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# **A Comparative Analysis of Reproductive Health Knowledge among HIV-positive and HIV-negative Youths in Zimbabwe**

**AMOS MILANZI, MARVELLOUS MHLOYI AND STANZIA MOYO<sup>1</sup>**

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## **ABSTRACT**

*The study contributes to the understanding of how youths in Zimbabwe continue to face numerous barriers that hinder their ability to take protective actions against HIV. Previous research has shown that while comprehensive knowledge is improving among both HIV-positive and HIV negative youths in Zimbabwe, the proportions are low. A cross-sectional mixed-method research design was employed in the study. This study used a simple random sampling approach to select respondents. The general youth population was sampled from the general population, while Youths Living with HIV (YLHIV) were sampled from clinic records. This study was conducted in three provinces of Matabeleland South, Harare and Manicaland in Zimbabwe. The study demonstrated low levels of comprehensive knowledge of HIV (14%), with YLHIV more likely to have*

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*comprehensive knowledge of HIV (19%), compared to HIV-negative youths (4%). The study findings show low levels of comprehensive knowledge of contraception (19%) among the youth, with YLHIV more likely to have comprehensive knowledge of contraception (22%), compared to HIV negative youths (15%). A logistic regression shows that marital status was a significant factor in comprehensive knowledge of HIV. Divorced youths were 10 times more likely to have comprehensive knowledge of HIV as compared to those who were never married (OR=9.8; 95% CI [(1.9349.63)]). Logistic regression analysis by geographic location demonstrated that YLHIV from urban areas were six times more likely to have comprehensive knowledge of HIV compared to youths from rural areas (OR=6.43; 95% CI [(2.71-15.28)]). The study recommends that information and services should be made available to youths to help them understand their sexuality.*

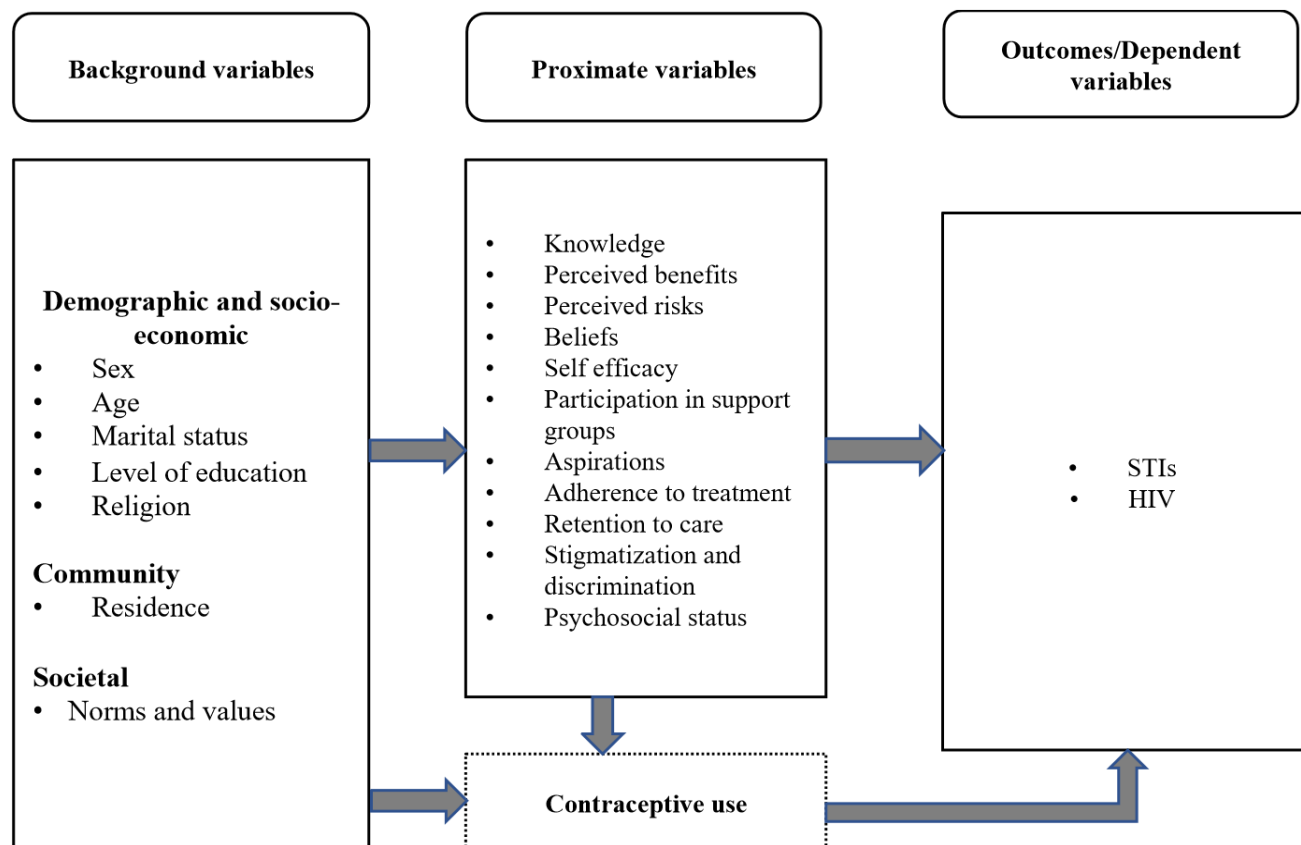
**Keywords:** Youths living with HIV, HIV & AIDS, comprehensive knowledge, Reproductive health

