies associate sex during pregnancy and breastfeeding with various childhood diseases (van de Walle and van de Walle, 1988; Caldwell and Caldwell, 1977; and Caldwell et al, 1989). That made sexual abstinence during pregnancy and following childbirth a salient feature of the family context in African societies (Degrees Du Lou, 1999); and van de Walle and van de Walle, 1988). It has been given as a reason for polygamy and multiple sexual partnerships in many African societies (Bankole et al, 2004; and Hogsborg and Aaby, 1992). This leads to the formation of sexual network with multiple sexual partners (regular and non-regular), hence increasing the risk for HIV/AIDS acquisition (Lawoyin, 2002 and 2004; and Hudson, 1993).

In Maiduguri, it was perceived by the majority Muslim participants that because of the practice of polygamy, men had alternative women in their homes to the pregnant/breastfeeding women. Hence the chances of extramarital sexual relationships among men in polygamous relationships were lowered (see section 6.1.2.1). The practice of polygamy therefore would protect men from the acquisition of HIV/AIDS that would otherwise be likely due to the traditional practices described above.

6.3.2.2 Economic dependence of women on men

In section 3.2.3.5 it was noted that economic factors might influence the frequency of polygamy. In Sub-Saharan Africa, women have no control over resources, including what they bring with them following marriage because they are regarded as dependents of men (Timaeus and Reyna, 1998 and Chojnacka 1980). This leads to inequality that predisposes to poverty, a factor that has been recognised as one of the driving forces of the HIV/AIDS epidemic (Timaeus and Reyna, 1998).

Section 6.1.2.1 presented the views of most Christian leaders in Maiduguri, which indicated that in many polygamous relationships the husband was not able to financially maintain the polygamous family. So, some of the polygamous wives resorted to extramarital sexual relationships to make ends meet potentially increasing the risk of acquiring HIV/AIDS.

6.3.2.3 Different educational levels of men and women

The practice of polygamy in a traditional setting is associated with low level of education among the women practicing it (Ukwani et al, 2002). This has been discussed in section 3.5.7. The period of sexual abstinence mentioned in section 6.4.2.1is shortened by increase in female education (Lee, 1992) as discussed in section 3.2.3.6.

In Maiduguri, as discussed in section 6.2.2.1.3 the practice of polygamy was made safe or risky depending on the level of education of those practicing it. Most participants were of the view that those that had a reasonable level of education practiced minimal polygamy. Even if they were involved in polygamy it was perceived that they practiced it according to laid down guidelines, which made the practice safe.

6.3.2.4 Lack of options for second/subsequent wives

Most of the time, the second and other subsequent wives had little or no choice but to be in a polygamous relationship if they were to be married. The majority of them were either divorcees or widows. Divorced women or widows in Sub-Saharan Africa experience difficulties in re-marrying and this is made more difficult now by the emergence of HIV/AIDS (Gregson et al, 1997b). In Northern Nigeria divorced women or widows who were still of childbearing age had a duty to remarry otherwise they would be considered to be CSW (Solivetti, 1994). And women entering second or subsequent marriages end as up as second/subsequent wives in polygamous relationships (Timaeus and Reynar, 1998).

The lack of options tends to affect widows more than it did divorced women. This is due to the nature of marriages in Sub-Saharan Africa in which a widow is often expected to remain in the family after the death of her husband by remarrying one of the husband's brothers or close relatives if they were to have access to the husband's properties and/or their children (Chamie and Nsuli, 1981). Failing that the woman might find maintaining herself and sometimes her children impossible without engaging in CSW.

Even though young girls could be second or subsequent wives, this was less common than with divorcees or widows (Solivetti, 1994). Such women might already be infected by the time they entered into the polygamous relationship, particularly with the widows (Ibid). If that happened, then HIV would be spread to more people than if they were to go into monogamous relationships.

From personal experience, divorced and/or widowed women in Maiduguri are tagged 'second hand'. Whatever their status, age or socio-economic position, they hardly ever got into monogamy. If they did it would be with a man who was involved in a divorce or widowed. That means women marrying for second or subsequent times would be involved in a sexual network that would involve more than her husband. This potentially increased the exposure of the women and their husbands to the possibility of acquiring HIV infection.

It emerged in Maiduguri that the participants among the HIV positive cohort who had married widows ended up being HIV positive after the death of the spouses due to HIV/AIDS. Premarital screening for HIV infection could prevent this.

6.3.3 Sexual negotiation in marriage practice influences the relationship between polygamy and HIV infection

Women are generally aware of the connection between sexual relationships and STDs and so self protection by women is important since sexual permissiveness of women is socially acceptable (Borrofice, 1995). Communication is crucial in establishing sexual negotiation because it takes two to have a safe sexual relationship (Campbell,

1995; Cohen & Reid, 1999). But culturally women are not supposed to take the initiative in sexual negotiation for safe sex (Schoepf, 1995; and Obbo, 1995). Men on the other hand are supposed to be dominant in negotiation for safe sex (Cohen & Reid, 1999). The dependence of women on men financially tends to make them powerless or have less power compared to men (van Dijk, 2002).

In one study Maharaj (2001) found that negotiating for safe sex in the African society is interpreted as a sign of mistrust of a spouse/partner and the request for the use of condom in a stable sexual relationship was seen as a sign of infidelity. I argue that 'trust' is an issue in safe sex negotiation. Trusting someone means increased familiarity with the person including the knowledge of sexual history of that person (Ibid). Maxwell and Boyle (1995) found that the practice of sexual negotiation is reduced with increase in level of trust among partners. This led to the practice of 'unsafe sex', which is done to confirm the quality of choice of partners (Sobo, 1996).

Moreover in a review of women's mating strategies Cashdan (1997) indicated that female choice of partners who were wealthy or had high status by them or their kinsmen on their behave was an important factor in polygamous situations. After all a woman's optimal strategy in getting a mate is affected by her economic options and to her expectation of paternal investment (Cashdan, 1997).

A request for sexual negotiation in a polygamous situation was possible in Maiduguri. It was also seen that Islam allowed it while Christianity also did not frown on it. It was seen in section 6.1.1.4.4 that the practice of sexual negotiation was associated with mistrust and suspicion of spouses. There was therefore the likelihood of the practice of 'unsafe sex' to avoid mistrust and gain confidence of spouses. Such a practice was a risk factor for HIV/AIDS transmission.

6.3.4 There was a perceived increase in HIV screening before marriages in Maiduguri

From the FGDs and interviews as well as questionnaires administered, it was perceived that the people of Maiduguri thought that there might be a relationship

between the practice of polygamy and an increase in the possibility of acquiring and/or spreading HIV infection. For this reason, there was a perceived rise in the request for screening for HIV for men and women before they entered into a marriage relationships particularly polygamy (section 6.1.2.3.2).

This seemed to have been accepted and encouraged by Muslim and Christian leaders as well as traditional leaders in Maiduguri. It was because of this apparent acceptance of the pre-marital screening that many participants of the study recommended that the practice be enforced by law. However, some argued that if it was made to become a law, then there was the possibility of people avoiding it. Most suggested that it should remain, as it was – a form of voluntary counselling and testing.

The Muslim leaders were trying to find a way of jointly addressing the issue of the introduction of the pre-marital HIV screening issue in Maiduguri. They intended to do that jointly because they wanted to co-ordinate the type of summons to give to their subjects such that there should be no difference in the message that was to be put across. If the messages differed in any way there might be reluctance in its acceptance by their followers. That was why at the time of this study, a body called Muslim Council of Ulama of Borno State comprising of all leaders of the different Muslim groups were making efforts towards such approach for the pre-screening of the HIV.

While speaking to the Christian clergy about the issue of pre-marital screening I found out that a system was in place in most Churches in Maiduguri to see that all marriages that would take place in any church were preceded by a screening of both the bride and groom. In most cases the clergy supervised the procedure in order to be sure that the test was actually done.

I find the phenomenon of pre-marital screening to be an interesting one because it seemed to be pioneered, endorsed and encouraged by religious and community leaders. It might therefore serve as a gateway to establishing a better rapport between leaders and followers whereby the leaders could be used to extend other preventive HIV/AIDS messages to the larger community. This could be done in a similar way to

what the Department of Health and Human Services; CDC had been doing since 1988, which was called 'Faith Partnerships for Health'. This was because the faith communities played an essential role in shaping the public knowledge, attitudes, beliefs and behaviours. Partnering with such faith-based organisations would be important to achieve comprehensive HIV prevention strategies that would build awareness, mobilise communities and reduce HIV- associated stigma (Chris, 2005).

Therefore, pre-marital HIV screening in combination with the possibility of sexual negotiation in a polygamous relationship that was contracted according to the religions allowing it might have a profound effect on the possible acquisition and/or spreading of HIV infection. I think the pre-marital screening is in itself a kind of sexual negotiation since it would determine if a marriage relationship would go on and how the sexual relationship would be lived depending on the outcome.

Chapter 7: Results and Discussion for research Question 3: What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

7.0 Introduction

This chapter addresses the research question: 'what is the extent of and what are people's beliefs about the practice of polygamy in Maiduguri?' by answering the following questions:

- How common is the practice of polygamy in Maiduguri?
- Who practices polygamy/monogamy in Maiduguri?
- What are the perspectives of different participants on the practice of polygamy in Maiduguri?

The chapter is an extension of the research analysis mentioned in section 4.2.2.2.1 and 4.2.2.2.2 and is in four sections. Section 7.1 discusses the extent of polygamy in Maiduguri, section 7.2 presents those who practiced polygamy and why. These results are then discussed in section 7.3.

7.1 How common is the practice of polygamy perceived to be in Maiduguri?

FGDs and in-depth interviews were used to get people's perception on how common the practice of polygamy is in Maiduguri. There was a general consensus from all the participants of the FGDs and in-depth interviews that polygamy was practiced in Maiduguri. While recruiting participants of the FGDs from the various wards of Maiduguri, we realised that it was easier to get those in monogamous relationships than those in polygamy. We had to speak to between seven and ten people to get one person in a polygamous relationship.

7.1.1 Views and opinions from the FGDs about the practice of polygamy in Maiduguri

There was no universal agreement about the frequency of polygamy. But the majority view of male participants, who were in polygamous relationships, men in monogamous marriages, mixed group of men in monogamous and polygamous relationships, and women in monogamous marriages, was that monogamy was more common than polygamy in Maiduguri and the polygamy practiced in Maiduguri was largely based on Islamic injunction of permitting the marriage of up to four wives provided the man was just.

The general consensus of female participants who were in polygamous relationship as well as mixed group of women in polygamous and monogamous relationships was that polygamy of two wives was the most common marriage practiced in Maiduguri.

