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Original Paper

Perceptions of HIV and AIDS Preventive Interventions and their Impact on Behavioural Change in Young People in Matero Township of Lusaka, Zambia.

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Abstract

Background: Zambia has been experiencing one of the most advanced and devastating Human Immunodeficiency Virus infection (HIV) and Acquired Immune Deficiency Syndrome (AIDS) epidemics in the world. Young people and sex workers have been identified as being at high risk of contracting HIV/AIDS and other sexually transmitted infections. Interventions have been designed to mitigate the epidemic, but their impact in some parts of Zambia is unknown. The study aim was to understand perceptions of HIV/AIDS preventive interventions in Matero of Lusaka town.
Methodology: This was a mixed method study design combining both quantitative and qualitative approaches. A total of 112 young people were selected using probability sampling and 22 adults sex workers purposively selected. A questionnaire was used to capture quantitative data while face to face interviews were held with young people and a focus group discussion with sex workers. Descriptive and inferential statistics using the Statistical Package for Social Sciences were used to analyse quantitative data while thematic content analysis using priori coding was done for qualitative data.
Results: A high level of awareness about HIV/AIDS interventions was found in 89% of young people at household level, and 96% of the commercial sex workers. However 64% of young people and 84% of the commercial sex workers never used a condom the first time they engaged in sexual intercourse. Some young people said they had sex due to peer pressure and a reward while commercial sex workers said that they exchanged sex for cash. Half (50%) of the young people had sex with more than three partners, and the majority of commercial sex workers (79%) had sex with three or more partners in the last 12 months.
Conclusion: Although awareness on the use of condoms was high, these preventive interventions seem not effective especially among sex workers.

Key Words: HIV/AIDS, sexually transmitted infections, sex-workers, risk behaviour, Zambia

1.0 Introduction

Zambia is one of the Sub-Saharan African countries that have been severely hit by the Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) pandemic. Zambia has one of the highest HIV-prevalence rates in the world. The adult HIV-prevalence rate of 14.3% has ranked the country, seventh among the most affected countries in the world. The epidemic has spread rapidly across all sectors of society [1]. Zambia sits in the region that is most affected by HIV and AIDS [2]. Over one million Zambians are living with HIV; and an equally high number of people have been decimated by the pandemic [3].

Young people were found to be the most affected by HIV/AIDS, with more than 50% of the affected population being younger than 20 years of age. Young people constituted the most vulnerable group to HIV infection in the year 2005 [4, 5]. Poverty levels have remained very

high in Zambia. About 60% of the population in Zambia are poor; and the poverty-stricken can be subdivided into extremely poor (42%) and moderately poor (18%) [6].

In absolute numbers, 7.9 million people live in poverty, with 5.5 million of those living in extreme poverty with insufficient resources to meet their daily minimum-food requirements [6]. Zambian young people continue to face challenges that limit their future potentials. These challenges include high unemployment rates, poor quality of education and educational opportunities; limited access to sexual and reproductive health services; high HIV, teenage pregnancy and child-marriage prevalence rates; limited civic engagement, participation and inclusion opportunities [7].

There have been high HIV prevalence rates among young people, where 8% of girls aged 15-19 are infected, compared with 5% of boys; low contraceptive use, with only 28% of married adolescent girls using contraception despite their need to space the births of their children; and a low school-retention rate; where 58% and 44% of girls drop out of school by the 9th and 12th grades, respectively mainly due to pregnancy and child marriage [7]. Furthermore, knowledge alone does not change behaviour; young people need to be equipped with life skills. These skills would help them to deal with the increased demands and stresses that they experience in relation to HIV and AIDS, in order to change attitudes and behaviour and be able to make informed decisions [8].

