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Knowledge of comprehensive sexuality education (HIV-component) among young girls in Africa: implications for sex education policies and programmes

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Abstract

Introduction: *The sexual and reproductive health problems such as HIV or AIDS, faced by youths has been largely attributed to insufficiency or lack of necessary information to make informed choices and prevent adverse sexual and reproductive health outcomes. Hence, to reduce these problems, it is expedient that we embrace a potent prevention strategy: Comprehensive Sexuality Education. Therefore, this study seeks to investigate the knowledge of young African girls about comprehensive sexuality education, especially the HIV component.*

Material and methods: *This study made use of secondary data collated by the UNFPA on comprehensive knowledge about HIV among young girls between 15 and 24 years of age in 28 African countries. The data obtained from the UNFPA database was collated and analyzed using Microsoft Excel 2019.*

Results: *Namibia is the only African country surveyed that had more than 50% of young girls between 15 and 24 years of age with comprehensive knowledge about HIV. Chad had the poorest result with only 4% of young girls (15–24 years) with good and comprehensive knowledge of HIV. Four African countries had half or more of young girls between 20 and 24 years of age with comprehensive knowledge of HIV. Only six of the 28 nations surveyed had young girls (15-19 years of age) with very good and intensive knowledge of HIV.*

Conclusion: *There appears to be a poor knowledge of comprehensive sexuality education across African countries. Also, barriers to proper implementation and low effectiveness of CSE at the country level were also presented. These should be appropriately dissected in making youth, sexual, and reproductive health, as well as education policies and programs.*

Key words: knowledge, sex education, HIV, young girls, africa, comprehensive

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Introduction

Early marriage, sexual coercion and violence, unintended pregnancy, unsafe abortion, and sexually transmitted diseases remain some of the menaces that plague youths and adolescents in low and middle-income countries [1, 2]. This is unsurprising as adolescence is a period of self-discovery, self-assertiveness, and questioning of parental and societal values [3]. The physical growth and hormonal surges that occur around this period make it crucial [4].

The sexual and reproductive health problems such as HIV or AIDS, unsafe abortion, etc., faced by this population have been largely attributed to insufficiency or lack of necessary information to make informed choices and prevent adverse sexual and reproductive health outcomes [1, 5, 6]. Aaro et al. [7] noted that apart from the lack of knowledge, the application of acquired knowledge to problematic situations is a skill that is lacking among most youths and adolescents. However, the problems faced by these adolescents are not evenly distributed between the sexes. Female adolescents and young women have been found to be more affected; they are more likely to be infected with HIV than their male counterparts [8, 9].

To combat the problems of sexual and reproductive health, several pieces of research have been carried

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out and policies have been formed. One of such is the Sexual and Reproductive Health and Rights that focuses on "the right and ability of all individuals (irrespective of sexuality) to decide over their own bodies, and to live healthy and productive lives" [10]. Comprehensive Sexual Education (CSE) is one of the efforts geared towards ensuring equal rights of all individuals in this regard.

Comprehensive Sexual Education comprises a rights-based approach that includes prevention of sexual harassment, gender-based violence, and discrimination with regards to LGBT (Lesbians, Gays, Bisexuals, and Trasgenders), and PLWHA (People Living with HIV and AIDS), among other segregated groups [11]. UNESCO [12] stated that CSE is a method of sex education based on a curriculum that aims to equip students with the knowledge, attitudes, skills, and values to make appropriate and healthy sexual choices. It is generally aimed at reducing all the sexual and reproductive health problems [13]. The CSE curriculum primarily emphasizes sexual abstinence as the safest sexual choice. Notwithstanding, it acknowledges that there would be sexual activity in the future, hence, it includes topics to guide their future sexual choices [14]. Some of its topics include positive sexual behaviors, use of contraceptives, refusal skills, pregnancy, and its possible outcomes [14, 15].

Comprehensive Sexual Education has met with some criticisms in the past years. These include problems of regulation of the comprehensiveness of its curriculum, the inclusion of the LGBT community in the curriculum, and age appropriateness of some of the topics included in CSE [16–19]. Despite the criticism, literature has shown that CSE has a positive impact on sexual and reproductive health. There is evidence supporting its effectiveness in increasing knowledge about HIV and reducing the rate of sexually transmitted infections, as well as self-efficacy related to condom use and refusal of sexual intercourse, increased use of contraceptives and reduction in unintended adolescent pregnancies, reduced number of sexual partners, and later age at first sexual intercourse [14, 20–24].