7.1.2 Views and opinions from the in-depth interviews about the practice of polygamy in Maiduguri

The opinion of all Muslim leaders, Christian leaders, all women leaders, all PLWA interviewed, all civil servants, all politicians and all the drivers interviewed was the view that polygamy was more common than monogamy in Maiduguri because the marriages taking place in Maiduguri were based on Islam. For example participant IICL01, was of the view that

> *"... Because Maiduguri was a predominantly Islamic society, polygamy was most practiced".*
>
> (a reverend father in in-depth interview).

The views from mechanics, water-vendors, housewives, political party youth supporters, lecturers were that about half thought monogamy was more commonly practiced than polygamy while the others thought that polygamy was more common than monogamy. All the traditional leaders interviewed thought that even though polygamy was common in Maiduguri the rate of monogamy was higher than that of polygamy.

7.1.3 The reality of how common the practice of polygamy is in Maiduguri

Drawing from the views and opinions of the participants of the FGDs and the in-depth interviews I observed that the real state of the practice of polygamy in Maiduguri is contested. This may be due to the fluidity of marriage such that those in monogamous relationships might find themselves in polygamous relationships and vice versa at different stages of their lives. This would make it difficult to be certain what was practiced most.

Another factor that I thought might contribute to the contested nature of the practice of polygamy in Maiduguri is religion. Most Christians in Maiduguri assumed that majority of those in Maiduguri were Muslims and most would have been in a polygamous relationship at one time or another. The Muslims however know that not all Muslims were polygamous. Since they interact more with each other, they were likely to know that monogamy could be more common than polygamy.

Those in position of authority over the community like the traditional and religious leaders would have a better idea of the degree of the practice of polygamy and monogamy. The majority of them were of the view that polygamy was very common but monogamy was most practiced.

7.2 Who practices polygamy in Maiduguri and why?

The data on who practiced polygamy in Maiduguri is presented by looking at five main factors identified from FGDs and Interview analysis that predisposed people to practice polygamy

- Religion
- Age
- Gender
- Social status
- Fear of HIV infection

7.2.1 Religion

All the participants of the FGDs, in-depth interview and the questionnaire administration were of the view that the main religions found in Maiduguri were Islam and Christianity with very few non-believers; often referred to as pagans or non-believers. They were of the view that being a Muslim, Christian or non-believer tended to influence the practice of polygamy.

7.2.1.1 Views and opinions expressed by people in the FGDs about who practiced polygamy in Maiduguri and why

The general consensus amongst the participants of the FGDs was that the Muslims, doing it to fulfil a religious obligation, practiced most of the polygamous relationships found in Maiduguri.

7.2.1.2 Views and opinions expressed by people in the in-depth interviews about who practiced polygamy in Maiduguri and why

Muslim scholars, traditional leaders, politicians, ordinary members of the society who were Muslims amongst the participants felt that Islam as a religion allowed polygamy. It allows polygamy of up to four wives but with a precondition that the husband must treat them 'justly'. The husband would be considered just if he could take care of all the wives equally, i.e. feed them, cloth them, shelter them, educate them, take care of their welfare as well as that of their offspring and give them their conjugal rights equally. For example participant IIML02 said:

> *"Islam allows polygamy of up to four wives if the man can be just, if not then marry just one. The justice meant here is justice in sharing of conjugal rights amongst the wives, not justice of giving equal love, no one can love different people equally"*
>
> (A male Muslim leader in in-depth interview).

Apart from that, some Muslim scholars said that there were some prophetic injunctions through the prophetic traditions (Hadith) asking the Muslim faithful to marry as many wives as they could without exceeding the recommended four so that

the Muslim community (Umma) will be large on the day of judgement in the hereafter. A typical view about this is like that of participant IIML03:

"A prophetic tradition prescribed that those of the Muslims who are capable should marry as many wives as allowed in order that the Muslim community shall be a large one on the day of judgement. However, those who are not capable of marrying even one should fast as fasting curbs sexual desire and therefore limits promiscuity in the society"

(Male Muslim leader in in-depth interview).

This means that Muslims who were wealthy enough, healthy and mature to be able to marry and maintain wives should try and marry as many as four wives. However, if one was not capable of maintaining even one wife, he should try to control his sexual desire by not engaging in sexual relationships and fasting has been suggested as a way out for such a person.

There was also a general consensus amongst the participants of the interviews that the Muslims, doing it to fulfil a religious obligation, practiced most of the polygamous relationships found in Maiduguri. For example participant IIWL01 gave her view as:

"Because of the Islamic nature of Maiduguri society, polygamy was the most practiced as many try to fulfil their religious obligation"

(A Muslim woman leader in in-depth interview).

However, fulfilling religious obligation could not be a reason for polygamy among the Christians who practiced it. All the Christian leaders as well as Christian participants of the study agreed that there were some among the Christian community who were polygamous. They said this was in contradiction to their religious injunction. Participant IICL01 had said:

"Monogamy is 'God's' *own idea of marriage...there is fellowshipping in it"*

(Reverend Father in in-depth interview)

That was to say that the Christians practicing polygamy were going against "God's" own idea of marriage. Even though one of the participants, IIPL02, had pointed out that:

"The Christians who go for polygamy tend to claim to follow King Solomon and Moses of the Old Testament"

(A female PLWA in in-depth interview).

For those in the third type of religion found in Maiduguri, the pagans, there was no information from the participants regarding this form of belief, but some participants point out that they do also practice polygamy. For example, IICL04 said:

"Polygamy is common in Maiduguri because of Islam, presence of pagans"

(Reverend Father, in in-depth interview).

Therefore religion could be described as a factor in deciding who practiced polygamy but other factors like age (mentioned above) might interact to determine who practiced polygamy.

7.2.2 Age

As pointed out earlier, those in polygamy were expected to treat their spouses equally and justly. One of the factors required in ensuring that the husband was capable of doing that was affluence, which more often than not came with increase in age. Because of this, most of the participants of this study generally agree that polygamy was more common among men who were aged about forty years or more. They said at that age it was expected that the man would be capable of financially and socially abiding by the rules and guidelines of polygamy recommended by religion. A typical view was that of participant IIML02:

"In Maiduguri those aged forty years and above are mainly polygamous while those aged below forty years are mainly monogamous and the only reason for that was that those aged forty and above are more economically buoyant than those below forty years"

(Male Muslim leader in in-depth interview)

Another participant, IIPO02, also pointed out that:

"Polygamy in Maiduguri is more common with the older generation, while the younger generation find it difficult to do so"

(Young male, Muslim politician in in-depth interview).

Most female participants agreed that generally girls were married early but those going into a polygamous relationship were those thought to be between twenty and twenty-five years of age. For example participant IIML01 said:

"Now girls are married at a later age (20-25years), they prefer polygamy for economic security"

(Male Muslim leader in in-depth interview).

Another participant, IILT04 in monogamous relationship but had been polygamous before said:

> *"Some traditions of marriage are changing allowing girls to finish school before marrying; the need for monetary capability before marrying is now coming in and delaying marriages"*
>
> (Male lecturer; in-depth interview).

He meant that one of the changes in marriage in Maiduguri was that parents allowed their daughters to attend schools of their choice and to a level of their choice. There was also the choice of men who had enough money to take care of them. These conditions led to delays in girls' marriages nowadays.

7.2.3 Gender

There were gender differences in women's and men's motivation and reason for going into a polygamous relationship. It was common knowledge in Maiduguri that the man initiates the relationship that may lead to marriage. The decision to enter into a polygamous relationship for a man may not be due to any specific reason apart from the desire to have more women to satisfy their sexual desires. Most civil servants, politicians and many ordinary members of the society (drivers, mechanics, and water-vendors) expressed this view. A typical example is what participant IICS01 said:

> *"Reasons for polygamy may include... sexual desire of some individuals"*
>
> (A male civil servant in in-depth interview).

Participant IITL02 also said:

> *"Some are polygamous because of the need for variety of women,"*
>
> (Male; traditional leader (ward head) in in-depth interview).

The majority of the participants thought that women never really liked to be in polygamous situations. They may go into polygamy just to fulfil religious obligation as described in section 5.3.1.3. Participant IIDR02 had pointed out this view when he said:

> *"A woman never likes polygamy; they do it because it is a religious injunction"*
>
> (Male, young driver in in-depth interview)

Problems associated with initial wives leading to a polygamous relationship were described by majority of the participants of this study. For example IIHW02 said:

"People go into polygamy because they are looking for certain factors that they have not found in the first or other women"

(Housewife in in-depth interview)

In some wives the problem was infertility while in others it was the relationship not being stable because of the attitude of the first wife. This was a general observation by majority of the participants of the study and what participant IIML02, said exemplified this:

"Polygamy may be caused by infertility of the first wife or if the first wife is difficult"

(Male Muslim leader in in-depth interview).

7.2.4 Social status

The majority of the participants observed that many polygamous individuals entered into polygamy because of their position in the society. For example participant IICL01 said:

"Many polygamous people go in for polygamy as a status symbol in the society"

(Reverend Father in in-depth interview).

All the traditional leaders and majority of the ordinary members of the community (drivers, mechanics, water-vendors) said that traditional title holders/rulers and Muslim scholars were the most polygamous group in Maiduguri and they thought this was due the fact that they tend to host many people on almost daily basis and they needed many women to do the cooking for them. For example participant IIWL01 said:

"The ruling class and the rich practice polygamy most"

(Woman leader in in-depth interview)

This saying was echoed by one of the traditional leaders in the interview. Participant IITL02 said:

"Traditional leaders and Islamic Scholars are the most polygamous"

(Male village head in in-depth interview).

Some of such members of the ruling class may have, in addition to the recommended four wives, an array of concubines as observed by participant IICS02:

> *"The ruling class tend to have concubines in addition to the four wives, but for others, the number depends on financial status"*
>
> (Male Magistrate court judge in in-depth interview)

Others, because of their position in society may go into a polygamous relationship in order to have political or economic benefit or forming inter-family alliance. Although the man may not desire an additional wife or the woman may not be in love with the polygamous man, because of some social needs of the man, woman or either of their families they may enter a polygamous relationship. This view was expressed by majority of the politicians, civil servants and many ordinary members of the public like drivers, mechanics and water-vendors. For example participant IICS02, a magistrate court judge said:

> *"People go in for polygamy as a social status, for inter-family alliance and fulfilment of religious obligation".*
>
> (Male Magistrate court judge in in-depth interview)

The inter-family alliance here was to describe cases whereby marriages were contracted between children of some families in order to continue an existing relationship between the said families. These may sometimes lead to polygamous relationships and may or may not be secondary to the consent of the bride and the groom.

