A Feasibility Study

For a School Health Project

In Nuu Division, Mwingi District, Kenya

Community Action Development Organisation

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Abstract

Background: Since the Kenyan government declared HIV/AIDS as a national disaster in 1999, AIDS education at school has been considered to be one of the major measures to prevent HIV infection in the country. Currently, the Kenyan government is mainstreaming AIDS issues into academic subjects at school, and donor agencies are also supporting peer education projects at the secondary level and AIDS education through mass media as effective tools for the prevention. The prevalence rate of HIV infection in Kenya is reported to be declining in urban cities, but increasing in rural areas, where people have little access to mass media and most children leave education at the primary level. AIDS education at primary school is crucial as source of accurate information on HIV/AIDS, and so is the role of primary school teachers in preventing HIV infection amongst children.

Objective: This study discusses the feasibility of a school health project in Nuu Division.The objectives of the study are (1) to identify accurate situation, perception, attitudes, and knowledge of local people concerning health issues which include HIV/AIDS, and (2) to explore these influences over AIDS education in classroom in rural villages in order to explore what measures should be taken to strengthen AIDS education at primary schools in rural areas.

Methodologies: The study was conducted from April 2004 to July 2004 through qualitative and quantitative methods collection in Nuu division, Mwingi District, Kenya. After focus groups and in-depth interviews with teachers and education officers, questionnaire survey was conducted to the teachers in 28 primary schools in the division. Participants in the questionnaire survey comprise more than 80% of the population of the teachers working in the division.

Findings: The results of the focus groups and interviews have identified that HIV/AIDS has been a serious and daily issue for local people in the community in Nuu Division. Local people have strong fear against HIV/AIDS through their experience of deaths caused by AIDS amongst their families, relatives, friends, and neighbours. In this situation, three main problems for the local people to tackle with the pandemic have been identified in Nuu Division, which include; (1) serious lack of accurate information followed by confusion of information on HIV/AIDS, (2) customs and practices which would help the spread of STI and HIV infection, and (3) lack of male engagement in AIDS related local activities despite male dominance in decision-making.

The results have also revealed that AIDS education at school has some limitations, and that the teachers are not confident enough in their knowledge on HIV/AIDS, especially the effectiveness of condoms to prevent HIV infection, due to confusion of the information spread from different sources. Though the condom issues are considered to be very crucial in preventing HIV infection among local people, it is very difficult to deal with the issues at school because of these problems.

Results of the questionnaire support the qualitative survey results. Most of the respondents have

enough knowledge on infection routes of HIV, but not on distinction between people with HIV positive and with AIDS. 47.9% of the respondents have never attended any seminars on health related issues whereas 18.8% have attended more than twice, and 65.4% think the information on condoms should not be passed to children. However, analyses of the results find that the decision on passing condom information to children has some relation to the strength of their sense on adults and children's vulnerability to HIV infection, which also has relation to the knowledge on distinction between HIV positive and AIDS. Furthermore, the analyses demonstrate that the decision has relation to the teachers' confidence in the effectiveness of condoms in preventing HIV infection, and that teachers with more accurate knowledge on HIV/AIDS tend to add information to textbook requirements.

Conclusions: Against such backgrounds, the demand of local people is considered to be high for some actions to be taken in order to tackle with the pandemic. Provision of accurate information on HIV/AIDS would be the first priority through encouragement of male participation in HIV/AIDS activities. By doing so, opportunities should be given to local people to think about the meaning of their customs and practices, which would help spread HIV infection in the district, and to make appropriate decisions on their traditional behaviours amongst themselves.

Furthermore, the role of teachers as intermediary to disseminate knowledge to children is unquestionably important in AIDS education as well as in other fields in school education, especially in places where people have limited access to information they need. The teachers recognise the importance of AIDS education at school but tend to avoid condom issues in classrooms, which might lead to partial success at best in AIDS education.

In order to solve the problem, parental cooperation would be indispensable through sharing responsibilities with teachers in teaching children HIV/AIDS related issues. Another priority should be given in provision of opportunities where teachers and parents can have discussions and some consensus on what is necessary to protect children from STI and HIV infection. Through those discussions, parents and other community members could lead to recognition on their own behavioural changes in preventing STI and HIV infection amongst adults as well.

In addition, knowledge on HIV/AIDS is one of the key elements to break up such hesitant attitudes of the teachers. Currently, seminars and workshops are held to provide more information on HIV/AIDS to teachers in many places, but opportunities seem to be given only to the limited number of teachers. Those trained teachers are expected to disseminate the information obtained at workshops to their colleagues in their communities, but fail to do so due to their geographical situations and heavy engagement in many other issues at school. In order to ensure the role of teachers as disseminators of knowledge to children, opportunities to attain accurate information, skills and methodologies they need for AIDS education in class should be directly given to more teachers in more community-based approaches.

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
CBO	Community Based Organisation
DACC	the District AIDS Control Committees
DO	District Officer
FGM	Female Genital Mutilation
GHC	Geography, History, and Civics
HIV	Human Immunodeficiency Virus
JICA	Japan International Cooperation Agency
KIE	the Kenya Institute of Education
NACC	the National AIDS Control Council
NGO	Non-Governmental Organisation
PA Teachers	Parent Association Teachers
STI	Sexual Transmitted Infection
TAC	Teacher Advisory Centre
TSC	the Teacher Service Commission
UNICEF	the United Nations Children's Fund
VCT Centres	Voluntary Counselling and Testing Centres

1. Introduction

Since 1998 CanDo has been engaged in the Primary School Support Project in Nuu Division to work in partnership with communities in realising a community-defined quality society. Since January 2004, under the JICA's partnership programme, in co-operation with the local leaders and relevant government officers in Nuu Division, CanDo has planned engagement in such projects as classroom construction, environmental activities/education, ECD and school health projects along with its objectives and strategies. Amongst these projects, school health is one of the fields in which CanDo has less experience and now is seeking for an effective way to be engaged.

The school health project is now being planned to be integrated into the current comprehensive Primary School Project in Nuu Division, in which participation of the parents is to be promoted as partners to the teachers in school activities. Therefore, in this sense, we hope the school health project would meet not only the demand of health education from schools and communities, but also help parents or communities to be able to participate in the school activities through the school health project and to play their role as partners to teachers for improvement of the health status of children as well as adults in the community.

In order to make a better planning for the school health project so that we could achieve the objectives mentioned above, a study was conducted to assess the feasibility of the school health project, putting as much emphasis on surveys from the parents as from the teachers concerning the health issues which include HIV/AIDS. This report is written in English so that the findings and results of the survey could be fully shared with the stakeholders as well as CanDo's local staffs.

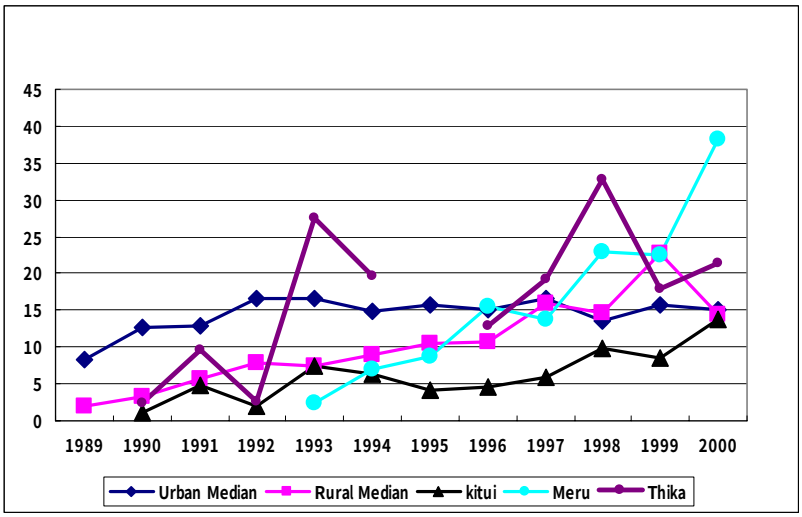
2. Background

HIV/AIDS has increased morbidity and mortality amongst people in many parts of the world, especially in Sub-Saharan Africa. In Kenya HIV/AIDS is a serious issue as well as in many other parts of Sub-Saharan Africa. HIV prevalence amongst adults rose from 5.3 in 1990 to over 13% in 1999. This situation of HIV/AIDS prevalence was declared as a national disaster in 1999.[1] National Aids Control Council, Kenya, estimated 13.5% of Kenyan adults were HIV positive at the end of 2001, and UNAIDS reported a figure of 15% in 2002. [NACC 2002] The Preliminary Report of the Kenya demographic and Health Survey 2003 has released the results of the survey that the prevalence rate of HIV positive declined to 6.7%. The number of AIDS orphans[2] in2003 was

[1] AIDS is not just a serious threat to our social and economic development, it is a real threat to our very existence. . .AIDS has reduced many families to the status of beggars. . .no family in Kenya remains untouched by the suffering and death caused by AIDS. . .the real solution of the spread of AIDS lies with each and everyone of us' Former President Daniel T. Aarap Moi's address to Members of Parliament on 25th November, 1999 declaring AIDS a national disaster.

[2] AIDS orphans here are defined as children who have lost their mother or father or both parents to AIDS and who are alive and under age 17 at the end of 2003.

Figure 2-1: HIV Prevalence for Pregnant Women



Source: the United States Bureau of the Census 2003 quoted by UNICEF (2004)

estimated as 650,000 [UNICEF 2004].

Though the prevalence rate might have been dropped, HIV/AIDS is still a big issue in the country, not only in urban cities but also in rural areas. According to the report of UNAIDS, HIV sentinel surveillance for pregnant mother has found that median rate was 14.4% in urban cities whereas 11.6% in outside of urban cities. Figure 2-1 demonstrates that the difference of the HIV prevalence rate amongst pregnant mothers between in urban cities and in outside of urban cities is getting smaller in about 10 years. According to the sentinel surveillance, the HIV prevalence rate has grown rapidly in Kitui, a neighbour city of Mwingi. In Meru, also a neighbour city, the upsurge of HIV prevalence was found: 2.3% in 1993, 22.6% in 1999, and 38.26% in 2000 [UNICEF 2004]. It would be easily presumed that the Mwingi Division, where CanDo has been engaged in Primary School Project, couldn't escape from this trend of HIV prevalence in Kenya, and it is reported that HIV/AIDS has become a serious issue amongst people even in small remote villages in Nuu Division in the last five years.

Against this background, an evaluation research on the CanDo's projects which was conducted in 2003 has found that teachers and education officers in Nuu Division crave opportunities to obtain accurate information on HIV/AIDS, and they suggested possible planning of a workshop on health issues including HIV/AIDS with CanDo. To explore the feasibility of this workshop on school health, CanDo has decided to conduct a survey on health in Nuu Division.

3. Objectives

This survey discusses the feasibility of a school health project in the division with the following objectives:

- To identify more accurate situation of health including HIV/AIDS and local customs

related to encouragement of HIV/AIDS prevalence in the division.

- To identify the perception of health issues and HIV/AIDS amongst local people.
- To investigate the policy and actions of the Kenyan government to the health issues.
- To investigate involvement of local organisations including community based organisations (CBOs) in the struggle against infectious diseases including HIV/AIDS.
- To identify the priority issues on health for the community
- To identify information sources on health in the community

4. Methodologies

4.1. Research Methods

This feasibility study was conducted from April 2004 to July 2004 through collecting both qualitative and quantitative data from the stakeholders in Nuu Division, Mwingi District. In the initial stage of the study, however, much focus was put on qualitative data collection to obtain the basic information on the perception of the stakeholders concerning health issues after the statistical data was collected on health in Mwingi District as well as nationwide. Based on the information collected through the qualitative research methods, questionnaire was made for the quantitative data collection so that the baseline benchmark for the next stage of the project could be made.

The main methods used for this study were as follows:

- Focus group interviews with teachers
- In-depth interviews both with teachers and parents.
- Informal interviews both with teachers and parents.
- Questionnaire survey to teachers in all the primary schools in Nuu Division.

4.2. Research Questions Investigated

4.2.1. Qualitative survey

Main questions in the study were made through discussions with a research assistant, and also in the course of the study, other research questions were added through the discussion with CanDo staff and other stakeholders to make adjustment to improve the survey. Main questions asked of teachers and parents were as follows[3]:

- What are the health problems in the community as well as in school?

[3] There were some changes of questions depending on the situation of the interviews

- What is the perception towards HIV/AIDS in the community?
- What knowledge do people have about HIV/AIDS?
- What kind of health education is conducted in classrooms?
- What is the perception of stakeholders concerning health education including HIV/AIDS?

4.2.2. Quantitative survey

After finishing focus group interviews with teachers and in-depth interviews both with parents, teachers and education officers, questionnaire survey was conducted with teachers. The questionnaire consists of 21 questions which are categorised into four factors: background of examinees, knowledge on health, perception about health, and educational activities on health. The main topics for the questionnaire survey are basically the same as qualitative research questions, and the questionnaire was made based on the date collected from focus group interviews and formal/informal interviews [see appendix 1]. The contents of the survey were consulted both with the education office and the health office in the division prior to the survey, in order to ensure if there is any problem with the survey from the aspects of a possible school health project planning and of the influence over the local community.

4.3. Survey Samples

For the qualitative research, focus group discussions, semi-structured formal and informal interviews were conducted with about one hundred and fifty people including education officers, and parents and teachers at seven primary schools out of twenty-eight primary schools in Nuu Division. Schools were randomly selected after divided into three clusters which were made according to the condition of the location of the schools; near the town centres, remote from the town centres, and neither of them.

After the quantitative research, questionnaire survey was made for teachers of all the twenty-eight primary schools in Nuu Division. The teachers were decided to be the target population for the questionnaire survey because of the aspect that many of the parents have difficulties to read and write to some extent, and that teachers are currently main responsible bodies to teach HIV/AIDS related issues at school. Furthermore, it is also considered to be important to obtain information on teachers' knowledge and perception concerning AIDS related issues in quantitative data in order to make a benchmark for evaluation. Quantitative survey was made for teachers at the first stage for those reasons.

4.4. Researchers of the Survey

Yuki Nakamura, PhD Candidate of Centre of African Studies in the University of Edinburgh, Evans Karangau, Education, Co-ordinator of CanDo, and Kawasya Nzovi, Junior Health Consultant of

CanDo, conducted this survey with the help from other staffs of CanDo. Yuki Nakamura was engaged in the research design and conducted both qualitative and quantitative surveys with Kawasya Nzovi, research assistant, as well as made reporting of this study. Evans Karangau was engaged in data collection on the government policies of HIV/AIDS and Education and the activities of other organisations in the district. Kawasya Nzovi worked as a research assistant, making interpretation from Kikamba to English when necessary, and gave advice on local situations and customs in conducting the survey.

4.5. Survey Implementation

The detailed timetable was made after the CanDo staff meeting and the consultation with relevant officers and schools. Special attention was paid to the availability of teachers and parents for the co-operation in this survey. Details on the implementation of the survey conducted are given in the appendix2 [See Appendix 2].

4.5.1. Procedures of the survey: Qualitative survey

Interviews and Focus Group Discussions were conducted as follows:

- Group interviews with teachers: 30 participants at 5 primary schools
- Group interviews with parents: About 100 participants at 4 primary schools
- Focus Groups with teachers: 15 participants at 2 primary schools
- An in-depth interview with education officers: 2 participants
- An in-depth interview with female parents specifically FGM: 3 participants at one school

Group interviews with teachers were conducted at five primary schools without any appointment of the school visit and asked teachers to get together in their teachers room for interviews. Interviews were implemented with following the semi-structured interview guide made by the author prior to the interviews, whereas focus group discussions were conducted at two schools with notification of the school visits and topics of focus group discussions in advance. In the focus group discussions, teachers were fully prepared for discussions on health issues. All the interviews and discussions were conducted in mixed-sex groups because of scarceness of female teachers in some schools[4]. English language was used in interviews and discussions with teachers. No teachers had any problems in understanding and speaking English because English is used as an instructional means in all the primary schools in the Division. Interviews and discussions were recorded and analysed by the author.

[4] Most of the primary schools located in remote area have only one female teacher, sometimes no female teachers whereas some primary schools located near the town centre, which are considered to be big school in the division, have as many as four female teachers. The average number of both female and male teachers of the primary schools in Nuu Division is five., ranging from three to nine..

Group interviews with parents were conducted both with mixed-sex groups and single-sex groups. To avoid hesitation to give honest opinions on sex-related issues, especially from females, many of the interviews were conducted with single-sex groups. Furthermore, in the case the number of the female participants was big, those participants were divided into three groups; mothers with husbands, widows, and single mothers[5]. As a result, formal and informal interviews with parents were conducted with five different groups; groups of males in general, females in general, females with husbands, females with dead husbands, and females without husbands. English and Kikamba were used with interpretation by the research assistant in formal interviews with notes taken by the author. Informal interviews were conducted by the research assistant in Kikamba, especially on such sensitive issues as sexual behaviours and practices among local people. The summary of these informal interviews was reported to the author afterwards both in written and verbal forms in English.

4.5.2. Procedures of the survey: Quantitative survey

- Questionnaire 167 participants at 28 primary schools in Nuu Division

In conducting questionnaire, each survey team, usually consisting of two or three people, visited schools in Nuu Division, and asked all the teachers in each school to complete the questionnaire form at the visit. Questionnaire was totally anonymous to avoid the hesitation of honest opinions. Special care was paid not to give any uneasiness that any personal information might reveal from the survey. In case where one or two teachers were absent or engaged in other activities, the survey team left the questionnaire for those absent and asked head-teachers to hand it to the absent teachers and to send it to the CanDo's office at Nuu town.

Through this procedure, the survey team was successful to collect quantitative data from 167 teachers out of 202 teachers (82.7%) working in the primary schools in Nuu Division. The number of primary school teachers employed by Teacher Service Commission (TSC Teachers) in Nuu Division was 163, and the number of teachers employed by Parents Association (PA Teachers) was 39 in 2004[6]. The number of PA teachers in each school varies from none to three, and the questionnaire survey did not differentiate PA teachers from TSC teachers in the points that both are teachers who are directly responsible to teach children at school and that anonymity is crucial in this survey to collect accurate information.

Quantitative data was entered Microsoft Access with special care to avoid mistakes in data entry. SPSS and Microsoft Excel were used for quantitative data analysis.

[5] Those single mothers were distinguished from widows because of the existence of 'women-women marriage' in the division.. The practice of 'woman-woman marriage' is explained in the chapter of findings in detail.

[6] The data of the number of TSC teachers was collected from the district education office though the information on the number of PA teachers was collected through contacts with each primary school. This is because PA teachers are normally hired through the contributions from the parents. Under the Free Primary Education Policy, collecting contributions from parents is a very sensitive issue, and there was no access to the data of PA teachers.

4.5.3. Schedule of the survey

April	
Week 1-2	Literature Review
	Starting statistical data collection on health, especially HIV/AIDS in Mwingi District as well as in Kenya nationwide.
	Preparation for focus group and in-depth interviews
Week 3	Completing the research design
	Preparation for the methodologies
	Research training for the research assistant
Week 4	Preparation of the research questions
May	
Week 5-7	Preparation of research questions
	Arrangement for focus group interviews
Week 8-9	Conducting focus group and formal and informal interviews
	Data analysis and preparation for the questionnaire survey
June	
Week 10-13	Data analysis
	Conducting the questionnaire survey
July - October	
Week 14-32	Data analysis and reporting in Kenya, Japan, and Britain

4.6. Ethical Issues

This feasibility study of a school health project utilised the methodologies of qualitative research as well as quantitative research and could not avoid the same problems as other qualitative and quantitative research has. Furthermore, as the study put its focus on sensitive issues as HIV/AIDS, sexual issues, and other health related problems, we consider that there are two main ethical issues in this survey. One is confidentiality of the participants, and the other is protecting privacy of people who are not the participants of this study as well as the participants. We recognise that protecting privacy and keeping confidentiality are particularly important so that we could avoid any inconvenience to any people in the communities and paid as much attention as possible to these ethical issues.

4.7. Training for the Research Assistant

A female research assistant was recruited for the survey. The research assistant had experience in public health and enough knowledge on health to conduct this feasibility study, but did not have any experience in social sciences and research methodologies. Therefore, training on social research and research methodologies was given to her, and it took place for five days at the CanDo Nairobi

office, which included a field trip to a VCT centre at Kibera, Nairobi. Explanation on CanDo's projects and its policy was included in the training.

4.8. Limitation of the Survey

In this study, questionnaire survey was conducted for data collection, and from the characteristics of the data collection, underreporting, and misunderstanding of the questions cannot have been fully avoided even though careful explanation was made to the respondents at the survey. Moreover, considering the situation at schools, we asked some teachers (less than 5% of all the respondents) who were not available at the survey to answer the questionnaire and sent the questionnaire filled to the office afterwards. Though we explained the importance of the data without any consultation with other people, it could not be denied the possibility of some respondents having consultation especially on knowledge on HIV/AIDS, which would be subject to biases.

The analysis of the study is based on cross-sectional data, in which the direction of causal relationships cannot always be determined.

5. Findings: Qualitative Survey

5.1. Government Policy for Health Education

5.1.1. AIDS education and the Kenyan government

The Kenya Institute of Education (KIE) has been charged with the key responsibility of making curricula for AIDS education and published textbooks for both primary and secondary school students. The textbooks published by the KIE are:

- The HIV/AIDS curricula (for educational institutions of all levels)
- Let's talk about Aids. This is a series of booklets for use in primary school from lower to upper primary. Book 1 (classes 1,2 & 3), Book 2(classes 4,5) and Book 3 (classes 6,7 & 8)
- FACILITATOR'S HANDBOOK. This is an AIDS Education Project for youth in and out of school and also would be useful as a teacher's resource book for AIDS Education.
- BLOOOM OR DOOM – YOUR CHOICE. This is a resource book for teachers and youth educators of students in and out of secondary school
- GOOD HEALTH MAGAZINE. This is a comic book for pupils in upper classes 6,7& 8. Life Skills.

When the curricula and the textbooks for the AIDS education were made in 1996, HIV/AIDS was supposed to teach as an independent subject. However, before HIV/AIDS took its root in school as a subject, there was a reduction of the number of the subjects to be taught in school. As a result, the

AIDS curricula and the textbooks have not fit in the situations of the school and not been in full use in classrooms.

5.1.2. Mainstreaming health education into academic subjects

There was a change for syllabi in primary education in 2002. To date, the new syllabi for standard 1, 2, 5, and 6 have come into use since 2003. By the year 2006 all the graders will have the new syllabi in every subject. The main focus in the new syllabi is put on mastery of life skills through obtaining knowledge, skills, and positive attitudes as citizens.

One of the big changes in the new syllabi is that Social Studies is replaced by Geography, History and Civics (GHC), and that health education is integrated into every subject to some extent. This health education includes health issues like sanitation and hygiene, drug abuse, infectious diseases and HIV/AIDS, gender issues, human rights, child's rights, moral values, and social responsibilities. The change of syllabi suggests big expectation from the society towards the role of formal education in preventing HIV/AIDS amongst children. The textbooks for the new syllabi indicate that HIV/AIDS is the biggest issue in health education[7]. Through this integration of health education, pupils are expected to learn health issues repeatedly in classrooms in every grade and to acquire adequate knowledge, skills, and positive attitudes for social life through eight years of primary education.

5.1.3. Challenges of AIDS education in classrooms

> *"Teachers cannot refer to condoms in classrooms. The knowledge on condoms will encourage children to be immoral." (Teachers: Male and Female, Education Officers: Male[8])*

Even though much focus is put in AIDS education in the new syllabi, big challenges on AIDS education were observed in primary education [9] in the district. One of the challenges for AIDS education in primary schools is very limited number of competent teachers in the district. In Nuu Division, there are no trained teacher counsellors who can competently handle with HIV/AIDS programmes at the primary school level. Even though there are some teachers who attended seminars on health issues including HIV/AIDS, the number of those teachers is very limited to share their knowledge to other teachers. As a result, teachers do not have confidence in teaching HIV/AIDS to children and also little access to accurate information on HIV/AIDS due to the difficult conditions of remote areas.

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[7] For example, in science HIV/AIDS and other infectious diseases are taught as scientific knowledge, and in Kiswahili for grade two there is a reading that mother is explaining what HIV/AIDS is to her daughter.. In English many terms for health issues are used in the textbooks from the grade one.

[8] Interviews with officers in Institute of Education on 25 , with District Education Officers on 2nd June , and with Divisional Education Officers on 20th May in 2004.

[9] Education officers in the district and the division, and the teachers explained in the different interviews. (conducted in May and June ,2004)

Another challenge is the issue of condoms. Condoms are recognised as one of the most effective preventive measures for HIV/AIDS if properly used. However, in the process of information dissemination, the Education Ministry seems to have issued very clear and strict guidelines on the condom debate. According to the explanation from the Education Officers the central government and the local government, no explanation of condoms should be made to pupils in the school settings. The government officers says that they are fully aware that the children know all too well about condoms and that they may have at one time experimented if not used them.

The condom debate is also not allowed even at the secondary school level though there are no limitations in discussion of HIV-Aids with teachers and parents. This is because the ministry believes that talk or mention of condoms will be of help indirectly to encourage the use of condoms amongst the school-age children. The new integrated syllabus steers clear of the same. Therefore, emphasis is made on abstinence from sex until marriage for prevention of HIV/AIDS in AIDS education in schools.

With this government guideline on information about condoms, many teachers explained that they cannot teach pupils about condom use, but the interviews have discovered that there are some teachers who consider accurate knowledge of condom use is necessary even for primary school pupils because they become sexually active at quite young age.

Considering the inconsistency with the condom policy by the Ministry of Health to encourage use of condoms amongst people, it is hard to accept the explanation on the guidelines on condoms at school as it was made by the Education Officers, but their explanation could be considered to reflect the reality of AIDS education in classrooms.

5.1.4. Involvement of the health office in health education at school

> *"I would like to participate in health activities in primary schools though I have never joined yet." (Health Office: Male[10])*

The Kenyan government has encouraged health officers to cooperate in health education, especially AIDS education at school, advocating the necessity of AIDS education at school. Therefore, local health officers hope to be involved in seminars or workshops to be conducted in school, but actual coordination between health officers and education officers seems to be difficult to cooperate together in conducting AIDS education at the primary school level. Consequently, health officers and education officers still separately hold workshops and seminars on health issues at grassroots though both of them recognise the importance of cooperation between the two. However, notification to health officers is necessary when health activities are to be held in primary schools.

[10] An informal interview with a health officer in Nuu Division conducted on 6th, May, 2004.