Most sex workers, especially young ones, are constantly exposed to unprotected sexual intercourse. Female sex workers and their clients play an important epidemiological role in the HIV and AIDS epidemic in most countries [9]. In Zambia, the HIV-infection rate among commercial sex workers was estimated to be 67% [8]. The National AIDS Council estimated that higher prevalence rates among men and women aged 15-49 years were noted in Lusaka province (20.8%) [10]. It has been suggested that a way to halt the spread of HIV/AIDS [11] would be to focus on young people by educating them on the danger of HIV, teaching them skills in negotiation, conflict resolution and critical thinking. Moreover, training the youth in decision-making, communication, improving their self-confidence and the ability to make informed choices, such as postponing sex until they are mature enough to protect themselves from HIV, other sexually transmitted infections (STIs) and unwanted pregnancies would help to control HIV/AIDS.

Progressively, HIV and AIDS have worsened Zambia's health problems and have had devastating socio-economic consequences. Five to six-fold increases in health workers' illness and death rates in Zambia have reduced personnel and increased stress, overwork and fear for their own personal safety in the remaining staff [12]. More than half of bed-occupancy rates have comprised HIV/AIDS patients. This has placed a heavy burden on the Zambian health sector [13].

Matero suburb is in the capital city of Zambia; and it has a population of about 69,870 individuals. Lusaka City has an estimated population of 1,676,321[14]. Sentinel sites surveyed in the Matero township of Lusaka have shown HIV prevalence for women aged 15-44 years to be 29.7%, and 23.9% for women aged 15-19 years [15]. However, HIV prevalence among young people in Zambia is now 5.7% for females aged 15-19 years and 11.8% for females aged 20-24 years. For males aged 15-19 years, the prevalence rate is 3.6% and 5.2% for males aged 20-24 years. In addition, HIV prevalence is higher in women (16.1%) than in men (12.3%). Thus, it can be said that HIV has a young and feminine face in Zambia [16].

In order to reduce HIV/AIDS transmission in Zambia, the government through the National HIV/AIDS STD/TB Council, Non-Governmental Organisations and Faith-Based Organisations have been implementing the following prevention programs since the year 2000:

- Information, Education and Communication (IEC) on HIV and AIDS through television, radio, billboards, use of pamphlets, and applicable materials in school curricula;
- Condom promotion and distribution, in health facilities, places of work, hotels etc.
- Life-skills education through adopting a number of HIV/AIDS/STI and reproductive health-teaching materials in the mainstream school curriculum at national level, and special life-skills programs developed and targeted at commercial sex workers, truck drivers and the military service;
- Counselling and testing, and early and effective diagnosis and treatment of STIs in health facilities;
- Blood-screening of blood transfusion in all district, provincial and central referral hospitals;
- Work-place programs for HIV/AIDS and the strengthening of Health Services to make health facilities youth-friendly, in order to encourage more youth to utilise such facilities for STIs, and voluntary counselling and testing for HIV [17].

Despite having these programs carried out by the Zambian government and the co-operating partners, HIV/AIDS prevalence rates have remained alarming. The targets were high-risk groups in Zambia in major trucking highways, fishing basins and agricultural plantations, commercial sex workers, migrant traders, seasonal workers, fishermen, traders, members of uniformed services, prisoners, refugees and low-income women [17]. A major focus of health interventions has been behavioural change to stem the spread of the HIV/AIDS epidemic [18]. Unless behavioural

changes in the number of sexual partners and the use of condoms during intercourse, is enhanced, it is probable that the HIV-transmission rate will continue to be high [19]. However, little is known about the extent to which these health interventions have influenced behavioural changes in Zambia.

2.0 Methodology

Study Design

This was a mixed-method design combining both quantitative and qualitative approaches. The study was conducted in three (3) standard-enumeration areas (SEAs) in the Matero constituency of Lusaka, Zambia. The three SEAs were randomly selected, where households were also randomly selected. Tasintha Programme for sex workers in Matero was also a site for data collection.

Population and Sampling

The target population included young people aged between 15 and 25 years of age, and the sex workers living in Matero. A sex worker was defined as anyone who earned money by providing sexual services.

A stratified sampling method following a list of Census Supervisory Areas (CSAs), and Standard Enumeration Areas (SEAs) from the Central Statistical Office (CSO) was used as an Area-Sampling Frame. From this Area-Sampling Frame (24), Matero Constituency had a total of 66 CSAs, 238 SEAs; and it comprised 41,227 households with a total population of about 197,763. From these, one CSA and three SEAs were randomly selected for the purpose of area identification and enumeration of the targeted respondents during the field work. In order to draw a representative sample, a sample of 120 households.

