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Involvement of Parents in Sexuality and Reproductive Health Education of Adolescents and Associated Factors in Hoima Municipality, Uganda

Article by Mugumya Ivan[1], Omona Kizito[2]
[1]*Public Health Specialist and works with Green Label Services Limited*
[2] *PhD, Lecturer and Researcher, Faculty of Health Sciences, Uganda Martyrs University,*
E-mail: ivanmugumya.muph@gmail.com[1], komona@umu.ac.ug[2]

Abstract

Introduction: *Many adolescents often lack strong and stable relationships with their parents to openly discuss reproductive health concerns. Parents often have the power to guide children's development in sexual health matters, encouraging them to practice reasonable sexual behaviours.*

Objective*: The study aimed at ascertaining the level of involvement of parents in sexuality education of their adolescents in Hoima municipality and the associated factors.*

Methodology*: It was both descriptive and analytical across-sectional study and used both qualitative and quantitative methods. 213 Participants were randomly selected and interviewed using semi structured questionnaires.*

Results*: Most of the parents (81.7%) reported to be involved in sexuality and reproductive health education of their adolescents. Females were 1.18 times more likely to be involved in sexuality education (CPR=1.18; CI= 1.02-1.37; p-value 0.02). Parents were 1.56 times more likely to be actively involved in talking to their adolescents about sexuality education compared to other people (APR=1.56; CI= 1.22-1.99; p-value < 0.001). Having both parents were 1.22 times more likely to equally talk to their children about sexuality and reproductive health (CPR=1.22; CI=1.07-1.40; p-value= 0.004). Mothers were 1.64 times more likely to be involved in teaching their children on this subject matter than fathers (APR=1.64; CI=1.15-2.34; p-value 0.006).*

Conclusion*: Factors associated with parents' involvement in sexuality education were; female headship of family, being a traditional believer and widow/widower. SRH services should, therefore, be availed in all the health units, where both adolescents and parents can easily access.*

Keywords: *Sexuality education, Sexual Reproductive Health (SRH) services.*

Introduction

A family has a role to play in sex education whereby parents stand at the centre of the sessions and can effectively deliver messages to the children. This is best achieved if parents have a free association and interaction with their children and act as their role models. Once adolescents both girls and boys are not attended to by parents, they resort to other sources like the peers, the media and the Internet to educate themselves about sexual related issues (Turnbull, *et al.*, 2018).

This helps children to develop and practice responsible sexual behaviour and personal decision making (Barnett, 2017). On contrary however, it was established that in almost all societies, educating children about sex is not a task that parents and other family members find easy. Many feel uncomfortable talking with children about the subject. Perhaps they are reluctant to expose their own lack of knowledge about anatomy, physiology, or other related information. They may worry about how much information to give at what age, based on the unfounded belief that the provision of this information will lead young people to experiment with sex (Goldman, 2011). Many adults did not receive sexuality education themselves, and some have fears arising from their own negative sexual experiences. Adult family members, therefore, tend to shy away from actively educating youth about issues relating to sexuality and reproductive health. What many fails to realize is that giving no

information or evading young people's questions can send negative messages about sexuality (UNFPA, 2013).

Adolescents are significantly exposed to risks of unintended pregnancies, unsafe abortions, increased STIs including HIV/AIDS, Child abuse including gender-based violence and sexual abuse. This risk is amplified by parent's reluctance to talk to their adolescents about SRH issues and as a result in Uganda, HIV prevalence among adolescent years is 1.9%for males and 2.3% for girls (MoH, 2015).About4% of young men and women age 15-24 have already been infected with HIV and 25% of teenage girls are either pregnant or have already had their first child (UBOS 2017). Due to lack of parental guidance and involvement in sexuality education, young people between the age of 15-24 remain with limited knowledge and seek information from unreliable sources (WHO, 2012).

Parents are the primary educators of their children, particularly in relation to sexuality education. Thus, in the past, young people used to receive sexuality education from their parents, relatives and community members. In addition, the cultural institutions have also been promoting the use of indigenous knowledge and engaging traditional systems and structures to disseminate and uphold observance of local cultural practices, norms and values relevant to sexuality. Similarly, religious institutions have been the custodian and promoters of morals and morality. However, because of on-going transformation in the communities, country and the world due to dynamic changes in local and national circumstances as well as impact of globalization, technological and economic development, the is much more needed than ever before. There is silence among most parents and their adolescent children on these matters, and the level of their involvement on this issue is unknown.

Although the Ugandan Ministry of Education has formulated the National Sexuality Education Frame Work to guide the teaching of sexuality education in institutions of learning, this issue remains controversial among several stakeholders including religious leaders who are not in support of this since 2016. This has sustained a challenge where adolescents have remained sexually active at 36% while experiencing associated effects of early pregnancies and increasing HIV prevalence among the adolescents (UBOS, 2016).

Many socio-economic effects resulting from oil exploration activities such as, culture mix, changes in income, displacement, economic transformation, influx of people are likely to greatly influence the sexuality and reproductive health status of millions of youth in the Albertine graben and Hoima municipality in particular. In spite of concerns that sexuality education may contribute to early sexual experimentation among young people, there is no supportive evidence (Kirby, *et al.*, 2006). On the contrary, sexuality education has the potential to positively impact knowledge, attitudes, norms and intentions (Paul, *et al.*, 2008). These gaps continue to expose adolescents to risks of unintended pregnancies, unsafe abortions, increased STIs, Child abuse including gender-based violence and sexual abuse.

Objectives of the study

General objective

To examine parental involvement in sexuality education of their adolescents in Hoima Municipality.

Specific objectives

These were

1. To assess the level of involvement of parents in sexuality education of their adolescents in Hoima municipality.
2. To assess the knowledge of parents of Hoima Municipality on adolescent sexuality and reproductive health.
3. To examine the attitude of parents of Hoima district towards sexuality education to adolescents.
4. To determine the factors associated with the involvement of parents in sexuality education of their adolescent children in Hoima Municipality.

