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**Sexual and Reproductive Health Services for
Young People in Kenya and Zambia**

Providers' attitudes and young people's needs and
experiences

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ABSTRACT

Background: Unintended pregnancy, abortion and STI, including HIV are common sexual and reproductive health problems among young people in Kenya and Zambia. Yet, the reproductive health services are underutilised. Nurses and midwives are key providers in the promotion young people's sexual and reproductive health in Kenya and Zambia.

Aim: The overall aim was to describe and explore young people's sexual and reproductive health needs and experiences and to describe health providers' attitudes related to those needs as a basis for strengthening sexual and reproductive health services for young people in Kenya and Zambia.

Methods: The studies were conducted between 2001 and 2005 in Kisumu and Nakuru, Kenya and Kitwe and Ndola, Zambia. Nurses' and midwives' (n= 707) attitudes were studied in a cross-sectional study using an attitudinal questionnaire (I). Self-generated questions were used to explore Zambian secondary school students' (n= 716) needs regarding sexuality and reproduction (II). Young clients' (n= 195) experiences of and preferences for sexual and reproductive health services were studied using exit interviews (III). A pilot intervention was conducted with one intervention group (28 health providers) and one control group (16 health providers). Reflective thinking methods were used to sensitise health providers in the intervention group in adolescent sexual and reproductive health matters. Health providers' attitudes toward young people's sexual and reproductive health issues were measured before and after the intervention at both the intervention and control clinics (IV).

Results: Nurses and midwives disapproved of adolescent premarital sex, masturbation, contraceptive use and abortion, but were at the same time somewhat prepared to provide sexually active adolescents with contraceptives. Nurses and midwives who had received continuing education showed a tendency toward more youth-friendly attitudes (I). Young people's sexual and reproductive health is vulnerable. This was reflected in the two emerging themes 'growing up in silence' and 'being caught between norms and values and reality of life'. The questions revealed that the young people have inadequate knowledge even about basic human reproduction and that they cry out for support and guidance regarding pregnancy, abortion and love. Boys and girls disapproved of sexual activity often based on religion but they also had difficulties in coping with emerging sexual feelings (II). Young clients' experiences of the care provided were, in general, good. Preferences for service were related to respectful attitudes, being attended by a provider of the same sex, being asked questions and being examined during the consultation. There was also a wish for dedicated services for young people (Kenya) and staff trained in youth-friendliness. The open-ended question showed that some parents disapprove of reproductive health service for young people (III). Prior to the pilot intervention, disapproving attitudes among health staff were mainly related to abortion, masturbation and premarital sex in both the intervention and control group. At the second assessment, the intervention group tended to have more approving attitudes related to condom use and masturbation, whereas no major changes were seen in the control group. Health providers reported more youth-friendly attitudes toward boys' sexuality compared to girls' sexuality and this even increased after the intervention (IV).

Conclusion: Culture, religion and gender influence attitudes around sexuality and make young people vulnerable to sexual and reproductive health risks. Training in adolescent sexual and reproductive health could be helpful for health providers to deal with adolescent sexuality. Young people's own views as well as parents and the leadership in health authorities need to be considered for the strengthening of the sexual and reproductive health for young people.

Keywords: Adolescent sexual and reproductive health, attitudes of health professionals, religion, reproductive health services, Kenya, Zambia.

LIST OF PUBLICATIONS

The studies will be referred to by their Roman numbers I-IV.

- I. Wärenius L, Faxelid E, Chishimba P, Musandu J, Ong'any A, Nissen E. Nurse-midwives' attitudes towards adolescent sexual and reproductive health needs in Kenya and Zambia. *Reproductive Health Matters* 2006;14:119-128.

- II. Wärenius L, Odberg Pettersson K, Nissen E, Höjer B, Chishimba P, Faxelid E. Vulnerability and sexual and reproductive health among Zambian secondary school students. *Culture, Health & Sexuality* 2007;9:533-544.

- III. Wärenius L, Faxelid E, Nissen E, Chishimba P, Musandu J, Ong'any A, Rubenson B. Young peoples' experiences of and preferences for sexual and reproductive health service in Kisumu, Kenya and Kitwe, Zambia. *Submitted.*

- IV. Wärenius L, Gottvall K, Nissen E, Chishimba P, Musandu J, Ong'any A, Faxelid E. A pilot intervention in Kenya and Zambia intending to sensitise health providers toward young peoples' needs in relation to sexual and reproductive health. *Submitted.*

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Studies I-IV

LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
DHMT	District Health Management Team
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
ICPD	International Conference on Population and Development
MoH	Ministry of Health
NGO	Non-Governmental Organisation
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infections
UK	United Kingdom
VCT	Voluntarily Counselling and Testing
WHO	World Health Organization

DEFINITION OF TERMS

<i>Adolescents</i>	A person between the ages 10-19 years (WHO, 1986).
<i>Attitudes</i>	Derive from our values and knowledge and the feelings attached to a phenomenon which in turn influences our behaviour (Oppenheim AN, 2003).
<i>Culture</i>	Culture can be defined as the behaviours, ways of life, values and norms of a population that are passed down from generation to generation (UNESCO, 2002).
<i>Gender</i>	Is the socially defined roles, responsibilities and behaviours assigned to men and women in a given culture, location, society and time (WHO, 2003).
<i>Human Development Index</i>	A standard measure to determine the development of a country related to life expectancy, child welfare, literacy, education and standard of living. It is used to determine whether a country is a low-, middle- or high income country (UNDP, 2006).
<i>Morality</i>	A code of conduct in matters of right and wrong, whether by society, philosophy, religion, or individual conscience (Oppenheim AN, 2003).
<i>Norms</i>	Norms are rules for behaviour in specific situations and vary across cultures and time. Norms derive from values that identify what should be judged as good or bad (Oppenheim AN, 2003).

<i>Reproductive health</i>	Is a state of physical, mental and social well-being in all matters relating to the reproductive system and functions at all stages in life (UN, 1995).
<i>Sexuality</i>	Is a central aspect of humanity and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction (UN, 1995).
<i>Sexual and reproductive health care service</i>	Includes prevention, diagnosis and treatment as related to STI and contraceptive service and counselling, pre- and postnatal care, delivery care, treatment of STIs, safe abortion and post abortion care, and access to information and education to the above mentioned issues (UN, 1995).
<i>Sub-Saharan Africa</i>	Encompasses 42 countries, including six islands off the African continent; south of Sahara (PRB, 2001).
<i>Values</i>	Refer to a deeper level of attitudes and touch upon a person's fundamental philosophy of life. Values may vary across people, cultures and are general guides to our behaviours (Oppenheim AN, 2003).
<i>Young people</i>	Persons between 10 to 24 years (WHO, 1986).
<i>Youth</i>	A person between 15-24 years (WHO, 1986).

PREFACE

The idea for this project emerged from an international network consisting of nurses and midwives from Europe and Africa. One problem identified by the African participants was that few young people visited the health centres for their sexual and reproductive health despite their great needs. As the key providers of sexual and reproductive health, the nurses and midwives were curious to find out about their own attitudes related to young people's needs. Why Kenya and Zambia? Aside from the prevalent sexual and reproductive health problems among young people, Dr Faxelid (the coordinator of this project) had long research experience from these two countries, where there were also established research teams.

My own background is as a public health scientist and with special interest in sport physiology and nutrition. Another great interest of mine is Islamic culture, which has brought me to several countries in the Middle East and central Asia. The idea to continue for a PhD started to grow during my Bachelor thesis, but it was by chance that I ended up in the field of sexuality and reproduction and in Africa. I applied and was accepted as a student at the National Research School in Health Care Sciences at Karolinska Institutet. There I met Dr Faxelid and was introduced to this ongoing project in Kenya and Zambia.

This research project has been carried out in collaboration between IHCAR (Division of International Health) at the Karolinska Institutet, Sweden, the Kitwe School of Nursing, Zambia, and the School of Nursing Sciences, University of Nairobi, Kenya.

BACKGROUND

ADOLESCENT HEALTH FROM A GLOBAL PERSPECTIVE

Adolescents comprise of about 20 percent of the world's population, of whom 85 percent live in low-income countries (PRB, 2000). Adolescent boys and girls could be seen as gateways to health since behavioural patterns acquired during adolescence tend to last throughout adult life. This age group has been neglected since they are considered relatively healthy as compared with infants and adults. There has, however, been an increasing recognition that adolescents are a distinct group subjected to special health related vulnerabilities (Dehne KL and Riedner G, 2001).

Globally, the major causes of morbidity and mortality among young people include road accidents, suicide, drug use, including tobacco use, and sexually and reproductive ill-health (Blum R and Nelson-Mmari K, 2004). The sexual and reproductive health needs vary substantially between regions and sexes, but mostly they are related to early and unprotected sex. Unintended pregnancy, induced abortions and STIs, including Human Immunodeficiency Virus (HIV) among adolescents are reported globally (Bearinger LH et al., 2007). Worldwide, the highest average birth rate is found in sub-Saharan Africa at 143 per 1000 among girls aged 15-19, which is very high compared with other regions, such as Latin America (78/1000), North Africa and the Middle East (56/1000), and Europe (25/1000) (Bearinger LH et al., 2007). Not all pregnancies are wanted and many girls resort to unsafe abortions, which often result in future reproductive ill-health or even death. Almost 14 percent of all unsafe abortions in low-income countries occur in young women under the age of 20 years (WHO, 2004c). Although the age patterns of unsafe abortions differ substantially between regions, the proportion of girls in the ages 15-19 in sub-Saharan Africa who have resorted to unsafe abortion is proportionally higher than in any other region (Shah I and Åhman E, 2004; WHO, 2004c). Girls as compared to boys are more affected by the consequences of unprotected sex both in terms of reproductive ill-health, social stigma and future career prospects. While pregnant girls often are expelled from school, the boy responsible for the pregnancy is often allowed to continue his education (Nzioka C, 2001). Another consequence of unprotected sex is STIs. Since the 1990s, the prevalence of STIs has continued to rise in most countries, including low-income countries (WHO, 2006). The largest number of STIs occur in south and southeast Asia followed by sub-Saharan Africa, Latin America, and the Caribbean (Dehne KL and Riedner G, 2005). Globally, the largest proportion of STIs is believed to occur in people younger than 25 years. The

highest global HIV prevalence among 15-24 year-olds is found in southern Africa. In central Asia and eastern Europe, the prevalence of HIV is rising rapidly because of injection drug use, and is, to a lesser extent, due to unsafe sex. In sub-Saharan Africa, the prevalence of HIV is higher among girls aged 15-24 years compared to boys in the same age (6.9 vs 2.1%), while the opposite is true especially in eastern Europe and central Asia, where 1.3 percent of boys compared to 0.6 percent of girls in this age group are HIV infected (UNAIDS, 2004).

DEFINING ADOLESCENCE

International organisations such as World Health Organization (WHO) and United Nations (UN) refer to the period between childhood and adulthood as adolescents (the ages of 10-19), youth (15-24 years) and young people (10-24 years). The target group of this thesis is inclusive of all these age categories and all three terms adolescents, youth and young people will therefore be used.

Adolescence is more than merely an age span. It is a dynamic period in life with both great opportunities and risks. This is a transition period from childhood to adulthood, which involves biological, physical and intellectual changes. It is also a time of expanding horizons, self-discovery and emerging independence (Magnussen D and Allen VI, 1983). Worldwide, this age group may experience similar physical and emotional changes, but how this period in life is understood varies between cultural contexts (Dehne KL and Riedner G, 2001; Magnussen D and Allen VI, 1983). In some countries adolescence is a well-established concept, while in others the concept is rather new or just emerging. Many western countries use legal markers for the passage to adulthood. Thus, there is a legal minimum age for consensual intercourse and marriage, often set at 16, 18 or 21 years. In many African societies, the child 'becomes adult' after initiation rites followed by marriage and expected childbearing (Caldwell JC et al., 1998). These traditional socialisation processes into adulthood have altered during the last few decades. Today, the emergence of adolescence is associated with longer schooling and later age at marriage, often leading to premarital sex. The new lifestyles of young people are often disapproved by adults and religious denominations (Friedman HL, 1999). These changes also mean that more young people are in need of sexual and reproductive health services and information.

ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS ON THE INTERNATIONAL AGENDA

A milestone regarding young people's health was the International Conference on Population and Development (ICPD), which was held in Cairo in 1994. For the very first time, young people's right to sexual and reproductive health information and services was put on the international agenda. Consequences of reproductive health, gender relations as critical determinants for reproductive health decision-making and sexual behaviour, and the social context was given a much more prominent place compared to previous UN conferences. Population questions have always raised controversy, but this conference was in particular contentious as it addressed issues such as gender relations, sexual education and contraceptives for unmarried youth, and abortion (UN, 1995). In 1999, the UN General Assembly convened a special session, ICPD+ Five, to review the progress toward meeting the ICPD goals. Despite the international agreements, the review revealed that young people are still grossly underserved regarding sexual and reproductive health information and services in many countries (Girard F, 1999).

SEXUAL AND REPRODUCTIVE HEALTH SERVICES FOR YOUNG PEOPLE

Health service is a vital element in promoting good health through its preventive and curative care. More specifically, sexual and reproductive health service encompasses maternal and child care, family planning, including infertility services, abortion, and STI/HIV service and care, as well as information and counselling (WHO, 2004b). In many low-income countries, reproductive health services have traditionally been for married and older women. Young unmarried people were not expected to be in need of reproductive health services. Younger women were expected to become mothers soon after marriage and, hence, they were not considered for contraceptives. If adolescents ever used such services they were subsumed in maternal and child health care (Hughes J and McCauley AP, 1998; Senanayake P et al., 2001).

As a response to the ICPD, the so-called youth-friendly services or youth corners were initiated in several countries. However, such services continue to stir controversy and opposition by religious groups, and many governments and Ministries of Health, particularly in low-income countries, have been slow to respond to the international agreements. Therefore, youth programmes are mainly run by international non-

governmental organisations (NGOs) and when or if they withdraw the youth-friendly services often stop functioning (DeJong J, 2000).