The demographic profile of the respondents is given in Table 1. Tasintha register had 34 female sex workers. (N=34); everyone was an eligible respondent; but a few decided not to come for some reason (at random). We could not decide on how these individuals should be sampled; because some decided not to come. A sample of 27 would have been an ideal sample size. Since the availability was less than 27, the sample size (n) was revised. Using a standard practice, in which out of a population of (N=100), a sample is (n=80); a sample size was determined:

N	n
100	80
34	n?

$$n = \frac{80 \times 34}{100}$$

$$n = \underline{27}$$

This meant that a target sample size of n=27 was envisaged, since only 22, were available for the interview, their mean age was 22.2

Instrument Used

The questionnaire was designed to translate the study objectives into measurable indicators that measured knowledge, attitudes, practice and the sexual-risk behaviours of Zambian young people concerning HIV/AIDS [19]. The questionnaire was revised, according to the pilot-study results. Some questions that respondents could not understand easily were re-phrased, to ensure that accurate answers would be given and to ensure the constant flow and logic of the questions.

The questionnaire included both quantitative and qualitative questions; and it was conducted through the use of face-to-face interviews. The quantitative questions included the household size, the respondent's age and the number of sexual partners, for example: *How old is/she?* The qualitative questions included both close-ended and open-ended questions, such as: *Do you think these interventions have had a positive impact*? 1. Yes; 2. No. An example of a qualitative open-ended questions is: If yes, *what are the advantages of these interventions*? The open-ended questions were intended to allow the capturing of in-depth information. Focus group discussions were based on themes drawn from the questionnaire.

Procedure of data collection

Upon getting an approval letter from Research Ethics, letters of permission were taken to Matero Police, Local Neighbourhood Groups and Tasintha Programme for Commercial Sex Workers. Three research assistants were trained by the researcher.

Upon getting permission, a pilot study was then conducted and the questionnaire was reviewed and ultimately revised. Each research assistant was given an area of operation where randomly selected homes were visited. A total of 112 youths from the house hold and 22 commercial sex workers identified giving a total of 134 participants. All the participants were assisted to fill in the structured-survey questionnaire at household level as the main data-collection instrument.

Focus-group discussions (FGDs) were held with sex workers, nightclub owners, the Chairperson and Executive Officers of Tasintha Programme. The FGDs were only held with commercial sex workers. The themes for the FGDs were drawn from the structured questionnaire:

Themes for Focus Group discussion

1. Heard of HIV/AIDS preventive program
2. Knowledge of HIV/AIDS intervention
3. Positive/negative impact on behavioural change
4. Use of condom at first sexual intercourse
5. Exchange of sex for reward
6. Having sex with more than three partners

Two FGDs were planned for and participants for the first group of 11 SW were assigned numbers A1-A11 while the second group of 11 were assigned B1-B11 for the purpose of confidentiality. Before the start of the focus groups, the participants were explained the purpose of the focus group interviews. Refreshments were given to them to relax. An introduction was made and they were assured of their confidentiality and the anonymity for any contribution they would make. An icebreaker was used to relax them further. Focus groups conducted in a Zambian local language "Nyanja". Where participants were confident to speak in English, they were allowed to proceed. The focus group discussions lasted approximately one hour each. The two focus group interviews, namely Focus A and B, were recorded and audio taped.

Discussing issues of HIV/AIDS with sex workers is quite delicate. The participants are skilled to seduce clients and the researcher needed a lot of patience and skills to bring them to discuss freely. A nice ice breaker such as a local common song and a question on the weather and on any latest news of Lusaka together with some refreshment were used as a warm up to set the environment.

Generally all the participants spoke willingly and freely. At times some spoke excessively or wanting to distract. However effort was made to make them participate equally by calling them by their number which were written on the tag they had pinned on them, when they were quite. For example, lady A1, lady B3, etc. In any group discussion it is common to find few respondents who tend to be more vocal. They were also controlled to ensure that every one had a chance to respond equally. They were being asked politely to speak after one or two other participants who were ready to talk had finished.