Methodology

Study area

The study was conducted in Hoima Municipality, Hoima district, Uganda. Hoima municipality is approximately 200 kilometres by road, northwest of Kampala (Uganda's Capital City). According to the 2014 national census, the population of Hoima is 572,986 (UBOS,

2014). The economic activity of Hoima is largely rice and maize growing. However, between the year 2000 and 2009, a considerable amount of oil deposits, estimated at between 2.5 billion to 3.5 billion barrels, were discovered in Lake Albert and on the shores of the lake in Hoima District and the neighbouring Buliisa District.

The Uganda Oil Refinery, is planned in Kabaale Village, Buseruka Sub-county, Hoima District, approximately 35 kilometres west of Hoima town. An oil pipeline, the Uganda-Tanzania Crude Oil Pipeline, is also planned to evacuate crude oil to the Tanzanian Indian Ocean port of Tanga. Consequently, Hoima is poised to become a hub of economic activity.

Study design

The study design was analytical and descriptive, cross-sectional and applied both qualitative and quantitative methods of data collection.

Study population

The study population under consideration were predominantly parents in Hoima municipality. Others were the District Health Officer, the Division Health Focal Persons, some parents with reputable status and the Community Development Officers and secondary school head teachers to help in qualitatively understanding the involvement of parents in sexual and reproductive education of adolescents.

Study unit

A parent in Hoima municipality

Inclusion criteria

A parent, with an adolescent under his/her care, residing in Hoima municipality for at least two years was included in the study.

Exclusion criteria

A parent, without an adolescent under his/her cares, with residence of less than two years in Hoima municipality was excluded from the study.

Sample size determination

Taro Yamane formula (1967) formula for calculation of sample size (n) when population size (N) is known was used to determine the sample size. Assuming a 95% confidence level and maximum degree of variability of the attributes in the population, p = 50% (0.5), the sample size was calculated as below

Thus, using the formula; $n = \frac{N}{[1+N(e^2)]}$

Where n is the sample size, N is the population size and e are the level of precision (Sampling error – 5%).

Thus; $n = \frac{456}{[1+456(0.05^2)]} = \frac{456}{(1+1.14)} = \frac{456}{2.14} =$ 213.084 = 213 respondents

Sampling procedure

Probabilistic sampling for quantitative data and non-Probabilistic sampling for qualitative data were used in this study. Parents were selected using simple random sampling with a help of a sampling frame of municipality dwellers' lists for only families with adolescent children. Each household in a particular ward was assigned unique numbers which were written on uniform pieces of papers and all papers folded uniformly. Then the folded papers were put in a bowl and shaken well and one by one selection of households to be interviewed was done to ensure all households in the cell have an equal chance of being selected. Only one respondent was acceptable for each of the selected household. District Health Officer, the Division Health Focal Persons, some parents with reputable status, Community Development Officers and secondary school head teachers were purposively selected to help in understanding the involvement of parents in sexual and reproductive education of adolescents.

Study variables

Dependent variables

Parents' involvement in sexuality education of adolescents

Independent variables

Factors associated with parents' involvement in sexuality education of adolescents. These included economic, social-demographic, government policies, poverty, occupation and communication, knowledge, attitude and content of information shared between parents and their adolescent children

Data collection methods and tools

The study used qualitative and quantitative methods of data collection; interview guides and

questionnaires were employed respectively. Questionnaires were administered to parents in the sampled households from the wards. To obtain genuine responses from respondents, questionnaires were researcher-administered to enable explanations in case of ambiguity. Interview guide was used in the collection of qualitative data that is explanatory in nature as per the respondent's understanding of events.

Data management and analysis

Quantitative data from questionnaires was edited, coded and checked for consistency, then entered in Epi data version 13.02 and later exported to Stata version 13.0 for analysis.

Qualitative data was analysed using content thematic analysis. Interviews were transcribed in English, in order to be used for identifying individual bits of data. The transcripts were read and re-read in full so as to annotate the thoughts in them.

This involved examining the text closely, line-by-line, to facilitate a microanalysis of the data. Coding was then carried out. Items relating to similar topics were organized into categories to enable the identification of emerging themes. The proto-themes were examined to start definitions.

Quality control

All data collection tools were pre-tested in Buhimba sub-county, one of the sub counties of Hoima district to check on their reliability. Adjustments were then made where necessary to improve the questionnaires. Field assistants were trained by the principal investigator in the administration of the tools. Emphasis was on ensuring that there is completion of the questions on the questionnaires before returning from the field.

Ethical considerations

Permission to conduct the study was sought from relevant Research Ethic bodies. Written informed consent from respondents was sought and their names were not written anywhere on the questionnaires in order to assure them of confidentiality. The researchers explained the purpose of research to the respondents.

Study limitations

Many households were found not to have adolescents and in others, parents were not staying with their adolescent children.

Results

Socio-demographic characteristics of respondents

A total of 213 respondents were interviewed and their socio demographic characteristics were profiled as follows; Most 133(62.4%) of the respondents was aged less or equal to 40 years with a mean age of 40.5 years. Majority of the respondents were females 130(60%) and many 168(78.9%) of these parents were Christians. The predominant tribe was Banyoro 159(75.6%) and 140(64.7%) of the respondents engaged in monogamous marriages. Most 35(35.2%) of the respondents earned a monthly income of 100,000-300,000/= Uganda shillings. Vending 58(27.2%) was the main occupation among the respondents. On the other hand, only 91(42.7%) of the respondents had completed secondary level of education.

Involvement of parents in sexuality education

Respondents were interviewed about their involvement in sexuality education of the adolescents and majority 174(82%) of the parents reported to be involved in sexuality education of their adolescent children and only 18% were not involved. On the number of adolescents under the care of the respondents, most 77(36.2%) of them had one adolescent under their care, 62(29%) had two and 36(17%) had three and 38(18%) had four and more number of adolescents each under their care as shown in the Figure 1.