## **INTRODUCTION**

The 1994 International Conference on Population and Development (ICPD) became the landmark of the reproductive health discourse because it's explicit focus on reproduction. The ICPD Programme for Action noted the glaring neglect of youths 'reproductive health needs from the existing reproductive health services (ICPD, 1994). In tandem with the ICPD Programme for Action, Zimbabwe has developed policies and strategic frameworks that aim at facilitating the provisioning of sexual and reproductive health (SRH) services to the youth. While substantial milestones have been reached regarding youths 'reproductive health problems, significant gaps remain. As Zimbabwe is nearing four decades experiencing the HIV&AIDS pandemic, it is expected that youths receive adequate HIV and sex education. However, the lack of comprehensive knowledge of HIV is one of the major causes of the increase in the number of new infections the world over. Within this background, this article seeks to investigate reproductive health knowledge among HIV positive and HIV-negative youths in Zimbabwe.

## **CONCEPTUAL FRAMEWORK**

The Health Belief Model and the Social Ecological Model were adopted to explore various factors influencing the sexual and reproductive health of HIV-positive and HIV-negative youths (Figure 1). The framework explores the interrelationship between background characteristics (demographic and socio-economic, community and societal) and proximate variables (knowledge of SRH, perceived benefits of SRH, perceived risks of not utilising SRH services, attitudes towards SRH, beliefs on SRH, self-efficacy on SRH services, participation in support group, aspirations, treatment adherence, retention to care, stigma and discrimination and psychosocial status), contraceptive use and SRH issues (sexually transmitted infections [STIs], HIV). The background characteristics have a great bearing on SRH. Youth born with HIV may not value SRH as they are victims of parent-to-child transmission. This group may not use contraception or condoms to protect themselves against STIs and HIV reinfection. The youth who acquired HIV sexually may realise their mistakes and take corrective measures with their SRH. They may use contraception or condoms to protect themselves against STIs. Sex could affect one's SRH knowledge, attitude, beliefs and practices. Female youths are expected to have better sexual and reproductive health-seeking behaviours as compared to male youths. Thus, female youths may use contraception or condoms to protect themselves against STIs and HIV reinfection. Youth aged 15-19 years may have less knowledge, negative attitudes and beliefs and poor SRH practices compared to older youths aged 20-24 years. Religion has a significant relationship with SRH attitudes, beliefs and practices. It is assumed that religious and cultural beliefs influence knowledge and attitudes towards SRH. Some religious groups may influence the use of contraception or condoms to protect themselves against STIs. Youths living in rural areas are more likely to have less knowledge, negative attitudes and beliefs and poor SRH practices compared to those in urban areas. This could be influenced by societal norms and values and the unavailability of SRH services.