Data analysis

Descriptive statistics using the Statistical Package for Social Sciences were used to analyse quantitative data while thematic content analysis using priori coding was done for qualitative data. Some of the information was presented as transcribed verbatim. To ensure the process of triangulation, comparative data of both quantitative and qualitative data was presented.

3.0 Results

Demographic Characteristics

A total of 134 respondents took part in the study with 112 participants representing the household (HH) participants and 22 female sex workers (SW). The majority of participants were females (66%) compared with male respondents (34%). With regards education, the majority of the respondents (63%) from households had at least reached grade 9 while 55% of the sex workers had also reached grade 9.

There were 25% at HH compared to 36% sex workers who were engaged in casualization. A total 12% from HH were sales assistants engaged in some business and 15% for HH were in the teaching profession. All sex workers were engaged in prostitution while 6% of HH were also in prostitution.

Interventions and Cultural Practices

Awareness of HIV and AIDS protective and risk behaviours

The level of awareness of HIV/AIDS intervention programmes among SW was very high (96%) and adequate. This can be confirmed by the results showing that all SW said that they had heard of a condom and 95% of them confirmed that they had seen a condom. Table 1 presents the level of awareness and the perception of condom use among the respondents.

Table 1: Level of awareness and perception of condom use

Response/Variables	*Young people Total (n) 112*		*Sex workers Total (n) 22*	
	Yes %	*No %*	*Yes %*	*No %*
Awareness				
Are you aware of any preventive program on HIV/AIDS?	*89*	*11*	*95*	*5*
Have you heard of a condom?	*99*	*1*	*100*	*0*
Have you ever seen a condom?	*98*	*2*	*95*	*5*
Have you and your partner ever used a condom?	*57*	*43*	*77*	*23*
Perceptions of the effectiveness of condom use				
Prevent pregnancy	*47*	*53*	*27*	*73*
Prevent diseases	*21*	*79*	*20*	*80*
Family planning	*21*	*79*	*0*	*0*
Scared of HIV/AIDS	*0*	*0*	*13*	*87*
Lack of trust	*0*	*0*	*20*	*80*

Perception of the effectiveness of HIV and AIDS-Preventive Programs

The results showed that only 35% of the young people thought that HIV and AIDS programs had a positive impact on the behavioural use of condoms. Similarly, only 24 % of the SW thought that the HIV/AIDS preventive programs had a positive impact on the behavioural use of condoms. Most sex workers (15, 75%) stated that there was no positive impact on behavioural change. During FGDs, a number of the explanations given in their verbatim indicated that the programs were not effective. For instance one of them had this to say: *A1: "Many young ladies, like myself, we continue to be promiscuousness because we are accessing ARV (antiretroviral therapy)". B9: "adults want to have sex with young girls". B2: "We do not like to use condoms".*

Marriage and Child Bearing

Condom use/non-regular partner & Behaviour

A few young people from HH (36%) confessed they did not use a condom the first time they had engaged in sexual intercourse while a significant number (86%) of sex workers also did not use the condom. In the last 12 months, some young people (13%) expressed they had sex with three or more partners. Furthermore, about 15% of the young people reported that they had received a reward, or a gift during the last sexual intercourse while almost half of commercial sex workers reported the same. Table 2 shows Condom use at first sexual intercourse, reward for sex and number of sexual partners.

The majority of sex workers (17, 85%) said in the FGDs that they had heard of HIV/AIDS preventive programs. This was reiterated by a sex worker in her verbatim: *A3:" Condoms are found and distributed in the health centre, in hotels and one can buy in shops". B6 said in her verbatim: "there are also programs heard on the radio saying that condoms are good to prevent catching HIV/AIDS, pregnancy and other sexually transmitted diseases"*. All sex workers in the focus groups (20, 100%) have knowledge of HIV/AIDS intervention. They all said that they had seen a condom.