In Figure 2, among the 213 respondents who took part in this study, Majority 174(82%) of them were involved in the sexuality education of their adolescents and hence responded to the questions that followed. Most 77(44.3%) of the respondents reported to find it easy to discuss issues of sexuality and reproductive health with their female children and only 48(27.6%) find it easy to talk to both sexes.

Most of the key informants indicated that it was easy to discuss issues of sexuality and reproductive health with adolescent girls than boys since girls are more understanding and easier to talk to than boys who tend to be stubborn and difficult.

"[…] we mostly discuss with girls since they are more understanding and simple, I leave the boys to their father unfortunately he is never bothered and available to talk to them" (key

informant 5- parent).“[…] as their mother, I only discuss such issues with the girls, the boys are hard and won’t listen (key informant 4-parent).

Most of the parents routinely talked to their adolescent children with 123(70.7%) having discussed with their adolescents in the last one-month period.

Although 167(96%) of the respondents were staying with their adolescent children, Majority 104(62%) were delegating the responsibility to educate their adolescent children issues on sexual reproductive health. Averagely 46.76(28%) delegated this responsibility to teachers at school and 28(16%) to aunts and 13(8%) to uncles and 17(10%) to others (church leaders, grand parents and community-based organisations) as shown by the figure 2

Knowledge of parents on adolescent sexuality and reproductive health

Most 133(62.4%) of the respondents had a proper understanding of sexuality education. However, a significant number of respondents 61(28.6%) understood sexuality education as study of sex matters, how to have sex in future and child production.

Only 7(3.3%) of the respondents did not consider sexuality education of the adolescents important. Parents’ discomfort to discuss the topic and lack of appropriate information to share with the adolescent was top 101(47.4%) barrier for parents’ involvement in the sexuality education of adolescents. Other factors mentioned were lack of conducive environment 50(23.5%), lack of communication skills 90(42.3%), Societal taboo 13(6.1%), lack of time (being busy), disrespectful children, Strictness of parents all combined were at 30(14.1%).

Majority of the key informants gave consistent information with the above findings in regards to the likely barriers to parents’ involvement in sexuality education of their adolescent children.

“[…] Some topics are embarrassing as they seem vulgar and hence parents tend to shy away” (key informant 2-Teacher).

“[…] Parents are harsh and adolescents get scared to open up” (key informant 3- Community development officer).

Majority of the parents 117(54.9%) only waited for radio and TV programmes with a topic on reproductive health education to trigger a discussion on sexuality education with their adolescents. 95(44.6%) of the respondents only discussed sexuality education with their adolescents when they see someone, they believe to be HIV positive or died of HIV. Only 97(45.6%) of the parents interviewed stated that it is a routine for them to discuss issues on SRH with their adolescents without waiting to have a trigger. The above findings were supported by, a parent who stated that she finds it challenging to directly introduce a topic on sexuality and reproductive health to her adolescent children (Table 1)

“[…] Adolescents are stubborn and don’t open up most of the times when I try to engage them on issues of sexuality and reproductive health. Because of this, I also don’t talk about such issues directly, I use examples of victims of things like abortion, HIV, death of people around us to teach them something (key informant 1 - parent).

Attitudes of parents on adolescent sexuality and reproductive health

Respondents were asked questions to which they Agreed, disagreed or neither agree nor disagreed to. To Agree implied that one had a negative attitude while disagree implied that one had a positive attitude.

Findings in table 2 indicate that talking to adolescents was not perceived as a taboo in this community. This is because most of the respondents 187(87.8%) disagreed with the concept. From the collected data, 183(85.9%) and 187(87.8%) of the respondents disagreed with the notion that culture and religion respectively prohibit parents from talking to their adolescent children about sexuality education, this indicates a positive attitude. However, averagely 97(45.5%) believe that there should be high level of privacy for parents to talk to their adolescent children on sexuality education and it is secretive act. Averagely 114(53.5%) don’t believe that talking to adolescents about sexuality education increases the likelihood of their involvement in sexual activities, this is a positive attitude. Most 184(86.4%) of the parents believe that they should monitor/supervise their adolescents all the time if they are to safeguard them against indulging into sexual behaviour that could risk their lives.

It should however be noted that to a certain level culture was mentioned by some key informant as a factor that affects sexuality education.

"[…] Cultural taboos prohibit fathers from talking to females and mothers talking to boys on SRH issues with their children" (key informant 7).

Content of sexuality and reproductive health information shared by parents to their adolescent children

On the content of sexuality and reproductive health information shared by the parents to their adolescent children, the popular key message passed to children was abstinence from sex 97(45.5%) followed by delaying sexual activities and concentrating on academics 94(44.1%). The least popular were messages of using contraceptives 10(4.7%) and negotiations and sex refusal skills 14(6.6%). On the mode of delivery of sexuality and reproductive health information to the adolescents, most 163(76.5%) of the respondents delivered the messages to the adolescents by face to face discussions, 90(42.3%) of the respondents used story telling approach and 14(6.6%) used peers of their adolescents to deliver the sexuality and reproductive health information (Table 3).

Factors associated with involvement of parents in sexuality education of adolescents

Bivariate analysis of the socio-demographic factors showed that others (traditional believers) in religion and widow/widower in the marital status category had statistically significant associations with p-values of at least 0.001 with parents' involvement in sexuality education of adolescents as compared to other members within the respective categories. The rest of the socio-demographic factors did not have any statistical significance with parent involvement in the sexuality education.

Majority of the key informants mentioned that widow/widowers have a lot of hope in their children as the only security for their old age and hence their increased involvement in sexuality education of their adolescent children (Table 4).

"[…] As a single mother, the more you talk to the adolescents the more they open up and become closer to your as parent" (key informant 8-Community development officer).

