Meeting adolescents where they are in provision of friendly health services:

Lessons from a needs assessment in Uganda

GEORGE W. KIVUMBI, 1 MPABULUNGI LILLIAN 2

¹ Makerere University Medical School, Child Health and Development Centre, Kampala,

Uganda

² Uganda Parliament, Research Section, Kampala, Uganda

Summary

This study investigated the context and the constraints in delivery of services to adolescents in Mbale district of Uganda. Focus group discussions and semi-structured interviews with adolescents, teachers, various service providers, community members and leaders were combined with documents review. In schools the senior women and science teachers assisted adolescent, but were not equipped with the skills and knowledge to offer friendly services. At health units there was a gap between the age and sex of the adolescents and providers. Confidentiality was not adhered to in provision of services due to lack of resources, personnel and time. Circumcision rituals and festivities were a risk to adolescents' health. Radio, adolescent-specific newsletters, and peers are the preferred channels of communication. Coordination of adolescent services was poor sometimes leading to duplication of efforts and resources, and competition among various providers. Reforms in the district health system appear to negatively affect service delivery as district do not have funds to pay health workers and other operational costs. Implications of our findings for remedying provision of adolescent friendly health services are discussed.

Key words: adolescents, friendly health services, needs assessment, Uganda.

Biographies

George Washington Kivumbi, a demographer by training, is lecturer and head of the training section at the Child Health and Development Centre, Makerere University Medical School. Currently, he is a PhD candidate at the Department of International Health, University of Copenhagen, Denmark.

Mpabulungi Lillian holds a Master's degree in Medical Anthropology from the University of Amsterdam, The Netherlands. She is currently employed as a research officer at the Research Unit of the Ugandan Parliament in Kampala.

Correspondence: George Washington Kivumbi, Child Health and Development Centre, Makerere University Medical School P.o Box 6717 Kampala Uganda Email: kivumbi@chdc-muk.com

Introduction

Worldwide, adolescents suffer a disproportionate share of unplanned pregnancies, sexually transmitted diseases (STDs), including HIV, and other serious reproductive health problems. Adolescence is a period of biological and psychosocial change. Things happen too fast and too radically, a situation that leaves the teenager in stress and wondering what is happening. Adolescents have to make decisions pertaining to their teenage life and their future life. The biological changes concern for appearance, sexuality, search for identity, sex roles and the whole question of their future status are quite overwhelming. They have no prior experience of such pronounced changes that puts them in a difficult situation as they grow up. Thus adolescent reproductive health is a major concern in many countries.

The World Health Organization (WHO 1989) defines adolescents as persons in the 10-19 years age group while youths are defined as those between 15 - 24 years. It combines these two overlapping groups into one entity of "young people", covering the age range of 10 - 24 years. Both groups together form 33.5% of the population of Uganda (Turyasingura 1994). In Uganda, Bohmer and Kirumira (1997) found that adolescents initiated sex at earlier ages (10-14 years) and that sexual influences were very prevalent in their environment. Bagarukayo, et al (1992) found the mean age for initiation of sexual experimentation was 10.2 years while the mode was 12 years. Agyei and Epema (1991) found that 44% of 15-year-old girls in Kampala had experienced sexual intercourse. In rural Madi, it was found that 18.5% of adolescent girls had premarital sexual experience (Schopper & Doussantousse,

1991). In Acholi, northern Uganda, girls reportedly went to sleep at their grand mothers to learn about motherhood (Laker-Ojok, 1987). Hudson (1988) also reported that 74% of 15-19 year old boys in western Uganda had multiple sex partners.