5.2. Health Problems

5.2.1. Health problems encountered in the Area

The survey found that common health problems in the area are as follows:

- Malaria: This is quite common but more frequent during the rainy seasons.
- Typhoid fever: Not very common even though most of villagers don't differentiate it from other diseases. This is due to similar symptoms with malaria, and in such a situation it may take time for a patient to be diagnosed or treated. Many people who suffer from typhoid fever are treated as malaria patient until they become very sick to be admitted for further lab investigation.
- Skin infections: Very common to children under ten years of age.
- Common colds: Mainly affecting young children.
- Diarrhoea: Affecting children as well as adults. Many villagers don't have latrines and the disposal of waste is poor. Due to shortage of water, very few wash hands after visiting toilets especially in primary school.

5.2.2. Treatment

> *"We often take local herbs for treatment. They are effective and they grow in the gardens." (Research assistant: Female)*

Most of minor ailments are taken to hospitals or health centres. Some buy drugs from shops and local chemists. Some people say they prefer taking traditional herbs to medicine, while others do combine traditional herbs and medicine.

These traditional herbs[11] include:

- Mwarubaine: an Indian origin and mainly grow well in coastal parts of Kenya as well as in some parts of Eastern province of Kenya like Kitui and Mwingi. The tree is believed to cure forty ailments including malaria, joint pain, stomach upsets, skin infections, and body rashes.
- Mwoa: given to children when they have parasitic infection like worms. Also given to relieve back pains, joints pains, and also for stomach upsets.
- Muuku: for treatment of jaundice for both of children and adults. People also use in cases of oedema to expectant mothers. Some old people use Muuku to maintain the body strong enough.
- Muteta: commonly used for treating joint pains, backache. Muteta is also commonly used

[11] Most of these herbs are boiled and taken with soup of beef or any meat soup according to the explanation by the research assistant..

to relieve hangovers.

5.2.3. Challenges when people are sick

> *"It's difficult to go to hospital[12] when sick because hospitals are in the long distance." (Parent: Female[13])*

It is not so unusual that people do not have good access to hospitals, health centres, or dispensaries unless they live near those health facilities. The reasons of bad access to health facilities, which can lead to delay of early medical interventions, were explained as follows:

- Lack of transportation and long distance
- Lack of financial resources to pay fees
- Lack of information on diseases; symptoms, seriousness, treatment, and so forth.
- Shortage or lack of medicine at health facilities
- Heavy reliance on traditional healers, diviners, witchdoctors or traditional medicine men

In many cases the communities don't have good access to health facilities and personnel. This is due to lack of transport, long distance, and poverty. Some don't have the information of what to do when they become sick, and not a few people keep patients at home until they die.

5.3. HIV/AIDS

5.3.1. Recognition and perception of HIV/AIDS in the community

> "*Yes, AIDS is also a big problem here. We can tell AIDS patients from their appearance."(Parents: Male and Female[14])*

Many people expressed a sense of crisis towards HIV/AIDS. Both parents and teachers understand AIDS is a threat to everyone - young and old, and that HIV/AIDS can infect anybody. Informal interviews found that many villagers are affected by HIV/AIDS to some extent through the experiences of having HIV/AIDS patients amongst their relatives and neighbours. Most people both in remote areas and big villages acknowledge HIV/AIDS, but their knowledge on HIV/AIDS is quite limited and often is not accurate. There was no any difference in degree of knowledge on HIV/AIDS amongst people in a small village and in a big village. Many people know AIDS is contracted through sexual intercourses, piercing objects, and blood transfusion. Very few people, even amongst teachers, could confidently point out blood exchange of body fluids like milk from breastfeeding as a cause of HIV infection. Furthermore, very few people can differentiate AIDS

[12] Local people often used 'hospitals' as a generic term for health centres, dispensaries, and private clinics.
[13] An informal interview with parents on 19th May 2004
[14] Group interviews with parents conducted on 11th May 2004..

from HIV positive. Many people think they can recognise HIV/AIDS patients from their appearance, and many don't know even healthy looking people can have HIV infection.

5.3.2. Sources and confusion of information on HIV/AIDS

> *"Health officers talk about AIDS in barazas, and church holds seminars for women. However, we don't know much about AIDS" (Parents: Female[15])*
> *"We don't know whose information is correct." (Parent: Male[16])*

Some parents have access to the information on HIV/AIDS through barazas, churches, radios, newspapers, and handouts from workshops. Others do attend workshops organized by ministry of health, NGOs. Sometimes they discuss HIV/AIDS amongst themselves. However, as a teacher said, they find their information on HIV/AIDS is very minimal. A woman said that there are not many workshops or awareness meetings organised by churches, the government, CBOs, or local chiefs. We found that about a half out of 60 female participants in an interview had attended certain workshops before, but almost none of the male participants had ever attended any kind of barazas or workshops on HIV/AIIDS in their life. Many people think they need opportunities for obtaining accurate information on HIV/AIDS. Furthermore, confusion of information on HIV/AIDS was identified. An interviewee expressed his uncertainty of accuracy of the information which was given to him, saying that different people said different things and that we didn't know whose information was correct.

5.3.3. Myths and misinformation on HIV/AIDS

> *"There are many people around here who believe AIDS is caused by witchcraft or due to violation of taboos." (Teacher: Male[17])*
> *"Is it true that AIDS was created in a lab in order to destroy Africans?"(Teacher: Male[18])*

The interviews have identified that many of myths and misinformation about HIV/AIDS are often somewhat related to witchcraft and their social taboos. Parents and teachers explained in the interviews that many people believe that people would suffer from AIDS when they violate taboos in their society. These taboos are explained to include violating sacred places, having incest amongst family members, and neglecting ancestral spirits.

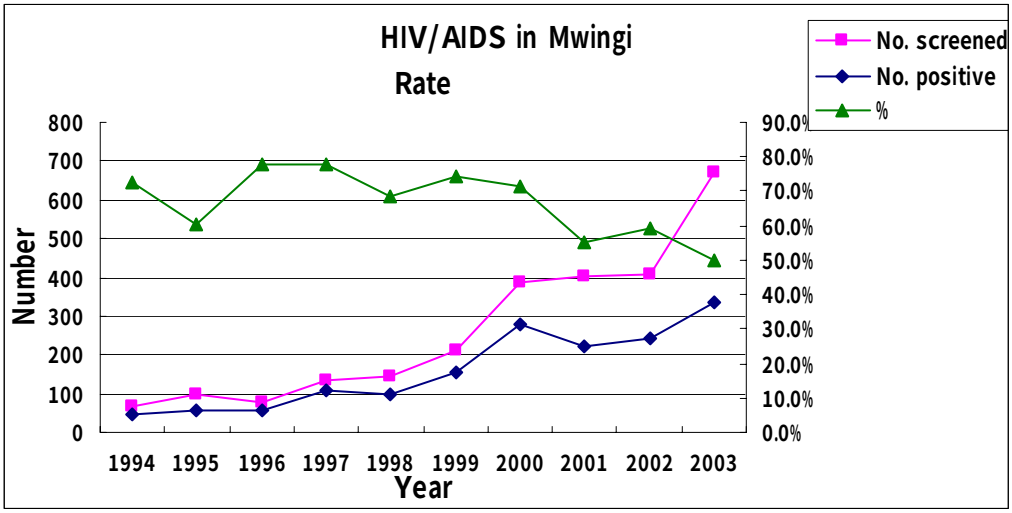
In addition, a belief that AIDS is caused by witchcraft is very deeply rooted in the perception of the local people. According to a district education officer, who is in charge of AIDS education, even

[15] Group interviews with parents conducted on 11th May 2004
[16] Group interviews with parents conducted on 11th May 2004
[17] A focus group discussion with teachers on 18th May 2004.
[18] A group interview with teachers on 12th May 2004.

amongst teachers, some people still believe that AIDS is caused by witchcraft. When people believe that their symptoms are caused by witchcraft, they normally do not go to hospital because sickness caused by witchcraft or curse is only cured by witchdoctors[19]. Counselling fees for seeing a witchdoctor are extremely expensive when compared to the fees in health centres or dispensaries in the division. Many people interviewed in the survey reported that the fee for witchdoctors is as much as two or three thousands Kenyan Shillings per visit. Despite of high cost, there are many people who would like to rely on witchdoctors for treatment of HIV/AIDS.

As one of the reasons some people are eager to connect HIV/AIDS with witchcraft, it might be due to the easiness for people to accept the disease of their own or their close people when they blame the disease to witchcraft. Many people connect HIV/AIDS with immorality. They think people get

Figure 5-1: HIV Screening Testing at VCT Centre in Mwingi



Source: Ministry of Health, Mwingi

HIV infections when they have immoral life style. So, when they find someone in their family or himself/herself become HIV positive, they need to admit that they have been immoral. Witchcraft could be a convenient way to avoid this recognition. This assumption might partly explain the mechanisms of their reliance on witchdoctors, but the base of their reliance would be their long tradition of witchcraft in the division.

The survey also identified some rumours on HIV/AIDS. A teacher expressed his antagonism against Americans, asking conspiracy of Americans to create AIDS virus in order to destroy Africans[20].

[19] According to an explanation by a Kenyan woman, there are several kinds of witchdoctors with different names, depending on their ability to cure the type of sickness. However, such difference is not in the scope of this survey, and detail explanation is omitted in this report. These different types of doctor who are supposed to cure the diseases by witchcraft are to be called 'witchdoctors' in this report.

[20] This kind of rumour seems to widely spread in Kenya. The author had an opportunity to be asked the same question by a taxi driver in Nairobi on 5th July 2004.

5.3.4. Situations of HIV/ AIDS

Findings from the local Statistic Data

According to the official statistics in Mwingi District, the number of the people who were diagnosed as HIV positive has been increasing drastically. Since 2000, more than 200 people have been diagnosed as HIV positive at the VCT centre in Mwingi District Hospital. Figure 5-1 shows the number of the people with HIV positive amongst the people who had screened at the VCT centre in Mwingi District Hospital. There is only one VCT centre in the whole region in Mwingi District, and it is located in Mwingi District Hospital. The graph shows the upsurge of the number of people who had HIV testing in these ten years. The number is ten-fold increase. The rate of the people who have been diagnosed as HIV positive amongst those who had HIV testing is incredibly high. In 1994 the rate is more than 70%, and this trend continued until 2000. Since 2001 the rate of the people diagnosed as HIV positive went down a little, but it has still exceed 50%. This would mean, especially in the 1990s, that people went to HIV testing only when they were sent to the VCT centre by doctors, having already developed AIDS.

The number of people who had voluntary testing has been increasing each year since 2000. In 2004, the number of the people who had testing has already reached 533 in July. The fact would also suggest that a sense of crisis towards HIV/AIDS has become stronger amongst people in the district[21]. According to the data by the Health Office in Mwingi, the Mwingi District Hospital has seven new HIV patients who are from Nuu Division in January – July 2004. Health facilities in Nuu Division have 61 patients with sexually transmitted infections (STI) in July 2004. People with STI are more vulnerable to HIV infection than those without STI. The situations where local people are put cannot be optimistic in the division.

The official data seems to illustrate a picture of the situation of HIV/AIDS in the district, but it would be very difficult to discuss the real situation of HIV/AIDS in the district even with the statistical data. The number of people who can take testing is very limited because of poverty or fear of the result. Many people have difficulty in financing for testing. The transportation fare is too high for ordinary people to go to Mwingi town. Furthermore, they need to stay night at Mwingi to go to the VCT centre due to bad transportation. So, only well-off people can afford to go testing at the VCT centre in Mwingi. Probably similar situations will be found in other rural districts in Kenya as well. .

Even though the statistical data seems to fail in describing the real picture of HIV/AIDS prevalence in the district, it would be easy to assume that the number of people with HIV positive has been dramatically increased in these five years. This increase has been confirmed through our interviews with parents, teachers, and government officers.

[21] Data obtained from an interview with District AIDS Co-ordinator in Mwingi.

Findings from Narratives on AIDS

In addition to the statistical data, some interviewees shared their experiences on HIV/AIDS in their families and in the community. These stories would be of help for us to understand the situations of HIV/AIDS in the community more vividly.

> *"My brother came home to die of immoral life in Mombassa." (Parent: Male in his sixties)*

A brother of an interviewee worked in Mombassa for quite a long time and got infected with HIV there. When the brother developed AIDS and suffered from opportunistic infection seriously, he came back to Nuu and stayed with him for some time. The interviewee said that his brother died of immoral life in Mombassa and said that he tried to persuade his brother to stop his life style. But it was too late when his brother came back home. This kind of story is not unusual in the district these days. Not a few people go to big cities for work and come back with AIDS to die in their hometown[22].

> *"There are some people who intentionally spread HIV virus as revenge. Those people think 'I will not die alone'. " (Teacher: Male)*[23]

Another story was told about an AIDS victim in the community. A husband went to the army service and came back with HIV infected. After he died of AIDS, his wife found she also got infected with HIV from her husband. When she found her infection, she decided to make revenge to unspecified people. She made sexual relationships with many young men in favour of money with the intention of spreading HIV virus to other people. A similar story was told about a Matatu driver who came to Nuu Town and tried to spread HIV on purpose.

> *She said, 'I might die of AIDS in five years time, but without money for food, our family will die in a month or less'. (Female*[24]*)*

The similar type of story was told by another interviewee. The driver came from another town and came to Nuu to make revenge to women through buying prostitutes. It is not certain whether these stories are true or not, but there are numerous stories of this kind told by the villagers[25]. "I will not die alone" is a common phrase told concerning revenge of HIV/AIDS. There are many people, especially women, who have sexual relationships for small amount of money with knowing the intention. "I might die of AIDS in five years time, but without money for food, our family will die in a month or less."

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[22] An interview with a male conducted at Nuu Primary School on 20th May 2004.
[23] An informal interview with a teacher on 18th May 2004.
[24] An informal interviews with a villager in Nuu Town in May 2004
[25] Informal interviews with several villagers in Nuu Town in May and June 2004

Validity of these stories told by the interviewees is uncertain. There is no way available to confirm the validity, but stories of this kind were repeatedly told by different people in the community. It could be said that these stories are at least true in the perception of the reality of AIDS in their community amongst local people.

5.3.5. Customs, sexual behaviours, and HIV/AIDS in Nuu Division

The survey has identified certain customs and practices which would encourage HIV infection amongst villagers. These include polygamy, wife inheritance, FGM, early marriages, and "Kaweto" system. Many of these customs and practices are originated from local traditions and would be difficult for local people to make a change in a short run. With these customs, local people find difficulty to stick to one partner and therefore become more vulnerable to HIV infection.

Polygamy and early marriages

The interviews have learned that polygamy is commonly practiced in many places in Nuu Division as well as other places in Kenya. According to the interviewees, a man sometimes has four or five wives at one time, and some even have seven wives at home. In Nuu, it is told that it is not so unusual for a girl at the age of ten or less to get married as the second or third wife of an old man who is over sixty. In many places in Kenya, boys are more valued than girls because they are continue lineage of the families, whereas girls could bring wealth to the families through marriages. In many cases of early marriages, parents of a bride obtain dowry in cattle, which is reported normally as many as ten cows for a marriage in Nuu Division. Those cows are sold to finance tuition fees of the secondary school for the bride's brothers. According to other surveys, wives with husbands who are ten or more years older were reported to be more vulnerable to HIV infection, compared to the counterparts with husbands who are three or less years older [NACC 2001]. Consulted with the results of the surveys, it could be said many girls in Nuu Division are placed in more risk of HIV infections due to common practices of above early marriages.

Children in the division become sexually active at the early years of age as well as in the other parts of Kenya and Africa. Many teachers in the interviews reported that children, especially girls, in their school become sexually active at around ten years old or even younger. Boys become sexually active a little later. This was explained due to children's exposure to sexual activities in their daily life and lack of parental attention to children's behaviour. Parents are too busy to be care about children's life and most of the girls need to stay away from home with house chores such as water fetching and fire-wood collecting. And moreover, there are some adults misuse girls for their desire.

This might be true to some extent, but there could be some other reasons behind the early years of being sexually active. Early marriage amongst young girls could be considered to have some influence over the girls' sexual behaviours. The survey asking the perception of girls' readiness for marriages has found that girls are considered to be ready for marriage when they are conceptive.

This capability of fertility is considered to be proved by actual pregnancy. Fertility of a wife is very important in Kenyan life. Therefore, it is not so rare for a girl to get married after pregnancy[26]. Under these circumstances, some parents could be more open-minded to sexual activities amongst girls to prove the fertility of their daughters. Parents seem to pay attention to fertility of their daughters, but little attention seems to be paid to protect girls from the risk of STI and HIV/AIDS.

Wife inheritance

Wife inheritance is practiced by some tribes in Kenya. Ordinarily by the practice, widows remarry to men as the second or third wife, or more, within the dead husband's family or clan to secure their life, their children's life, and the dead husband's property or land. The tradition takes different forms in different areas. Other types of wife inheritance are also reported in literature. In Nuu this practice of wife inheritance was explained as traditional passage after death[27]. After death of a husband, his wife is expected to have sexual intercourse with a man before the burial of her husband in order to cleanse her of her dead husband's spirit and to release his sprit from the world[28]. In this case this practice of wife inheritance does not necessarily lead to remarriage. This custom makes both males and females more vulnerable to HIV infection when the dead husband was HIV positive and his wife also has HIV infection from her husband, or when the married sexual partner is HIV positive.

Pressure to end the practice of wife inheritance is growing in Kenya. BBC reported some Kenyan women taking action to stop wife inheritance on the basis of the human rights and the risk of HIV infections. However, the community in Nuu in the survey did not show any sense of crisis towards the practice regarding to wife inheritance.

Female Gentile Mutilation (FGM)[29]

FGM is still practiced in many places in Nuu Division as well as some places in Kenya, even though the government prohibits FGM by law. The rate of the practice amongst young girls varies by the location even in Nuu Division. Normally parents try to hide the practice, which might indicate the possibility of the community's understanding that the Kenyan government prohibits FGM and therefore the practice violates the Kenyan law. As a result, FGM practices are secretly done by villagers or even by health workers. Some parents take their daughters to hospitals or health centres in distance to avoid troubles.

The procedure of FGM is quite risky especially when FGM is conducted by villagers. FGM is normally conducted in a group of girls at one time[30] when following the old custom in a village.

[26] Pregnancy before marriage also has risk for a girl to be abandoned by her partner.. There are many single mothers who expect marriage, but fail to reach the marriage she wanted to have. (From informal interview s with villagers in May 2004)
[27] From an interview with a research assistant of CanDo who is from Kamba tribe on 12th May 2004
[28] This type of wife inheritance is also reported within some communities in Zambia by a report of an NGO, Family Health International in 2002.
[29] From group interviews with mothers and teachers on 24th June 2004.
[30] According to an interviewee, girls undergo FGM during August when school is closed for holidays.

They use a traditional knife for mutilation of all the girls. No treatment is given but butter is applied with the cut. The girls are laid on sleeping mat made of fresh grass. No special attention seemed to be paid to the risk of infection at the practice in the village[31].

"FGM will reduce difficulties of giving birth." (Parents: Female[32])

It is very difficult to conclude what makes FGM still practiced in some places, while not practiced any more in other places. However, the survey identified that some community had wrong belief on FGM, which could encourage some parents to continue the practice. According to explanation by villagers, after FGM the women would not have difficulties in child birth -like excessive bleeding due to fear at giving birth, and girls grow well after FGM. They believe a woman not having FGM is considered to have heavy labour, and said that they knew some women who had FGM done during their giving birth to reduce difficulties in delivery. There was another belief on FGM, which is concerning traditional religion. Some believe that the community gets blessing from ancestors with FGM and that they are also protected from evils through the shed of blood from FGM. With this belief, traditional doctors seem to play a powerful role to persuade parents of FGM practice.

"I don't understand why many parents in this village continue FGM. In my hometown nearby, the practice of FGM is already terminated." (Teacher: Female[33])

FGM seems to take its root deeply in some communities, but the survey has also identified some activities have been conducted by teachers who were striving to persuade parents to give up the practice. It might take time to accomplish their objectives but this suggests the existence of local efforts to improve the situations surrounding girls in the community.

Kaweto[34]

In Kamba tribe they have a practice called "Kaweto", which means 'woman-woman marriage'[35] Custom of 'woman-woman marriage' in Kenya is reported by several researchers, but the study on this custom is marginal. According to the interviews in this survey, Kaweto is a custom, whereby a woman who did not bear a boy in her marriage, Kaweto mother, can marry a young girl, Kaweto, so that Kaweto mother can have a boy or boys through Kaweto, who will take care of her at the old age and inherit her properties. Boys are highly respected in Kamba tribe and adoption of children is not practised in the tribe, therefore these boys through Kawetos are heirs of the families. Kaweto is

[31] A mother did not express her fear to the infection at all when asked the risk of infection. She explained that young girls were free from infection because normally girls have FGM at the age of between seven and twelve and they are too young to be infected with HIV. She did not seem to pay attention to other infection, or just she did not know the risk of other infection than HIV.

[32] A group interview with mothers on 24th June 2004.

[33] An informal interview with female teachers on FGM on 12th May 2004

[34] Information from several formal and informal interviews with the villagers, parents and teachers, which conducted during May and June 2004

[35] According to O'Brien, who conducted a micro-level qualitative survey on woman-woman marriages for Kikuyu women, the practice of women-women marriages are not so unusual in certain communities in West Africa, Southern Africa, East Africa, and Sudan [Njambi and O'Brien 2001]

normally chosen amongst girls who were born out side of wedlock or are from very poor families. The girl becomes Kaweto by her will or is forced by the circumstances. Some becomes Kawetos because they had early pregnancies before marriage. Others were forced by poverty. Parents of Kaweto expect to get dowry from Kaweto mother. They send their daughters to rich Kaweto mothers expecting dowry from them. Kaweto has a right to decide with whom she will get married. She can choose another woman as her Kaweto mother according to her preference or other conditions.

Njambi and O'Brien summarises the explanations on woman-woman marriages by the preceding researches as follows:

> …the basis for the woman-woman marriage is the desire to obtain rights over a woman's capability to bear children who are considered as a means of conveying properties through inheritance. The incentive of women who initiate woman-woman marriages is access to children who can inherit their property. [Njambi and O'Brien 2001]

Njambi and O'Brien also explain that the woman-woman marriages are conducted in the same way as normal man-woman marriages in the community. The marriages are conducted through the help of village elders with dowry paid to the parents. Children through woman-woman marriages are to be socially recognised as legitimate in the community [Njambi and O'Brien 2001]. The information on Kaweto obtained through the interviews supports the explanations by the preceding researchers.

The situation of Kawetos seemed to be very complicated, and according to the interviews, it was said to cause a lot of family conflicts. Kaweto is expected to bear a boy or boys, even though she does not have a husband. She also needs protection from men - financially, mentally, and emotionally. Quite often she has multiple sex partners who are normally married men, sometimes youths in the community. This kind of relationship is not stable and their partners do not stay at their houses or claim for the parental rights when babies are born. According to an interviewee, Kawetos change their partners even every week. They have such relationships in favour of money or other supports from men as well. In other words, to some extent, Kawetos sometimes act like prostitutes in the community due to the nature of their marriage to women. As a result Kawetos are put at the high risk of STI and HIV infections. Ordinary wives do recognise the situations as normal where their husbands have sexual relationships with Kawetos, with having bitter feeling to this issue.

The population of Kawetos in the community is not clear, but the survey has identified the number is not very small. In a primary school where in-depth interviews were conducted, six mothers out of about 60 female participants were Kawetos and the number of Kawetos was the same as that of widow participants in the interviews. In another primary school, the rate of Kawetos amongst mothers of pupils was said to be as much as 75%. This rate could be too much exaggerated and not

be very reliable[36], but at least we can understand the practice of Kaweto is not so unusual in the division.

The Kawetos we met in the interviews were not old, from mid-twenties to thirties. Education level of those Kawetos varies from none to Standard 8. One of them did not have any formal education and two of them had finished 8 years of primary education. Others left school at Standard 3, 4, or 5. The number of children each Kaweto has varies from five to seven. Many villagers were supportive to the practice of Kaweto, but Kawetos seemed to have some difficulties in the relationship with other women in the community. We observed Kawetos flocked together for themselves and that there was no communication with other mothers in the gathering for the interviews. It made a quite contrast with widows who went to other groups of mothers for talking shortly after the interviews[37]. This situation would partly explain the position of Kawetos in the female community in the villages.

This Kaweto system could be understood as socially systematised prostitution in the community in a view from HIV infection, though it seems to have other deep cultural meanings in the community. Kawetos cannot easily get out of this system. Sine this custom seemingly takes a deep root in the community, it is a real threat of the spread of HIV/AIDS to people in the community. In the community with this Kaweto custom, "abstinence", and "being faithful with a single partner" are considered to be of little use as preventive measures of HIV/AIDS. The awareness of the high risk of STI and HIV infections in sexual intercourses without condoms should be more encouraged to be recognised amongst the people the in the community.

5.3.6. Activities by local stakeholders on HIV/AIDS

Responding to the government policy and a strong sense of crisis to HIV/AIDS prevalence in the community, there are many HIV/AIDS seminars, workshops, and awareness activities. Main bodies which hold workshops on HIV/AIDS are as follows;

- Barazas (village meetings) organised by chiefs or administration officers
- Church Workshops or seminars
- Seminars for the villagers by the Community Based Organisations (CBOs)
- Seminars for the teachers by the Education Offices

Baraza (a village meeting)

[36] The rate was explained in the situation where we have a conversation with head teachers on possible health workshops after the interviews with the parents. The head teacher asked whether the workshop is going to deal with the issue of Kaweto, and described the difficulty in dealing with the issue in the workshop, saying that '75% of the parents in our school are Kawetos, and it would be very difficult to discuss the practice to be abolished with those parents.". Judging from the situation, it is highly likely for the head teachers to exaggerate the percentage in order to stop dealing with the Kaweto issue in a possible workshop. (May 2004)

[37] From the observation at the interviews on 11th May 2004

The two main messages were passed to the community members through a village meeting, which the author observed with participation[38]: they should talk about AIDS, and people should make the use of condoms. The same kind of information was repeatedly conveyed to the audience by different speakers in the meeting, but the way of communication was very authoritative and the contents of their talk seemed to be shallow in the point that there was no persuasive information on condoms or HIV/AIDS; rather they just gave them an order from the top. There was no spare time for villagers to ask any questions on the given information, or no detail reasoning was given to the villagers for the use of condoms. The villagers only listened to their talk, and no responses were observed from the villagers to the talk. Therefore, it is very difficult to judge the effectiveness of the AIDS awareness activity through the village meeting observed.

