Ghana Journal of Geography

journal home page : https://www.ajol.info/index.php/gjg/ https://journals.ug.edu.gh/index.php/gjg/

Implementation of School-Based Sexual Health Curriculum in Tanzania: Perspectives of Secondary School Adolescents in Southern Highlands

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article info

Article history:
Received 6th November 2023
Accepted 10th January 2024

Keywords:
Sexual,
Health,
Curriculum,
Implementation,
Adolescent,
Perspectives

abstract

This study investigates how adolescents in the Iringa Region of Tanzania perceive the sexual health education curricula currently taught in secondary schools. Utilizing a quantitative, cross-sectional design, the study involved 372 adolescents who filled out survey questionnaires. The data was analyzed using descriptive statistics to provide insights into their views. Most participants (95%) were between 15 and 19 years old, with a composition of 64% females and 36% males. About 57.3% were day scholars, while 42.7% were boarders, and the religious composition included 87.4% Christians and 11.3% Muslims. The results showed that 77.7% of adolescents reported receiving sexual health education, which covered many critical topics but notably excluded homosexuality. The study found good comprehension of topics like the reproductive system, puberty, and sexually transmitted diseases, but identified significant gaps in understanding family planning, sexual orientation, and responsible behaviors. Additionally, many adolescents suggested that topics such as confidence in relationships, puberty, sexual health, and behavior should be introduced as early as primary school. The conclusion drawn from the findings is that while sexual health education is implemented in secondary schools within the studied areas, the coverage of topics is incomplete. The study recommends the development of an age-appropriate, comprehensive sexuality education curriculum that addresses the full spectrum of necessary topics to equip adolescents with the knowledge and skills required for making informed decisions related to their sexual health.

Introduction

One of the biggest public health concerns facing the globe today, according to reports, is adolescent sexuality and development (World Health Organization, 2022; United Nations Department of Economic and Social Affairs, 2022). The global statistics show that, of today's world 8 billion people, 1.3 billion are adolescents meaning those between the ages of 10 and 19 years. This is the biggest population of teenagers ever recorded, with the majority (88%) residing in developing nations (United Nations Department of Economic and Social Affairs, 2022; United Nations Children's Fund, 2022a). Tanzania contributes to the world population of about 61 million people and the country is among the world's fastest growing adolescent population where more than 50% of its people are under 18 and over 70% are under 30 (United Republic of Tanzania, 2022). Adolescents (10-19 years) in Tanzania form over 14 million of the overall population and make up almost 25% of the country's population and statistics show that this number is set to rise dramatically (UNDESA, 2022; URT, 2022).

While their proportion is being rapidly growing across the world, adolescents in both developed and developing nations including those in Tanzania have been reported to engage in high-risk sexual behaviours such as engaging in premarital sex at a very younger age and in multiple and short-term relationships with older people who are likely to have had more sexual partners and without protection (United Nations Children's Fund, 2022b; Ahari et al., 2020; Manago & Pacheco, 2019).

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http://dx.doi.org/10.4314/gjg.v16i2.3

This is due to the quick development of global technology as well as socioeconomic, cultural, and spiritual shifts that are taking place in the majority of the world's nations (Manago & Pacheco, 2019; Acharya et al., 2015). Instigation of sexual debut at a very young age has exposed many adolescents to sexual risks. These include unintended pregnancies, unsafe abortions, and the onset of earlier parenthood. Making a sexual debut when younger carries additional hazards, such as a higher school dropout rate, increased susceptibility to poverty, and family separation. Furthermore, having intercourse when young increases the risk of contracting STIs, such as HIV/AIDS, and almost always results in early mortality (WHO, 2022; UNICEF, 2022b; United Nations Fund for Population Activities, 2018; United Nations Children's Fund, 2015; World Health Organization, 2015).

Although all adolescents are exposed to these risks, those of the developed world are better off than their counterpart adolescents in developing nations. This is because of significant economic progress that has been accomplished, which has reduced the rate of poverty among the populace, high school attendance, increased access to healthcare information, and unfettered access to comprehensive sexual health education (Ahari et al., 2020; Askari et al., 2020). In Europe, for instance, although it varies widely across the region, pregnancies among adolescents have been abridged with rates ranging from roughly 12 per 1000 girls aged 15 to 19 years in Italy to roughly 59 in Bulgaria (Santelli, Sandfort and Orr, 2008).

While things appear to be getting better in Europe, terrible conditions have been reported in Africa, especially in sub-Saharan Africa. The region bears the greatest risks: each year, 14 million adolescents (10–19 years old) become unintentional mothers, and 89 million, or over half of them, discontinue their education (United Nations Educational Scientific and Cultural Organization,

2015). At the same time, the HIV/AIDS epidemic is having a devastating effect on adolescents, with half of new infections occurring in this age group and around 10 million adolescents roughly 1 in 14 are living with HIV/AIDS (UNICEF, 2022b; Jewkes, 2010).