These studies showed that both young and older men, alike, particularly sought for younger girls. This is because they believed such young girls were free from AIDS. The above studies showed that young girls were vulnerable to being raped or beaten once they accepted a young man's gifts. The girls were also vulnerable to sexually transmitted diseases (STDs) and unwanted pregnancies since they were unable to negotiate condom use. The studies also showed that both young men and women lacked knowledge or had misconceptions about risk factors and transmission of HIV/AIDS. In additions, all parties blamed the other for unwanted pregnancies. The girls attributed unwanted pregnancies on the boys, the men's trickery, pressure from peers, and on their parents for failing to provide them with proper sexual education. The boys on the other hand attributed young women's interests in gifts. Both boys and girls blamed their parents for exposing them to sex early in their lives by having sex in their presence and awakening their sexual interest as a result of their parents' undisguised sexual activities.

Through the years, various donors and organizations have made efforts to come up with 'youth friendly' services. A youth friendly health service has been defined as a setting that is welcoming, pleasing and comfortable to young people, and even relaxing and enjoyable (UNICEF 1996). Other studies summarized a user-friendly service for adolescents as being private, confidential, affordable, accessible and staffed with sensitive service providers. Adolescent friendly health services (AFHS) are defined in the Uganda context as services that are accessible, affordable, acceptable, welcoming and which provide confidentiality. The minimum package for such services entails recreation, information, life skills education, counseling and health services with a focus on substance abuse prevention and control and enhancing reproductive health (HIV/AIDS prevention, sexually transmitted infections (STIs) treatment/prevention, and providing links to contraceptive services). The home, school, health center, community and media are all avenues for promoting, referring and providing AFHS.

In August 1998, UNICEF and government of Uganda commissioned the present study to assess the needs for providing adolescent friendly health services (AFHS). The overall objective was to provide comprehensive district specific data on the situation of adolescent health, coverage and quality of services, and gaps in services to meet the health and development needs of adolescents. Such data may exist in part but is not always available to district staff, or applicable for planning. The Ministries of Health, and Gender and Community Development, supported by UNICEF, spearhead the AFHS program in Uganda. It runs in five districts and covers the situation of adolescent health, the coverage and quality of services for adolescents and gaps in services to meet the health and development needs of adolescents.

Methodology

This descriptive study was conducted in five districts of Uganda; Mbale in the east, Nebbi in the north, Kabale and Rukungiri in the south, and Kiboga in the central. Selection of the study districts was based on assumptions that the districts provided proto-typical examples of provision of services to adolescents in Uganda. We found that all the study districts faced similar constraints in provision of services to adolescents. This paper presents findings from Mbale district.

Most of Mbale is hilly and mountainous, lying at altitudes between 1299 _ 1524 m (4200 _5,000 ft) above sea level in the foothills of mountain Elgon. The Bagisu or Bamasaba traditionally known for practicing male circumcision are the main ethnic group in the district, comprising 86% of the district population. About 18% of the district's working population is engaged in government service or business in Mbale town or institutions throughout the district. The other (82%) depends on subsistence agriculture for survival. As a regional administrative and trading center situated on the border, Mbale town attracts inhabitants from most regions in Uganda and neighboring Kenya.

The overall population characteristics of the district are similar to the rest of the country; high levels of illiteracy, fertility, infant and maternal mortality indicators. According to the national census of 1991, one out of every five people in the district were adolescents in the age bracket 10 to 19 years. One third of the people in the district aged six years and above had never attended school. Adolescents in Mbale face additional challenges arising from male circumcision rituals held every even year.

Study sites were selected from providers of adolescent services in two sub-counties and the district headquarters. We conducted the study in five primary schools, one secondary school, and two teacher-training colleges. Data were also collected from two government health units, one non-government health centre, and four drug shops. A team consisting of one principal researcher and four research assistants carried out the research with occasional support by district staff and staff from international development agencies working with adolescents.

Documents review included a systematic collection and analysis of published and unpublished material on adolescent health. At the national level, documents were reviewed from the Ugandan Ministry of Health and international development agencies. In the district documents were reviewed at the administrative headquarters, international development agencies, schools, and health centres. The documents included policy guidelines, work plans, memos, and study reports.

