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

## Amos Milanzi[[1]](#footnote-1), Marvellous Mhloyi[[2]](#footnote-2)1 and Stanzia Moyo[[3]](#footnote-3)1

**ABSTRACT**

This study sought to investigate Reproductive Health knowledge among HIV-positive and HIV-negative youths in Zimbabwe. A cross-sectional mixed method research design was employed in the study. This study used simple random sampling approach to select respondents. The general youth population was sampled from the general population, while Youths living with HIV (YLHIV) was sampled from clinic records. This study was conducted in three provinces in Zimbabwe that are Matabeleland South, Harare and Manicaland. The study administered 600 questionnaires, conducted four focus group discussions. Statistical Package for Social Sciences (SPSS version 25) was used to analyse quantitative information while, FGD data was analysed using content analysis and Nvivo Version 11 software. The study demonstrated lower levels of comprehensive knowledge of HIV, 14%, with YLHIV more likely to have comprehensive knowledge of HIV, 19%, compared to HIV-negative youths, 4%. The study findings show lower 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. Youths who were divorced were ten 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 the urban areas were six times more likely to have comprehensive knowledge of HIV compared to youths from the rural areas (OR=6.43; 95% CI [(2.71-15.28)]. The study recommends an incessant need for comprehensive sexuality education for young people in Zimbabwe regardless of their HIV status.

Keywords: Youths living with HIV, HIV&AIDS, comprehensive knowledge, Reproductive health, HIV-negative.

**INRODUCTION**

The 1994 International Conference on Population and Development (ICPD) became the landmark of the reproductive health discourse by its explicit focus on reproductive. The ICPD Programme for Action noted a 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 services to the youth. While substantial milestones have been achieved regarding youths’ reproductive health problems, significant gaps still remain. As we are about to get to four decades with HIV&AIDS pandemic it is expected that youths receive adequate HIV and sex education however in the contrary there has been stagnation on knowledge. Lack of comprehensive knowledge of HIV is one of the major causes of 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.

This article is the outcome of a study that sought to investigate Reproductive Health knowledge among HIV-positive and HIV-negative youths in Zimbabwe. This article gives the background to the study and highlights the research problem. Literature gaps will be identified on reproductive health knowledge among HIV positive and HIV negative youths in Zimbabwe. It also gives an insight into the objectives which provides direction to the study. This article reviews previous literature on reproductive health knowledge among HIV positive and HIV negative youths from global, regional and national levels.The Conceptual framework underpinning the study and the methodology employed will be presented. The major findings and discussion will be presented on comprehensive knowledge of HIV and comprehensive knowledge and use of contraception. The article will end by giving the conclusions and recommendations.

**Conceptual Framework**

This study adapted the Health Belief Model, and the Social Ecological Model to explore how the various factors influence the sexual and reproductive health of HIV positive and HIV negative youths (Figure 1). The framework explore the interrelationship between background characteristics (demographic and socio-economic, community and societal**)** and proximate variables (knowledge on SRH, perceived benefits of SRH, perceived risks of not utilizing SRH services, attitudes towards SRH, beliefs on SRH, self efficacy on SRH services, participation in support group, aspirations, adherence to treatment, retention to care, stigma and discrimination and psychosocial status), contraceptive use and SRH issues (STIs, HIV).

The background characteristics have a great bearing on SRH. Youth who were born with HIV may not value SRH as they feel victim of parent to child transmission or that it was not their responsibility. This group may not use contraception or condoms to protect themselves against STIs and HIV reinfection. The youth who acquired HIV sexually may realize 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. The 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 use contraception or condoms to protect themselves against STIs Youths living in rural areas 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 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 percent decline in new HIV infections worldwide from 2.1 million in 2010 (UNAIDS, 2020). 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 (UNAIDS, 2020). 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 (ZIMSTAT and ICF, 2016). It is clear that young people are the most affected and thus need the most attention, both in research and interventions.

Knowledge about HIV

Comprehensive sexuality 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 (UNAIDS, 2020). Comprehensive sexuality 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 (UNAIDS, 2020).

