FACTORS PREDISPOSING PRIMARY SCHOOL TEACHERS TO RISK OF SEXUALLY RELATED HIV/AIDS INFECTION IN SINGIDA RURAL DISTRICT.

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF PUBLIC HEALTH OF THE UNIVERSITY OF DAR ES SALAAM.

2004.

Certification

The undersigned certifies that he has read and hereby recommend for acceptance by the University of Dar- es- Salaam a dissertation titled "FACTORS PREDISPOSING PRIMARY SCHOOL TEACHERS TO RISK OF SEXUALLY RELATED HIV/AIDS INFECTION IN SINGIDA RURAL DISTRICT" in partial fulfillment of the degree of Master of Public Health.

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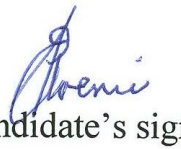
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ABSTRACT.

The risk of sexually transmitted HIV/AIDS among primary school teachers has been expressed by researchers in various parts of sub Saharan Africa. Mortality among teachers due to AIDS and AIDS related conditions has been reported to be high including here in Tanzania. A few studies have been conducted in Tanzania regarding HIV/AIDS among primary school teachers. Similarly minimal publications concerning factors predisposing the teachers to sexually related HIV/AIDS are available. This study therefore, focused on the important factors which if worked upon will reduce HIV/AIDS among the teachers, other professionals and the general population.

The broad objective was:- To determine the behavioural and Economic factors predisposing primary school teachers to risk of sexually related HIV/AIDS infection in Singida rural district.

The specific objectives of the study aimed at determining whether level of knowledge, attitude and behaviour, as well as economic status predispose the primary school teachers to sexually related HIV/AIDS.

A cross sectional descriptive study was conducted during the period May – August 2004 where the study population comprised of primary school teachers from 42 selected primary schools as the main elements, and the education administrators and community members for provision of supporting information .

Multistage cluster sampling was used to select the wards and the primary schools. All primary school teachers found in respective selected schools during data collection were involved in the research. A total of 377 teachers were researched. Forty five education

administrators and 39 community members were also researched. Data collection tools included close and open ended questionnaires and an interview guide.

Ethical clearance was ascertained before starting data collection. Data analysis was through EPI6 computer program where appropriate statistical tests were carried out.

It was found that 90.2% of all teachers interviewed were highly knowledgeable about AIDS infection, transmission and prevention. 3.7% had negative attitude against preventive measures more of them being males than females. 54.6% of respondents expressed high risk sexual behaviour with respect to spreading of HIV/AIDS.

On economic status 80.1% of the teachers expressed inadequate income and 36.3% of them depended upon their sex partners for income support, majority of them being females.

In conclusion, the main factors predisposing primary school teachers to sexually related HIV/AIDS are behavioural, that is attitude and behaviour, and economic constraints.

Recommendations: The school HIV/AIDS should be reviewed to target both the pupils and their teachers with focus on both raising awareness and behavioural change communication, and on economic issue all teachers should be persuaded to enroll in the Savings and credit society so that they can get loans to relieve their deficits.

The research costed Tshs. 1,267,000/= to complete.

Dissemination of research findings:

The findings from this study will be disseminated to the following bodies:- Muhimbili University college of Health Sciences library, Ministry of National Education, District Executive Director's office- Singida rural, Ministry of health and the World Health Organisation.

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LIST OF ABBREVIATIONS

AFT..... American Foundation of Teachers.

AIDS..... Acquired Immunodeficiency Syndrome.

AMREF..... African Medical Research Foundation.

ARV.....Anti Retroviral.

B.B.C.....British Broadcasting Corporation.

BSSR.....Baseline Studies on the Status of Response to HIV/AIDS in the Education Sector.

CCBRT..... Community Based Rehabilitation Tanzania.

Conf. ..... Conference.

D.E.O ..... District Education Officer.

EQUINET..... The Network on Equity in Health in Southern Africa.

ESRF..... Economic and Social Research Foundation.

HIV.....Human Immunodeficiency Virus

HMIS.....Health Management Information System.

MoE.....Ministry of Education.

MUCHS..... Muhimbili University College of Health Sciences.

NACP.....National AIDS Control Program.

NIAID..... National Institute of Allergy and Infectious Diseases.

PMR..... Proportional Mortality Rate.

SAC..... School AIDS Committee.

SPHSS..... School of Public Health and Social Sciences.

SSA..... Sub-Saharan Africa.

STIs ..... Sexually transmitted infections.

TANESA.....Tanzania Netherlands Support for AIDS.

UK..... ..... United Kingdom.

UN..... United Nations.

UNAIDS.....Joint United Nations AIDS programme.

URT ..... United Republic of Tanzania.

VCT ..... .Voluntary Counseling and Testing.

Vol. .....Volume.

WEC .....Ward Education Coordinator.

WEO ..... Ward Executive Officer.

WHO ..... World Health Organisation.

DEFINITION OF TERMS

Sexually related HIV/AIDS= HIV/AIDS transmitted through sexual intercourse.

Various measuring scales:

Attitude.

Bad attitude = Scores 0-2.

Fair attitude = Scores 3-4.

Good attitude = Scores 5-6.

Behaviour.

Bad behaviour = Scores 0-2.

Moderate behaviour = Scores 3-4.

Good behaviour = Scores 5-6.

Knowledge.

Low knowledge = Scores 0-3.

Moderate knowledge = Scores 4-6.

High knowledge = Scores 7 and above.

CHAPTER 1

1.0 INTRODUCTION.

The HIV/AIDS pandemic is now a big challenge throughout the world due to its high magnitude of spread and the mortality it causes. The infection and death rates are increasing extraordinarily despite peoples' awareness of the existence of the disease. The seriousness of the pandemic is shown through various data presented by different researchers. For instance, by 1992, 12.9 million people had been infected with HIV, out of whom 21% developed AIDS. 90% of the AIDS cases had died by then (Mann .J. M, et al, 1992).

Between 1.6 and 1.9 million people were infected with HIV in the year 1992 (Mantel C, et al, 1992). By 1998, 33.4 million people had been infected with HIV world wide (UNAIDS, 1998), and out of these 21million were AIDS cases (NACP, 1998). From these data, there is an increase of 10.5 million people infected in the period of 6 years, from 1992 to 1998. The 2001 records show that around 40 million people (cumulative) had lived with HIV in the world and 3 million people died of AIDS that year.(Piot P, 2002; Fauci A.S., 2003; Capdevila G., 2001). Cumulatively, AIDS had killed 20 million people world wide. Five million people were reported to have been infected in 2001 (Capdevila G., 2001; Piot P., 2002). The infection rate was 14,000 people a day (Fanci A.S. 2003). It was estimated that 42 million people had suffered from AIDS world-wide by 2002 (Semali I., et al, 2003; UNAIDS, 2002), out of whom 29.4 million (70%) were from Sub – Saharan Africa (SSA) (UNAIDS, 2002).

Sub Saharan Africa (SSA) has been hit more seriously by the pandemic as compared to the rest of the world. This has been shown briefly by researchers as follows:- A cumulative figure of 28.1 million Africans were HIV positive in SSA by 2001, out of whom 3.4 million were estimated to have been infected in that particular year, (Mpanju-Shumbusho W., 2000). Furthermore, it was estimated that 26.6 million people from SSA were living with HIV by 2003, where approximately 3.2 million new infections occurred in SSA in 2003, and AIDS claimed lives of 2.3 million Africans, (Fredriksson J., et al, 2003).

Tanzania, being one of the SSA countries has also been similarly affected. For example, in 1998, 8,675 Tanzanians were reported as new cases, the prevalence of the disease being 8.2% (NACP, 1998). A statement made by the President of the United Republic of Tanzania on Anti-Retroviral (ARV) treatment of AIDS patients showed that there were 2.2 million Tanzanians living with HIV/AIDS, 70% of the HIV infected Tanzanians were young-aged 20 to 40 years, and we have acumulative total of 1.1 million HIV-related Orphans. He went on saying that, "Without intervention, 150,000 Tanzanians, would die next year from AIDS", (Mkapa, 2003).

The HIV spread in Tanzania is not even throughout the country. It is high in some areas and low in other areas. Studies done in Tanzania have shown that the prevalence of HIV in this country varies between 1.6 and 28.6% and AIDS is the leading cause of deaths with proportional mortality rate (PMR) of 30.2% to 44.5%. The morbidity and mortality from AIDS have negatively affected schooling, agriculture and economic sectors in Tanzania (Semali I., et al, 2003).

In Singida Rural district, 2003 data reported concerning HIV/AIDS are from VCT where a total of 935 people were counseled and tested for HIV, out of whom 92 (9.8%) were HIV positive. Considering sex, out of the 624 males counseled and tested for HIV, 57 (9%) were HIV positive while out of 311 females counseled and tested for HIV, 35 (11%) were HIV positive. HIV transmission rate was approximated to be 10%. (HMIS-Singida Rural-2003)

All sectors in the country have been affected and will continue being affected by HIV/ AIDS unless special efforts are made to intervene the factors predisposing the professionals to HIV/AIDS infection (Semali et al 2003). It is not possible to cover all sectors in a short period of time, therefore, this study is going to focus on the Education sector, particularly on primary school teachers because of their importance as far as formal Education is concerned. If they are left to perish in vast numbers, it means collapse of Education and hence lack of experts, and ultimately underdevelopment of the country. The teachers are a very important group of professionals which can take a great part in HIV/AIDS prevention through educating their pupils (the adolescents) who are at a high risk of being infected with HIV. They may also participate in educating the community on HIV prevention either directly, or indirectly through the pupils they have educated. Deaths among primary school teachers due to HIV/AIDS. have been observed in various parts of our country (Mujinja et al, 2003).

Some studies in various countries have reported the teachers to be a "High Risk Behaviour" group. Prevalence rate among them might be higher than in the general population.

Primary school teachers are said to have higher mortality rate than other categories of teachers. Type of school, location, gender and marital status have been reported as contributing factors, rural teachers, single males, being reported to be more affected than the rest. (Bennel P., et al, 2002).

Many deaths of teaching staff and the education administrators have had an impact on the educational sector as in the case of Central African Republic, where 85% of teachers who died between 1996 and 1998 were HIV positive. These died 10 years before they were due to retire. Absenteeism either due to chronic ill-health, seeking for medical care, or due to taking care of other sick colleagues, has been a common phenomenon[1].

Among the few studies conducted in Tanzania, including the one done by CCBRT in Dar es Salaam, it was stated that, incidents of male teachers asking to have sex with their own female pupils are common[2]. Furthermore, some primary school teachers feel that it is very difficult for them to talk with their own pupils about sexuality, relations between sexes, sexual abuse, sexual diseases and HIV. They are of the view that such matters are best covered by a professional team from outside the school[3].

Some adults believe that sex education encourages sexual experimentation[4].

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[1]African First On-line Science magazine – 2002.
[2]Info @ccbrt.org.tz., 2002.
[3]Info @ccbrt.org.tz., 2002.
[4]World YOUTH Report, 2003.

Another study conducted by TANESA in the primary schools of two districts in Mwanza region report that, six percent of all girls in the study cited sexual harassment by teachers as a common problem (Mgalla Z., et al 1998).

A study done in six districts in Tanzania, Kinondoni, Mbeya Urban, Mbeya Rural, Dodoma Urban, Simanjiro and Kahama, showed that the proportion of teachers who died of HIV/AIDS related illnesses ranges between 66% and 100%, which is much higher than the general population. (Mujinja P. et al, 2003).