Semi-structured interviews were conducted with health workers (nurses, clinical officers, nursing aides, and other paramedic staff), health managers, community leaders, folk providers, local surgeons, and teachers. Interviews were also conducted with providers associated with international development agencies. A total of 44 semi-structured interviews were conducted. Almost all the individuals contacted consented to the interviews.

Sixteen focus group discussions were held with adolescents (both in and out of school), mothers and fathers of adolescents, and adolescent mothers. Of these, 10 were for

in-school adolescents between the ages of eight and twenty-four. They were stratified by sex and age; that is, 8 to 14, 15 to 19, and 20 to 24. The group discussions selected through convenience sampling aimed at exploring opinions, attitudes, and knowledge held by the adolescents, which regulated their treatment seeking patterns. Both focus group discussions and semi-structured interviewers were conducted in Luganda and Lumasaba, the local dialects in the area.

Data collection was preceded by a preparatory phase that involved training research assistants, translating, testing and refining the data collection instruments. Findings from the pre-test were analyzed and used to adjust and code the research instruments. Other quality control measures included field editing, review meetings, and daily synthesis and verification of data.

Notes and tapes from the key informant interviews and transcripts of focus group discussions were analysed through several processes involving identification of emerging themes. Important issues raised in the data were presented in a matrix form for in-depth analysis of delivery of reproductive health services to adolescents.

The Uganda National Council for Science and Technology granted ethical clearance for the study. In the districts, permission was sought from the directors of health services, chief administrative officers, and community representatives. Finally the consent of adolescents and other respondents was obtained.

Results

Focus group discussions and key informants interviews pointed out four main delivery points for adolescent services; home, health center, schools, and community. These levels form the basis for analysis and interpretation of the results.

1. Home

Parent-child interactions

Due to lack of knowledge on reproductive health issues, parents found it easier for their adolescents to learn matters related to adolescent health from radio programs. Fathers rarely talked to their adolescents on matters related to health and development. The elder sisters, brothers, mothers or grandmothers instead occasionally did this.

Teachers revealed that when a schoolgirl got pregnant her parents stopped paying for her education and she dropped out of school. Occasional conflicts between adolescents and their parents resulted in the parents barring them from attending health meetings and not providing them with the basic necessities. Some parents admitted denying their children rights to some of the basic needs when the children did not respect them. Others feared that by attending health meetings their children would be brain washed with modern ideas such as family planning that hindered expansion of the families.

Adolescents' lack of information

Many adolescents told us they lacked information on growing up such as changes in sex organs, development of deep voices for boys and breasts for girls, and other body changes. During discussions it was evident that many had fears, misconceptions, myths, and beliefs on menstruation and fertility regulation. Several lacked knowledge on condoms as one asserted "There is no one to explain to us about condoms, some are big for us and others are used as balloons. We do not know whom to ask and we do not know what we are supposed do". Another also expressed his concern "Some people fear that condoms have negative effects on the girl and so fear to use it... We also do not know the best type to use and its duration.... Condoms may also break in the vagina. I would better go live". Providers of adolescent services interviewed indicated that these kinds of misconceptions resulted in nonuse and/or misuse of condoms. For instance, not to take chances, one boy reported having worn the condom before leaving home to visit his girlfriend in the neighboring district that was 100 kilometers away. Adolescents expressed the desire to be taught how to use condoms: "We want people from the district medical office to educate us. They can also train counselors from among us. We also need magazines and posters so that we learn more about condoms particularly how to use it".

2. Health Units

Operational constraints

Adolescents, their parents, and providers reported constraints such as irregular opening times, lack of trained staff, low staff morale, lack of drugs and equipment, long waiting hours, and poor waste disposal in public health units. Shortage of medical equipment led to unhealthy practices like using one needle and syringe on three patients. Health workers (many were untrained) reported having difficulties in making proper diagnosis without laboratory facilities. Many adolescents were afraid of getting other infections when admitted as they noted that the beds, mattresses, and bed sheets were dirty and not disinfected after patients were discharged. To them having one nurse meant missing healthcare as more attention was given to older people. One adolescent had this to say: "When I reach the health unit and find others seated waiting for their turn, I am always asked to help the health unit in one way or another. At the end of the day I'm forced to go back without any treatment". Faced with such problems, adolescents reported rarely visited public health units, but tried alternative facilities like drug shops and traditional healers where they reportedly got better attention and care.