About four decades with the HIV&AIDS pandemic have passed, it is expected that the youth could be enjoying or benefitting from well-developed programs on reproductive health with adequate HIV and sex education however, in the contrary, there has been a stagnation on knowledge. Lack of accurate and complete knowledge of HIV is one of the major causes of increase in the number of new infections the world over. Globally it is estimated that around 34% of youths have comprehensive knowledge of HIV (UNAIDS, 2020). 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 (UNAIDS, 2020). In Zimbabwe, less than half (47% of males and 46% of females) of the youth population have comprehensive knowledge about HIV&AIDS (ZIMSTAT and ICF International, 2016). On the contrary, 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 unintended pregnancy and early 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 sub-Saharan Africa 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 rate (67%) in sub-Saharan Africa compared to countries in West Africa (9%), Central Africa (7%), Eastern Africa (22%) and North Africa (45) (UNFPA, 2013). In the SADC region contraceptive prevalence rate (CPR) vary from a low of 13 per cent in Angola, to a high of 54.6 per cent 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 are at risk of contracting HIV&AIDS (Dlamini, 2003).

A study conducted in Uganda showed that 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 partner with HIV or other STIs. The study further reported that use of contraceptives by YLHIV was relatively higher compared to the wider population that suggests careful sexual behaviour among YLHIV (Birungi *et al.,* 2008). Birungi *et al.* (2007) showed that YLHIV had erroneous concerns about hormonal contraceptives that might impact on its uptake and use.

Studies have revealed that YLHIV are engaging in risky sexual behaviours that results in teenage pregnancy (Zgambo *et al*., 2018). Research indicates high incidents of pregnancy that are not intended among YLHIV, that increases the risk of morbidity and mortality for both mothers and their new-born babies (Zgambo *et al*. 2018). 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.

**MATERIALS AND METHODS**

The study was conducted in three provinces with highest, medium and lowest number of YLHIV in Zimbabwe. The three selected provinces are Matabeleland South with HIV prevalence of 21.7%, Harare with HIV prevalence of 13.7% and Manicaland with HIV prevalence of 11.0%. This research employed a cross-sectional research design, involving triangulation of both survey and Focus group discussions (FGD) methods of data collection. A survey was used to collect quantitative data using the questionnaire. The questionnaire was translated into Shona and Ndebele. Data was collected using mobile devices. Data collection was conducted by trained enumerators. During the training, enumerators were familiarized with the broad objectives of the study, the context in that the study came about and the importance of ethical conduct.

The general youth population was sampled from the general population, while YLHIV was sampled from clinic records. The first stage of sampling included all the three selected provinces of Zimbabwe with the highest, medium and lowest prevalence levels as stated earlier. The second stage of sampling was to select two HIV hot spot districts, rural and urban in each of the selected provinces. Thirdly, in the hot spot districts, all clinics with Opportunistic Infection (OI) departments were identified and their lists of patients requested. From a list of YLHIV who know their HIV status, a simple random selection of YLHIV was done. Youths who perceived themselves as HIV-negative were selected from the general population aged 15-24 in the district. Thus, at district level, 6 wards are purposively selected covering the geographical North, South, West, East and Central areas of the district. One enumeration area was randomly selected in the selected wards. Within the selected EAs, there was a systematic random selection of households. Within the selected households, only one youth aged 15-24 years was randomly selected.

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 as well as pre-coding allowable response values. Frequency tables, Cross-tabulations and logistic regression were used for data analysis.

No personal identifying information was collected. All the interviewers were taught on ethical conduct. There was an assurance to adolescents that all the information discussed during the interviews will be kept confidential. Consent was asked to use voice recorders. The study was approved by Medical Research Council of Zimbabwe (MRCZ/A/2942).