Due the fact that few studies have been conducted in Tanzania concerning HIV/AIDS with special attention to primary school teachers, and limited similar researches have been conducted in Singida region and especially the Singida rural district, it is appropriate for such a research to be done now. This may provide baseline data for further researches to enable planning for special interventions for HIV prevention amongst the primary school teachers and the community at large, specifically in Singida and the rest of the country.

1.1 STATEMENT OF THE PROBLEM

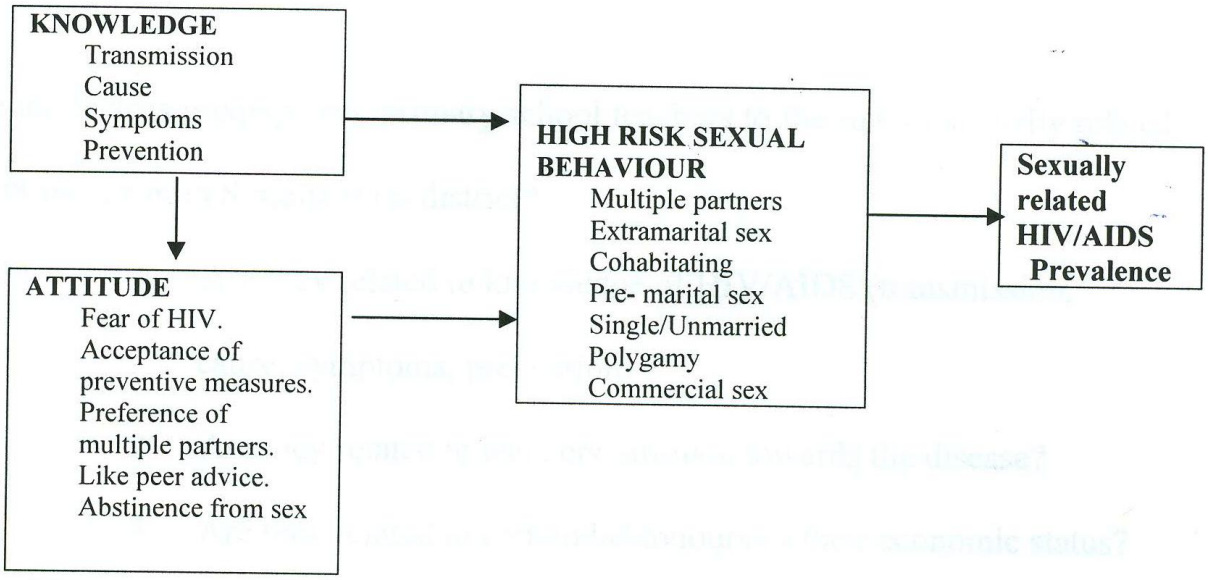
The primary school teachers have been considered to be a high risk behaviour group in some studies (Bennel P. et al 2002). This has been reflected by a large number of teachers dying of HIV/AIDS, many of them being chronically sick and absent from their working places seeking for medical attention every now and then.

A good example on how primary school teachers have been affected by HIV/AIDS in Tanzania was shown by Mujinja P., et al, (2003) who documented an infection rate of more than 30% among them (URT, 2002), and death rate ranging between 66% and 100%. HMIS data from Singida rural district (2003) shows HIV transmission rate of 10% in the general population. One study done in some countries in SSA, other than Tanzania, pointed out a few factors predisposing teachers to HIV/AIDS. These include; type of school, location, gender and marital status (Bennel et al, 2002).

In Tanzania however, and so in Singida rural district, little has been documented regarding factors predisposing primary school teachers to risk of HIV/AIDS infection. It is impossible to plan for interventions on HIV/AIDS prevention to this group of professionals unless factors predisposing them to the disease are known, which will be targeted for intervention.

The conceptual framework below shows a number of factors which may predispose the primary school teachers in Singida rural to HIV/AIDS infection.

1.2 CONCEPTUAL FRAMEWORK FOR HIV/AIDS INFECTION



The diagramatic representation above is the conceptual framework for sexually related HIV/AIDS infection. Several factors have been listed pertaining to knowledge and attitude which influence high risk sexual behaviour and hence increase HIV/AIDS prevalence in the community. Some factors related to knowledge include lack of awareness on the cause, mode of transmission, symptom and means of prevention. Factors related to attitude include lack of fear on the disease, preference of multiple partners, peer influence on unprotected sex. Factors related to high-risk sexual behaviour include unsafe sex through multi partnership, extramarital sex, premarital sex, and commercial sex (without using condoms).

Lack of knowledge and negative attitude towards preventive measures can lead to high-risk sexual behaviour. Having high knowledge may influence a positive attitude towards preventive measures hence reduction of high-risk sexual behaviour and ultimately reduction of HIV/AIDS.

1.3 RESEARCH QUESTIONS.

What are the factors predisposing primary school teachers to the risk of sexually related HIV/AIDS infection in Singida rural district?

1. Are they related to knowledge of HIV/AIDS (transmission, cause, symptoms, prevention) ?
2. Are they related to teachers' attitude towards the disease?
3. Are they related to certain behaviours or their economic status?

1.4 RATIONALE OF THE STUDY

Literature review shows that very little has been published as far as HIV/AIDS and teachers in Tanzania is concerned. Primary school teachers in Singida rural district may be as vulnerable to HIV/AIDS as the general population or other social and professional groups. They might as well be either more, or less vulnerable.

This research is aiming at coming up with data on a prioritized number of factors which predispose the primary school teachers to the risk of HIV/AIDS infection and hence provide recommendations on interventions targeting those factors.

The study results are also expected to stimulate further researches either in Singida or elsewhere in Tanzania regarding teachers and HIV/AIDS. This may help to rescue these professionals, their pupils and students, and all the Tanzanians from the AIDS Pandemic.

1.5 REVIEW OF LITERATURE

Reports from various parts of SSA have shown that teachers are a "High Risk Behaviour" group, and that therefore, HIV prevalence among the teaching profession is higher than in the adult population. In general, mortality rates are much higher among the primary school teachers and male teachers. Location, gender and marital status are amongst the factors contributing to the high risk behaviour. (Bennell P., et al, 2002). Education could play a critical role in HIV/AIDS prevention but the pandemics devastating impact threatens to derail any such effort. The World Bank warns, and I quote: "HIV/AIDS is draining the supply of education, eroding its quality, weakening demand and access, drying up country's pools of skilled workers and increased the sector's costs (WB, 2003).

In Central African Republic, 85% of teachers who died were HIV positive and they died 10 years before they were due to retire. Education administrators were also affected. At least 12% of South African administrative personnel were estimated to be HIV positive. The teachers' absenteeism and non-performance could also be responsible to the largely ignored psychological effects of the pandemic[5]. In Zambia, more than two thirds of a survey sample of teachers with relatives who died of AIDS were unable or unwilling to talk about the problem with friends or family. Such isolation coupled with fear about their own HIV status, took its toll on teachers and their ability to teach[6].

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[5]African's First On-line science magazine, 2002.

[6]African's First On-line science magazine, 2002.

HIV/AIDS is influenced by individual and environmental factors such as education, poverty, employment, geography and socialisation. For the time being, the only options for avoiding sexual transmission of HIV include abstaining from sex, mutual monogamy between uninfected partners, and correct and consistent use of condoms. However, risky behaviour change may not take place because consequences of sexual actions are not immediate due to long incubation period of HIV/AIDS[7].

In some countries the epidemic contributes to making the education system itself a source of risk, especially to girls. In one Ugandan district for example, 315 of school girls surveyed reported being sexually abused mainly by teachers. The specific costs of HIV/AIDS to education sector, now beginning to be estimated are large. Zambia for example, has estimated the cost of replacing teachers who had died of HIV/AIDS to be US $ 25million between 2000 and 2010, and Mozambique estimated about twice as much[8]. A break down in the school environment in Africa has led to growing number of cases of HIV amongst young girls being caused by teachers. One of the crucial reasons for this rise is the number of teachers having sex with their pupils. "Most of the perpetrators are the Head-teachers". They are supposed to educate their teachers about good behaviour, role models, and exemplary etiquettes within the school system[9]

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[7]HIV/AIDS and young people, World YOUTH Report, 2003.

[8]Africans First On -line Science Magazine – 2002.

[9]BBC News - 2003.

One 19 year old school girl in Lusaka said she knew of many teachers who had sex with a number of their pupils. "Those teachers are not only going out with one girl at the school. They are going out with several other girls". "You might find that they are going out with three or so". The pupil added that the reasons for her classmates sleeping with their teachers varied. "Sometimes they just say that they like teachers. Sometimes they want to be getting good grades". Some have been using condoms and some haven't. Sometimes they think their boyfriends – people they are having sex with-might leave them[10].

Another study done in Namibia shows that the supply of teachers may be diminished due to mortality. Productivity of teachers is likely to decline due to frequent absenteeism because of AIDS, care of family members or attendance of funerals. Learner/teacher ratios are likely to worsen. The consequence of this will be reduced teaching time and continuity. Teachers and learners might suffer emotional stress through being affected by the incidence of HIV/AIDS among relatives and colleagues. The standing of teachers in the community might be devalued through community views of teachers as contributing to spread of the disease. "HIV does to the society what it does to the human body. It undermines the very institutions that are meant to define the society – its teachers, its doctors". (Piot P., 2000).

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[10]BBC News-2003

In several African countries, as many teachers died of AIDS every year as quality to teach deteriorates. Education ministries are closing schools, the number of orphans is increasing rapidly, and fewer individuals are entering the teaching profession. Deaths among teachers are expected to climb dramatically over the next ten years (Fieldman S., 2001), for example, in South Africa about 1000 teachers a year are dying of AIDS, 420,000 children have lost one or both parents due to AIDS and half of toady's 15 years old will die of AIDS in the next ten years.

In Zimbabwe, more than 1.5 million people are living with HIV/AIDS, more than ¼ of the population between 15 and 49 years are HIV positive and more than 30% of the country's teachers carry the HIV virus (Feldman S., 2001).

In Kenya, an average of 10 teachers die each week from AIDS, more than 3 million people will die in the next decade from AIDS, 20% of students between 14 and 17 are HIV positive with the infection rate among girls, substantially higher than among boys (Feldman S. 2001).

In Zambia, AIDS kills about a half the number of newly trained teachers, there are about 600,000 orphans and 20% of the population is HIV infected. The need for effective AIDS prevention programme can't be ignored (Feldman S., 2001). In African countries such as Uganda and Senegal, similar prevention programmes have led to sharp reduction in rates of infection. Sharing accurate information and breaking down the barriers of silence are essential components of effective AIDS control programmes" (Feldman S., 2001).

A study was conducted to estimate and project the economic impact of HIV/AIDS on the supply of education in Zambia. The results showed that the impact of HIV/AIDS on supply of primary education imply the cost to the MoE (Ministry of Education) estimated at US $ 1.3 to 3.2 million in 1999 and projected at US $ 10.6 to 41.3 million over the period 1999 to 2000. These costs include salaries paid to teachers absent as a result of HIV/AIDS associated illness (71%), additional training of teachers to cope with AIDS related attrition (22%) and funeral costs contractually met by MoE (7%).The annual cost of HIV/AIDS is relatively a small fraction of the overall MoE budget (2.5% in 1999) but has substantial implications for resource allocation to some functions. Expenditure in teacher training will need to be increased by 26% if education for all targets are to be met in the face of AIDS (Glassly N.C., et al, 2003).

"AIDS is decimating the ranks of the civil servants in the worst affected countries. The loss of these highly skilled workers places the essential government services under tremendous strain, and may comprise the ability of the state to ensure law and order (Mpanju- Shumbusho W., 2000). One example the UN mentioned was the impact on SSA's education systems, which are strained to the breaking point by the loss of teachers. In 1999, 860,000 children lost their teachers to AIDS in Africa. By the late 1990s, in the Central African Republic, more than 100 schools were forced to close due to the fact that many teachers had died of AIDS related causes, (Mpanju-Shumbusho W., 2000).