Workshops by a CBO

To this point, one CBO, Nuu Tei Self-Help Group, has been recognised to be active in AIDS awareness promotions as well as engaged in providing financial supports to AIDS orphans[39] in the division. Nuu Tei Self-Help Group has been funded by the District AIDS Control Committees (DACC). The main activities are to support AIDS orphans through financial support to guardians who take care of AIDS orphans, which include support for tuition fees of secondary school, for school uniforms, and for food to AIDS orphans. As subsidiary activities, the group organised awareness meetings in some villages and schools with the help from nurses in the health centres, inviting primary school students as well as youths and adults in the community. In 2003, Nuu Tei Self-Help Group conducted seven AIDS awareness meetings in the whole division, and this year they have already conducted five awareness meetings.

The contents of the meetings included video shows concerning HIV/AIDS, basic knowledge of preventive measures as well as the way to use condoms. The activities of Nuu Tei Self-Help Group involve primary school children, and its workshops were sometimes held in the school compound. However, its activities in the school compounds were not well recognised amongst teachers. The survey with teachers has unfortunately identified that not all the teachers of the school where its workshops were held were aware of or remembered the workshops by Nuu Tei Self-Help Group.

Seminars for teachers by the education office

The survey has found that a seminar on AIDS education was held under the name of a seminar for Guidance and Counselling in February 2004 at Teacher Advisory Centre (TAC) in Nuu Town. The divisional education office invited a teacher from each primary school to the seminar, who is not necessarily head teacher of a school. According to the notes taken by a participant, the contents they dealt with in the seminar include some basic scientific facts on HIV/AIDS, the meaning of acronyms, the situation of HIV/AIDS prevalence in Kenya, and AIDS education in classrooms. Much emphasis was laid on how to integrate AIDS issues in academic subjects, such as using the

[38] Baraza, a village meeting held by District Officer at Nuu Town on 2nd July 2004.
[39] To the point of 1st July 2004, Nuu Tei supports 129 AIDS orphans in the division.

number of AIDS patients for percentage lessons in mathematics, and the AIDS issues as discussion topics in social sciences and English. About preventive measures of HIV infection, especially the condom issue was advised to be handed over to professionals, who are supposed to be nurses, or health officers in the division. The advice would imply that teachers should not touch the condom issue in classrooms.

The Kenyan government is trying to promote co-operation between the health office and the education office on HIV/AIDS. However, no health officers or nurses were observed to participate in the seminar, according to the notes taken by a participant and the interviews[40]. It would probably because the seminar was on Guidance and Counselling, which is considered to have no relation to Health on the surface. Even though it might be a little difficult to achieve full co-operation between the two offices in a short time, the survey has observed that some health officers are very much interested in participating in AIDS seminars to be held in primary schools, and that the education officers seem to recognise the importance of their participation in AIDS education in school.
Apart from the seminar held in Nuu Division, the survey also obtained the information on another HIV/AIDS related workshop for both secondary and primary school teachers, which were held as Girls Guide Association Meeting in a church in Mwingi Town on 10th June 2004[41]. A couple of female head teachers and senior teachers participated from primary schools in Nuu Division, and a focus of the seminar was put on peer education.

Challenges of the seminars held in the division

> *"I don't think even health officers know about HIV/AIDS well." (Parent: Male)*
> *"I don't know if what they say (on HIV/AIDS) is true or not." (Parent: Male)*[42]

It is obvious so much effort was made to disseminate the information for the HIV/AIDS awareness, but a couple of challenges of the seminars and workshops held in the division were monitored. Firstly, the participation is quite limited to certain type of population. In the case of village meetings or workshops held in the village, most of the participants were reported and identified to be females.

Secondly, there is an issue of accuracy and acceptance of information. Information on HIV/AIDS is provided in an authoritative way in local workshops and village meetings, normally by such non-professionals on HIV/AIDS as chiefs, District Officers (DO), and other government officers. In these settings, it is very difficult for villagers to ask questions even if they found it difficult to accept. Some informal interviews with parents identified their scepticism and confusion about the information provided. As there are a quite number of information sources, formally and informally,

[40] Informal and formal interviews with teachers and education officers on 6th and 12th May 2004
[41] Evans Karangau and Kawasya Nzovi participated in the meeting by the invitation from the District Education Office.
[42] Group interviews with parents on 11th May 2004.

for the villagers, they seemed to be perplexed at whose information is accurate and trustworthy.

5.3.7. Perception on HIV/AIDS in the community and preventive actions

Apathy and a Sense of Crisis

> *"AIDS is the same as Malaria. People die easily of these diseases." (Male)*[43]

Some people believe AIDS is like other common diseases. Some don't know that AIDS can be prevented. The interviews have found a strong sense of crisis against HIV/AIDS, but apathy at the same time. Many villagers have certain experiences that their families, relatives, friends, or neighbours died of AIDS. They saw people dying easily of AIDS, but it is not only HIV/AIDS which take people's lives easily. Local people die of malaria, typhoid fever, and other common diseases, which are not so unusual in the area. They seem to think that they are unlucky if they are infected with HIV. Expertise says to them, "HIV/AIDS is different because there is no cure for HIV/AIDS," but for local people, there is quite often no access to the cure for other diseases with cure, which are considered to be different from HIV/AIDS for certain people.

No Preventive Actions by the Community

Apathy, which co-exists with a sense of crisis, seems to lead to no positive actions to prevent HIV infection amongst people in the community. Despite eagerness in acquiring information on HIV/AIDS, local people seem to take no actual action in order to save their own lives from HIV/AIDS. In a sense, HIV/AIDS is just one of many diseases which deprive many lives in the community. The preventive measures they are informed of are mainly 'Abstinence' and 'Being faithful to one partner', but people know it is impossible for them to abstain perfectly or to be faithful to one partner, considering their traditional customs and practices. Not a few husbands have multiple wives and other sexual relations outside of their marriage according to their norms.

Condoms: Perceptions and Use

> *"It is really difficult to discuss sexual issues with my husband. He will beat me if I mention condoms." (Parent: Female*[44]*)*

> *"Many believe those who use condoms are very immoral and have many sex partners. In other words, to prove that you love and care for your partner, no condoms should be used." (Parent: Female*[45]*)*

The only possible action for people to take in preventing infection would be condoms, but condoms

[43] An informal interview with a villager in Nuu town on 17th June 2004
[44] A group interview with mothers on 11th May 2004
[45] A group interview with mothers on 11th May 2004

are not widely spread amongst people. The physical access to condoms is not a problem for local people. We can see condoms are sold in every shop in the division, and women can have free access to condoms at dispensaries and health centres. However, condoms are still out of their reach for many women. The majority of women don't discuss sex with their husbands, and it's very hard to talk of condoms - this can bring misunderstanding between the spouses.

> *"Do you know it is very difficult for us to buy condoms in a shop? It is very embarrassing to buy them…" (Teacher: Male[46])*

For males, the situation might be different from females, but the result is the same. They don't or can't use condoms. There is no free access for male to condoms, because condoms are provided for women in the scheme of family planning. A man explained how men obtain condoms at shops. "Do you know it is very difficult for us to buy condoms in a shop? It is very embarrassing to buy them. Some men ask the shopkeeper to get something on the tall shelf. While she is looking for it, they take condoms into their pockets."

> *"I do not believe condoms are safe because a friend of mine narrated how his wife conceived, yet they had safe sex (with condoms)." (Teacher: Male[47])*

Concerning the effectiveness of condoms in preventing infection of HIV, the majority of the people in the community still seem to have a question on the effectiveness of condoms. More than half of the men and women who were interviewed in the survey expressed their distrust in condoms. The reasons they cannot believe condoms as a preventive measure as follows:

- Condoms have tiny spots which can leak.
- Rubber can burst due to friction.
- Rubber can be retained during sex.

Some suggested that they wear condoms when they do not trust their partners. Some men also expressed their worry that condoms would reduce their sensation, and that it would bring out some problems to men. Even if they have trust in condoms in their effectiveness, it seems to be still difficult to use in practice.

In addition to the doubts on the effectiveness, many of them also do not fully understand the effective way of using condoms to prevent infections. The interviews has found that most married women have no chance to use condoms, or even to see condoms while widows and single mothers[48]

[46] A group interview with teachers on 12th May 2004
[47] A focus group discussion with teachers on 18th May 2004
[48] There is no information obtained concerning young women, who are out of the reach in this survey because the interviews were made with parents of the school children.

have their stock of condoms at home, but the decision of their use relies on their male partners.

5.4. Health Education and HIV/AIDS Education in Schools

Perceptions on Health Education and HIV/AIDS Education in School

> *"Try to educate the parents/teachers/pupils on the HIV/AIDS epidemic through visual media and also print some information on paper using a language everybody can understand."(Teacher: Male)*

So long as the interviews were conducted, the response to a possible health workshop was welcomed in every school. Both teachers and parents recognise the necessity of Health education especially HIV/AIDS education is recognised to be urgent for both adults and children. The comments by teachers on a possible workshop on health or HIV/AIDS are as follows[49]:

- "The earlier CanDo organises a school based workshop, the better."
- "Workshop is very necessary to our division."
- "If possible they can organize HIV/AIDS workshop in our school."
- "Please we need these workshops because AIDS has claimed many people in Kenya and the world."
- "Thanks for being concerned with many good issues in our community, please help us to understand better on HIV/AIDS."
- "Organise awareness meetings on HIV/AIDS for the entire community."

5.5. Discussions: What Are the Problems in the Division?

The qualitative survey could summarise the situations of HIV/AIDS related issues in Nuu Division as follows;

- Knowledge on HIV/AIDS including preventive measures – absolute lack of basic knowledge
- Engagement of males – serious lack of engagement in seminars and workshops amongst males
- Traditions and customs encouraging spread of HIV/AIDS: Kawetos, wife inheritance and witchcraft – difficult intervention by outsiders to stop practices
- Limitation of school education on HIV/AIDS – Necessity of involvement of parents and the community in AIDS education to children. The community and parents should shoulder to some extent.

[49] Interviews with teachers in at primary schools in Nuu division in May and June 2004

Lack of Basic Knowledge on HIV/AIDS

The interviews have observed that most of the villagers are conscious about the issue of HIV/AIDS, and awareness seminars and workshops are held for the villagers. However, though the villagers recognised AIDS pandemic and its main infection routes, they seem to fail to grasp the comprehensive basic knowledge on HIV/AIDS. As much emphasis is put on the sexual intercourses as an infection route, some are not aware of the danger of HIV infection when they attend birth without any gloves or other kind of protections. Also, reluctance towards condoms is observed to be very strong. Lack of knowledge on proper use of condoms and rumours about the effectiveness of condoms seem to be the basis of their reluctance, in addition to the perception of condoms that condoms are for immorality. Basic knowledge on HIV/AIDS and its preventive measures would be indispensable for villagers, and they are eager to have such opportunities.

Little Engagement of Males

In order to prevent HIV infection, engagement of both males and females is absolutely necessary. Especially for use of condoms in the family, men's understanding on the use is indispensable since women expressed difficulties even to consult condom issues with their husbands. On the other hand, male involvement in seminars or workshops on HIV/AIDS is very limited and males are not exposed to condoms issues in public. It could be because quite often those workshops are held targeting only females under the schemes of family planning and HIV/AIDS, and also cultural consideration is made on difficulties for women to discuss sexual issues in the presence of men.

Another reason would be men's engagement in income earning activities when workshops and seminars are held. As not a few men work outside of the division, it is sometimes physically impossible to attend seminars or workshops while on duty. Furthermore, little attendance of males in workshops would further discourage males to participate in AIDS activities even if they have nothing else to do. Careful planning for active involvement of males in AIDS activities would be required to hold effective projects on HIV/AIDS and other health issues.

Difficult Intervention in Traditional Practices by Outsiders

The survey has identified the existence of some traditional practices which could be seriously connected to spread of HIV infection. However, these practices take deep roots in the daily lives of local people, and some of these practices have been functioning as safety valves in their lives. Some of the practices remained because people find certain meanings in them, and it is very difficult to for outsiders to understand implicit meanings these practices have. Furthermore, there are practices even villagers find it difficult to handle; such some issue as witchcraft which has strong influence over the lives of local people in certain areas, especially in Kambaland.

The report would not suggest any direct intervention from outsiders in these practices because it would be very difficult for outsiders to be engaged in these traditional practices without deep understanding of the culture and customs. In order to make a change in these practices, careful

consultation with local people and active initiatives from the community are indispensable, which would take a long time. What outsiders could do at best would be provision information on possible influence of those practices and opportunities for local people to think about the alternatives.

Limitation of AIDS Education in School

The survey has recognised large expectation on school concerning AIDS education both from the government and the community. The school education has been doing its best to maximise its efforts to prevent HIV/AIDS from spreading in the country through integrating HIV/AIDS and other health issues into academic subjects so that school children can be conscious about HIV/AIDS issues at a daily basis. However, scepticism cannot be diminished about the effectiveness of school engagement in the HIV/AIDS prevention.

The biggest concern is too much emphasis is put on moral issues in AIDS education. If the information on condoms is banned or considered to be banned to give to children in school and is not provided to children, it could be said that AIDS education in school have serious weakness in its effectiveness, considering the actual situations of children and adults in the community concerning sexual behaviours and practices. Who would be responsible for providing accurate and indispensable information to children if children are swept away from the information of condoms? Responsibilities of parents and communities should be re-considered on this issue.

6. Findings: Quantitative Survey

The questionnaire used in this survey consists of 21 questions which are categorised into four factors. The first factor is Background to obtain information on sex, religion (denomination), and age. Education background was not asked in order to keep anonymity because all the respondents are primary school teachers and the majority of them have the top-level qualification, p1-level, except those who are hired not by the government but by the school, who are called Parent Association (PA) teachers. Another factor is Knowledge to explore what is teachers' knowledge especially on HIV/AIDS, and what kind of information sources they have or recognise.

Another is Educational Activities for information on the coverage of health education in class, health activities in school, workshop attendance by teachers and their desired topics for health workshops so as to make a clear picture of their school activities related to health not only HIV/AIDS but other health issues included as well. The other factor is Perception which explores various perceptions of the respondents on HIV/AIDS, vulnerability of children and adults in their community to STI and HIV infection, and the effectiveness on condoms to prevent the infection. This factor also contains a question concerning whether the knowledge of condoms should be given to the students. Amongst four factors there are some open-ended questions but most of the questions are made for ticking so that quantitative analysis could be easily made. Nominal data was

analysed with chi- square test for association and ordinal data was with non-parametric test.

6.1. The Results of the Questionnaire

6.1.1. Background factor: What are the respondents like?

Table 6-1 Background of the Respondents

Sex	man	119
(Valid: 167, 100%)	woman	48
Age	Twenties	48
	Thirties	78
	Forties	32
(Valid: 167, 100%)	Over fifty	9
Religion	Catholic	69
(Denomination)	Protestant	90
	Muslim	0
	None	1
(Valid: 163, 97.6%)	Others	3

Question 1, 2, and 3 are categorised in Background Factor and ask about sex, age, and religion [See appendix 2]. The typical image of the respondents of the survey made from the collected data could be Christian male under forty years of age. As Table 6-1 and Figure 6-1, 6-2, and 6-3 show, a little less than three fourths of the respondents are male and about three fourths of the respondents are under forty, with 46.7% of thirties and 28.7% of twenties. Although about 20% of the respondents are in their forties, only 5.4% are over 50. Concerning religion or denomination, about 98% of the respondents are Christian and there are no Muslim teachers in the division. Only one respondent answered that he has no religion, but the qualitative research found that this means that the person is not an atheist, but has traditional beliefs. From the results in the survey, a decision was made to exclude other attributes than Catholic and Protestant at some analyses because of their small number.

Figure 6-1: Sex

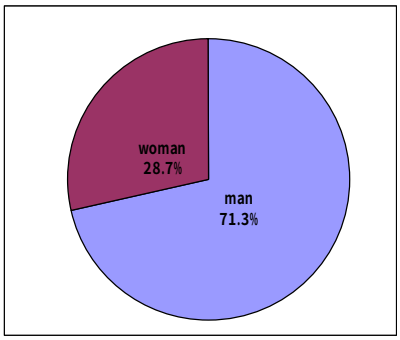


Figure 6-2: Age

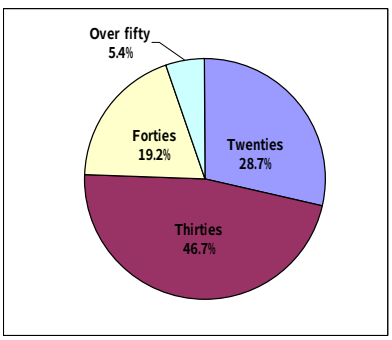
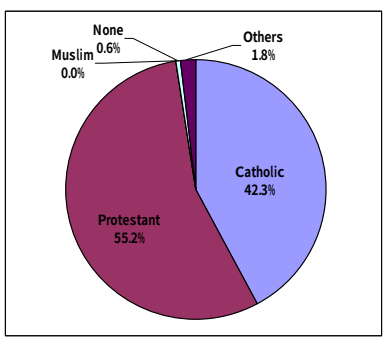


Figure 6-3: Religion



6.1.2. Knowledge factor: How much do the teachers know on HIV/AIDS?

Question 10, 11, and 17 are categorised into Knowledge Factor and ask about HIV infection routes, difference between HIV and AIDS, and information sources for the respondents in order to know how much correct basic information the respondents have concerning HIV/AIDS. [See appendix 2]

HIV Infection Routes

Figure 6-4: The Rate of Correct Answers on Infection Routes

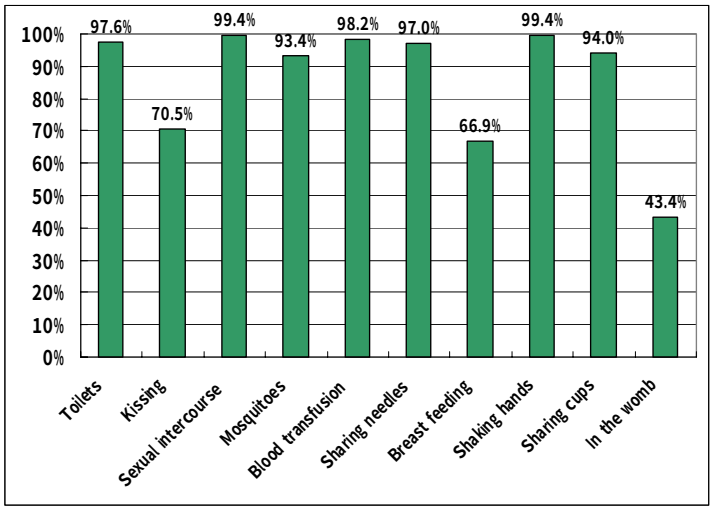


Figure 6-4 shows the rate of correct answers on each infection route. Most of the respondents recognise most of the infection routes correctly, but 29.5% of the respondents think people would get infected with HIV through kissing. 33.1% don't know breast-feeding as an HIV infection route, and 56.6% don't know babies could get infected in the womb, either. Other infection routes are well understood by the respondents, but it could be said that this result is not satisfying enough for teachers who are supposed to disseminate the knowledge on HIV/AIDS to children.

Figure 6-5: Marks on HIV Infection Routes

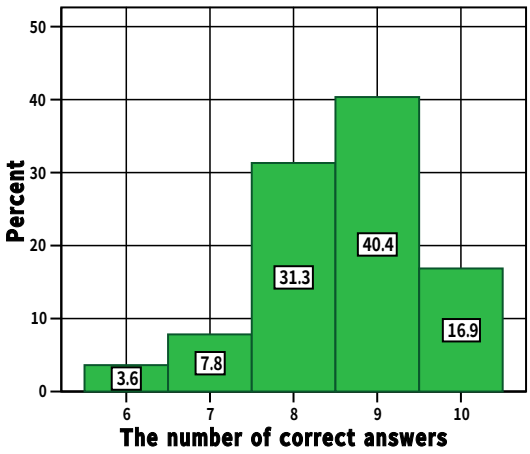
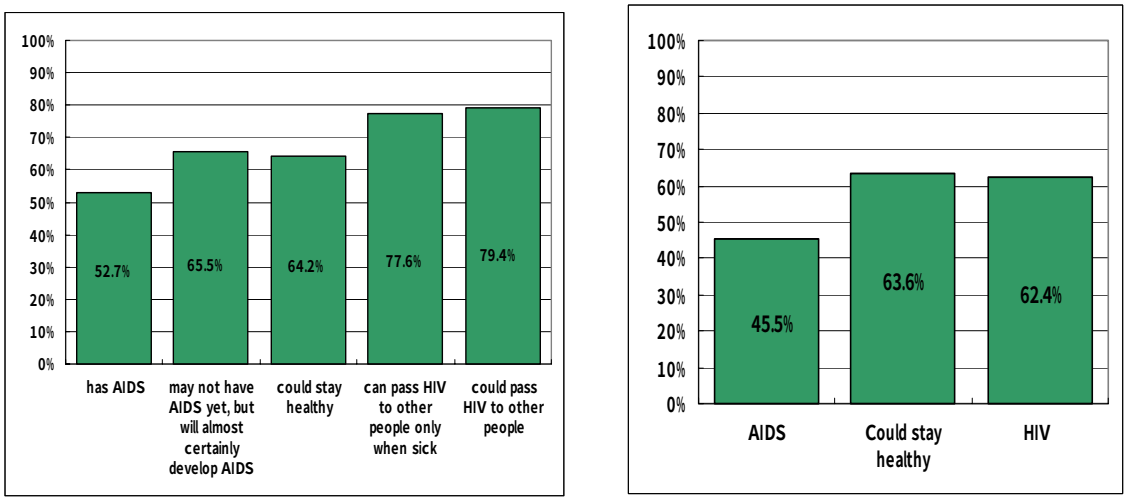


Figure 6-5 shows the distribution of marks of the respondents' correct answers on HIV infection routes. The full mark is 10. The mean of the marks of the respondents is 8.59 and the lowest mark is 6 with the highest 10. Only 16.9% respondents have full marks and six respondents (3.6%) have wrong answers with 40% of the questions.

HIV and AIDS

Figure 6-6: The Correct Answer Rate on HIV and AIDS, "People infected with HIV …"

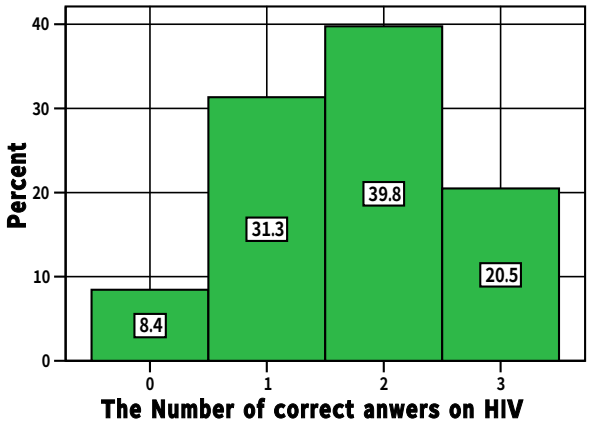


(a) (b)

Figure 6-6 (a) shows the rate of correct answers in which each respondent ticked as a correct statement on HIV/AIDS. However, the first and the second statement on AIDS and the fourth and fifth statements on HIV are deeply connected with each other. Therefore, they cannot be counted as correct answers if one of the pair is wrongly answered. In Figure 6-6(b), 'AIDS' shows the rate of those who have correct answers both on the first and the second statement, and 'HIV' shows the rate of those who have correct answers on both of the fourth and the fifth statement. Only 45.5% of the respondents understand difference between HIV and AIDS. Though 63.6% understand people infected with HIV could stay healthy, 62.4% understand when those people with HIV could pass the virus to other people. The rate of correct answers on HIV and AIDS also could indicate that the knowledge of the teachers on HIV/AIDS is not sufficient enough to pass the accurate information on HIV/AIDS to children.

Figure 6-7 shows the distribution of the respondents' marks on HIV and AIDS. The mean is 1.7, but 8.4% of the respondents failed to answer none of the questions on HIV and AIDS correctly. As the recognition of difference between HIV and AIDS is considered to be very important when thinking about the prevention of HIV infection, the result of this question can be very serious for the community.

Figure 6-7: Teachers' Marks on HIV and AIDS



Where do the Teachers get information?

Figure 6-8: Information Sources on HIV/AIDS

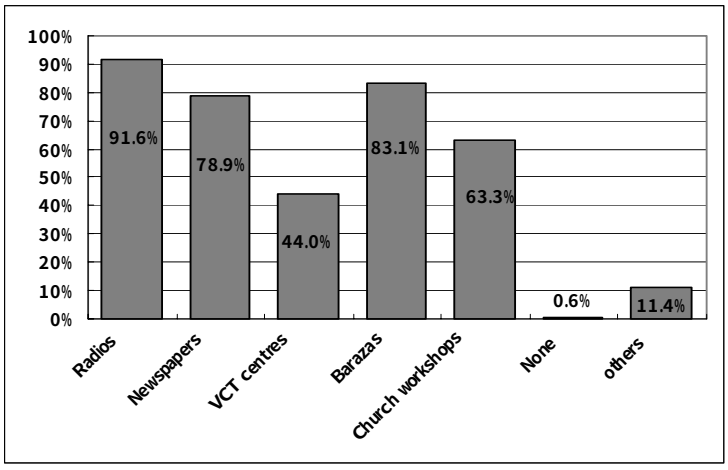


Figure 6-8 shows the information sources on HIV/AIDS. The main information sources for the respondents are radios, barazas (village meetings), and newspapers. In Nuu Division, there is no electricity and the access to the media is very limited. The interviews with teachers found three radios were allocated to each school and that all the teachers can have access to the radio, which provides information on HIV/AIDS through HIV/AIDS awareness programmes by Kenya Broadcast Corporation and by Kenya Institute of Education. However, according to some head teachers, the cost of electricity for the radio is very high and they do not have enough budgets for the batteries. Therefore, the use of the radio itself is limited because of its running cost.

Baraza is also one of the biggest information sources for villagers as well as for the respondents. Baraza is a village meeting which is normally held by administrators or members of the community. Important information is passed to villagers through barazas in local villages. Awareness speeches about HIV/AIDS from many stakeholders were observed in Baraza in Nuu town by the author on

1st July 2004.

Newspapers are also one of the biggest sources of information even though newspapers are not sold in the division. Most of the villagers have access to newspapers from someone who bought newspapers at Mwingi Town or other big towns in other districts. As a result the information from newspapers tends to be one days or several days old.