Table 5 below shows that females were 1.18 times more likely to be involved in sexuality education than their male counterparts. (CPR=1.18; CI= 1.02-1.37; p-value 0.02). Parents who agreed were 1.77 times more likely to be actively involved in talking to their adolescents about sexuality and reproductive health than those who disagreed with the statement (CPR =1.77; CI= 1.35-2.31; p-value= <0.001) and both parents were 1.22 times more likely to equally talk to their children about sexuality and reproductive health as compared to those who disagreed with the statement. (CPR=1.22; CI=1.07-1.40; p-value = 0.004). Interestingly a mother was either 1.73 times more likely to be involved in teaching their children on sexuality and reproductive health as compared to those who disagreed (CPR=1.73; CI= 1.17-2.55; p-value= 0.006). Children were 0.85 more likely to be assisted by schools and other institutions on sexuality and reproductive health than those that disagree (CPR=0.85; CI=0.73-0.99; p-value 0.04).

Multivariate analysis of factors associated with involvement of parents in sexuality education of adolescents

The multivariate analysis of socio-demographic factors with parent's involvement in the sexuality education of the adolescents revealed that divorced parents had a statistically significant association with involvement in sexuality education of adolescents at p value of <0.001. The rest of the socio demographic factors did not have any positive association with parent involvement in sexuality education of adolescents. The results from table 6 indicates that parents actively talking to their children about sexuality and reproductive health was a significant predictor of their involvement in sexuality education after being adjusted at p-value <0.001(APR=1.56; CI= 1.22-1.99). There was also a significant statistical association between mothers being more involved in teaching their children and involvement on sexuality education after being adjusted at p-value 0.006 (APR=1.64; CI=1.15-2.34). The rest of the factors such as gender, being parents, perception of sexuality education did not have a statistically significant association with parents' involvement in sexuality education of their adolescent children (Table 6).

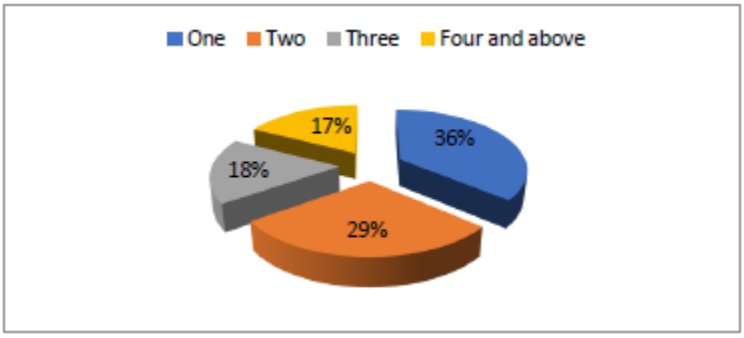

Figure 1. Number of adolescents under the care of the respondents depicting parental involvement in sexuality education (n=213)

Table 1. Knowledge of parents on adolescent sexuality and reproductive health

Characteristic/Categories	**Frequency (n=213)**	**Percentage (%)**
Understanding of sexuality education		
A lifelong process of acquiring information and forming attitudes, beliefs and values about sexual and reproductive health	133	62.4
Matters of sex	61	28.6
Child production	13	6.1
Sex in the future	5	2.4
Teaching how to play sex	1	0.5
Perceived importance of reproductive health education of adolescents by parents		
Important	206	96.7
Not important	7	3.3
Effective communication barriers on sexual matters between parents and adolescents*		
Societal taboo	13	6.1
Lack of conducive environment	50	23.5
Parent discomfort to discuss the topic	101	47.4
Lack of information to share	101	47.4
Lack of skills	90	42.3
Others[1]	30	14.1
Discussion triggering situations*		
Routine for me to discuss issues about sexuality with my adolescents	97	45.6
Radio/TV programs	117	54.9
Flyers/posters	16	7.5
Parental perceptions of risky sexual behaviour of the adolescent	72	33.8
Seeing someone they believed is HIV positive or died of HIV	95	44.6

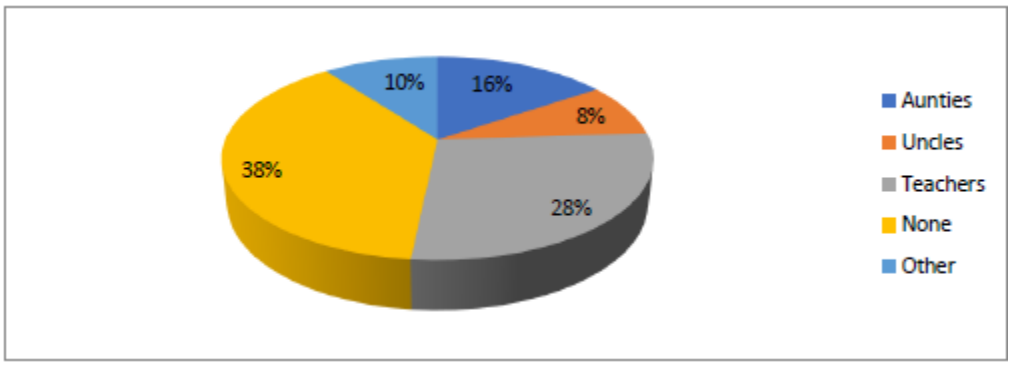

Figure 2. Shows people whom the responsibility of discussing with adolescents is delegated to by parents (n=213)

Others[1] included; Church leaders, grand parents and community-based organisations

Others[1] included; Lack of time (Being busy), Disrespectful children, Strictness of parents; *- Multiple responses

Table 2. Attitudes of parents on adolescent sexuality and reproductive health

Characteristic/responses	**Frequency (n=213)**	**Percentage (%)**
It is a taboo for parents to talk about sexuality issues to their children		
Disagree	187	87.8
Neither agree nor disagree	12	5.6
Agree	14	6.6
Culture in this area prohibits parents to talk about sexuality issues to their children		
Disagree	183	85.9
Neither agree nor disagree	9	4.2
Agree	21	9.9
Religion in this area prohibits parents to talk about sexuality to their children		
Disagree	187	87.8
Neither agree nor disagree	2	0.9
Agree	24	11.3
High level of privacy is needed for parents and children to talk about sexuality		
Disagree	66	31.0
Neither agree nor disagree	50	23.5
Agree	97	45.5
Talking to the adolescents about sexuality and reproductive education may increase their involvement in sexual activity		
Disagree	114	53.5
Neither agree nor disagree	58	27.2
Agree	41	19.3
Parents should monitor or supervise their adolescents all the time		
Disagree	23	10.8
Neither agree nor disagree	6	2.8
Agree	184	86.4