**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.

**Demographic socio-characteristics of respondents**

The sample comprises of 67% YLHIV and 33% Youths 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, 52%, compared to males, 48%; however, this female dominance is more pronounced among HIV-negative youths, 57%, compared to YLHIV, 47% (p=0.02). The majority of youths, 81%, reported that they were not married, while 16% reported that they were married or cohabiting. The proportion that has never married is fairly 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, this is 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 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 living 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 |
| Sex  |  |  |  |  |
| Female | 46.6 | 56.7 | 0.020\* | 50 |
| Male | 53.4 | 43.3 |  | 50 |
| Highest Level of Education |  |  |  |  |
| Primary | 0.8 | 0.0 | 0.060 | 0.5 |
| Secondary | 40.3 | 31.7 |  | 37.5 |
| College | 58.9 | 68.3 |  | 61.9 |
| Marital status |  |  |  |  |
| 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 |
| Religion |  |  |  |  |
| 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 |
| Living With Disability |  |  |  |  |
| Yes | 18.8 | 3.5 | <0.0001\* | 13.7 |
| No | 81.2 | 96.5 |  | 86.3 |
| Geographical Location |  |  |  |  |
| Rural | 35.1 | 62.2 | 0.512 | 36.0 |
| Urban | 64.9 | 37.8 |  | 64.0 |
| Total | 66.5 | 33.5 |  | 100 |

\*P<0.05

**Comprehensive knowledge of HIV transmission by socio-demographic characteristics**

The study 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%. It is interesting to note that YLHIV were more likely to demonstrate comprehensive knowledge of HIV. For instance, while 15% and 24% of YLHIV age 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 demonstrated comprehensive knowledge of HIV respectively, none of the youths with primary education demonstrated 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 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%. It is also interesting to note that a sizeable proportion, 20%, of persons with disabilities demonstrated comprehensive knowledge of HIV. Consistently, youths in urban areas were more likely to demonstrate comprehensive knowledge of HIV, 19%, compared to rural youth, 4%. This dominance was more pronounced among YLHIV, 27% compared to 4% 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 |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 14.8 | 0.022\* | 2.0 | 0.254 | 10.6 | 0.019\* |
| 20-24 | 23.8 |  | 5.0 |  | 17.2 |  |
| Sex  |  |  |  |  |  |  |
| Female | 19.4 | 0.884 | 6.1 | 0.019\* | 14.3 | 0.723 |
| Male | 18.8 |  | 0 |  | 13.3 |  |
| Highest Level of Education |  |  |  |  |  |  |
| 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 |  |
| Marital status |  |  |  |  |  |  |
| 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 |  |
| Religion |  |  |  |  |  |  |
| 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 |  |
| Living With Disability |  |  |  |  |  |  |
| Yes | 20.0 | 0.816 | 0.0 | 0.609 | 18.3 | 0.208 |
| No | 18.8 |  | 3.6 |  | 13.1 |  |
| Geographical Location |  |  |  |  |  |  |
| Rural | 5.0 | <0.0001\* | 2.6 | 0.608 | 4.2 | <0.0001\* |
| Urban | 26.6 |  | 4 |  | 19.3 |  |
| Total | 19.0 |  | 3.5 |  | 13.8 |  |

\*P<0.05

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

*Sexuality education seems to be a no-go area for discussion between us and adults in this community. It really 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, 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 ten 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 [(1.11-17.24)]). Analysis by geographic location, demonstrated that youths living with HIV from the urban areas were six times more likely to have comprehensive knowledge of HIV compared to youths from the 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**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variable | Youths living with HIV | 95% CI for Exp(B)  | HIV-negative Youths | 95% CI for Exp(B)  |
|   | RC | Exp (B) | Lower | Upper | RC | Exp (B) | Lower | Upper |
| Age |   |   |   |   |   |   |   |   |
| 15-19 | 1 |   |   |   | 1 |   |   |   |
| 20-24 |   | 1.96 | 0.98 | 3.92 |   | 1.43 | 0.13 | 15.74 |
| Sex |   |   |   |   |   |   |   |   |
| Female | 1 |   |   |   |   |   |   |   |
| Male |   | 1.063 | 0.6 | 1.88 |   | 0 | 0 |   |
| Marital status |   |   |   |   |   |   |   |   |
| Married/Co-habit |   |  0.93 | 0.41  | 2.10  |   |  1.345 | 0.11  | 17.15  |
| Never married | 1  |   |   |   |  1 |   |   |   |
| Divorced  |   | 9.79\* | 1.932 | 49.63 |   |   |   |   |
| Separated |   | 4.38\* | 1.12 | 17.24 |   | 0.01 | 0 | 0.32  |
| Highest Level of Education |   |   |   |   |   |   |   |   |
| Primary | 1 |   |   |   |   |   |   |   |
| Secondary |   | 199608819.6 | 0.05 | 0.21  | 1 |   |   |   |
| College |   | 171055817.3 | 0.03 | 0.08  |   | 1.49 | 0.08 | 27.93 |
| Religion |   |   |   |   |   |   |   |   |
| Islam |   | 0.4 | 0 |  0.0 |   | 4.64 | 0 | 0.0  |
| Christianity |   | 107189590 | 0 |  0.0 |   | 0.95 | 0 |  0.0 |
| Apostolic Sect |   | 98952921 | 0 |  0.0 |   | 3.17 | 0 |  0.0 |
| African Traditional |   | 178717656 | 0 |  0.0 |   | 5.59 | 0 |  0.0 |
| None | 1 |   |   |   | 1 |   |   |   |
| Living With Disability |   |   |   |   |   |   |   |   |
| 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 |   |   |   |