Health workers admitted the constraints in service delivery as one midwife emotionally described the situation

"It is true at times the hours for opening the antenatal clinic are irregular. I stay in Bulago, which is six kilometers away so I have to walk a long distance to come here, and as you know Bulago is a mountainous area. Sometimes I come late especially during the rainy season. Today I have examined more than 90 pregnant women. I'm going to be paid 1,000 shillings (\$ 0.6) for this service because I'm just a volunteer. As you have seen, the line was very long and the women were really tired. But I have nothing much to do since I'm alone. The patients never appreciate that we have many constraints while providing services. They always say we are rude. I have been trying hard to join the district service so that I am on the district payroll but I have failed for several months. By the way, can you assist me so that I join the district service?"

Poor reception

Adolescents cited several instances where health providers poorly received them. Several reported that yelling, discrimination, receiving no attention from nurses, and providers thinking that they were pretending to be sick, as common at the health units. Some especially pregnant girls, those with STDs, or those seeking family planning services did not seek health care at the health units for fear of stigmatization by the providers. The situation was worse for those below 15 years of age because they were abused and scorned by both the health workers and older pregnant women for becoming pregnant at a tender age. Often they lined up last while getting antenatal services. To avoid stigmatization, some ended up going to informal providers where they were well received. One midwife reported attending to girls as young as 12 and 13 years coming for antenatal services. She was aware that pregnant girls below 15 years need confidentiality because their needs are different from those of older women. We found that the midwife did not to offer service in confidentiality because of lack of resources, space, time and personnel.

Confidentiality

Adolescents made it clear during focus group discussions that they wanted to have privacy while receiving services. They considered service delivery points in schools, health units, and drug shops as open to interruptions and lacking privacy. Besides service delivery points, adolescents complained that most health workers leaked information about their health status especially those with sexually transmitted infections to the public at drinking places. Such information ended up with the parents, teachers or the boy/girl friends. Many preferred traditional healers or drug shops who kept information about their health as top secret.

Boys prefer to use proverbial language while presenting their illnesses or problems especially with STDs as one nurse noted: 'A boy will come to the clinic and tell me "I kicked a stone while walking" then I will know that he had unprotected sex and got an STD. This is the language they prefer to use'. Attendants in drug shops reported that since many adolescents were either their relatives or known to them as friends they just requested for antibiotics when they had STDs: "When an adolescent comes and says, "Auntie, I want some antibiotic tablets, I have a wound" then I know something happened'

Many girls complained that it was an older man the age of their fathers who invariably provided services. This hindered them from seeking care, or presenting their case openly. They felt a man could not understand their problems as girls. They preferred getting services from young providers and fellow females.

Affordability

Key informants and participants during group discussions indicated that the turn up for STI treatment was always high once the adolescents knew that the health unit got free STI drugs from district medical office.

Coordination of service delivery

Many providers reported lack of proper coordination and linkages both at the national and district level. This led to competition and duplication of efforts. Adolescents were concerned for being left out when planning for adolescent services.

3. School

In primary and secondary schools senior women and science teachers provided health education/counseling for girls and boys respectively. The teachers who were not counselors admitted that much of their knowledge to deal with adolescents' problems was through personal experience or talent. They were aware of their limitations as one senior woman teacher remarked: "Sometimes I feel sorry when a student asks me what she should do when she is in her monthly periods and I cannot assist her". However, adolescents especially girls told us they appreciated the services of the senior woman teachers, especially their advice on what to do when ill or during their menstrual periods. They described them as receptive, affectionate, understanding, trustworthy, and hard working. The girls were more comfortable confiding in senior women teachers than nurses. This was because nurses reportedly let out personal information about patients leading to rumors and stigmatization.