VCT centres are mentioned by the respondents, but in reality the possibility seems to be very low that the respondents utilise the VCT centres as a source of information on HIV/AIDS. The qualitative research has identified that there is only one VCT centre in Mwingi District, and that access to the VCT centre is not easy for villagers because of the distance from Nuu Division and the transportation cost. Therefore, though 43.4% of the respondents ticked VCT centre as their information source, it might mean that they recognise that VCT centres provide information on HIV/AIDS only as knowledge, but not from their own experiences.

As other information sources, the respondents point out 'talk with friends', 'seminars and workshops', 'videos', 'teachers' manuals', and 'magazines and books'. These illustrate that teachers make full use of available materials near by and sharing information one another seems to play an important role to obtain information they need though quality of information is not sceptical.

6.1.3. Educational activity factor: How are health activities held in school or in class?

Question 4, 5, 6, 7, and 8 are categorised into Educational Activities Factor, asking such questions as topics dealt in Guidance and Counselling, the coverage of health issues in classrooms, health related activities in classrooms, desired topics for a workshop in school, and the number of attendance to workshops on health [See appendix 2] .

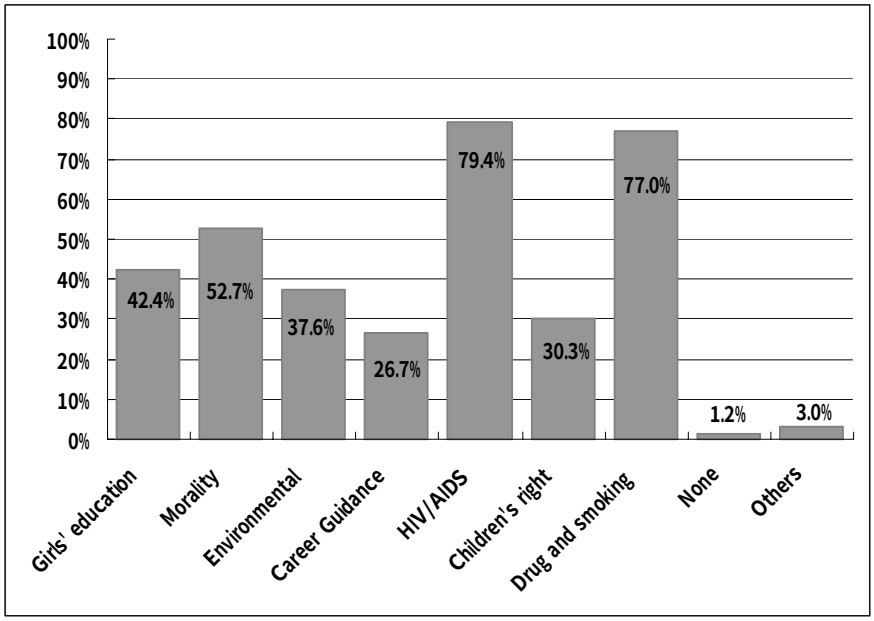
Topics on Guidance and Counselling

Every school is supposed to have class for Guidance and Counselling, where teachers give appropriate guidance to pupils on such topics as discipline, morals, and career guidance outside of academic subjects. One teacher in each school is appointed to be in charge of Guidance and Counselling, and the government holds seminars for those teachers so that Guidance and Counselling can be fully utilised at schools. Figure 6-9 shows the distribution of the topics for Guidance and Counselling. The topics in the questions were selected amongst what were mentioned in the interviews and the discussions in the qualitative research with teachers and education officers in Nuu Division. Those who answered others point out 'gender equality', 'Sexual Transmitted Infection (STI)', 'boys' education', and 'leisure time activities[50]' as topics for Guidance and Counselling. The topics in the question would suggest the concerns and problems which the

[50] The qualitative survey has discovered that leisure time are strongly connected with sexual misbehaviour among teachers, thus teachers often give guidance to children that they should work hard not to be idle in their leisure time.

respondents have in their schools. The biggest concerns and problems seem to be HIV/ AIDS and smoking and drugs. These results were also confirmed in the qualitative survey.

Figure 6-9: Topics Covered in Guidance and Counselling



Health Activities in School and Class

153 respondents (91.6%) answered in this open-ended question about their health related activities conduced in class or school. 143 teachers out of 153 respondents (93.5%) answered that they have certain activities on hygiene and sanitation which include grooming of bodies, cleaning of the school compound, washing hands at the use of latrine, and safe water. 17 teachers dealt with HIV/AIDS and STI in their health activities, 14 nutrition, 10 first aid, 7 drug abuse, and 7 common diseases. The results would indicate that the focus of health activities in reality is put on basic hygiene and sanitation, even though teachers are highly interested in HIV/AIDS and STI.

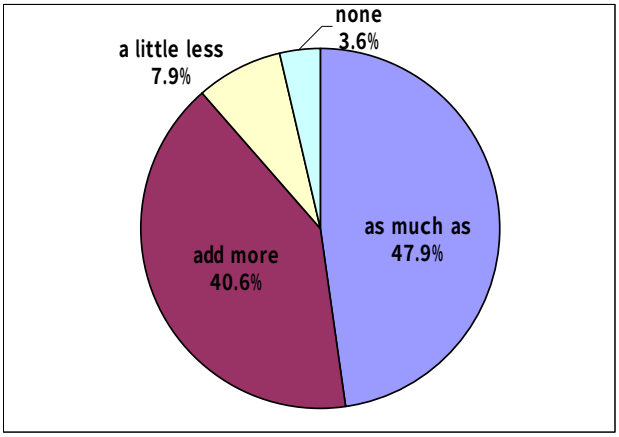
The Coverage of Health Education in Class

Figure 6-10 shows the share of the coverage of health education in class. The qualitative survey has identified that health education has been integrated into academic subjects, and the degree of integration has been highly increased since the new curricula started in 2003[51]. The degree of integration of health issues into academic subjects differs in each grade, but almost half of the teachers adhere to the syllabi and teach as much as the syllabi require. 40.6% of the respondents have answered that they add more information to the syllabi according to their interest and

[51] The new curriculum has phased in along with the grade in a way that in standard 1 and 5 in 2004, standard 2 and 6 in 2004, standard 3 and 7 in 2005, completing in 2006 with standard 4 and 8 in 2006. At the time of the survey, the new curriculum has started only in standard 1, 2, 5, and 6. Though there is difference in the degree of health education to be taught in each grade, this question did not differentiate the respondents teaching with the new curriculum and with the old curriculum, because the main intention of this question is to explore how much the teachers adhere to the curriculum. Therefore, this question has a limitation in exploring the flexibility of the teachers depending on the situation.

knowledge. The qualitative survey has found that addition is normally made on hygiene and sanitation which is almost the same topics as the answer of the former question. Though the number is very small (six respondents), there are some teachers who do not cover the requirement of syllabi or who do not just recognise that they are dealing with health issues in class. The question shows more than half of the teachers in the division adjust the amount of the coverage of the syllabi on their own decision.

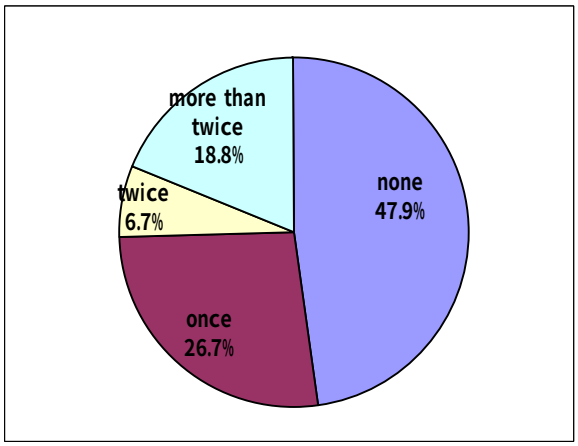
Figure 6-10: The Coverage of Health Education in Class



Attendance of Workshops on Health by Teachers.

Surprisingly, almost half of the respondents answered they have never attended the workshops on health whereas about 20% answered they have attended more than three times. A little more than a quarter of the respondents answered to have one attendance to a workshop on health. 6.7% answered they had twice. What is the implication of the disparity of the number of attendance to workshops amongst teachers? Two possible answers could be assumed: Those teachers who are not interested in health issues are big in the number whereas those who are interested attend many workshops on their own will, or opportunities may not be equally provided to teachers to attend workshops.

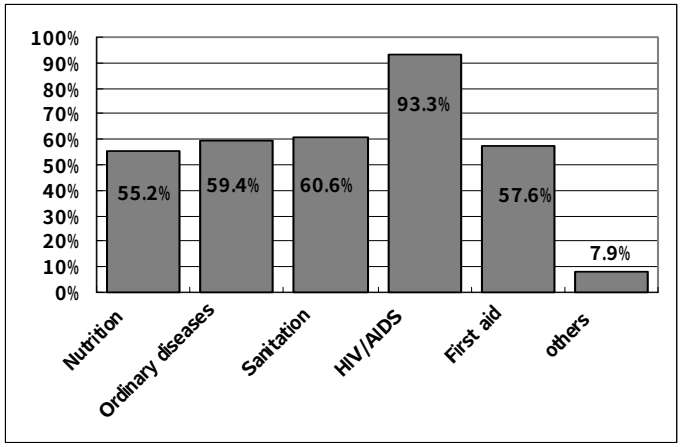
Figure 6-11: The Number of Workshop Attendance on Health



The answer might not be only one of these, but the qualitative survey has confirmed that the education office holds several workshops on health under the name of Guidance and Counselling as well as other academic issues. Normally, these workshops did not seem open to every teacher who wishes to attend. The same teacher in a school tends to attend the different types of workshops repeatedly, which was also observed through the qualitative survey. This might be because the key person in a school is appointed to attend various workshops so that he or she could spread knowledge or information obtained in the workshops to other teachers in his or her school[52]. Furthermore, under the constraint of the educational budget, it would be very difficult to provide opportunities for every teacher to obtain knowledge. So, it can be assumed that there are a certain number of teachers who are not successful to grasp opportunities to learn in spite of their wish.

What Knowledge do Teachers Aspire in Health?

Figure 6-12: Desirable Topics for the Possible Workshop with CanDo.



CanDo conducted school based workshops in 27 primary schools in Nuu Division in the last three years. For the next possible workshop, the questionnaire asked the teachers to tick the topics in which they are interested. These topics were selected based on the information through the interviews and focus groups prior to the questionnaire survey. The results would reflect the high interest in health issues of the teachers. However, HIV/AIDS were selected by 155 out of valid 167 answers and could be said that it is the highest concern amongst health issues for the teachers. For 'others', such topics as STI, communicable diseases, abusive use of drugs, herbal medicine were cited.

6.1.4. Perception factor: What do teachers discern on HIV/AIDS related issues?

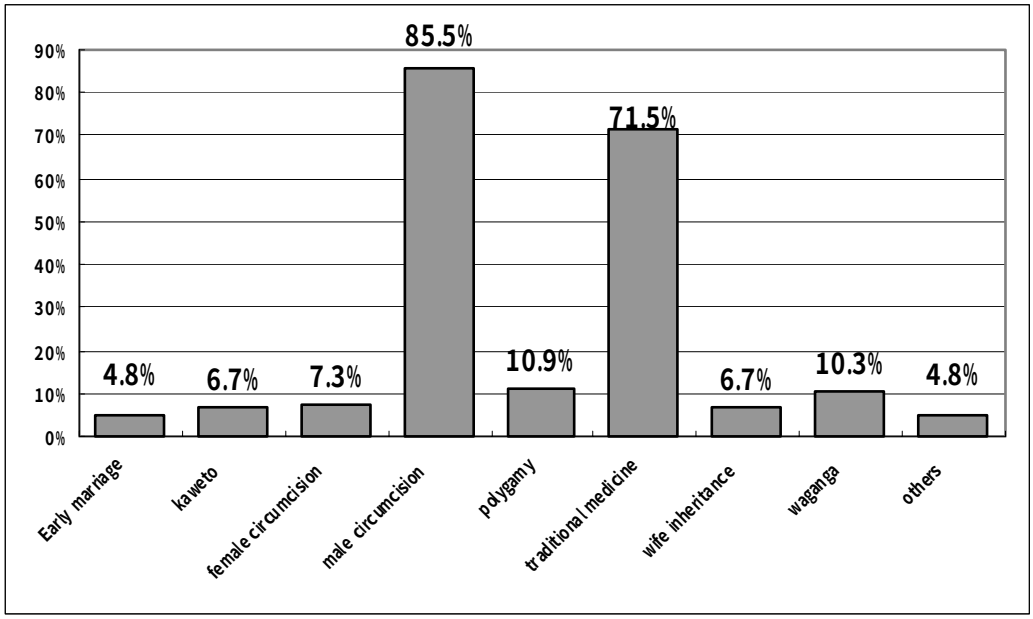
Question 9, 12, 13, 14, 15, 16, 18, and 19 were categorised into Perception Factor, asking questions

[52] A head teacher who attended health-related a seminar held in other district told that he was chosen to attend the seminar and has been responsible to disseminate the knowledge he obtained in the seminar to other teachers in the division. He also would like to hold a seminar for other teachers, but said that he was too busy with other school issues to discharge his responsibility. (Informal interview with a male head teacher in May, 2004)

on practices to be retained as tradition, perception towards a person with HIV/AIDS (immorality and happy working together), children's vulnerability to STI and HIV infection, Adults' vulnerability to STI and HIV infection, responsible body to tackle with HIV/AIDS; Information provision of condoms to children, and perception of effectiveness of condoms in protection of HIV infection [See appendix 2].

Practices to be Retained as Tradition

Figure 6-13: Practices to be Retained as Tradition



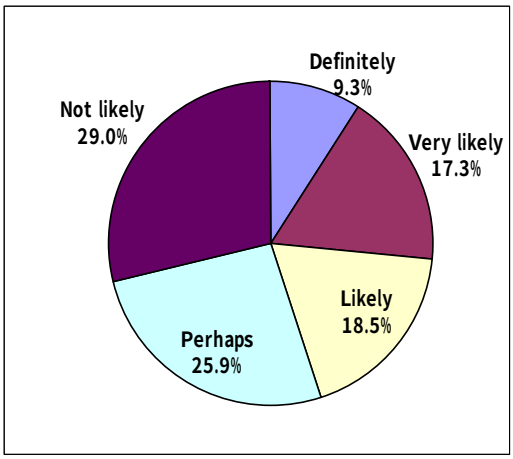
In the first place, the qualitative survey has obtained some information on customs and practices which seemed to be related to spreading HIV/AIDS in the community to a certain extent. Some practices are deeply related to HIV infection amongst villagers and some are connected to the treatments for HIV/AIDS physically and mentally. Though the detail of each practice is explained in the former chapter, brief explanation of unfamiliar terms is presented in this section. *Kaweto* is a practice of 'woman-woman' marriage, which is not very unusual in the division. Married women who did not bear a boy or boys are eligible to marry a woman who can bear a boy for her in order to have some boys to inherit her property. Kawetos are responsible to have children without legal male husbands, and this practice requires extramarital intercourses amongst villagers. *Waganga* is a traditional healer or medicine man through witchcraft, who is considered to be capable to cure the diseases which are caused by curse. Kamabaland is a famous place for witchcraft and the belief that AIDS is caused by curse is still strongly supported in the community.

In the questionnaire survey the percentage of the respondents who support these traditional practices is quite small except male circumcision and traditional medicines which are well recognised even outside of Kenya. However, through the qualitative survey, most of the practices shown in Figure 6-13 were found to be still widely conducted in the community, and villagers do

not relate these practices with the danger of the spread of HIV/AIDS. Therefore, many of the teachers also think that it would be difficult or not necessary to abolish these practices in reality. It can be assumed that the low rate of the support to these practices represents the attitudes of teachers towards traditional customs as intellectual people in the community.

Perception towards a Person with HIV: Is he or she Immoral?

Figure 6-14: Perception towards a Person with HIV: Is he or she Immoral?



For the local strategy of HIV/AIDS awareness, the qualitative survey has detected much focus is put on 'avoiding immorality', which means 'abstain' and 'be faithful to one partner', as preventive measures for HIV infection in the division as well as in other parts of Kenya. Therefore, people in the community tend to connect people infected with HIV/AIDS with immorality. Figure 6-14 demonstrates the perception of the respondents towards people with HIV/AIDS. The result also confirms the findings of the qualitative survey. Despite the recognition of other infection routes than sexual intercourses, more than two-thirds of the respondents perceive a person with HIV/AIDS as immoral to some extent. However, the case where wives get infected from their husbands seems not to be included in this category of immorality, which was presumed through a question from a respondent in answering the questionnaire[53].

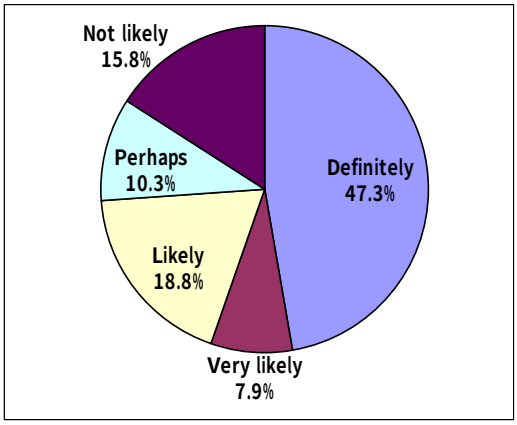
The Perception towards a Person with HIV: Are you Happy with Working Together?

Though many of the respondents perceived People with HIV/AIDS as immoral, this perception of immorality does not seem to hinder them from social association at the workplace or in other communal occasions. About three quarters of the respondents answered to take positive attitudes towards having association with those people at the workplace. Almost half of the respondents are very much confident with continuing their relationships at the workplace while 15.8% answered negatively. This attitude towards people with HIV/AIDS would come from the understanding of the nature of the disease. However, it would not be denied that it is because they might think they will

[53] One respondent asked a question, "What should I do with the case of a wife infected from her husband. She is not immoral." (in the questionnaire conducted in June, 2004)

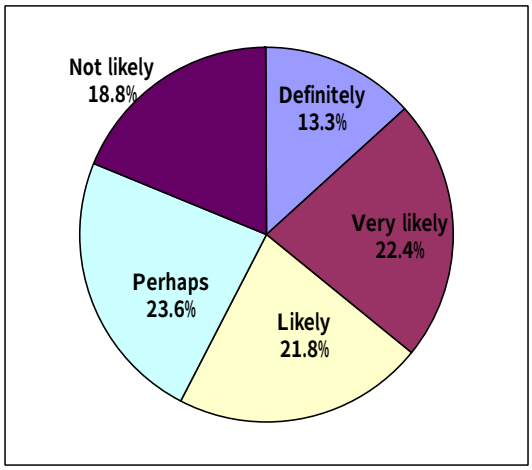
not get infected unless they have sexual relationships with people with HIV/AIDS.

Figure 6-15: Perception towards a Person with HIV: Are you Happy with Working Together?



Children's Vulnerability to STI and HIV Infection

Figure 6-16: Children's Vulnerability to STI and HIV Infection



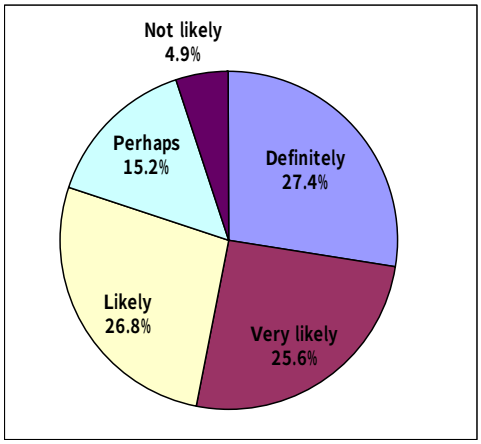
As figure 6-16 demonstrates, the respondents have some sense of crisis concerning STI and HIV infection amongst children, though the sense of crisis varies to the highest degree. The qualitative survey has obtained some information concerning children's sexual activities in the community. It is reported that many children become sexually active at the age of ten or so. The teachers indicated the misuse of children in the sexual context by adults through early marriage and other situations. In informal interviews, some villagers blamed male teachers to have sexual abuse to their pupils. It is not clear where this sense of crisis towards children comes from, on what information it is based, or whether it is from only assumption. However, it is clear that many of the respondents recognise that even children are at the risk of HIV infection.

Adults' Vulnerability to STI and HIV Infection

Compared to the response concerning children's vulnerability to STI and HIV, the sense of crisis

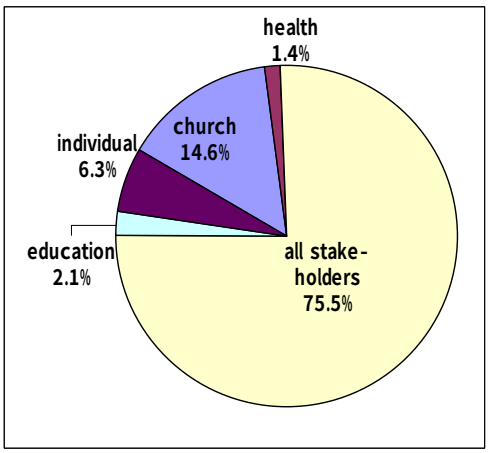
towards adults is more serious. About 95% of the respondents perceive that adults are vulnerable to STI and HIV infection to a certain extent. This sense of crisis is probably coming from their experience in the community, seeing family members, relatives, friends, and neighbours dying of AIDS. From the qualitative survey, people can easily suspect a death caused by AIDS even though it is not clearly mentioned in that cases. Furthermore, there are quite number of AIDS orphans in the community as well. This kind of situation in their daily lives seems to make the respondents' sense of crisis expanded.

Figure 6-17: Adults' Vulnerability to STI and HIV Infection



Responsible Bodies to Tackle with HIV/AIDS

Figure 6-18: Responsible Bodies to Tackle with HIV/AIDS

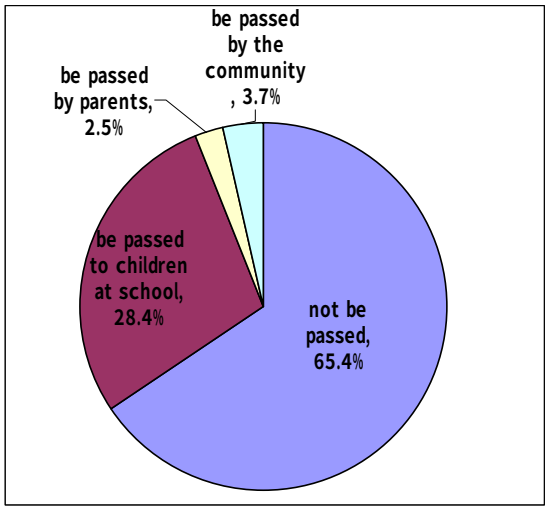


Three quarters of the respondents recognise that HIV/AIDS is an issue that every stakeholder in the community to tackle with, but as Figure 6-18 demonstrates, 14.6% of the respondents think HIV/AIDS is an issue of morality, and therefore church should be the main body to tackle with the problem. The influence of church over the HIV/AIDS issue is still strong compared to the influence from other sectors. Furthermore, this question was a single choice question and the invalid rate for this question is extremely high compared to the other single choice questions. Most of the problem

in this invalidity is that many of the respondents with the invalid answer ticked church even though they selected another choice[54]. This would mean that the influence of church over the issue is stronger than what Figure 6-18 suggests. More respondents think that HIV/AIDS is the issue of morality and church should be more responsible to tackle with the problem even though they recognise all the stakeholders in the community should be responsible for the issue.

Provision of the Condom Information to Children

Figure 6-19: Provision of the Condom Information to Children: Knowledge of Condoms Should …



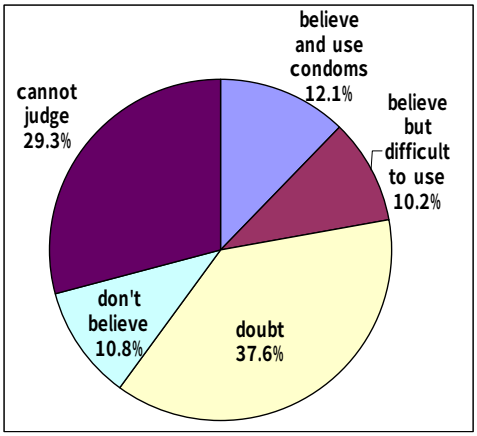
About two-thirds of the respondents think that the knowledge of condoms should not be passed to children as a preventive measure from HIV infection because the knowledge would encourage children to be involved in sexual relationships. This perception might be very much influenced by the attitudes of the Ministry of Education or the local education offices. In an in-depth interview in the qualitative survey, the officer in the District Education Office, Mwingi, who is in charge of HIV/AIDS education, clearly stated that teachers were not allowed to mention the word, 'condoms' in classrooms. He explained that only guidance passed to pupils to protect themselves from HIV infection should be 'pupils should not be indulged in sexual relationship.' This attitude seems quite contradictory with the attitude of the Ministry of Health towards condoms, and this might be his personal opinion. However, the possibility is quite low because he has added in the end of the interview that he personally believes the knowledge of condoms is necessary for children and passes the information of condoms to his children. Therefore, it would be natural to think that certain guidelines on condoms should be passed from the government to teachers at a certain level.

[54] This type of invalidity was recognised in other questions as well in the pre-testing, and special attention was made in explanation to the respondents in answering the questions in order to avoid the invalid answers. As a result the rate of invalid answer rate was dramatically improved in many of other questions (invalid rate; less than 2%) compared to this question about the responsible body (invalid rate, 13.9%). Another question with high invalid answer rate is on the effectiveness of condoms (invalid rate, 6%), but in this case most of them are invalid with no answer chosen. From this comparison, it could be concluded that the invalidity of the response was caused because the respondents could not choose only one answer even though they understood the way of answering the question.

Despite the negative attitudes of the Education Office to condoms, there are some teachers who believed that children should have accurate information on condoms as a preventive measure. The overall rate of those people who think passing the information on condoms is necessary is 34.6%. Most of them think it should be passed at school rather than in the community or by parents.

Effectiveness of Condoms to Prevent Infection

Figure 6-20: Effectiveness of Condoms to Prevent Infections



The church seems to be very influential over the HIV/AIDS issue, which is emphasising the aspects of morals and family values for the prevention of HIV infection. The biggest debate over the issues is about condoms. Christian Church in Kenya, especially Catholic Church, has been in the position against condoms, providing information that condoms are not effective in preventing HIV infection, pointing out bursting and leaking of condoms. Details on the condom issue, the attitudes of Christian Church, and the perception of the community are reported in the qualitative survey chapter.