These are happening despite the Centre for Reproductive Rights (2008), international human rights standards, as articulated by United Nations (UN) governing bodies and other international organizations, require that governments guarantee the rights of adolescents to health, life, education, and non-discrimination, through comprehensive sexuality education (Chandra-Mouli et al., 2019). The 1994 International Conference on Population and Development (ICPD) in Cairo and the 1995 Fourth World Conference on Women in Beijing emphasize the obligations in international law for states to provide sexuality education in primary and secondary schools (Liang, et al., 2019; United Nations Educational Scientific and Cultural Organization, 2009). A variety of international authorities, such as UN Treaty Monitoring Committees, have also set standards on topics that should be covered and solidly support that sexuality education curricula in schools must be comprehensive, covering topics of pregnancy, unsafe abortion, the prevention of HIV/AIDS and STIs, family planning and contraception (Bernstein et al., 2022; United Nations Programme on HIV/AIDS, 2006).

Following these conferences, a great number of nations have come to agree that the best approach to meet the sexual and reproductive health requirements of adolescents is to provide sexual health education in schools. For example, organized sexual health education curricula have been implemented in the United Kingdom, the United States of America, Germany, Canada, and Australia. Their curricula include a wide range of issues and center on the interests of both national and students. Issues covered in their curricula include all topics concerning growing up process, changing of the body, emotions, the biological process of reproduction, sexual activity, partnership, homosexuality, unwanted pregnancies and the complications of abortion, dangers of sexual violence, child abuse, sexual-transmitted diseases and sex-positions (Dekker et al., 2020; Ketting et al., 2020; Chandra-Mouli et al., 2019; Leung et al., 2019; UNESCO, 2009). A wide range of studies (Maness et al., 2018; Baheiraei et al., 2014; Simon & Daneback, 2013; Buhi, et al., 2010) affirm that when curriculum designers ignore topics that students find interesting, adolescents frequently turn to their peers, media and the internet for information about sexual health, a problem that exposes many adolescents at high sexual risks and its related complications.

In Tanzania, sexual and reproductive health education came to its inauguration after the emphasis on various policy frameworks and strategies. For instance, Tanzania's policy framework of 1998 -2002 for prevention and control of HIV/AIDS/STDs stated that the in-school youth are to be provided with HIV/AIDS education at primary and secondary levels (United Republic of Tanzania, 1998). Furthermore, the National HIV/AIDS policy stressed that raising and maintaining public awareness through information, education, and communication for behavioral change at all levels by all sectors can help prevent the spread of HIV/AIDS (United Republic of Tanzania, 2001). Currently, sexual and reproductive health issues in Tanzania are addressed in secondary schools through the subject of biology, Civics and General studies (Rangi & Mwageni, 2012; Mkumbo & Ingham, 2010; United Republic of Tanzania, 2010a; United Republic of Tanzania, 2010b). The topics covered under sexual and reproductive health issues include reproductive parts of the body, sexually transmitted diseases, pregnancy and childbirth, puberty growth and development, confidence in relationships and decision making, family planning (contraception and their usage), sexual orientation or gender and its roles, sexually, sexual health and responsible sexual behaviours, heterosexuality and effects of drug use in a relationship. Other topics include lifestyle choices and consequences, risk behaviours and situations, and care and support for people living with HIV (URT, 2010a; 2010b). Generally, efforts to provide sexual health education to adolescents typically focus on teaching HIV/AIDS prevention and abstinence-only programs depriving them of a comprehensive knowledge of sexuality education.

Adolescents in secondary schools in Tanzania, specifically in the Iringa Region are facing enormous challenges including early pregnancies, the rising prevalence of sexually transmitted diseases like HIV/AIDS, a rise in school dropouts brought on by pregnancy, early parenthood and untimely deaths (WHO, 2015; UNICEF, 2015). According to UNICEF (2015), the trend of STDs particularly HIV among adolescents in the Region is higher (8.2%) than it is nationwide (3.7%) for those adolescents between the ages of 15 – 19 years. The region is a hotspot for HIV/AIDS and ranked second in the country by having high infection rates of 11.3% after Njombe Region which has a higher infection incidence of 11.4% (Tanzania HIV Impact Survey, 2018). All these are happening despite sexual health education being made part and parcel of education provided in schools (URT, 2010a; URT, 2010b).