In Tanzania, a few researches have been done concerning primary school teachers, in relation to spread of HIV/AIDS. One such research was conducted in Mwanza in 1995-96, involving the primary schools in the region. It was found that primary school girls are sexually active from the age of 12 years. The regional education office established a programme to protect primary school girls from sexual abuse following the 1995-96 reports to the rural school AIDS committees (SAC), that female students were being sexually harassed and abused by primary school teachers. The programme involved training of selected female teachers as guardians to help female students with social, sexual and reproductive health problems (Mlemya B. et al, 1997).

Other study results were presented in the 12th World AIDS conference in Geneva Switzerland on the 3rd July 1998, concerning protecting school girls against sexual exploitation.

The report showed that sexual exploitation of girls was common, included cases of rape, forced and unequal sexual relationships, and sexual harassment. Here the respondents were the girls of standard V, VI and VII of whom 1% were expelled from school due to advanced pregnancy. School girls had most problems with school boys, but also frequently with men from the village, and teachers. 6% of all girls in the study cited sexual harassment by teachers as a common problem. (Mgalla Z. et al, 1998).

AMREF Tanzania Researchers also conducted a research related to AIDS transmission among primary and secondary school girls in Mwanza region. The research was on sexual reproductive health. The results of this research were as follows: Forced sex was reported by 47% of primary school girls and 37% of the secondary school girls.

Fifty percent of primary school girls had previously had sex with adults including their teachers and relatives (Matasha E. et al, 1998).

Another study done by TANESA Researchers in Mwanza targeted health services use and household expenditure during terminal illness to AIDS in rural Tanzania. The study reported that during terminal illness people with HIV/AIDS made use of both traditional and modern health services than other patients. The long duration from illness to death makes treatment costs about 15 times higher than the funeral costs, and the sum of medical and funeral costs exceeds the estimated annual household income per capita in the population of study. (Ngalula J. et al, 2002). From this study the increased HIV infection and deaths among the teachers passes a heavy financial burden both to the MoE, their families and community at large.

Mujinja et al, (2003), showed that the death rate from HIV/AIDS related illness among the primary school teachers ranges between 66% and 100% where more deaths were observed in urban than rural districts. This study showed how HIV/AIDS affects the Education sector through frequent absenteeism of sick teachers, decreased ability to teach, replacement of dead teachers by less experienced ones, and high medical, transport and funeral costs.

Literature from Tanzania has documented little regarding HIV/AIDS among teachers. Most of the studies are on pupils, and a few studies tell about mortality of primary school teachers from HIV/AIDS and that the teachers are a high risk behaviour group, with no comparable data on the high risk factors.

There is no hard data within Tanzania education sector on whether the education staff at all levels experience a higher level of illness and deaths due to HIV/AIDS than the general population. (Muhondwa et al, 2004).

Little has been documented about determination of factors predisposing teachers to the deadly disease, factors such as knowledge, attitudes, beliefs behaviour and economic status. This means that researches have to be conducted to show the factors predisposing primary school teachers to the risk of HIV/AIDS. Interventions aimed at protecting teachers and the community surrounding them depend on how these factors will be targeted.

CHAPTER 2

2.0 HYPOTHESES

2.1 Null hypothesis

Behavioural and economic factors have no effect of predisposing primary school teachers in Singida rural district to the risk of sexually related HIV/AIDS infection.

2.2 Alternative hypothesis

Behavioural and the economic factors have effect of predisposing the primary school teachers in Singida rural district to sexually related HIV/AIDS infection.

2.3 OBJECTIVES

2.3.1 Broad Objective:

To determine the behavioural and economic factors predisposing primary school teachers to risk of sexually related HIV/AIDS infection in Singida rural district.

2.3.2 Specific Objectives

1. To determine the level of knowledge pertaining to spread of HIV among primary school teachers in Singida rural district.
2. To study the attitude towards HIV/AIDS among primary school teachers in Singida rural district.
3. To study behaviours which predispose primary school teachers in Singida rural district to HIV/AIDS infection.
4. To study whether economic status predisposes primary school teachers in Singida rural district to HIV/AIDS.

CHAPTER 3

3.0 METHODOLOGY.

3.1 Description of the study area.

Singida rural district was selected for the study because of its size and variable geographical distribution of its primary schools. This distribution gave the targeted primary school teachers desirable qualities with reference to the district head quarters. This was taken as representative of many other rural areas.

The district surrounds the Singida town council. It is bordered by Iramba district to the North West, Tabora to the West, Manyoni to the South, Kondoa district to the East and Hanang district to the North. It is situated between latitude 3.4° South of the Equator and Longitudes 34° East of the Greenwich meridian. The district has average annual rainfall of 600mm and temperature ranges between 21 and 27 degrees centigrade. It covers the area of 12,164 square kilometres which is administratively divided into 7 divisions, 28 wards and 146 villages. The total population is 420,549 people as per the 2002 National census. The main occupation of its inhabitants include peasantry and pastoralism. Social services offered in the district include education, health and water supply. The education sector has a school program for teaching HIV/AIDS subjects to pupils, and with collaboration with the health department, two teachers from each primary school have been facilitated for dealing with HIV/AIDS affairs in their schools.

3.2 Study design.

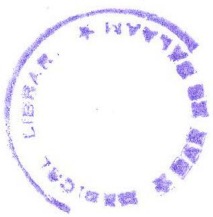
A cross sectional study was conducted in 15 wards and 41 primary schools from 28th May to 16th June 2004. On average three primary schools were selected per ward for research work.

3.3 Study population.

Singida Rural has 147 primary schools with a total of 1,449 primary school teachers who formed main elements of the study. This was 57.5% of the required total of teachers in the district as per teaching staff establishment. Community members (including parents, pupils and opinion leaders), ward educational coordinators and the District Educational Officer were interviewed for supportive information to the main questionnaire.

3.4 Sampling method.

A multistage cluster sampling technique was applied for the study. The wards were selected by simple random sampling. Three primary schools were selected randomly from each respective ward. All teachers found in selected schools during our visit were involved in the research and no school was repeated. An average of 10 teachers per school was considered. The community members were picked randomly in the respective areas. The ward educational coordinators and the District Educational Officer were selected purposefully.



3.5 Sample size Estimation.

The size was estimated using a single proportion formula by Kish and Leslie used in statcalculator programme in Epi info 6.

$$n = \frac{z^2 p(1-p)}{d^2}$$

Where, n = Sample size.

z = Critical value 1.96 (95% CL).

d = Absolute precision to be taken (5%).

p = Expected proportion of teachers (not known – 50% was used).

A total of 377 Primary school teachers were interviewed, out of whom 178 were females and 199 were males.

3.6 Variables;

1. Dependent variable: Sexual HIV/AIDS infection, HIV/AIDS prevalence.
2. Independent variables: Age, sex, marital status, qualification (Professional grade).
3. Indicator variables:
   a) Knowledge: Proportion of teachers who knew the mode of transmission of HIV/AIDS, proportion of teachers who knew the organisms causing AIDS, Proportion of teachers who knew the symptoms of AIDS and proportion of teachers who knew how to prevent AIDS.

b) Attitude: Percentage of teachers who were afraid of being infected with HIV. Percentage of teachers who preferred multiple sex partners, percentage of teachers who disliked use of condom, percentage of teachers who felt they can't abstain from sex.

c) Behaviour: Proportion of teachers who had premarital sex, percentage of teachers who didn't use condoms during their first sexual intercourse, proportion of teachers who had multiple sex partners, proportion of teachers who had children out of marriage.

d) Economic status: Percentage of teachers who collected their salaries at the district headquarters, percentage of teachers who were not satisfied wit their salaries. percentage of teachers with additional sources of income, percentage of teachers who rely on their sexual partners for income support.

3.7 Ethical issues:

Permission to conduct the research was obtained from the relevant authorities which included the MUCHS Research and Publications Committee, the District commissioner Singida, the District Executive Director Singida District Council, the District Education Officer, the Divisional Secretary and the Ward Executive Officer. Informed consent was also sought from all respondents for their willingness to participate in the study.

3.8 Data collection instrument:

Two research assistants were recruited to assist the principal investigator during data collection. Selection criteria included: Maturity (age above 18 years), ability to work from morning to evening during the whole period of the research, fluency in Kiswahili and skills to use questionnaires and interview guides. Research assistants were trained for one day on how to fill in the questionnaires and how to conduct the interviews.

Pre testing of research tools was done and necessary corrections were made.

3.8.1 The primary school teachers:

These were researched using a Kiswahili version of the questionnaire which had part A with demographic particulars including age, sex, marital status and professional level.

Part B concerned knowledge on HIV infection, mode of transmission, ways of prevention, school HIV curriculum and Voluntary counselling and testing for HIV.

Part C concerned with various perceptions on AIDS, and protective measures.

Part D dealt with teachers' behaviours with respect to AIDS transmission and prevention. Part E focused on teachers' economic status and AIDS spread. Majority of questions were close-ended while the remaining few questions were open-ended. The questionnaires were self administered, and the researcher and research assistants were only facilitating the filling where need arose. Each questionnaire session took 30 to 45 minutes.

Interview to the WEC and DEO:

Most of the WEC were interviewed at the district head office and some at Makiungu education centre. A total of 17 WECs were interviewed. The District Educational Officer was interviewed at his office at the district headquarters.

Interview to Community members:

A total of 39 community members were picked at random and interviewed on their awareness on the primary school teachers and AIDS in their localities. School girl sexual abuse by male teachers was also inquired into.

3.9 Data entry, validation and analysis:

Every evening the principal investigator assisted by the research assistants went through all the day's questionnaires to ensure correctness. The principal investigator then coded all the questionnaires and gave each a serial number.

The research team went through all questionnaires at the end of each day of data collection to make sure that all questionnaires were thoroughly filled and corrections made where necessary. Before computer data entry all the questionnaires were reviewed again and the necessary corrections were made, then data entry followed and finally data analysis. Data processing was done through Epi Info 6 computer program where frequency tables, cross tabulations, pie charts and bar charts were made.

Dissemination of research findings:

The findings from this study will be disseminated to the following bodies:- Muhimbili University college of Health Sciences library, Ministry of National Education, District Executive Director's office- Singida rural, Ministry of health and the World Health Organisation and others.

3.10 Study Limitations:

1. The study coincided with the salary collection dates, so, some teachers were missing during our visit.
2. Some of the newly employed teachers were attending the evaluation exercise for their confirmation, therefore, a good number of them were missing during data collection.
3. A good number of ward educational coordinators were interviewed away from their ward offices, so they lacked some information.
4. Poor road network made it impossible for research team to reach some primary schools. To solve this, re sampling was done within each respective ward to compensate for the impossibilities. (tarmac bias was inevitable in this aspect in some wards).
5. Funds were delayed and inadequate for smooth operationalisation of the research. To solve this, the number of research assistants was reduced from four to two.
6. There was time limitation as time was too short to satisfy the researcher on the whole process of data collection. This was offset by applying self — administered questionnaire in order to cover the required sample size.