Some schools made medical checkups every term to check for pregnancy in girls. Girls found pregnant were asked to leave school. According to teachers, most of the girls never returned to school after delivery. This led to high levels of school dropouts among girls. In other cases the senior woman teacher checked the hygiene of the girls by asking them to undress so that she checks the cleanliness of their knickers and bodies. The girls told us that if one was wearing a petticoat and she kept it on, the teacher just pulled it off so that the girl remains only in knickers. To avoid the embarrassment of undressing before others, pregnant girls would not come to school. Besides pregnant girls, older girls felt uncomfortable exposing their growing bodies to other girls.

Parents complained that some teachers were undisciplined and ended up impregnating their daughters: "How do you expect to solve the problems of adolescent health when some teachers impregnate our girls?" one mother wondered.

Many girls had neither seen nor knew where to get sanitary pads. They had only heard about them through the radio, peers, rumors and other sources. They told us that they used mainly rags and old blankets during menstruation. For lack of what to use others did not attend school when in their menses. Many had not been educated about the changes taking place in their bodies. Stepmothers were reported not to assist and guide their daughters on what to do when they started having their menses. Such girls were left under the mercy of their friends or senior women teachers at school.

Adolescents reported that they liked *Straight Talk* and *Young Talk* magazines distributed by a USAID funded project on adolescent health. Whereas some, especially in remote schools, complained that the magazines were in English (which was not their mother tongue), most were of the view that the language used was simple and easy to understand. The major limitation was that few copies were irregularly supplied. We also observed that posters on adolescent health were kept in the headmaster's office, or the school store. Few adolescents had access to them except during health education talks. Adolescents did not have many opportunities for recreation both at their homes and in school.

4. Community

Our informants in communities told us that boys who impregnate schoolgirls were fined between 700,000 shillings (\$ 389) and 1,400,000 shillings (\$ 778) to compensate the damage done to the girl's parents. Failure to do so sometimes meant imprisonment of the boy. Informants indicated that whereas this by-law had been considered effective in scaring adolescent into having unwanted pregnancies, it had negative implications. Both the boy and girl involved remained financially exploited. Only the girls' parents benefited; they used the money for personal gratification. The pregnant girl was left out of school with no support from the boy and her parents. When the boy failed to pay the money he ran away from the village never to return. Thus abandoning the girl to suffer alone with the pregnancy and later alone with the child.

During group discussions and interviews, it was pointed out that local surgeons for male circumcision rituals did not sterilize their knives. Sometimes they used the same knife for more than one candidate putting many circumcised boys at risk of infections with HIV/AIDS. District health officials were concerned that this problem persisted despite several training and educational courses organized for local surgeons. Besides this, many surgical processes were poorly performed leading to accidents such as cutting the blood vessels or the head of the penis. This was mainly attributed to drunkenness and lack of surgical skills by the surgeon.

Taboos related to male circumcision rituals had some negative effects as one newly circumcised boy narrated: "I was advised not to eat some foods like milk, ground nuts, and sugarcane. I was also advised not to get many injections because I would lose my manhood if I got many. I was told that at least two injections were enough. This led to the wound not healing very fast". Health staff told us that with such perceptions in mind, most of the circumcised boys adhered to these taboos and in the process their wounds got infected with bacteria and took long to heal.

Discussion

Problems with adolescent health are not a new phenomenon. Adolescents have always had problems transforming from childhood to adulthood. Millions of dollars are injected in programs to improve their health each year. Assisting adolescents cope with their body changes as they grow up, however, requires a deep understanding of the services at their disposal and how they use these services. Unfortunately matters regarding adolescent services remain poorly investigated in many countries both developed and developing. It is only when we clearly understand the social, economic, and cultural context in which delivery of services to adolescents takes place that we could expect to improve their lives. Our data has demonstrated that serious gaps exist in provision of services for adolescents at all levels of service delivery: home, health facilities, schools and community. Consequently adolescents were not prepared to face the challenges of adulthood and teenage life.