**Figure 1: Conceptual framework** (Adapted from the Health Belief Model (Becker, 1974) and The Social Ecological Model (Baral *et al.*, 2013))

## LITERATURE REVIEW

There is a general decline in HIV & AIDS incidence and prevalence, albeit with variability across countries and continents. Globally, 38 million people were living with HIV in 2019, with 1.7 million new infections (UNAIDS, 2020). This shows a 23% decline in new HIV infections worldwide from 2.1 million in 2010 (*ibid.*). East and Southern Africa have been, and continue to be, the most affected, with 20.7 million people living with HIV. While global levels of HIV infections were declining, age differentials remain among the youth population, and females bear the brunt of infection. At a global level, 13% of new HIV infections were among the youth aged 15-24 years, and in Sub-Saharan Africa (SSA) the youth accounted for 17% of new HIV infections (*ibid.*). While there is a general decline in HIV & AIDS incidence and prevalence in Zimbabwe, females continue to bear the brunt of infection as sex differentials in both incidence and prevalence continue in Zimbabwe. HIV prevalence by sex was most pronounced among youths aged 15-

24 years, in that, HIV prevalence of female youths was twice (6.0%) that of male youths (3.0%) with an overall HIV prevalence among youth at around 4% (ZIMSTATS and ICF, 2016). Furthermore, more than a third (35%) of new infections in Zimbabwe were among the youth aged 15-24 years (*ibid.*). Young people are the most affected and thus need the most attention, both in research and interventions.

Comprehensive sex education plays a central role in preparing young people for a safe, productive and fulfilling life (UNAIDS, 2020). It provides opportunities to learn and acquire complete, accurate, evidence-informed and age-appropriate knowledge on sexuality and reproductive health issues (*ibid.*). Comprehensive sex education has been shown to contribute to delayed initiation of sexual intercourse, decreased number of sexual partners, reduced sexual risk-taking, increased use of condoms and increased use of contraception among young people (*ibid.*).

About four decades after the HIV & AIDS pandemic has passed, it is expected that the youth could be enjoying or benefitting from welldeveloped programmes on reproductive health with adequate HIV and sex education. On the contrary, there has been a stagnation in knowledge. Lack of accurate and complete knowledge of HIV is one of the major causes of the increase in the number of new infections the world over. Globally, it is estimated that around 34% of youths have comprehensive knowledge of HIV (*ibid.*). In population-based surveys conducted across East and Southern Africa, between 2011 and 2016, just 36% of young women and 30% of young men had comprehensive knowledge about HIV (*ibid.*). In Zimbabwe, less than half (47% of males and 46% of females) of the youth population have comprehensive knowledge of HIV&AIDS (ZIMSTAT and ICF International, 2016). However, other population-based studies in Zimbabwe reported higher levels of comprehensive knowledge of HIV averaging 78%, with females recording higher knowledge levels (81%) as compared to males (71%) (Mzingwane *et al.*, 2020). There is a substantial divergence of levels of knowledge between national statistics and small survey statistics where national surveys report lower levels of comprehensive knowledge than small surveys.

## **KNOWLEDGE AND USE OF CONTRACEPTION**

Contraceptive use can prevent early pregnancy and childbearing and their consequences. In developed countries, contraception among sexually active young people ranges from a high of 90% in the United Kingdom to a low of 31% in Serbia and Montenegro (Avery and Lazdane, 2018). Modern contraceptive use is higher in high-income countries (58%) than in low-income countries (33%) (Woog *et al.*, 2015). Latin America has the highest modern contraceptive prevalence rate among young women, at 57%, while use in SSA has increased fast, from 4% to 15% in the last two decades (Darroch *et al.*, 2016). In more than two-thirds of African countries, modern contraceptive use is below 20% (Woog *et al.*, 2015). Zimbabwe had one of the highest contraceptive prevalence rates (67%) in SSA compared to countries in West Africa (9%), Central Africa (7%), Eastern Africa (22%), and North Africa (45) (UNFPA, 2013). In the Southern African Development Community (SADC) region, contraceptive prevalence rates (CPR) vary from a low of 13% in Angola, to a high of 54.6% in South Africa and 66.5% in Zimbabwe (UNAIDS, 2020).