Material and methods

Description of the study area

Iringa Region lies in the southern highlands of Tanzania Mainland between latitudes 6^0 55' and 9^0 00' North of the Equator and longitudes 33^0 45' and 36^0 55' East of Greenwich. The region has a total area of 35,743 km2. Administratively, Iringa Region is divided into three districts namely Iringa, Mufindi, and Kilolo with four councils namely Iringa District Council, Mufindi District Council, Kilolo District Council and Iringa Municipal Council (URT, 2013). Iringa Municipal and Iringa District Councils were purposively selected for this study. Iringa Municipal covers an area of 162 square kilometers with 14 wards and 162 streets varying in size significantly. Iringa Rural District as the other study area has a total of 20,413.98 km^2 which is about 35% of the total area of the Iringa Region. The district lies between latitudes 7^o 0' and 8^o 30' South of the Equator and between longitudes 34^o 0' and 37^o 0' East of Greenwich. The district is divided into 6 divisions and 25 wards with a total of 123 villages and 718 hamlets distributed unevenly (United Republic of Tanzania, 2013).

The study design and sampling procedures

This study employed a cross-sectional research design. The design was used because it allows the collection of data from different groups of respondents at a time. Both simple random and purposive sampling techniques were employed in the selection of the study area and respondents. Purposive sampling was used to select two districts (Iringa Municipal and Iringa Rural District) for the current study. The districts were purposively chosen because they have a high risk of sexual outcomes among adolescents including high unplanned pregnancies and its related complications, STIs and HIV/AIDS, unsafe abortions, sexual abuse and massive school dropouts (Omondi et al., 2019). Simple random sampling was used to select a total of 372 adolescent respondents with ages ranging from 10-19 years from two districts (Iringa Municipal and Iringa Rural district). The sampling frame for this particular study comprises all secondary schools in the two districts with more than 200 students. Schools with a large number of students imply high interaction among learners and have complex management roles as compared to those with few students hence being suitable for this study.

Based on the set criteria, Iringa Municipal had a total of 26 schools while Iringa District had 32 schools. For good representation of the study population, 10% of all secondary schools from each District were taken resulting in a selection of 6 schools (3 from each district). The chosen sampling frame of 10% is based on what is recommended by Kothari, (2004) thus, being representative for the study area. A simple random sampling technique was also applied in the selection of 3 schools from each district. Names of all schools in each district were written on pieces of paper, mixed up in a box and one person was asked to pick one paper after another without replacement until the required number was achieved. Moreover, the sampling unit for this study was all adolescent students in the selected secondary schools with ages ranging from 10-19 years. Adolescents in this age group were thought to be more knowledgeable on sexual health education provided at school as they have learned some of the contents in primary school and yet, they are learning it in secondary schools. To get a representative sample size, the total number of 5,476 students from the sampled 6 schools were covered by this study. The exercise resulted in the selection of Miyomboni, Mlamke and Kihesa secondary schools from Iringa municipal and Kidamali, Isimila and Nyerere high schools from Iringa Rural district used for the current study. The sample size of 372 students was determined by using a formula proposed and used by Israel (2009). The formula which is based on 95%confidence level and p=0.05 reads as:

$$n = \frac{N}{1 + N(e)^2} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where; n is the sample size to be calculated, N is the total population of the study (schools) and e is the level of precision measured by a probability scale of 5%.