7.2.5 Fear of HIV infection

Most of the civil servants and ordinary members of the public in the interviews said that there were people who went into polygamous relationships due to the fear of acquiring of HIV infection. The consensus among them was that there were people who naturally required more women to fulfil their sexual desires. Such people now preferred getting into polygamous relationships than having extramarital relationships. There were also others who had to leave families behind and work in different towns/cities. Such people now engaged in polygamy instead of having extramarital relationships to satisfy their sexual desire. For example participant IICS01, a civil servant, said:

"Polygamy is practiced more now because of the fear of HIV infection. They prefer polygamous relationships to extramarital relationships"

(Male civil servant in in-depth interview)

And a village head, participant IITL04, said:

"Those who fear getting the disease practice polygamy of at least two wives"

(Male village head in in-depth interview)

Participant IIWL02 also said:

"Men entered Polygamy because it protects from HIV by limiting promiscuity"

(A woman leader in in-depth interview)

They were also of the view that such polygamous marriages were often preceded by HIV screening for all those involved in the relationship – the husband, wives (old and new). It was because of such views that the majority of participants of the study pointed out that screening for HIV infection before marriage had become common in Maiduguri. Some even thought that the screening should be done for all marriages, whether polygamy or monogamy. For example participant IIMC01 had summed up this view when he said:

"In Nigeria now, if you are going to marry, it is almost compulsory to screen for HIV now"

(Male mechanic in in-depth interview)

However, others said the test was for those marrying divorcees or widows or when marrying girls that were not so young, particularly graduates. Participant IITR03 had described this:

"In the case of marrying a young woman, the request for the screening of the girl may be unacceptable to the parents. But in the case of a divorcee or widow, the need for screening is there"

(Male trader in in-depth interview)

Most participants agree that HIV screening before marriage is needed but there were different opinions as to how this was to be implemented. Muslim scholars point out that they encourage people to get the test done before getting into any marriage relationship, with greater emphasis on a marriage involving a divorcee or widow. They said this was a voluntary effort on the part of those getting married. However, the best description of the situation as it concerns Muslims, Muslim scholars and the screening for HIV before marriage came from participant IIML03:

"Well, some individual brothers came to me and suggested that we should preach on this issue. I agreed that it was a good idea, but its implementation will not be successful without the involvement of the Council of Ulama. We thank God that we have what is called 'Borno Muslim Forum'. This is an umbrella for all Muslim organisations in Borno. I suggested that the forum should have a serious debate on the issue and talk about the positive and negative aspects of the idea. Then, whatever they decide to recommend will be all binding. The council is made up of members from all sects of Islam in Maiduguri. So if the council decides, no one will talk against the subject while preaching because he would have been part of the decision and would have expressed his grievances before the council. If however you individually decide to preach, there will be argument and this will cause division in the Muslim community. We might cause problems of decision making, such that Muslims will be confused of which one to follow. But I have learnt that some have made their own initiatives on their own. They do go and do the test between the boy and the girl, sometimes without even the knowledge of their parents. Sometimes parents do encourage the testing saying that there will be no marriage without the test. I have heard all these, but I have told you our position religiously".

(Male Muslim religious leader in in-depth interview).

For the Christians however, the situation was rather different. A reverend father, participant IICL01 explained that in the church nowadays marriages are not conducted without the presentation of the evidence of screening for HIV. He said the church organised this by assigning a pastor to accompany the potential couple to a test centre where they are screened for HIV. The accompanying clergy then gets the result that is sealed to be opened in the presence of the church leader, parents of the couple and the couple. If they are cleared of the possibility of infection with HIV, the wedding then goes ahead. If however anyone of them is positive, no marriage will take place. All the Christian clergy interviewed as well attest to this view.

But another Christian leader informed me that there was a case of a girl disappearing from home when she was found to be HIV positive following such test. As at the time of this study she had not returned home after three years. There was also a case of a

man marrying an HIV positive woman just to keep her HIV status a secret and she was reported to have died shortly after the wedding.

Both the Muslim scholars/clergy and the Christian clergy said that this was now common practice in Maiduguri and is welcomed by parents and relatives of those getting married.

The Voluntary counselling and testing that seemed to be adopted as a pre-marital issue have been suggested by others to replace the use of condoms as a way of preventing HIV infection and spread. For example participant IIPO04 had suggested that:

> *"If there is suspicion of STD or HIV/AIDS, the suspected individual should be screened instead of the request to use the condom"*
> (Male politician in in-depth interview).

7.3 Discussion on the practice of polygamy in Maiduguri

7.3.1 General situation of marriage practice (polygamy/monogamy) in Maiduguri

Islam has a patrilineal and polygamous tradition that strengthens the expansion of clan size (Mazrui, 1994). Thus Islam encouraged polygamy in order for Muslims to have more children and to make the Muslim community larger. But it was associated with lower marital stability leading to divorce and remarriages (Gwanfogbe et al, 1977), thereby increasing the number of people involved in a sexual network that get involved in such marriages. The findings presented previously make it quite clear that the dominant influence over polygamy in Maiduguri is the religion of Islam.

Section 7.1 has shown that it was difficult to conclude about the practice of polygamy and monogamy in Maiduguri. The general consensus about the level of polygamy and monogamy was that they were both practiced in Maiduguri but what seemed to be the most common form of marriage was polygamy of two wives. Most participants actually recommended this form of marriage to be the best for Maiduguri.

7.3.2 The extent of the practice of polygamy in Maiduguri

There are indications that the institution of marriage may be declining (Amato et al, 2003). For anyone coming from the Northeast of Nigeria and Maiduguri in particular the assumption had been that polygamy is so common that one may assume it to be in every alternate home. The common saying from that place is that the first thing any man would do when his financial status changed is to go for an additional wife. This study has shown us that there was the perception that polygamy was practiced in Maiduguri (see section 7.1).

From the FGDs and in-depth interviews the opinion of the participants were about half believing that polygamy was more common than monogamy and the other half believing that monogamy was more common than polygamy. No one said the two were equal in extent. In the quantitative part of the study involving the HIV positive cohort, only 19.1 %(n=33) of the respondents were in polygamous relationship at the time of the study as compared to 27.7% (n=48) were currently in monogamous relationships out of the 173 participants.

Islam allowed up to four wives and the other religions had no specific limitations since those Christians in polygamous relationships were already against their religious injunction, they could have as many wives as they wished. The most common perceived form of polygamy seemed to be that of two wives.

7.3.3 Reasons for polygamy in Maiduguri

It was observed from this study that people perceived reasons for polygamy to include as summarised in the table below. I will discuss them in the order I perceive them to contribute to the practice of polygamy in Maiduguri.

Table 7.01: showing a summary of the possible reasons for polygamy for men and women in Maiduguri

Reason for polygamy	Women	Men
To fulfil religious obligation	√	√
Infertility	√	√
Status symbol	√	√
To get financial gains	√	√
Political gains	√	√
To access cheap labour	--	√
Fear of HIV infection	--	√

A detailed discussion of the reasons for the practice of polygamy in Maiduguri follows in sections 7.3.3.1 to 7.3.3.9.

7.3.3.1 Religious injunction

The most frequent reason expressed in my study for people undertaking polygamous relationship wais religion. Many commentators have observed this e.g. (Bambra, 1999). Islam encouraged polygamy and many went in for polygamy in order to fulfil such religious injunction. The Qur'anic verse endorsing polygamy is stated in a language that has made it susceptible to subjective interpretation and so had been read by most traditional scholarship as endorsing polygamy subject only to the man not fearing that he will be unable to deal equitably among several wives (Sanusi, 2002). This was a common occurrence in Maiduguri (see section, 7.2.1). I have seen several cases in which husbands decided to go for polygamy in an attempt to test their level of ability to practice justice between the wives. One of the reasons they did this was religious. They thought it was a Jihad, i.e. a fight for the propagation of Islam.

Being polygamous following religious injunction was found to be common to both men and women. This might be the reason why many of the women who did not like having co-partners in their marriage homes yet found themselves in polygamous relationships. Even though Islam encourages Muslims to get married in order to have a large community thereby encouraging polygamy, it also allows choice. It recognised family systems and gave women choices in negotiating their status and authority within the family (Sow, 2003). Choice could be determined by increased education

and employment (Amato et al, 2003). In obeying parental wishes the woman might have to forfeit her right to choice of husband. The Muslim woman had a right to choose her husband whether she is a virgin, a divorcee or a widow, even though for the virgin who is often a young girl, parental guidance in the choice of a husband was recommended but her consent was necessary (Yusuf, 2005; and Mitsunaga, et al, 2005).

In Muslim women in Mali in 2001, it emerged that marriages based on Islamic injunctions were similar to the situation found in Maiduguri. This was characterized by arranged marriages with the aim of getting a husband who was a 'good Muslim', related to the family and had the resources for the marriage. It was also observed that nowadays girls had a say in their marriages but in the past women rarely got the chance to have any say in their marriages (Callaway, B. and Creevey, L., 1994).

7.3.3.2 Infertility of the existing wife/wives

The relationship between polygamy and fertility has largely been conflicting (Anderton and Emigh, 1989; and Josephson, 2000). Some associate polygamy with lower fertility (Ukaegbu, 1977; Mosley et al, 1982; and Beck, 1982). Others find no difference between fertility of polygamous and monogamous women (Chojnacka, 1980; and Ahmed, 1986), while others found that fertility was higher for women in polygamous relationships (Bambra, 1999; and Arowolo, 1980). What seemed to be important in the influence of polygamy on fertility were the factors complicating the interrelationship e.g. marital disruption, divorce, widowhood and age difference between husband and wife (Anderton and Emigh, 1989).

The main object of exchange for a woman in marriage in Sub-Saharan Africa is a child (McClowskey and Larsen, 2005). Lack of social security systems in African countries lead to large families to ensure adequate workforce and care for the elderly. So a childless marriage was considered as no marriage at al (Loosli, 2004). Women were often blamed for not having a child and this usually led to stigmatisation and abuse.

If men did not have any erectile dysfunction they were often thought to be capable fathering children, any fertility problems were then ascribed to women (Leonard, 2002). This was because sex between a man and a woman who were legitimately united was expected to result in conception (Ibid). In traditional African society, giving the man a second wife who was younger than his first wife could lead to a presumptive diagnosis of male or female infertility such that if she failed to be pregnant, the man was presumed to be the cause of infertility (Giwa-Osagie, 2001).

In Maiduguri, many participants had pointed out infertility of the first wife to be a reason for polygamy (see section 7.2.3). If six months after any wedding the new wife was not pregnant, relatives of the husband would start asking questions as to why the delay in getting pregnant. The pressure from relatives was usually so great that if after a few years of marriage there was infertility polygamous relationship may be the end result even though this might not necessarily solve the problem. The relatives of the husband may blame the wife for the infertility. Such assumption may not follow any medical intervention for the infertility. They just assume that it is the fault of the woman only, and not the man. Sometimes the man may marry up to four wives with no children resulting from these marriages.