Table 3. Content of sexuality and reproductive health information shared by parents to their adolescent children

Characteristic/Categories	Frequency (n=213)	Percentage (%)
Content of key messages shared with adolescent*		
Abstinence from sex	97	45.5
Safer sex	16	7.5
Condom use	28	13.2
Contraceptive use	10	4.7
The risk of unprotected sexual intercourse and how to avoid them	35	16.4
Discouraging risk taking behaviour	55	25.8
Delaying sexual activities and concentrating on academics	94	44.1
Human reproduction	34	16.0
Negotiation and sex refusal skills	14	6.6
Common mode of delivery*	16	
Story telling	90	42.3
Family meetings	30	14.1
Face to face discussions	163	76.5
Peers	14	6.6

* Multiple response variable

Table 4. Social demographic factors at bivariate analysis

Socio-demographic factors	Involvement of parents in sexuality education of adolescents					
Variable	**Yes**		**No**		**Crude prevalence Ratios**	**P value**
	F	**%**	**F**	**%**	**(CPR:95%CI)**	
Age in years						
Less or equal to 40	108	50	25	11.7	1	0.811
Greater than 40	66	30.9	14	6.6	1.02(0.89-1.16)	
Religion						
Christian	139	65.2	29	13.6	1	-
Islam	34	15.9	10	4.7	0.93(0.78-1.11)	0.444
Others	1	0	0	0	1.21(1.13-1.30)	**<0.001****
Tribe						
Banyoro	130	61.2	29	13.6	1	-
Batooro	13	6.1	5	2.3	0.88(0.66-1.19)	0.412
Baganda	14	6.5	2	0.9	1.07(0.88-1.31)	0.506
Banyakole	8	3.7	1	0.9	1.09(0.85-1.39)	0.500
Other	9	4.2	2	-	1.00(0.75-1.34)	0.996
Level of education						
None	19	8.9	4	1.9	1	-
Primary	53	24.9	6	2.8	1.09(0.88-1.34)	0.427
Secondary	66	30.9	25	11.7	0.88(0.70-1.10)	0.260
Tertiary	36	16.9	4	1.9	1.09(0.88-1.35)	0.434
Occupation						
Farmer	25	11.7	8	3.8	1	-
Vendor	49	23.0	9	4.2	1.12(0.89-1.39)	0.38
Professional	46	21.6	8	3.8	1.12(0.90-1.41)	0.303
Housewife	29	13.6	7	3.2	1.06(0.83-1.37)	0.632
Other	25	11.7	7	3.2	1.03(0.79-1.35)	0.821
Nature of family						

Single parent	46	21.6	8	3.8	1	-
Nuclear	102	47.9	22	10.3	0.97(0.84-1.11)	0.620
Extended	26	12.2	9	4.2	0.87(0.70-1.09)	0.233
Marital status						
Married monogamous	112	52.6	28	-	1	-
Married polygamous	16	7.5	4	13.1	1.00(0.79-1.26)	**0.001****
Divorced	22	10.3	4	1.8	1.06(0.88-1.27)	0.550
Widowed/widower	6	2.8	0	1.8	1.25(1.15-1.36)	**0.001****
Never married	18	8.6	3	1.4	1.07(0.88-1.30)	0.485
Monthly income						
Below 100,000	34	15.9	5	2.3	1	-
100,000-300,000	63	29.6	12	5.6	0.96(0.82-1.13)	0.641
300,000-500,000	51	23.9	16	7.5	0.87(0.73-1.05)	0.141
Above 500,000	26	12.2	6	2.8	0.93(0.76-1.15)	0.502

*Variable significant (P-value < 0.05), **Statistically significant association (P-value < 0.05)

Table 5. Factors associated with involvement of parents in sexuality education of adolescents

Factors	**Involvement in reproductive health education**				**Crude Prevalence Ratios (CPRs) at 95% CI**	**P-values**
	Yes (n=174)		**No (n=39)**			
	F	**%**	**F**	**%**		
Gender						
Male	61	35.1	22	56.4	1	**0.02***
Female	113	64.9	17	43.6	1.18 (1.02-1.37)	
Parents actively talk to children about sexual and reproductive health						
Disagree	26	14.9	23	59.0	1	-
Neither agree or disagree	13	7.5	7	18.0	1.23 (0.81-1.86)	0.34
Agree	135	77.6	9	23.1	1.77 (1.35-2.31)	**<0.001****
Both parents equally talk to their children about sexuality education						
Disagree	66	37.9	22	56.4	1	-
Neither agree or disagree	29	16.7	10	25.6	0.99 (0.80-1.24)	0.94
Agree	79	45.4	7	18.0	1.22 (1.07-1.40)	**0.004***
Mother is more involved in teaching their children on sexuality education						
Disagree	13	7.5	13	33.3	1	-
Neither agree or disagree	23	13.2	4	10.3	1.70 (1.12-2.58)	**0.01***
Agree	138	79.3	22	56.4	1.73 (1.17-2.55)	**0.006****
Children in this home are assisted by schools and other institutions on sexual and reproductive health						
Disagree	14	8.1	1	2.6	1	-
Neither agree or disagree	17	9.8	1	2.6	1.01 (0.85-1.21)	0.90
Agree	143	82.2	37	94.9	0.85 (0.73-0.99)	**0.04***
Perception on importance of reproductive health education						
Important	173	99.4	33	84.6	1	
Not important	1	0.6	6	15.4	1.17 (0.03-1.05)	0.06