Health services should be friendly to everyone, including young people. The term youth-friendly refers to the idea that service should be relevant and should be provided with sensitivity. For instance, if a sexually active adolescent asks for contraceptives and is denied protection and told to abstain, the service is neither relevant nor friendly (Arulkumaran S, 2001; Senderowitz J, 1999). WHO has put minimum conditions for youth-friendly services, such as to be situated where young people feel comfortable to obtain reproductive care, e.g. at separate clinics or integrated with existing service. Further conditions are that services should be affordable, should provide basic range of services including information on sexuality and reproduction, should offer privacy and confidentiality, and should have non-judgmental health workers who are trained in youth-friendliness (WHO, 2002a).

Health providers in the sexual and reproductive health field

Nurses and midwives are by number, education, and training in a unique position to promote sexual and reproductive health care services. An international definition of the work of a nurse and midwife was adopted in 1992 by the WHO, the International Federation of Gynaecologists and Obstetricians (FIGO), and by the International Confederation of Midwives (ICM) (WHO, 1992). By this definition the role of the midwife compromises reproductive health in a lifecycle perspective. Midwifery competence includes care during normal pregnancy, delivery, and the postpartum period. Other important tasks of the midwife and nurse are sexual and reproductive health information and contraceptive counselling and prescription. In much of Africa, nurses also perform midwifery tasks (WHO, 2004a).

Education and training are important components in the provision of high-quality care and for preventing reproductive ill-health. In many western countries, the nurse-midwifery education is guided by problem-based knowledge and practice, which is meant to equip the students with the skills to meet with sensitivity the needs of clients having varying background (WHO, 2004a). Since the needs will change over time, it is important to revise the curricula. The practice in many African medical and nursing schools, including those in Kenya and Zambia, is learning by rote, with little opportunity for students to question and explore. Furthermore, pre-service training due to lack of funding often fail to fulfil the curriculum intentions for field practice outside

the hospital (Stark R et al., 1999; University of Natal, 2002). Not until recently, adolescent sexual and reproductive health was added as a topic of its own into the nurse curricula in Zambia (MoH Zambia, 2000).

Human resources are the cornerstone of a health system. Without a strong and skilled health workforce, the public health sector cannot deliver adequate and appropriate care to its population. Over the past few years, the human resource situation in many African countries has worsened and reached a point of severe crisis and inability to provide even basic health services (USAID, 2003). Many health professionals lack motivation because they are poorly paid, poorly equipped, and have limited career opportunities. Due to this situation a substantial number of health professionals migrate to countries that offer better working conditions and salaries, such as the United Kingdom (UK), a popular destination for African migrant health workers (Kombe G et al., 2005; van Lerberghe W et al., 2002). WHO has put a standard of 1 doctor per 5000 population. Although Kenya meets this standard, there is severe geographical misdistribution to the advantage of the cities. In Kenya, the ratio of nurses is 1 per 1000 population. In Zambia, the provider-to-population ratio is higher than in Kenya. Of the 600 doctors who completed their medical training in Zambia between 1978 and 1999, only 50 are left working in the country. There is 1 doctor per 20,000 population and the nurse-to-population ratio is 1:1000 (USAID, 2003). The picture of the human resource crisis becomes very clear when comparing to the UK, where many of the Zambian health professionals migrate. In the UK, there is 1 nurse per 110 population (Eastwood J et al., 2005).

THE KENYAN AND ZAMBIAN CONTEXT

Kenya is situated in east Africa and Zambia in the southern part of Africa. The study sites Kisumu and Nakuru (Kenya) and Kitwe and Ndola (Zambia) are marked in Figure 1 and 2.

Country profile



Figure 1. Map of Kenya.

Kenya gained independency from the UK in 1963. The Kenyan economy performed well from the 1960s to early 1970s, but thereafter started to decline. The economic downturn led to ethnic conflicts. Today, Kenya is a poor country and is ranked 148 out of 177 in poverty level, according to UN Development Programme's (UNDP) (2006) Human Development Index (HDI). The largest ethnic groups in Kenya are Kikuyu, Luo and Kalenjin. English is the official language. Around 80 percent of people adhere to Christianity, ten percent to Islam and the rest to traditional beliefs. Like other African countries, many Kenyans practice a mix of traditional beliefs and Christianity (CIA Kenya, 2007).



Figure 2. Map of Zambia.

Prior to the independence in 1964, Zambia was under British colonial rule and known as Northern Rhodesia. There are more than 70 ethnic groups, of which Bemba is one of the largest. As in Kenya, English is the official language. The predominant religion is Christianity (75%), followed by indigenous beliefs (24%) and Islam (1%) (CIA Zambia, 2007). With an economy built on mining and the exportation of copper, Zambia was once on its way to becoming one of the wealthiest countries on the African continent. Due to a drastic fall in copper prices in the 1970s, Zambia is today one of the poorest countries in the world, ranked 165 out of 177 countries, according to the HDI (UNDP, 2006).

Table 1. Socio-economic and health information for Kenya and Zambia.

Indicators	Kenya	Zambia
Total population (million)	37	12
Population below 25 years (%)	50	70
Urban population (%)	36	37
Poverty level (%)	50	75
Life expectancy at birth (years) F/M	55/55	40/39
Literacy rate above 15 years F/M	80/91	75/87
Infant Mortality Rate per 1000 live births	57	95
HIV prevalence, age 15-49 years (%)	7	17
HIV prevalence, age 15-19 F/M (%)	4/1	7/2
Total Fertility Rate	5	6

Source: (CBS et al., 2003; CIA Kenya, 2007; CIA Zambia, 2007; CSO et al., 2003; UNDP, 2006).

National policy and international agreements related to sexual and reproductive health

Since 1985, the Kenyan and Zambian governments have responded to the HIV/AIDS epidemic. In both countries, the main national strategy to address HIV/AIDS is by promoting behaviour change that includes ‘abstinence, mutual faithfulness or condom use’ (MoH Kenya, 2003; National HIV/AIDS/STI/TB Council [Zambia], 2003).

However, the role of condoms in curbing the spread of the HIV epidemic has been a subject of prolonged controversy in Kenya and Zambia, with strong religious leanings. Many church leaders and politicians say that condoms cause promiscuity and immorality, and have opposed promotional campaigns (Kangara LW, 2005). In 2004, the Zambian president decided to ban the distribution of condoms in schools, a decision that was endorsed by the head of the National AIDS Council who said ‘it is not right to

allow condoms in schools... It is going against the teaching of good morals' (Reuters, 2004).

The Kenyan and Zambian governments have, however, ratified several international agreements that require them to provide young people with sexual and reproductive health information and services. In line with this, Kenya and Zambia, along with 178 governments, adopted to the ICPD agreements (UN, 1995) and to the Convention on the Rights of the Child (UN, 1989).

The socio-cultural context related to sexuality in Kenya and Zambia

The socio-cultural context in which young people in Kenya and Zambia live has changed considerably within the past few generations. In both countries, as in much of Africa, young people experience social turmoil from conflicting values as the countries become more urbanised and modernised (Blum R, 2007; Caldwell JC et al., 1998). Today's young generation have, for instance, access to internet, youth magazines, lifestyle programmes on television and radio, and cell phones. These 'modern' trends have had large impact on young people's values and lifestyles, which have led to an increased alienation between generations (Blum R, 2007).

Culture fundamentally affects sexuality and fertility by creating values, norms, and expectations about sexual relationships, roles and behaviour. The cultural norms around sexuality vary across ethnic groups. For instance, while the Akamba in Kenya allow premarital sex for both boys and girls after circumcision, the Kikuyu allow unmarried youth to practice a non-penetrative form of sex called ngwiko (Fedders A and Salvatori C, 1980). The Luo and Bemba on the other hand expect chastity from girls but not for boys. Despite different sexual conduct, most ethnic groups stipulate that young women should not have children out of wedlock (Pillai VK and Barton TR, 1998). The sexual double standard for boys and girls is obvious regarding unintended pregnancy. Whereas unmarried girls who become pregnant are socially disgraced and often expelled from school, unmarried boys who father a child are allowed to continue their schooling (Nzioka C, 2001).

Traditionally, the socialisation process of the young is the responsibility of the elderly as it is taboo for parents to talk about sex with their children. Through stories and living together, the elderly children learnt about cultural norms and customs, about womanhood and manhood (Adegoke AA, 2001). Although it varies, most ethnic groups in Kenya and Zambia have a rite of passage that takes place when menarche is

reached. Girls are expected to get married shortly after the rite. The rite of passage marks the emergence from childhood on the way to adulthood. In the past, the rites went on for several weeks or even months, where the initiates were secluded from the community and explained by a tutor about personal hygiene, sexual behaviour, pregnancy, and their expected roles within the family and in society (Adegoke AA, 2001; Fedders A and Salvatori C, 1980; Kapungwe A, 2003).

With the arrival of the missionaries in the 1880s, most of the socialisation rites were discarded or even forbidden as they were viewed as unchristian and sexually immoral (Rasing T, 1995). Industrialisation and urbanisation has further altered the socio-cultural structures of the traditional community. Sexual education, which formerly was the responsibility of the family, is now increasingly taken over by schools, NGOs and churches. These institutions often have different agendas resulting in conflicting messages (Kapungwe A, 2003; Rasing T, 1995). Sexual education is not compulsory in schools, but children learn about sex during biology lessons and in anti-AIDS clubs. However, many teachers do not feel prepared to talk about sexuality, and parents want their children to be taught about the dangers of HIV but oppose information on contraceptives and sexuality (Ahlberg BM, 1991; Kapungwe A, 2003). While NGOs promote condom use, religious groups advocate for sexual abstinence as an exclusive strategy for young people. Most, if not all, religious groups oppose premarital sex and condom use (Agha S et al., 2006). Modernisation has prolonged schooling, and young people often marry at later age than their parents did (Mensch BS et al., 2006).

Young people's sexual and reproductive health needs

Many young people oppose premarital sex as they consider it sinful and immoral. Yet they are sexually active due to peer pressure, being in love, and wishing to experiment (Carmody B, 2003; Spronk R, 2005). According to the Kenyan Demographic and Health Survey (2003), the median age at first sexual intercourse is 17 years for boys and 18 years for girls. In Zambia, the corresponding figure is 17 years for both boys and girls. Many unmarried adolescents are sexually active at early age. National statistics from Kenya show that more boys (26%) than girls (19%) have had sex before the age of 15 (CBS et al., 2003). In Zambia, 23 percent of boys and girls reported that they have had sex before the age of 15 years (CSO et al., 2003). Poverty is prevailing in both countries and is a contributing factor to why young people engage in premarital sex. In Kenya, 21 percent of adolescent girls aged 15-19 years have received gifts or economic support for sex, while 17 percent of adolescent boys have paid for sex. In

Zambia, 27 percent of girls have engaged in transactional sex and among men in the same age (15-19 years) the rate is 40 percent (CBS et al., 2003; Chatterji M et al., 2004).

Both in Kenya and Zambia governmental policy stipulates that all sexually active men and women have the right to contraceptive services (MoH Kenya, 2003; National HIV/AIDS/STI/TB Council [Zambia], 2003). In reality, many young people find it difficult to access such services due to shyness and unwillingness by health providers to provide condoms (Muturi NW, 2005). This leaves young people with periodic abstinence as their only protective option with adolescent pregnancy as growing concern (Mensch BS et al., 2001). Adolescent childbearing has been a major reason for school drop-out. The desire to continue school and avoid social stigma are reasons for girls in Kenya and Zambia to resort to induced abortion, often with devastating consequences (Koster-Oyekan W, 1998). Zambia is considered to have one of the least restrictive abortion laws in Africa as it allows abortion on social grounds. In reality, abortion services are inaccessible and unacceptable. Findings from Western province of Zambia, revealed an high induced abortion mortality ratio of 120 induced abortion-related deaths per 100 000 live births (Koster-Oyekan W, 1998). National statistics from hospital-based studies from Kenya show that out of 809 patients with abortion complication, 16 percent were adolescents aged 14-19 years (Gebreselassie H et al., 2005).

Further consequences of unprotected sex are reflected in the high prevalence of HIV. In Kenya, national HIV prevalence among young pregnant women has declined since 2000-2001 (UNAIDS, 2006). In Zambia, there has also been a decline in HIV prevalence primarily among highly educated women 15-24 years between 1994 and 2002. This is, however, contrasted with sharp local differences (Sandoy IF et al., 2006). In Nyanza province (Kenya), where this study was carried out, about 14 percent of men and women aged 15-49 years are HIV infected. Among adolescents (15-19 years), the prevalence is about two percent (CBS et al., 2003). The Copperbelt in Zambia, where this study took place, has the second highest HIV prevalence in the country at 20 percent among men and women between 15-49 years and about five percent of adolescents aged 15-19 years (CSO et al., 2003).

Sexual and reproductive health services

In Kenya and Zambia, both modern and traditional health care delivery systems exist. The government is the main provider of modern health services through its own

facilities such as dispensaries, health centres, and hospitals or subsidies to other providers such as church-based voluntary organisations. The private sector is also providing a substantial amount of modern health services (MoH Kenya, 2003; MoH Zambia, 2000). Traditional health services are being provided by a wide range of healers, which include herbalists who depend on herbs for treatment, spiritual or faith healers who rely on spiritual methods for their treatment (WHO, 2002b).

In Kenya in 2003, the government developed the National Adolescent Reproductive Health and Development Policy as a starting point for the establishment of youth-friendly services (MoH Kenya, 2003). This policy is still to large extent in preparatory stage. In Kisumu, the study area, the health centres have 'recreational centres' for young people where they meet to play sports, games or perform dramas. Entrusted youth from the community visit the recreational centres once in a while to talk about HIV, encourage their peers to study, to get a job, and to stay away from crimes and drugs. However, for counselling in sexual and reproductive matters, and to obtain condoms, the young people have to go to the health centres or to the voluntary counselling and testing (VCT) centres.

In Zambia, youth-friendly services are quite scarce and are mainly available in the major cities (MoH Zambia, 2000). At such services, there are health providers trained in youth-friendliness and peer educators who inform youth clients about STIs and provide them with condoms. Through my own observations and personal communications with peer educators, health providers and the director of the District Health Management Team (DHMT), it has been observed that many youth-friendly services in Kitwe are running poorly due to lack of funding and difficulties in keeping the trained peer educators who work voluntarily. Many youth corners are more or less empty with only a table and a chair and no pamphlets or informative sheets. The registration book over clients is often kept in the peer educator's home. Many peer educators are initially highly motivated but after a while they drop out as they felt isolated and wished for supervision and feed back from the health providers at the health centres. There are very few female peer educators as many parents do not like their daughters to distribute condoms or to talk about sex. The DHMT in Kitwe has recently put the development of youth-friendly services as a priority in the district, and has started to train nurses and midwives in youth-friendliness (personal communication with the director at the DHMT).

