UNIVERSITY of RWANDA

PARENTAL PERCEPTIONS ON EDUCATION OF CHILDREN ABOUT SEX AND REPRODUCTIVE HEALTH -A QUALITATIVE STUDY AT THE UNIVERSITY TEACHING HOSPITAL OF KIGALI

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By

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A dissertation submitted in partial fulfilment of the requirements for the Degree of

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DECLARATION

I declare that this Dissertation contains my own work except where specifically acknowledged.

Dr BUCYANAYANDI Jean Pierre

Registration number: 10102688

Signed……..

Date……..

DEDICATION

To my Creator,

To my special wife Jacky NYIRANEZA

To our children Honest and Helga

To my late parents

To my brothers, sisters and in-law family

I dedicate this work.

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ABSTRACT

Background and objective: Sex and reproductive health (SRH) education to children is one of the protective factors against sexually transmitted infections (STIs), and unintended pregnancies. Rwanda is facing challenges of teen pregnancies and related consequences that seriously affect the future of young generations. However, many parents do not educate children about SRH. The goal of this study was to find out perceptions of parents regarding SRH education to children in Rwandan context.

Methods: Convenient sampling was applied to recruit participants among parents, caregivers and health care personnel at the University Teaching Hospital of Kigali paediatric department. Fifteen in-depth interviews were conducted using a semi-structured questionnaire and data were thematically analyzed using Microsoft Excel 2007.

Results: Participants favored sex and reproductive health (SRH) education to children as it is beneficial for the future sexual behaviors. Majority revealed that the primary responsibility for this education belongs to parents. Puberty is the appropriate age to start this education while the topics are diverse and include pubertal changes, sexual abuse, and homosexuality among others. Family based discussion is the favorable approach while unavailability of parents, fear and lack of adequate knowledge in addition to the influence of technology were the main challenges. Proposed solutions were specialized centers, children's forums for SRH education to children,and use of media in parental mobilization among others.

Conclusion: Age appropriate SRH education to children can have protective benefits especially when provided by parents. However, this study revealed many challenges especially unavailability of parents that need to be addressed to ensure children are getting enough knowledge about SRH for a better adulthood.

Key words:Reproductive health, sex,children, education, parents, perceptions, Rwanda

LIST OF ABBREVIATIONS AND ACCRONYMS

ADEPR: Association Des Eglises de Pentecote au Rwanda (Pentecost Church of Rwanda)

CBHI: Community Based Health Insurance

CHUK: Centre HospitalierUniversitairede Kigali (The University Teaching Hospital of Kigali).

EAR: Eglise Anglicane au Rwanda (Anglican Church of Rwanda)

HIV: Human Immunodeficiency Virus.

IQR: Interquartile range

IRB: Institutional Review Board

MMI: Military Medical Insurance

RSSB: Rwanda Social Security Board

SDA: Seventh Day Adventist

SRH: Sex and Reproductive Health

STIs-Sexually Transmitted infections

UNESCO: United Nations Educational, Scientific and Cultural Organization

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CHAPTER I:INTRODUCTION

1.1.Definition of terms

Children: Human beings aged ≤ 18 years or below the age of majority.

Perception: The ability to see, hear, or become aware of something through the senses. Or: The way in which something is regarded, understood, or interpreted. For our study, the word perception means the way something is regarded, understood or interpreted.

Reproductive health: Global term used to describe all anatomical, physiological and psychological sex issues of human beings.

1.2.Background

SRH education is an experience that targets to develop the capacity of children. It helps them to understand biological, psychological, socio-cultural and reproductive dimensions of their sexuality. It also equips them with knowledge and skills in decision making and responsible actions with regard to SRH behaviours (UNESCO and UNFPA 1998).