Studies have shown that high levels of adolescent pregnancy and childbearing in Africa are largely because of a lack of adequate information and barriers to accessing and using contraception (Bankole and Malarcher, 2010). In SSA, an estimated 35% of pregnancies among adolescents are unwanted (WHO, 2018). For instance, a study in Swaziland reported that due to lack of knowledge, adolescents practised unsafe sex and were not aware that they could be pregnant or at risk of contracting HIV & AIDS (Dlamini, 2003). A study conducted in Uganda showed that the use of contraceptives by YLHIV followed the same trend in knowledge and actual practice as their peers not living with the virus (Birungi *et al.*, 2008). The study reported that a significant proportion (63%), recognised the necessity of using condoms to avoid re-infection. However, a smaller proportion (30%) stated using condoms to avoid infecting partners with HIV or other STIs. The study further reported that the use of contraceptives by YLHIV was relatively higher compared to the wider population, suggesting careful sexual behaviour among YLHIV (*ibid.*). Birungi *et al.* (2007) showed that YLHIV had erroneous concerns about hormonal contraceptives that might impact its uptake and use.

Studies have revealed that YLHIV are engaging in risky sexual behaviours that result in teenage pregnancies (Zgambo *et al.*, 2018). Research indicates high incidents of pregnancy that are not intended among YLHIV, increasing the risk of morbidity and mortality for both mothers and their new born babies (*ibid.*). Arikawa *et al.* (2016) found 17 incidents of pregnancies in their 266 female YLHIV sample in Côte d'Ivoire. Similarly, Birungi *et al.* (2011) found that 74% of pregnancies among YLHIV in their longitudinal study occurred unintentionally in Uganda.

## **METHODOLOGY**

The study was conducted in three provinces with the highest, medium and lowest numbers of YLHIV in Zimbabwe. The three selected provinces are Matabeleland South with an HIV prevalence of 21.7%, Harare with an HIV prevalence of 13.7% and Manicaland with an HIV prevalence of 11.0%. The research employed a cross-sectional research design, involving triangulation of both survey and focus group discussion (FGD) methods of data collection. A survey was used to collect quantitative data using the questionnaire. A data entry template was developed for the questionnaire using the Census and Survey Processing System (CSPRO) 7.0.1 for Windows. Quality assurance mechanisms were developed, including skip patterns and logical checks and pre-coding allowable response values. Frequency tables, cross-tabulations and logistic regression were used for data analysis.

## **RESULTS**

The study sought to investigate Reproductive Health knowledge among HIV-positive and HIV-negative youths in Zimbabwe. Findings from 600 youths were presented with 400 YLHIV and 200 HIV-negative. In this presentation, an effort is made to identify issues that pertain to young people as a group, and to YLHIV as a specific group. This comparative approach is necessitated by the appreciation that YLHIV are not necessarily a diametrically different group of youth from other young people. However, their HIV status may exacerbate particular issues common to young people.

## DEMOGRAPHIC SOCIO-CHARACTERISTICS OF RESPONDENTS

The sample comprises 67% YLHIV and 33% youth perceived to be HIV negative (to be subsequently referred to as HIV-negative). In this sample, the 15-19-year olds were slightly more (52%), than the 20-24-year olds (48%). Youth living with HIV were slightly younger than HIV-negative youths (53%) and 47% were aged 15-19 and 20-24 years respectively, compared to 50% for both age groups for HIV-negative youths. Females dominated the sample accounting for 52%, compared to males (48%). However, this female dominance is more pronounced among HIV-negative youths (57%), compared to YLHIV at 47% ( $p=0.02$ ). Most youths (81%) reported that they were not married, while 16% reported that they were married or cohabiting. The proportion that has never married is comparable between YLHIV and HIV-negative youths, albeit with a bias towards the HIV-negative youths (80%), compared to 83%. The largest proportion of youths (62%) reported that they completed tertiary education. This is comparable between YLHIV (59%) and HIV-negative youths (68%). A sizeable proportion of youths (38%) reported that they completed secondary education, comparable between YLHIV (40%), and HIV-negative youths (32%). However, worth noting is the fact that HIV negative youths were more likely to complete college (68%), compared to YLHIV (59%,  $p=0.001$ ). The dominant religion is Christianity (63%). This is comparable between the two groups with a slight bias towards HIV negative youths (64%) compared to YLHIV (62%). A sizeable proportion of youths (14%) reported having a disability. However, YLHIV are four times more likely to be living with a disability (19%), compared to HIV-negative youths (4%,  $p<0.0001$ ). The largest proportion of youths (64%) were living in urban areas, while 36% were in rural areas. This is comparable between YLHIV (65%), compared to 62% among HIV-negative youths.