In this question the choices 'doubt' and 'can not judge' are differentiated, depending on whether they feel they have accurate knowledge or not. The choice 'can not judge' implies that they cannot judge because they don't have accurate knowledge on condoms. The choice 'have doubts' implies that they have knowledge on effectiveness of condoms, but still wondering if it is really effective in case of leaking and bursting. The answer 'doubt' is picking up as a key word from the qualitative survey. In focus group discussions and group interviews, many teachers asked questions on condoms, saying, "Are condoms really effective in prevention? I have doubts on its effectiveness." On the other hand, some teachers avoid expressing their ideas on condoms, saying 'I cannot judge the effectiveness. I don't know much about condoms.' [55]

Despite the assertion by the church, the respondents do not quite believe the negative information

[55] From group interviews and focus group discussions conducted in May and June 2004

on condoms distributed by the church. A little more than 20 percent of the respondents believe the effectiveness of condoms: 12.2% even answered that they use condoms in practice. Furthermore, the rate of the teachers who responded that they don't believe the effectiveness of condoms at all is smaller than expected; 10.9% of the respondents. Figure 6-20 seems to illustrate the situation where the local people are put in the flow of various pieces of information through the church, the government, the media, and other sources of information.

6.2. Exploration of the Results: Differences, Associations, and Correlations.

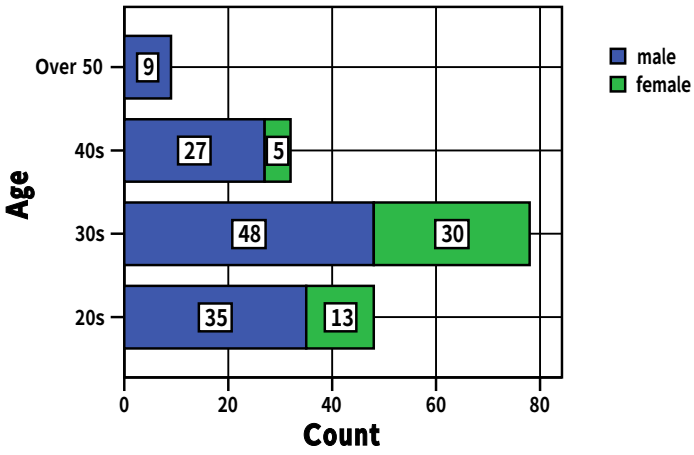
The former section describes the entire picture of HIV/AIDS and other health related issues through the actual responses to the questionnaire survey. This section will discuss what the findings could explain in the real context by paying attention to the differences by the background factor (age, sex, and religion) and the associations amongst the factors (perceptions, educational activities and knowledge), so that the local situations could be demonstrated.

6.2.1. Characteristics of the respondents: What consideration should be paid to the analyses?

In this section, the significance of difference amongst each attribute is explored to find the ones with statistical significance amongst sex, religion, and age so that appropriate consideration could be given to the analyses of the data in further exploration.

Males and Females are Different in Age Distribution

Figure 6-21: Sex and Age of the Respondent



As Figure 6-21 shows, the age distribution is different between the females and the males. The highest population of both the males and the females in this survey is 30s; 40.3%and 62.5% respectively. The figure tells that 90% of the female respondents are under 40 years of age with 10% of the population is at their 40s. There are no female respondents over 50 years of age, whereas about 30% of the male respondents are over 40. The chi-square test for sex and age also has the result as χ^2= 9.541; df=3; and p=0.023, and concluded that the difference is statistically

significant at the 0.05 level (2-taile) by rejecting the null hypothesis.

The result implies that careful consideration would be necessary to the Sex factor when the data is analysed in relation with Age, and vice versa. By the fact that almost 90% of the female teachers are under 40 while about 70% of the male teachers are under 40, it could be assumed that most of the female respondents are in the generation with small children but not with grand-children or grown-up children, while the males could have adult children or grand-children. From this assumption the difference might have some influence over the perception or behaviours of the respondents.

Religion Distribution Does not Have Influence over Age or Sex

Figure 6-22: Sex and Religion (Denomination) of the Respondents

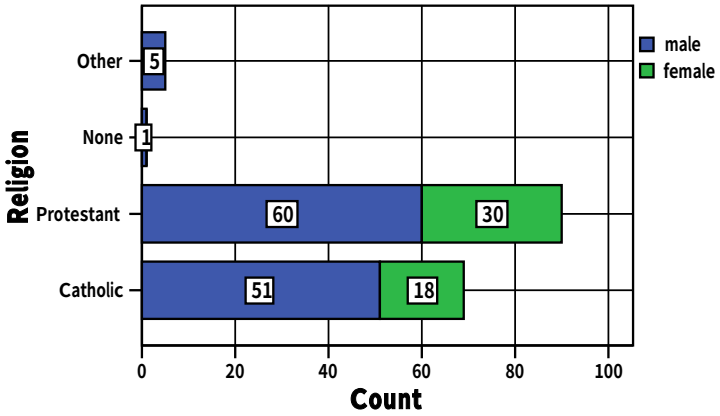
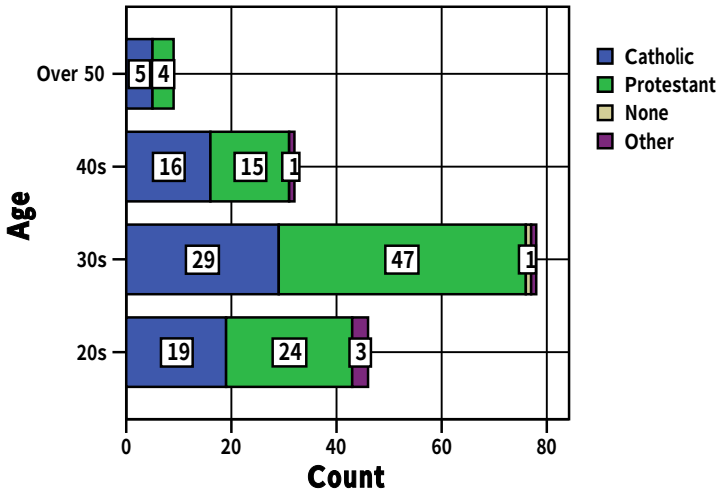


Figure 6-23: Age and Religion (Denomination) of the Respondents



Each attribute in Sex and Religion (Figure 6-22) is not statistically different. The chi-square test for

association accepted the null hypothesis with the result of Fisher's chi-square test[56] as χ^2= 3.005; p=0.372; n=162. In other words, the females and the males are not statistically different concerning their religion. The chi-square test of association for Age and Religion (Figure 6-23) also accepted the null hypothesis that each age group is not different in their religion with the result of Fisher's chi-square test as χ^2=7.414; p=0.657[57]; n=162. When further analysis is made concerning age, bias from the influence religion distribution would not be expected.

6.2.2. How different are the male and the female respondents?

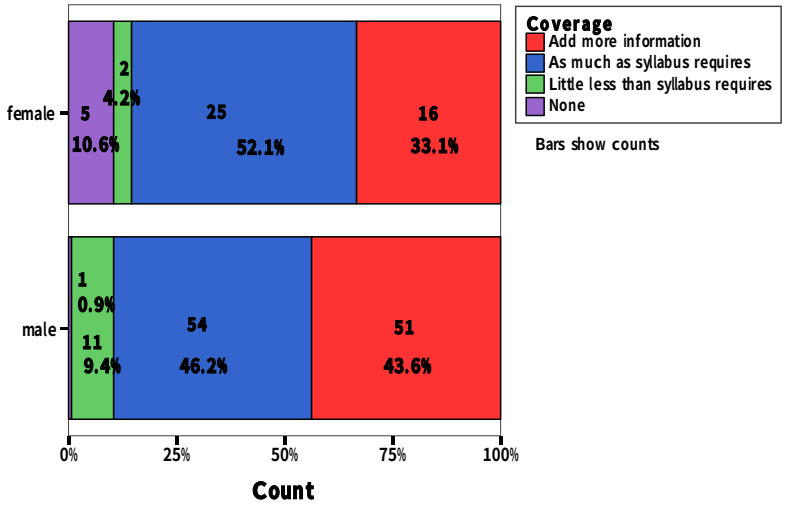
With the data in the former section, analyses were made in order to explore differences between the male and the female respondents. The statistical significance of difference between the males and the females is found in such categories as follows;

- Coverage of Health Education in Class
- The Perception towards Children's Vulnerability to STI and HIV
- The Perception towards Adults' Vulnerability to STI and HIV
- The Perception whether Knowledge of Condoms should be Passed to Children

No significance of difference was found in other categories and the details of the exploration and its implication is discussed below.

Coverage and Sex: Male Teachers are More Flexible in Class

Figure 6-24: Sex and Coverage of Health Education in Class



As Figure 6-24 illustrates, the females tend to adhere to the syllabi whereas the males tend to make

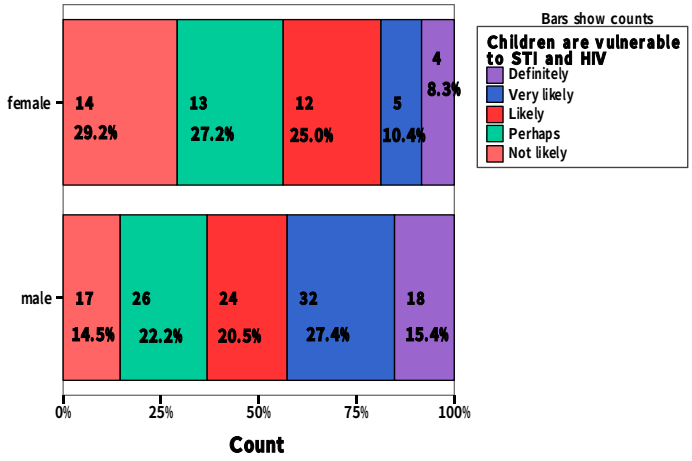
56 4cells(50%)inthetesthasexpectedcountlessthan5,andFisher'sexacttestwasutilizedfortheanalysis.

57 10cells(62.5%)inthetesthasexpectedcountlessthan5

adjustment according to their own decision. The share of the teachers who answered' no coverage of health education in their class' is more distinct amongst the females than the males, which could suggest the neglect of health education by some teachers in practice or in recognition. The difference between the males and the females in the coverage of health education is supported by the statistical analysis with the result; χ^2= 9.4632; p=0.018; n=166 (Fisher's Exact test). [58] The strength of the association was examined by Phi coefficient with the result as; φ= 0.257; p=0.018; φ^2=0.0659 representing medium size of effect.

Children's Vulnerability to STI and HIV and Sex: The males Have a Stronger Sense of Crisis

Figure 6-25: Sex and Children's Vulnerability to STI and HIV



As Figure 6-25 illustrates, the difference between the females and the males is distinctive in a perception of crisis towards STI and HIV amongst children. The rate of the respondents that answered 'not likely' is 14.5% for the males whereas 29.2% for the females. The rate of 'definitely' and 'very likely' is 42.8% for the males and 18.7% for the females. The males seem to feel the sense of crisis more strongly than the females do. The perception of children's vulnerability to STI and HIV is statistically different between the males and the females with the result; χ^2= 10.157; df=4; p=0.038 n=165. The degree of association was examined by Phi with the result; φ=0.248; φ^2=0.0616 representing medium size of effect.

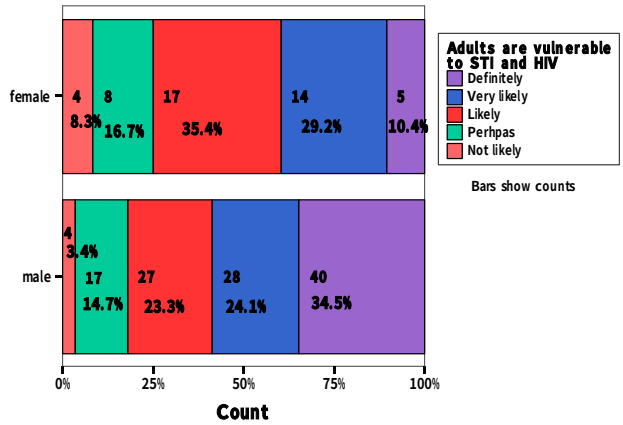
Adults' Vulnerability to STI and HIV: Males have Stronger Sense of Crisis

As Figure 6-26 illustrates, the difference between the females and the males is distinctive in the perception of crisis towards STI and HIV amongst adults. 3.4% of the male respondents answered 'not likely' whereas 8.3% for the females. Furthermore 34.5% of the males answered 'definitely' and 10.4% for the females. Compared to the perception towards children's vulnerability, the female respondents seem to have stronger sense of crisis towards adults than children, but the degree is still

[58] As 3 cells (37.5%) have expected count less than 5, exact test is appropriate to examine the significance of difference.

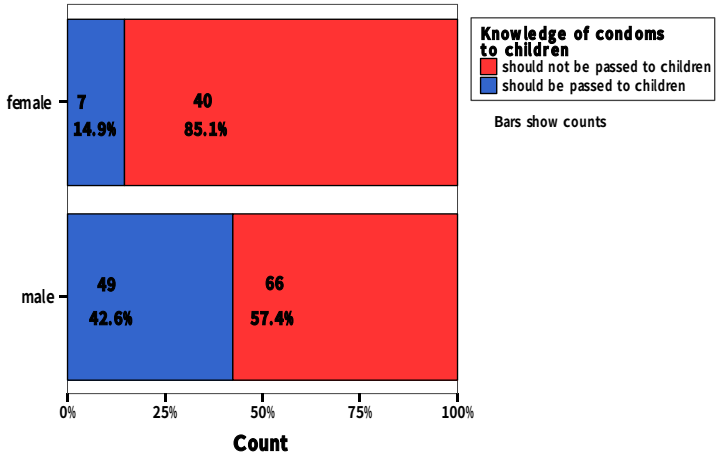
smaller than the males. It might be concluded that the males tend to feel the perception of crisis towards both adults and children more strongly than the females do. The perception of Adult's vulnerability to STI and HIV is statistically different between the males and the females with the result; χ^2= 11.118; df=4; p=0.025 n=164. The degree of association was examined by Phi with the result; φ=0.260; φ^2=0.0678, representing medium size of effect.

Figure 6-26: Sex and Adults' Vulnerability to STI and HI



Condom Knowledge to Children and Sex: More Males feel Necessity than Females

Figure 6-27: Sex and Knowledge of Condoms to Children



For the analysis of the perception on the knowledge of condoms, the responds to the questionnaire were categorised into two groups: 'Knowledge should NOT be Passed to Children'; and 'Knowledge should be Passed to Children', so that the contrast could be pictured more clearly. The rate for each category is 65.8% for 'not to be passed' and 34.2% for 'to be passed'. With this data, the perception of the condom knowledge and sex was examined through chi-square for association.

As Figure 6-27 displays, the difference between the males and the females is very much apparent on the perception whether the knowledge of condoms should be passed to children or not. 42.8% of the male respondents consider that knowledge of condoms should be passed to children while the percent of the female respondents is as small as 14.9%. The majority of the female respondents think the knowledge of condoms should not be passed to children though nearly half of the counterparts think it should be. The significance of the difference was supported at the 0.01 level with the result; χ^2= 11.330; df=1; p=0.001<0.01. n=164. The degree of association was examined by Phi with the result; φ=0.265; φ^2=0.0699 representing medium size of effect.

The males and the females are Not Different in the Other Attributes, including the Perception of the Effectiveness of Condoms

Figure 6-28: The Effectiveness of Condoms and Sex

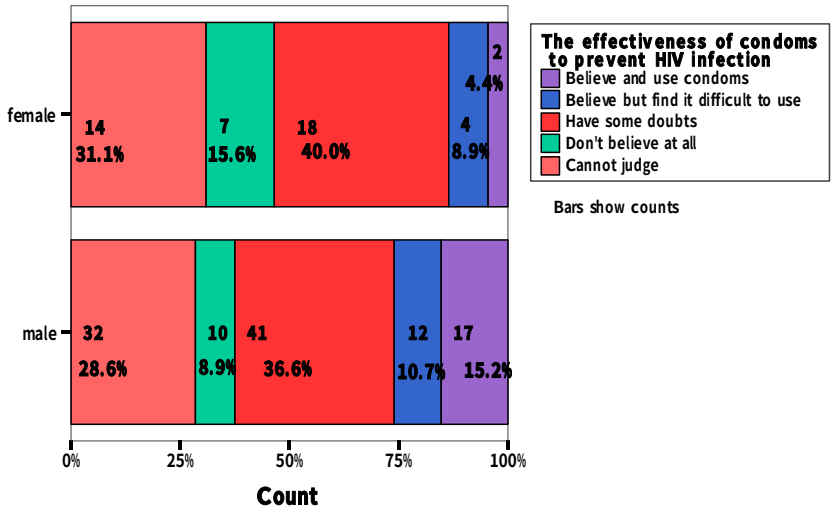


Figure 6-28 demonstrates that the only visible difference between the males and the females lies in the percentages for the respondents who answered 'I don't believe the effectiveness at all'; 15.6% for the females and 8.9% for the males, and 'I believe the effectiveness and use condoms in practice'; 4.4% for the females and 15.2% for the males. The percentage of the females who answered 'believe and use' could be considered as high considering the situation where the females are put in the community. The qualitative survey has found that the conversation on sexual issues is extremely difficult between husband and wife and the suggestion of condom use from a wife could cause violence from her husband. The males seem to make a decision on the use of condoms, but the females need their husbands' consent for their use. However, the difference between the males and the females in the issue is not significant statistically, failing to reject the null hypothesis that the males and the females are different in the perception on the effectiveness of the condoms with the result; χ^2= 4.632; df=4; p=0.327. n=157.

6.2.3. How different are age group in their responses?

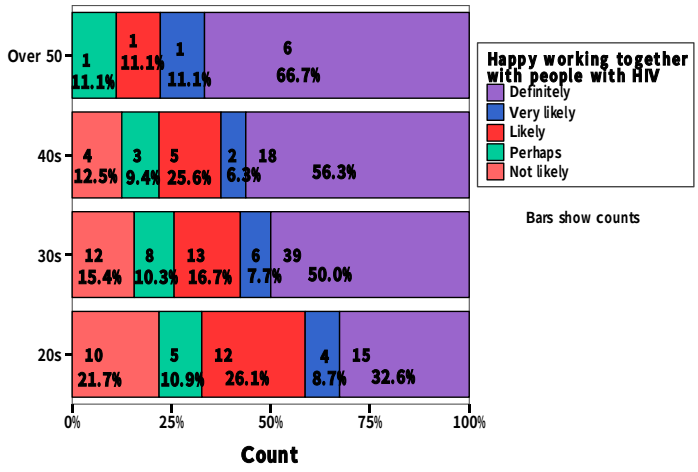
The statistical significance of difference amongst age groups was identified in such categories as follows:

- Happy Working Together with a Person with HIV/AIDS
- The Perception towards Children's Vulnerability to STI and HIV
- The Perception towards Adults' Vulnerability to STI and HIV

Though the result is not conclusive, another category, the Coverage of Health Education in Class, could be considered to have suggestive difference amongst the age groups.

Happy Working Together with People with HIV and Age: Older have More Confident in Association

Figure 6-29: Age and Happy Working with a Person with HIV



What is recognised from Figure 31 would be that the older the respondents are, the more confident they become in associating with people with HIV/AIDS. It could be considered that older people tend to more understandable the situation in the society. Examining the correlation between the degree of the perception towards a person with HIV in 'happy working together' and age, a nonparametric test, the Spearman rank of correlation (r_s), was conducted with the result; r_s= 0.1926; p= 0.0131; n=165; r^2=0.0371 representing a medium size of effect. It is conclusive that the older the people are, the more confident they are in associating with people with HIV/AIDS.

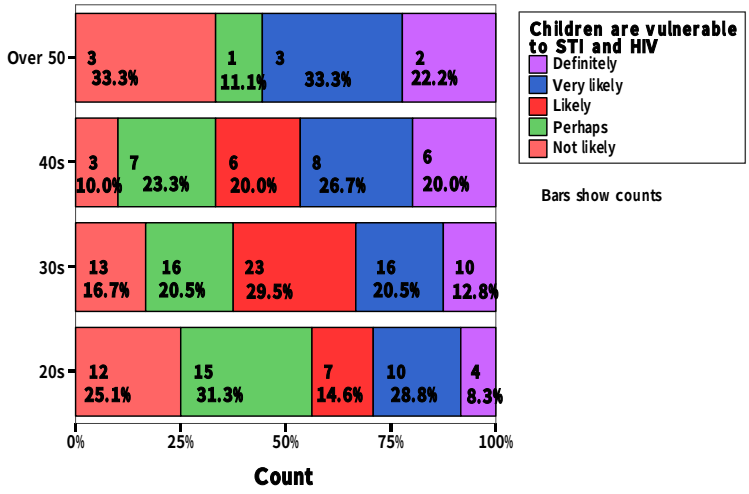
The Perception on Vulnerability to STI and HIV: the Older Tend to have a Stronger Sense of Crisis

Children's Vulnerability to STI and HIV

As Figure 6-30 illustrates, the difference in the perception on children's vulnerability to STI and HIV is distinctive amongst the teachers in different ages, especially more distinctive amongst the

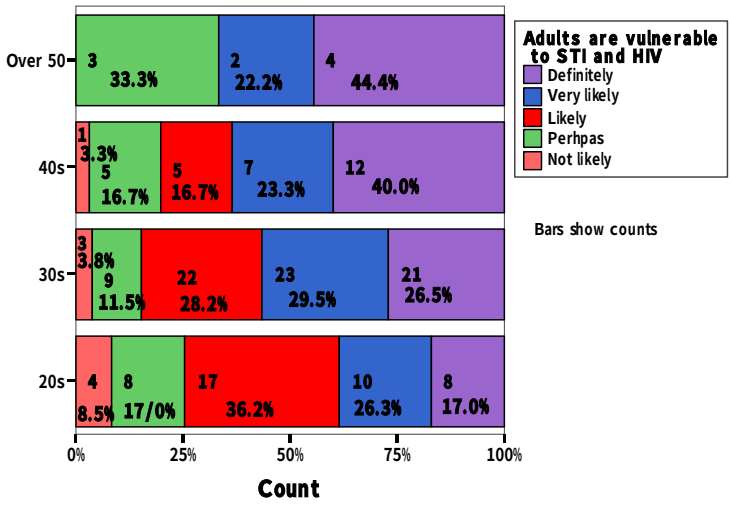
age range from 20s to 40s[59]. The older teachers tend to feel a stronger sense of crisis to children's vulnerability towards the infection. The rate of the respondents who answered 'not likely' is 25.1% for 20s, 16.7% for 30s, 10.0% for 40s and 33.3% for over 50, while the rate that answered 'definitely' is 8.3% for 20s, 12.8% for 30s, 20.0% for 40s and 22.2% for over 50. The correlation between the degree of the perception towards children's vulnerability to STI and HIV and age is supported by the Spearman rank of correlation (r_s) with the result; r_s=0.167; p=0.032; n=165; r^2=0.0279 representing a medium size of effect.

Figure 6-30: Age and Children's Vulnerability to STI and HIV



Adults' Vulnerability to STI and HIV

Figure 6-31: Age and Adults' Vulnerability to STI and HIV



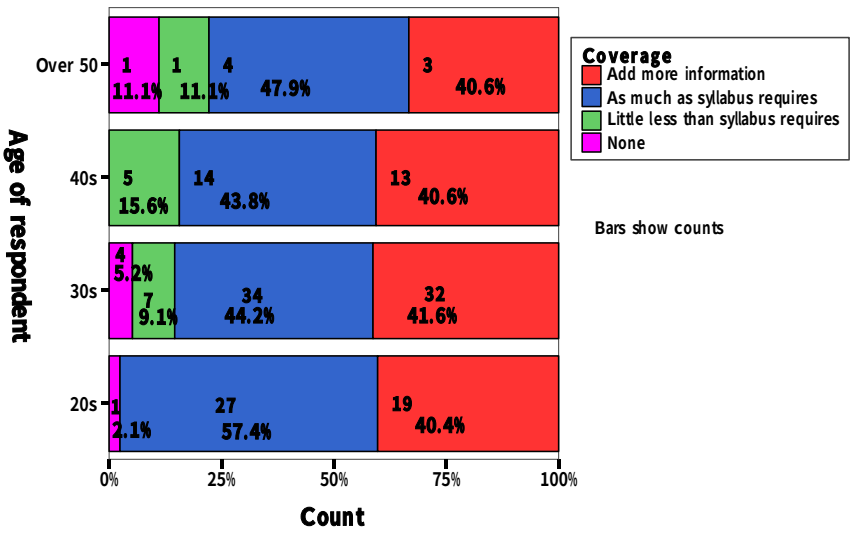
[59] The respondents who are over 50could be excluded from the consideration because of its small number in some categories, and therefore, it is hard to analyse the tendency of the age group.

As Figure 6-31 illustrates, the difference in the perception on adults' vulnerability towards STI and HIV is also distinctive amongst the teachers in different ages. The older teachers tend to feel a stronger sense of crisis to children's vulnerability towards the infection. The rate of the respondents that answered 'not likely' is 8.5% for 20s, 3.8% for 30s, 3.3% for 40s and 0% for over 50, while the rate that answered 'definitely' is 17.0% for 20s, 26.5% for 30s, 40.0% for 40s and 44.4% for over 50. The correlation between the degree of the perception towards adults' vulnerability to STI and HIV and age is supported with the result; r_s=0.187; p=0.0163<0.05; n=164; r^2=0.0351 representing a medium size of effect.

In comparing the result of the perception on adults' vulnerability with the perception on children's vulnerability, it could be concluded that each generation has a stronger sense of crisis in STI and HIV towards adults than to children, and that older generation has a stronger sense of crisis towards both adults and children.

Age and the Coverage of Health Education and: The Older, The More Flexible, but now always in Good Effects

Figure 6-32: Age and the Coverage of Health Education



Though the percentage of the respondents who add the information is almost the same in each age group, but the difference seems to lie in the share of the respondents who answered 'less than syllabus' and 'none'. What is recognised from Figure 6-32 would be that the more teachers get experienced, the more adjustment they might make. This is considered to be very natural for human's behaviours, but at the same time, as Figure 6-32 could suggest, it does not always have good effects. If older teachers consider the topic is important, he or she might spare more time for further explanation, but if he or she doesn't, he or she might omit the topic to some extent. The result examining the correlation between coverage of health education and age failed to reject the null hypothesis that there is no correlation between two attributes with r_s=0.0716;

p=0.360>0.05.Therefore, it cannot be concluded that age and the coverage is statistically correlated.