Clearly, the young people are in need of sexual and reproductive health service. Yet these services are under-utilised by the young people in Kenya and Zambia (Mmari KN and Magnani RJ, 2003; MoH Kenya, 2003; Wairimu Kamau A, 2006). There are several reasons for this: lack of youth-friendly services (Kenya), judgmental attitudes among health providers, lack of awareness among young people on available preventive reproductive health services, and resistance from community to provide adolescents with such services (Erulkar AS et al., 2005; Mmari KN and Magnani RJ, 2003; Ndubani P, 2002; Wairimu Kamau A, 2006).

RATIONALE FOR THE STUDY

Sexual and reproductive health problems are very common among young people in Kenya and Zambia and health care services can play a critical role in promoting good health. In order to strengthen sexual and reproductive health services for young people, more knowledge is required about the needs and experiences for care as expressed by the young people themselves, as well as about the attitudes of health providers working in adolescent sexual and reproductive health.

STUDY AIM

The overall aim of this thesis is to describe and explore young people's sexual and reproductive health needs and experiences, and to describe health providers' attitudes related to those needs as a basis for strengthening the sexual and reproductive health services for young people in Kenya and Zambia.

SPECIFIC OBJECTIVES

- To describe Kenyan and Zambian nurse-midwives' attitudes towards adolescent sexual and reproductive health needs (I).
- To explore Zambian secondary school students' needs as related to their sexual and reproductive health (II).
- To describe Kenyan and Zambian young peoples' experiences of and preferences for sexual and reproductive health services (III).
- To evaluate a pilot intervention intending to sensitise Kenyan and Zambian health providers in young peoples' sexual and reproductive health needs (IV).

METHODS

STUDY TEAM

These studies were carried out by a research team consisting of me, as a public health scientist, and nurses and midwives (male and female) from Kenya, Zambia and Sweden. The Kenyan and Zambian collaborators had special interest in adolescent sexual and reproductive health and psycho-social counselling, and were lecturers at the University of Nairobi, Kenya, and the Kitwe School of Nursing, Zambia. My fieldwork experiences are mainly from Zambia. Dr Faxelid and Dr Nissen focused more on the Kenyan studies together with the Kenyan collaborators. However, the whole study team has met in Nairobi, Kitwe, and in Stockholm to discuss the planning, the carrying out of the studies and the analyses.

Data for study **I-IV** have been collected in both countries. However, in study **II**, only data from Zambia are presented in this thesis. Table 2 gives an overview of participants, methods and time period for the different studies.

Table 2. Participants, methods and time period.

Study	Title	Study population	Method	Time period
I	Nurse-midwives' attitudes towards adolescent sexual and reproductive health needs in Kenya and Zambia.	Kenyan and Zambian nurses and midwives (n= 707)	Attitudinal questionnaire	September - December 2001
II	Vulnerability and sexual and reproductive health among Zambian secondary school students.	Zambian secondary boys and girls (n= 716) between 11-22 years	Self-generated questions	May - July 2002
III	Young peoples' experiences of and preferences for sexual and reproductive health service in Kisumu, Kenya, and Kitwe, Zambia.	Kenyan and Zambian clients (n= 195) between 14-24 years	Individual interviews using a questionnaire with closed and open-ended questions	April 2004 (Zambia) April 2005 (Kenya)
IV	A pilot intervention in Kenya and Zambia intending to sensitise health providers toward young peoples' needs in relation to sexual and reproductive health.	Kenyan and Zambian health providers in one intervention group (n= 28) and in one control group (n= 16)	Attitudinal questionnaire before and after an intervention	Sept 2004- Feb 2005 (Zambia) Sept – Dec 2005 (Kenya)

STUDY SETTING

In Kenya, the research was carried out in Kisumu and Nakuru, and in Zambia, the research was carried out in Kitwe and Ndola. Study **I** was conducted in both areas in each country. Studies **II-IV** were only carried out in Kisumu and Kitwe. These cities are among the worst affected by HIV in each country. Other reasons for conducting the research in these areas included the wish to move out from the main cities and the fact that research networks were available in Kisumu and Kitwe.

Kisumu, in Nyanza province, is an important port town close to Lake Victoria in the western part of Kenya. Approximately 1 million people live here, which makes it Kenya's third largest town. The majority of the population belongs to Luo ethnic group. The area is a commercial, fishing and agriculture centre. The province has the highest

HIV prevalence in the country, 14 percent among men and women 15-49 years (CBS et al., 2003). There are five hospitals, 14 health centres and 47 dispensaries in Kisumu. The town is served by one university and approximately 600 primary and 80 secondary schools. Primary school enrolment is about 70 percent and for secondary level it is about 20 percent. Unemployment is high and drug abuse and commercial sex work is common in the town (Siringi S, 2002). Nakuru is about 1.5 hours by car away from Kisumu and includes both urban and rural areas with approximately 850 000 inhabitants, mainly belonging to the ethnic group Luo. Nakuru is situated in the province of River Valley and is mostly an agricultural centre. The HIV prevalence in the area is around 5 percent. There are seven hospitals, 16 health centres, 47 dispensaries, around 450 primary and 100 secondary schools in the area (CBS et al., 2003).

In Zambia, the studies were carried out in the urban areas of Kitwe and Ndola, both situated in the Copperbelt province in the northern part of the country and close to the boarder of the Democratic Republic of Congo. The predominant ethnic group in both cities is Bemba, and the areas are the economic hubs of the country where copper and mineral mining are the main industries. There is great fluctuation of people in the area due to the mines that attracts manpower from all over the country, but also internationally. Due to mass retrenchments that occurred between 1999 and 2000, many people were left unemployed and this consequently increased the levels of poverty resulting in high-prevalence of malnutrition and tuberculosis (CSO, 2000). The HIV prevalence among women and men (15-49 years) are the second highest (20%) in the country after Lusaka (22%), the province of the capital (CSO et al., 2003). Many of the retrenched workers have gone into subsistence farming, while others have resorted to street vending. Another consequence of the harsh economic environment is the increase of beggars, street children, commercial sex workers and crimes (National HIV/AIDS/STI/TB Council [Zambia], 2003). Kitwe is Zambia's third largest town with around 400 000 inhabitants who have access to one hospital, and 22 health centres. The major health centres have youth-friendly corners with voluntarily peer educators. The town has approximately 47 primary schools, 11 secondary schools and one university. Ndola is populated by approximately 270 000 people who have access to one hospital, and 18 health centres. There are approximately 57 primary schools, 18 secondary schools, and nine institutions of higher learning. In the province, enrollment in primary

school is 76 percent and in secondary school it is 37 percent (CSO and ORC Macro, 2003).

Personal experiences from the study setting

Aside from the data collection, I have got a glimpse of the reality of young people in various ways. I made friends with local people that I used to visit during my stay. This gave me an opportunity to gain insight in the social context and how strongly gender directs and restricts behaviours, and how this affects both sexes. Girls cannot, for example, demand condom use in a relationship, and boys are taught to be ‘tough men’, but have a wish to talk about love. Other interactions with young people were made during the long walks around the area. People were curious about the ‘white lady’, a curiosity which was reciprocal, indeed. A significant meeting point was at the church, which plays an extremely important role in people’s lives. Many congregations have ‘youth clubs’ where they, for instance, discuss HIV or proper dress codes. In these discussions the clash between morality and reality became very clear. The youth wanted to be good Christians and condemned premarital sex. At the same time they were curious and struggled with sexual feelings, and revealed that church was a common ‘flirting and dating’ place. Further insights aside from the fieldwork were made from the window in the room where I stayed, which was situated very close to the central station. At night time I witnessed the harsh realities of young girls selling sex, and gangs moving around drinking and sniffing glue.

STUDY DESIGN, PARTICIPANTS AND DATA COLLECTION METHODS

Study I

Design: In order to get an overview of nurses’ and midwives’ (for simplicity labelled nurse-midwife) attitudes toward adolescent sexual and reproductive health needs, a cross-sectional design was adopted. In this type of design, data are collected at just one point in time and are commonly used for need assessments (Bernard R, 2000).

Sampling and participants: In the study area, approximately 600 nurse-midwives in Kenya and 450 nurse-midwives in Zambia worked with sexual and reproductive health services. Minor health facilities with only 1-3 personnel were excluded. In Kenya, 420 nurse-midwives, and 400 nurse-midwives in Zambia, were asked to participate. Out of those, 322 (Kenya) and 385 (Zambia) nurse-midwives participated, making a response rate at 77 and 96 percent, respectively.

Data collection: A structured questionnaire in English on adolescent sexual and reproductive health issues was developed by the Kenyan, Zambian and Swedish research team. The content was based on their own clinical experiences. To test whether concepts and expressions were easily comprehended, the questionnaire was piloted on a group of nurse-midwives working in reproductive health services at Nairobi Hospital in Kenya and at Central Hospital in Kitwe, Zambia. The questionnaire was discussed at a workshop in Cape Town, South Africa, where researchers from several African countries, as well as from Norway and the Netherlands participated. The final questionnaire covered socio-demographic data, information about continuing education in adolescent sexual and reproductive health, and statements related to sexuality that included premarital sex and masturbation, contraceptive use, pregnancy and abortion, and STI. A Likert scale with four response alternatives was used (Spector PE, 1992). Statements were worded both positively: ‘Masturbation is a good way to prevent unwanted pregnancies and STI/HIV for girls’ and negatively: ‘Adolescent boys should be taught the dangers of masturbation’. When responding, nurse-midwives chose between: disagree completely, disagree, agree, or agree completely, which was assigned to each statement.

All available nurse-midwives, including nightshift staff, received the questionnaire, which was, if possible, completed immediately at the health facility while one person from the research team waited and then collected them. No names were registered, and instead the questionnaires were marked with an ID.

Study II

Design: This was an explorative study with self-generated questions.

Sampling and participants: The study was carried out among secondary school youth in Kitwe. The district had 11 secondary schools, and out of those, nine were co-educational schools, with one only for boys and one only for girls. Included in the study was the all-girl school, the all-boy school and two co-educational schools, chosen randomly and selected from the nine mixed schools. In every school, one class (including approximately 40 students) from each grade (8-12) was randomly selected, making a sample of approximately 800 students.

Data collection: During class hour, and without the presence of teachers, students received a questionnaire in English where they were asked to write down any questions they had about sexuality and reproduction, in addition to background information, such

as sex, age and class. Members from the research team were present to give clarification, if needed.

Study III

Design: In this study, exit interviews were carried out using a questionnaire with closed and open-ended questions describing young clients' experiences of and preferences for sexual and reproductive health services.

Sampling and participants: Data were obtained from the four largest health centres, two in Kisumu (Kenya) and two in Kitwe (Zambia) that provided sexual and reproductive health services. One of the health centres in Kisumu had a recreational centre for youth, and in Kitwe both health centres had youth corners. Exit interviews were carried out with young clients visiting the health centres for sexual and reproductive health reasons. After consultation, the clients were referred by the health worker to the interviewer. During two weeks, 195 young clients were consecutively interviewed.

Data collection: Data were collected through interviews using a structured questionnaire with closed and open-ended questions. The questions were related to their experiences of and preference for sexual and reproductive health services. Questions on experiences related to the possibility to ask questions, to receive explanations, to have privacy and confidentiality, impressions of the attitude and behaviour of staff, on waiting time, and fees. In addition, a scale from 1 to 10 was used where participants were asked to rank their satisfaction with the provided care. Questions on preference were related to the gender of the attending provider and how the young clients wanted to be handled at the clinic.

Study IV

Design: Pre-post intervention including a control and an intervention group.

The study was conducted in Kisumu and Kitwe. The different steps involved in the intervention study were carried out as follows.

Sampling and participants:

1) In Kisumu, there were 14 health centres and in Kitwe, there were 22 health centres. Out of those, the largest health centres (minimum 15 health providers) providing sexual and reproductive health services were identified, which resulted in four health centres in Kisumu and six health centres in Kitwe.

2) Thereafter, the health centres were matched according to comparable characteristics, such as number of staff and their qualifications, and whether the health providers had received any previous training in adolescent sexual and reproductive health. The distance between the health centres was also taken into consideration as a way to reduce the risk for ‘spill-over effect’ between intervention and control centres. In Kisumu, two of the health centres had on-going research activities related to sexual and reproductive health and were therefore excluded. Thus, only two health centres remained. In Kitwe, one of the three matched-pairs was randomly chosen.

3) Within each pair, one health centre was randomly assigned to intervention or control.

Data collection:

1) All health providers at the intervention and control centres were given an attitudinal questionnaire both prior to and after the intervention. The content of this questionnaire was based on the questionnaire in study **I**, with the difference that statements in study **IV** were revised to see any possible differences in attitudes towards boys and girls and possible differences in attitudes toward an adolescent with STIs or infected by HIV. Participants from both intervention and control group responded to the questionnaires two weeks prior or just before the intervention, and three (Kenya) to five (Zambia) months after the intervention. Only health providers who responded to the questionnaire at both assessments were included in the final analysis of the study. Hence, the study sample was 28 and 16 health providers in the intervention and control groups, respectively.

2) The intervention involved all health providers at the centre and went on for five days. The first three days of the intervention involved only health providers. They received training in adolescent sexuality, youth-friendliness and counselling skills led by a counsellor trained in adolescent reproductive health. Furthermore, results on previous studies (**I** and **II**) were presented and discussed. Methods used during the three first days in the intervention were reflective thinking: a method used in order to become aware of one’s own attitudes and how these might affect the clients. The health providers were presented with different scenarios, such as a girl asking for contraceptive use. One of the providers acted as the attending health worker and the other as the young girl asking for contraceptives. After the play, the scenario was discussed and the ‘acting girl’ was asked about her experience from being scolded and denied contraceptives. In other scenarios, the audience also intervened and directed the play. Value clarification exercises were also carried out. In privacy, participants took a stand in a number of statements, such as masturbation, sex before marriage, extra

marital sex, and sex whenever your partner wants it. To each statement they could respond 'ok for me', 'not ok', 'ok for others but not for me'. The anonymous responses were read out loud and categorised under those response alternatives and put on the wall. Thereafter, there was a common discussions about whether something was surprising, or if a statement was 'wrongly put'. There was also condom demonstration using a penile model, which clearly revealed that even health providers at the family planning clinic felt very uneasy and even refused to touch the condom. The two last days in the intervention also included young people who gave their views on how they wanted the service to be provided. Together with the health providers, they discussed and developed an action plan on how to make the clinics more youth-friendly.