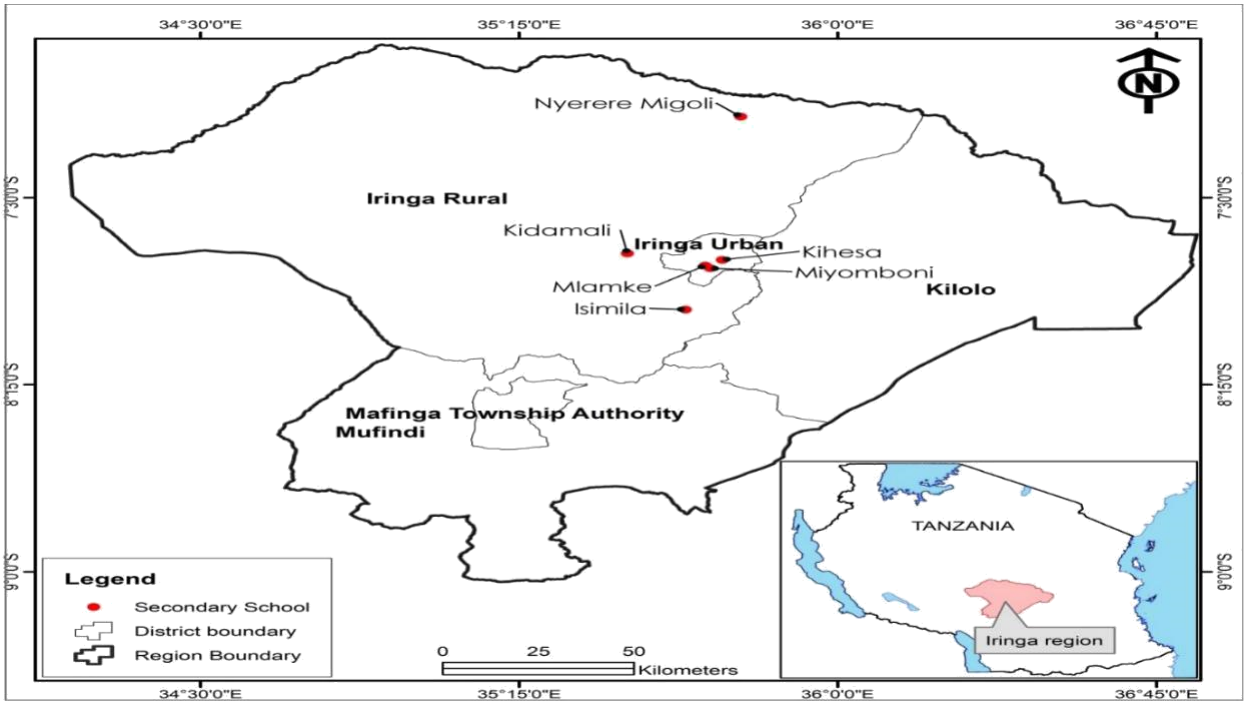

Figure 1: Location of Iringa, administrative area and the sampled study schools
Source: GIS Lab, IRA, University of Dar es Salaam.

Plugging data into the formula, symbols will be replaced with figures as shown below:

$$n = \frac{5476}{1 + 5476(0.05)^2} = 372$$

The calculated sample size was applied to compute the proportion of students in each school which was determined by the number of students in all schools. The formula used reads as:

$$n_h = \frac{N_h}{N} n \quad \text{..... (2)}$$

Whereby n_h is the required sample size from school h (h=1, 2, 3, 4, 5 and 6), N_h is the number of students in school "h", N is the total number of students in all schools and n is the total sample size of the study population. Plugging data in the formula above resulted in a proportional of 45, 52, and 64 students from Miyomboni, Mlamke and Kihesa secondary schools in Iringa Municipal respectively and 50,74,87 students from Kidamali, Isimila and Nyerere high schools in Iringa Rural districts respectively. A quantitative analysis technique was employed in collecting data and analyzing the study findings. Data obtained were coded and analyzed using Statistical Product and Service Solution (SPSS) version 27 and Microsoft Excel software 2013 to generate descriptive statistics (frequencies and percentages).

Results and discussion

Socio-demographic characteristics of respondents

It was important to study the age, sex, class level, studentship, religion and worship sessions of the population under study because the mentioned variables have an influence in determining adolescents' response to the study theme. The findings in Table 1 show that the majority of the respondents (95%) in both districts were aged between 15-19 years and the minority (5%) were aged between 10-14 years. The sex composition of the population comprised 64% female and 36% male adolescents. Moreover, at the class level, 35% of the survey population was in form four, 33.6% were in form three and 26.1% were in form six. Others, 4.8% of the respondents were in form five and the rest, 0.5% were in form two. On studentship, more than half (57.3%) of adolescents were day students and the rest 42.7% were boarding students. Furthermore, the majority (87.4%) of the respondents were Christians while Muslims constituted 11.3% of the respondents and the rest 1.3% of the respondents were non-religious. More than half (54.8%) of adolescents attended worship sessions more times in a month followed by 35.5% of adolescents who attended worship sessions once a month. Others, 8.1% of the surveyed population attended worship twice a month and the rest 1.6% of adolescents never attended worship. The findings above imply that, based on age, the population had enough experience and knowledge as far as the subject matter was concerned as it demanded respondents to retrieve their past and present experiences on the subject matter.

Also, involving both sexes from every school was important as sexual relations engross both sexes and at the same time both of them are vulnerable when it comes to issues of sexuality and their related problems. Moreover, the study involved Christian and Muslim students to have perspectives of both religions when it comes to issues of sexuality and sexual health.

Provision of sexual health education in schools

The researcher was eager to know whether sexual health education was provided at schools and in which subject(s) it is being taught. Results in Figure 2 show that the majority (77.7%) of the respondents reported the education to be provided at their schools, 20.2% of the sampled population reported that the education was not provided and 2.1% of respondents reported knowing nothing about whether the education was provided at schools or not. Moreover, more than three-quarters (85%) of those who said it is provided at schools reported the education to be inclusive in other subjects and not taught separately just like other subjects are being taught. Adolescents at the ordinary level reported more of the contents taught to be found in Biology subject and part of it was in Civics while in advanced levels sexual health education was taught mostly in General studies.