*Variable significant (P-value < 0.05) ** Statistically Significant Association (P-value < 0.05)

Table 6. Multivariate analysis of factors associated with involvement of parents in sexuality education of adolescents

Socio-demographic Factors	Crude Prevalence Ratios (CPRs) at 95% Confidence Interval (CI)	Adjusted Prevalence Ratios (APRs) at 95% Confidence Interval (CI)	P-values
Gender			
Male	1	1	0.33
Female	1.18 (1.02-1.37)	1.07 (0.94-1.22)	
Religion			
Christian	1	1	-
Islam	1.93 (0.78-1.86)	0.94(0.78-1.12)	0.476
Others	1.21 (1.13-1.30)	1.23(0.97-1.55)	0.090
Marital status			
Married monogamous	1	1	
Married polygamous	1.00 (0.79-1.26)	1.01(0.79-1.29)	0.938
Divorced	1.06 (0.88-1.27)	1.06(0.88-1.28)	0.522
Widow/widower	1.25(1.15-1.36)	1.24(1.13-1.35)	**<0.001****
Never married	1.07(0.88-1.30)	1.08(0.87-1.31)	0.455
Parents actively talk to children about sexual and reproductive health			
Disagree	1	1	-
Neither agree or disagree	1.23 (0.81-1.86)	1.25 (0.87-1.79)	0.24
Agree	1.77 (1.35-2.31)	1.56 (1.22-1.99)	**<0.001****
Both parents equally talk to their children about sexuality education			
Disagree	1	1	-
Neither agree or disagree	0.99 (0.80-1.24)	1.02 (0.86-1.22)	0.80
Agree	1.22 (1.07-1.40)	1.05 (0.93-1.19)	0.40
Mother is more involved in teaching their children on sexuality education			
Disagree	1	1	-
Neither agree or disagree	1.70 (1.12-2.58)	1.64 (1.13-2.38)	0.09
Agree	1.73 (1.17-2.55)	1.64 (1.15-2.34)	**0.006****
Children in this home are assisted by schools and other institutions on sexual and reproductive health			
Disagree	1	1	-
Neither agree or disagree	1.01 (0.85-1.21)	1.05 (0.89-1.24)	0.54
Agree	0.85 (0.73-0.99)	0.96 (0.85-1.10)	0.57
Perception on importance of reproductive health education			
Important	1	1	
Not important	1.17 (0.03-1.05)	0.22 (0.03-1.43)	0.11

* Variable significant (P-value < 0.05), ** Statistically Significant Association (P-value < 0.05)

Discussion

Involvement of parents in sexuality education

Majority 174(82%) of the parents reported to be involved in sexuality education of their adolescent children and most 77(36.2%) of them had at least one adolescent under their care. This finding is consistent with the report by the WHO (2007) that indicated that most parents were getting more involved in adolescent sexual and reproductive health education worldwide, including Sub-Saharan Africa. This is good for adolescents because it makes them more aware of sexuality education, creating a better linkage between parents and their children and reducing the chances of teenage pregnancies and marriages hence delayed sexual activity adolescents may end up reducing the rates of school drop outs and unsafe abortions. A previous study showed that increased parent and adolescent interaction on sexuality and reproductive issues was positively associated with reduced levels of risk-taking

behaviour among adolescents (Babalola, *et al.,* 2005). Many other authors support the position that adolescents are less likely to engage in sexual risk-taking behaviour when they reside with a parent especially two parents or when they identify with the views of their parents (Rodgers, 1999**;** Borawski, 2003; Li *et al.,* 2000).

Almost all 96% of the respondents were staying with their adolescent children and 70.7% of the parents having had a discussion on sexuality and reproductive health with their adolescents in one last month period. This creates a strong bond between parents and the adolescents which acts as a channel to ease communication on seemingly uncomfortable topics of sexuality and reproductive health as parents and children as supported by previous studies (Diop, 2004; Kiragu, 2007). This leads to the upbringing of adolescents who value life and make informed decisions on issues of sexuality and reproductive health which can eventually reduce on unwanted pregnancies and spread of sexually transmitted diseases in community. This is in line with the finding of a study done in slum in Nairobi Kenya, which found that when a father lived in the same household as his never married 12–19-year-old adolescent, they were much less likely to have ever had sex, to have had an unwanted pregnancy or to have been recently sexually active than when neither parent or only the mother lived in the household (Ngom, 2003). It was also similar to results from a national survey conducted in Ghana by Karim (2003), that showed adolescent females who lived with both parents were less likely than females who had other living arrangements to have ever had sex (Karim, 2003).

Another previous study done in Côte d'Ivoire by Babalola, *et al.,* (2005) as well found that female adolescents who had lived in the same household as their father during childhood were more likely than those who had not to delay first sex (Babalola, *et al.,* 2005). The benefit of parents staying with adolescents is also clearly brought out in a previous study of 14–19-year-old African Americans, which stated that staying with parents and high levels of parental supervision were associated with reduced incidence of STDs (after adjusting for age and baseline infection) (Bettinger, 2004). Furthermore, a longitudinal study of teenagers in Scotland (aged 13–14 at baseline and 15–16 at follow-up) found that low parental monitoring was associated with an earlier transition to sexual activity for both females and males, and also with a greater risk of unprotected sex for females (Wight, *et al.,* 2006).

Majority of the respondents (44.3%) reported to find it easy to discuss issues of sexuality and reproductive health with their female children and only 27.6% find it easy to talk to both sexes. This is similar to findings in a previous study done by Turnbull et al., (2018) which indicated that although Parents provide an entry point into sexual related communication, mothers tend to provide a platform for the girls leaving a gap at the boys' side that resort to other sources (Turnbull, *et al.,* 2018). This finding has the implication that boys who most of the time are not given much attention as compared to girls, by parents in the issues of sexuality and reproductive health end up taking risky sexual behaviour that adversely affect their health and society as a whole. This finding is inconsistent with results from previous studies which stated that parents themselves feel uncomfortable talking directly with adolescents about sexuality and reproductive health issues (Diop, 2004; Kiragu, 2007).