The implications of polygamous relationships in such settings though not specific for infertility was that:

- If the women who were divorced/widowed and remarried were infected, they may introduce HIV into a polygamous family thereby increasing the risk of the spread of the disease in the new family
- A woman who may be healthy may marry into a family that was infected thereby increasing individual risk to the new wife

7.3.3.3 Social status

Traditionally, polygamy was a kind of a mark for high status and a source of cheap labour (Nielsen, 2004). Political and social power enabled dominant men to accumulate women more than their fare share for sexual purposes and as menial servants (Collins, 1971). In their role for sex and reproduction, women were the object of concern that were valuable for men, worth accumulating and fighting for,

because women invest so much in their offspring (Nielsen, 2004). In almost all societies polygamy was virtually more among men in high social rank and those that were wealthy (Sanderson, 2001).

In Maiduguri, traditional titleholders and the rich had a large number of followers and hangers-on and providing hospitality for such people required helping hands (see section, 7.2.4). Many of such people went in for polygamy in order to handle such situations. That means most traditional rulers (District heads, village heads and ward heads); Islamic scholars as well as the rich and affluent tend to be polygamous.

The actions of such leaders may tend to be copied by those who could since they served as role models, hence Community leaders had a critical role to play in HIV/AIDS prevention and care because they are often highly respected medical, social and psychological advisers in their community. Their position enables them to either promote or hinder behavioural change as well as HIV prevention and care in general. Therefore, their involvement in a community's response to HIV is vital (UNAIDS, 2001).

7.3.3.4 Financial gains from the marriage

Many marriages might be conducted to get some kind of financial benefit. This could be on the side of the man or the woman. Young women could be married off to older, wealthier men by the women's parents for some financial compensation (Morrisson and Jütting, 2005). There were times in Maiduguri when men sought the hands of women in marriage just for the benefit of the money the women or their parents had. They would not mind the number of wives they had provided they got the money they were looking for (see section 7.2.4).

The same could apply for the women. That means they could get into a polygamous relationship if they stood a chance of getting financial gains from the relationship. In areas where social stratification was marked among men, if women were given the choice, most but the rich amongst them would prefer polygamy with a polygamous man to obtain resources for their children (Anderson, 2000).

However in some cases, women rarely saw polygamy to be beneficial, since if men took second or third wives, resources tended to be diverted to the point of not feeding and clothing children of the un-favoured wife (Bird and Shinyekwa, 2005). Thus polygamy could emerge as a serious source of conflict in some households contributing to the increased domestic violence and eventually family break up"(Ibid).

This indicates that being in polygamous relationship could either make women better by accessing wealth or worse off if the husband they got had nothing to give to the relationship. It was in such circumstances that women might enhance their economic status by engaging in extramarital relationship, potentially exposing them to the risk of getting HIV/AIDS.

7. 3.3.5 Political gains

Polygamy in African marriage context has been described to offer men political and economic alliance with a wide range of families (Bledsoe, 1990; and Tertlit, 2005).

In some situations marrying into a certain family might prove useful to some who might be politically inclined. Thereby enhancing interfamily alliance (see section, 7.2.4). A common scenario in Maiduguri is when children of famous politicians are handpicked for a marital relationship in order for them to continue a political legacy of the elders of such families.

7.3.3.6 Accessing cheap labour

Polygamy in Sub-Saharan Africa motivated men to have many wives who would have many children, and all would serve as a form of cheap labour. (Hayase and Liaw, 1997). In northern Nigeria, apart from being a source of labour, polygamy was also related to social reproduction by focusing on non-domestic production as a determinant of a woman's position in society because of the practice of seclusion that bared women from going out of their homes (Sen, 1981). Polygamous women in Africa have indicated that polygamy could be a good source of help in reducing individual workload (Anderson, 2000; Ware, 1979; and Meekers and Franklin, 1995).

The traditional leaders and Islamic scholars who were described in section 7.2.4 as having the tendency for marrying up to four wives and sometimes with concubines might do so in order to access cheap labour that would be provided by such women. Such marriages usually follow claims that Islam allowed the marriage of four wives with concubines. The concubines in this case cannot be described as wives but are bought like property. They do all that the regular four wives can do and may be more since they may not be hindered by any regulations restricting their access to the man based on the equity required for the wives. The man could have sexual relationship with such women whenever he wanted to. The children who may result from such relationship were his legal children.

Apart from being a source of sex for the man, such women did menial duties around the house that might be required of them more than would be from the four regular wives. In cultures that permit polygamy, the youngest co-wife did similar chores to the concubines, as they were required to care for elder co-wives, establishing a daughter/mother relationship (Forum on Marriage and the Rights of Women and Girls report May 2000).

7.3.3.7 Fear of getting HIV infection

HIV infection is driven by individual behaviours such that people had little control over their exposure to HIV infection (UNAIDS, 1999). Polygamy is a cultural factor that could be used by those in need to control their exposure as people could decide to be in polygamy/monogamous depending on their perceived need for women (Lawoyin and Larsen, 2002). Hence in Muslim societies, the rich, God-fearing people tend to opt for polygamy to satisfy their sexual virility (El-Battahani, 1998).

There were cases whereby the man may not necessarily require many women to satisfy his sexual desire but needed to have sexual release once in a while but was scared of casual sex for the fear of HIV infection. This was compounded by the dislike of the use of condom by some and strict religious belief by others. Such people included those who lived/worked away from their homes or had wives who might have had an illness that would not allow sexual relationship when required by the man.

For the man living away from his usual home, he might find it cheaper and easier marrying another wife rather than have casual sex or move his family to his work place or change his job. This might lead to a polygamous situation with its possible complications described in chapter 6 (section 6.1.1).

It appears the observation above would be suitable only for the benefit of men. There is no evidence of similar benefit for women in either literature or from this study.

7.3.4 Changes in polygamy over time

In Sub-Saharan Africa, polygamy as a type of marriage practice may have declined but as a value system the decline was accompanied by various forms of multiple and/or serial marriages (Hayase and Liaw, 1997).

This study has shown us that polygamy is not new in Maiduguri but has changed over time because the reasons for the polygamy have changed. In the past the reason people went in for polygamy was the need for a large labour force to use for agricultural purposes. Agriculture now is not the mainstay of livelihood of the people of Maiduguri.

The incidence of polygamy or monogamy was influenced by socio-economic status of individuals because economic resources are the basis for marital power (Bittman et al, 2003). The more resources a polygamous man has, the more likely he would continue to build up a polygamous family. But those who cannot afford it would remain monogamous. Even the polygamous could be monogamous if their economic status changed for the worse.

Others practised polygamy in an attempt to keep to their traditional values. In African traditions polygamy was the form of marriage within which children were born and was influenced by taboos against sexual intercourse following childbirth, during breast feeding and afterwards (Valentine and Revson, 1979). Attaching traditional values like insisting on virginity of the bride, early marriage for girls and involvement of parents in the whole process of marriage depended on the educational status of

those involved and how this interplayed with religion, tradition and economy (Mufune, 2003; and Amato et al, 2003).

Increasing popularity of non-marital cohabitation, increase in number of children born outside marriage, high rates of divorce and fall in rates of remarriage influenced the practice of polygamy (Ibid). Widespread polygamy was possible because of high difference of marriage age with women marrying early and men late (Goody, 1989). The rate of polygamy may be higher in urban settings because the wives could have separate houses except in the slums where polygamous wives may be forced to live in the same house (Goody, 1989).

7.3.5 The influence of HIV/AIDS on the practice of polygamy

There is very little data on the influence of HIV upon polygamy practice. In an adult cohort study over a 7-year (1989-1990) period in rural Uganda, Kamali et al (2000) assessed trends in HIV-1 infection rates and changes in sexual behaviour. They followed 5500 participants and found no change in the rate of polygamy. At the beginning of the study 12% were in polygamous unions and at the end of the study 14% were in polygamous union.

In fact some do not think that polygamy would change. For example Hackney (2002) reported on a project aimed at combating attitudes and behaviours that were of risk to people for HIV acquisition and to raise awareness and emphasise on HIV/AIDS prevention in the community in Malawi. This was an effort by community and church leaders. In setting priorities among categories of determinants of behaviour change they placed polygamy in the less important and less changeable group. This was because it is a cultural belief and was therefore unlikely to be changeable (Hackney, 2002).

The emergence of HIV infection in recent times has caused some changes in the process of polygamous marriage relationships in Maiduguri. Many participants said that the practice of polygamy increased the chances of getting HIV infection amongst individuals practicing it (section 7.3.6). There may be many people in the society with similar view. Because of this view, some participants thought that the rate of

polygamy had reduced. However there were some who thought that polygamy might be protective against HIV infection and so encouraged some people to go in for polygamous relationships (section 7.2.5). This indicates it is difficult to say which way polygamy would go.

Pre-marital screening for HIV often preceded the marriages that took place because of the fear of HIV infection. I have seen cases whereby the existing wives insisting on the screening for the disease before any new wives were brought in. In some cases even after the marriage following screening the first wives may insist on the use of condoms for any sexual encounter.

A key informant (participant IITL03 who is a traditional ruler/District head) informed me of a typical situation in Maiduguri that happened at the time of this study. It was the case of a man who wanted to get a second wife. He had gained consent from the first wife with the pre-condition that they all (the future wife, the current wife and the husband) go for a screening for HIV. Following a negative result the man went ahead to marry the second wife. Even with the negative test result the first wife refused having sexual intercourse with the husband even with a condom. Her reason was that she feared that the new wife was infected with the virus since she was a free woman for sometime before this marriage. The husband then decided to kill the second wife thinking that she had brought the dreaded disease into his home. At the time of this work the man was with the law enforcement agents for investigation. This incident reflected the fear associated with getting into polygamous relationships because of the fear of HIV infection, the use of the pre-marital screening as well as the power of negotiation that women could have in a polygamous relationship.

Chapter 8: Conclusions

8.0 Introduction

The study was about establishing whether the practice of polygamy was a problem to the society and a key factor in the spread of HIV/AIDS or not. The complexity of the issues at stake meant that it was difficult to ascertain whether the practice of polygamy was a problem or a solution to the spread of HIV/AIDS.

Before the study I had the notion that polygamy was a problem particularly in Maiduguri, Nigeria. On the surface one might see that engaging in polygamy was a risky relationship since it involved a way of life of more than two people. They might have different reasons for engaging in the relationship, but even those engaging in the relationship might have different perceptions of the practice and live it differently.

The study has however shown that it was the way that polygamous people lived their lives that could make polygamy a problem or a solution. What was obtained from the study was a perception by participants of polygamy as a problem or solution, which would require further study including statistical inferences to prove whether polygamy was indeed a problem or not. This would be difficult to decide since no two people are the same; more so the way they went about living their lives.

In this chapter I present the findings from the literature, findings from this study and my personal views and comments regarding the three study questions in sections 8.1, 8.2 and 8.3. Final conclusions and implications for policy and practice drawn from the thesis are given in section 8.4.