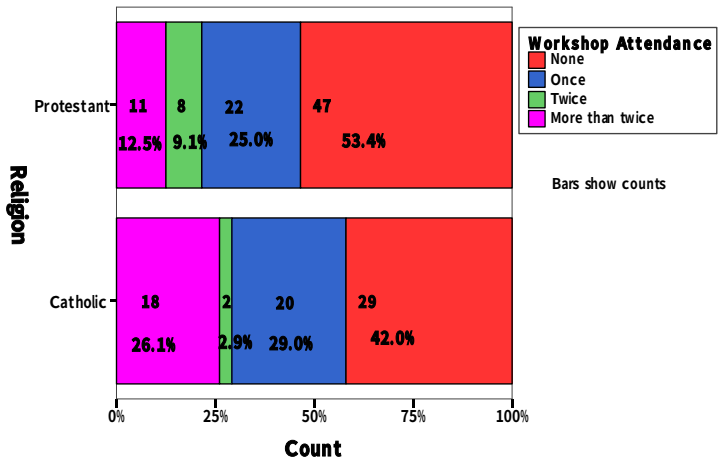
6.2.4. How different are the Catholic and the Protestant respondents?

In this section, analyses were made in order to explore differences between the Catholic and the Protestant respondents. The statistical significance of difference between the Catholics and the Protestant respondents is found in only two elements below and no association was found in other categories including the perception of condom issues.

- The Number of Workshop Attendance on Health
- The Perception towards Adults' Vulnerability to STI and HIV

More Workshop Attendance amongst Catholic than Protestant

Figure 6-33: Workshop Attendance and Religion (Denomination)



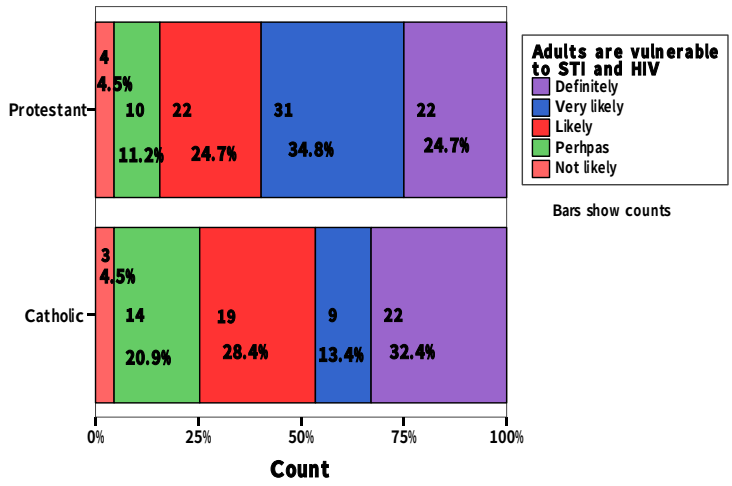
As Figure 6-33 illustrates, the difference between the Catholic and the Protestant seems to be distinctive in the number of the respondents who had never attended any workshop on health; 53.4% for the Protestant and 42.0 for the Catholic. The Catholic teachers tend to attend more workshops on health than their counterparts, especially the difference is more distinct in the number of those who had attended more than twice; the percentage of the Catholic teachers is double, though the difference in the number of the respondents who attended twice is not along with the same tendency.

This would be partly because the Catholic Church is very active in holding HIV/AIDS awareness seminars in Nuu Division. Therefore, Catholic teachers might have more opportunities to attend workshops on health, compared to their counterparts. However, the significance of difference failed to reject the null hypothesis by a chi-square test conducted to examine whether workshop attendance is statistically different between the Protestant and the Catholic with the result; χ^2=

7.458; df=3; p=0.059; n=156. However, judging from the p-value which exceeds 0.05 by only a little, the association could be considered as suggestive even though it is not conclusive.

Different Pattern of a Sense of Crisis towards Adults' Vulnerability to STI and HIV

Figure 6-34: Religion and Adults' Vulnerability to STI and HIV



The Protestant and the Catholic respondents are different in the perception of adults' vulnerability to STI and HIV. However, from what Figure 6-34 illustrates, it would be very difficult to determine which have a stronger sense of crisis towards adults in STI and HIV between the Catholic and the Protestant respondents. What the data and the figure could tell is a very ordinal conclusion that the pattern of the perception between the two is different. The Catholic have more confident that adults are vulnerable to STI and HIV, judging from the rate of the respondents who answered 'definitely'; 32.4% for the Catholic and 24.7% for the Protestant. However, the overall strength of the sense of crisis is bigger amongst the Protestant than the Catholic. The significance of difference was supported by a chi-square test for association with the result as χ^2= 10.230; df=4; p=0.037; n=154 (Fisher's Exact Test[60]). The degree of association was examined by Phi with the result; φ=0.256; n=154; φ^2=0.0656 representing medium size of effect. Further exploration would be necessary though the difference was supported between the two in the aspect of the perception of adult' vulnerability to STI and HIV.

The Catholic and the Protestant are Not Different over the Issue of Condoms

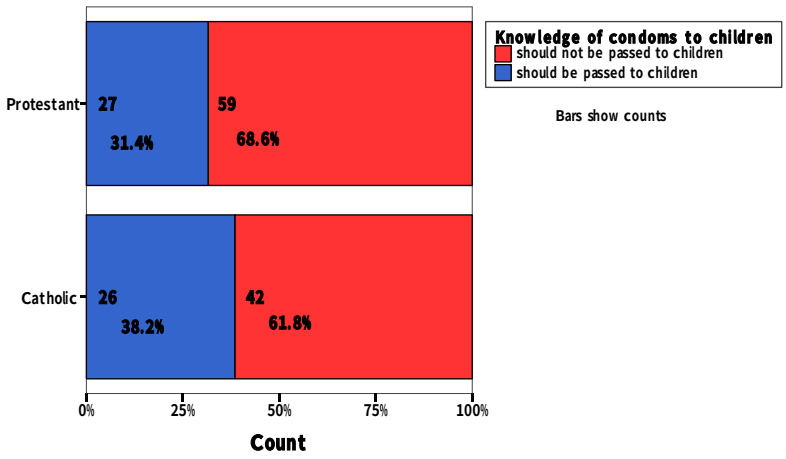
The Knowledge of condoms to Children

As Figure 6-35 illustrates, the perception whether the knowledge of condoms 'should be passed to children or not' is not much different between the Catholic and the Protestant. 31.4% of the

[60] As 2 cells (20.0%) have expected count less than 5, exact test is appropriate to examine the significance of difference.

Protestant respondents think it should be passed to children while 38.2% of the Catholic respondents agree with the idea. Though it is commonly said that Catholic are more antipathetic towards condoms, the stereotype idea on Catholic is not be applied to the teachers on the perception that the knowledge of condoms 'should be passed to children or not'.

Figure 6-35: The Knowledge of Condoms to Children and Religion



The Effectiveness of Condoms in HIV Prevention

Figure 6-36: The Effectiveness of Condoms to Prevent HIV and Religion

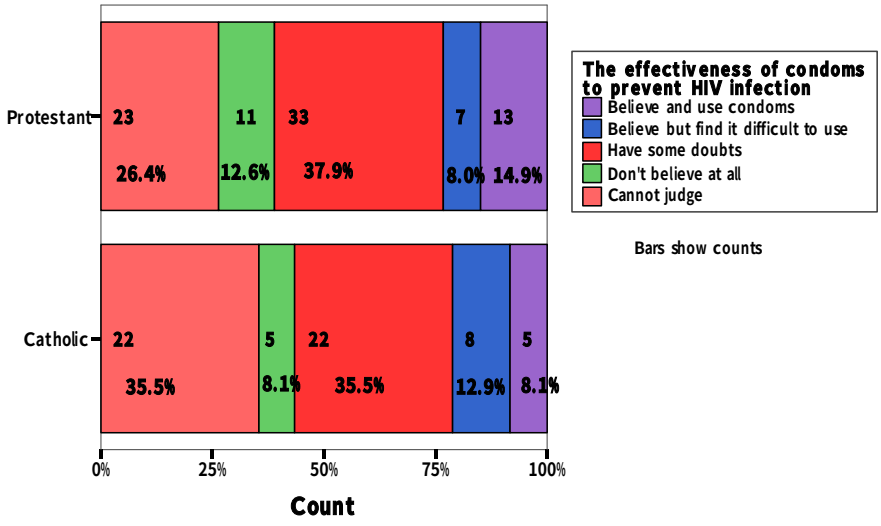


Figure 6-36 presents that 8.1% of the Catholic respondents answered 'I don't believe the effectiveness of condoms at all', whereas 12.6% of the Protestant respondents did so. The percentage of the respondents who 'believe the effectiveness and use condoms in practice' is 14.9% for the Protestant and 8.1% for the Catholic. More Protestant respondents answered that they use condoms than Catholic. However, the total percentage of the respondents who 'believe' the

effectiveness of condoms in preventing HIV infection is 22.9% for the Protestant and 21.0% for the Catholic, and the difference between the two becomes smaller due to the increased of those who answered 'believe but find it difficult to use condoms.' As far as compared with the Catholic respondents in the survey, the perception on condoms of the Protestant respondents might not be different on their perception of the effectiveness, but whether they can take action to use condoms in practice seems to be a little different. The analysis has also found another difference that more Catholic (35.5%) responds answered 'they can not judge as they don't have accurate knowledge on condoms'. This might suggest more possibility in the existence of lack of knowledge on condoms or confusion of information on condoms amongst the Catholic teachers

Influence of the Catholic Church

The issue of condoms is very controversial in Christianity in Kenya. Especially the Catholic Church has an uncompromised view of rejection towards condoms even as a preventive measure for HIV infection. The qualitative survey has found that they have been even spreading propaganda that condoms are not effective in preventing HIV infection[61]. Therefore, the influence from the Catholic Church had been expected enormous over the perception of the Catholic respondents on the condom related issues in this questionnaire survey as well. However, the survey did not find any statistical difference in the perception on condoms between the Catholic and the Protestant respondents, even though there are some minor differences, but both of the tests failed to reject the null hypothesis that the Catholic and the Protestant are not different concerning the condom related issues in the survey (χ^2= 0.787; df=1; p=0.375>0.05; n=154 for the knowledge on condoms and χ^2= 4.013; df=4; p=0.404>0.05; n=149 for the effectiveness of condoms). It could be concluded that the influence of Catholic Church over the Catholic respondents is not serious enough to differentiate the Catholic respondents from the Protestant respondents on the perception of condoms.

6.3. Analysis: What Attributes have Association or Correlation within or over the Factors?

In this section, analyses are made on attributes over the Factors in order to explore association or correlation between the attributes, so that it would be of help to understand what attributes have influence over the perception, the activities, or the behaviour of the respondents on health issues. The statistical significance of association or correlation is found in such elements as follows;

- The Coverage of Health Education in Class and the Knowledge on HIV and AIDS
- The Coverage of Health Education in Class and the Perception to People with HIV/AIDS (Immorality)

[61] The reporter encountered a book sold in Textbook Centre in Nairobi, which is supposed to be the biggest bookshop in East Africa. The content of the book is all about how ineffective the condoms are in preventing HIV infection. The information on the book is as follows; Shorter, Aylward, and Onyancha, Edwin (1998) *The Church and AIDS in Africa: A Case Study: Nairobi City.* Paulines Publication Africa. Nairobi. The book was among a few books on HIV/AIDS sold in the bookshop.

- The Perception of Vulnerability to STI and HIV towards Children and Adults
- The Perception towards Adults' Vulnerability to STI and HIV and the Perception to People with HIV/AIDS (Happy Working Together)
- The Perception towards Adults' Vulnerability to STI and HIV and whether the Knowledge of Condoms should be Passed to Children
- The Perception whether the Knowledge of Condoms should be Passed to Children and the Perception of the effectiveness of Condoms to prevent HIV
- The Number of Correct Answers and the Perception on Children's and Adults' Vulnerability to STI and HIV

More Information in Class Tends to Mean Higher Mark on Knowledge of HIV and AIDS

Figure 6-37: Knowledge on HIV and the Coverage of Health Education in Class

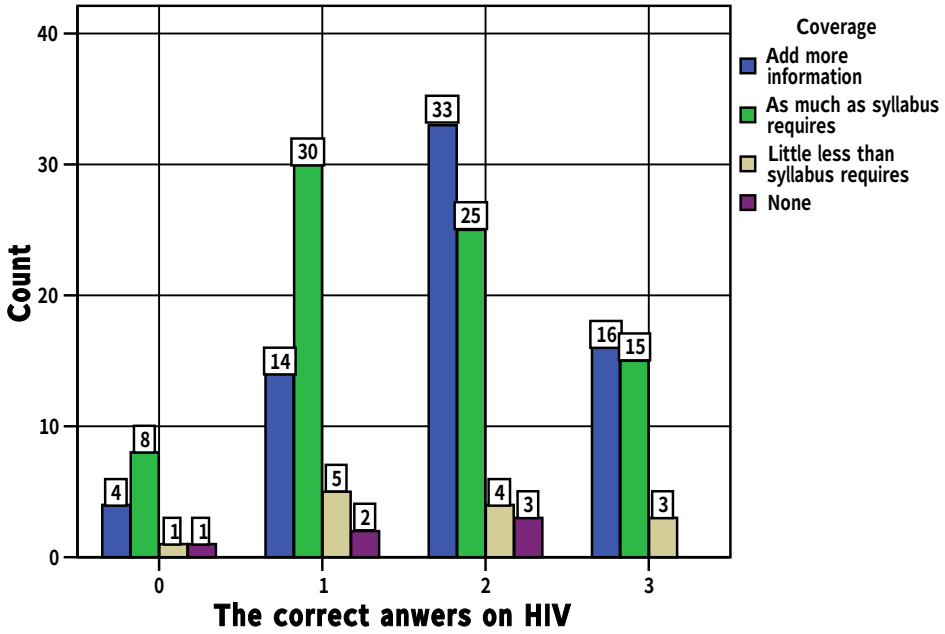


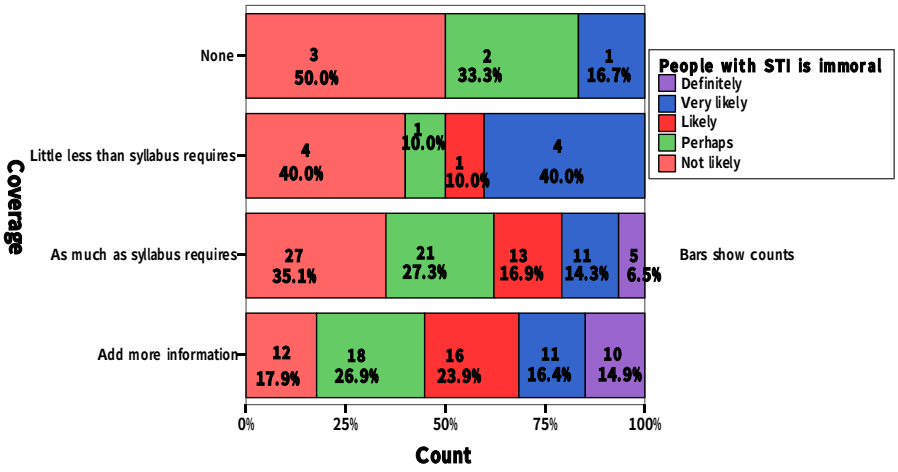
Figure 6-37 illustrates that the more accurate knowledge the teachers have, the more information they tend to add in their classrooms. No respondents had correct answers for the entire questions on HIV and AIDS amongst those who answered 'no health education in classes. This would illustrate the confidence of teachers and their behaviour in classrooms. If they have and are confident in their knowledge, they will pass the knowledge to the students. The correlation between the Knowledge on HIV and AIDS and the Coverage of Health Education is supported with the result as follows; r_s=0.175; p=0.025<0.05; n=164; r^2=0.0305 representing a medium size of effect.

Less Information and Less Discrimination to People with HIV/ADIS?

A close look at Figure 6-38 shows that the more information the respondents add in class, the stronger they tend to feel that people with STI or HIV are immoral. The correlation was supported with the result as follows; r_s=0.205; p=0.009; n=160; r^2=0.0420 representing a medium size of effect. What the tendency explains is not clear. However, as the coverage has association with the

age groups, former analyses found that older respondents tend to reduce the coverage of health in class, and that older have less discrimination towards people with HIV/AIDS. The result of this analysis is highly likely to reflect those results found in the former analyses. However, further exploration would be necessary for this interpretation.

Figure 6-38: Coverage of Health Education and the Perception towards People with HIV



The Same Level of Concern Towards Adults and Children in the Community

Figure 6-39 : Vulnerability to STI and HIV (Children and Adults)

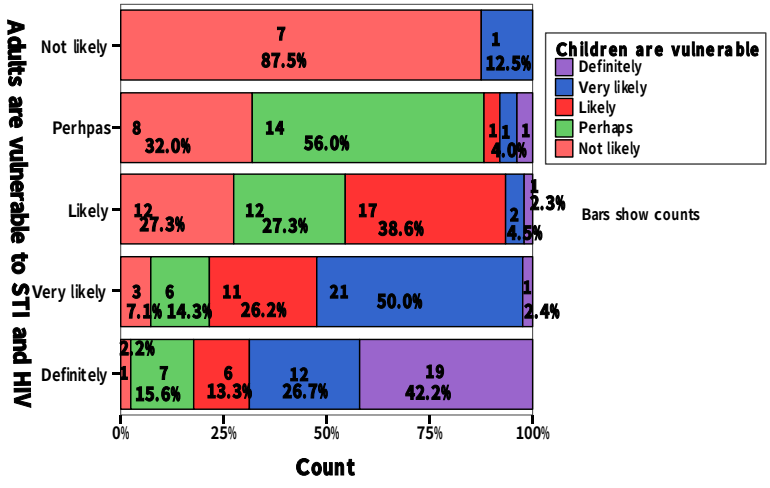


Figure 6-39 demonstrates that the respondents who more strongly feel children's vulnerability to STI and HIV tend to share the same feeling towards adults as well. The correlation was supported at the 0.01 level with the result; r_s=0.618; p=0.000<0.001; n=164; r^2=0.382 representing a large size of effect. However, it also indicates that the sense of crisis towards adults is stronger than towards children amongst the respondents. Most of the people who select 'definitely' for the question about

children's vulnerability express the same degree of concern towards adults as well, but not a few people who select 'definitely' for adults decrease the level of concern towards children's vulnerability to STI and HIV.

More Concern on Adults' Vulnerability to STI and HIV and Happier Working Together with People with HIV/AIDS

Figure 6-40: Adults' Vulnerability to STI and Happy Working Together with People with HIV

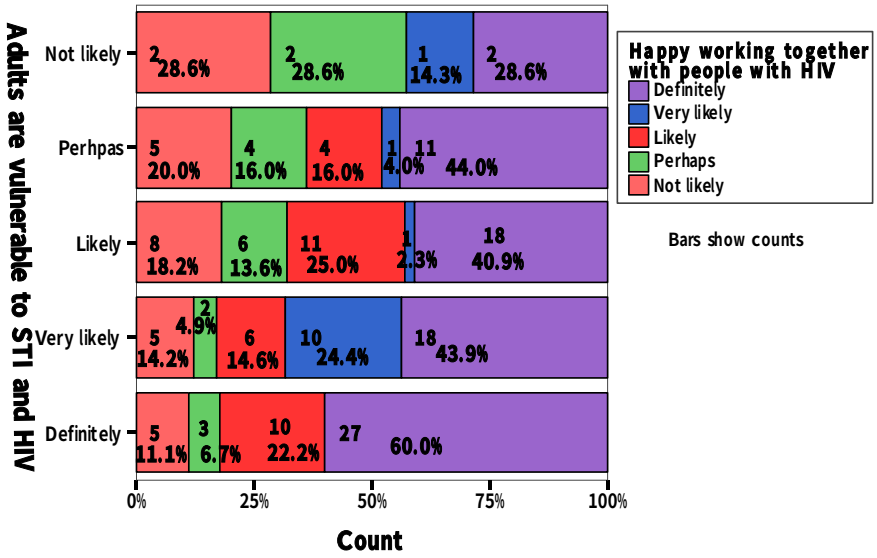


Figure 6-40 shows that the more confident the respondents are in happy working together with people with HIV/AIDS, the more concerned they tend to be with the adults' vulnerability towards STI and HIV. The correlation was supported with the result; r_s=0.180; p=0.022<0.05; n=162; r^2=0.325 representing a medium size of effect. Those who answered 'definitely' might consider that anyone could fall into the same situation as those people with HIV/AIDS.

More Supports to the knowledge on Condoms Passed to Children amongst those with Concern on Children's and Adults' Vulnerability to STI and HIV

Figure 6-41 and 42 demonstrate that more respondents are supportive to the idea of passing the information on condoms to children when they have a stronger sense of crisis towards children's and adults' vulnerability to STI and HIV in the community. 54.5% of the people in adults' vulnerability who answered 'definitely' to the question think that the knowledge of condoms should be passed to children, whereas none of those who answered 'not likely' in adults' vulnerability think the knowledge should be passed to children. The association between the perception of adult's vulnerability to STI and HIV and the perception whether knowledge of condoms should be passed to children was supported at the 0.01 level with the result; χ^2= 14.572; df=4; p=0.0057<0.01 n=159. The degree of association was examined by Phi with the result; φ=0.295; n=159. φ^2=0.0917

representing medium size of effect.

Figure 6-41 Children's Vulnerability to STI and HIV and the Perception of the knowledge on Condoms to Children

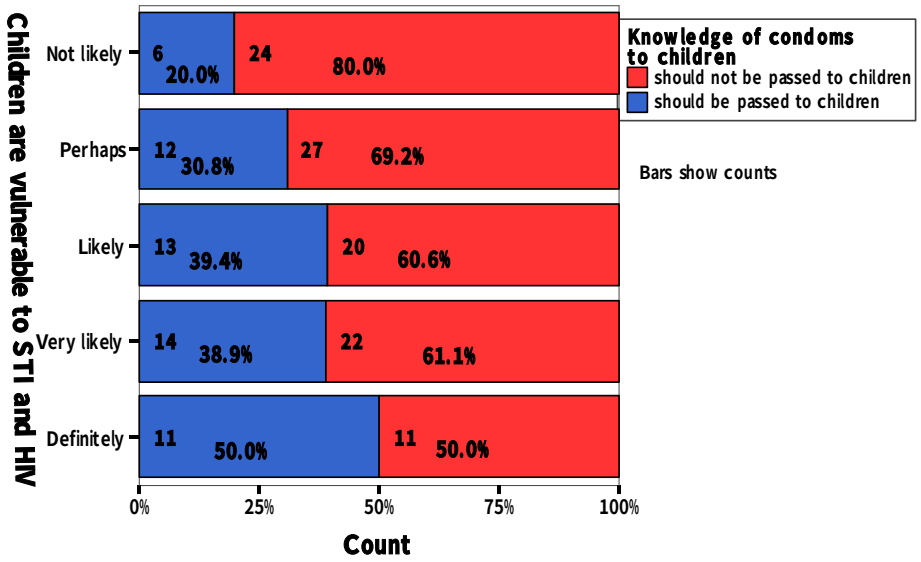
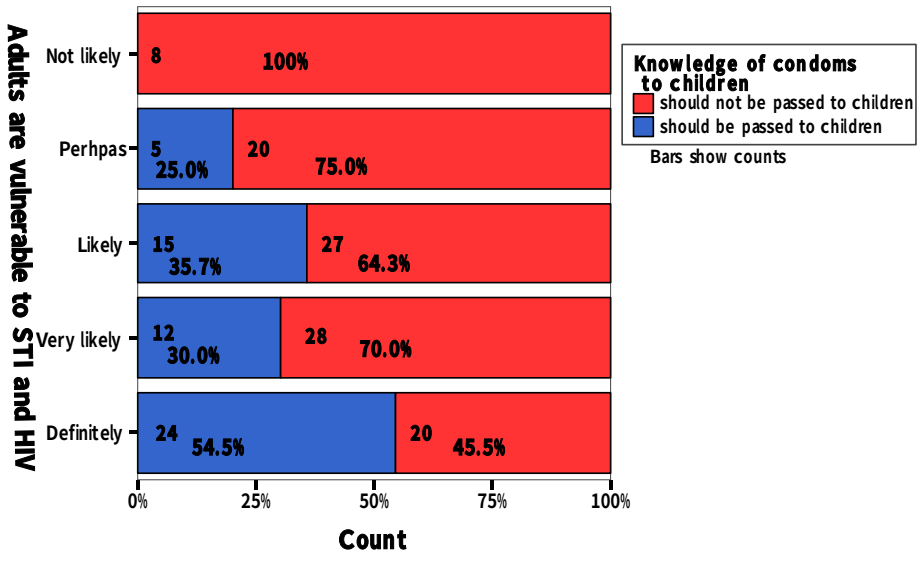


Figure 6-42: Adults' Vulnerability to STI and HIV and the Perception of the knowledge on Condoms to Children



Even though the result does not explain the direction of association, but the direction of association could be presumed by the natural reasoning. In this sense, the result would mean that the decision of passing the knowledge of condoms to children partly depends on the extent to which they have a

sense of crisis towards STI and HIV.

On the other hand the association between the perception on children's vulnerability to STI and HIV and the knowledge on condoms to children failed to reject the null hypothesis (χ^2= 18.3645; df=4; p=0.303 n=155). Judging from the results of the analysis, the sense of crisis towards adults leads to the decision to provide information on condoms to children, but the sense of crisis towards children does not seem to lead to the same decision.