The reported findings imply that adolescents in the study areas both (urban and rural districts) have learned sexual health education at their schools. The sexual health contents are taught in the subjects of Biology, Civics and General Studies. These results resemble that of Jerome et al. (2017), Rangi & Mwageni (2012) and Mkumbo, (2010) in Arusha and Morogoro and Dares Salaam Regions respectively who noted similar observations of sexual health education not to be provided as standalone subject rather, it is mainstreamed in other subjects, namely Social Studies, Science, Civics and Biology. However, it is not clear how much sexuality education topics are covered in these subjects.

Table 1: Socio-demographic characteristics of respondents (n=372)

Variable name	Frequency	Percentage (%)
Age		
10-14.	19	5
15-19	353	95
Sex		
Male	134	36
Female	238	64
Class levels		
Form six	97	26.1
Form five	18	4.8
Form four	130	35
Form three	125	33.6
Form two	2	0.5
Studentship		
Day scholar	213	57.3
Boarder	159	42.7
Religion		
Christian	325	87.4
Muslim	42	11.3
None religious	5	1.3

Source: Field data, (2023).

Contents of sexual health education focused on in schools

Sexual health education in Tanzania is taught in secondary school through the subject of Biology, Civics and General Studies (Rangi & Mwageni, 2012; URT, 2010a; 2010b). The study noted 11 major sexual health topics that are taught in secondary schools as recommended by various councils, organizations and experts. These include reproductive parts of the body and their functions, sexually transmitted diseases, pregnancy and birth, puberty growth and development, confidence in relationship and decision making and family planning, contraception and their usage. Others are sexual orientation, sexuality and responsible sexual behaviours, heterosexuality, effects of drug use in relationships and homosexuality. On the other hand, they were also asked to provide some new topics that were deemed important to them but not included in the curricula. These included sexual harassment and alternatives to sexual intercourse. Knowing how these topics are important from the learners' point of view is imperative in the learning process as it makes learners receive the correct knowledge they want in fighting against problems associated with sexuality, paying attention in the learning process and enjoying the lesson. The findings in Table 2 indicate that the majority (99.5%) of the respondents reported that there is a need for teaching about the reproductive parts of the body and their functions at the secondary school level. Similarly, a larger percentage of the respondents (98.1%) reported a need for teaching about puberty, growth and development.

Moreover, the topic of pregnancy and birth was supported by a large number of adolescents (98.4%) who felt that this knowledge is highly needed to enable students to be aware of issues of unintended pregnancies. Not only that, but also a large number (97%) of the respondents reported that there is a need to teach them confidence in relationships and decision making which could create awareness on their role whether to engage in sexual relations or not and why. Others (95.7%) reported that there is a need to teach about knowledge on contraceptive methods and their usage to create awareness of protective methods against pregnancies and sexually transmitted diseases. Furthermore, 95% of respondents reported that there is a need to be taught about sexual harassment at the school level. Education on the effects of drug use in sexual relations was supported by 84.9% of adolescents that it should be taught in the study area while knowledge of alternatives to sexual intercourse was also desired by the majority of the respondents (83.3%). This is a new topic suggested by students from what they learned from school. Homosexuality was only supported by 3.2% of the respondents in the study area where 96.8% of the respondents felt that there is no need to teach it at the school level as it is against the natural creation and not culturally appropriate in the country setting