CHAPTER 4

4.0 RESULTS

Data analysis was done through computer Epi Info program which produced the results from key questions distributed as follows, eleven on knowledge, six on attitude, six on behaviour and five on economic affairs as far as primary school teachers and HIV/AIDS is concerned in Singida rural district. The results have been presented using tables as follows:

4.1 Tables of results.

4.1.0. Demographic characteristics:

Table 4.1.1 Demographic characteristics by sex:

Characteristics	**Sex**				**Total**	
	Males		**Females**			
Age(years)	Nos	%	Nos	%	Nos	%
20-24	20	10.0	38	21.3	58	15.4
25-29	36	18.1	39	21.9	75	19.9
30-34	29	14.6	19	10.7	48	12.7
35+	114	57.3	82	46.1	106	52.0
Total	199	100.0	178	100.0	377	100.0
Marital status						
Married	144	72.4	96	52.9	240	63.7
Divorced	0	0.0	4	2.2	4	1.1
Widow(er)	0	0.0	6	3.4	6	1.6
Single	55	27.7	72	40.5	127	33.7
Total	199	100.0	178	100.0	377	100.0
Salary (income) status						
Enough	11	5.5	12	6.7	23	6.1
Not enough	173	87.0	129	72.5	302	80.1
Not applicable	15	7.5	37	20.8	52	13.8
Total	199	100.0	178	100.0	377	100.0

Out of 377 Primary school teachers involved in the study, 199 (52.8%) were males and 178 (47.2%) were females. In the younger ages, 20-24 and 25-29, there were 77 (43.2%) females and 56 (28.1%) males respectively. Looking at older ages females were 101 (56.8%) and 143 (71.9%) males.

Concerning marital status, 240 (63.7%) of all teachers were married, 127 (33.7%) were single, while the rest 10 (2.6%) included the divorced (1.0%) and the widows (1.6%). Of the married, males were 144 (60.0%) while females were 96 (40.0%). All the 4 divorced were females (2.2% of all females), and all the 6 widows were females (3.4% of all females). For the singles, 55 (27.7%) were males while 72 (40.5%) were females. (Chi squared =22.777; Degrees of freedom=5; p-value=0.000372).

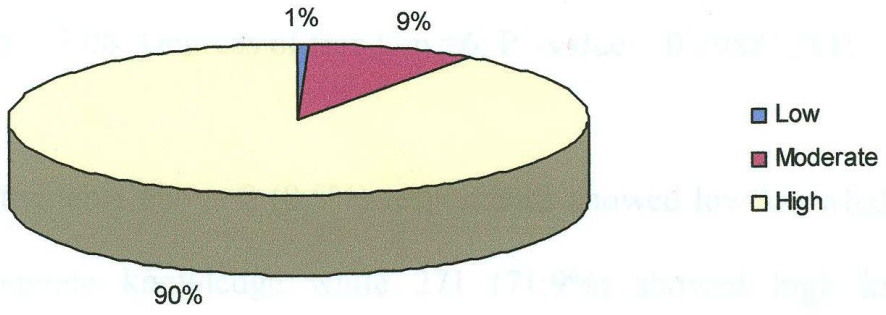
Looking at teachers' income in terms of salaries, 23 (6.1%) reported salary sufficiency, 302 (80.1%) reported salary insufficiency, while the rest 52 (13.8%) were not yet getting salaries (the newly employed). Of the males, 173 (87.0%) reported salary insufficiency as compared to 129 (72.5%) females.

(Chi squared =14.64; Degrees of freedom=2; P-value=0.00066302).

4.2.0 Assessment of teachers' knowledge on HIV/AIDS.

The measuring is on hearing about AIDS, What is AIDS, its causative agent, common way of spread, attendance of AIDS seminar, seeing AIDS cases, symptoms and signs, ways of protection, seeing a female condom, use of condoms and importance of using condoms. Out of the 11 scores, three cut off points were made, 0-3 for low, 4-6 for moderate and 7 or more for high knowledge.

Figure 1: Level of knowledge by Percentage



Of all respondents, only 2 (0.6%) scored low while 35 (9.3%) scored moderate and the rest 340 (90.1%) scored highest for knowledge on HIV/AIDS.

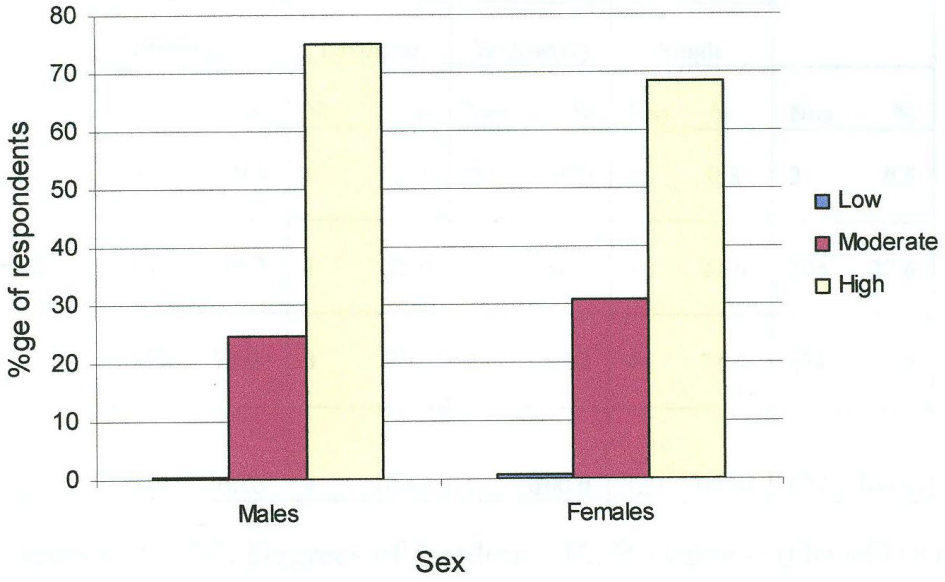
Table 4.2.1 Level of knowledge by age of respondents.

Level of knowledge	Age of respondents(years)								Total	
	20-24		25-29		30-34		35+			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Low	0	0.0	1	1.3	0	0.0	1	0.5	2	0.5
Moderate	19	32.8	17	22.7	13	27.1	55	28.1	104	27.6
High	39	67.2	57	76.0	35	72.9	140	71,4	271	71.9
Total	58	100.0	75	100.0	48	100.0	196	100.0	377	100.0

(Chi squared = 3.08; Degrees of freedom =6; P –value = 0.79881284).

Looking at the table above 2 (0.5%) respondents showed low knowledge, 104 (27.6%) showed moderate knowledge while 271 (71.9%) showed high knowledge about HIV/AIDS. Observation of the age groups shows that all age groups are equally knowledgeable.

Figure 2: Level of knowledge by sex



(Chi squared = 1.87; Degrees of freedom=2; P –value = 0.3921)

Figure 2 above shows that out of 199 males, 1 (0.5%) had low knowledge, 49 (24.6%) had moderate knowledge and 149 (74.9%) had high knowledge. Similarly, out of 178 females, 1 (0.6%) had low knowledge, 55 (30.9%) had moderate knowledge and 122 (68.5%) had high knowledge. This table shows no significant difference in knowledge between males and females.

Table 4.2.2 Level of knowledge according to marital status.

Knowledge	Marital status								Total	
	Married		Divorced		Widow(er)		Single			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Low	1	0.4	0	0.0	0	0.0	1	0.8	2	0.5
Moderate	64	26.7	1	25.0	4	66.7	35	27.6	104	27.6
High	175	72.9	3	75.0	2	33.3	91	71.6	271	71.9
Total	240	100.0	4	100.0	6	100.0	127	100.0	377	100.0

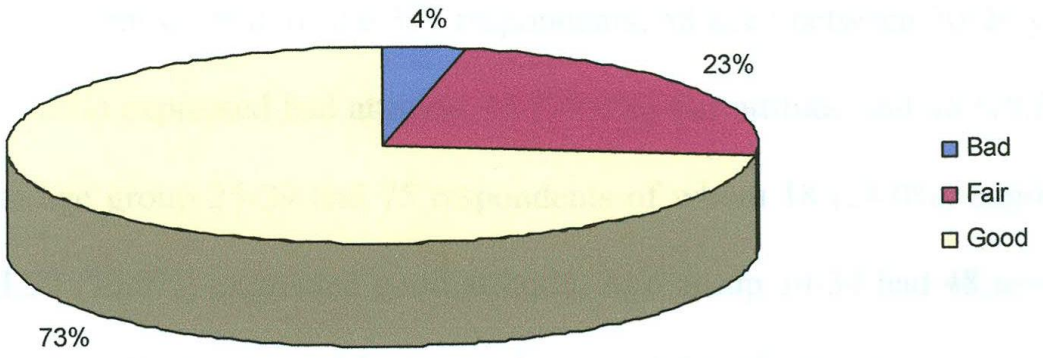
(Chi squared = 5.50; Degrees of freedom =10; P –value = 0.85547161).

Table 4.2.2 above shows that out of all 377 respondents, 2 (0.5%) had low knowledge while 104 (27.6%) presented with moderate knowledge and 271 (71.9%) with high knowledge. Looking at different marital statuses, 240 were married out of whom 1 (0.4%) had low knowledge while 64 (26.7%) had moderate knowledge and 175 (72.9%) had high knowledge. The divorced were only 4, out of whom 1 (25.0%) had moderate knowledge and 3 (75.0%) had high knowledge. Six respondents were widows, of whom 4 (66.7%) had moderate knowledge and 2 (33.3%) had high knowledge. Lastly, 127 were singles, out of them 1 (0.8%) had low knowledge, 35 (27.6%) had moderate and 91 (71.6 %) had low knowledge. Generally there is no significant difference in knowledge between different marital statuses.

4.3.0 Assessment of attitude.

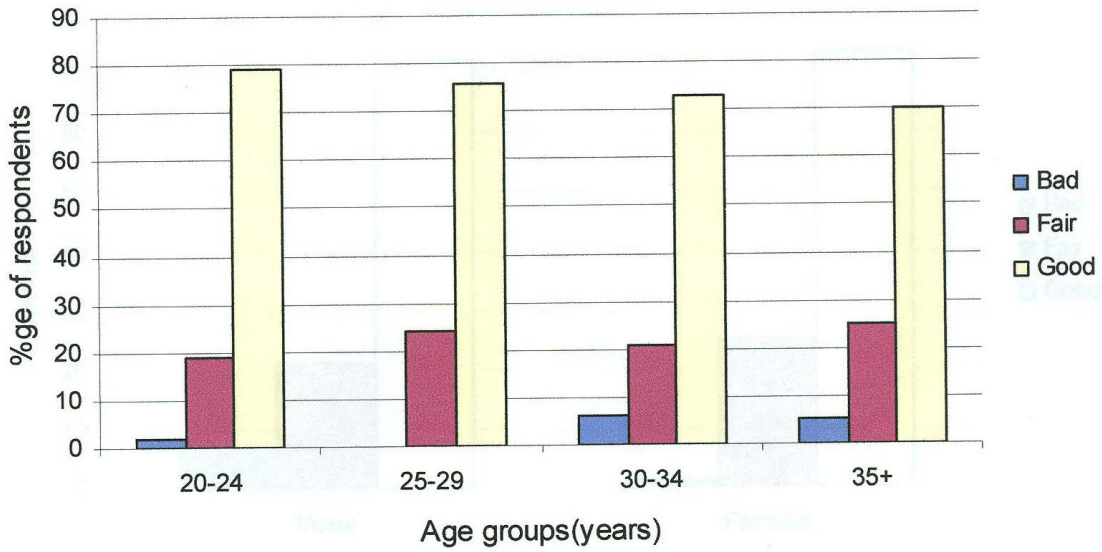
Attitude was assessed by using six questions on different perceptions teachers had on HIV/AIDS with focus on safe sex, (condom use), abstinence from sex, school HIV/AIDS program and voluntary counselling and testing for HIV. Each of the six questions was scored and the scores were added together. From a frequency table categorisation of attitude gives three cut off points: 0-2=bad attitude, 3-4=fair attitude and 5-6=good attitude.