**Table 1:** Percentage distribution of demographic socio-characteristics of the respondents by HIV status

Variable	Youths living with HIV	HIV-negative Youths	P-value	Total
Age				
15-19	52.6	49.8	0.505	51.7

20-24	47.4	50.2		48.3
<b>Sex</b>				
Female	46.6	56.7	0.020*	50
Male	53.4	43.3		50
<b>Highest Level of Education</b>				
Primary	0.8	0.0	0.060	0.5
Secondary	40.3	31.7		37.5
College	58.9	68.3		61.9
<b>Marital Status</b>				
Never married	79.9	83.1	0.041*	81.0
Married/Co-habit	15.0	16.4		15.5
Divorced	2.0	0.0		1.3
Separated	3.0	0.5		2.2
<b>Religion</b>				
Islam	4.0	5.5	0.737	4.5
Christianity	61.7	64.2		62.5
Apostolic Sect	31.6	28.9		30.7
African Traditional	1.5	0.5		1.2
None	1.0	1.0		1.0
Non-Response	0.2	0.0		0.2
<b>Living with Disability</b>				
Yes	18.8	3.5	<0.0001*	13.7
No	81.2	96.5		86.3
<b>Geographical Location</b>				
Rural	35.1	62.2	0.512	36.0
Urban	64.9	37.8		64.0
<b>Total</b>	<b>66.5</b>	<b>33.5</b>		<b>100</b>

\*P<0.05

Comprehensive knowledge of HIV transmission by socio-demographic characteristics

YLHIV were more likely to have comprehensive knowledge of HIV (19%), compared to HIV-negative youths (4%). As expected, there is a positive

relationship between age and comprehensive knowledge of HIV. Older youths aged 20-24 years were more likely to demonstrate comprehensive knowledge of HIV (17%), compared to those aged 15-19 years (11%). It is interesting to note that YLHIV were more likely to demonstrate comprehensive knowledge of HIV. For instance, while 15% and 24% of YLHIV aged 15-19 and 20-24 years, respectively, demonstrated comprehensive knowledge of HIV, this compares to 2% and 5% of their HIV-negative counterparts. Females dominated the sample on comprehensive knowledge of HIV (14%), compared to males (13%). Comprehensive knowledge of HIV is positively related to education, while 12% and 14% of the youths with secondary education and college education respectively demonstrated comprehensive knowledge of HIV with none of the youths with primary education demonstrating the same. However, this relationship is more marked among YLHIV. For instance, while 16% of YLHIV who completed secondary education, demonstrated comprehensive knowledge of HIV, 20% of those with a college education reported the same. On the other hand, 2% and 3% of HIV-negative youths with the same levels of education reported the same. Comprehensive knowledge of HIV is positively related to marital status. For instance, while 13% of the never-married youths demonstrated comprehensive knowledge of HIV, 63% and 39% of the divorced and separated youths, respectively, demonstrated comprehensive knowledge of HIV. It is interesting to note that never-married YLHIV (17%), were more likely to have comprehensive knowledge of HIV compared to their HIV-negative counterparts (4%). A sizeable proportion (20%) of persons with disabilities demonstrated comprehensive knowledge of HIV. Consistently, youths in urban areas demonstrated comprehensive knowledge of HIV (19%), compared to rural youth (4%). This dominance was more pronounced among YLHIV (27%) compared to 4% of HIV-negative youths.