Developing countries, mainly in Africa, have the highest population of adolescents and young individuals, most of which have sexual and reproductive health concerns. This could be largely attributed to the fact that most developing nations have not fully embraced the CSE curriculum. Hence, to reduce the burden of sexual and reproductive health problems in Africa, and in the world at large, it is expedient that we embrace a potent prevention strategy: Comprehensive Sexuality Education. Therefore, this study seeks to: investigate the knowledge of young African girls about comprehensive sexuality education, especially the HIV component; assess the knowledge about HIV in different age groups of African girls; and present these findings in light of sex education policies and programs.

Results from this study will add to the pool of knowledge of young African girls about CSE, HIV, and STIs (Sexually Transmitted Infections). It would also clearly guide policymakers in developing sound and effective policies that would curb most sexual and reproductive health problems in Africa. Also, it would help non-government and government organizations plan programs that would tackle the menace of HIV in Africa.

Material and methods

This study made use of secondary data collated by the UNFPA on comprehensive knowledge about HIV among young girls between the ages of 15 and 24 years in 28 African countries. The data is available at www.unfpa.org/data. The data obtained from the UNFPA database was collated, grouped, and analyzed using Microsoft Excel 2019. Descriptive statistical tools were used in analyzing the data.

Results

Namibia is the only African country surveyed that had more than 50% of young girls between the ages of 15 and 19 years with comprehensive knowledge about HIV. Chad had the poorest result with only 4% of young girls (15–24 years) with good and comprehensive knowledge of HIV. Nine African countries (Cameroon, Chad, Comoros, Cote d'Ivoire, Democratic Republic of Congo, Gambia, Guinea, Mali, and Niger) had less than a quarter of late teenage girls (15–19 years) with comprehensive knowledge of the most common sexually transmitted diseases (HIV). The proportion of young girls (15–19 years) in the most populous African nation, Nigeria, was very low (27%).

Four African countries (Gabon, Kenya, Namibia, and Zimbabwe) had half or more of young girls between the ages of 20 and 24 years with comprehensive knowledge of HIV. Namibia had the highest proportion of girls between the ages of 20 and 24 years with comprehensive knowledge of HIV. Chad also had the poorest result in this age group as only 4% of girls aged 20–24 years had comprehensive knowledge of HIV. Only six (Cameroon, Chad, Comoros, Cote d'Ivoire, Guinea, and Niger) of the 29 nations surveyed had young girls (15–19 years) with very good and intensive knowledge of HIV. Additionally, only 32% of girls between the ages of 20 and 24years in the most populous black nation (Nigeria) had comprehensive knowledge of HIV. Nami-

bia and Zimbabwe had the highest difference (12%) in the proportion of older and younger girls with good comprehensive knowledge of HIV.

No country had a higher proportion of younger girls (5–19 years) relative to the older ones (20–24 years) with comprehensive knowledge of HIV. However, two countries (Benin and Chad) had the same proportion of girls within age groups 15–19 years and 20–24 years with good knowledge of HIV. Liberia, Mali, and Sierra Leone had the lowest difference (2%) in the proportion of older and younger girls with good knowledge of HIV. More details of the comprehensive knowledge of girls with both age groups 15–19 years and 20–24 years are displayed in Table 1.

Table 1. Percentage of young girls in 28 African countries within age groups 15–19 and 20–24 years who have comprehensive knowledge about HIV

Country	15–19 years old	20–24 years old
Benin	33	33
Burkina Faso	29	33
Cameroon	14	19
Chad	4	4
Comoros	18	21
Congo	35	38
Co´te d'Ivoire	18	22
Congo, the Democratic Republic of the	22	27
Ethiopia	25	25
Gabon	46	50
Gambia	22	30
Ghana	29	36
Guinea	18	24
Kenya	49	60
Liberia	35	37
Malawi	41	46
Mali	23	25
Mozambique	27	33
Namibia	56	68
Nepal	25	27
Niger	11	15
Nigeria	27	32
Senegal	26	33
Sierra Leone	28	30
Togo	32	38
Uganda	36	41
Zambia	40	47
Zimbabwe	41	53

Discussion

Adolescence marks a developmental phase where one has relatively sound health, a time where physical sexual maturity is acquired [25]. Comprehensive Sexuality Education plays a key role in preparing young people for a safe world where HIV and AIDS, sexually transmitted infections (STIs), unintended pregnancies, gender-based violenc e (GBV), and inequality still pose serious risks to their well-being [12]. Although there is definitive evidence for the benefits of high-quality, curriculum-based CSE, few children and young people receive the knowledge needed for their entire lifetime [12]. Most countries are acknowledging the importance of equipping young people with the knowledge and skills to make responsible choices in their lives [12]. Hence, this study aims to analyze the proportion amongst young girls aged 15 to 24 years with comprehensive knowledge of HIV in Africa.