8.1 Findings from the literature regarding the research questions

Section 1.1.1 outlined the three main research questions. Due to paucity of literature about polygamy in Maiduguri, findings in literature were generally from other parts of Africa and these could be applied by inference to Maiduguri due to some similarities in the practice.

8.1.1 How does the practice of polygamy among the HIV positive individuals in Maiduguri compare to that in the general population?

There were no literature findings regarding this question. I would like to point out here that there had been no literature about Maiduguri in relation to all the three research questions. This was a significant gap in literature that this study was hoped to start to fill.

8.1.2 Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?

The association between polygamy and the spread of HIV/AIDS was found to be conflicting. In Kenya, Edwards (1994) early in the epidemic found that HIV/AIDS incidence was higher among polygamous tribal groups. But in 1988 in Ghana, Oppong found that HIV/AIDS incidence was lower among the population group that had high rate of polygamy. Also, Ferry et al (2001) found that polygamy was significantly high in Cotonou (a low HIV prevalence area) and Kissumu (a high HIV prevalence area). Thus the practice of polygamy had to interplay with certain factors that increased vulnerability to HIV infection to play any role in the spread of HIV infection.

Polygamy was identified as a factor in the spread of the virus because of poly-partner sexual relationships (McCloskey et al, 2005). Sexual networking as a result of cultural proscription against sex in pregnancy and breastfeeding led polygamous men in Nigeria to have unprotected vaginal sexual intercourse with extramarital partners (Lawoyin and Larsen, 2002). But Kapilani et al (2004) found people in Senegal believed that polygamy increased marital fidelity and was thought to be protective against HIV/AIDS. What was important therefore was not monogamy or polygamy, but fidelity or the practice of safe sex in extramarital relationships (Hackney, 2002, Gausset, 2001).

Early sexual debut; early age at first marriage and significant spousal gap was often tied to the practice of polygamy and were closely linked in most areas (ICRW, 2005;

UNAIDS/UNIFEM/UNFPA, 2004; and Caraël and Holman, 2001). Power differentials between husband and wife leading to a lack of negotiation for safe sex and young girls may be forcibly initiated into sexual relationship thereby making them susceptible to HIV infection (Population Council, 2005). Such relationships increased young girl's frequency of sexual intercourse, decreased condom use and eliminated their ability to abstain from sex (Clark, 2004).

However, high educational attainment improved knowledge of HIV/AIDS transmission and reduced chances of high individual risk behaviours like polygamy (Olayemi et al, 2002; Deji and Enuenwemba, 2005; and Najjumba-Malindwa, 2003). Disparity in educational levels between husband and wife because of inequality in education may cause subordinate wives to remain socially and materially dependent on their much older husbands who, as a sign of virility may be involved in polygamy (Benz, 2005).

8.1.3 What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

Section 3.2.3 outlines the social dimensions of polygamy in which functions of polygamy, attitudes towards it and value society attached to the practice of polygamy was presented. The practice of Polygamy was found to be more common in patrilineal kinship societies (Chojnacka, 1990; McCloskey et al, 2005 and Meekers, 1992) with the potential of diversifying marital situations by forming extended family structures (Stanley and Hirth, 1993 and Timaeus and Reynar, 1998). This played a huge role in supplying the large number of children needed by many African families (Makinwa-Adebusoye, 2000; Hayase and Liaw, 1997). The children and women were a source of cheap labour and the key to success for men, which made polygamy to be a cause and effect of large family size in the society (Timaeus and Reyna, 1998; and Chojnacka 1980).

In Sub-Saharan Africa, people's perception of polygamy, particularly amongst women varied (Meekers and Franklin, 1995). Some women were in favour of polygamous relationships (Ware, 1979 and Winterhalder and Smith, 2000)

particularly those with low levels of education and the tendency to follow traditional values (Ukwani et al, 2002; Timaeus and Reyna, 1998).

The practice of polygamy was maintained in Sub-Saharan Africa by religion and tradition. Islam that is practiced by a large segment of the African society endorsed polygamy through the verse [Qur'an 4:2,3], with strict guidelines that were hardly followed (Ali and Mills, 2001; Al-Krenawi, 1999). Christianity preached directly opposing opinion about polygamy by insisting on monogamy (Timaeus and Reynar 1998; Niedermayer and Saskatchewan, 2005). But many African churches allowed polygamous relationships in their congregation (Orubuloye, et al, 1997; Elbedour et al, 2002; and Kessel, 1998).

There was the 'down' side to polygamous relationships (see section 3.2.4). It was a potential source of marital distress, friction and disharmony (Fatoye, Adeyemi and Oladimeji, 2004). Jealousy and intense competition among the co-wives (Elbedour et al, 2002 and Al-krenawi, 1999) fuelled marital dissolution through divorce (Bird and Shinyekwa, 2003, Kassam, 1996; Von Struensee, 2005; Yusuf, 2005). Marital dissolution was often followed by remarriage into polygamous relationships (Hampshire and Randall, 2000). On the other hand, if they were not able to remarry, they sometimes ended up as CSW (Kassam, 1996; Oni, 1996).

Extramarital sexual relationships were found to be associated with the practice of polygamy (Lawoyin, 2000; Adeokun, 1994; Mholyi and Mholyi, 1992). In certain circumstances and with certain tribes in Africa, women would sometimes have affairs if their husbands were polygamous to avoid sexual deprivation (Kisekka, 1989; Segendo and Sekatawa, 1999). Extramarital relationships together with marital dissolution increase the possibility of lifetime sexual partners (Gatrad and Sheikh, 2004; and Gray, 2003). In fact in Sub-Saharan Africa, polygamy was one of the cultural practices through which society approved multiple sexual partnerships particularly for men (UNDP, 2002). This was because polygamy was seen as the type of marriage practice that would be attractive to demonstrate masculinity (Campbell, 1995).

8.2 Findings from this study in regard to the research questions

Findings of the study that answered the research questions in section 1.1.1 indicate the contribution of this thesis to specific areas of knowledge.

8.2.1 How does the practice of polygamy among the HIV positive individuals in Maiduguri compare to that in the general population?

Despite limitations of secondary data for comparison (see section 5.2.1) it was noted that

- Even though polygamy was found to have been a form of marriage practice in the HIV positive cohort, more were in monogamous than in polygamous relationships
- There was an association of high rate of polygamy in males but not in the females in the HIV positive cohort.
- Polygamy was rare below the ages of 11-20 years and over 50years (see section 5.2.2.2.2)
- In the study group there were more Muslims than there were Christians and all the polygamous in the study were Muslims. In the general population there were about the same proportion of Christians as there were Muslims (see section 7.2.2.3)
- There was non-reporting of widows among the HIV positive cohort suggesting the possibility of age difference between spouses with men dying and leaving their younger wives to be remarried
- There was poor or lack of utilisation of VCT services among the HIV positive cohort

8.2.2 Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?

The findings of this thesis regarding the role of polygamy in HIV/AIDS spread in Maiduguri that would add to knowledge include:

- Marital infidelity among the polygamous was likely to increase the acquisition and/or spread of HIV infection (see section 6.1.1.1). The reason for infidelity among the polygamous could be because it was difficult for the man to take care of many women in all aspects – financial or sexual.
- Gender relationships might have an influence in the role of polygamy in HIV infection (section 6.1.1.4). Most of the time men dictated the type of marriage relationships that they wanted to be involved in. Women on the other hand rarely had any choice, particularly if they were widows or divorcees.
- Sexual negotiation had a place in the determining the relationship between polygamy and HIV infection (section 6.1.1.4.4). The study revealed that women avoided sexual negotiation. This could be due to gender power differentials (sections 5.2.3.1; 6.2.5; 6.3.2.2 and 6.1.1.4.4). It was hardly practiced even by men despite the fact that many were aware of this practice (section 5.2.3.1.1). This could be misinterpretation of religious guidelines about the subject of sexual negotiation (section 6.1.2.3.2; 6.3.2.3 and 6.2.5).
- There was a perceived increase in HIV screening before polygamous marriages because most of them might have been married and then divorced or widowed (section 6.2.3.1.3)
- Condom use was absent or rare in Maiduguri amongst the HIV positive cohort (section 5.2.3.2) despite perceived high rates of polygamous relationships

8.2.3 What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

Despite the passage of time polygamy was found to be a major form of marriage practice in Maiduguri and northeast of Nigeria. It was so common that it was not clear if it was practiced at the same or higher rate with monogamy (see section 7.1). Mainly Islam, the major religion of the area, fuelled the practice of polygamy. Most polygamous relationships were in an attempt to fulfil Islamic religious injunction (see section 7.2.1).

Other than religion some other factors contributed to the acceptance and practice of polygamy (infertility, Status symbol in the society, to get financial gains, for Political

gains, to access cheap labour, widowhood, fear of HIV infection and acquired wealth). What was particularly noteworthy was that some men went into polygamous relationships specifically in an attempt to avoid getting HIV infection (see section 7.2.5).

8.3 Personal views and comments regarding the three study questions.

Knowledge of myths, beliefs and cultural conceptions or misconceptions about polygamy and HIV/AIDS is important in the study of such a relationship. Before doing this research I assumed I knew what people thought about the relationship between the practice of polygamy and the spread of HIV infection. This is because I am a Muslim having a general knowledge of the marriage practice in Maiduguri.

Ordinarily people in Maiduguri assumed that polygamy was a very common and widely practiced form of marriage. I had the opportunity to work in the SSHM, which brought me in contact with all groups of people (e.g. young, old, educated, and not educated) and their assumptions on polygamy/HIV/AIDS.

I was close to the community not only as a medical practitioner but had also travelled around all the 27 LGAs in the state and so had a general idea of the assumptions people had for the relationship between polygamy and HIV/AIDS since many people from these local governments did at some point come to settle in Maiduguri.

Therefore any researcher trying to replicate such a study may be limited by not having the idea of such assumptions or not having been exposed to assumptions of peoples of the different tribes that make up Maiduguri population

8.3.1 How does the practice of polygamy among the HIV positive individuals in Maiduguri compare to that in the general population?

Accessing relevant secondary source of data for use in this study was difficult because such data in relation to polygamy/monogamy and HIV/AIDS was almost non-existent in Maiduguri. This was a manifestation of the paucity of literature on the relationship between polygamy and HIV/AIDS. Consequently this made comparison of the data I

generated with any secondary data almost impossible. This situation would be hard to resolve except through the generation of further findings on marital practice and HIV and AIDS.

8.3.2 Do people believe that polygamy plays any role in the spread of HIV/AIDS in Maiduguri and what factors are important in their perception of polygamy's role?

Polygamy provides ground for the interplay of gender relationships, sexual behaviours and HIV risk moderated by culture, tradition and religion. Depending on the degree of interrelationship of these factors polygamy could promote or prevent the transmission of HIV infection. It can be described as a life process that is in reality a spectrum with the practice of polygamy at one end and lack of it at the other.