Figure3 :Type of attitude by percentage.



Of the 377 (100.0) respondents, 275 (72.9%) showed good attitude towards HIV/AIDS prevention, 88 (23.3%) showed fair attitude and 14 (3.7%) of them showed bad attitude.

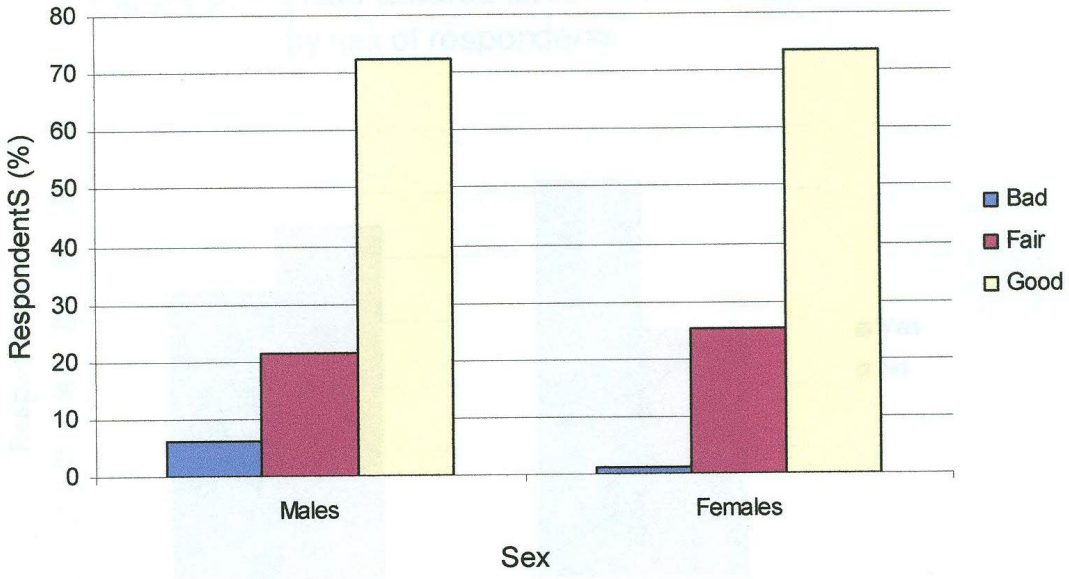
Figure 4: Type of attitude by age



(Chi squared = 6.77; Degrees of freedom =6. P –value = 0.342262873).

The figure above shows that, of the 377 respondents, 58 aged between 20-24 years. Out of those, 1 (1.7%) expressed bad attitude, 11 (19.0%) fair attitude and 46 (79.3%) good attitude. The age group 25-29 had 75 respondents of whom 18 (24.0%) expressed fair attitude and 57 (76.0%) expressed good attitude. Age group 30-34 had 48 respondents. Out of those, 3 (6.3%) expressed bad attitude, 10 (20.8%) fair attitude and 35 (72.9%) good attitude. The age group 35+ had 196 respondents, of whom 10 (5.1%) expressed bad attitude, 49 (25.0%) fair attitude and 137 (69.9%) good attitude.

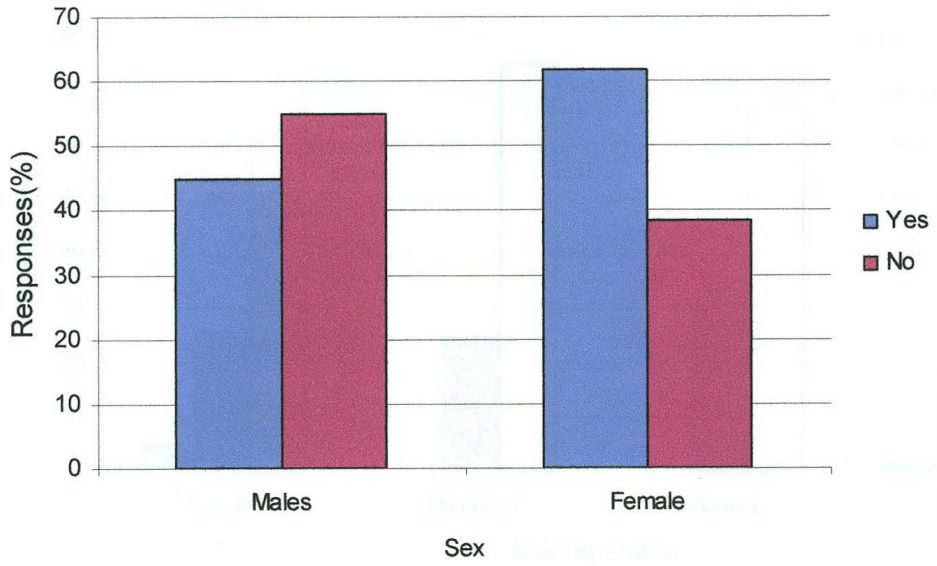
Figure 5: Type of attitude by sex



(Chi squared = 6.65; Degrees of freedom=2; P –value = 0.03590529).

Of all 14 respondents who had bad attitude, 12 were males (6.0% of all males) and 2 were females (1.1% of all females). Out of 88 respondents with fair attitude, 43 were males (21.6% of all males), while 45 were females (25.3% of all females). For the 275 respondents with good attitude, 144 were males (72.4% of all males) while 131 were females (73.6% of all females).

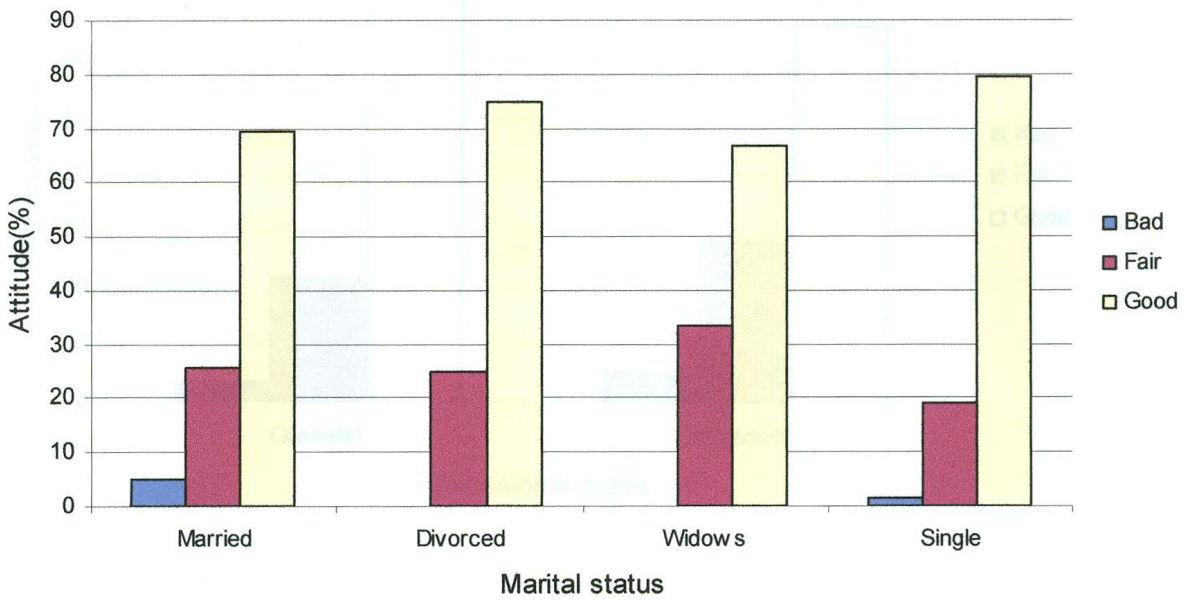
Figure 6: Attitude towards abstinence from sex by sex of respondents



(Chi squared = 10.46; P –value = 0.00121821).

A total of 375 (99.5% of all) teachers responded to the issue of abstinence from sex. Out of those 198 (52.8%) were males and 177 (47.2%) were females. Of all respondents 200 (53.3%) perceived that it was possible for a man or a woman to abstain from sex. Out of those 90 (45.0%) were males and 110 (55.0%) were females. Those who perceived that sex abstinence is impossible totalled to 175 (46.7%), out of whom 108 (61.7%) were males and 67 (37.9%) were females.

Figure 7: Type of attitude by marital status

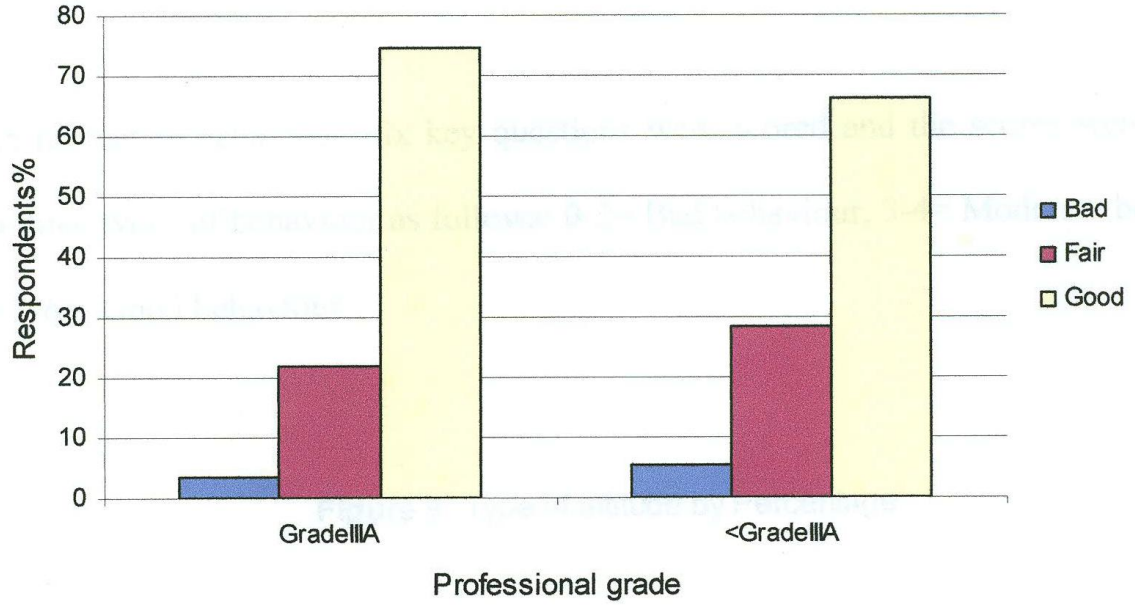


(Chi squared =11.52; Degrees of freedom=11; P-value=0.31826093).

Figure 7 describes the influence of marital status on type of attitude towards HIV/AIDS preventive measures. Out of 377 respondents, 240 were married among whom 12 (5.0%) had bad attitude towards HIV/AIDS preventive measures, 61 (25.4%) had fair attitude and 167 (69.6%) had good attitude. There were only 4 divorced respondents of whom 1 (25.0%) had fair attitude and the other 3 (75.0%) showed good attitude. Six respondents were widows, 2 (33.3%) of them having fair attitude and 4 (66.7%) having good attitude. The rest 101 were singles out of whom 2 (1.6%) had bad attitude, 24 (18.9%) had fair attitude and 101 79.5%) had good attitude.

There is no significant difference in marital status on influencing attitude.

Figure 8: Type of attitude by professional grade



(Chi squared = 2.28; Degree of freedom=2; P-value=0.31957333).