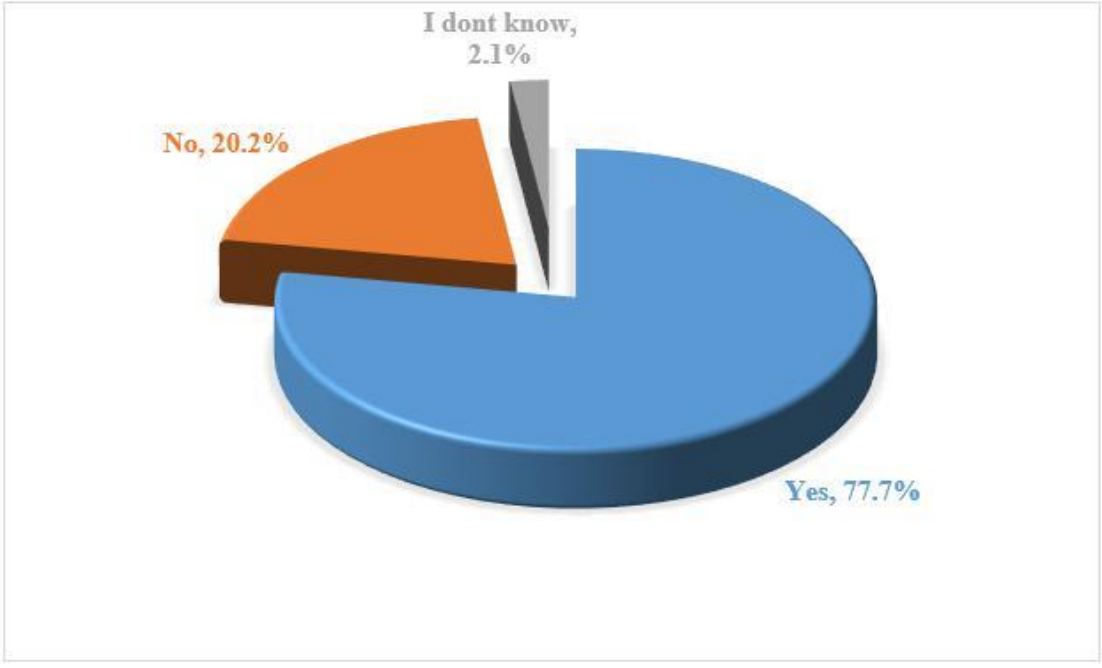

Figure 2: Provision of sexual health education in schools
Source: Field survey, (2023).

Table 2: Contents of sexual health education focused on in schools (n=372)

Component of sexual health education	Important (%)	Not Important (%)
Reproductive parts of the body and their functions	99.5	0.5
Sexually transmitted diseases	98.9	1.1
Pregnancy and birth	98.4	1.6
Puberty, growth and development	98.1	1.9
Confidence in relationship and decision-making	97	3
Family planning, contraception and their usage	95.7	4.3
Sexual orientation (Gender and its roles)	95	5
Sexuality and responsible sexual behaviours	95	5
Sexual harassment	93	7
Heterosexuality	95	5
Effects of drug use in relationship	84.9	15.1
Alternative to sexual intercourse	83.3	16.7
Homosexuality	3.2	96.8

Source: Field Survey (2023).

Table 3: Sexual health education topics learned at schools (n=372)

Components of sexual health education	Learnt (%)	Not Learnt (%)
Reproductive parts of the body	91.4	8.6
Sexually transmitted disease	83.3	16.7
Effects of drug use in relationship	82	18
Puberty, growth and development	72.8	27.2
Pregnancy and birth	72	28
Heterosexuality	52.2	47.8
Sexual orientation	45.7	54.3
Alternative to sexual intercourse	36.8	63.2
Sexuality, sexual health and responsible behaviours	26.3	73.7
Confidence in relationship and decision-making	13.2	86.8
Family planning and Contraceptive methods	5.1	94.9

Source: Field Survey (2023).

The findings above imply that adolescents in the study areas view the majority of sexual health topics taught in schools as important except for homosexuality. Pointing out many topics as important implies that they want to learn a wide range of sexual health components not only sexual abstinence programs or pregnancy prevention programs or HIV prevention programs, but comprehensive programs that could help them solve their sexual and reproductive health challenges as they transform from puberty to adulthood. These findings are in line with what was reported by Panchaud et al. (2019) and Sidze et al. (2017) in Ghana and Kenya respectively where adolescents were in favour of learning a full range of comprehensive sexual health education (CSE) topics to have a wider knowledge and skills to make an informed decision on sexuality and sexual matters. Similar results were also observed by Zulu et al. (2019) in Zambia.

Adolescents' views on sexual health education topics learned at school

It was important to know adolescents' perceptions of what they have learned from the areas of sexual health education provided at school to know the coverage. Findings in Table 3 reveal that the majority of the respondents (91.4%) reported that they have learned about reproductive parts of the body at the school level while 83.2% of respondents reported having learned about sexually transmitted diseases. Others, 82% of respondents reported having learned the effects of drug use in relationships and 72.8% reported that they have learned about puberty, growth and development. The study results also indicate that 72% of adolescents reported that they have learned about pregnancy and birth in school. Conversely, the majority (94.9%) of adolescents felt that have not learned family planning and contraception while, 86.8% of the respondents reported that they had not learned about confidence in relationships and decision making and73.7% of respondents reported had not learned sexuality, sexual health and responsible behaviours. Moreover, 63.2% of adolescents reported to have not learned alternative to sexual intercourse and 54.3% of respondents reported to have not learned sexual orientation.