Factors that led to the practice of polygamy often exposed women to multiple sexual relationships as a result of polygamous marriages involving the divorced and the widowed. This is associated with the belief that women should be given chance to be married usually through polygamy as sexual relationship was expected to happen only in marriage. Also, increased marital instability led to marital dissolutions setting up a vicious circle of divorce and re-marriages. The promotion or protecting effect of polygamy on HIV/AIDS depends on which factors play the bigger role in an individual's life thereby dictating that person's sexual behaviour. These behaviours then dictate the possibility of preventing or acquiring HIV/AIDS.

Islam theoretically augments the practice of polygamy and in part accounts for the extent of the practice in Maiduguri. People tend to manipulate or interpret religious injunctions, traditional rites and societal norms in order to achieve their self-interest. But it might also be dependent upon the economic situation of those who wished to be polygamous. The greater the number of those that are economically capable of polygamy as described above, the higher would be the practice of polygamy, which in many cases would be considered as keeping to the tradition of their ancestors.

Women in Maiduguri were at risk of sexually transmissible diseases. This is because they lacked the ability to bargain for safe sex as a result of power/gender relationship. There is also a general lack of understanding of the subject of safer sex. Most assumed safe sex only meant the use of condoms, which also had different interpretations by different religions. All these would mean that there would be risky sexual relationships, particularly in polygamous relationships that involve more than two persons.

I believe it is not polygamy per se that is responsible for the spread of HIV/AIDS, rather it is the way polygamy is lived that will determine whether it will help in increasing or decreasing HIV infection.

8.3.3 What is the extent of and what are peoples' opinions and beliefs about the practice of polygamy in Maiduguri?

In Maiduguri monogamy is expected to be the norm while polygamy is for only those who could afford the practice because of their economic or social status. Even those entering polygamy for religious reasons should ideally follow guidelines that if interpreted correctly would favour monogamy. For example the verse of the Qur'an permitting polygamy emphasised that if one cannot be just to the many wives in polygamy, the best for that person is one, meaning monogamy.

From the experience of living in Maiduguri I am aware of the marriages that take place in Maiduguri particularly around the Muslim fasting period of Ramadan. This is characterised by many women entering marriage relationships just before the commencement of the fasting period. The marriage usually involved those that were divorced or widowed. Most of the marriages end just after the fasting. This is because in Maiduguri the end of fasting is associated with husbands giving their wives gifts in appreciation of the care they would have given them during the period of fasting. So after the acceptance of such gifts many of these women left their husbands and might remarry by the next fasting period (to the same or a different man). The marriages are usually into polygamous homes.

8.4 Final conclusions and recommendations

Based on the theoretical framework outlined in section 1.2 and the causal structure of HIV/AIDS-related vulnerability in figure 1.1, final conclusions of the thesis are drawn by looking at: marriage as an exposing factor to HIV/AIDS acquisition; Potentiality of acquiring HIV infection determined by socio-cultural nature of men and women and Capacity/ability of individuals and communities to contain the spread of the disease. The interrelationship between these factors is illustrated in the diagram below.

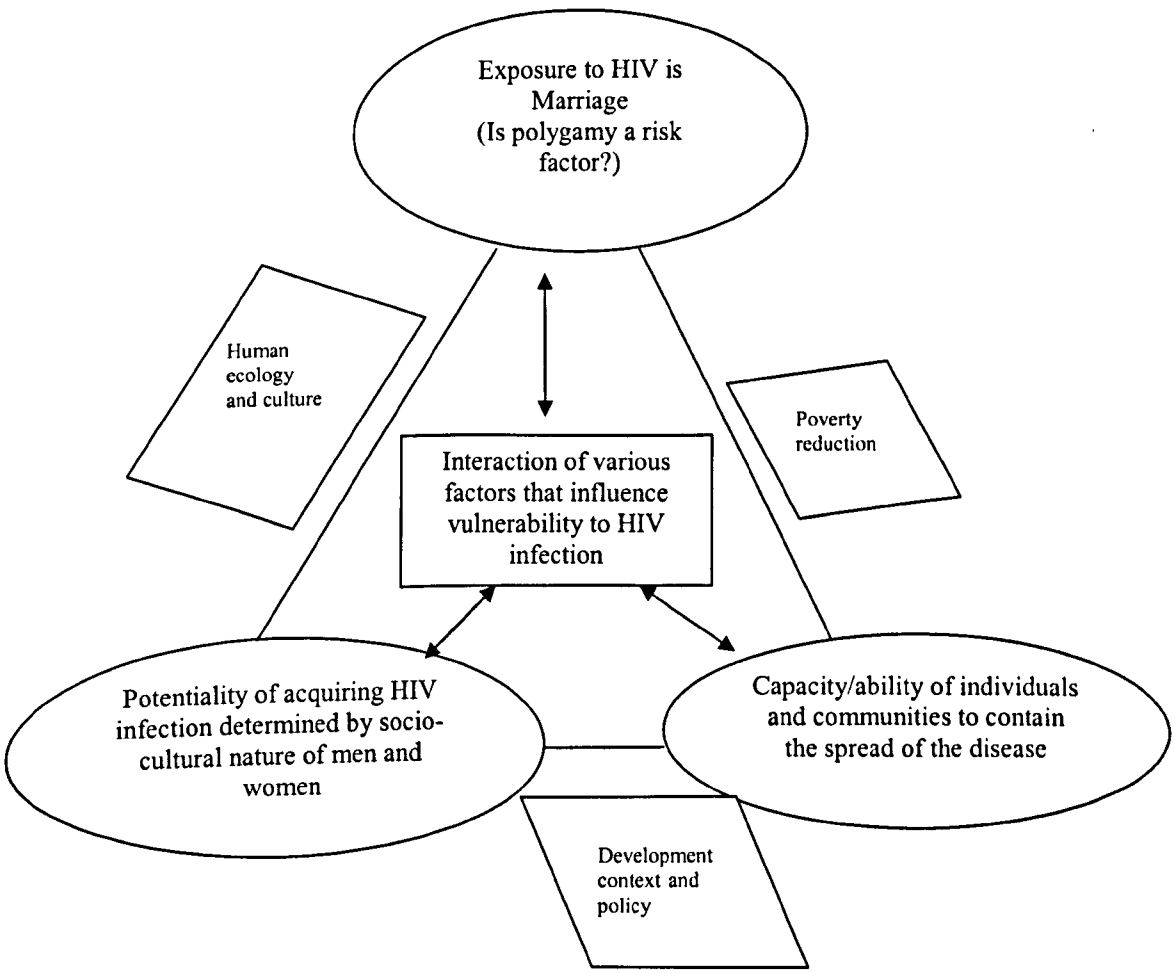

Figure 8.1: Triangle of causal structure adopted for HIV/AIDS vulnerability based on section 1.2 (self)

8.4.1 Marriage as an exposing factor to HIV/AIDS acquisition

Most societies and cultures view marriage as normal and the expected way of life (Cohen, 2004) and it plays a role in regulating sexual activity in most such societies

(Luke and Munshi, 2003). In many societies the social norm tends to favour monogamy and mutual fidelity in which women are expected to abide by the rule of monogamy and mutual fidelity while men are excused (Hirsch et al, 2002). The situation is not any different in Maiduguri as monogamy is expected to be the norm while polygamy is for only those who could afford the practice because of their economic or social status (section 7.2.4). Even those entering polygamy for religious reasons should ideally follow guidelines that if interpreted correctly would favour monogamy.

Polygamous behaviour has been associated with the spread of HIV/AIDS in Sub-Saharan Africa (Oppong, 1998). But I believe it is not polygamy per se that is responsible for the spread of HIV/AIDS, rather it is the way polygamy is lived that will determine whether it will help in increasing or decreasing HIV infection.

8.4.2 Potentiality of acquiring HIV infection determined by socio-cultural nature of men and women

Certain socio-cultural factors of men and women interplay to determine how polygamy is lived and how that affects the spread of HIV. These factors include: Religion, Gender, marital infidelity, Influence of the practice of sexual negotiation, socio-economic situation, upholding of traditional values and Level of education (Islamic or Western). This is diagrammatically described in figure 8.2

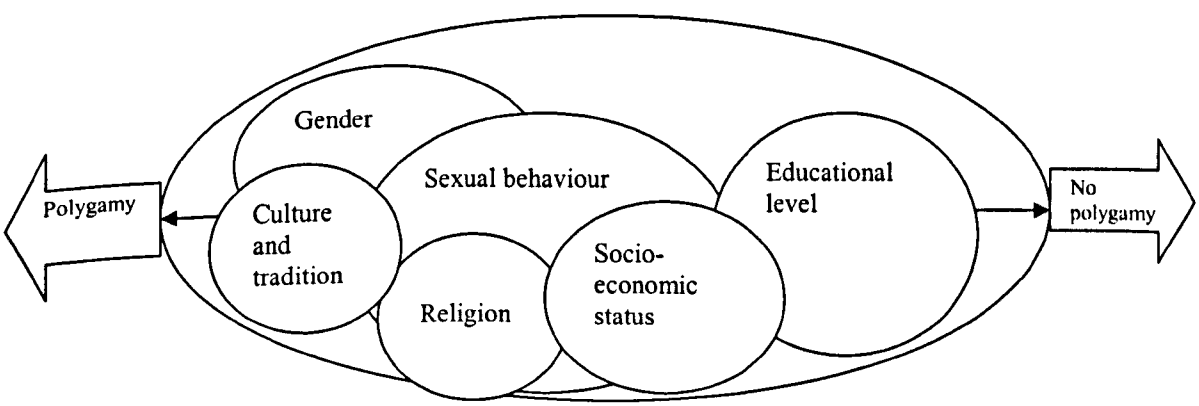

Figure 8.2: Interrelation of factors involved in the spectrum of living a polygamous life (self)

8.4.3 Capacity/ability of individuals, communities and institutions to contain the spread of the disease

Individual, community and institutions could deal with the possibility of polygamy playing a role in the spread of HIV/AIDS. This could be by: addressing fidelity in polygamous relationships, condom use in polygamy/monogamy, premarital screening for HIV, cultural approach to the prevention of HIV infection and co-opting of religious and traditional leaders into preventive programmes.

8.4.3.1 Addressing fidelity in polygamous relationships

Human cultures have the institution of marriage that induces fidelity between partners (Robillard et al, 2003). In many societies male multiple sexual partnership relationship is acknowledged and even encouraged; but female multiple sexual partnership was socially prohibited (ibid); polygamy was viewed as an avenue of increasing multiple sexual partnerships for men (see sections 3.2.3.3, 3.2.4.3 and 3.3.1).

It had been observed in Maiduguri that because of the advent of HIV some went in for polygamy in an attempt to seek for safety in numbers (see section 7.2.5). They kept the number of women they wanted at home instead of going out to seek for extramarital sexual affairs.