For many centuries human beings pay attention to their reproductive health, but different groups and different generations have controversial points of view regarding SRH education to the young ones (Diiorio et al 2008; Bianca et al 2003; Darling & Howard 2006). Communities like Latinos and Hispanic tend to start talking to their children about SRH issues earlier in life while others consider it too risky and decide to introduce these topics during late adolescence (Maureen & Sandy 2013; Mbbs et al. 2014). Parents are the cornerstone and mothers are more open than fathers to discuss the issues of sexuality to their children. Mothers also tend to do it earlier than their spouses, and lack of parental involvement is associated with many risky decisions for adolescents (Jeffery 2008; Muna et al 2009; Kunnuji 2012; Lema et al 1989). In addition; media, social media, and peer groups have a big influence on the SRH knowledge and decision making capacity among children (Ugochuku et al 2011; Ngilangwa et al 2016). On the other hand, some parents think that their children benefit SRH education at school (Kawai et al 2008; Fentahum et al 2012; Obiunu 2014; Grossman et al 2013). However, school involvement in SRH is still

undermined and need a booster to be more effective (Fentahum et al 2012; Fisher et al 2015; Irala 2008).

Studies from Africa and the region found that despite a significant number sexually active children, at risk of STIs and unintended pregnancies; many parents do not discuss sex-related issues with them due to lack of age-appropriate respectful vocabulary and skills. When discussed, a very limited number of topics are covered (Kunnuji 2012; Muhwezi et al 2015; Kamangu 2017). This lack of parental involvement requires effort to encourage parents to participatein the SRH education to children (James 2012; Manu et al 2015; Nambambi and Mufune 2011; Vilanculos and Mzikazi 2017; Ballard and Gross 2009). In Rwanda,81% of parents do not communicate with their children about SRH due to cultural, demographic, socioeconomic, and gender challenges (Bushaija et al 2013). Similar situation was observed in Kenya, Uganda and Tanzania (Kamangu 2017).

1.3.Problem statement

SRH education to children is one of the protective factors against STIs, unintended pregnancies, unsafe abortions, and other unhealthy sexual behaviours (Bastien et al. 2011; Sarah 2015). However, despite these evidences, many parents are still not educating their children about sex and related matters, as shown in Rwanda where 81% of parents reported never communicating with their children about SRH (Bushaija et al 2013). This situation has been associated with high number of precocious sexual activity, unintended pregnancies, and others adverse behaviours in adolescents (National Institute of Statistics of Rwanda (NISR) [Rwanda], Ministry of Health (MOH) [Rwanda] 2015).

The above research findings highlight that there is still a challenge on the child's health, especially for adolescents, to get a good parental guidance regarding SRH in Rwanda. They also underscore the need of a study to find out the perceptions of Rwandan parents about sex and reproductive health education to their children.

1.4.Research objectives

a. General objectives

The main objective of this study was to find out perceptions of parents regarding SRH education to children in Rwandan context.

b. Specific objectives

1. To identify reasons of giving SRH education to children
2. To identify topics included in SRH education to children
3. To identify people responsible of providing SRH education to children
4. To determine the age at which Rwandan parents initiate SRH education to children
5. To identify methods used to educate Rwandan children about SRH to children
6. To assess challenges faced when providing SRH education to children and solutions suggested to address these challenges

1.5.Research questions

The specific research questions are:

1. Are there specific reasons to why Rwandan children should be or should not be taught about SRH?
2. What topics to discuss with children about SRH?
3. According to Rwandan parents, who should mainly be responsible of educating children about SRH?
4. When to introduce SRH education to Rwandan children?
5. What methods should be used to educate Rwandan children about SRH?
6. What are challenges and solutions to address these challenges faced when providing SRH education to children?

CHAPTER II: LITERATURE REVIEW

2.1.Literature search

We searched PubMed, Hinari and Cochrane among other online libraries using the search terms in appendix 1. Articles were included if they were consistent with the topic and published in English or French. The primary search revealed 125 and 12 results respectively of which 50 and 1 were relevant. A secondary search was performed searching the reference lists of the relevant papers and found additional 20 relevant papers. Once duplicates were removed, 67 relevant papers have been reviewed here. An automated email update was set up on PubMed and other libraries during the process of writing this dissertation to ensure no new relevant articles were missed.