Our findings are in agreement with what has been shown in literature that lack of information remains the greatest challenge adolescents face as they struggle to cope with their body changes. This is partly because parents don't have time, knowledge, skills, and will to talk to their adolescents about body changes and other psychological requirements that are necessary for coping with adolescence. They left such responsibilities to teacher or other relatives. The teachers do not have the time and capability to educate all the children about these body changes. Consequently many adolescents got such information from informal sources where they stood a risk of being exposed to wrong information. Girls who became pregnant were thrown out of school by teachers, and the home by the parents. Many of these

girls ended up having a low self-esteem and never found a way in which they could re-enter the education system or be rehabilitated.

Perhaps one of the best ways to improve adolescent health would be to improve the services of the senior woman and science teachers. This is because students spend more time with teacher than with parent. Besides, both the parent at home and providers in health units are not in position to assist adolescents; the parents don't have the time and skill, while providers at health units faced several constraints. While schools senior women and science teacher assist adolescents who have reproductive health problems, they lack the necessary skills and knowledge. This can be counter-productive when the teachers' service such as checking knickers and pregnancy hinder adolescents from receiving proper services.

Adolescents want confidentiality as reflected in the use of proverbial language, and non-seeking services because of the provider's age, sex, or environment of service delivery point. This is an area of service delivery that needs to be addressed urgently. Adolescents are entitled to receive services without intimidation and rudeness. Providers argued that operational constraints in the Uganda health system made it difficult for them to avoid being 'rude'. In Uganda many health facilities have insufficient funding to cater for drugs, equipment, salaries, and other operational costs (Okuonzi and Birungi 2000). Unqualified staff that had just acquired experience in treating people over time manned the health units. Working conditions of the health workers were poor which affected their performance. In most cases it is one person attending to hundred of patients without supplies, equipment, job security, and several other problems. The midwife in our study was doing a good job, but

could not be admitted into the district service because the district had put a ban on staff recruitment. The ban on staff is a result of district being unable to pay staff salaries following countrywide decentralization. Decentralization meant that districts are independent with little or no support from the central government. Many districts have insufficient resource base to meet their operational expenses. This remains the greatest challenge of healthcare systems not only in Uganda, but in other developing countries as well. Even donor funding faced challenges of poor coordination and duplication of efforts that led to situations where too many cooks spoilt the broth. Competition among provider cannot be ruled out. This may explain why there has not been any major impact despite many donors channeling money to adolescent programs.

Our findings are in agreement with similar studies indicating that adolescents in both development and developing countries face several challenges in having access to friendly healthcare (Kinsman et al 2001; Mbulaiteye et al 2000; Hulton et al 2000; Kinsman et al 1999; Nuwaha et al 1999; Shuey et al 1999; Agyei et al 1994). Like this study, they contend that service delivery for adolescents often varies from policy intent.

The lessons that other countries can learn from the Uganda study are multifold. First, adolescents have unique problems that are not properly addressed. Providers should improve the quality of both services and service providers with great emphasis on confidentiality at service delivery points. There should be a narrow gap between the age and sex differences between adolescents and providers. Second, the school can be a good channel for reproductive health for in-school adolescents. The senior women and science teachers should

be equipped with the skills and knowledge to offer more friendly services to adolescents. Short training in counselling and guidance, emphasis on ethics and discipline, in addition to manuals and guidelines could improve the situation. Third, out of school adolescents should also be catered for in adolescent health programs since they have special needs and are usually left out in provision of services. Four, local authorities should monitor and regulate cultural rituals and festivities such as circumcision since they negatively affect adolescents' health. Five, adolescents want to learn reproductive health messages from the radio, adolescent-specific newsletters, and their peers. Greater emphasis should be put on strengthening these channels to reach the adolescents. Six, there should be proper coordination of adolescent services to avoid duplication of efforts and resources, and competition among various providers. Seven, there is need to examine the effect of health reforms such as decentralisation on service delivery since they appear to negatively affect service delivery in the district health system. Eight, there should be stronger political will to provide friendly health services to adolescents. Governments in developing countries should provide funding for adolescent programs if such schemes are to be successful. Training of health workers, in addition to a system for monitoring and regulation, would largely increase the effectiveness of service delivery.