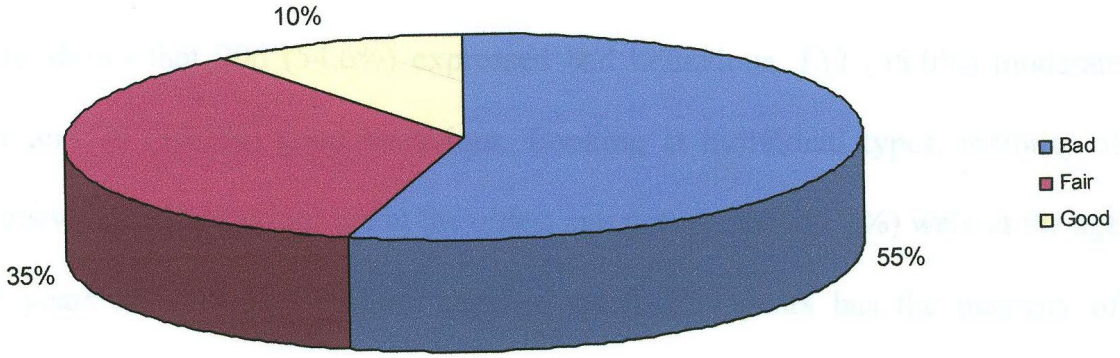
Figure 8 shows that out of 377 respondents of the study, 303 (80.4%) were grade IIIA and above while 74 (19.6%) were below grade IIIA. Of the 303, 10 (3.3%) had bad attitude, 67 (22.1%) had fair attitude and 226 (74.6%) had good attitude as far as HIV/AIDS prevention is concerned. Of the 74 respondents who were below grade III A, 4 (5.4%) had bad attitude, 21 (28.4%) had fair attitude and 49 (66.2%) had good attitude concerning HIV/AIDS prevention.

The figure shows that professional grade does not significantly influence attitude.

4.4.0. Assessment of behaviour as pertaining to HIV/AIDS spread and prevention among primary school teachers in Singida.

With respect to behaviour, six key questions were scored and the scores were graded into three types of behaviour as follows: 0-2= Bad behaviour, 3-4= Moderate behaviour and 5-6 = Good behaviour

Figure 9: Type of attitude by Percentage



(t=39.764; Degrees 0f freedom=376; p-value=-0.00000).

The diagram above shows that 206 (54.6%) respondents scored Bad, 132 (35.0%) scored Moderate and 39 (10.4%) scored Good.

This is further described below.

Table 4.4.1 Type of behaviour by age with respect to spread of HIV/AIDS.

Type of behaviour	Age groups of respondents								Total	
	20-24		25-29		30-34		35+			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Bad	24	41.4	29	38.7	26	54.2	127	64.6	206	54.6
Moderate	24	41.4	29	38.7	17	35.4	62	31.6	132	35.0
Good	10	17.2	17	22.6	5	10.4	7	3.6	39	10.3
Total	58	15.4	75	19.9	48	12.7	196	52.0	377	100.0

(Chi squared = 33.04 Degrees of freedom=6. P –value = 0.00001032).

This table shows that 206 (54.6%) expressed bad behaviour, 132 (35.0%) moderate behaviour and 39 (10.3%) good behaviour. Looking at individual types, majority of respondents with bad behaviour are at the oldest age group, 127 (61.7%) were at the age group 35 years and above. Similarly the age group 35+ years has the majority of respondents with moderate behaviour 62 (47.0%). Observation within the individual age groups shows that age group 35+ years has 127 (64.8%) respondents with bad behaviour and 7 (3.6%) respondents with good behaviour as compared to the age group 20-24 years which had 24 (41.4%) respondents with bad behaviour and 10 (17.2%) with good behaviour respectively.

Table 4.4.1.1 below further elaborates this.

Table 4.4.1.1: Age at first sexual intercourse by sex of respondents

Sex of respondents	Age at first sexual intercourse(years)												Total	
	10-14		15-19		20-24		25-29		30-34		35+			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Males	10	6.5	81	52.3	43	27.7	18	11.6	3	1.9	0	0.0	155	50.8
Females	9	6.0	56	37.3	64	42.7	17	11.3	2	1.3	2	1.3	150	49.2
Total	19	6.2	137	44.9	107	35.1	35	11.5	5	1.6	2	0.7	30	100.0

(Chi squared = 10.89; Degrees of freedom=5; P –value = 0.053).

*72 respondents (44 males; 28 females) didn't remember their ages at first sexual intercourse.

Out of 305 teachers who responded, 155 (50.8%) were males and 150 (49.2%) were females. Of the males 124 (80.0%) had their first sexual intercourse between 15-24 years. The peak age for males is 15-19 years consisting of 81 (52.3%) respondents.

For females, 120 (80.0%) had their first sexual intercourse between 15-24 years, the peak age was at 20-24 years consisting of 64 (42.7%) respondents.

Table 4.4.1.2. Condom use at first sexual intercourse by sex.

Sex of respondents	Condom use						Total	
	Yes		No		No response			
	Nos	%	Nos	%	Nos	%	Nos	%
Males	25	12.6	149	74.9	5	2.5	199	52.6
Females	30	16.9	104	58.4	44	24.7	178	47.4
Total	55	14.6	253	67.1	69	18.3	377	100.0

(Chi squared = 14.52; Degrees of freedom=2; P –value = 0.00070186).

Condom use at first sexual intercourse involved 55 (14.6%) respondents. Non users were 253 (68.2%). Of the males, 25 (12.6%) were condom users while 149 (74.9%) were non users. Of the females, 30 (16.9%) were condom users while 104 (58.4%) were non users.

Table 4.4.1.2. Condom use at first sexual intercourse by sex.

Sex of respondents	Condom use						Total	
	Yes		No		No response			
	Nos	%	Nos	%	Nos	%	Nos	%
Males	25	12.6	149	74.9	5	2.5	199	52.6
Females	30	16.9	104	58.4	44	24.7	178	47.4
Total	55	14.6	253	67.1	69	18.3	377	100.0

(Chi squared = 14.52; Degrees of freedom=2; P –value = 0.00070186).

Condom use at first sexual intercourse involved 55 (14.6%) respondents. Non users were 253 (68.2%). Of the males, 25 (12.6%) were condom users while 149 (74.9%) were non users. Of the females, 30 (16.9%) were condom users while 104 (58.4%) were non users.

Table 4.4.2. Type of behaviour with respect to HIV/AIDS spread by sex.

Type of behaviour	Sex of respondents				Total	
	Males		Females			
	Nos	%	Nos	%	Nos	%
Bad	109	52.9	97	47.1	206	54.6
Moderate	71	53.8	61	46.2	132	35.0
Good	19	48.7	20	51.3	39	10.3
Total	199	52.8	178	47.2	377	100.0

(Chi squared = 0.31 at 2 degrees of freedom P –value = 0.85493604).

This table shows no significant sex difference with respect to behaviour influencing HIV/AIDS spread.

Table 4.4.2.1 Number of sex partners by sex of respondents

Sex of respondents	Number of sex partners								Total	
	None		Only one		Two or more		Not applicable			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Males	116	59.2	71	36.2	8	4.1	1	0.5	196	52.5
Females	98	55.4	70	39.5	8	4.5	1	0.6	177	47.5
Total	14	57.4	141	37.8	16	4.3	2	0.5	373	100.0

(Chi squared = 0.55 at 3 degrees of freedom; P –value = 0.090671490).

The difference in number of sex partners per individual is not significant between males and females.

Table 4.4.2. Type of behaviour with respect to HIV/AIDS spread by sex.

Type of behaviour	Sex of respondents				Total	
	Males		Females			
	Nos	%	Nos	%	Nos	%
Bad	109	52.9	97	47.1	206	54.6
Moderate	71	53.8	61	46.2	132	35.0
Good	19	48.7	20	51.3	39	10.3
Total	199	52.8	178	47.2	377	100.0

(Chi squared = 0.31 at 2 degrees of freedom P –value = 0.85493604).

This table shows no significant sex difference with respect to behaviour influencing HIV/AIDS spread.

Table 4.4.2.1 Number of sex partners by sex of respondents

Sex of respondents	Number of sex partners								Total	
	None		Only one		Two or more		Not applicable			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Males	116	59.2	71	36.2	8	4.1	1	0.5	196	52.5
Females	98	55.4	70	39.5	8	4.5	1	0.6	177	47.5
Total	14	57.4	141	37.8	16	4.3	2	0.5	373	100.0

(Chi squared = 0.55 at 3 degrees of freedom; P –value = 0.090671490).

The difference in number of sex partners per individual is not significant between males and females.

Table 4.4.2.2. Frequency of condom use with sex partners by sex.

Sex of respondent	Frequency of condom use								Total	
	Always		Occasionally		Not at all		Not applicable			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Males	40	20.1	24	12.1	52	26.1	83	41.7	199	52.8
Females	35	19.7	19	10.7	43	24.2	81	45.5	178	47.2
Total	75	19.9	43	11.4	95	25.2	164	43.5	377	100.0

(Chi squared = 0.80 Degrees of freedom=3; P –value = 0.84908147).

The results above show that, 75 (19.9%) respondents used condoms always with their sexual partners while 43 (11.4%) used condoms occasionally, 95 (25.2%) respondents didn't use at all, and the rest 164 (43.5%) condom use was not applicable (married couples).

The test shows no sex difference.

Table 4.4.2.3. Extramarital children by sex.

Sex of respondents	Children extramarital						Total	
	Yes		No		No response			
	Nos	%	Nos	%	Nos	%	Nos	%
Males	50	25.1	149	74.9	0	0.0	199	52.8
Females	40	22.5	137	77.0	1	0.6	178	47.2
Total	90	23.9	286	75.9	1	0.3	377	100.0

(Chi squared = 1.45 at 2 degrees of freedom; P –value = 0.484).

Of all the 377 teachers involved in the study 90 (23.9%) teachers had extramarital children and 286 (75.9%) had no such children. Out of 199 males, 50 (25.1%) had extramarital children while149 (74.9%) had no such children. Of 178 females, 40 (22.5% had extramarital children while 137 (77.0%) had none.

Table 4.4.3. Type of behaviour by marital status with respect to HIV/AIDS spread among respondents.

Type of behaviour	Marital status of respondents								Total	
	Married		Divorced		Widow(er)		Single			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Bad	154	74.8	2	1.0	6	2.9	44	21.4	206	54.6
Moderate	76	57.5	2	1.5	0	0.0	54	40.9	132	35.0
Good	10	25.7	0	0.0	0	0.0	29	74.4	39	10.3
Total	240	63.6	4	1.1	6	1.6	127	33.7	377	100.0

(Chi squared = 57.28 Degrees of freedom=10; P –value = 0.00000000).

Looking at various marital statuses as shown by the table above, bad behaviour was expressed by 206 respondents out of whom 154 (74.8%) were married, 2 (1.0%) were divorced, 6 (2.9%) were widows and 44 (21.4%) were singles. Moderate behaviour was expressed by 132 respondents out of whom 76 (57.5%) were married, 2 (1.5%) were divorced and 54 (40.9%) were single. Good behaviour was expressed by 39 respondents out of whom 10 (25.7%) were married and 29 (74.4%) were single.

4.5.0 Economic issues

The economic affairs of the primary school teachers in the study area were explored through five key questions, and the findings are as shown in the result tables below.

Table 4.5.1. Place of salary collection among the respondents.

Sex of respondents	Place of salary collection				Total	
	District Headquarters		Not applicable			
	Nos	%	Nos	%	Nos	%
Males	184	92.5	15	7.5	199	52.8
Females	142	79.8	36	20.2	178	47.2
Total	326	86.5	51	13.5	377	100.0

Of all the teachers in the study, 326 (86.5%) collected their salaries at the district headquarters while the rest were not getting salaries as they were newly employed and had not yet been included in the salary payrolls.