**Table 2: Percentage distribution of comprehensive knowledge of HIV, by HIV status**

Variable	Youths living with HIV		HIV-negative Youths		Total	P-value
	Percent	P-value	Percent	P-value		
<b>Age</b>						
15-19	14.8	0.022*	2.0	0.254	10.6	0.019*
20-24	23.8		5.0		17.2	
<b>Sex</b>						
Female	19.4	0.884	6.1	0.019*	14.3	0.723
Male	18.8		0		13.3	
<b>Highest Level of Education</b>						
Primary	0.0	0.506	0.0	0.570	0.0	0.702
Secondary	16.4		1.8		12.4	
College	19.8		3.3		13.9	
<b>Marital Status</b>						
Never married	17.2	0.002*	3.6	0.969	12.6	
Married/Co-habit	18.3		3.0		12.9	<0.0001*
Divorced	62.5		0.0		62.5	
Separated	41.7		0.0		38.5	
<b>Religion</b>						
Islam	0.0	0.210	9.1	0.879	3.7	0.471
Christianity	22.4		3.1		15.7	
Apostolic Sect	15.1		3.4		11.4	
African Traditional	16.7		0		14.3	
None	25		0		16.7	
<b>Living with Disability</b>						
Yes	20.0	0.816	0.0	0.609	18.3	0.208

No	18.8		3.6		13.1	
<b>Geographical Location</b>						
Rural	5.0	<0.0001 *	2.6	0.608	4.2	<0.0001 *
Urban	26.6		4		19.3	
<b>Total</b>	<b>19.0</b>		<b>3.5</b>		<b>13.8</b>	

\*P<0.05

Female and male FGD participants highlighted the following preventive knowledge gaps:

Sex education seems to be a no-go area for discussion between us and adults in this community. It does not matter who you are talking to, as long as it is an adult you are talking to, discussing sexual issues is taboo. This was supported by one boy, with the clapping of hands by others retorted, —Sir, sexual issues cannot be discussed, full stop! However, the boy hastened to add: —But sexual issues are the real juicy topics among us as boys.

### **LOGISTIC REGRESSION COMPREHENSIVE KNOWLEDGE OF HIV**

A logistic regression was performed to ascertain the effects of age, sex, and marital status, level of education, geographical location and disability status on comprehensive knowledge of HIV. For youths living with HIV, marital status was a significant factor in knowledge of ways of contracting HIV. Those who were divorced were 10 times more likely to have comprehensive knowledge of HIV as compared to those who were never married (OR=9.8; 95% CI [(1.93-49.63)]). Those who were separated were also four times more likely to have comprehensive knowledge of HIV as compared to those who were never married (OR=4.3; 95% CI [(1.117.24)]). Analysis by geographic location demonstrated that youths living with HIV from urban areas were six times more likely to have comprehensive knowledge of HIV, compared to youths from rural areas (OR=6.43; 95% CI [(2.71-15.28)]). However, age, sex, highest level of education and disability status had no significant effect.

**Table 3:** Logistic Regression Comprehensive Knowledge of HIV

\*P<0.05



Yes		1.24	0.62	2.47	1			
No	1					0.32	0.61	0.98
Geographical Location								
Rural	1					3.09	0.3	31.49
Urban		6.44*	2.71	15.28	1			

### **COMPREHENSIVE KNOWLEDGE OF CONTRACEPTION**

YLHIV were more likely to have comprehensive knowledge of contraception (22%), compared to HIV-negative youths (15%). As expected, there is a positive relationship between age and comprehensive knowledge of contraception. Older youths aged 20-24 years, were more likely to demonstrate comprehensive knowledge of contraception (27%), compared to those aged 15-19 years (14%). YLHIV were more likely to demonstrate comprehensive knowledge of contraception. For instance, while 19% and 24% of YLHIV aged 15-19 and 20-24 years, respectively, demonstrated comprehensive knowledge of contraception, this compares to 5% and 25% of their HIV-negative counterparts. Comprehensive knowledge of contraception is related to education, with 12% and 20% of the youths with secondary education and college education demonstrating comprehensive knowledge of contraception, respectively, 100% of the youths with primary education demonstrating the same. However, this relationship is more marked among YLHIV. For instance, while 17% of YLHIV who completed secondary education demonstrated comprehensive knowledge of contraception, 22% of those with a college education reported the same. On the other hand, none and 17% of HIV-negative youths with the same levels of education reported the same. Comprehensive knowledge of contraception is positively related to marital status. For instance, while 17% of the never-married youths demonstrated comprehensive knowledge of contraception, 29% and 50% of the divorced and separated youths, respectively, showed complete and accurate knowledge of contraception. The never-married YLHIV, (19%) are more likely to have comprehensive knowledge of contraception compared to their HIV-negative counterparts (14%). A sizeable proportion (13%) of persons with disabilities demonstrated comprehensive knowledge of contraception. This dominance was

more pronounced among YLHIV (26% vs 19%) compared to 17% vs 14% among HIV-negative youths.