The findings above imply that there are sexual health components adolescents have learned in schools and many other components not learned despite being important in shaping their sexual behaviours. The learned components include reproductive parts, puberty, growth and development, pregnancy and birth, heterosexually, sexually transmitted diseases, effects of drugs in relationships, puberty growth and development, pregnancy and birth as well as heterosexuality. Conversely, components that have not been taught include family planning and contraceptive methods with the exclusion of condoms, confidence in relationship and decision making, sexuality, sexual health and responsible behaviours, alternative to sexual intercourse and sexual orientation. Teachers are not in favour of teaching these contents worrying that they are against the cultural norms. Moreover, they are in the perception that teaching these contents would expose many adolescents to sexuality and encourage sexual practices. These findings correlate to those of Popoola &

Ogunfowokan, (2018) in Nigeria who noted many adolescents are not taught family planning and contraceptive use in secondary schools. A similar observation was noted by Sidze et al. (2017) in Kenya who noted adolescents have not learned some topics including contraceptive methods, sexual orientations and communicating within relationships. The same results were also observed by Ivankovich et al. (2013) in America who noted that adolescents have not received effective formal instruction across many topics despite having an effective sexual health curriculum.

Adolescents' views on understanding the taught components of SHE at school

Findings in Table 4 show that the majority of the respondents (98.1%) reported that they understood reproductive parts of the body as taught in the school. A majority (96%) of respondents reported that they understood puberty, growth and development. Moreover, 85% of the respondents in the study area reported that they have understood about pregnancy and birth as taught in school.

Table 4. Adolescents' views on the understanding of the learned areas of SHE (n=372)

Taught components	Understood (%)	Not understood (%)
Reproductive parts of the body	98.1	1.9
Puberty, growth and development	96.0	4.0
Sexually transmitted diseases	86.0	14.0
Effects of drug use in relationship	84.7	15.3
Pregnancy and births	85.0	15.0

Source: Field Survey, (2023).

The findings above imply that each topic taught was understood by more than three-quarters of adolescents. These include reproductive parts of the body, puberty growth and development, sexually transmitted diseases, effects of drugs in relationships and pregnancy and births. This also has an implication that few contents have been covered that could not give adolescents wider knowledge to fight against sexual health challenges. The current study findings are consistent with that of Nash et al. (2019) in Malawi, Sidze et al (2017) in Kenya and Zulu et al. (2019) in Zambia who noted adolescents in schools receiving instruction on only a small subset of sexual health topics despite national guidelines that demand the teaching of comprehensive sexual health education. The diminutive education received was poorly provided and less understood. The current study findings also lead credence to that of Narushima et al. (2020) in Canada, Najafi_Sharjabad & Haghighatjoo, (2019) in Asia and Acharya et al. (2019) in Nepal who observed that sex education programs were being inadequately delivered in schools as a result pupils have low levels of knowledge and understanding about sexual health matters leading them to engage in risky sexual behaviours and sexual health problems.

Levels to start learning proposed SHE components

Findings in Table 5 indicate majority (73.4%) of adolescents reported that the teaching of confidence in relationships and decision-making needs to commence at primary school standards five through seven. This topic has recently been found in Civics curriculum and is being taught to form three students. Other majorities (70.3%) of respondents reported that teaching about the reproductive parts of the body and their functions at the school level should begin at the primary school level, particularly in standards six and seven. Currently, this component is found in the Biology curriculum under the topic of reproduction and is taught to from three classes. Apart from that, the majority (68.6%) of the respondents reported that teaching of heterosexuality needs to commence at primary school especially in standard five through seven. This topic is found nowhere in the current Biology and Civics curricula however, it can be related to concepts of gender and courtship and marriages as found in the Civics syllabus and it is taught to form one class.

Nevertheless, (68.3%) of respondents said the teaching of the effects of drug use should begin at secondary schools from form one through form two. The topic currently is found in the Biology curriculum under the topic of coordination and is taught to form three students. Not only that, but also 66.4% of respondents reported that teaching about puberty, growth and development should begin at primary schools in standard five through seven.

Table 5: Levels to start learning the proposed SHE topics (n=372)

Component of SHE	Standards		Forms		
	1-4 (%)	5-7 (%)	1-2 (%)	3-4 (%)	5-6 (%)
Confidence in relationship	5.7	73.4	17.5	2.6	1.1
Heterosexuality	0	68.6	30.6	0.5	0.3
Puberty and growth	17.7	66.4	13.9	1.8	0
Sexually transmitted disease	7.7	64.0	20.2	7.3	0.8
Sexual orientation	4.6	51.6	37.6	4.6	1.6
Sexual health and behaviours	4.3	48.7	34.4	10.8	1.8
Pregnancy and birth	3.4	28.2	53.5	12.0	18.9
Alternative sexual intercourse	3.5	25.0	60.5	9.9	1.1
Reproductive parts of the body	1.5	70.3	32.1	3.4	1.5
Drug use and relationship	2.2	23.1	68.3	5.3	1.2
Contraceptive methods	0	4.0	62.4	32.8	0.8

Source: Field Survey, (2023).