ANALYSIS

Quantitative data

Study I. Descriptive statistics, including frequencies, proportions, and median were used to describe socio-demographic characteristics, attitudes and continuing education in adolescent sexual and reproductive health issues. Analyses were performed country wise. Chi square test was used for comparisons of proportions, which included analyses of associations between responses to attitude statements and age, religion, and education (enrolled or registered nurse-midwife and continuing education or not). In the analysis, the response alternatives 'disagree completely' and 'disagree' were aggregated into 'disagree' and, likewise 'agree completely' and 'agree' were aggregated into 'agree'.

Study III. Descriptive statistics, including frequencies, proportions and means were used to describe socio-demographic data, reasons for visiting the health centres, experiences of and preferences for sexual and reproductive health services, and the satisfaction with the provided care marked on a scale. Analyses were carried out country wise and by gender, age and civil status. Responses to the open-ended question about whether the participants had anything more to add were related to sexual and reproductive health services and written down in full detail and coded according to content.

Study IV. Data from Kenya and Zambia were merged since background data were similar at baseline. The content of the intervention was also similar in both countries. Descriptive statistics, including frequencies, proportions, means, median, and standard

deviation were used to describe socio-demographic data, previous training in sexual and reproductive health, and attitudes. Chi square test was used to analyse the association between attitudes in the first and second assessment. All statements concerning STI/HIV, condom use and sexual abuse that were related to boys (n= 11) and girls (n=11), were added respectively. Thereafter a mean and standard deviation was calculated after reversing negative statements. A mean at 1.00 indicates a negative attitude whereas a mean at 4.00 indicates a positive attitude. Changes in attitudes toward boys and girls between pre- and post-assessment were analysed by ANOVA for repeated measurement. Significance level was set at 0.05. The questionnaire in this study was based on the questionnaire in study I. The Likert scale with the four response choices 'disagree completely', 'disagree', 'agree', and 'agree completely' were kept during the analyses.

Qualitative analysis

Study II. Data for young people's questions about sexuality and reproduction were analysed by content analysis (Graneheim UH and Lundman B, 2004). The analyses were performed in several steps. First, the authors read through the text independently and thereafter met to discuss and develop a code list on what young people asked about. Then the questions were sorted into categories. A category represented the type of questions raised around sexuality and reproduction. Thereafter, themes emerged by reading across data to find higher-level associations among categories (Table 3).

Table 3. Illustrating the category system emerging from study II.

Overall theme	Themes	Categories	Codes
Vulnerability of young people to sexual and reproductive health threats	Growing up in silence	Inadequate information	Reproduction
			STI/HIV
			Contraceptives
			Masturbation
			Body development
		Cultural specific curiosity	Circumcision
			Initiation
			Elongation of labia
		Need of support	Pregnancy
			Abortion
	STI/HIV		
	Love		
	Being caught between norms and values and reality of life	Moralised sexuality	Premarital sex
			Contraceptives
			Masturbation
			Abortion
Sexual feelings			
Sexual abuse		Rape	
		Incest	
		Violence	
	Gender roles		

ETHICAL CONSIDERATIONS

In order for potential participants to decide whether or not to enrol, they were informed about the aim of the study, about the confidentiality of the information, that no names would be taken, that their participation was voluntary, and that they had the right to withdraw at any time. In study **II**, youth were very eager to get a response to their questions. After data collection, the researchers stayed to respond to their queries. In study **III**, clients were informed that health providers would not be informed about their statements. Studies **I-IV** had ethical clearance from the Regional Ethics Committee, Stockholm, Sweden, the Ministry of Education, Science and Technology, Kenya, and from the Central Board of Health, Zambia. Study **II** also obtained permission from the head teachers at each school.

RESULTS

This section will provide an overview of the main results presented study by study, which also are in the chronological order the studies were carried out. For detailed presentation of the findings, the reader is referred to the attached studies **I-IV**.

NURSE-MIDWIVES' ATTITUDES TOWARDS ADOLESCENT SEXUAL AND REPRODUCTIVE HEALTH NEEDS IN KENYA AND ZAMBIA (STUDY I).

The first study in this project was to find out about the attitudes of nurse-midwives toward adolescent sexual and reproductive health needs. In total, 707 Kenyan and Zambian nurse-midwives responded to a questionnaire in relation to adolescent sexuality, including masturbation, contraceptive use, abortion, and STIs. The background data on the participants showed that the majority of nurse-midwives in Kenya worked in hospitals while their Zambian counterparts worked in health centres. The majority of participants in both countries were Protestants or Catholics. For further background data, see Table 4. Data were analysed country wise and by sex, age, religion, and education. The only variables that showed significant difference related to attitudes were professional education and continuing education.

Table 4. Background data on nurse-midwives (Study I).

	Kenya n= 322 (%)	Zambia n= 385 (%)
Sex		
Women	277 (86)	374 (97)
Men	45 (14)	11 (3)
Age		
Median	37	39
Range	22-54	22-60
Professional background¹		
Enrolled	236 (74)	266 (69)
Registered	81 (26)	119 (31)
Continuing education related to adolescent sexual and reproductive health		
Yes	61 (19)	61 (16)
No	259 (81)	323 (84)

Results on nurse-midwives' attitudes are grouped and presented according to content: adolescent sexuality, contraceptive use, pregnancy and abortion, and STI.

Adolescent sexuality

The results showed that nurse-midwives disapproved of premarital sex and masturbation. For instance, the majority (Kenya: 77%, Zambia: 81%) of nurse-midwives agreed 'their first option would be to recommend unmarried adolescents to abstain from sex when they ask for contraceptives'. Very few (Kenya: 5%, Zambia: 6%) participants agreed that 'it is more important for boys to have sexual experience before marriage than for girls'. The vast majority (Kenya: 82%, Zambia: 86%) of nurse-midwives agreed that 'adolescent boys should be taught the dangers of masturbation' and few providers agreed (Kenya: 28%, Zambia: 37%) that 'masturbation is a good way to prevent unwanted pregnancies and STI/HIV for girls'.

¹ Enrolled nurse-midwives have two years of nursing training and one year of midwifery training, and their professional role is restricted to clinical work.

Registered nurse-midwives have three years of nursing training and one year of midwifery training, and their professional role includes administrative, as well as clinical work.

Contraceptive use

Attitudes toward contraceptive use were somewhat ambiguous and Kenyan nurse-midwives tended to report more disapproving attitudes compared with their Zambian counterparts. Nurse-midwives disagreed (Kenya: 69%, Zambia: 52%) that '16-year-old out-of-schoolgirls should be encouraged to use condoms', but at the same time, they agreed (Kenya: 55%, Zambia: 67%) that 'if a schoolgirl is sexually active she should be allowed to use contraceptives'. Regarding condom counselling, nurse-midwives agreed (Kenya: 54%, Zambia: 68%) that 'out-of-schoolboys should be informed about how to use a condom'. Yet, 59 percent of Kenyan and 47 percent of Zambian participants disagreed with 'schoolboys asking for condoms show responsibility'.

Pregnancy and abortion

The majority of nurse-midwives from both countries agreed that boys (Kenya: 83%, Zambia: 84%) and girls (Kenya: 88%, Zambia: 87%) should be allowed to continue school in case of pregnancy. Regarding abortion, participants again showed somewhat ambiguous attitudes. Considering the less restrictive abortion law in Zambia, it is noteworthy that even more Zambian nurse-midwives (94%) as compared with Kenyan nurse-midwives (80%) disagreed that 'abortion should be allowed for girls with unwanted pregnancies'. At the same time Kenyan (59%) nurse-midwives disagreed that they 'would feel annoyed if an adolescent girl presents with symptoms from induced abortion', while 50 percent of the Zambian disagreed with the statement.

STIs

Regarding adolescents with STIs, Kenyan nurse-midwives disagreed that 'a schoolboy (56%) or schoolgirl (55%) with a genital ulcer is likely to be promiscuous'.

Corresponding figures among Zambian nurse-midwives were 37 percent for schoolboys and 40 percent for schoolgirls.

Attitudes by education

Comparison between enrolled and registered nurse-midwives

The comparison between enrolled and registered nurse-midwives showed that among Kenyan participants fewer enrolled nurse-midwives (28%) than registered nurse-midwives (40%) agreed that 'a 16-year old out-of-schoolgirl should be encouraged to use condoms' ($p=0.049$). Furthermore, more enrolled nurse-midwives (48%) than registered nurse-midwives (32%) agreed that a 'secondary schoolboy with genital ulcer

is likely to be promiscuous' (p= 0.013). In Zambia, fewer enrolled nurse-midwives (85%) as compared to registered nurse-midwives (93%) agreed that 'a girl who becomes pregnant should be allowed to continue school' (p= 0.018).

Comparison between nurse-midwives with and without continuing education

In general, significantly more nurse-midwives with continuing education agreed with adolescent contraceptive use. At the same time, with or without continuing education, most nurse-midwives disagreed to abortion and even more so among those without this education (Table 5 and 6).

Table 5. Kenyan nurse-midwives with continuing education (n=61) and without continuing education (n=259) related to adolescent sexual and reproductive health.

Statements	Continuing education	No. (%) who agree	P-value
A schoolgirl who is sexually active should be allowed to use contraceptives	Yes	44 (73)	0.001
	No	129 (50)	
It shows responsibility when a schoolboy asks for condoms	Yes	35 (59)	0.002
	No	95 (37)	
I think abortions should be allowed for adolescent girls with unwanted pregnancies	Yes	20 (33)	0.009
	No	45 (18)	
I would be annoyed if an adolescent girl presents with symptoms related to induced abortions	Yes	16 (26)	0.008
	No	112 (45)	

Table 6. Zambian nurse-midwives with continuing education (n=61) and without continuing education (n=323) related to adolescent sexual and reproductive health.

Statements	Continuing education	No. (%) who agree	P-value
I think 16 year out-of-school girls should be encouraged to use condoms	Yes	39 (64)	0.008
	No	146 (45)	
A schoolgirl who is sexually active should be allowed to use contraceptives	Yes	50 (82)	0.007
	No	206 (64)	
A 16 year out-of-school boy should be informed how to use a condom	Yes	52 (85)	0.002
	No	210 (65)	
I would be annoyed if an adolescent girl presents with symptoms related to induced abortions	Yes	21 (34)	0.007
	No	170 (53)	
A secondary schoolboy who has got a genital ulcer is likely to be promiscuous	Yes	30 (49)	0.015
	No	208 (66)	

VULNERABILITY AND SEXUAL AND REPRODUCTIVE HEALTH AMONG ZAMBIAN SECONDARY SCHOOL STUDENTS (STUDY II)

The next step in the project was to turn to the young people themselves and find out about their sexual and reproductive health needs. In order to do so, 716 secondary school Zambian boys (n= 362) and girls (n= 354) aged 11-22 years participated and wrote down any inquiry they had about sexuality and reproduction. The data for this study have been analysed both qualitatively and quantitatively. The qualitative analysis did not include analyses by sex and age, which was performed in the quantitative analysis. The quantitative part is not yet published.

Qualitative results

The qualitative analysis resulted in one overall theme, two themes, and five categories (Table 3). The self-generated questions reflected that the sexual and reproductive health of youth is vulnerable. The vulnerability was running like a red thread through data and was reflected in two salient trends: growing up in silence and being caught between norms, values and reality.

The silenced sexuality was reflected in the limited knowledge the young people had about the basics in human reproduction. Girls up to the age of 20 years asked how one becomes pregnant. They were further uninformed about the transmission and symptoms of STIs. Boys wondered, for instance, why they get ‘pimples’ on the penis when they sleep with girls. The basic nature of the questions showed that there is little discussion around sexuality even in school. In absence of proper information, the young people relied on myths and misconception. The accounts showed that there were many misconceptions particularly about condoms, but also around masturbation. Some boys and girls seemed to believe it was even more dangerous to use condoms than to have unprotected sex, as the condom was believed to cause cancer and AIDS.

Misinformation flourished around masturbation, which boys feared would lead to infertility. The questions further revealed great curiosity around bodily development, but also around a culture-specific curiosity, which was related to circumcision and initiation rites. They wanted to know why this was done, but they also seemed to believe that circumcision or initiation were totally protective measures against STIs, including HIV. They were, furthermore, curious to find out about the meaning of

stretching the labia majora, which is a cultural custom among girls belonging to ethnic group Bemba. In the silenced sexuality, young people had difficulty disclosing or seeking help for reproductive health needs. As a result, they relied on substitutes to contraceptives and used self-treatment to abort. Young people expressed great need for someone to turn to for guidance on love and how to relate to the opposite sex.

The other salient trend in young people’s questions showed that they were caught between norms and values and reality of life. A lot of the questions were morally charged where the young people opposed premarital sex, contraceptive use and masturbation, as it was considered sinful and immoral. On the other hand, they struggled with sexual feelings and even indulged in sex. This seemed to cause them feelings of guilt. The young people witnessed sexual abuse, including incest. The questions reflected that sexuality is gendered. While girls were uneasy with boys being ‘pushy’ and demanding sex, boys were asking why girls were “fuzzy” when they called on them on the street or touched their breasts. There were, however, also boys concerned about what to do when they felt forced to sex by their girlfriends.

Quantitative results

To see within what area questions were raised, data were also analysed quantitatively (unpublished data). The questions were grouped into areas according to their content. In general, close to 50 percent of the students asked questions about sexuality, while approximately 30 percent asked about contraceptives and pregnancy and reproduction, and around 25 percent asked about STI/HIV and body development. Just above 20 percent asked about cultural practices and about love and relationships, and less than 10 percent of the students had questions about abortion and sexual abuse. Students asked more than one question and, therefore, the adding up exceeded 100 percent. Data were further analysed by gender. Significantly more girls than boys had questions about contraception, body development, relating to opposite sex and abortion (Table 7).

Table 7. Questions raised by boys and girls presented as frequency, and percentages (%).