2.2.Commentary on literature

a) Background

SRH education is a teaching experience that targets to develop the capacity of children and adolescents to understand biological, psychological, socio-cultural and reproductive dimensions of their sexuality and to equip them with knowledge, skills in decision making and responsible actions with regard to SRH behaviours (UNESCO and UNFPA 1998). This education by parents has a protective impact on children's future sexual behaviour even during adulthood (Grossman et al 2014; Bonifide 2015). However, it is deficient due to different reasons including lack of knowledge, lack of communication skills and limited access to SRH information, culture, and religious beliefs (Tipwareerom and Worawan 2017; Randolph et al. 2017; Bushaija et al 2013; Helen 1985; Mona and Beckmeyer 2016; Kegaugetswe et al 2016).

b) Rationale and age to initiate SRH education to children

Bangladesh researchers highlighted the importance of SRH education as a prerequisite for the child'scontemporary andfuture choices in the sexual matters (Bosch 2008). Similarly, improvement in knowledge and self-confidence in decision making about sexual matters and gender ideology was shown after attending SRH education programs (Jennings et al. 2014; Grose 2014; Grossman et al 2014). Beneficial difference in sexual behaviour was found between adolescents who discussed sex issues with parents before first sex act and those who

did not, in terms of timing of the first sex and practice of safe sex (Atienzo et al. 2009; Kraft et al 2012). Not only discussing with parents but the whole SRH education programs are associated with many good outcomes regarding children's sexual health (Mona Malacane & Jonathon J. Beckmeyer 2016).

The timing of SRH education is important because early initiation had a protective value against early sex intercourse and its consequences (Atienzo et al. 2009). In Nigeria, adolescence was considered the right time and 15 years was regarded as ideal age for most of parents to initiate SRH discussions (Emelumadu et al 2014). On the other hand, Latino parents showed to be willing to initiate SRH education as early as seven years old (Maureen & Sandy 2013) , and other parents considered it reasonable to initiate SHR education to children at elementary school level (Fisher et al 2015). Likewise, in South Africa the accepted age was 11 or 12 years (Vilanculos and Mzikazi 2017), and the range of five to 25 years was found in Ethiopia as acceptable to initiate SRH education to children (Fentahum et al 2012). On the other hand, a review of sub-Saharan Africa researches has found the range of six to 10 years to be appropriate for initiation of sex and reproductive health education (Bastien et al. 2011).

c) Responsibility of providing SRH education to children

The primary role of educating childrenabout SRH is for parents and families. They are the cornerstone for it to be well achieved (UNESCO and UNFPA 1998; Macintyre et al. 2015; Adebayo 2016; Segura Zuloaga et al. 2015). Majority of Iranian mothers agree that parents should be the principle source of SRH information to children (Shams et al 2017). Many parents are in favor of SRH issues to be taught in schools and at home, with many parents insisting to be the final ones to decide on which topics to be taught in either area. Additionally, UNESCO highlighted the role of school as a good educating environment, which may be used in promoting SRH education to children (Fisher et al 2015; UNESCO and UNFPA 1998; Jennings et al. 2014).

The role of mass media and social media cannot be left aside. Media has many attractive programs to children, and it has a capacity to cover a big audience at once. As a social construction tool, media is in great position to provide SRH messages if well equipped (UNESCO and UNFPA 1998). Media messages impacted on improvement of parent-child

communication about SRH in USA (Evans et al 2012). Health care institutions and the whole community should be also responsible to provide SRH education to the young people (UNESCO and UNFPA 1998; Denno 2015).

d) Methods to use and topics to include

UNESCO recommends human and Sexual development,reproductive anatomy and physiology, puberty, physical, psychological, and socio-cultural changes, conception and pregnancy, development of self-awareness, and self-esteem as essential topics to be introduced to children respective to age (UNESCO and UNFPA 1998). Additionally, HIV,STIs (Kennedy et al 2014; Nambambi and Mufune 2011), homosexuality, how to ask for a date, how to use condom, and not pressuringothers for sex are found to be of great importance when discussing SRH with children (Beckett et al 2009). However, some parents are against the use of contraceptives in adolescents, arguing they might increase promiscuity or encourage sexual activity in adolescents (Briggs 1998; Mudhovozi 2012). Whereas, avoidance of sexual acts, self-control, avoiding people of the opposite sex, abstinence, faithful marriage,and use of condom were the main topics for others (Muhwezi et al 2015).