Since it would be difficult to dissuade people from what they saw as an obligation, particularly fulfilling religious obligation and observance of their traditional values, policies and programmes should be made in such a way that if people insisted on fulfilling their cultural and traditional values, they should not be discouraged. Instead programmes should be focused on how to encourage them to keep to marital fidelity. That would be taking people along, not imposing things on people without reasoning if they wanted particular information or not.

Ultimately, tackling infidelity would be something rather personal and individualised. How it will work will depend on the degree of interplay of the factors in figure 8.2. The religious approach may be very effective in avoiding marital infidelity. Approaching the religious angle of getting information to individuals could then be attempted through their various leaders. It would be easier approaching the Muslims since a great majority of the polygamous Muslims would have used their religion as a basis for entering the relationship. Messages relevant to the upholding of fidelity in marriage should be passed to them through their leaders. It would however be difficult to breach the condom issue to such people, as the leaders themselves would have to be addressed in that regard. There would be discussions/dialogue with these leaders on how to inform their followers of the subject of condom use.

Another possible way of approaching the issue of infidelity is by organising drama shows that could be shown on TV, broadcast on the radio and getting a drama troupe that could move around to the grass roots where TV and radio may not be affordable and entertain people where they live. This can be done since similar things have been done for family planning and immunisations in order to bring information close to people. However, making use of the information is entirely up to the public. And dependant on the degree of conviction of whatever message that would be presented to them.

The messages would be helpful if they projected the benefits of negotiations in sexual relationship and the reality that religions did not prohibit bargaining in marriage relationships. They should also enlighten the public that the use of condoms in situations when there use would be protective would not be against religious teachings, particularly Islam. Even though fewer Christians practiced polygamy the use of condom among them would be easier to encourage as from personal experience, a large proportion of Christians in Maiduguri already use condoms.

8.4.3.2 Condom use in polygamy/monogamy

Condom use is part of the ABC approach to the prevention of HIV/AIDS. This prevention package consist of "A", which stands for abstinence from sex or delay of sexual debut; "B", stands for being faithful (fidelity) or reducing number of sexual

partners and "C" stands for the correct and consistent use of condom (Christian connection for International Health and Medical Service Corporation International, 2006). Section 2.1.1.3.4 discusses condom use as an indicator of sexual behaviour pattern.

The form of partnership (polygamy/monogamy) determines condom use (Foss et al, 2004). Messersmith et al (2000) in Nigeria found that condom use with wives was perceived differently from condom use with CSW. With the wives condoms may be used to delay pregnancy, in case the husband had an STI or when having sexual intercourse during menstruation. This can be the starting point of approaching such group of people to encourage them to use condom not only while having sexual intercourse during menstruation but they should make it a habit to use the condom more often even with their wives.

Consistency of condom use depended on age of partners, level of education and religious practice (Zellner, 2003; and Bailey et al, 1999) and therefore dependent on the interplay of the factors outlined in figure 8.2. It was found to be low with increase in age, lower level of education and among those that were married (Zellner, 2003 and Lawoyin, 2004). Islam and the Roman Catholic Church do not condone condom use (Bailey et al, 1999) and this is important because of the association of the practice of polygamy among the Muslims and the apparent lack of condom use. This issue should be addressed by co-opting of Muslim leaders into HIV/AIDS prevention programmes (section 8.4.3.5).

Allen and Heald (2004) observed that their have been reports of divergent trends as to the effect of condom use as exemplified by findings regarding the effect of condom promotion on reducing HIV/AIDS acquisition in Botswana and Uganda. They found that in Botswana condom promotion provoked antipathy from church groups, local leaders, parents and chiefs. In Uganda on the other hand condom use was not promoted, instead they worked on social acceptance of sexual behaviour patterns (Allen and Heald, 2004).

The finding of this study confirmed that Muslims did not use condoms (section 5.2.3.2). In Maiduguri condom use was perceived to be a family planning method.

Any request other than this was usually associated with marital infidelity and those asking for condom use were then faced with mistrust and suspicion (section 6.3.3.2.3), which might lead to marital dissolution and divorce. This might then start off the cycle of divorce and remarriage and hence increase number of sexual partners.

Condom use among the HIV positive cohort was found to be rare (section 5.2.3.2) which might be due to their HIV status or religion, both of which might discourage condom use. Overall therefore condom use in Maiduguri was poor and needs to be addressed with the aim of increasing its use in the community. This would mean government and HIV/AIDS prevention officials finding ways of sending messages that would encourage the use of condom and also co-opting religious and community leaders in the prevention programmes (section 8.4.3.5). Community acceptance of condom use is important for the success of this component of HIV/AIDS prevention package (Ntozi et al, 2001). This would require intensive ways of tackling the interrelationship of polygamy, religion, condom use and HIV/AIDS.

8.4.3.3 Premarital screening for HIV

The need to identify interventions that would reduce or avoid HIV related risk behaviour is important in HIV prevention and control (Holtgrave et al, 1996). Acceptance of VCT (section 3.4.4) as a valuable tool for HIV/AIDS prevention had been observed but it had been slow to develop (Painter, 2001).

Here also there was a place for religious, traditional leaders of the community the acceptability and practice of VCT in Maiduguri (section 7.2.5). The community and government should work together in order to arrive at the best way possible to carry out VCT. Some participants had even suggested legislation enforcing VCT, particularly before marriage, and this needs further study and deliberation in order to come up with an acceptable way of using VCT.

What I wish to emphasise here however is that VCT before entering a polygamous relationship is only one point. It is advocated for use in determining the HIV status of those going in for the practice. I believe a more important issue is to live polygamous relationships in a safe way. If at the start of the relationship the HIV status were

determined to be negative it would be the duty of the couple and the other participants of the relationship to keep it that way. They would therefore need to be enlightened about the use of condom and maintaining marital fidelity. It would be helpful to have access to religious information regarding the way to live the polygamous life at the point of the VCT so that the participants of the practice become aware of the possibility of sexual negotiation and possible condom use in case of health risk that is allowed by religion.

8.4.3.4 Cultural approach to the prevention of HIV infection

Cultural and socio-economic conditions determine sexual behaviour patterns (Buvé et al, 2002). Section 3.4 describes cultural approach to prevention of the spread of HIV infection with emphasis on changing risky behaviour in section 3.4.3. Adoption of strategies that would prevent HIV spread may be hindered by cultural beliefs and practices relating to sexuality, fertility and gender (Piot and zevdi, 2002) also see section 2.1.2.2. Considering a cultural approach to preventing HIV infection would essentially require an attempt at addressing gender roles that enhance vulnerability to HIV infection (Buvé et al, 2002).

Since it has emerged from the study that mainly Muslims and followers of traditional religions practiced polygamy, the best practice of the cultures and traditions of these religion should be studied and improved upon to suit the prevention strategy for HIV infection. It would be difficult to completely change or stop any cultural practice that such persons valued. This again would require the participation of traditional and religious leaders in HIV prevention.

To start with policies aimed at educating women in the society would go a long way in reducing vulnerability to HIV infection. In Maiduguri it had already been shown that girls now could go to school and delay marriages until such a time they were ready for the relationship (section 7.2.2). They would therefore improve their level of awareness about any prevention messages that government would pursue. Since they would be future mothers they could impart their knowledge to their offspring thereby taking HIV prevention to a different level all together.

8.4.3.5 Co-opting of religious and traditional leaders into preventive programmes

Change in behaviour and attitude resulting in the reduction of HIV prevalence could be achieved by integrating community/religious leaders in national policies and programmes (Ngnie et al, 2004, Lagarde et al, 2000 and Goercke 2004). It would be more significant in Maiduguri since it is this group of people that mainly practice polygamy (section 7.2.4). Four distinct groups of traditional/religious leaders could be identified in Maiduguri [traditional heads of government (district heads, village heads and ward heads); Council of Ulama (comprising all the Muslim scholars heading different Islamic sects); leaders of Churches (from different denominations) and women opinion leaders].

8.4.3.5.1 Traditional rulers

These are the leaders that are closest to the community (section 4.1.2.1.2) and are also major practitioners of polygamy (section 7.2.4). They are the custodians of the culture and traditions of the societies they lead and are aware of any 'best practice' in the culture and tradition that should be adopted for HIV/AIDS prevention. They are also aware of practices that do not auger well for the acquisition and transmission of HIV infection.

They should therefore be among the first-line approach to cultural ways of preventing HIV infection. Most of the time they are included in the negotiations for and contracting marriages taking place in their domains. They give out documents signifying the acknowledgement of the marriage akin to marriage certificate and in these documents it is usually stated whether the marriage is polygamous or monogamous. Therefore, because of their level of involvement in the marriage processes, they could be educated to be involved in VCT before and within marriages since sometimes they counsel people whose marriages were in difficulty.

They should then use their position as counsellors to encourage people to use condoms and practice sexual negotiation in their marriage relationships.

8.4.3.5.2 Muslim leaders

These are also leaders that are close to the community in Maiduguri. They function hand in hand with the traditional leaders mentioned above. There are different Muslim sects in Maiduguri and so the leaders form an umbrella body called the Council of Ulama that is recognised by government and serves as the body that could be involved in any enlightenment programmes that have some form of religious implication.

Involving the Muslim council of Ulama for example will ensure that any policies and programmes that government wants to disseminate will reach their target easily because their followers would accept advice from them better than from any source. They should be implored to teach their followers the correct teachings regarding the permission given by Islam for the practice of polygamy. This would minimise incorrect interpretations or correct wrong interpretations that would likely lead to risk of HIV spread. This is because the permission is strict in the need to fulfil the condition of the man being just to all his wives (section 3.2.3.7).

Again the main problem here would be the use of condoms. Muslims, particularly their leaders in Maiduguri do not condone condom use, as the majority of them believed that it encouraged promiscuity (5.2.3.2). They however indicated that sexual negotiation is possible and encouraged in Islam. This avenue should therefore be explored. The leaders should be encouraged to inform their followers of the essence of sexual negotiation to make polygamy a safe marital relationship.

8.4.3.5.3 Church leaders

Leaders of all Christian denominations in Maiduguri come under one umbrella of Christian Association of Nigeria (CAN). Any information given through this body is sure to get to all Christians in Maiduguri (section 4.1.2.1.1). They are already recommending premarital VCT in all churches in Maiduguri and the use of condoms is not a problem for most Christians other than the Catholics.

What might be a problem to them is a situation whereby their members become polygamous despite outright prohibition of the practice in Christianity (section

3.3.9.1) and I have seen cases where Christians were involved in polygamy despite the fact that their initial wives informed their Church about that. In such circumstances I would like to suggest that the leaders counsel their erring members to use condoms, sexual negotiation and ensure fidelity in the relationship rather than expelling them from the church, as that might have no beneficial effect in HIV/AIDS prevention. Without proper counselling the practice may in fact spread the disease.