Sex	Students (number)	Sexuality	Contra-ception	Pregnancy & reproduction	STI/HIV	Body development	Cultural practices	Love & relationship	Abortion	Sexual abuse
Boys	362	176 (49)	110 (30)	106 (29)	103 (28)	67 (19)	78 (22)	45 (12)	10 (3)	12 (3)
Girls	354	147 (42)	144 (41) ^I	130 (37)	73 (21)	108 (31) ^{II}	76 (21)	106 (30) ^{III}	37 (10) ^{IV}	17 (5)
Total	716	323 (45)	274 (38)	236 (33)	176 (25)	175 (24)	154 (22)	151 (21)	47 (7)	29 (4)

Note: Significant differences ($p < 0.05$) between boys and girls; ^I=0.047, ^{II}=0.004, ^{III}=0.001, ^{IV}=0.001

YOUNG PEOPLES' EXPERIENCES OF AND PREFERENCES FOR SEXUAL AND REPRODUCTIVE HEALTH SERVICE IN KISUMU, KENYA AND KITWE, ZAMBIA (STUDY III).

In the third study, boys and girls visiting the health centre for issues related to their sexual and reproductive health were interviewed about their experiences of and how they would like the sexual and reproductive health service to be provided to them. For details on background information of the participants, see Table 8.

Table 8. Background data and reasons for visiting the health centres presented as median, frequency and percentage (%).

	Kenya		Zambia	
	Boys n=28	Girls n=70	Boys n=41	Girls n=56
Age				
Md	20.5	21	23	22
14-19	12 (43)	22 (31)	3 (7)	9 (16)
20-24	16 (57)	48 (69)	38 (93)	47 (84)
Educational level				
Never been to school	3 (12)	8 (12)	2 (5)	4 (7)
Primary	4 (17)	17 (26)	11 (27)	36 (64)
Secondary	17 (71)	38 (59)	26 (65)	16 (29)
Tertiary		2 (3)	1 (3)	
Civil status				
Married		4 (6)	8 (20)	41 (73)
Unmarried	28 (100)	66 (94)	33 (80)	15 (27)
Reasons for visiting the health centre				
Family planning	3 (11)	43 (62)	12 (29)	18 (32)
STI	13 (46)	10 (14)	27 (66)	18 (32)
HIV counselling and treatment	12 (43)	10 (14)	2 (5)	2 (4)
Pregnancy		6 (9)		13 (23)
Other (menstruation, abortion, abdominal pain)				5 (9)

Clients' experiences of the sexual and reproductive health services

Regarding experiences of the provided care, most Kenyan and Zambian clients were satisfied. They felt that they could *put questions* to the health provider. The majority said they had received explanations during the consultation and most said that they had also understood the explanations.

Regarding *privacy*, around 90 percent of participants from both countries said they had privacy. However, in the open-ended question, the Kenyan clients were dissatisfied to share room with other clients during consultation. About *confidentiality*, those who mistrusted that the information they shared with the health provider would be kept confidential, were mainly Zambian participants. Almost one-third of the Zambian males with STIs, and 16 percent of the Zambian females with STI or abortion related problems did not believe that their personal information would be kept confidential. As regards the *encounter*, the majority of both Kenyan and Zambian clients stated that they had been treated well by the attending health provider and other staff at the clinic. This was often described as not being shouted at, as not being harshly treated, but also as being talked to in a nice way, as being shown interest and concern, and as being given information and competent care. Those who were not satisfied were again the Zambian males (22%) visiting the health centre for STI services since they had been shouted at in front of other clients. Kenyan girls (16%) had complaints about receptionists who had shouted at them. About the *waiting time*, 30 percent of Zambian clients said they had waited too long (1-5 hours), and Zambian males said the *costs* for STI services were too high.

The scale where participants were asked to rank their satisfaction with the provided care (1-10) showed that participants were positive with a mean at 8.3 and 7.6 among Kenyan boys and girls, respectively. The corresponding figures in Zambia were 7.8 and 8.2, respectively.

Clients' preferences for the sexual and reproductive health services

Regarding *preferences for the sex of the provider*, the majority of clients preferred to be attended by a provider of the same sex. However, almost half of the Kenyan girls preferred male providers as they were considered more caring and less gossipy.

Preferences for how to be treated showed that clients valued friendly attitudes and behaviours of the providers, but also lower costs, confidentiality, being examined and being asked questions were highly valued. In Kenya, where there are no youth-friendly corners, clients expressed a wish for this, and in Zambia, clients asked for staff to be trained in youth-friendliness.

A PILOT INTERVENTION IN KENYA AND ZAMBIA INTENDING TO SENSITISE HEALTH PROVIDERS TOWARD YOUNG PEOPLES’ NEEDS IN RELATION TO SEXUAL AND REPRODUCTIVE HEALTH (STUDY IV).

The last study in the project was to test a method intending to sensitise health providers in adolescent sexual and reproductive health needs. This study was informed by the previous studies of the project on nurse-midwives’ attitudes and young people’s needs and experiences as related to sexual and reproductive health.

Only health providers who took part in both assessments were included in the analysis. In the intervention group in Kenya, 70 percent, and in Zambia, 78 percent took part in both assessments. Corresponding figures in the control group were 35 percent in Kenya, and 42 percent in Zambia (Table 9). The study population in the intervention group and control group thus consisted of 28 and 16 health providers, respectively.

Table 9. Number of health providers in Kenya and Zambia who responded to the questionnaire at the pre- and post-assessment.

	Kenya		Zambia	
	Pre	Post	Pre	Post
Intervention group	20	14	18	14
Control group	23	8	19	8

For background data on participants who took part in both assessments see, Table 10, and for background data on those who did not participate in the second assessment (the drop-outs) see Table 11. In the intervention group, mainly those who had not received continuing education in adolescent sexual and reproductive health dropped-out. In the control group, mainly men dropped-out. Reasons for not taking part in the second assessment were being on sick leave, moving out from the area, or unwillingness to participate.

Table 10. Background data at first assessment on participants who took part in both assessments.

	Intervention group n= 28	Control group n= 16
Sex		
Female	22 (79)	12 (75)
Male	6 (21)	4 (25)
Age		
Median	39	35
Range	27-55	24-52
Professional qualification		
Enrolled nurse-midwife	14 (50)	6 (37)
Registered nurse-midwife	5 (18)	4 (25)
Clinical Officer	5 (18)	2 (13)
Bachelor Science in Nursing	0 (0)	1 (6)
Lab technician	2 (7)	2 (13)
Environmental health technician	2 (7)	1 (6)
Years in profession		
Median	19	6
Range	3-30	1-28
Missing	1	1
Previous training in sexual and reproductive health		
Yes	20 (71)	8 (50)
No	8 (29)	8 (50)

Table 11. Background information of the drop-outs in the intervention group and control group.

	Intervention group n= 10	Control group n= 26
Sex		
Female	9 (90)	17 (65)
Male	1 (10)	9 (35)
Age		
Median	39	31
Range	25-43	25-61
Professional qualification		
Enrolled nurse-midwife	5 (50)	11 (42)
Registered nurse-midwife	2 (20)	3 (12)
Clinical Officer	1 (10)	6 (23)
Lab Technician	1 (10)	1 (4)
Environmental health technician	1 (10)	0 (0)
Other		5 (19)
Years in profession		
Median	15	6
Range	2-24	1-31
Previous training in sexual and reproductive health		
Yes	4 (40)	14 (56)
No	6 (60)	11 (44)

Attitudes before and after the intervention

At first assessment, no significant differences in attitudes between participants in the intervention group and the control group were found. Both groups reported overall supportive attitudes toward adolescent sexual and reproductive health needs, except for attitudes related to abortion and masturbation. A majority also agreed that health workers should tell unmarried adolescents to abstain from sex. No significant differences in responses to attitude statements were found between first and second assessment in the control group, whereas additional attitudinal improvements were reported at the second assessment in the intervention group. The reported changes were mainly moving within the ‘disagree’ (disagree completely, disagree) or ‘agree’ (agree completely, agree) side.

As the responses to single attitude statements were similar between the two assessments in the control group, only the results from intervention group will be reported, except for attitudes related to boys' and girls' sexuality (Figure 3 and 4). The first and second assessment will be referred to as before and after the intervention.

Attitudes toward masturbation

The training seemed to have had greatest impact on the attitudes toward masturbation. Before the intervention, the majority 'disagreed completely' that masturbation is a good way to prevent unwanted pregnancies and STI/HIV. After the intervention, the majority 'agreed' with the statement ($p=0.037$).

Attitudes toward condom use

The training also had impact on attitudes toward condom use, which were supportive even before the intervention, but improved even further. Before the intervention, most participants 'agreed' to condom use. After the intervention, significantly more health providers 'agreed completely' that a schoolboy ($p=0.016$) and a schoolgirl ($p=0.046$) asking for condoms should be given them.

Attitudes toward STI

Further changes, however not significant, were seen in attitudes toward adolescents with STI. Before the intervention, the majority of participants 'disagreed' that schoolboys/girls and out-of-schoolboys with and STI are promiscuous. After the intervention, more of the health providers had moved from 'disagree' to 'disagree completely'.

Attitudes toward sexual abstinence

Additional changes (not significant) were reported about sexual abstinence. Before the intervention, twice as many the participants 'agreed completely' that health workers should tell adolescents to abstain from sex as compared with after the intervention.

Attitudes by sex

Result was also analysed by sex. At baseline, the attitudes were slightly more positive toward boys as compared to girls. In the intervention group, attitudes improved further and even more so toward boys at the second assessment (Figure 3 and 4). In the control group, no such improvements were found either for girls or for boys (Table 12).

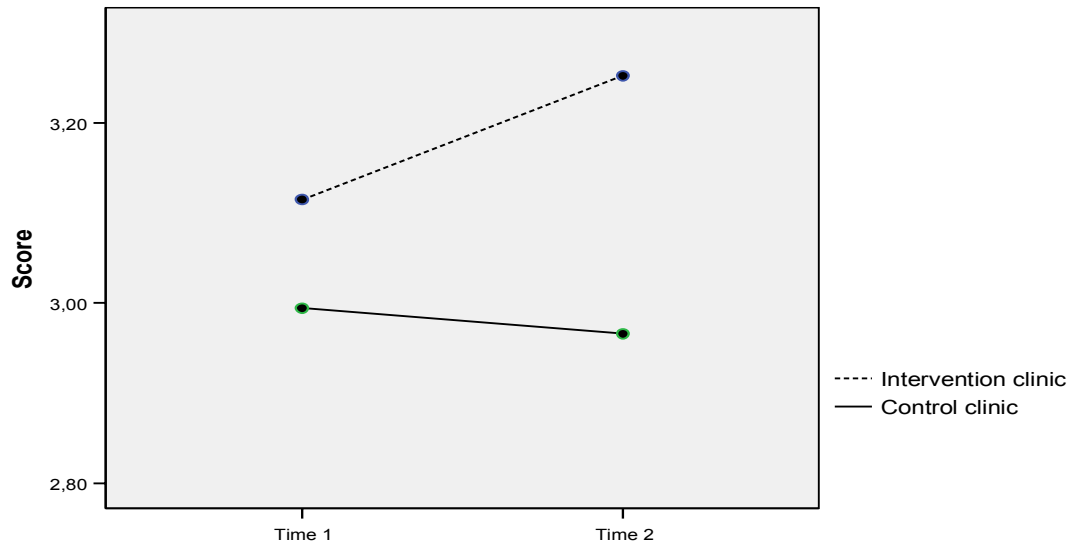


Figure 3. Health providers' attitudes toward boys' sexual and reproductive health concerns at the first (Time 1) and second assessment (Time 2). The scores refer to the mean of the added statements. Higher scores indicate more positive attitudes. Mean differences between the groups were tested by ANOVA for repeated measurement, $df=1$, $F=5.361$, $p=0.026$.

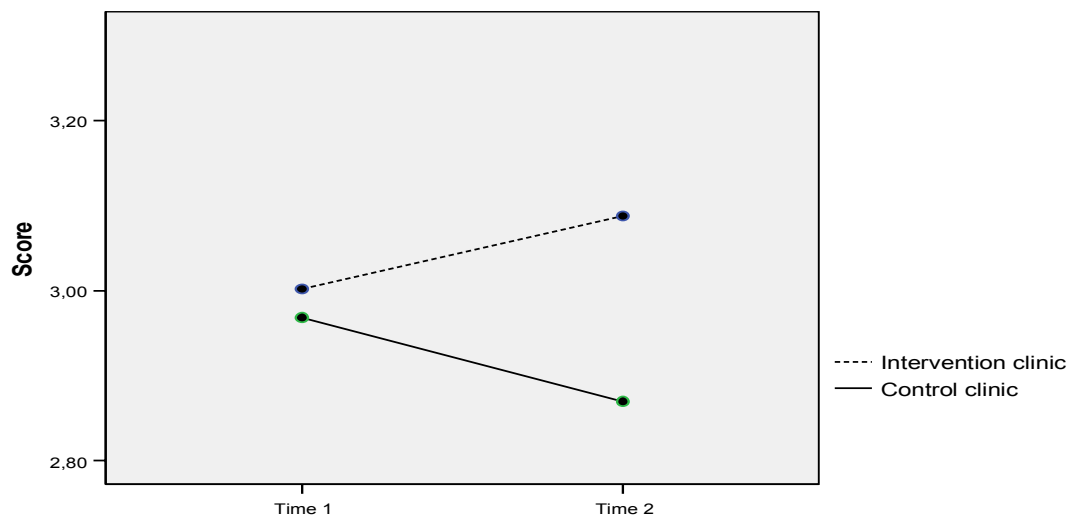


Figure 4. Health providers' attitudes toward girls' sexual and reproductive health concerns at the first (Time 1) and second assessment (Time 2). The scores refer to the mean of the added statements. Higher scores indicate more positive attitudes. Mean differences between the groups were tested by ANOVA for repeated measurement, $df=1$, $F=2.657$, $p=0.111$.

Table 12. Attitudes pre- and post-intervention toward boys’ and girls’ sexuality presented as means. Mean at 1.00 indicates a negative attitude and mean at 4.00 indicates a positive attitude.

	Pre	Post
Intervention group		
Boys	3.11	3.25
Girls	3.00	3.09
Control group		
Boys	2.99	2.97
Girls	2.97	2.87

Results from the action plan and reflections about the intervention

Both in Kenya and Zambia, an action plan was developed and followed-up. However, the following presentation about the action plan and follow-up is only from Zambia and this data is not published. Two days during the intervention, young people and health providers discussed and developed an action plan on how to make the health centre more youth-friendly. Before developing the action plan, the young people gave their views on youth-friendliness and barriers to visiting the health centre for reproductive health services.