Table 4.5.2. Duration of waiting for salary.

Sex of respondents	Duration of waiting						Total	
	Hours to one day		Two or more days		Not applicable			
	Nos	%	Nos	%	Nos	%	N	%
Males	145	72.9	39	19.6	15	7.5	199	52.8
Females	113	63.5	27	15.2	38	21.3	178	47.2
Total	258	68.4	66	17.5	53	14.1	377	100.0

Chi squared = 15.01; Degrees of freedom=2; P-value=0.00055067

Among the 377 teachers 258 (68.4%) spent one day or less waiting for their salary at the district headquarters while 66 (17.5%) spent two or more days. For the rest 53 (14.1%) they were not concerned in the issue (51 were not yet getting salaries and 2 were helped by their spouses).

Table4.5.3 Place of stay while waiting for salary.

Sex of respondents	Place of waiting						Total	
	Guesthouse		Elsewhere		Not applicable			
	Nos	%	Nos	%	Nos	%	Nos	%
Males	77	38.7	97	48.7	25	12.6	199	52.8
Females	37	20.8	92	48.7	49	27.5	178	47.2
Total	114	30.2	189	50.1	74	19.6	377	100.0

(Chi squared = 20.85; Degrees of freedom=2; P –value = 0.00002974).

With regard to place of stay while waiting for salary, 114 (30.2%) teachers stayed in guesthouses while 189 (50.1%) stayed in other places. Comparing sexes, 77 (67.5%) males and 37 (32.5%) females stayed in guesthouses while 97 (51.3%) males and 92 (48.7%) females stayed elsewhere.

Table 4.5.4. Salary sufficiency by sex of respondents.

Sex of respondents	Salary status						Total	
	Enough		Not enough		Not applicable			
	Nos	%	Nos	%	N0s %		Nos	%
Males	11	5.5	173	86.9	15	7.5	199	52.8
Females	12	6.7	129	2.5	37	20.8	178	47.2
Total	23	6.1	302	80.1	52	13.8	377	100.0

(Chi squared = 14.64; Degrees of freedom; P –value = 0.00066302).

Only 23 (6.1%) of the respondents had satisfactory salaries, while 302 (80.1%) were not satisfied by their salaries. Of those whose salaries were not satisfactory, 173 (57.3%) were males (86.9% of all males), while 129 (42.7%) were females (72.5% of all females). The difference between those satisfied and those not satisfied is very significant.

Table 4.5.5. Sex partner income support by sex of respondents.

Sex of respondents	Income support						Total	
	Yes		No		Not applicable			
	Nos	%	Nos	%	Nos	%	Nos	%
Males	63	31.7	47	23.6	89	44.7	199	52.8
Females	74	41.6	24	13.5	80	44.9	178	47.2
Total	137	36.3	71	18.9	169	44.8	377	100.0

(Chi squared = 7.67; Degrees of freedom=2; P –value = 0.02157169).

Concerning income, 137 (36.3%) respondents reported support by their sexual partners while 71 (18.9%) had no partner support. More females than males had support from their sex partners (54.0% females and 46.0% males respectively). More males than females had no support from their sex partners (66.2% males and 33.8% females respectively).

4.6.0. Interview to education administrators. (The ward education coordinators and the district education officer).

Information obtained from these administrators aimed at substantiating some issues from the main questionnaire. A total of 17 Ward Education Coordinators (WECs) and the District Education Officer were interviewed (D.E.O.).

4.6.1. Interview with the WECs.

It was reported by most of the discussants that HIV/AIDS had been included in the school teaching curriculum since 2001. Two discussants said that ..." We started in 1994 because there was a special programme which was run by an NGO in our place...". Three others gave a similar response for having started in 1995, 1997 and 1998 respectively. The areas covered included protection from AIDS, behaviour in relation to sex, prevention and caring of patient with AIDS. The targeted audience varied from one area to another. In some areas all the people were targeted, in some pupils were targeted, in others pupils and teachers, and in others the youth. There was no uniformity regarding the target audience.

As far as how much the school HIV/AIDS teaching curriculum is concerned, it helps the teachers to know about AIDS, to take care against infection with HIV, understand AIDS and protection against it and to prepare thorough teaching to the pupils.

A total of 23 school girls from 12 primary schools were terminated from studies due to pregnancy in the past three years. The smallest number per school was one girl while the largest number was six girls. Out of the 23 pregnancies, 4 were caused by primary school teachers, single episode in two schools and two episodes in one school.

The teachers involved were sent to court of law for prosecution. Several other measures were taken to protect school girls from pregnancies. These included: Educating school committees and parents on how to handle the school girls, banning marriages to school girls, recruiting school guardians who provide counselling.

One WEC added that," …We keep working mixed up with boys without segregating them …"

On how much these measures help protecting the school girls from sexual exploitation some said that it helps much, some moderately and some a little.

One WEC said "… It helps by 70% …". Another one said "…It helps protecting them but there is no specific measure of assessing the magnitude. Only that our schools have not got such incidences for the past three years".

All the primary school teachers from the study area collect their monthly salaries at the district head quarters and were not happy with this, especially those from remote areas. "Every month we have to hire a pickup for collecting monthly salaries which are still not enough for our basic requirements. Some of our colleagues have once been hijacked and robbed off all their money. So we are at risk every month …" He said.

Most of the WECs reported that their teachers were not getting their salaries in time. The WECs have teachers' record books and the commonest cause for teachers' absenteeism included attending treatment, collection of salaries, income generation, visiting their families (some teachers stayed far from their families), dodging for alcoholism and attending funerals.

There is no special arrangement (local) for caring the sick teachers in the study area. In a few wards they support them financially to pay for treatment.

As regarding job security to the chronically sick teachers including the HIV cases they are allowed to attend treatment and continue and continue getting their salaries.

4.6.2 Interview to the DEO:

This revealed that school HIV /AIDS teaching curriculum had been in place since 2000 for the whole district. The coverage is on the meaning of AIDS, symptoms prevention and caring of the AIDS patients. Targeted group are the pupils. Teachers benefit by getting a little information about AIDS. School girls dismissed from school due to pregnancy in the past three years totalled to 44. Out of those 4 were in standard four, 8 in standard five, 19 in standard six and 13 in standard seven. Only one out of the 44 school girl pregnancies was caused by a teacher (Differs from the WECs reports 4 pupils in 3 schools). The measures taken to prevent school girls sexual exploitation is by making frequent checks to identify any abnormalities in sexual behavior, and correct accordingly. All teachers collect their salaries at the district head quarters due to safety against robbery. They get their salaries in time (as soon as the salary is out for dispatch). The district office has a register in which every teacher who went to town has to register. Commonest causes of absenteeism are the same as reported by WECs.

For the case of chronically sick teachers including the HIV/AIDS cases, " ...We transfer them to working stations near health facilities, we support their treatment costs, including referrals to Muhimbili and KCMC and they are kept at work till death ...". He reported.

4.7.0. Interview with community members.

A total of 39 community members were interviewed on their awareness as far as primary school teachers and AIDS was concerned. Results were as follows:

Table 4.7.1. Age groups of respondents by sex

Sex of respondents	Age groups (years)										Total	
	10-94		20-29		30-39		40-49		50+			
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
Females	10	55.6	1	5.6	2	11.1	3	16.7	2	11.1	18	46.2
Males	10	47.6	1	4.8	4	19.0	6	28.6	0	0.0	21	56.8
Total	20	51.3	2	5.1	6	15.4	9	23.1	2	5.1	39	100.0

(Chi squared = 3.46; Degrees of freedom = 4; P-value = 0.48454651).

Of the interviewed community members, 21 (56.8%) were males while 18 (46.2%) were females. The age group 10-19 years had 20 (51.3%) of respondents while the older ages constituted 19 (48.7%) of all.

Table 4.7.2. Awareness on AIDS by age among community members.

Age groups (years)	Awareness on AIDS		Total	
	Yes		No	
	Nos	%	Nos	%
10-19	20	51.3	20	51.3
20-29	2	5.1	2	5.1
30-39	6	15.4	6	15.4
40-49	9	23.1	9	23.1
50	2	5.1	2	5.1
Total	39	100.0	39	100.0

All 39 (100%) respondents were aware of AIDS.

Table 4.7.3. Community awareness on various situations pertaining Primary school teachers and HIV/AIDS in respective areas.

Awareness on various situations	Number of respondents	Percentage
Heard about AIDS		
Yes	22	56.4
No	17	43.6
Total	39	100.0
Teachers with AIDS		
Yes	4	10.3
No	22	56.4
Don't know	13	33.3
Total	39	100.0
AIDS deaths occurred		
Yes	22	56.4
No	16	41.0
Don't know	1	2.6
Total	39	100.0
Death of teachers due to AIDS		
Yes	11	28.2
No	16	41.0
Don't know	12	30.8
Total	39	100.0
Pregnant school girls		
Yes	18	46.2
No	21	53.8
Total	39	100.0
Sexual abuse of school girls by teachers		
Yes	2	5.1
No	37	94.9
Total	39	100.0

From the table above, 56.4% of respondents had heard about AIDS while 43.6% had not. Regarding teachers with AIDS signs and symptoms, 4 (10.3%) of respondents were aware of that, while 35 (89.7%) showed unawareness. Occurrence of AIDS deaths in the villages was reported by 22 (56.4%) respondents. Results also show that 11 (28.2%) of interviewees were aware of teachers' deaths due to AIDS while the rest 28 (71.8%) were not.

Furthermore, results show that 18 (46.2%) were aware of school girls terminated from studies due to pregnancy and 2 (5.1%) were aware of sexual abuse of school girls by their teachers.

CHAPTER 5

5.0. DISCUSSION.

This study has enabled exploration of some factors predisposing primary school teachers to sexually transmitted HIV/AIDS in Singida Rural district. The factors range from knowledge, attitude to behaviour as influenced by sex, age and marital status and professional level. Economic constraints have also shown to be among the factors. These factors have also been addressed in other studies (Bennell p., et al; World YOUTH Report, 2003; Muhondwa et al, 2004). Knowledge or awareness has been ruled out as a factor for predisposing teachers to HIV/AIDS in Singida rural.

5.1. Knowledge:

In assessment of knowledge pertaining to HIV/AIDS disease, the study shows that majority of the teachers, 340 (90.1%), are highly knowledgeable about it. The knowledge is on AIDS as a deadly disease, its causative agent, mode of infection and spread, and prevention. Only a few showed low and moderate knowledge, accounting to nine percent. Similar findings have been shown by Kasindi S., (2000). Teachers of all ages, both sexes and all marital statuses are equally knowledgeable as from analysis tables of results above (Figures 1 and 2; and tables 4.2.1 and 4.2.2). HIV/AIDS is still spreading despite this high knowledge teachers have about it. In terms of HIV/AIDS prevention it means that knowledge doesn't automatically lead to change of behaviour.

5.2. Attitude:

As far as attitude is concerned generally majority of respondents expressed good attitude towards HIV/AIDS prevention. Only the minority 14 (3.7%) expressed bad attitude against HIV/AIDS preventive measures (Figure 3).