Acknowledgements

The authors would like to thank UNICEF Uganda for financial support to carry out this study. We also wish to express our gratitude to all the people who made various contributions to the study. John Arube-Wani and Loyce Kemigisha Arinaitwe are specially thanked for their comments on earlier drafts of this paper. Representatives of UNICEF Uganda and various other international agencies, Uganda government officials, district staff, and community members are thanked for making the study a success. The Child Health and Development Centre, Makerere University is acknowledged for academic support and office space. References

Agyei WK, Mukiza-Gapere J, Epema EJ (1994) Sexual behavior, reproductive health and contraceptive use among adolescents and young adults in Mbale district, Uganda. J Trop Med Hyg 1994 Aug;97(4):219-27

Bagarukayo, H. Shuey, D. Babishangare, B. Johnson, K. (1993). An Operational Study Relating to Sexuality and AIDS Prevention among Primary School Students in Kabale District of Uganda. Unpublished Document, AMREF, Kampala Uganda.

Bohmer, L. and Kirumira, E. (1997). Access to Reproductive Health Services: ParticipatoryResearch with Ugandan Adolescents. Pacific Institute for Women's Health. Los Angeles,CA, USA. & CHDC, Makerere University, Kampala, Uganda.

Hulton LA, Cullen R, Khalokho SW (2000) Perceptions of the risks of sexual activity and their consequences among Ugandan adolescents. Stud Fam Plann 2000 Mar; 31(1): 35-46

Kinsman J, Nakiyingi J, Kamali A, Carpenter L, Quigley M, Pool R, Whitworth J, (2001) Evaluation of a comprehensive school-based AIDS education programme in rural Masaka, Uganda Health Educ Res 2001 Feb; 16(1): 85-100

Kinsman J, Harrison S, Kengeya-Kayondo J, Kanyesigye E, Musoke S, Whitworth J (1999) Implementation of a comprehensive education programme for schools in Masaka district, Uganda. AIDS Care 1999 Oct; 11(5): 591-601 Mbulaiteye SM, Ruberantwari A, Nakiyingi JS, Carpenter LM, Kamali A, Whiworth JA (2000) Alcohol and HIV: a study among sexually active adults in rural southwest Uganda. Int J Epidemiol 2000 Oct; 29 (5): 911-5

Ministry of Health, Entebbe. (1997). Draft National Adolescent Health Policy, Unpublished Document, Kampala Uganda

Nuwaha F, Faxelid E, Neema S, Hojer B (1999) Lay people's perceptions of sexually transmitted infections in Uganda. Int J STD AIDS 1999 Nov; 10(11): 709-17

Shuey DA, Babishangire BB, Omiat S, Bagarukayo H (1999) Increased sexual abstinence among in-school adolescents as a result of school health education in Soroti district, Uganda. Health Educ Res 1999 Jun; 14(3): 411-9

UNICEF. (1998). Sensitisation Package for Adolescent Friendly Health Services – Institutional Framework. Unpublished, UNICEF Documents, Kampala Uganda

UNICEF/ MOH. (1998). A Guide to Establishing Adolescent Friendly Health Services. Unpublished, UNICEF Documents, Kampala Uganda

WHO (1997), Coming of age: From Facts to Action for Adolescent Sexual and Reproductive Health. WHO/FRH/ADH/97.18. WHO Documents Kampala