Youth-friendliness, according to the young people, was found similar to the findings in study III and involved confidentiality, low costs, no shouting, and good facial expression, but the young people also wanted the health providers to emphasise sexual abstinence as they considered premarital sex as very sinful and immoral.

The discussions on possible barriers for young people to visit the health centres were very heated and some of the health providers were offended when the young people said that some providers, in particular female staff, were rude and shouted and did not consider young people’s problems as important. They also said that the providers acted more as advisors than as counsellors. The health providers said that they treated the adolescents as they would treat their own children: to abstain from sex is to stay away from trouble. Moreover, the health providers said that perhaps a few providers could be unfriendly when they were tired, and that clients did not understand providers’ working situation. Other reasons for barriers mentioned by the young people were lack of

awareness of existing service, few peer educators, resistance from parents and community to provide young people with sexual and reproductive health services, as this was believed to lead to promiscuity.

Based on these discussions, the young people and health providers developed an action plan with the purpose to make the health centre more youth-friendly and to attract more young people to the centres. In order to reach these goals, the following areas were addressed:

- 1) To increase the number of peer educators (also girls) at the centre and to train more health providers in youth-friendliness.
- 2) To sensitise community members, such as parents, church leaders, traditional birth attendants, and teachers in adolescent sexual and reproductive health.
- 3) To do exchange visits between health centres in order to share experiences on how to work in a youth-friendly way.
- 4) To have regular meetings between peer educators and health providers.
- 5) To have educational sessions on sexual and reproductive health in the community and at the health centre based on the questions raised in study II.

In addition to these areas, the responsible person for the activities, time table, costs and possible barriers for achieving the aims were also included in the action plan.

Five months after the intervention, a follow-up day was carried out in order to give feedback to the managers at the district level and to listen to the participants' reflections about the intervention. The director and the manager of clinical care at the DHMT said that our pilot study came at the right time since the district had received money, which partly would be allocated to the training of two health providers in youth-friendliness from each health centre throughout the district. At the follow-up, several of the health providers stood up and said that they felt more prepared to attend to young people and that they had become more aware of their own behaviours: 'Before I shouted at a girl if she presented with an STI and asked her if she even know how to take care of her husband'. A nurse from the family planning clinic had been very uneasy to handle condoms before the intervention: 'I still don't like condoms, but now I can touch them and I don't deny young ones to use them' and 'This is what we need to do. We need to talk about sex in the family, at work during tea breaks'. Sister-in-charge said that before the intervention, youths were only counselled by a provider trained in youth-friendliness and if this person was not available the youth were told to come back.

Now, she said, anyone of the health providers can counsel a young person. The health providers said that there had been an increase in number of clients coming for STI service and voluntarily counselling and testing.

Some of the planned activities in the action plan had been carried out. A few peer educators had been recruited and trained. Regarding sensitising of the community, the peer educators had arranged a drama about HIV awareness and some of the providers had been visiting people's home and talking about HIV prevention. There had also been an educational session about STIs at the outpatient department in the waiting room. The providers had also contacted a youth club in church, but with very little response from them. Barriers to fulfilling the action plan were limited budget, lack of transportation, failing motivation by staff (as they are already overloaded with work), difficulties to keep trained peer educators, and resistance from religious leaders and parents to promote services for adolescents. High turnover among directors and managers at the DHMT was another problem, since the staff needed their support.

DISCUSSION

METHODOLOGICAL CONSIDERATIONS

Quantitative measurements

In this section the internal and external validity of data will be reflected upon. *Internal validity* is concerned with whether the instrument used actually measures what it purports to measure. *External validity* refers to the extent to which the results can be generalised to other settings and groups (Kazdin AE, 1998).

Internal validity

One part of this thesis was to address health providers' attitudes. A first question to be asked is whether attitudes can be measured? A common critique against attitudinal questionnaires is that they are a simplification of the complex phenomena of attitudes. Attitudes are usually more intricate than what can be captured on a continuum from negative to positive. But for the purpose of getting a hint or indication of the health providers' general feelings in these areas, such scales can be useful (Oppenheim AN, 2003).

In study **I** and **IV** we tried to measure underlying attitudes to young people's sexual and reproductive health, through the use of a number of statements where we forced the respondents to take a stand for or against a statement by using an even number of response alternatives (Oppenheim AN, 2003). The goal was to identify underlying themes in the statements such as "Gendered sexuality", "Liberal/judgmental attitudes", etc. However, these themes did not follow from the questionnaires used; when trying to understand latent themes we found the responses scattered and no clear coherence present from which to form scales to identify the underlying themes. To further develop the attitudinal questionnaire and to enhance the sensitivity and precision of the statements, more qualitative data on health providers' attitudes toward young people's sexual and reproductive health were needed. For practical and logistical reasons only a few individual interviews were carried out with nurses-in-charge. These data are not published.

Even though we did not manage to find underlying themes underlying the statements, study **I** still represents systematic research of nurse-midwives' attitudes on different

young people's sexual and reproductive health. The attitudinal questionnaire used in study **IV** is a more refined version of the questionnaire in study **I**. In study **IV**, the questionnaire was revised to see any possible differences in attitudes towards boys and girls and possible differences in attitudes toward STIs including HIV.

Several steps were taken to enhance internal validity. Regarding construct validity, a large pool of statements was developed and tested on 87 nurses and midwives for their comprehensibility and acceptability. Statements related to ethnicity were, for instance, not considered appropriate in the Kenyan setting and were thus excluded from the revised instrument. To avoid bias produced by response tendency, the statements were worded both positively and negatively (Spector PE, 1992). Reliability, (consistency) is a prerequisite for the validity. To test the internal consistency, how well the statements correlate with one another, an inter-item analysis was carried out (Spector PE, 1992). In study **I** we wanted to describe the attitudes of health providers and we therefore aggregated the four response alternatives into two categories for analysis: agree and disagree. For the purpose of description, the four-point scale did not achieve a higher degree of precision as compared with the two-point scale. However, to measure attitude changes over time, as we did in study **IV**, the four-point scale was kept as to identify even small changes in attitudes.

Study II

By experience we know that girls in particular are more reluctant to openly talk about sexuality. Therefore, the method of self-generated questions was used for its potential to allow for anonymous inquiry into otherwise taboo topics. The results of study **II** were presented to the young people in study **IV**. Thus, the participants of study **IV** provided a kind of member check on the emerging data and interpretations in study **II** (Polit D and Hungler B, 1999).

Study III

Clients are an essential source of data about how health services function and they have the right to have their views taken into account when developing and evaluating services (Donabedian A, 1980). In line with this, we asked clients about their experiences of and preferences for health services. It is well known that clients tend to report high levels of satisfaction (Avis M et al., 1995; Urden LD, 2002). In order to capture clients' satisfaction we included closed but also open-ended questions where

the clients could further explain their views. Client satisfaction was also measured on a scale.

External validity

Important aspects to consider regarding generalisation are where the studies have been carried out and the characteristics of study participants. When we study attitudes, it is important to consider the setting; adolescents with urban lifestyles may differ from those with rural lifestyles. Another important aspect is the cultural background of the health providers, as attitudes toward sexuality might vary between ethnic groups. The studies included in this thesis have mainly been carried out in urban areas and the majority of the participants belong to the ethnic group Luo (Kenya) and Bemba (Zambia). Hence, the results on attitudes are essentially applicable to urban settings and to Luo and Bemba culture. In study **II**, the sample size was large but yet restricted to school-going boys and girls in an urban area. However, focus group discussions were carried out with out-of-school boys and girls in the same towns, although this data is not yet published. In study **III**, results on patients' satisfaction are based on clients who visited public health centres. Hence, information on young people who seek care elsewhere, such as from private health facilities, is lacking.

Methodological considerations related to Study IV

Study **IV** should be considered as a first step in a long-term process of influencing attitudes; this process takes time and should involve multiple actors. Prior to the intervention in Zambia, we met with the director in charge of all health centres in the district. We presented results from previous studies and discussed the pilot study. The director was very interested in developing youth-friendly clinics in the district, as adolescent sexual and reproductive health problems are prevalent in the area. Throughout the study period, there has been high turnover among directors, which meant that we had to meet new directors with varying degrees of interest and will to cooperate with and support study into adolescent sexual and reproductive health. Moreover, we visited many health centres and talked to nurses-in-charge and peer educators about how services functioned and the extent to which they reached young people. Health providers complained of high stress due to the lack of equipment such as gloves and medications, as well as low salaries and difficult working situations, often including double-shifts. Staff members were rotated between clinics on regular basis. The mobility of staff was obvious as the providers constantly explained that they were

under-staffed and that many colleagues had migrated to the UK or South Africa. The overall experience from this pilot study is that it is a very complex task to carry out an intervention in a context with varying support from higher authorities and with highly mobile staff.

Aside from the abovementioned contextual issues, there are several methodological issues to take into consideration when analysing the results from study IV. *Sampling*: two health centres in each country were randomly assigned as intervention or control health centres. An alternative could have been to assign the individual health provider randomly to intervention or control groups. Such a random selection at the individual level would have brought about difficulties, such as a huge spill-over effect between the participants randomised to either intervention or control but who had daily contact while working at the same health centre. In order to affect the quality of services for adolescents, we wanted to involve everybody at the health centre. This was also the only practical way to involve the adolescents in designing their desired health services. With a larger sample of perhaps 20 health centres one could have analysed for whether changes occurring after the intervention were due to the uniqueness of the health centre or due to the randomisation method. The small *sample size* makes it difficult to draw any conclusions. The *drop-out* was high, particularly in the control group. Regarding the drop-out, it is important to see whether this was due to any systematic bias. In the intervention group, it was mainly those who had not received any continuing training in adolescent sexual and reproductive health who did not participate in the second assessment. Reasons were being on sick leave and rotating to other health centres or leaving the country. In the control group more men dropped out. In addition to unwillingness to participate when not being rewarded, the high drop-out also reflects the high mobility among health providers in the health sector. *The timing of the assessment* also needs to be considered. The ambition was to make the first assessment before the health providers knew whether they belonged to the intervention or control group. However, despite many efforts, it was extremely difficult to get the health providers from both groups to respond to the questionnaire. Hence, some providers responded to the questionnaire while being uninformed as to whether they belonged to the intervention or the control group, while others responded to the questionnaire when they already had this information. The second assessment took place three (Kenya) and five (Zambia) months after the intervention. The rationale behind this was not to wait too long due to the high turn-over of health providers yet not to conduct the assessment

too early so as not to catch just the novelty effect. The optimum is, of course, to have several assessments at various time points after the intervention.

We used *reflective thinking, including interactive group discussion* exercises in the intervention as attitudes are often dormant and need to be worked on actively to become aware of them. The strength in study **IV** was the involvement of young people who were allowed to meet with health providers face-to-face. In this way, both parties shared the other's experiences and views. This means that they could tackle the task together, which is crucial for the strengthening of services for young people. In addition to the pre-and post attitudinal questionnaire, a *process evaluation* was included in Zambia. The process evaluation cannot alone determine the effectiveness of the intervention as it rather focuses on how the intervention was delivered (Bonell C et al., 2003). Before the start of each training session, the health providers were asked to write down how they defined the topic that they were about to be trained in (sexuality, youth-friendliness and counselling). At the end of the day, they were asked to write down how they felt after the training, what they had learned, what they thought of the methods used and about the moderators leading the training.

ADOLESCENT SEXUALITY- BETWEEN MORALITY AND REALITY

In all four studies in this thesis it was confirmed that adolescent sexuality is a highly morally-charged issue in Kenya and Zambia (Carmody B, 2003; Kamaara E, 1999). Both the young people and the health providers opposed premarital sex, masturbation, contraceptive use and abortion (studies **I, II, IV**). These are indicative expressions deeply rooted in culture and religion (Hogan RM, 1982; Runkel G, 1998). In Kenya and Zambia, as in much of Africa, there is a profound concentration on procreation with large families as an ideal. In a study from rural Zambia, good and satisfying sex was considered by both men and women as semen released into a woman (Bond V and Dover P, 1997). Consequently, 'proper' sex should be without any barriers such as condoms, and masturbation is seen as deviant and the action of a young boy, not befitting a man (Bond V and Dover P, 1997; Ndubani P, 2002). Viewpoints from Christian groups on masturbation and condoms may have reinforced these ideas. Christian denominations stress that sex should be for procreation and should take place within marriage, and the Bible likens masturbation to 'seed..... spilled on the ground' (Genesis 38:9). Abortion is considered by many Christian religions as a severe crime

against the value of human life (Runkel G, 1998; Schenker JG, 2005). The vast majority of people in Kenya and Zambia are Christians and religion plays a major role in everyday life (Carmody B, 2003). The questions around sexuality posed by young people in study **II** reflected that both boys and girls experienced ethical dilemmas where they, on the one hand, held moralistic views and, on the other, faced difficulties in living in accordance with their ideals. They expressed sexual frustration and some engaged in sex and masturbation, which seemed to cause them feelings of guilt. A situation where adolescent sexuality is surrounded by silence- to such an extent that girls aged 20 years wonder how one becomes pregnant- coupled with prohibitions and denial, put the sexual and reproductive health of young people at risk. In our study (**II**), it was indicated that some girls relied on wine and tablets as contraceptive methods and resorted to 'backstreet abortions' in case of pregnancy. Research has shown that being uninformed and receiving messages with sexual abstinence as the only option, leaves young people unprepared to take precautions when they are about to have sex (Hauser D, 2004). Other international studies in settings where adolescent sexuality is a highly morally charged issue have shown similar results- that young people are sexually active despite moral prohibitions, and often with devastating consequences (Chikovore J, 2004; Klingberg-Allvin M et al., 2007; Smith DJ, 2004).

Contradictions between prevailing societal norms in Zambia opposing premarital sex- and the reality of young people engaging in sexual relations were demonstrated by the young people in studies **II** and **IV**. During the discussions around premarital sex in study **IV**, it emerged that some of the health providers viewed premarital sexual relations as risking future happiness and that, thus, it was their duty to warn the young people about reproductive health consequences: 'When they ask for condoms I tell them to focus on their studies. Sexual abstinence is the best way to stay away from troubles'. This warning syndrome has been reported in other studies on health providers' interactions with young people (Jaruseviciene L et al., 2006; Klingberg-Allvin M et al., 2006; Muturi NW, 2005). An emerging youth culture with increasing autonomy and premarital sex can be interpreted by the older generation as the disintegration of cultural norms and values and thus a threat to national or cultural group identity (Friedman HL, 1999). In study **IV** and in personal communications, several Zambian nurses and midwives described that they act towards their young clients as they do with their own children. As mothers, they feel a responsibility to

convey what is right and wrong according to the cultural norms around sexual behaviour. They therefore, take on the role of gatekeepers of cultural values.