Looking at specific examples, attitude is not influenced by age of an individual (Figure 4). Sex has been found to have a strong influence on attitude against or towards HIV/AIDS prevention where more of males expressed bad attitude while more of females expressed good attitude and these differences have been shown to be statistically significant in the analysis of results (Figure 5). Usually the males are more powerful in decision making on sexual affairs. Females have been socialized to "lack autonomy" on sexual matters[11]. Males are more risk takers as shown in the study. This can affect those females with good attitude during practicing unsafe sex. For example the study shows that more males perceived that they can't abstain from sexual intercourse as compared to female while more females perceived that abstinence is possible (Figure 6). The main reasons given for impossibility in abstinence include issues of socialisation, and that, sex is a natural phenomenon so nature has to take its course, others needed children, others reported it as a habitual issue. Some claimed of inadequate sex education and others used sex as a source of income.

From the study findings, marital status and professional grade have no sex differences in influencing attitude against or towards HIV/AIDS prevention in both sexes (Figures 7 and 8 elaborate this).

5.3. Behaviour:

On the aspect of behaviour, the study shows that this is the area where the problem lies. Only 39 (10.3%) of respondents showed good behaviour as far as HIV/AIDS spread is concerned, 132 (35%) showed moderate behaviour while the majority 206 (54.7%) showed bad behaviour (Figure 9).

Regarding behaviour, the results have also shown that a larger proportion of respondents with bad behaviour is from those with older age as compared to younger age. Good and moderate behaviours have been shown by the younger respondents. The difference is statistically significant (Table 4.4.1).

Looking at specific issues pertaining to behaviour, the results of this study have shown the following: Regarding the age at first sexual intercourse the highest is in the age groups 15-25 years constituting 244 (80%) of all respondents, with the peak age group 15-19 years. However, age difference by sex is not statistically significant (Table 4.4.1.1).

Of all respondents, 290 (76.9%) had their first sexual intercourse before marriage while in 72 (19.1%) it was after. The rest 15 (6.0%) didn't respond to this issue. This shows high risk behaviour which might have predisposed them to HIV/AIDS infection from practiced unsafe sex.

Looking at the issue of condom use at first sexual intercourse (Table 4.4.1.2), its only 55(14.8%) of the respondents who used condoms, more of them being females than males. The majority didn't use condom at their first sexual intercourse some giving reasons that at the time of the act HIV/AIDS had not yet crept in (for those who did it

before the HIV/AIDS era). Others gave reasons like lack of knowledge on condom use, unavailability of condoms, trust to sex partner, fear of being infected by HIV form HIV implanted condoms.

In general as far as sex difference is concerned with respect to influence on behaviour there is no significant differences between sexes, meaning both sexes have equal chances in influencing certain behaviour. However, majority of respondents fell in the group of bad behaviour with respect to sexual HIV/AIDS spread, followed by moderate behaviour. Very few showed good behaviour as considering safe sex in prevention of HIV/AIDS spread (Table 4.2.2).

If we look at the number of sex partners per respondent, there is no significant difference in number of sex partners per individual between males and females (Table 4.4.2.1). Concerning frequency of condom use with sex partners, it is a smaller proportion of respondents who used condoms always during sexual intercourse with their sexual partners. The disadvantaged, the women are not in a position to enforce condom use of only one partner[12]. Majority in the study did not use condom always.

However there is significant difference between males and females on the aspect of not using condoms where more males than females reported not using condoms with their sex partners (Table 4.4.2.2).

Having extramarital children is also an indicator for bad sexual behaviour (unsafe sex) 23.9% of respondents had a child or children extramarital (Table 4.4.2.3). There is no sex difference in having extramarital children.

Marital status is another area explored. The bad behaviour has been shown among the married and good behaviour is mostly among the singles (table4.4.3). The study shows that the married respondents are mostly at risk although the other groups are not excluded. In other studies marital status has also been expressed as a predisposing factor for HIV/AIDS spread among teachers (Bennell P. et al, 2002).

5.4. Economic aspect:

Looking at the economic aspect of the respondents all teachers who are in the salary pay rolls travel to the district headquarters every month to collect their salaries (table 4.5.1). At town some spend hours while others spend days waiting for their salary (Table 4.5.2) and the waiting places include the guest houses and other places like at their relatives' and their friends'-sex partners- (Table 4.5.3). Here the respondents are exposed to a different social environment and interact with people of different life styles which may predispose them to being infected with HIV through unsafe sex.

Very few of the respondents reported that their salaries were enough to cover all their basic needs (table 4.5.4). The majority had their salaries insufficient for basic needs. The newly employed were not yet receiving salary because of bureaucracy of enrolling them for payments. This is dangerous as it might force them to look for other sources of income to sustain their living, some involve themselves in petty business, others seek for assistance from their colleagues and sex partners (table4.5.5). All these predispose them to risk of sexually transmitted HIV/AIDS as the assistance they get may be on exchange with sexual intercourse. Economic status has been thought of as a

predisposition of teachers to HIV/AIDS as documented by Muhondwa et al, 2004. Being infected with HIV/AIDS may result in further income loss of the affected teachers hence a vicious cycle of poverty. This has also been expressed in other studies[13]. Teaching hours are lost by a number of teachers looking for additional income to supplement the deficits. As shown in the results of this study, 137 (36.3%) of respondents had income support from their sexual partners (both males and females). More of these are females than males (Table 4.5.5).

5.5. Views from education administrators and community members:

The behavioural and economic factors have further been elaborated on by the education administrators, the WECs and the DEO. First the school programme to include HIV/AIDS in the teaching curriculum was introduced in 2000 according to the DEO but at different wards the introduction was at different paces. A few wards started in 1995 (before the district plan) while others started from 2001 to 2003. In the majority of them the targeted is the pupil, the teachers being involved in just getting knowledge for the purpose of teaching and not for themselves. The district has no HIV /AIDS programme for teachers. Similar findings have been shown in other studies including the one conducted in Dar es Salaam[14].

Despite these efforts, several school girls have been terminated from school due to pregnancy ranging from one to six girls per school in the study area. This reflects at one level the inadequacy of the programme, and at other level difficulties in changing behaviour when both "partners" are not addressed.

For the past three years report from WECs shows 23 school girls from 12 primary schools were pregnant. Out of those, 4 pregnancies were caused by primary school teachers. However, there is inconsistency between the reporting and that from the DEO which shows a total of 44 school girls were terminated from studies due to pregnancy in past 3 years, and only one out of those was caused by a primary school teacher. There is under reporting of such incidences to the district office. All in all, this proves bad behaviour among some male teachers, which in the long run will ruin lives of the school girls and many others. Other studies done in Mwanza have shown similar findings on male teachers sexually abusing primary school girls (Mlemya B. et al, 1997; Mgalla Z. et al, 1998).

The community members interviewed in the area of study, showed to some extent occasions of sexual abuse of primary school girls by their male teachers (Table 8.3 above). One ward education coordinator reported about recruitment of school guardians to protect school girls from sexual exploitation. A similar program was introduced in some primary schools in Mwanza (Mgalla Z. et al, 1998) This may control sexual abuse of school girls by teachers and others.

The question of salary collection at the district head quarters is reported to be due to security, purposes against robbery. This is on one hand proper. On the other hand, the teachers are kept at double risk. One of smuggling and robbery of their salaries on the way back to their working stations, the other one being unplanned use of their inadequate income during following the salary every month and finally predisposition to unsafe sex and hence infection by HIV /AIDS.

This also gives some teachers freedom of excessive alcohol intake while in town hence lowering their risk perception on HIV/AIDS infection with tendency to forget or ignore condom use. Alcohol and other mind- altering drugs influence risky sexual behaviour as explained in other studies[15].

Absenteeism of teachers from their working places has been attributed to income generation activities, attending treatment themselves or caring the sick relatives, and following salaries at the district head quarters. The other reason is that some teachers are leaving away from their families so they have to pay visits to their families. This also endangers the teachers' lives as far as sexual practice is concerned. Long separation might make some teachers seeking for sexual partners other than their spouses. This is very dangerous to the teachers and their families because death due to AIDS renders poverty to the affected families. A good number of teachers have multiple sex partners and they don't use condoms as the study results show. Keeping teachers away from their families predispose them to unsafe sex and hence HIV/AIDS to themselves and their spouses`.

The district head office data showed that 5 (38%) of deaths of primary school teachers in the past three years were due to HIV/AIDS (Mujinja P. et al, 2003, showed in their study 66 to 100 percent mortality from AIDS and AIDS related diseases among primary school teachers). The situation might be worse than this as these are the deaths which were fully diagnosed in hospitals. Other deaths occur at homes and undiagnosed and these are not reported.

Chapter 6

6.1. CONCLUSIONS.

1. Primary school teachers are highly knowledgeable about HIV/AIDS disease its mode of infection, spread and prevention. Knowledge doesn't seem to be a factor helping them to avoid sexually transmitted HIV/AIDS. The majority are still in bad behaviour despite high level of knowledge on this problem.
2. Some teachers have bad perception as far as HIV/AIDS prevention is concerned and males in particular have a lower risk perception than females.
3. Among others this research has shown that behaviour is a factor contributing to HIV/AIDS spread in the teachers' community.
4. Low income in terms of salary predisposes some teachers to risk of sexually related HIV/AIDS as a good number of primary school teachers depend on their sexual partners for supplementation of income.
5. Delayed salary payment to the newly employed teachers keeps them at risk of unsafe sex for income or other support.
6. The question of following salary to town on monthly basis contributes to lowering teachers' income through various expenses such as fare to and from town, guest house lodging costs, subsistence and other affairs. This deepens their poverty and so predisposing some of them more to sexually related HIV/AIDS infection.

7. Inadequacy of salary drives some of the teachers to involve themselves in other income generating activities hence less teaching hours with poor concentration on classes. Lesser knowledge to students generally and on HIV/AIDS predisposes them to sexually related HIV/AIDS.

8. Some bad mannered male teachers sexually abuse primary school girls and sometimes make them pregnant. This predisposes the pupils to high risk of acquiring sexually transmitted HIV hence risking their lives. It also cuts down their schooling time, rendering them illiterate and poor immediately and in the longer term. This qualifies them for commercial sex and so the infection.

9. The school teaching curriculum focuses HIV/AIDS teachings to pupils and there is no special programme for their teachers, therefore the perception is that, it's for the benefit of pupils. The teachers are left alone to decide at their own which way to follow in which case behaviour change is becoming difficult.

10. This study underlines further the fact that the fight against HIV/AIDS should not be vertical. One can not target certain segments of the population and exclude others. In this case, teachers, pupils as well as communities must be targeted.

6.2. RECOMMENDATIONS.

1. School HIV/AIDS programs should be reviewed to target both the pupils and teachers, with focus not only on awareness raising but also Behaviour change communication and facilitation.
2. From the fact that teachers' salaries are not enough for their daily living, some of them have been busy looking for money from other sources like petty business, herding and some others have been dependent on their sex partners. As there are no easy means of generating additional income by teachers, it is better all teachers are persuaded to enrol in savings and credit societies where they can get loans to relieve their deficits.
3. It has been found during the study that a good number of newly employed teachers had worked for several months without getting their salaries. This is a problem the situation pushes them to be dependent on others to sustain theirlives. This might force them involving in unintended sexual relations hence endangering their life. To rescue them, arrangements should be made to ensure that the newly employed teachers get their payments the soonest possible.
4. The issue of teachers collecting their monthly salaries at the district headquarters has disadvantages both to the teachers (through fare, guest house costs and subsistence costs), and the pupils (through loss of learning hours). It is advisable to make payment substations at divisional level instead of a single paying station at the district headquarters.

5. As in the case of a few schools in Singida rural and some other districts like in Mwanza region, School guardians should be recruited among the female teachers in all primary schools to take care of school girls regarding sex education, sexual relationships and reproductive health.
6. Serious measures to be taken against male teachers sexually abusing school girls. The measures to include summary dismissal and /or imprisonment.

CHAPTER 7

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