Namibia had the highest proportion (56%) of girls between the ages of 15 to 19 years with comprehensive knowledge about HIV. This is followed by Kenya with 49%, Gabon with 46%, Zambia and Zimbabwe with 40 and 41% respectively. Chad had the lowest proportion with 4% followed by Niger with 11%. Among the older ladies aged 20 to 24 years, Namibia still had the highest proportion with a good 68% showing a comprehensive knowledge about HIV, Kenya still followed behind with 60%, Zimbabwe, Gabon, Zambia with 53%,50%, and 47% respectively. This trend shows that Namibia, Kenya, Gabon, Zambia, and Zimbabwe have a good knowledge of HIV across the two age groups. There appears to be a better knowledge amongst girls aged 20–24 years compared to 15–19 years. No country had a higher proportion of younger girls (5–19 years) relative to the older ones (20–24 years) with comprehensive knowledge of HIV. Benin and Chad had the same proportion of girls within age groups 15–19 years and 20–24 years with good knowledge of HIV. Namibia had the highest percentage difference with 12% more girls aged 20 to 24 years showing a better knowledge of HIV.

This study shows poor knowledge across African countries as evidenced by the majority of the countries having less than 50% of girls having good knowledge of HIV. Namibia is the only African country surveyed that had more than 50% of young girls within age 15–19 years with comprehensive knowledge of HIV, while Gabon, Kenya, Namibia, and Zimbabwe had half or more of young girls within age 20–24 years. One of the major reasons for this poor knowledge across African countries is the fact that sexuality education policies and programs have only been recently implemented in a lot of African countries with some countries that do not have any policy [26]. Also, the majority of African tribes are limited to shyness when discussing sex [27]. In Africa, parent-adolescent communication on sexuality is a forbidden subject for fear that adolescents

may become curious about their sexual desires [28].

Namibia has the highest proportion with 56% of young girls between the ages of 15 and 19 years and 68% of young women aged 20–24 years with comprehensive knowledge about HIV. Kenya followed with the second-highest proportion with 49% of young girls aged age 15–19 years and 60% of young women aged 20–24 years. This is similar to a study conducted by UNFPA in seven East and South African countries which shows that there is an average knowledge about HIV as 45% of all youth have comprehensive knowledge of HIV while 74% of youth know about HIV prevention methods (from 59% of youth in South Africa to as high as 85% in Swaziland) [29]. This can be attributed to the implementation of laws and policies, high literacy rate, the dedication of the government towards education. Namibia is a resource-rich South African country with a population of 2 179 000 people, with an adult literacy rate of 76.5% [30]. Namibia has invested about 22% of its annual budget in education [30]. The historic East and Southern Africa (ESA) Ministerial Commitment was endorsed and affirmed at the 2013 International Conference on HIV and AIDS in Africa (ICASA) on December 7, 2013 by 20 countries. Education and Health Ministers in those African countries committed to accelerating access to Comprehensive Sexuality Education (CSE) and health services for young people in the region [29] including Namibia and Kenya. Various programs and campaigns such as Sexual Information, Mental and Behavioural Initiative for Health (SIMBIHealth), Health Promoting School Initiative (HPSI), Window of Hopes, and My Future My Choice (MFMC) have been introduced by the government as well as NGOs [24, 31] which targets youths on building healthy relationships.

Kenya was part of 20 countries in East and Southern Africa that affirmed a commitment to implement sexuality education in schools in the region [32]. Kenya has also incorporated sexuality education into different subjects taught in school [33]. In line with this study, the Kenya Bureau of Statistics also reported that only 49% of young female adolescents have comprehensive knowledge of HIV and AIDS. This average result has been blamed on the difficulty in enforcing new policies on sexuality education [33].