Knowledge on Condoms should Not be Passed to Children, but I don't have Accurate Knowledge on Condoms

Figure 6-43: Knowledge on Condoms to Children and the Perception of Effectiveness of Condoms (a)

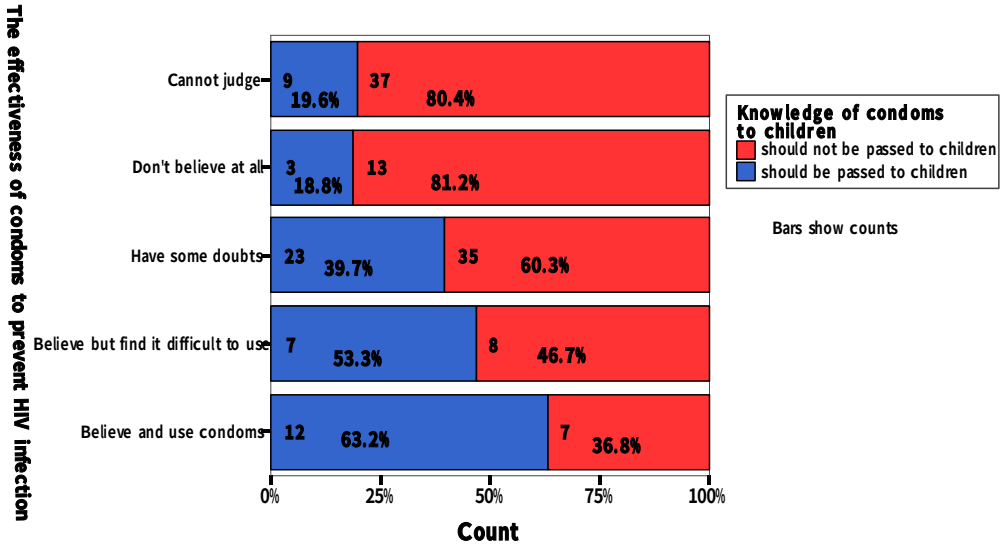
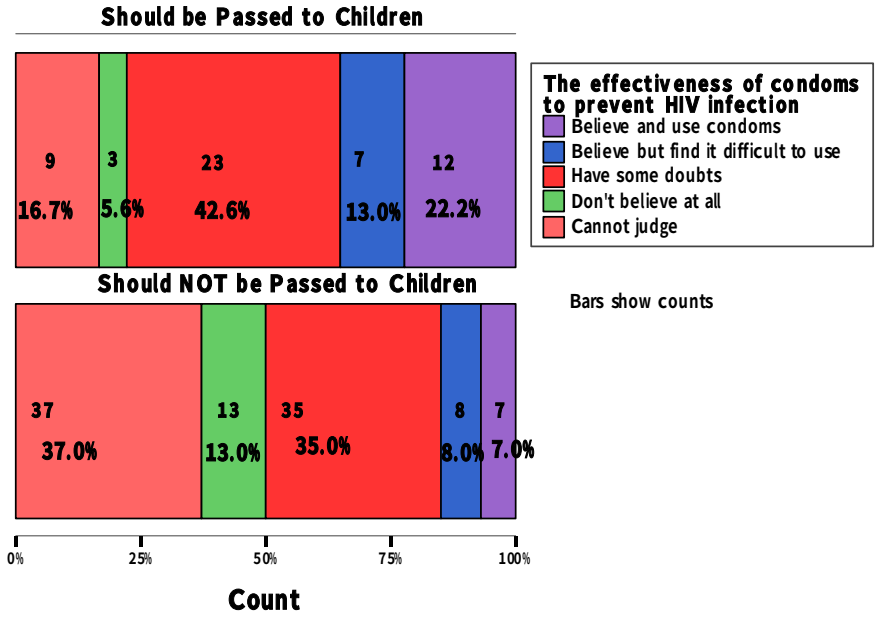


Figure 6-43 presents that the difference of the opinion on whether the knowledge of condoms should be passed to children or not has some association with the respondents' perception on the effectiveness of the condoms. 63.2% of the respondents who answered 'believe the effectiveness of the condoms in preventing HIV infection and use them in practice' support the idea that the knowledge to be passed to children. The percentage decreased with those who 'believe the effectiveness but find it difficult to use condoms' (53.3%) and with those who 'have some doubts on the effectiveness of condoms' (39.7%). However, even 18.8% of the respondents who 'don't believe the effectiveness of condoms at all' think the knowledge should be passed to children. This rate is almost as much as that of those who 'cannot judge the effectiveness because I don't have accurate knowledge of condoms'.

The result demonstrates that more teachers think the knowledge should be passed to children when they believe the effectiveness of condoms in preventing infection, and that the majority are against the idea of the knowledge to pass to children when they are not confident enough to judge the

effectiveness because of the lack of accurate knowledge.

Figure 6-44: Knowledge on Condoms to Children and the Perception of Effectiveness of Condoms (b)



Furthermore, as Figure 6-44 illustrates, the biggest supporters to the idea that knowledge on condoms should not be passed to children are those who answered 'I can not judge the effectiveness', who comprise 37% of the population of those who are against the idea that knowledge should be passed to children. The second biggest group is those who answered 'I have some doubts on the effectiveness of the condoms to prevent the infections,' who account for 35.0% of the population.

In other words, more than 70% of the people support the idea not to pass the information on condoms to children because they don't have accurate information on condoms or they have some doubts on condoms, rather because they don't believe the effectiveness of the condoms. The association between these two attributes was supported at the 0.01 level with the result; χ^2= 14.732; df=4; p=0.0053<0.01; n=154. The degree of association was examined by Phi with the result; φ=0.309; φ^2=0.0957 representing medium size of effect.

The result does support the hypothesis that the teachers make a decision on whether the knowledge of the condoms should be passed to children or not in association with their perception of the effectiveness of condoms to prevent infections.

The More Precise Knowledge on HIV and AIDS, the More Concern on Children's and Adults' Vulnerability to STI and HIV

Figure 6-45: Children's Vulnerability and Knowledge on HIV and AIDS

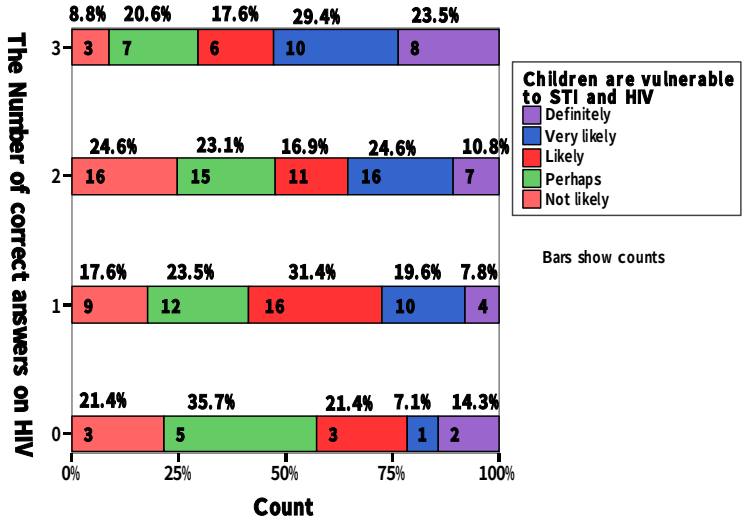


Figure 6-46: Adults' Vulnerability and Knowledge on HIV and AIDS

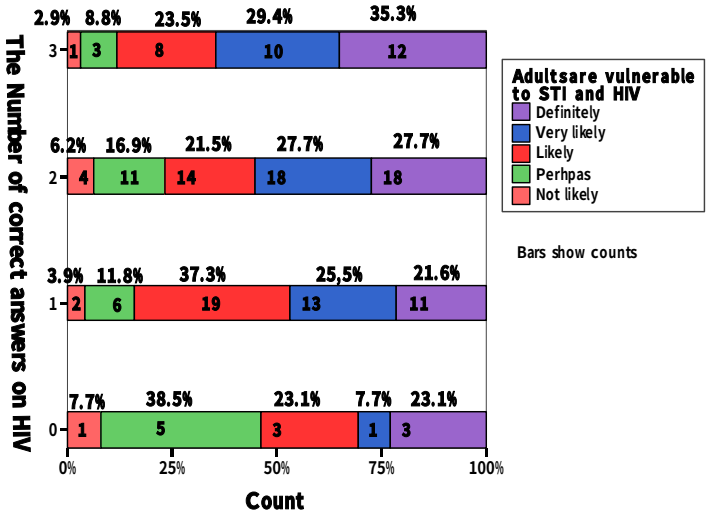


Figure 6-45 illustrates the correlation between adults' vulnerability to STI and HIV with the accuracy of knowledge on HIV and AIDS. In the figure, the respondents who acquire higher marks seem to have stronger concern on Children's possibility of infection with HIV and STDs. 52.9% of the respondents with full marks answered 'definitely' and 'very likely' for the question on children's vulnerability (23.5% for 'definitely being the highest share amongst the groups), 35.4% for those with two marks, 27.4% for those with one mark, and 21.4% for those with zero mark. The test for the correlation rejected the null hypothesis that there is no correlation between the knowledge of HIV and AIDS with the perception on children's vulnerability to STI and HIV, with the result; r_s=0.159; p=0.042<0.05; n=164; r^2=0.0252 representing medium size of effect.

Figure 6-46 illustrates the correlation between adults' vulnerability to STI and HIV with the knowledge on HIV and AIDS. In the figure, the respondents who acquire higher marks seem to have stronger concern on adults' possibility of infection with HIV and STDs. 64.7% of the respondents with full marks answered 'definitely' and 'very likely' for the question on adults' vulnerability (35.3% for 'definitely being the highest share amongst the groups), 55.4% for those with two marks, 47.1% for those with one mark, and 30.8% for those with zero mark. The test for the correlation rejected the null hypothesis that there is no correlation between the knowledge of HIV and AIDS with the perception on adults' vulnerability to STI and HIV, with the result; r_s=0.161; p=0.041<0.05; n=161; r^2=0.0258 representing medium size of effect.

The results of these two analyses could conclude that the teachers tend to have a stronger sense of crisis towards STI and HIV infection among adults when they have more accurate knowledge to differentiate HIV from AIDS, and therefore the accurate knowledge on HIV and AIDS is considered to be indispensable for the proper recognition of the vulnerability to STI and HIV infection amongst both children and adults.

No Association or Correlation in the Other Elements: Workshop Attendance has Little Influence over Knowledge of HIV/AIDS and the Related Perception

Analyses were made on other factors as well, but no other association or correlation was detected through the analyses. Especially, the number of workshop attendance has any association with the degree of knowledge on HIV/AIDS. From the result, it could be remarked that the respondents mentioned workshops and seminars are the source of information concerning HIV/AIDS, but the impact of workshops and seminars by various stakeholders is considered to be very small. The teachers seem to have information and knowledge on HIV/AIDS with their own sources of information. The level of knowledge might be said to rely on the level of efforts each individual makes.

6.4. Multi-way Frequency Analysis

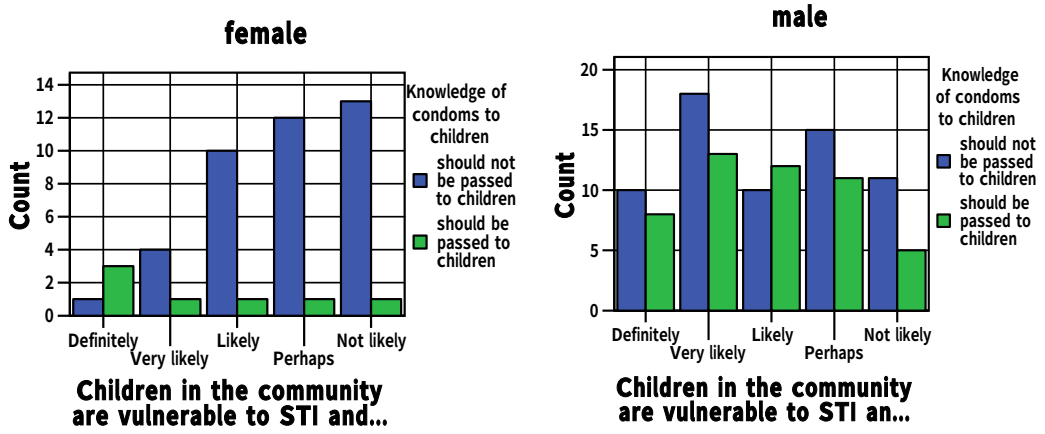
Does Background Factor Have Influence over the Analyses between Other Categories?
In this section, loglinear analyses, in which analysis is made by three or more attributes, was made in order to explore further association amongst the attributes with which Background factor has been concluded to have significance of difference amongst categories in the former analysis. Though the analyses found possible association amongst several elements, the significance of association was not detected though loglinear analyses because of its small number of the female teachers and so forth. The results are discussed in this section so as to explore some suggestive aspiration in understanding the local situation.

The attributes, which suggest the possible association through loglinear analyses, are as follows;

- The perception of children's vulnerability to STI/HIV and the knowledge of condoms to children amongst the females
- Adults' vulnerability to STI and HIV and the knowledge of condoms to children amongst the Catholic
- The perception on the effectiveness of condoms to prevent HIV infection and the knowledge of condoms to children amongst the Protestant
- Female concerns on the children's Vulnerability and the knowledge on condoms to be Passed to Children

The Perception of Children's Vulnerability to STI/HIV and the Knowledge of Condoms to Children amongst the Females

Figure 6-47: The perception of children's vulnerability to STI/HIV and the knowledge of condoms to children by the females and the males



(a) (b)

Figure 6-47 (a) shows that the number of the female respondents is increasing along with the degree of a sense of crisis to children concerning their vulnerability to STI/HIV, while the male case does not show any sign of the tendency. Furthermore, the number of the female respondents who support the idea that the knowledge of condoms should be passed to children exceeds the one of the counterparts only amongst those female who have the strongest sense of crisis.

The results through a loglinear analysis (for the males, Likelihood Ratio (L.R.) χ^2= 2.141; df=4; p=0.721; n=113, and for the females, L.R χ^2= 9.10; df=4; p=0.059; n=47) cannot be applied for a hypothesis testing because the data for the loglinear analysis does not meet the requirements in this analysis.[62] However, the data from the female respondents could suggest some possible accounts

[62] According to Kinnear, loglinear analysis needs to meet the requirements; all expected frequencies are greater than 1; and no more than 20% are less than 5. The expected frequency in this analysis did not meet the requirements. [Kennear 2004] This is considered to be a part of limitation of the micro-level surveys.

for their decision on whether the knowledge of condoms to be passed to children. However, what Figure 6-47(a) suggests could be of use in understanding the female perception on the knowledge of condoms to be passed to children and on children's vulnerability to STI and HIV AIDS.

The Catholic Opinion on the Condom Knowledge to Children According to their Perception on Adults' Vulnerability to STI and HIV

Figure 6-48: Adults' vulnerability to STI and HIV and knowledge of condoms to children by the Catholic and the Protestant respondents

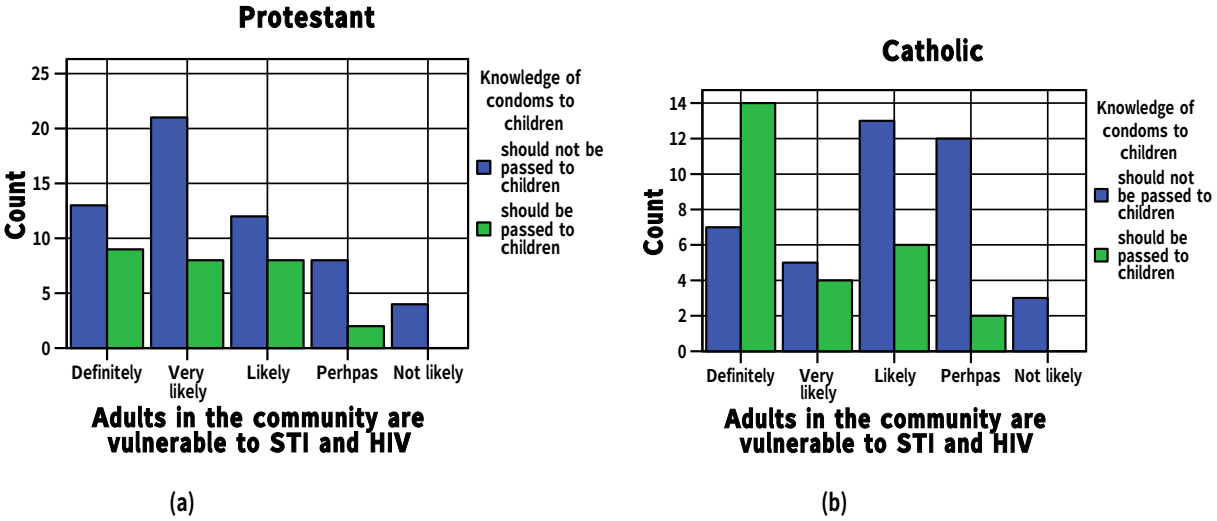
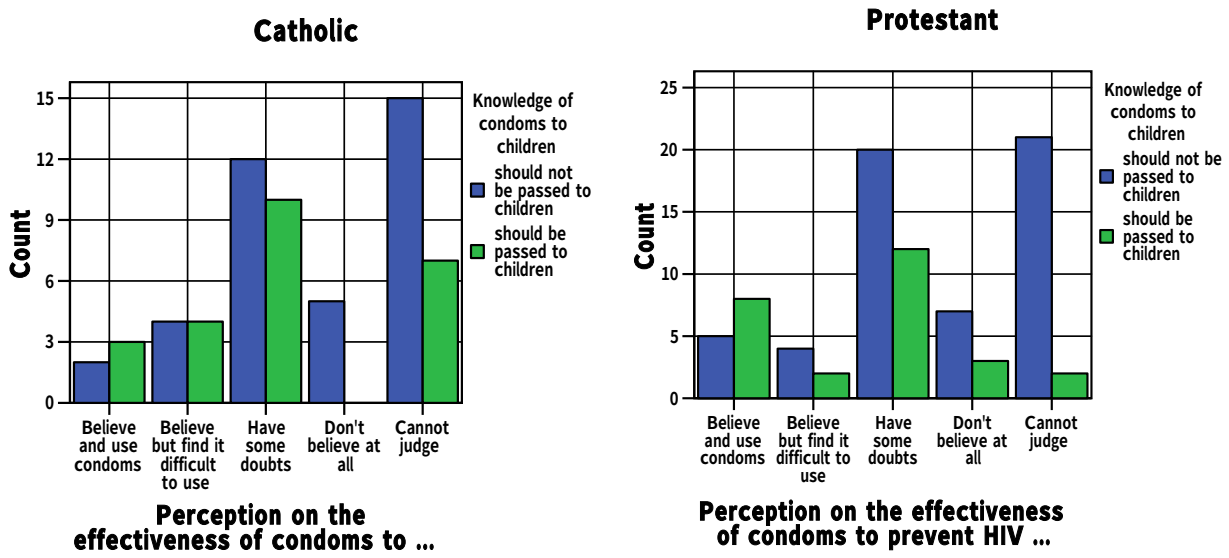


Figure 6-48 (b) shows some tendency that the Catholic respondents made their decision whether they support the idea on the knowledge of condoms to children according to their perception of adults' vulnerability to STI and HIV. 66.7% of the Catholic respondents who answered 'definitely' for the question on adults' vulnerability supported the idea that the knowledge of condoms should be passed to children, whereas 40.9% of the Protestant counterparts do. Neither the Catholic nor the Protestant respondents who answered 'not likely' support the idea on the knowledge to children. For the answer, 'perhaps', 14.3% of the Catholic respondents and 20.0% of the Protestant respondents supported the idea.

The results through loglinear analyses (for Catholic, L.R χ^2= 14.222; df=4; p=0.007; n=66, and for Protestant, L.R χ^2= 5.406; df=4; p=0.248; n=85) suggest the correlation between the two elements, but the results cannot be applied for the hypothesis testing because the data does not meet the requirements in this analysis due to the small number of the respondents as well. However, the data from the Catholic respondents could suggest some possible account for their decision on the knowledge of condoms to children.

The Protestant's Opinion According to their Perception on the Effectiveness of Condoms to Prevent HIV Infection

Figure 6-49: Perception on the effectiveness of condoms to prevent HIV infection and Knowledge of condoms to children by the Protestant and the Catholic



(a) (b)

Figure 6-49 (a) and (b) demonstrates certain possibility of the influence of the perception on the effectiveness of condoms in preventing infection over the Protestant respondents. However, the tendency is even less clear than the two cases above. What attracts some attention in the data from the Catholic respondents compared to that of the Protestant would be that no respondent who 'do not believe the effectiveness at all' are supportive to the idea that knowledge of condoms should be passed to children.

The results through loglinear analyses (for Catholic, L.R χ^2= 7.103; df=4; p=0.131; n=62, and for Protestant, L.R χ^2= 12.385; df=4; p=0.015; n=84), but the result does not support the hypothesis because of the failure to meet the requirements of this analysis as well. However, the data from the Protestant and the Catholic respondents might provide some insights over their decision concerning the knowledge of condoms.

6.5. Discussions

The analyses on the questionnaire responses gave various insights over the local situations of the teachers, and the perceptions of teachers, and the influence from the outside of the school concerning HIV/AIDS and other health related issues. This section discusses the implications of the results through summarising the results, with focusing on three aspects; the situation where the teachers are placed, the relationship between knowledge and perception, and the influence of the Catholic Church over the teachers on HIV/AIDS issues.

6.5.1. What is the situation of the teachers as intermediaries of knowledge on HIV/AIDS?

Insufficient Accurate Knowledge on HIV/AIDS

The results of the quantitative could conclude that the teachers do not have sufficient knowledge on HIV/AIDS as professionals to disseminate accurate information to their pupils, though the questions in the survey to explore this problem were not comprehensive but pinpointing only on the infection routes and the distinction between HIV and AIDS. Most of the teachers might have a certain level of knowledge on HIV infection routes, but it was not perfect or sufficient for most of them. The level of knowledge on the distinction between HIV and AIDS, which is crucial when taking proper preventive measures from HIV infection, is not sufficient at all for most of the teachers. Some even failed to show any accurate knowledge on this distinction between the two. Each teacher would need more opportunities to obtain knowledge on the issue, and the qualitative survey supports this through the identification that the teachers are eager to have more opportunities to accumulate their knowledge.

Limited Opportunities and Sources to Obtain Knowledge and Information on HIV/AIDS

However, the sources of the up-date information on HIV/AIDS are limited for the teachers. Nearly half of the teachers have never attended any seminars or workshops on Health. They say they obtain information on HIV/AIDS from radios, newspapers, church seminars, books and magazines, village meetings, and a VCT centre. However, the access to some of these information sources is not easy for the teachers due to the difficult situations. The qualitative survey has found that newspapers are not sold in local shops, and that books to which teachers have easy access are mainly textbooks and teachers manuals. So, in many cases, newspapers and books are not stable sources of up-date information for the teachers.

Some teachers referred to a VCT centre as a source of information, but gaining the access to the VCT centres is very difficult for the teachers in Nuu Division. There is only one VCT centre in Mwingi District, which is attached to Mwinigi District Hospital in Mwingi Town. Therefore, the VCT centre is costly and time-consuming to use as a normal source of information on HIV/AIDS. Radios are considered to be a stable information source, but not all the teachers have a radio at home. Each school has been allocated three radios so that teachers and pupils can have access to up-to-date information on HIV/AIDS through those radios, but the use of the radios is limited because of the budget constrain; the radios need a lot of butteries to run and there is no electricity in Nuu Division.

Seminars and workshops might be comparatively easy sources for the teachers to obtain information, but a little more than a half of the teachers have ever attended seminars or workshops on health. Furthermore, considering the results that the number of workshop attendance did not have any association with the knowledge on HIV/AIDS or the perception of the effectiveness of condoms in preventing HIV infection, these seminars, and workshops did not seem to be reliable

sources of accurate knowledge on HIV/AIDS for the teachers. Judged from these situations, the teachers could be said to be placed under various difficulties for access to accurate and up-to-date information on HIV/AIDS.

6.5.2. What are the determinants over perception of the teachers on HIV/AIDS related issues?

Knowledge on Condoms

The effectiveness of condoms in preventing STI and HIV infection is scientifically recognised when they are properly used. The knowledge on condoms as a preventive measure is also observed to be insufficient amongst the teachers through the responses of the survey. Many of the teachers answered that 'they have some doubts on the effectiveness of condoms in preventing HIV infection' or that 'they can not judge the effectiveness because they don't have accurate knowledge on condoms'.

Additionally, it is identified that many of those teachers with insufficient knowledge on condoms in their recognition consider that 'the knowledge on condoms should not be passed to children'. The rate of these teachers exceeds that of those teachers who 'do not believe the effectiveness of condoms at all' and think 'the knowledge should not be passed to children'. The analyses revealed that the knowledge of condoms has medium association with the decision whether the information concerning condoms should be passed to children or not. Many of the teachers, who are against 'the knowledge provision on condoms to children, do not 'disbelieve the effectiveness at all' but 'cannot judge the effectiveness as they don't have accurate knowledge on condoms'.

Knowledge on HIV/AIDS

In addition to the association between the knowledge on condoms and the provision of their knowledge to children, the survey results suggest medium correlation between the knowledge on HIV/AIDS and the adults' vulnerability to STI and HIV. The more accurate knowledge to distinguish HIV from AIDS the teachers have, the stronger sense of crisis towards adults' vulnerability to the infection they tend to have.

Perception on People's Vulnerability to Infection

Furthermore, the results suggest that perception on children's and adults' vulnerability to STI and HIV has medium association with the decision on whether the knowledge on condoms should be passed to children or not. The stronger sense of crisis towards people's vulnerability towards the infection tend to lead the decision that the knowledge on condoms should be passed to children despite of the school environment where condoms are treated as an untouchable topic for preventive measures of STI and HIV infection.

Less Influence of the Catholic Church over the HIV/AIDS Issues

The Catholic Church still has big power over the condom issues in Kenya. Therefore, it was

presumed before the analyses that the Catholic teachers might have different opinions over the issues of condoms from the Protestant teachers. However, the analyses have failed to present the difference of the Catholic teachers over the condom related issues. The associations the analyses have detected concerning the influence of the Catholic Church is that the Catholic teachers are different from the Protestant teachers in the number of workshop attendance on health and that they are different in the perception on Adults' vulnerability to STI and HIV. These have no relation with the condom issues. It would be concluded that the perception or decision concerning condoms issues is made partly by both of the recognition of the crisis in the local situations and the knowledge concerning HIV/AIDS rather than the influence from the church.

6.5.3. Inter-association of the determinants: Accurate knowledge is the key factor?

In considering about preventive measures for STI and HIV infection, it would be avoidable to think about dealing with the condoms issues at school in the situation where HIV/AIDS is a serious threat even to children in primary schools. However, many teachers seem to have strong obstacles to deal with the condom issues in classrooms both situationally and psychologically in Kenya. In such circumstances, a certain proportion of teachers think the knowledge on condoms should be passed to children even though majority of teachers are against the idea. What makes the different teachers decision on the condom issues? The analyses of the survey have identified the determinants of the teachers' decision on the condom issues and that lack of knowledge lies at the bottom of the problems on the condom issues.