Table 2: Condom use at first sexual intercourse, reward for sex & number of sexual partners

Response/Variables	*Young People*			*Sex workers*		
	Yes %	*No %*	*Not Stated %*	*Yes %*	*No %*	*Not Stated %*
Variable						
When you had first sexual intercourse did you use a condom?	*27*	*47*	*26*	*14*	*86*	*0*
Exchange of sex for reward	*15*	*10*	*75*	*54*	*4*	*40*
Having sex with more than three partners in last 12 months	*13*	*13*	*74*	*50*	*14*	*36*

During the FGDs, the majority of sex workers (17, 86%) said that they had not used a condom at first sexual intercourse. In her own experience one of the SW assigned the identity of *A2 narrated:" I was experimenting after undue peer pressure"*. Most sex workers (13, 65%) also said that they do exchange sex for a reward. A4 in her verbatim said: *"I need money to survive and support my child."* The majority of sex workers (14, 70%) said that they had sex with more than three partners in a year. B9 in her verbatim said: *"This is our livelihood and our work"*.

4.0 Discussion

This study has demonstrated that Human immunodeficiency virus infection and acquired immune deficiency syndrome (HIV/AIDS) preventive interventions are effective in young people but the behaviour change was still very low. The impact on behaviour change is still minor and uncertain. The majority of young people and commercial sex workers were aware of HIV and AIDS preventive interventions and they knew that they were effective in the prevention to HIV infection. However the major finding of this study is that behaviour is not changing proportionately to the level of knowledge that the young people have on the effectiveness of HIV and AIDS preventive measures.

Most of the young people (YP) (62.5%) and the sex workers (SWs) (90%) had attended school. About 43.8% of the young people and most of the sex workers (72.7%) had completed grade 9. These results are in tandem with what previous studies in Zambia found literacy rates for rural and urban areas in Zambia were 60.5% and 83.8% respectively and overall, the literacy rate at national level stood at 70.2% in 2010. Literacy rates for males were higher (73.2%) than that of females (67.3%). The national youth literacy rate for the cohort aged 15-24 years stood at 88.7% in 2010 up from 70.1% recorded in 2000 [16]. The majority of the young people were not working; and all the sex workers were engaged in prostitution. All the sex workers were females; and none of them were married. Other Zambian studies have revealed extreme poverty in rural areas (57.7 %) being four times higher than in urban areas (13.1 %). The proportion of rural Zambians in extreme poverty has steadily increased. The 'young and poor' are both in rural areas and in peri-urban settings, with ongoing migration from rural communities to cities in search of jobs [16] In a study in Uganda of female sex workers it was found female workers (FSW)were younger (73% aged <30 years), unmarried (52%) [25].

This study has demonstrated that the awareness of an HIV and AIDS-preventive program is high in young people; however, behavioural change is still very low. The impact of these interventions on behavioural change is still minor and uncertain. The key to preventing the spread of HIV, especially in epidemics driven mainly by heterosexual transmission, whether heterosexual or homosexual changes in sexual behaviour apply is through changing sexual behaviour. Behavioural-change programmes are required to prevent HIV. However, these have mainly promoted condom use or abstinence; while partner reduction remains the neglected component of ABC [26]. Young people in a Ugandan study discovered that a total of 1,179 (60.3%) students reported having had their sexual debut. Of these, 231 (37.4%) males and 209 (49.2%) females reported inconsistent condom use with a new sex partner [25]. Though young men and women in South Africa aged 15-24 (24.2%) correctly identified ways of preventive the sexual transmission of HIV and rejected

major misconception about HIV transmission and prevention, however, the rate of HIV infections remains high. Young men and women aged 15-24 years accounts for about one quarter of all new HIV infections in South Africa [27].

The majority of young people and commercial sex workers were aware of HIV and AIDS preventive interventions and in the prevention of HIV infection. However, the major finding of this study is that behaviour is not changing proportionately to the level of knowledge that the young people have on the effectiveness of HIV and AIDS preventive programs. Most of the young people and sex workers had not used a condom the first time they had sex. Our findings are supported by a study in Uganda by Mehra et al. [28]. This stated that inconsistent condom use and low condom use was found among males and females; but females were more found to be at higher risk compared to their male counterparts. Similarly, a study in China [29] found an increased level of HIV knowledge in participants; but the number of sexual partners did not change.