Nigeria is a large country with diverse geography and climate with a heterogeneous population [34]. Nigeria has an estimated population of 170 million [35] and approximately 22% are adolescents [36]. Nigeria, the most populous black nation has a low proportion of girls having comprehensive knowledge about HIV with 27% among girls aged 15 to 19 years and 32% among girls aged 20 to 24 years. This may be due to the overpopulation, high illiteracy rate, socio-cultural and religious beliefs. This can be corroborated by the findings of a study by Asekun-Olarinmoye et al. [37] which showed that knowledge among teachers in Nigeria about key reproductive issues was poor and inadequate. This is due to wariness in teaching and lack of training about sexuality education. Therefore, if there is no knowledge among teachers, there would be most likely a lack of knowledge about adolescents in Nigeria. Contrary to this is a report by Akande and Akande [38] which showed a good awareness of sexuality education was high (72.3%) among the respondents though through informal strategy in a Kwara Secondary school in Nigeria. Also, a study by Orji and Esimai [39] done amongt students showed that only 40% of the students in the study were unaware of sex education. This knowledge may be based on widespread media about sex, HIV/AIDs, and condoms. The findings of the studies showed that informal knowledge about HIV/AIDS in Nigeria is high while formal knowledge seems to be poor. Nigeria has implemented the Family Life and HIV Education (FLHE) curriculum tailored to suit each state's needs which provides a comprehensive approach to HIV prevention education and general sexual health at the secondary levels of education [40]. Also, Different categories of user organizations serve different, but complementary functions to support government policies. Youth and reproductive health non-government organizations (YRH-NGOs) such as Action Health Incorporated (AHI), Girl Power Initiative, Slum and Rural Health Initiatives. Global Health and Awareness Research Foundation provided teacher in-service training on the FLHE curriculum and ongoing support to schools [24, 26]. The knowledge in Nigeria is also similar to that of a neighboring country, Ghana, which had girls aged 15 to 19 years with 29% and 20 to 24 years with 36% showing a comprehensive knowledge. Even though Ghana has a dedicated Comprehensive Sexuality Education system, there has been moderate management and administration of these programs with a poor effect from other agencies [5].

The Democratic Republic of Congo is present in Central Africa. The proportion of girls aged 15 to 19 years with comprehensive knowledge of HIV is 35% while among girls aged 20 to 24 years it is 38%. The total population of the DRC is estimated at 71.2 million according to the 2014 Population Reference Bureau [41]. Serious indications show that the sexual and reproductive health status of the population of the DRC is among the worst in sub-Saharan Africa [42]. This can be attributed to the prolonged conflict, high poverty, and illiteracy, among others.

Research in context

Comprehensive Sexuality Education is vital to the achievement of several Sustainable Development Goals (SDGs). Several countries have committed to accelerate efforts to scale up scientifically accurate age-appropriate comprehensive education, relevant to cultural contexts, that provides adolescent girls and boys and young women and men, in and out of school, with information on sexual and reproductive health and HIV prevention, gender equality and women's empowerment, human rights, physical, psychological and pubertal development and power in relationships between women and men, to enable them to build self-esteem, informed decision-making, communication and risk reduction skills and develop respectful relationships' [43].

Before reaching adolescence and adulthood, young people need to have a clear understanding of the physical and emotional changes they will experience and of how these changes are related to their development and reproduction. Non-availability of this information can lead to some health consequences for the young adult, one of which is early pregnancy and childbirth. It constitutes the leading cause of death for girls aged 15 to 19 years worldwide. And yet, approximately 16 million girls aged 15 to 19 years and 2.5 million girls under 16 years give birth each year in developing regions. About 3.9 million girls aged 15 to 19 years undergo unsafe abortions [44]. It was revealed that high teenage pregnancy is caused by insufficient information young people get about sexual behavior [27]. Learning about safer sexual behaviors can prevent sexually transmitted infections, including HIV. Young people account for 33% of all new HIV infections among adults (aged 15 and over). Yet, although knowledge about HIV has increased, only 36% of men and 30% of women aged 15 to 24 had comprehensive knowledge of HIV prevention and transmission in the 37 low- and middle-income countries according to data for 2011–2016 [45]. In addition to health outcomes, early pregnancy can affect girls' education opportunities. Data from Madagascar confirm that teenage pregnancy leads to early school leaving [46].

Studies have confirmed that a school-based CSE has a positive impact, resulting in increased and more effective use of contraception, a decreased number of adolescents having sex at a very young age, as well as early unintended adolescent pregnancies with a reduction in HIV and sexually transmitted infections among adolescents [23, 47].

Barriers to the implementation of CSE can be divided into two types: social opposition due to norms and power relations, and operational constraints [48]. Strong community resistance has also been shown to be preventing the enactment of laws and slow implementation of policies related to gender equality and sexual and reproductive rights. These misconceptions commonly include concerns that such education is inappropriate for young children, goes against local cultural or religious values, encourages early sexual initiation or causes 'gender confusion' and may be used to recruit young people into 'alternative lifestyles' or non-conforming sexual orientation or gender identity [48]. The public backlash led the Ministry of Education to withdraw the national sexuality education curriculum in Uganda in 2016 [48]. In Mali, after the High Islamic Council voiced opposition, the government canceled workshops that included modules with questions on sexual orientation, tolerance, inclusion, and respect [49].