Due to the hard environment, teachers are suffering from chronicle difficulties in obtaining information on HIV/AIDS as well as other issues in the educational settings. This difficult access to information would create lack of accurate knowledge on HIV/AIDS and condoms. The lack of accurate knowledge on condoms is directly associated with the decision whether the knowledge on condoms should be passed to the children or not. In the same way, the accurate knowledge to distinguish HIV from AIDS is associated with a sense of crisis towards people's vulnerability to STI and HIV infection. Furthermore, this sense of crisis towards people's vulnerability is associated with the teachers' decision on the condoms again. In addition to this vicious association, the analysis has failed to indicate that the Catholic Church has its influence over the teachers' decision on condoms.

In other word, the teacher's decision on condoms heavily relies on the accuracy of their knowledge on HIV/AIDS related issues both directly and indirectly. Arguably, it could be considered that the teachers' decision on the condom issues to children might be changed if they attain more accurate scientific information on HIV/AIDS related issues as well as build their confidence in their knowledge.

7. Conclusion

What is Necessary for AIDS Education in Nuu Division?

HIV/AIDS has been a serious and daily issue for local people in the community in Nuu Division. Local people have strong fear against HIV/AIDS through their experience of deaths caused by AIDS amongst their families, relatives, friends, and neighbours. In this situation, three main problems for the local people to tackle with the pandemic have been identified in Nuu Division, which include; (1) serious lack of accurate information followed by confusion of information on HIV/AIDS, (2) customs and practices which would help the spread of STI and HIV infection, and (3) lack of male engagement in AIDS related local activities despite male dominance in decision-making.

Against such backgrounds, the demand of local people is considered to be high for some actions to be taken in order to tackle with the pandemic. Provision of accurate information on HIV/AIDS would be the first priority through encouragement of male participation in HIV/AIDS activities. By doing so, opportunities should be given to local people to think about the meaning of their customs and practices, which would help spread HIV infection in the district, and to make appropriate decisions on their traditional behaviours amongst themselves.

Furthermore, AIDS education at school is one of the effective tools in prevention of STI and HIV infection amongst local people and children. The Kenyan government also puts much emphasis on AIDS education both at primary and secondary school, promoting mainstreaming AIDS education into academic subjects since new curricula were introduced. Provision of opportunities for teachers to attain skills and methodologies to teach HIV/AIDS issues in their classrooms would be of great help to promote AIDS education at grassroots.

However, the survey has also identified problems in AIDS education at school; (1) limitations of AIDS education at school, especially on the issues of preventive measures, and (2) lack of accurate knowledge on HIV/AIDS amongst primary school teachers. Much focus in AIDS education is put on morality, and abstinence is introduced as the main preventive measure of HIV infection to children. However, considering the situations where the local people are placed concerning HIV/AIDS, the knowledge of condoms even to children as well as adults is crucial to prevent the spread of HIV infection in the community.

In order to solve the problem, parental cooperation would be indispensable through sharing responsibilities with teachers in teaching children HIV/AIDS related issues. Another priority should be given in provision of opportunities where teachers and parents can have discussions and some consensus on what is necessary to protect children from STI and HIV infection. Through those discussions, parents and other community members could possibly have opportunities to think

about their own behavioural changes in preventing STI and HIV infection amongst adults as well.

Additionally, the analyses of the survey have identified that the teachers' knowledge on HIV/AIDS related issues could help overcome the current limitations of AIDS education at school. However, the accurate knowledge on HIV/AIDS of teachers in general in the division is not sufficient as an intermediary of disseminating knowledge to children. Many teachers find difficulties in obtaining accurate information and knowledge on HIV/AIDS as well as other health issues.

Therefore, in addition to the opportunities to obtain skills and methodologies in AIDS education in class, teachers should not be excluded from the opportunities to have access to accurate information on HIV/AIDS. Rather, it is important to ensure that every teacher could have such opportunities to obtain accurate information on HIV/AIDS so that teachers can have confidence in teaching HIV/AIDS issues to children.

8. Suggestions

Based on the conclusion of the study, following activities could be suggested:

- School –based workshops for teachers and parents in order to provide basic and accurate information on HIV/AIDS
- Centre-based workshops for teachers in order to provide opportunities to make teaching plans for health issues, which include HIV/AIDS, in class

School-based W*orkshops*

Providing basic and accurate information on HIV/AIDS would be preferable in workshops at the school-base on the points; (1) to ensure those parents who wish the information can have easy access to the information, (2) to ensure all the teachers as well as the parent participants can have direct access to the information so that they can seek for answers directly when they have questions on HIV/AIDS related issues, (3) to create opportunities to have practical discussions between teachers and parents of the school to protect children from STI and HIV infection, putting much focus on the pupils of the school, and (4) to create opportunities to have certain consensus on AIDS education in the school.

Centre-based Workshops

It would be crucial to train teachers to be capable and confident in implementing AIDS education so that AIDS education could reach children effectively. Centre-based workshops would help (1) exchange ideas and opinions on AIDS education amongst teachers from different schools in the workshops, (2) establish informal network of teachers outside of the workshops, and (3) have discussions to establish a system to encourage AIDS education in the division.

Bibliography

Allemano, Eric 2003 'HIV/AIDS: A Threat to Educaitonal Quality in Sub-Saharan Africa, Anaytical framework and implications for policy development' *ADEA Biennial Meeting*, Grand Baie, Mauritius: Association for the Development of Education in Africa.

Aloo-Obunga, Colette 2003 'Country Analysis of Family Planning and HIV/AIDS: Kenya'.

Argyrous, George 2002 *Statistics for Social & Health Research with a Guide to SPSS*, London: Sage Publication.

Bank, World 2003 *Education and HIV/AIDS: A Sourcebook of HIV/AIDS Prevention Programs*, Washington D.C.: World Bank.

Bankole, Akinrinola, Singh, Susheela, et al. 2004 'Risk and Protection: Youth and HIV/AIDS in Sub-Saharan Africa', New York: The Alan Guttmacher Institute.

Bavendreier, Joe 2000 *AIDS Education for the Youth*, Nairobi: Focus Books.

Bennell, Paul 2003 'The Impact of the AIDS Epidemic on Schooling in Sub-Saharan Africa' *ADEA Biennial Meeting*, Grand Baie, Mauritius: Assoication for the Development of Education in Africa.

Boler, Tania and Aggleton, Peter 2004 'Life Skills-Based Education for HIV Prevention: A Critical Analysis' *Policy ad Research Issue 3*, London: ActionAid,
Save the Children.

Bryman, Alan and Cramer, Duncan 1999 *Qaulitative Data Analysis: A Guide for Social Scientists*, London: Routledge.

Buckely, Stephen 1997 'AIDS in Kenya: Wife Inheritance Spurs AIDS Rise in Kenya', accessed at http://www.wasingtonpost.com/wpsrv/inatl/longterm/africanlives/kenya/kenya_aids.html, on 22nd September 2004.

Central Bureau of Statistics 2004 *Kenya Demographic and Health Survey 2003*, Nairobi: Central Bureau of Statistics, Kenya.

Esterberg, Kristin 2002 *Qualitative Methods in Social Research*, Boston: McGraw Hill.

Family Health International 2004 'Policy Profile, HIV Prevention and Women's Rights: Working for One Means Working for BOth', accessed at http://www.fhi.org/en/hivaids/pub/archive/articles/aidscaptions/volume2no3.html, on 2004 22nd Sept.

Frank, Marion 1995 *AIDS - Education Through Theatre*, Bayreuth: Bayreuth University.

Global Campaign for Education 2004 'Learning to Survive: How education for all would save millions of young people from HIV/AIDS'.

Gordon, Gill 1999 *Choices: A Guide for Young People*, London: Macmillan.

Hayase, Yasuko and Liaw, Kao-Lee 1997 'Factors on Polygamy in Sub-Saharan Africa: Findings Based on the Demographic and Health Surveys', *The Developing Economies* vol.38: pp.293-327.

He, Jinglin 2000 'HIV/AIDS Prevention Education: Teacher's Guide': UNICEF.

JOICFP 2000 *A Guide for Operationalising Male Participation and Other Gender Issus in Community-Based Sexual and Reporductive Health Programs*, Tokyo: JOICFP.

Kenya Institute of Education 1999 *AIDS Education Facilitators' Handbook*, Nairobi: Kenya Institute of Education.

----- 1999 *Bloom or Doom: Your Choice*, Nairobi: Kenya Institute of Education.
----- 1999 *Let Us Talk About AIDS: A Book for Class 1, 2, and 3*, Nairobi: Kenya Institute of Education.
----- 1999 *Let Us Talk About AIDS: A Book for Class 4 and 5*, Nairobi: Kenya Institute of Education.
----- 1999 *Let Us Talk About AIDS: A Book for Class 6, 7 and 8*, Nairobi: Kenya Intitute of Education.
Kinnear, Paul and Gray, Colin D. 2004 *SPSS Made Simple*, East Sussex: Psychology Press.
Lemma, Wuleta 2003 'Kenya: Country Coordinating Mechanism: A Case Study': The Global Fund to Fight AIDS, Tuberculosis and Malaria.
Malambo, Rosah Moonga 2000 'Teach Them While They Are Young, They Will Live to Remember.The Views of teachers and pupils on the teaching of HIV/AIDS in Basic Education: A Case Study of Zambia's Lusaka and Southern Provinces', *Current Issues in Comparative Education* vol.3(no.1).
Mangurular, L., C.V.Whitman, et al. 2001 *Life Skills Approach to Child and Adolescent Healthy Human Development*, Washington D.C.: Pan American Health Organisation.
Ministry of Health 2001 *AIDS in Kenya: Background, projections, impact, interventions, policy. 6th edition.*, Nairobi: Ministry of Health, Kenya.
----- 2001 *National Condom Policy and Strategy*, Nairobi: Ministry of Health, Kenya.
----- 2001 *Policy Guidelines for Blood Transfusion in Kenya*, Nairobi: Ministry of Health, Kenya.
----- 2004 *Framework for Monitoring and Evaluating the Kenya Global Fund Programme*, Nairobi: Department of Standards and Regulatory Services, Kenya.
Ministry of Home Affairs 2003 *National Programme Guidelines on Orphans and Other Children Made Vulnerable by HIV/AIDS*, Nairobi: Ministry of Home Affairs, Kenya.
Mulonzya, Mutua 2003 *The Churches Confronted with the Problem of HIV/AIDS: Analysis of the Situation in Six Countries of Eastern Africa - Ethiopia, Keya, Rwanda, Tanzania, Uganda, Zambia*, Geneva: World Council of Churches: Health and Healing Programme.
National AIDS Control Council 2000 *The Kenya national HIV/AIDS strategic plan 2000-2005 -Popular version*, Nairobi: Office of the President, Kenya.
----- 2002 *Mainstreaming Gender Into the KEnya National HIV/AIDS Strategic Plan*, Nairobi: Office of the President, Keya.
Nishimura, Yumiko 2003 *Socio-epidemiological Study on HIV-Related Behaviour among Young People in Mauritius*, Tokyo: JICA.
Njambi, Wirimu Ngaruiya and O'Brien, William E. 2001 'Revising 'Woman-Woman Marriage': Notes on Gikuyu Women', accessed at http://iupjournals.org/nwsa/nws12-1.html., on 22nd Sept 2004.
Norusis, Maija J. 1988 *The SPSS Guide to Data Analysis*, Chicago: SPSS Inc.
Shorter, Aylward and Onyancha, Edwin 1988 *The Church and AIDS in Africa: A Case Study Nairobi City*, Nairobi: Paulines Publication Africa.

Steel, Philip W., Lewis, Milton, et al. (eds) 1999 *Histories of Sexually Transmitted Diseases and HIV/AIDS in Sub-Saharan Africa*, Westport: Greenwood Press.

Thairu, Kihumbu 2003 *The African and The AIDS Holocaust: A Historical and Medical Perspective*, Nairobi: Phoenix Publication.

UNAIDS 1999 *UNAIDS Best Practices: School AIDS Educattion Category, The Kenya Youth Initiatives Project*.

UNAIDS and Bank, World 2002 *Education and HIV/AIDS: Modeling the Impact of HIV/AIDS on Education System*.

UNESCO 2003 *HIV/AIDS and Education: A Strategic Approach*, Paris: IIEP Publication, UNESCO.

UNICEF 2001 *HIV/AIDS Prevention Education: Teachers' Guide*.

----- 2003 *Finghting HIV/AIDS: Strategies for Success*, New York: UNICEF.

----- 2003 *Life Skills Education with a Focus on HIV/AIDS: Eastern and Souther African Region*, New York: UNICEF.

----- 2004 'Epidemicological Fact Sheets on HIV/AIDS and Sexually Transmitted Infections: Kenya', accessed at http://www.childinfo.org/eddb/hiv_aids/factsheets/pdfs/Kenya_en.pdf, on 4th October 2004.

----- 2004 *Official Summary: The State of the World's Chidren 2003*, New York: UNICEF.

UNICEF, UNAIDS, et al. 2002 *Young People and HIV/AIDS: Opportunity in Crisis*.

WHO 2001 *Sexually Transmitted Infections: Briefing Kit for Teachers*, Manila: WHO, Regional Office for the Western Pacific.

----- 2002 *Skills for Health: Skills-based health education including life skills: An important component of a Child-Friendly/Health Promoting School*.

World Bank 2001 *Education and HIV/AIDS: A Window of Hope*, Washington D.C.: The World Bank.

Appendices

Appendix 1. Focus Group Interviews for Teachers Questioning Route

Opening Question

1. Please tell us about health problems in this area or school.
   May be you could begin by telling us what are the biggest health problems for each of you.

Introductory Questions

2. How do you deal with those health problems in this school?
3. Could you explain about health education in this school?
   Do you have school curriculum on health education in any means?

Transition Questions

4. In your opinion, what would you really say is of particular importance to you in health education?

Key Questions

5. What do you think of AIDS education in primary schools?
   Who should be involved in AIDS education planning?

6. Could you tell us anything you know about HIV/AIDS? (knowledge, situation in the community)
   How did you get that information?

7. What would you think is the biggest challenge for teachers to deal with AIDS issues?
   Do you think the community members feel confident or comfortable in talking about AIDS?

Ending Questions

8. Is there any other issues relating AIDS in your school?
9. Could you say that a workshop on AIDS could help you to deal with AIDS in your class?
10. Feel free to tell us if there is anything you think we left out that we should talked about?

Other questions

Access to materials on HIV/AIDS education
Expected support from the community when conducting AIDS education
Teachers' knowledge on AIDS and other health related issues
Early marriages in the area.
School-drop out in relation to early marriage

Appendix 2. In-depth Interviews for Parents Questioning Route

General questions on health in the community

1. Could you tell us about health problems in this area?

2. What are the challenges people have in the area when they are sick?

3. How do people treat their diseases?
   Hospital,
   Wanganga,
   Traditional medicine

HIV/AIDS related questions

4. What are the recurring sicknesses?

5. What do people fell towards people who die of untreatable diseases?

6. Could you tell us anything you know about untreatable diseases (AIDS)?
   Infection, Cure, Prevention, Risky behaviour

7. Do the community members feel comfortable when talking about AIDS?
   What are the obstacles, if any?

FGM related issues

8. What is the average age of girls to get married in the community?
   Why?
   Forced or willingly

9. How are the girls ready for marriage?

10. Is there any traditional ritual to be taken for a girl to get married? If any, what and why

11. What do you think is the danger of early marriages/FGM.

Appendix 3. Interview Sheet

Date May, 2004

Sex: Male Female Age:

No_Children: Religion

Education level:

Memo

Appendix 4. Questionnaire for a Feasibility Study of School Health Project in Nuu

Please fill in this form and put it in a bag. There is no need to give your name.

1. Are you

( ) a man or ( ) a woman?

2. How old are you?

( ) In the twenties ( ) In the thirties ( ) In the forties ( ) Over fifty

3. What is your religion?

( ) Catholic ( ) Protestant ( ) Muslim ( ) None ( ) Others [ ]

4. In Guidance and Counselling, which topics have you dealt with in your class or school?

(Choose as many answers as you like.)

( ) Girls' education ( ) Morality ( ) Environment activities and conservation
( ) Career guidance ( ) HIV/AIDS ( ) Children's rights and act
( ) Drugs and smoking ( ) None ( ) Others [ ]

5. How much information on health issues do you cover in your class?

( ) As much as a syllabus requires ( ) Add more information than a syllabus requires
( ) a little less than a syllabus requires ( ) None

6. What health activities do you practice in your class or your school?

7. On what topics do you want to get information in a workshop with CanDo?

(Choose as many answers as you like.)

( ) Nutrition ( ) Ordinary diseases and their preventive measures
( ) Sanitation and hygiene ( ) HIV/AIDS and its preventive measures
( ) First aid ( ) Others [ ]

8. Have you ever attended seminars or workshops dealing with health issues?

( ) None ( ) Once ( ) Twice ( ) More than twice

9. In your opinion, which practices should be retained as tradition in the community?

(Choose as many answers as you like.)

( ) Early marriages ( ) Kaweto ( ) Female circumcision
( ) Male circumcision ( ) Polygamy ( ) Traditional medicine
( ) Wife inheritance ( ) Wanganga ( ) Others [ ]

10. In general, how can HIV be transmitted? (Choose as many answers as you like.)

( ) Toilets	( ) Kissing	( ) Sexual intercourse
( ) Mosquitoes	( ) Blood transfusion	( ) Sharing needles and blades
( ) Breast feeding	( ) Shaking hands	( ) Sharing cups and spoons
( ) In the womb	( ) Others [	]

11. If someone is infected with HIV, which of these statements is true?
(Choose as many answers as you like.)

( ) He or she has AIDS.
( ) He or she may not have AIDS yet, but will almost certainly develop AIDS.
( ) He or she could stay healthy for a long time.
( ) He or she can pass HIV to other people only when he or she is sick.
( ) He or she could pass HIV to other people.

12. In general, do you think that people who have sexually transmitted infections have been immoral?

1. Definitely 2. Very likely 3. Likely 4. Perhaps 5. Not likely

13. If you knew that one of your community members was infected with HIV, would you feel happy to continue working with him or her?

1. Definitely 2. Very likely 3. Likely 4. Perhaps 5. Not likely

14. In general, do you think that children in your school are vulnerable to sexually transmitted infections and HIV?

1. Definitely 2. Very likely 3. Likely 4. Perhaps 5. Not likely

15. In general, do you think that adults in the community are vulnerable to sexually transmitted infections and HIV?

1. Definitely 2. Very likely 3. Likely 4. Perhaps 5. Not likely

16. Which one of the following statements is closest to how you feel?

( ) AIDS is mainly about morals. Religious leaders and organisations must convince people of the need to protect themselves from AIDS.
( ) AIDS is mainly a health issue, so workers in the health sector are mainly responsible for responding to AIDS
( ) All the members in the community are responsible for working together to prevent HIV infection and to stop AIDS.
( ) AIDS is mainly an issue of education. Workers in the education sector have to protect the next generation from HIV infection.
( ) AIDS is mainly an issue of individual behaviours. Parents are mainly responsible for

providing enough knowledge to protect their children from HIV infection.

17. Through which means do you have access to the updated information of HIV/AIDS?

(Choose as many answers as you like.)

( ) Radios ( ) Newspapers ( ) VCT centres ( ) Barazas

( ) church workshops ( ) None ( ) Others [ ]

18. Which one of the statements is closest to how you feel?

( ) The knowledge of condom use should not be passed on to pupils because it would encourage immorality.

( ) The knowledge of condom use should be passed on to pupils at school to protect themselves, depending on the age of pupils.

( ) The knowledge of condom use is necessary for pupils but should be passed on to pupils by their parents.

( ) The knowledge of condom use is necessary for pupils but should be passed on to pupils by the community rather than the school.

19. Which one of the statements is closest to how you feel about the effectiveness of condoms in preventing infectious diseases?

( ) I believe the effectiveness of condoms and use them in practice.

( ) I believe the effectiveness of condoms but find it difficult to use them in practice.

( ) I have some doubts on the effectiveness of condoms.

( ) I don't believe the effectiveness of condoms at all.

( ) I don't have accurate knowledge of condoms and can not judge their effectiveness.

20. What kind of difficulties would you worry about in having a workshop on health issues together with parents at school?

21. Any other comments to CanDo?

Thank you very much for co-operation.

June, 2004

Yuki Nakamura, CanDo Nairobi

Appendix 5. The Results of the Analyses

	Variable 1	Variable 2	F.E.	χ^2	df	p	n	Phi	Cramer's V	Phi square
1	sex	coverage	0	9.4632	3	0.0182	166	0.2567	0.2567	0.0659
2	sex	workshop attendance		2.1180	3	0.5483	166			
3	sex	correct answer on Infection Route	0	3.8447	4	0.4297	166			
4	sex	correct answer on HIV		6.0889	3	0.1074	166			
5	sex	morality		9.3104	4	0.0538	162			
6	sex	working together		1.5409	4	0.8194	165			
7	sex	children's vulnerability		10.1571	4	0.0379	165	0.2481	0.2481	0.0616
8	sex	adults' vulnerability		11.1179	4	0.0253	164	0.2604	0.2604	0.0678
9	sex	knowledge of condoms to children		11.3305	1	0.0008	162	0.2645	0.2645	0.0699
10	sex	effectiveness of condoms to prevent HIV		4.6324	4	0.3271	137			
11	age	knowledge of condoms to children	0	9.6370	3	0.3007	162			
12	age	effectiveness of condoms to prevent HIV	0	11.2208	12	0.4688	157			
13	religion	coverage	0	2.9033	3	0.4056	157			
14	religion	workshop attendance		7.4579	3	0.0586	157			
15	religion	correct answer on Infection Route		2.0973	4	0.7179	158			
16	religion	correct answer on HIV		6.4780	3	0.0905	158			
17	religion	morality		2.9138	4	0.5723	154			
18	religion	working together		1.6700	4	0.7962	157			
19	religion	children's vulnerability		6.0644	4	0.1944	157			
20	religion	adults' vulnerability		10.2299	4	0.0367	156	0.2561	0.2561	0.0656
21	religion	responsible body	0	2.0073	4	0.8252	137			

22	religion	knowledge of condoms to children		0.7871	1	0.3750	154			
23	religion	effectiveness of condoms to prevent HIV		4.0128	4	0.4043	149			
24	coverage	knowledge of condoms to children	0	3.7184	3	0.2846	161			
25	coverage	effectiveness of condoms to prevent HIV	0	11.2870	12	0.4206	155			
26	workshop attendance	knowledge of condoms to children		2.1152	9	0.5488	160			
27	workshop attendance	effectiveness of condoms to prevent HIV	0	14.2950	12	0.2324	155			
	correct answer on Infection Route	knowledge of condoms to children	0	2.5809	4	0.6409	161			
28	correct answer on Infection Route	effectiveness of condoms to prevent HIV	0	6.6527	16	0.9794	156			
29	correct answer on HIV	knowledge of condoms to children		3.3736	3	0.3375	161			
30	correct answer on HIV	effectiveness of condoms to prevent HIV	0	8.0475	12	0.7859	157			
31	morality	knowledge of condoms to children		8.5632	4	0.0730	157			
32	morality	effectiveness of condoms to prevent HIV	0	14.5970	16	0.5543	152			
33	working together	knowledge of condoms to children		5.4289	4	0.2460	160			
34	working together	effectiveness of condoms to prevent HIV		8.0733	16	0.9467	155			
35	children's vulnerability	knowledge of condoms to children		5.9691	4	0.2015	160			
36	children's	effectiveness of	0	18.364	16	0.3030	155			

	vulnerability	condoms to prevent HIV		5						
37	adults' vulnerability	knowledge of condoms to children		14.5724	4	0.0057	159	0.3027	0.3027	0.0917
38	adults' vulnerability	effectiveness of condoms to prevent HIV	0	13.5940	16	0.6289	154			
39	knowledge of condoms to children	effectiveness of condoms to prevent HIV		14.7329	4	0.0053	154	0.3093	0.3093	0.0957

	Variable 1	Variable 2	ρ	p	n	ρ square
40	age	coverage	0.0716856	0.360194	165	
41	age	workshop attendance	0.0999556	0.143589	165	
42	age	correct answer on Infection Route	-0.077228	0.322675	166	
43	age	correct answer on HIV	0.103566722	0.184226141	166	
44	age	morality	-0.122799784	0.11952249	162	
45	age	working together	-0.192687281	0.013153786	165	0.0371
46	age	children's vulnerability	-0.166913456	0.032129328	165	0.0279
47	age	adults' vulnerability	-0.187264056	0.016346423	164	0.0351
48	coverage	workshop attendance	-0.128014498	0.102348237	164	
49	coverage	correct answer on Infection Route	-0.05475618	0.486190625	164	
50	coverage	correct answer on HIV	-0.174681435	0.025277693	164	0.0305
51	coverage	morality	0.204905637	0.00934438	160	0.0420
52	coverage	working together	-0.053782205	0.495330901	163	
53	coverage	children's vulnerability	0.062931399	0.42483424	163	
54	coverage	adults' vulnerability	0.076183842	0.335269313	162	
55	workshop attendance	correct answer on Infection Route	0.024054798	0.759802815	164	
56	workshop attendance	correct answer on HIV	-0.010722019	0.891613762	164	
57	workshop attendance	morality	0.034396074	0.665889533	160	
58	workshop attendance	working together	0.006285569	0.936529971	163	
59	workshop attendance	children's vulnerability	0.044777871	0.570326475	163	

60	workshop attendance	adults' vulnerability	-0.082025249	0.299420771	162	
61	correct answer on Infection Route	correct answer on HIV	0.080017697	0.30693654	165	
62	correct answer on Infection Route	morality	-0.064398206	0.417022554	161	
63	correct answer on Infection Route	working together	-0.085406568	0.276877726	164	
64	correct answer on Infection Route	children's vulnerability	0.054913423	0.484937557	164	
65	correct answer on Infection Route	adults' vulnerability	0.07109435	0.367148062	163	
66	correct answer on HIV	morality	-0.028814	0.716726	161	
67	correct answer on HIV	working together	-0.089313336	0.255415088	164	
68	correct answer on HIV	children's vulnerability	-0.158766436	0.042300797	164	0.0252
69	correct answer on HIV	adults' vulnerability	-0.160517551	0.040670708	163	0.0258
70	morality	working together	-0.058949621	0.459022127	160	
71	morality	children's vulnerability	0.098903296	0.21051229	162	
72	morality	adults' vulnerability	0.140492822	0.075471031	161	
73	working together	children's vulnerability	0.098774453	0.209684762	163	
74	working together	adults' vulnerability	0.180219955	0.021739626	162	0.0325
75	children's vulnerability	adults' vulnerability	0.618070349	0.000001	164	0.3820