\*P<0.05

**Comprehensive knowledge of contraception by Background characteristics**

The study findings show lower levels of comprehensive knowledge of contraception, 19%, among the youth. Worth noting is the fact that 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%. It is interesting to note that YLHIV were more likely to demonstrate comprehensive knowledge of contraception. For instance, while 19% and 24% of YLHIV age 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; while 12% and 20% of the youths with secondary education and college education demonstrated comprehensive knowledge of contraception respectively, 100% of the youths with primary education demonstrated 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 college education reported the same. On the other hand, 0% 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 youth’s demonstrated comprehensive knowledge of contraception, 29% and 50% of the divorced and separated youths respectively shows complete and accurate knowledge of contraception. It is interesting to note that never married YLHIV, 19%, are more likely to have comprehensive knowledge of contraception compared to their HIV-negative counterparts, 14%. It is also interesting to note that a sizeable proportion, 13%, of persons with disabilities demonstrated comprehensive knowledge of contraception. Youths in rural areas were more likely to demonstrate comprehensive knowledge of contraception, 22%, compared to urban youth, 17%. 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 |  |  |
| Age |  |  |  |  |  |  |
| 15-19 | 19.2 | 0.395 | 5.2 | 0.003\* | 14.2 | 0.022\* |
| 20-24 | 24.4 |  | 25.0 |  | 24.6 |  |
| Highest Level of Education |  |  |  |  |  |  |
| Primary | 100 | 0.099 | 0 | 0.015\* | 100 | 0.022\* |
| Secondary | 17.1 |  | 0 |  | 12.3 |  |
| College | 22.4 |  | 17.4 |  | 20.4 |  |
| Marital status |  |  |  |  |  |  |
| 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 |  |
| Religion |  |  |  |  |  |  |
| 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 |  |
| Living With Disability |  |  |  |  |  |  |
| Yes | 13.9 | 0.216 | 0 | 0.550 | 13.2 | 0.326 |
| No | 23.3 |  | 15.2 |  | 19.8 |  |
| Geographical Location |  |  |  |  |  |  |
| Rural | 25.8 | 0.313 | 17.1 | 0.015\* | 22.3 | 0.288 |
| Urban | 19.4 |  | 13.7 |  | 17.3 |  |
| Total | 21.5 |  | 14.9 |  | 19 |  |

\*P<0.05

It was clear from the FGD for female participants that there is indeed a double standard with regards to the discussion of sexual issues and family planning. In fact, the girls found it difficult to even give their points view openly. They made it a point that they would preamble their responses by phrases such as:

 *I am not sure but it appears*

For instance, when they were asked about condom use one of the girls responded, with others nodding their heads:

*Ah, we really don’t know much about condoms in this community, besides, as girls, we do not use condoms, its man’s business to use condoms.*

When asked whether or not they do not negotiate for sex, this was the response from one of the girls:

*Why should we have sex in the first place? I don’t know about others, but I believe that it is not good for a girl to be an expert in these issues.*

The facilitator quickly asked, why?