The lack of government funding, together with a reliance on international donors, leads to discontinuity in program delivery, as funders have different priority areas and do not coordinate with each other [48]. In Nigeria, it was noted that the provision of funds both from state and federal budgets has been insufficient which has created logistical and management problems [26]. There would be greater coverage of teacher training, better distribution of teacher and learner resource materials, and routine monitoring of classroom implementation if more governmental support existed [50].

A study by Mufune [27] found that one of the main barriers is that teachers are not equipped well enough and with sufficient content to teach sexual education. Another barrier found is the lack of teaching resources in local languages. Lack of teacher skill as the main obstacle to success and have identified investing in teachers' capacities (through pre-service and in--service training) as the main priority [32]. Personal views on sex before marriage, the access to contraception, or same-sex relationships may influence the way that a teacher delivers curriculum content [48]. Most teachers and learners have also been found to have a lack of importance for CSE, as they believe it may not be as important for them in the future [27]. It was also discovered that both teachers and learners are not open to talking about sexually related matters because of their religious and cultural beliefs [27]. According to a study on sex education and HIV/AIDS in South-Eastern Nigeria by Oshi; Nakalema, and Oshi [51], teachers are not passing on this knowledge because of cultural and social inhibitions. In addition, teachers have not been receiving adequate training and motivation on information, education, and communication for HIV/AIDS sex education. The need for competent educators who approach adolescents with respect and encourage the development of communi-

cation, negotiation, and decision-making skills while delivering fact-based information is crucial for effective programs [33]. Therefore, sex education policies and programs should take into consideration the findings, their justifications, and barrier to strong CSE in African countries; this would enable the development of sound and effective policies and programs.

Limitations

This study focuses on the knowledge of girls about HIV; it does not cover the entirety of CSE in Africa. Although the results will help to narrow down the trend of countries with good and poor knowledge of HIV; It does not give a full indication of CSE in African countries. Therefore, a study that tests for knowledge in all domains in CSE, which includes relationships, values, rights, culture and sexuality, gender, violence, health and well-being, the human body and development, sexuality and sexual behavior, and sexual and reproductive health should be conducted.

Recommendations

In line with the United Nations Educational, Scientific and Cultural Organization (UNESCO) Policy Paper in 2019, CSE needs to be a part of education and health ministries' major business with appropriate laws, policies, and budgets. To avoid barriers to proper implementation of these programs, the government should be involved in developing appropriate curricula, training and supporting teachers appropriately, effectively monitoring and evaluating programs, engaging with community organizations and parent associations, supporting the creation of favorable and safe physical environments, and developing linkages with health services. Appropriate budget and funding should be given to various ministries of health and education in order to ease the administration of these programs. Also, more funding should be given to projects such as SIMBIHealth that tackle the menace of HIV/AIDS in Africa. Advocacy is therefore essential to ensure that governments uphold their financial commitments.

Sexual health education should be taught by certified, highly qualified, effective teachers. It is crucial that educators are given the necessary preparation and guidance to implement the curriculum. A training program which should include pre-service education and in-service training would teachers teach with current evidence. It should be mandatory for all teachers and should include aspects such as critical thinking and directing free and open discussions among students. Comprehensive sexuality education should be of great quality and should contain complete and specific curricula. The development of a curriculum for CSE should be in accordance with a growing body of evidence documenting the specific characteristics.

Regular monitoring and evaluation of the curriculum are needed to determine how effective it is and what changes can be made. Effective CSE cannot be achieved by the education sector alone. Partnership with the private and health sector will help to scale up and improve these programs. Community members (parents, guardians, religious and traditional leaders) must also be involved in the development and implementation of the policies and program.

Conclusion

There appears to be a poor knowledge of CSE across African countries. This study has presented justifications and reasons for these findings. Also, barriers to proper implementation and low effectiveness of CSE at the country level were also presented. These should be appropriately dissected in making youth, sexual and reproductive health programs and education policies; this might make them more effective and productive.

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Authors' contributions

MA initiated and designed the study, analyze the data, wrote methodology, results section and coordinate the study. MA, AO, TI, II and OF contributed in performing literature review, discussion and manuscript review. DG prepared, formatted and submitted the manuscript for publication. All authors read and approved the final version of the manuscript.

Availability of data and materials

Data was sourced from United Nation Population Fund (UNFPA) and is available at: www.unfpa.org/data

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