**Table 4: Percentage distribution of comprehensive knowledge of contraception by HIV status**

Variable	Youths living with HIV		HIV-negative Youths		Total	P-value
	Percent	P-value	Percent	P-value		
<b>Age</b>						
15-19	19.2	0.395	5.2	0.003*	14.2	0.022*
20-24	24.4		25.0		24.6	
<b>Highest Level of Education</b>						
Primary	100	0.099	0	0.015*	100	0.022*
Secondary	17.1		0		12.3	
College	22.4		17.4		20.4	
<b>Marital Status</b>						
Never married	18.8	0.061	13.5	0.612	16.7	0.041*
Married/Co-habit	34.4		20.8		28.6	
Divorced	50		0		50.0	
Separated	0		0		0	
<b>Religion</b>						
Islam	12.5	0.910	14.3	0.991	13.3	0.924
Christianity	22.2		14.7		19.3	
Apostolic Sect	21.8		15.6		19.5	
African Traditional	25.0		0.0		25.0	
None	0.0		0.0		0.0	
<b>Living with Disability</b>						
Yes	13.9	0.216	0	0.550	13.2	0.326

No	23.3		15.2		19.8	
<b>Geographical Location</b>						
Rural	25.8	0.313	17.1	0.015*	22.3	0.288
Urban	19.4		13.7		17.3	
<b>Total</b>	<b>21.5</b>		<b>14.9</b>		<b>19</b>	

\*P<0.05

The study showed that the main reason for using contraception was to avoid getting pregnant. The sentiments were shared in the focus group discussion with young women. Note the following remark from one young lady:

The only reason we are using contraception is to avoid getting pregnant. We are not worried about HIV anymore. You know what? One can continue with school when they are infected by HIV but pregnancy will force someone to drop school and continue maybe later. We are appealing to the family planning centres to be friendly to us when we try to find some form of contraception.

The youth were quick to point out that they were more afraid of getting pregnant than HIV infection. This remark is by an 18-year-old HIV negative girl, with the support of others in the group:

As young people, we are mostly afraid of getting pregnant because pregnancy is quick to show while HIV is an infection you must personally struggle with.

YLHIV were rather conflicted. They maintained that they are certain of their positive status and the only issue is whether or not they are going to infect the next person. One point of view was that most HIV positive youths do not worry much about infecting the next person given that they were also infected by someone, and mostly not through their choice or negligence. To that extent, they maintained that it is unfair to expect them to live lives which are not common at all that is using a condom all the time when having sex. Note this remark by 23-year-old HIV-positive female which was met with ululations:

The fact that we are HIV-positive does not mean that we also do not like to taste unprotected sex like any other youth. We also want to give birth to children you know. And condom use and childbirth are incompatible.

HIV-positive boys were more vindictive than their female counterparts. There was a general feeling that infecting another person is no issue because they themselves were infected by someone too. So, they maintained, as a 24-year-old HIV positive male said:

We are youth and please do not expect me to behave like a priest for the sake of the next person. I am largely concerned about impregnating a girl before I am ready to be a father. And of course, I will tell a girl when she is pregnant that we should go for HIV testing. If the test is positive, which I am sure it will be, then I will ask for what we can do to prevent mother-to-child transmission. The objective here will be to protect my child. Definitely, I will not necessarily concede that I infected my girlfriend unless she was a virgin when I had sex with her. But there are virgins who were also born positive, so no big deal.