 Three girls almost spoke together:

 *That would be a sign of promiscuity*

**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 youths who were divorced were ten 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 the 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 that 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). Absence of correct and accurate information on HIV transmission routes and associated misconstructions increase the probability of indulging in unsafe sex practices that exposes 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. Worth noting is the fact that YLHIV were more likely to have comprehensive knowledge on contraception, 22%, compared to HIV-negative youths, 15%. Youths in rural areas were more likely to demonstrate comprehensive knowledge of contraception, 22%, compared to urban youth, 17%. 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 supports findings from a study in Uganda that reported that use of contraceptives by YLHIV was relatively higher compared to the wider population that suggests careful sexual behaviour among YLHIV (Birungi, 2008).

**CONCLUSION AND RECOMMENDATIONS**

The study concludes that lack of comprehensive knowledge on reproductive health exposes youth to undesirable reproductive health consequences. The study also concludes that YLHIV are more knowledgeable about both HIV and contraception compared to HIV-negative youths. The study recommends that:

* comprehensive sexuality education that targets the youths regardless of their HIV sero-status.
* the need for 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 sensitizing them about comprehensive sexuality education.

**References**

Avery, L. and Lazdane, G. (2010). What Do We Know About Sexual and Reproductive Health of Adolescents in Europe? *The European Journal of Contraception & Reproductive Health Care*, *15*(sup2), S54-S66.

Arikawa, S., Eboua, T., Kouakou, K., N'Gbeche, M.S., Amorissani-Folquet, M., Moh, C., Amoussou-Bouah, U.B., Coffie, P.A., Becquet, R., Leroy, V. and Pediatric IeDEA West Africa Working Group. (2016). Pregnancy Incidence and Associated Factors among HIV-infected Female Adolescents in HIV Care in Urban Côte d'Ivoire, 2009–2013. *Global health action*, *9*(1), 31622.

Bankole, A. and Malarcher, S., (2010). Removing Barriers to Adolescents' Access to Contraceptive Information and Services. *Studies in Family Planning*, *41*(2), 117-124.

Birungi, H., Mugisha, J.F. and Nyombi, J. (2007). Sexuality of Young People Perinatally Infected with HIV. New York: Guttmacher Institute

Birungi, H., Obare, F., van der Kwaak, A. and Namwebya, J.H. (2011). Maternal Health Care Utilization among HIV-positive Female Adolescents in Kenya. *International Perspectives on Sexual and Reproductive Health*, 37(3), pp.143-149.

Darroch, J.E., Singh, S., Woog, V., Bankole, A. and Ashford, L.S. (2016). Research Gaps in Adolescent Sexual and Reproductive Health. New York: Guttmacher Institute.

Dlamini, L.S., Van der Merwe, M.M. and Ehlers, V.J. (2003). Problems Encountered by Teenage Mothers in the Southern Hho-Hho Region of Swaziland. *Health SA Gesondheid*, *8*(3), 74-85.

Fincher, R.A., 1994. International Conference on Population and Development. *Envtl. Pol'y & L.*, *24*, p.309.

Joint United Nations Programme on HIV/AIDS (UNAIDS). (2019). Global AIDS update 2019–communities at the centre. *Geneva: UNAIDS*.

Mzingwane, M.L., Mavondo, G.A., Mantula, F., Mapfumo, C., Gwatiringa, C., Moyo, B., Dube, P. and Chaibva, C.N. (2020). HIV knowledge, risky behaviours and public health care services attendance among adolescents from the Grassroot soccer Zimbabwe programme. *BMC health services research*, *20*(1), 1-8.

Woog, V., Singh, S., Browne, A. and Philbin, J. (2015). Adolescent Women’s Need for and Use of Sexual and Reproductive Health Services in Developing Countries. Guttmacher Institute.

Zgambo, M., Kalembo, F.W. and Mbakaya, B.C. (2018). Risky Behaviours and Their Correlates Among Adolescents Living with HIV in sub-Saharan Africa: a Systematic Review. *Reproductive health*, *15*(1), 1-12.

Zimbabwe National Statistics Agency and ICF International (2016). Zimbabwe Demographic and Health Survey 2015: Final Report. Rockville, Maryland, USA: Zimbabwe National Statistics Agency (ZIMSTAT) and ICF International.

1. Department of Demography Settlement and Development, Faculty of Social and Behavioural Sciences, University of Zimbabwe, [↑](#footnote-ref-1)
2. [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)