Knowledge of parents on adolescent sexuality and reproductive health

Most (62.4%) of the respondents had a proper understanding of sexuality education and this is probably because of the many programmes that are being run across different platforms in this region by an array of organisations to help bridge the gap between adolescents and their parents in issues of sexuality and reproductive health. As indicated in the report by World Health Organization (2007) more than 30 programmes are engaged in sexuality and reproductive health in Sub Saharan Africa of which Uganda was part. Furthermore, similar programs, such as Families Matters in Kenya, are working directly with parents and their children to improve intra-family communication about sexuality and sexual risk (Miller & Vandenhoudt, 2007) and Uganda's Straight Talk campaign, has demonstrated the general willingness of parents and other adults to create a supportive environment for young people (Diop, 2004; Kiragu, 2007). These programs have ensured provision of sexual and reproductive health information and services to adolescents and their parents. This has had the implication of improving the knowledge of parents on the subject of sexuality (62.4%

indicated in this study) and changing their attitudes and practises to support adolescents.

However, a significant number of respondents 28.6% understood sexuality education as a study of sex matters, how to have sex in future and child production and 3.3% of the respondents did not consider sexuality education of the adolescents important. This finding has the implication that more efforts need to be put on educating the parents to change their attitudes and perceptions on sexuality and reproductive health if adolescents are to positively benefit from their parents.

This study also found that parents not being comfortable to discuss the topic and lack of appropriate information to share with the adolescent was top 47.4% barriers for parents' involvement in the sexuality education of adolescents. This has the implication of adolescents being easily misled by their own parents who may be lacking the right information or shy to talk about SRH issues with them eventually the children resort to other sources of information within their circles leading to getting inappropriate content from wrong elements in society. This is in line with findings of a previous study which stated that parents were shifting their role of educating children on SRH to either relatives or schools and that schools were taking a leading role in ensuring sexuality education as they have not only ample time for the schooling children but also part of the school curriculum (Del Giudice, & Belsky, 2011).

Another previous study by Goldman, (2011) showed that parents who were either uncomfortable or did not know the importance of SRH had shifted their burden blindly to the schools indicating that parents expressed the need to be helped in facilitating and organizing the development of sexuality-related competencies of children (Goldman, 2011). What many parents though fail to realize is that giving no information or evading young people's questions can send negative messages about sexuality (UNFPA, 2013). Yet on the contrary several previous studies have showed that an improved parent-adolescent communication is vital in promoting healthy sexual behaviours among adolescents (Kirby & Miller, 2002; Klein, *et al.,* 2005; Bastien, *et al.,* 2011) because adolescents who have a positive relationship with their parents are known to be less likely to initiate sex early (Bastien, *et al.,* 2011; UNAIDS, 2004).

Majority of the parents 54.9% only wait for radio and TV programmes with a topic on reproductive health education to trigger a discussion on sexuality education with adolescents and 44.6% of the respondents only discuss sexuality education with their adolescents when they see someone, they believe to be positive or died of HIV. This finding is probably because most of the parents are still not comfortable discussing issues of SRH with their children and many of them who try to do so need to find some sort of stimulus to trigger this seemingly hard discussion. Yet it may also be due to the fact that some of the parents are not sure of the right information to offer to the adolescents at particular points in time and fear the consequences of giving inappropriate content of SRH to their students. This creates a gap in the effectiveness of parents' interventions and programmes with the purpose of preventing undesirable or poor sexual health outcomes in children (Haberland & Rogow, 2015).

The above is similar to a study in Sub-Saharan Africa, where evidence suggests that parent-child communication about sex-related matters is not very common and at times is fraught with discomfort, especially communication with fathers (Kiragu, 2007; Awusabo-Asare, *et al.,* 2008). However, 45.6% of the parents interviewed in this study stated that it is a routine for them without waiting to have a trigger.

This has the implication of parents and their adolescents developing a strong relationship and trust between them that makes discussing SRH issues easy and eventually children grow up adopting healthier lifestyles. This finding is inconsistent with that of a previous study by Bastien *et al.,* (2011) which found that parents in much of Sub-Saharan Africa argue that they are not comfortable discussing sex-related issues with their children and lack an appropriate language, information and skills to communicate effectively on these particular topics (Bastien, *et al.,* 2011).

Attitudes of parents on adolescent sexuality and reproductive health

From the collected data 85.9% and 87.8% of the respondents disagreed with the notion that culture and religion respectively prohibit parents from talking to their adolescent children about sexuality education. This was inconsistent with the finding of a study in Sub-Saharan Africa

where it was found that parent-child communication about sex-related matters was not very common and at times was fraught with discomfort, especially communication with fathers (Kiragu, 2007; Awusabo-Asare, *et al.*, 2008). Furthermore, several previous studies in Uganda also showed that parental discussions of sexuality issues with their children was a cultural taboo (Bastien, *et al.*, 2011, Kibombo, *et al.*, 2008; Luwaga, 2004) in most parts of the country and this is contrary to what is reported in this study. This task is often relegated to other family members notably, paternal aunties in Buganda (Kibombo, *et al.*, 2008) and in talking about HIV, parents are often known to communicate with their children through arousal of fear.

Parents in Uganda are known to be strict, particularly with the girl child, which prompts many to hide their intimate or sexual relationships thereby exacerbating their vulnerability (Lofgren, 2009). In this study majority 45.5% of the respondents believe that there should be a high level of privacy for parents to talk to their adolescent children on sexuality education and it is a secretive act and 53.5% of the parents don't believe that talking to adolescents about sexuality education doesn't increase the likelihood of their involvement in sexual activities. This could be because the parents don't feel comfortable discussing with their children issues of SRH due to fear of being misunderstood by society. This has the implication of parents delegating their responsibilities of ensuring proper upbringing to people who lead healthy lifestyles, therefore much still remains to be done by government and other organizations to bring parents up to speed with obligations in areas of SRH education of children.