According to the current national curriculum this topic is found in the Biology syllabus and it is taught to form one and form four students. Others, 62.5% of respondents felt that teaching of family planning and contraception methods should start in forms one and two. Based on the curriculum this topic is found in Biology and is taught to form three classes. Education on sexually transmitted diseases was proposed by 64% of respondents who emphasized it to be given at school starting at standards five through seven. This component is found in the Biology syllabus and it is taught to from one and form four students. Meanwhile, 60.5% of respondents desired that teaching about alternatives to sexual intercourse start in secondary schools particularly in form one through two. This component is not found in the national curriculum. Moreover, more than half (53.5%) of the respondents suggested that the teaching about pregnancy and birth should start in secondary schools form one and two. This topic is found in the Biology syllabus in the topic of reproduction and it is taught to form three classes. Furthermore, 51.6% of respondents reported that sexual orientation to be taught in schools and should begin at primary school especially standard five to seven. This topic is not found in the current secondary school curricula. Others, 48.7% of respondents reported that the teaching about sexuality, sexual health and responsible behaviours should begin at primary schools and start to be taught in standards five through seven. This component is found in the Biology syllabus and it is taught to form three students.

These findings above imply that adolescents are proposing the teaching and learning of some sexual health education content at schools to start as early as possible before one initiates sexual activity and their contents to be based on age and class level. For instance, adolescents report that topics such as puberty and growth, sexual orientation, confidence in relationships,

heterosexuality and sexually transmitted diseases have to start being taught at primary schools standard five to seven. The observation given as to why they should learn these topics at primary and specifically in standards five through seven is that adolescents recently initiate puberty and start sexual debut at young ages. Also, many of them are in multiple partnerships and some to people who are older than themselves. Moreover, the other categories of topics such as pregnancy and birth, contraceptive methods, alternatives to sexual intercourse and effects of drug use in relationships should be taught starting from forms one and two to higher classes forms (three, four, five and six). This will help adolescents be able to acquire sufficient knowledge and skills concerning sexuality and sexual health as they grow and be able to protect themselves against problems related to sexuality and relationships.

Therefore, observing the way adolescents categorized the topics and the levels for each topic to be taught, one could argue that the provision of SHE in schools has to be offered as early as possible before a person initiates a sexual act. It should also be provided based on class levels, starting with simple components to those in lower classes to complex ones to those in higher classes. The findings are similar to the study by Sidze et al. (2017) in Kenya who observed that SHE should be introduced from primary schools to secondary school and should have clear suggested topics based on class levels. A similar observation was noted by Leung et al. (2019) in Taiwan who noted respondents demanding SHE to start at lower grades based on age that is appropriate to the content taught.

Conclusion

The current study has noted sexual health education to be taught in secondary schools in the study areas. The study has also noted that school secondary adolescents report most of the topics in the curricula to be important except homosexuality. Findings have also revealed adolescents to have thoroughly learned and understood five topics taught as stipulated in the curriculum including reproductive parts of the body, puberty, growth and development, sexually transmitted diseases, effects of drug use in relationships and pregnancy and birth. Conversely, results have shown adolescents to have not learned almost half of the topics as found in the curriculum including sexual orientation, the alternative to sexual intercourse, sexuality, sexual health and responsible behaviours, confidence in relationship and decision making, family planning and contraceptive methods. Results father indicates a high desire of adolescents reporting a need for a shift of some topics that are taught in secondary schools to primary school standards five to seven. These topics include confidence in relationships, heterosexuality, puberty, growth and development, sexually transmitted diseases, sexual orientation, sexual health and behaviours, the reproductive parts of the body, sexual health and responsible behaviours, alternatives to sexual intercourse and sexual orientation. The reason for this shift is that adolescents recently initiate puberty and start their sexual debut at young ages. Also, many adolescents in secondary schools are in multiple partnerships and some to people who are older than themselves. It is concluded that to equip adolescents with a full range of knowledge and skills that could help them make healthy decisions in the context of their relationships and to better address the increasingly high sexual health challenges, an age-appropriate comprehensive sexuality education curriculum that meets national and adolescents' desire is recommended in secondary schools in the study areas and other places of the same nature.

Acknowledgments

I am indebted to all adolescents and teachers in the participating schools but also to healthcare workers and District Secondary school Education officers from Iringa Municipal and Iringa Rural districts.

Ethical approval and consent to participate

The informed consent was obtained from participants with clearly stated objectives of the research. The participants were also assured of anonymity and confidentiality of information and were informed of their right to participate or refuse participation. Full respect for individuals, their social status and personalities were considered.

Conflict of interest

The authors declare that there is no conflict of interest.

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