Despite their moral objections, health providers expressed a pragmatic attitude in handling adolescent sexuality (I, IV). On the one hand they disapproved of premarital sex and on the other they were prepared to provide sexually active adolescents with condoms. These conflicting perspectives may reflect that the health providers are at critical intersection between societal norms and values, and the reality of adolescents engaging in premarital sex amidst the HIV crisis. This ethical dilemma was also seen among Vietnamese health providers meeting unmarried adolescents in reproductive health services (Klingberg-Allvin M et al., 2007). Nursing is a profession where the health provider is often confronted with ethical dilemmas (Thompson A, 2004). This was clear in study IV, where the providers described how they were torn between Christian morals and being professional, in particular, in relation to abortion. This suggests that the health providers are ill-prepared to meet the young people's needs in a realistic way. Non-judgmental attitudes are one of the most important aspects for high quality of care and they are a crucial factor determining whether the client will return or follow the provider's instructions (Creel LC and Perry RJ, 2003). Continuing education on adolescent sexual and reproductive health matters seemed to influence providers' attitudes even more than being an enrolled or registered nurse-midwife. In Kenya and Zambia, as in much of Africa, there has been little focus on ethical problem solving in health providers' education programmes (Akinsola HA, 2001; Botes A, 1999). The training is often teacher-centered with little opportunity for students to question and reflect upon their own views (Haegert S, 2000). One helpful way to address attitudinal barriers could be to use reflective thinking methods in undergraduate training as well as in continuing education trainings, focusing on the cultural and moral dimensions attached to adolescent sexuality. Key features in this method involve examinations of an ethical dilemma and critical analysis of personal beliefs and values related to this dilemma, thus becoming aware of one's attitudes and what impact this may have on the client. Subsequently new perspectives can be achieved and sustained (Liimatainen L et al., 2001).

The health providers described weaknesses such as poor equipment, shortage of staff, low salaries and feeling neglected by managers in their working environments. This has to do with management and structures in the health system and improvements are

dependent on external factors such as politics and finances (Hocklong L et al., 2003). These structural factors leading to employee dissatisfaction influence professional morale and need to be taken into consideration when describing health providers' attitudes and the need for these attitudes to change (van Lerberghe W et al., 2002).

GENDER AND SEXUALITY

Almost no nurse-midwives in study **I** agreed that it is more important for boys to have sexual experience before marriage than for girls, which can be seen as the general objection toward premarital sex, regardless of whether it is a boy or a girl. However, in study **IV**, health providers' attitudes toward boys' and girls' sexuality differed somewhat with providers demonstrating more supportive attitudes toward boys than girls regarding being infected with an STI/HIV, condom use and sexual abuse (Fig 3 and 4). This was further explained in discussions with health providers (study **IV**) who explained that there are more restrictions around girls' sexuality as compared to boys' sexuality. Girls are more controlled by parents and adults while boys are allowed to do as they please. Similar findings among health providers have been reported in other studies (Klingberg-Allvin M et al., 2007).

This gendered sexuality was also seen among young people themselves. During the upbringing and in initiation rites, girls are socialised to be subservient both in the family and towards men, while boys are fostered to initiate sexual relations and not to show emotions (Kapungwe A, 2003; Ndubani P, 2002). Reflections of this were seen in the young people's questions around sexuality and reproduction (study **II**) regarding girls being beaten when refusing to have sex with a boyfriend or boys 'running' after girls for sex. In study **II**, the questions posed showed that girls can be subjected to violence by the boyfriend if denying him sex and that child-rape is a reality for some girls. However, the questions also showed that boys expressed a need to talk about love and how to relate to girls, and that they wondered what to do when they were forced into sex by their girlfriends. This shows that gender power dynamics and expectations on men and women, founded during early gender socialization, affect both sexes, but probably affect girls more adversely (Ampofo AA, 2001).

SEXUAL AND REPRODUCTIVE HEALTH SERVICES FOR YOUNG PEOPLE

In societies where premarital sexual activity is met with denial, prohibition and silence, young people have limited access to sexual and reproductive health information and services (Ahlberg BM et al., 2001; Chikovore J, 2004; Magnani R et al., 2002; Mensch BS et al., 2001). Young people often turn to their friends for information on sexual matters, which can be based on misconceptions and myths as seen in Study **II**. Studies conducted in several sub-Saharan countries, including Kenya and Zambia, showed that young boys and girls are eager to learn and to get clear information and also looked upon health professionals as a reliable and knowledgeable sources on sexuality matters (Amuyunzu-Nyamongo M et al., 2005; Buseh AG et al., 2002). This was, indeed, the point of embarkation for study **III**, asking for the young clients' own opinions on the clinical encounter and services they had just experienced. Patient-based assessments of medical care are increasingly being used to measure the quality of care (Ajayi IO et al., 2005). As mentioned earlier, the DHMT in Kitwe, Zambia, has put youth-friendly services as a district priority, and to our knowledge there is no information on how young people perceive the services in the study areas; Kitwe (Zambia) or Kisumu (Kenya). Results from the exit interviews (Study **III**) showed that clients were, on the whole, satisfied with the care provided. This is consistent with research findings on patient satisfaction from both high- and low-income countries (Bender SS, 1999; Bernhart MH et al., 1999; Masatu MC et al., 2001). However, in Kenya and Zambia, there is limited research focusing solely on young people's satisfaction with sexual and reproductive health care. Research conducted in these two countries has often found dissatisfaction with the care provided and with the health providers related to STI services, abortion or contraceptive use, however, care quality was often not the specific focus of the studies and emerged indirectly when other issues were being investigated (Koster-Oyekan W, 1998; Ndubani P, 2002; Oindo ML, 2002). But studies which do specifically investigate patient satisfaction often do report high levels of patient satisfaction (Avis M et al., 1995). The high level of satisfaction reported in our study may be a result of reporting bias, such that respondents were giving socially desirable responses or were reluctant to express negative opinion as the client may have felt dependent upon the care provided and feared that negative comments would negatively affect their ability to access care in the future. Research has, furthermore, shown that the client's expectation of the services must be taken into account in order to get a 'true' picture of their satisfaction (Schneider H and Palmer N, 2004). In our study (**III**),

the clients perhaps did not have very high expectations of the care as they often described 'good care' as not being shouted at or not being harshly treated.

An important finding was the charging of fees for STI services, which caused dissatisfaction among the Zambian male clients. To charge STI clients is not in line with the policy of the Ministry of Health in Zambia, which states that STI services are free of charge. This is to encourage people to visit the health centres and to curb the spread of STIs, including HIV (MoH Zambia, 2005). Another important finding was, the disbelief in patient confidentiality found among STI clients. The belief in confidentiality is of outmost importance for the clients to visit and revisit the health centre (Thomas N et al., 2006).

The clients in Study III had a clear view of what good services should include. Respectful treatment seemed to be one of the most important characteristics, lower costs, privacy and confidentiality and short waiting times also seemed valuable. The views from Kenya and Zambia were generally similar, but the Kenyan clients asked for clinics only for youth and in Zambia, where there are already such services, the clients asked for staff trained in youth-friendliness and clinics only for girls. Furthermore, the clients also valued being asked questions. Some of the boys and girls reported that they felt embarrassed or even feared to ask questions. A study from Zimbabwe on quality of care showed that young girls in particular do not ask questions unless they are prompted (Kim YM et al., 1997). This shows the importance of the communication skills of the provider. Good communication skills are fundamental to establish rapport and transmit information, and especially when dealing with sensitive issues such as sexuality (Dehne KL and Riedner G, 2005; Koh A, 1999).

There is a need for information, support and guidance regarding sexuality and reproduction among young people in these settings, as illustrated in this thesis. The question is how to meet those needs. The rights-based approach to sexual and reproductive health as defined by the ICPD, with roots in Western culture and individualism is a challenge for countries with strong religious leanings and who are more collective-oriented such as Kenya and Zambia. There are many actors influencing young people's health and health care is just one of these influences; it is, nevertheless, an important actor in promoting the young boys' and girls' sexual and reproductive health. A review of interventions in low-income countries provided evidence, despite difficulties in interpreting the evaluations, of increased use of health services by young people for those interventions that included training for health providers and activities

in the community (Dick B et al., 2006). Providing young people with sexual and reproductive health services can cause personal ethical dilemmas for some health providers. Reflective thinking where health providers become aware and reflect upon their attitudes could be a useful way to prepare them to meet young people's needs in a more realistic way. However, to promote adolescent reproductive health and to make changes sustainable, different kinds of local actors such as parents, religious leaders, teachers, NGOs, and decision makers have to be involved in the dialogue about the best way to meet adolescents' needs for sexual and reproductive health.

CONCLUSION

- Both the health providers and young people disapproved of premarital sex, masturbation, contraceptive use, abortion and STIs. But the health providers also held pragmatic attitudes in handling these issues, and the young people experienced difficulties in coping with emerging sexual feelings.
- Health providers who have received continuing education related to adolescent sexual and reproductive health had more youth-friendly attitudes.
- Societal norms, religion, and gender influence attitudes toward adolescent sexuality.
- Young people are in need of information about the basics in reproduction, STIs including HIV, contraceptives and masturbation. They further expressed a need for guidance and someone to turn to in cases of pregnancy, abortion, STIs/HIV but also for someone with whom to discuss issues related to love.
- Young people's experience from sexual and reproductive health services was in general good. Dissatisfaction was related to both structural and personal factors such as privacy, confidentiality, long waiting times, costs and negative attitudes from health providers.
- Young people's preferences with regard to sexual and reproductive health services were related to respectful attitudes, they preferred to be attended by a provider of the same sex, they wanted to be asked questions and to be examined during consultation. Confidentiality and low costs were also highly valued, as well wishes for services solely for young people (Kenya) and staff trained in youth-friendliness.
- Parents, the leadership in health authorities, and young people themselves need to be involved for the strengthening of sexual and reproductive health services for young people.

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REFERENCES

- Adegoke AA (2001) Pubertal development and traditional support systems in Africa: an overview. *African Journal of Reproductive Health* **5**, 20-30.
- Agha S, Hutchinson P and Kusanthan T (2006) The effects of religious affiliation on sexual initiation and condom use in Zambia. *Journal of Adolescent Health* **38**, 550-555.
- Ahlberg BM (1991) *Adolescents, Sexuality and the Socio-economic and Cultural Change: Impact on Reproductive Health in an African Setting*, In Stolen K. A. (ed) "Gender, Culture and Power in Developing Countries" University of Oslo, Vol II.
- Ahlberg BM, Jylkas E and Krantz I (2001) Gendered construction of sexual risks: implications for safer sex among young people in Kenya and Sweden. *Reproductive Health Matters* **9**, 26-36.
- Ajayi IO, Olumide EA and Oyediran O (2005) Patient satisfaction with the services provided at a general outpatients' clinic, Oyo State, Nigeria. *African Journal of Medicine and Medical Science* **34**, 133-140.
- Akinsola HA (2001) Ethical issues in rural nursing practice in Botswana. *Nursing Ethics* **8**, 340-349.
- Ampofo AA (2001) "When men speak women listen": gender socialisation and young adolescents' attitudes to sexual and reproductive health issues. *African Journal of Reproductive Health* **5**, 196-212.
- Amuyunzu-Nyamongo M, Biddlecom A E, Ouedraogo C and Woog V (2005), Qualitative evidence on adolescents' views of sexual and reproductive health in sub-Saharan Africa. New York: Occasional Report No.16, The Alan Guttmacher Institute.
- Arulkumaran S (2001) Reproductive health care for young adolescents. *International Journal of Gynecology & Obstetrics* **75**, 109-110.
- Avis M, Bond M and Arthur A (1995) Satisfying solutions? a review of some unresolved issues in the measurement of patient satisfaction. *Journal of Advanced Nursing* **22**, 316-322.
- Bearinger LH, Sieving RE, Ferguson J and Sharma V (2007) Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. *Lancet* **369**, 1220-1231.
- Bender SS (1999) Attitudes of Icelandic young people toward sexual and reproductive health services. *Family Planning Perspectives* **31**, 294-301.
- Bernard R (2000) *Social research methods: qualitative and quantitative approaches*, USA: Sage Publications Inc.
- Bernhart MH, Wiadnaya IGP, Wihardjo H and Pohan I (1999) Patient satisfaction in developing countries. *Social Science & Medicine* **48**, 989-996.
- Blum R (2007) Youth in sub-Saharan Africa. *Journal of Adolescent Health* **41**, 230-238.
- Blum R and Nelson-Mmari K (2004) The health of young people in a global context. *Journal of Adolescent Health* **35**, 402-418.
- Bond V and Dover P (1997) Men, women and the trouble with condoms: problems associated with condom use by migrant workers in rural Zambia. *Health Transition Review* **7 (supp)**, 377-391.
- Bonell C, Bennett R and Oakley A (2003) *Sexual health interventions should be subject to experimental evaluation*, In Effective sexual health interventions, Stephenson JM, Imrie J, Bonell C. (eds). New York: Oxford University Press.
- Botes A (1999) Nursing ethics in a developing country *Curationis* **22**, 64-67.
- Buseh AG, Glass LK, McElmurry B, Mkhabela M and Sukati NA (2002) Primary and preferred sources for HIV/AIDS and sexual risk behavior information among adolescents in Swaziland, Southern Africa. *International Journal of Nursing Studies* **39**, 525-538.
- Caldwell JC, Caldwell P, Caldwell BK and Pieris I (1998) The construction of adolescence in a changing world: implications for sexuality, reproduction, and marriage *Studies In Family Planning* **29**, 137-153.