Sex workers were also recognised as the most dangerous population in the spread of HIV/AIDS [29]. A study conducted in South Africa showed that although most youths have a relatively good understanding of the way in which HIV is transmitted and the unsafe nature of some sexual practices, the knowledge and behaviours/attitude (safe sex) appeared to be unrelated. And greater knowledge did not necessarily result in safer sex [30]. The findings in previous studies in South Africa also revealed that knowing that condom use prevented the transmission of the HIV virus did not result in any increased intention to use condoms [30] [31]. There was also a marked discrepancy between the knowledge and the performance of safe sexual behaviours, measured by the questions on condom use in casual sex encounters in South Africa [30].

The rate of having sex with multiple sexual partners found in this study was high and worrying. Commercial sex workers were at a much higher risk of contracting and transmitting HIV infections. Other young people incurred some risk as well, of catching and spreading HIV infection. These findings are an observation consistent with other findings in sub-Saharan Africa that most new HIV infections occurred in young women aged below 25 years. Such young people are important for HIV intervention trials in Africa [32]. This study agrees with a study conducted in Uganda that found that Condom knowledge was high with 97% of female sex workers (FSW) and 95% of truckers agreeing with the statement, "*Using condoms properly and consistently reduces risk of HIV infection*". Attitudes towards condom use were generally favourable with 91% of FSWs and 82% of truckers agreeing with the statement, "*Condom use is the best method of HIV prevention*". However, qualitative findings showed that poverty, refusal to use condoms by male partners, alcohol use before sex and beliefs that condoms 'kill the mood for sex' remain key barriers to consistent condom use [25].

The proportion of those who responded from young people at household level (15.1%) receiving a gift or reward for sex; and those 15.3% who had had sex with more than three partners, is a matter of concern on risk behaviours. Human Immunodeficiency Virus infection would spread easily during such transactions because the one receiving the gift would have no power to negotiate for safer sex. These findings support the results of a study on evaluation of HIV'AIDS prevention in South African schools that showed that HIV/AIDS flourished in areas where high levels of unemployment, poverty, prostitution, high school-dropout rates were rife [33].

The age at first marriage of 15 years, as found in the study, was younger than 18 years of age. Young people less than 18 years of age (quote see above) people should be encouraged to grow to full maturity before thinking of marriage. Studies in Uganda revealed that the promotion of delayed sexual debut was pivotal to HIV reduction [34]. More over WHO [35] state that in low- and middle income countries, complications of pregnancy and childbirth are the leading cause of death in women aged 15–19 years. Adolescent girls need to be informed and empowered to prevent pregnancy (and contracting sexually transmitted infections, including HIV). A study by Gordon [36] revealed that teenage marriage is also associated with much lower education levels; women who marry before the age of 19 are 50% more likely to drop out of high school and four times less likely to graduate from college. Early marriage of girls and boys impairs the realization and enjoyment of virtually every one of their rights. Unless measures are taken to address early marriage, it will continue to be a major stumbling block to the achievement of human rights [37].

5. Conclusion

Our findings reveal that HIV/AIDS preventive interventions are perceived effective in young people and sex workers; but the impact on behavioural change is still minor and uncertain. Young people and sex workers were still at risk of contracting and transmitting HIV infection; because they were engaged in risky behaviours. Most of them did not use a condom; they were exchanging partners; and they received gifts or rewards in exchange for sexual intercourse.

Health behaviour is difficult to change; yet educating youths about the risk of unsafe sexual behaviour can reduce risky behaviours and prevent the spread of HIV in Africa. Promoting sexual health in the age of HIV/AIDS necessitates the acknowledgement of the behavioural and the social aspects of sexuality. Psychological approaches and skills to enable young people to make sensible and safe choices for motives, other than fear of disapproval, is vitally important.

The study has shown that a more vigorous condom promotion and distribution of program interventions, together with an HIV strategy for advocacy and social and behavioural change communication (SBCC) are the keys to a gradual and a steady behavioural change in young people, including sex workers.

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