8.4.3.5.4 Women opinion leaders

Voices of women are heard through the umbrella association Council of Women's Societies in Nigeria (section 4.1.2.1.3). They comprise of different associations including religious groups (FOMWAN for Muslim women and Zumunta association for Christian women). Specific feminine messages regarding HIV/AIDS prevention could be introduced to all cadres of women through these women groups and their leaders who are educated in their various religions and would be able to impart the information as would be required of them.

This would be a huge challenge as most women are culturally groomed to be subordinate to their men. The effort might be easier if there were preventive measures that would involve changes in culture and tradition. It would also require the inclusion of men in whatever enlightenment programmes that would be developed so that they will help in empowering their women.

8.5 Suggestions for areas of further research

This thesis demonstrates the paucity of literature regarding the practice of polygamy and its relationship to the spread of HIV/AIDS, particularly in Maiduguri and the northeast of Nigeria. There is the need for scholars to look at that region of Nigeria for research on HIV/AIDS and polygamy. There were however specific areas that would require further research because they would have a place in the efforts at finding ways of stopping the spread of HIV infection:

- There was a perception that people were engaging in polygamous marriages as the way of avoiding the acquisition of HIV infection. There would be a need

to further study this in order to see how it would contribute to the prevention of HIV

- Sexual negotiation was prominent in the possible role of polygamy in HIV transmission. There is a need to study why the practice was negligible in Maiduguri
- Attitudes towards VCT among HIV positive cohort need to be further looked at because it was already playing a role in the changes of sexual behaviour that might be useful for HIV prevention

A useful method of looking at these would mean conducting surveys that would involve the general population in order to get a more representative sample for further comparison. The recruitment for research assistants should also consider gender differentials such that those requiring specific gender to interact with them should get the right researchers attending to them. This could help in getting some participants to respond better to questions on sensitive topics like sexual negotiation.

Appendices

Appendix 1: Checklist of areas addressed in Qualitative Interviews

- Types of Marriages practiced in Maiduguri – polygamy, monogamy, others
- The influence of religion on the types of marriages in Maiduguri – Islam, Christianity, Others
- Advantages of polygamy- for men and for women
- Disadvantages of polygamy, for women and men
- Advantages of monogamy, for women and men
- Disadvantages of monogamy, for women and men
- Changes of marriage practice through time
- Participant's own experience of polygamy/monogamy
- The influence of marriage practice on the spread of HIV/AIDS – polygamy/ monogamy
- Possible Recommendations

Appendix 2: Quantitative Research Questionnaire

QUESTIONNAIRE ON: Exploring The Links Between The Dynamics Of The HIV/AIDS Epidemic And The Practice Of Polygamy In Maiduguri, Borno State Of Nigeria.

CODE NUMBER: .....

INTRODUCTION:

My name is Dr Abdullahi Saddiq. I am a student of the Liverpool, School of Tropical Medicine in the United Kingdom, carrying out a study that will lead to a degree of PhD in Tropical Medicine. I am working to explore the role of polygamy and marriage practice on the spread of HIV/AIDS in Maiduguri.

I would therefore be grateful if you could respond to a questionnaire that will help in giving answers that will assist in pointing out the relationship between HIV/AIDS and polygamy / marriage practice.

The questions will touch on your marital status, partners and your own opinion about the topic. Your answers will be treated with confidentiality and will be used in such a way that it will not be traced to you. You are free to withdraw from the study at any time and you are free to refuse to answer any question with no effect whatsoever on the quality of care you will get.

SECTION A: PERSONAL DETAILS

1. Age (years): a.11-20 ... b. 21-30 ... c. 31-40 ... d. 41-50 ... e. 51 and above...
2. Date of birth (dd/mm/yy)..... 3.Sex: a. Male... b. Female...
4. Marital status: a. Married... b. Divorced... c. Widowed... d. Never married... e. Living with a partner.....
5. Religion: a. Islam... b. Christianity..... c. Others (specify).....
6. Tribe: a. Kanuri ... b. Shuwa Arab... c. Babur-Bura... d. Marghi... e. Hausa... f. Fulani... g. Others (specify).....
7. Occupation: a. Public servant... b. Private sector employed... c. Self-employed... d. Other (specify).....

SECTION B: MARITAL HISTORY

8. Marital status: a. Currently Monogamous... b. currently polygamous...
   c. Ever been polygamous.... d. Ever been monogamous... e. never married (go to section c) ... f. currently divorced... g. currently widowed...
9. If polygamous, what was the reason?
   a. To fulfil religious obligation... b. Desire for more women.....
   c. To get economic benefit..... d. To get political benefit.....
   d. As a status symbol..... f. Other (specify).....
10. Number of marriages ever had: a.1... b. 2... c. 3... d. 4... e. ≥ 5
11. Current number of spouse/co-spouses: a. none... b. 1... c. 2...d. 3...e. 4...f. ≥ 5...

12. What is (are) the age(s) of the spouse(s): a. Spouse 1 ... b. Spouse 2 ... c. Spouse 3 ... d. Spouse 4 ... /don't know
13. Have you ever been involved in a divorce? Yes... /No (proceed to question 15)...
14. If yes, how many times? ...
15. Have you ever been widowed? Yes... /No (proceed to question 17)...
16. If yes, how many times? ...
17. Have you ever been married to a widow/widower? Yes... /No...
18. Have you ever been married to a divorcee? Yes... /No...
19. What is your current position in the home (hierarchy)
a. Only wife... b. First wife.... c. Second wife ... d. Third wife ... e. Fourth wife ...
f. Others (specify).....

SECTION C: PRACTICE OF SEXUAL NEGOTIATION/BARGAINING IN THE MARITAL RELATIONSHIPS

20. What is the possibility of practicing Sexual negotiations and bargaining in the marriage relationships?
a. Sexual Negotiation is not possible... b. Sexual negotiation is possible but not practiced... c. Sexual negotiation is possible and practiced.... d. Does not know about it (go to section D).
21. Can those in monogamous relationships ask for the use of the condom? Yes.../No... /don't know...
22. Can those in polygamous relationships ask for the use of the condom? Yes... /No... /don't know
23. In what type of marriage practice is sexual negotiation most likely to be practiced?
a. Polygamy... b. Monogamy.... c. Polygamy and monogamy (same for both)....
d. Other (specify)...

SECTION D: PRACTICE OF SAFE SEX:

24. Apart from your spouse(s), do you have a partner? a. Yes.... b. No... c. not applicable
25. Do you know if your partner has other partner(s)? a. Yes... b. No... c. Not applicable
26. If yes, how many... a. one... b. More than one... c. don't know...
27. Do you use a condom with your spouse(s)? a. Yes.... b. No... c. not applicable
28. Do you use a condom with your partner?
a. Yes.... b. No... c. Not applicable
29. Have you ever been treated for an unusual vaginal/urethral discharge? Yes.... /No...
30. Was (were) your spouse(s) ever treated for an unusual vaginal/urethral discharge?
a. Yes.... b. No.... c. not applicable... d. don't know
31. Are you aware of HIV/AIDS screening before marriage? Yes.... /No....
32.Were you ever screened for HIV/AIDS before marriage(s)?
a. Yes... b. No... c. Not applicable
33. Are polygamous marriage relationships more likely to increase the spread of HIV/AIDS than monogamous ones?
a. Yes... b. No... c. don't know

34. Are monogamous marriage relationships more likely to increase the spread of HIV/AIDS than polygamous ones?
a. Yes... b. No... c. don't know
35. Is there any difference between polygamous and monogamous marriage relationships in the spread of HIV/AIDS?
a. Yes... b. No... c. don't know
36. Are extramarital relationships more likely to increase the spread of HIV/AIDS than polygamy/monogamy?
a. Yes... b. No... c. don't know

SECTION E: OTHER POSSIBLE CAUSES OF HIV/AIDS:

37. Have you ever been transfused blood/blood products? Yes.... /No...
38. Were you ever treated with equipment used for other people without sterilisation?
a. Yes... b. no... c. don't know
39. Have you ever had any traditional treatment requiring the use of sharp objects?
a. Yes... b. No... c. don't know
40. Do you patronise traditional/local manicure/pedicure? Yes.../No...
41. Are you on any medication/drug requiring the continuous use of injections? Yes.../No...
42. If yes, do you use sterilised syringes and needles?
a. Yes... b. No... c. don't know

SECTION F

Consent to access the confirmatory test

- Given...
- Denied...

Appendix 3: Invitation notice to a group discussion

Dear Sir/Madam,

RE: INVITATION TO A GROUP DISCUSSION

I am a student from the Liverpool School of Tropical Medicine in the United Kingdom. I am carrying out a study that will lead to the award of PhD in Tropical Medicine. I am working to explore the link between how people believe and act towards HIV/AIDS epidemic and polygamy/marriage practice in Maiduguri. I would therefore appreciate it if you could join in a group discussion. The discussion will last about sixty minutes. It is scheduled to take place at ..... by .....

The discussion will reflect on polygamy/marriage practice in Maiduguri, who practices polygamy and why, it's changes through time, and your own personal opinion and experience. The outcome of the discussion will be kept confidential and will be used in a way that no one will be able to say that it was you who made the contribution. You are free to withdraw from the study at any point without any consequences whatsoever.

Thank you,

Yours sincerely,

DR ABDULLAHI SADDIQ

Appendix 4: Invitation letter for participation in an in-depth interview

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Dear Sir/Madam,

RE: INVITATION LETTER FOR PARTICIPATION IN AN INDEPTH INTERVIEW.

I am a student from the Liverpool School of Tropical Medicine in the United Kingdom carrying out a study that will lead to the award of PhD in Tropical Medicine. I am working to explore the link between how people believe and act towards HIV/AIDS epidemic and polygamy/marriage practice in Maiduguri, Borno State.

I would therefore appreciate if you could answer questions that would find out more about the topic. The session will last about sixty minutes and will take place at your convenience.

The questions will reflect on the practice of polygamy in Maiduguri, its relationship with the spread of HIV/AIDS, who practices polygamy and why, and your own personal opinion and experience. The answer you will give will be kept confidential and they will be used in a way that no one will be able to tell it was you who gave those answers. You are free to withdraw from the study at any point and can refuse to answer any question without any consequences whatsoever.

Thank you,

Yours sincerely,

DR ABDULLAHI SADDIQ

Appendix 5: Consent form for focus group discussion

CONSENT FORM FOR FOCUS GROUP DISCUSSION

I agree to participate in a focus group discussion being conducted by Abdullahi Saddiq. I realize that I will take part in a sixty-minute group discussion and that I may decline to discuss any subject if I so wish. All information I will provide will be held in confidence and I will not be identified in the thesis. I understand that I may withdraw this consent at any time by opting out of the discussion at any time.

Name: .....

Signature: .....

Date: .....

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