- Carmody B (2003) Religious heritage and premarital sex in Zambia. *Journal of Theology for Southern Africa* **115**, 79-90.
- CBS, MoH and ORC Macro (2003) *Kenya Demographic and Health Survey*, Calverton, USA: Central Bureau of Statistics, Ministry of Health & ORC Macro.
- Chatterji M, Murray N and London D (2004) *The factors influencing transactional sex among young men and women in 12 sub-Saharan African countries*, Washington DC: Policy Project for USAID.
- Chikovore J (2004) Gender power dynamics in sexual and reproductive health. A qualitative study in Chiredzi district, Zimbabwe. Phd Thesis. Sweden: Umeå University, Print & Media.
- CIA Kenya (2007). The World Factbook: Kenya. Central Intelligence Agency, Washington DC. Retrieved from: <http://www.cia.gov/library/publications/the-world-factbook/print/ke.html>. Accessed at 29 August 2007.
- CIA Zambia (2007), The World Factbook: Zambia. Central Intelligence Agency, Washington DC. Retrieved from: <http://www.cia.gov/library/publications/the-world-factbook/print/za.html>. Accessed at 29 August 2007.
- Creel LC and Perry RJ (2003) *Improving the quality of reproductive health care for young people. New Perspectives on Quality of Care: No. 4*, Population Council and Population Reference Bureau.
- CSO (2000) *Census of population and housing*, Lusaka: Central Statistical Office.
- CSO, CBH and ORC Macro (2003) *Zambia Demographic and Health Survey 2001-2002*, Calverton, USA: Central Statistical Office, Central Board of Health & ORC Macro.
- CSO and ORC Macro (2003) *Zambia DHS EdData Survey 2002. Education Data for Decision-making*, Calverton, USA: Central Statistical Office and ORC Macro International.
- Dehne KL and Riedner G (2001) Adolescence- a dynamic concept. *Reproductive Health Matters* **9**, 11-15.
- Dehne KL and Riedner G (2005) *Sexually transmitted infections among adolescents: the need for adequate health services*, Geneva: World Health Organization.
- DeJong J (2000) The role and limitations of the Cairo International Conference on Population and Development. *Social Science & Medicine* **51**, 941-953.
- Dick B, Ferguson J, Chandra-Mouli V, Brabin L, Chatterjee S and Ross AD (2006) Review of evidence for interventions to increase young people's use of health services in developing countries. *World Health Organization technical report series* **938**, 151-204.
- Donabedian A (1980), Explorations in quality assessment and monitoring: volume 1, The definition of quality and approaches to its assessment. Michigan: Health Administration Press, Ann Arbor.
- Eastwood J, Conroy R, Naicker S, West P, Tutt R and Plange-Rhule J (2005) Loss of health professionals from sub-Saharan Africa: the pivotal role of the UK. *Lancet* **365**, 1893-1900.
- Erulkar AS, Onoka CJ and Phiri A (2005) What is youth-friendly? Adolescents' preferences for reproductive health services in Kenya and Zimbabwe. *African Journal of Reproductive Health* **9**, 51-58.
- Fedders A and Salvatori C (1980) *Peoples and cultures of Kenya*, Nairobi: Trans Africa.
- Friedman HL (1999) Culture and adolescent development. *Journal of Adolescent Health* **25**, 1-6.
- Gebreselassie H, Gallo MF, Monyo A and Johnson BR (2005) The magnitude of abortion complications in Kenya. *International Journal of Obstetrics and Gynaecology* **112**, 1229-1235.
- Girard F (1999) Cairo + Five: Reviewing progress for women five years after the International Conference on Population and Development. *Journal of Women's Health and Law* **1**, 1-14.
- Graneheim UH and Lundman B (2004) Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today* **24**, 105-112.
- Haegert S (2000) An African ethic for nursing. *Nursing Ethics* **7**, 492-502.

- Hauser D (2004) *Five years of abstinence-only-until-marriage education: assessing the impact*, Washington, DC: Advocates for Youth.
- Hocklong L, Herceg-Baron R, Cassidy AM and Whittaker PG (2003) Access to adolescent sexual and reproductive health services: financial and structural barriers to care. *Perspectives on Sexual and Reproductive Health* **35**, 144-147.
- Hogan RM (1982) Influences of culture on sexuality. *Nursing Clinics of North America* **17**, 365-376.
- Hughes J and McCauley AP (1998) Improving the fit: adolescents' needs and future programs for sexual and reproductive health in developing countries. *Studies In Family Planning* **29**, 233-245.
- Jaruseviciene L, Lavoisier G and Liljestrand J (2006) Confidentiality for adolescents seeking reproductive health care in Lithuania: the perceptions of general practitioners. *Reproductive Health Matters* **14**, 129-137.
- Kamaara E (1999) Reproductive and sexual health problems of adolescent girls in Kenya: a challenge to the church. *Reproductive Health Matters* **7**, 130-133.
- Kangara LW (2005) The church, youth and sexuality in Kenya. *Sexuality in Africa*, 8-10.
- Kapungwe A (2003) Traditional cultural practices of imparting sex education and the fight against HIV/AIDS: the case of initiation ceremonies for girls in Zambia. *African Sociological Review* **7**, 35-52.
- Kazdin AE (1998) *Research design in clinical psychology*, Needham Heights, MA 02194: Allyn and Bacon.
- Kim YM, Marangwanda C and Kols A (1997) Quality of counselling of young clients in Zimbabwe. *East African Medical Journal* **74**, 514-518.
- Klingberg-Allvin M, Nguyen Thu Nga, Ransjo-Arvidson A-B and Johansson A (2006) Perspectives of midwives and doctors on adolescent sexuality and abortion care in Vietnam. *Scandinavian Journal of Public Health* **34**, 414-421.
- Klingberg-Allvin M, Vu Van Tam, Nguyen Thu Nga, Ransjo-Arvidson A-B and Johansson A (2007) Ethics of justice and ethics of care. Values and attitudes among midwifery students on adolescent sexuality and abortion in Vietnam and their implications for midwifery education: a survey by questionnaire and interview. *International Journal of Nursing Studies* **44**, 37-46.
- Koh A (1999) Non-judgmental care as a professional obligation. *Nursing Standard* **13**, 38-41.
- Kombe G, Galaty D, Mtonga V and Banda P (2005), Human resources crisis in the Zambian health system: a call for urgent action. Assessment report. The partners for Health Reformplus Project, Abt Associates Inc.
- Koster-Oyekan W (1998) Why resort to illegal abortion in Zambia? Findings of a community-based study in Western province *Social Science & Medicine* **46**, 1303-1312.
- Liimatainen L, Poskiparta M, Karhila P and Sjögren A (2001) The development of reflective learning in the context of health counselling and health promotion during nurse education. *Journal of Advanced Nursing* **34**, 648-658.
- Magnani R, Karim M, Weiss L, Bond K, Lemba M and Morgan G (2002) Reproductive health risk and protective factors among youth in Lusaka, Zambia. *Journal of Adolescent Health* **30**, 76-86.
- Magnussen D and Allen VI (1983) *Human development: an interactionist perspective*, New York: Academic press.
- Masatu MC, Klepp K-I and Kvåle G (2001) Use of health services and reported satisfaction among primary school adolescents in Arusha, Tanzania. *Journal of Adolescent Health* **28**, 278-287.
- Mensch BS, Clark WH, Lloyd CB and Erulkar AS (2001) Premarital sex, schoolgirl pregnancy, and school quality in rural Kenya. *Studies In Family Planning* **32**, 285-301.
- Mensch BS, Grant MJ and Blanc AK (2006) The changing context of sexual initiation in sub-Saharan Africa. *Population and development review* **32**, 699-727.
- Mmari KN and Magnani RJ (2003) Does making clinic-based reproductive health services more youth-friendly increase service use by adolescents? Evidence from Lusaka, Zambia. *Journal of Adolescent Health* **33**, 259-270.

- MoH Kenya (2003), Adolescent Reproductive health and Development Policy: plan of action 2005-2015. Nairobi: Ministry of Health.
- MoH Zambia (2000) *National Health Strategic Plan 2001-2005*, Lusaka: Ministry of Health.
- MoH Zambia (2005) *National HIV/AIDS/STI/TB policy*, Lusaka: Government of Zambia, Ministry of Health.
- Muturi NW (2005) Communication for HIV/AIDS prevention in Kenya: socio-cultural considerations. *Journal of Health Communication* **10**, 77-98.
- National HIV/AIDS/STI/TB Council [Zambia] (2003) *National HIV/AIDS/STI/TB intervention strategic plan 2002-2005*, Lusaka, Zambia.
- Ndubani P (2002) Young men's sexuality and sexually transmitted infections in Zambia. PhD thesis. Stockholm: Karolinska Institutet, Karolinska University Press.
- Nzioka C (2001) Perspectives of adolescent boys on the risks of unwanted pregnancy and sexually transmitted infections: Kenya. *Reproductive Health Matters* **9**, 108-117.
- Oindo ML (2002) Contraception and sexuality among the youth in Kisumu, Kenya. *African Health Sciences* **2**, 33-40.
- Oppenheim AN (2003) *Questionnaire design, interviewing and attitude measurement*, London: Biddles Ltd.
- Pillai VK and Barton TR (1998) Modernization and teenage sexual activity in Zambia. *Youth & Society* **29**, 293-310.
- Polit D and Hungler B (1999) *Nursing research: principles and methods*, Philadelphia: Lippincott, Williams & Wilkins.
- PRB (2000). Population Reference Bureau. The World's Youth 2000. Retrieved from: <http://www.prb.org>.
- PRB (2001) *Youth in Sub-Saharan Africa: a chartbook on sexual experience and reproductive health*, USA: Population Reference Bureau.
- Rasing T (1995) *Passing on the rites of passage. Girls' initiation rites in the context of an urban Roman Catholic community in the Zambian Copperbelt*, Amsterdam, Avebury: African Studies Centre.
- Reuters (2004) AIDS-hit Zambia bans condom handouts to students. 26th October 2004. Available at: www.aegis.com.
- Runkel G (1998) Sexual morality of Christianity. *Journal of Sex & Marital Therapy* **24**, 103-122.
- Sandoy IF, Kvale G, Michelo C and Fylkesnes K (2006) Antenatal clinic-based HIV prevalence in Zambia: declining trends but sharp local contrasts in young women. *Tropical Medicine and International Health* **11**, 917-928.
- Schenker JG (2005) Assisted reproductive practice: religious perspectives. *Reproductive BioMedicine* **10**, 310-319.
- Schneider H and Palmer N (2004) Getting to the truth? Researching user views on primary health care. *Health policy and planning* **17**, 32-41.
- Senanayake P, Nott JH and Faulkner KM (2001) Adolescent sexual and reproductive health: the challenge for society. *Human Fertility* **4**, 117-122.
- Senderowitz J (1999) *Making reproductive health services youth-friendly*, Washington DC, Focus On Young Adults.
- Shah I and Åhman E (2004) Age pattern of unsafe abortion in developing country regions. *Reproductive Health Matters* **12(24 Suppl)**, 9-17.
- Siringi S (2002) East Africa to tackle high rates of child prostitution. *Lancet* **359**, 1756.
- Smith DJ (2004) Youth, sin and sex in Nigeria: Christianity and HIV/ AIDS-related beliefs and behaviour among rural-urban migrants. *Culture, Health & Sexuality* **6**, 425-437.
- Spector PE (1992) *Summated rating scale construction: an introduction*, Newbury Park, USA: SAGE Publications Inc.
- Spronk R (2005) Female sexuality in Nairobi: flawed or favoured? *Culture, Health & Sexuality* **7**, 267-277.
- Stark R, Nair NVK and Shigeru O (1999) Nurse practitioners in developing countries: some ethical considerations. *Nursing Ethics* **6**, 273-277.

- Thomas N, Murray E and Rogstad KE (2006) Confidentiality is essential if young people are to access sexual health services. *International Journal of STD & AIDS* **17**, 525-529.
- Thompson A (2004) Bridging the gap: teaching ethics in midwifery practice *Journal of Midwifery & Women's health* **49**, 188-193.
- UN (1989) *Convention on the Rights of the Child*, New York, Office of the United Nations High Commissioner for Human Rights.
- UN (1995) *Population and Development: Programme of action adopted at the International Conference on Population and Development, Cairo, 5-13 September 1994*, Department for Economic and Social Information and Policy Analysis. Cairo: United Nations.
- UNAIDS (2004) 2004 report of the global AIDS epidemic Retrieved from: <http://www.unaids.org>.
- UNAIDS (2006) *Report on the global AIDS epidemic*, Geneva: Joint United Nations Programme on HIV/AIDS.
- UNDP (2006) *Human Development Report*, New York: United Nations Development Programme.
- UNESCO (2002) *Universal Declaration on Cultural Diversity*, United Nations Educational, Scientific and Cultural Organization
- University of Natal (2002) *Current nursing education in Africa*, School of Nursing, Durban, South Africa.
- Urden LD (2002) Patient satisfaction measurement. Current issues and implications. *Lippincott's Case Management* **7**, 194-200.
- USAID (2003) *The health sector human resource crisis in Africa: an issue paper*, Washington: United States Agency for International Development.
- van Lerberghe W, Conceicao C, van Damme W and Ferrinho P (2002) When staff is underpaid: dealing with the individual coping strategies of health personnel *Bulletin of the World Health Organization* **80**, 581-583.
- Wairimu Kamau A (2006) Factors influencing access and utilisation of preventive reproductive health services by adolescents in Kenya. A case study of Murang'a district. Phd Thesis. Bielefeld: University of Bielefeld, German Academic Exchange Service (DAAD).
- WHO (1986) *Young people's health- a challenge for society: report of a WHO Study Group on young people and 'health for all by the year 2000'*, Geneva: World Health Organization.
- WHO (1992) *Strengthening nursing and midwifery in support of strategies for health for all*, Geneva: World Health Organization.
- WHO (2002a) *Adolescent friendly health services: an agenda for change*, Geneva: World Health Organization.
- WHO (2002b) *Traditional medicine strategy 2002-2005*, Geneva: World Health Organization.
- WHO (2003) *Integrating gender into HIV/AIDS programmes. A review paper*, Geneva: World Health Organization.
- WHO (2004a) *Adolescent health and development in nursing and midwifery education*, Geneva: World Health Organization.
- WHO (2004b) *Protecting young people from HIV and AIDS: the role of health services*, Geneva: World Health Organization.
- WHO (2004c) *Unsafe abortion. Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000. 4th ed*, Geneva: World Health Organization.
- WHO (2006) *Global strategy for the prevention and control of sexually transmitted infections: 2006-2015*, Geneva: World Health Organization.