## **DISCUSSION**

The findings demonstrated lower levels of comprehensive knowledge of HIV (14%) among the youth. Worth noting is the fact that YLHIV were more likely to have comprehensive knowledge of HIV (19%), compared to HIV-negative youths (4%). As expected, there is a positive relationship between age and comprehensive knowledge of HIV. Older youths, aged 20-24 years, were more likely to demonstrate comprehensive knowledge of HIV (17%), compared to those aged 15-19 years (11%). This can be explained by the fact that sexual information is widely shared with young people who are older and have higher chances of engaging in sexual activities. A logistic regression showed that divorced youths were 10 times more likely to have comprehensive knowledge of HIV as compared to those who were never married (OR=9.8; 95% CI [(1.93-49.63)]). Logistic regression analysis by geographic location demonstrated that YLHIV from urban areas were six times more likely to have comprehensive knowledge compared to youths from rural areas (OR=6.43; 95% CI [(2.71-15.28)]).

These reported levels are slightly below the global average of comprehensive knowledge of HIV among youths that ranges around 34% (UNAIDS, 2020). The reported levels are also lower than the national average of comprehensive knowledge of HIV among the youth in Zimbabwe which stands at 47% for males and 46% for females (ZIMSTAT and ICF International, 2016). The reported levels

show a divergence from other small-scale survey statistics in Zimbabwe that reported higher levels of comprehensive knowledge of HIV averaging 78%, with females recording higher knowledge levels (81%) as compared to males (71%) (Mzingwane *et al.*, 2020). The absence of correct and accurate information on HIV transmission routes and associated misconstructions increases the probability of indulging in unsafe sex practices that expose them to HIV infection and reinfection, treatment failure and subsequently, general futility of treatment investment.

The study findings show lower levels of comprehensive knowledge of contraception (19%) among the youth. YLHIV were more likely to have comprehensive knowledge of contraception (22%), compared to HIV negative youths (15%). This dominance was more pronounced among YLHIV, 26% vs 19%, compared to 17% vs 14% among HIV-negative youths. The reported levels of comprehensive knowledge of contraception are within the regional levels and support findings from a study in Uganda that reported that the use of contraceptives by YLHIV was relatively higher compared to the wider population, suggesting careful sexual behaviour among YLHIV (Birungi, 2008).

The youth maintained that their pre-occupation when using contraception is to avoid getting pregnant, HIV infection and re-infection are secondary concerns. The reviewed literature showed that in Zimbabwe, the use of modern contraceptive methods among adolescent women is slowly increasing from 35% in 1999 to 38% in 2011 (Remez, Woog and Mhloyi, 2014). Globally, the rate of contraceptive use is much higher among unmarried sexually active adolescent girls (51%) than among married or in union adolescent girls (20%), so too is the unmet need for family planning at 41% and 23%, respectively (UNAIDS, 2019). In developed countries, contraception among sexually active adolescents ranges from a high of 90% in the United Kingdom to a low of 31% in Serbia and Montenegro (Avery and Lazdane, 2018). Modern contraceptive use is higher in high-income countries (58%) than in low-income countries (33%) (Woog *et al.*, 2015). It can be concluded that contraceptive use among youths in Zimbabwe is generally much lower than in other countries. It is rather disturbing to note that YLHIV are concerned only about avoiding getting pregnant. This finding tends to suggest that Zimbabwe is failing to raise a new generation of youths that is knowledgeable about contraception.

## **CONCLUSION**

In general, YLHIV exhibit greater knowledge about sexual and reproductive health issues. They possess comprehensive knowledge about HIV when compared to HIV-negative youths. Additionally, YLHIV demonstrate understanding of contraception compared to their HIV negative counterparts. The generally low levels of knowledge shown in the study are largely anchored in the socio-cultural milieu within which behaviour is developed and nurtured. Thus, intervention models must aim at changing norms and values about young peoples' sex and sexuality. The community should be empowered to acknowledge and support the education of young people about sex, sexuality and protection, indeed reproductive health diseases - their etiology, prevention and treatment.

## **RECOMMENDATIONS**

Comprehensive sex education that targets the youths regardless of their HIV serostatus. The need for Ministry of Health and Child Care (MoHCC) and shareholders to mobilise coherent reproductive health resources with particular emphasis on youth reproductive health problems. The incessant need for the implementation of multi-sectorial awareness programmes for youths, sensitising them about comprehensive sex education.

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