Most 86.4% of the parents believe that they should monitor/supervise their adolescents all the time if they are to safeguard them against indulging into sexual behaviour that could risk their lives. This could probably be because parents in Uganda still hold their traditional cultures very dear to them while those who seem to be on the religion side also believe in principles of strong parental monitoring of the children to ensure their safety from wrong elements of society. This is consistent with finding in a previous study by Lofgren, (2009) that showed that parents in Uganda are known to be strict, particularly with the girl child, which prompts many to hide their intimate or sexual relationships thereby exacerbating their vulnerability (Lofgren, 2009) yet being too strict in fact drives the children to want find out by doing what exactly the parents are trying to hide.

A key message passed to children was abstinence from sex 45.5% followed by delaying sexual activities and concentrating on academics 44.1% and the least popular were messages of using contraceptives 4.7%. This is similar to a finding in other studies which indicated that adolescents were much told about abstinence from sex to avoid contracting HIV, STIs and pregnancy, however, they lack in-depth knowledge of contraception to make decisions in case abstinence fails since it was always less talked about by parents (Bankole, *et al.*, 2007; Neema, *et al.*, 2006). The idea of contraceptive usage is still largely not bought by a significant proportion of people in society and most would not advise their children to use. This is partly because of the myths that are surrounding family planning in society. This has the implication of increased teenage pregnancies that has exacerbated the school dropout problem in local areas because adolescent girls who are not talked the options of contraceptives end up conceiving hence failing to complete school.

About 76.5% of the respondents delivered the messages to the adolescents by face to face discussions. This has the implication that the adolescents are more likely to heed the message since it is coming from a credible source who happens to be apparent wanting the best for their children. This may result into a strong relationship between the children and parents since they can easily discuss what most people in society find uncomfortable. This may delay the adolescent from engaging in early sex and hence have better chances of completing their studies and leading healthy lifestyles in the future.

Factors associated with involvement of parents in sexuality education of adolescents

Results from bivariate analysis showed that the females were 1.18 times more likely to be involved in sexuality education (CPR =1.18 CI: 1.02-1.37). This could be true given the fact that most mothers are always at home with children and they get used to her as a contact person who easily identifies and understands their challenges, adolescent then find a mother easy to approach.

At the same time the mother being in touch with the children most of the time finds herself in a better position to easily notice the changes these adolescent experiences from time to time and this gives an edge over the fathers who may not spend a better part of the day at home to notice and address challenges adolescents are faced with. Parents were 1.77 times more likely to be actively involved in talking to their adolescents about sexuality and reproductive health (CPR =1.77 CI: 1.35-2.31) and both parents were 1.22 times more likely to equally talk to their children about sexuality and reproductive health (CPR =1.22 CI: 1.07-1.40).

Parents having the parenting obligation to the adolescents find themselves in a position where they are faced with the reality of coming out to discuss SRH issues with their children more so in the event that the children have the first lead of asking them questions of SRH or are faced with a SRH problem and parents become the most immediate people to help their children as compared to other distant relatives and friends. Children always trust and take their parents to be the most credible source of information hence parents find no way to escape discussing sexuality issues with them. Interestingly a mother was either 1.73 times more likely to be involved in teaching their children on sexuality and reproductive health 1.70 times more likely to neither get involved nor not get involved. This could be so depending on the gender of the adolescent as girls seem to always have a strong bond with their mother yet boys are sometimes stubborn and mothers find it hard to be listened to giving up. The odds ratios show a more chance of a mother talking to the adolescents than not. Children were 0.85 less likely to be assisted by schools and other institutions on sexuality and reproductive health.

This is consistent with a finding in previous studies where teachers at school were also uncomfortable talking students about SRH due to fir of backlash from parents (Helleve, *et al.,* 2011; Helleve, *et al.,* 2009).

Results from multivariate analysis showed that parents actively talking to their children about sexuality and reproductive health was a significant predictor of their involvement in sexuality education after being adjusted at p-value <0.001. The strong statistically significant association between parents actively talking to the adolescents and their involvement in SRH education shows the implication there is need to build good communication in a family if SRH education is to be realised with leading taking a lead. There was also a significant statistical association between mothers/females being more involved in teaching their children and involvement on sexuality education after being adjusted at p-value <0.006. The implication from this study there is need to bring on board fathers to get involved in sexuality and reproductive health of their adolescents and this could be by first fathers creating time for the adolescents to better their relationships and establishing good communication. In this way the fathers will be able to stand up to the task of educating their adolescents on SRH issues other than blindly shifting their parental obligation to schools, relatives and friends whom the adolescents may not have much trust on.

Conclusion

Most of the parents were involved in sexuality education of their adolescents. Majority (44.3%) said they found it easy to discuss issues of sexuality and reproductive health with their girls and only 27.6% found it easy talking to both boys and girls. Parents' discomfort to discuss the topic and lack of appropriate information to share with the adolescent was a top barrier for parents' involvement in the sexuality education of adolescents. Although most of the parents had proper understanding of sexuality and reproductive health and only 3.3% of the parents did not consider sexuality and reproductive health of adolescents important.

Recommendations

To the ministry of health

Partnership with the ministry of education and sports to ensure parental involvement in the implementation of the national sexuality education framework 2018 is emphasized. Secondly, Collaboration with civil society organizations and churches to conduct programmes in the community aimed at educating people about SRH is very important. Thirdly, platforms through which those who need information on SRH can easily access it need to be provided.

To parents

Parents need to actively engage in educating their children on the issues of SRH to enable them

adopt and lead healthy lifestyles in future. Next, parents need to freely communicate with their adolescents to better understand and advise them on issues of sexuality instead of depending on triggers such as radio and TV programmes. Furthermore, they need to seek for credible information on SRH from professionals to avoid misleading their adolescents or fearing to discuss with them such issues due to their lack of content to share

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