According to UNESCO, SRH education must be a multilevel and multidisciplinary approach, involving parents and families, teachers and the whole community in general. It also recommends that parents should be involved in committees that select topics to include in the curriculum on SRH. They can be asked to review homework on SRH with their children, they can be involved in setting up community programs on SRH and should be equipped with adequate knowledge to educatetheir children in the family settings (UNESCO and UNFPA 1998; Wamoyi & Wight 2014). Regarding how they do it, Asian American parents tend to use more prohibitive messages about SRH, stating taboos, and bad consequences of premarital sex (Kim and Monique 2007). Likewise, in Tanzania parents were using more of prohibitive and punitive strategies regarding SRH discussion with children (Kajula et al. 2016).

Media messages were found to improve the parent-child communication quality on SRH (Evans et al 2012). There is evidence that when used appropriately media plays a big role in SRH education as it has a massive coverage in short time and may allow access to explicit advices by appropriately organized programs with music or other artistic work. Health care

institutions must also play their role in SRH education, as they have people's trust and considered to be the masters of the subject (UNESCO and UNFPA 1998; James at al 2011; Guilamo-ramos et al 2015). In Uganda, the role of good health care services in providing adequate sexual health information was highlighted (Atuyambe et al. 2015).

School programs need to be prepared in a way that incorporates SRH topics and provide adequate knowledge to students (Akim J. Mturi et al 2005). Peer education on SRH, as a school based program, showed a great contribution to the knowledge, self-confidence and decision making about SRH of the participants (Jennings et al. 2014). Improving parents knowledge is also a good strategy to improve SRH education to children (Leeds et al 2014).

CHAPTER III: METHODOLOGY

3.1.Study design, site and period

A cross-sectional qualitative study using in-depth interviews was conducted at the University Teaching Hospital of Kigali (CHUK). This is a tertiary hospital situated in the capital of Rwanda, Kigali, and Nyarugenge District. It serves as a referral hospital, which receives people from the whole country, particularly from Northern Province, Western Province, and Kigali city. It also receives patients from other referral hospitals for sub-specialized care. It was built in 1918 during the colonial period, but started working as health centre in 1928. In 1965, it became the Hospital of Kigali and in 2000, it became University Teaching Hospital of Kigali (CHUK). The study period was 4 months from October 2018 to January 2019.

3.2.Study population

The participants were parents encountered at CHUK during the study period and met inclusion criteria.

3.3.Inclusion criteria and exclusion criteria

The study included parents in CHUK during the study period. For practical access and diversity, the sampling process incorporated: parents and caregivers of children admitted to paediatric ward, parents and caregivers bringing children for paediatric outpatient consultation, parents working in paediatric department, parents and caregivers of babies admitted in neonatology, and parents and caregivers who agreed to consent for the study. We excluded parents and caregivers whose patients were in emergent or critical condition, parents and caregivers who are not Rwandan by nationality, parents and caregivers under the age of legal maturity (aged below 18 years of age), anyone mentally unfit as per investigator judgment through conversation, or known under treatment.

3.4.Study procedures

a. Sampling and sample size

As a qualitative research, convenient sampling was used. That is, explicitly selecting interviewees using “typical case sampling” who are likely to generate appropriate and useful data from the group that is reasonably available during the study period, and including enough of them to answer the research questions (Guest et al. 2006; Fusch & Ness 2015; Mason 2010). Interviews were conducted until the minimal representative sample and saturation were reached. Each interview was transcribed, translated and coded prior to proceeding with the next interview and we stopped the sampling process when we reached 15 interviews as information from interview transcripts produced no change to the codebook.

b. Procedures of participant enrolment

Parents were approached by the principle investigator when at CHUK and the recruitment of study participants was different depending on their reason of presence in CHUK. For in-patient and non-clinical units, the recruitment took place during lunch break, in the evening, and during weekend timeso as not to interrupt the care delivery to clients. The data collector approached the parents and introduced himself; explained the purpose and process of the study, and invited them to participate in the interview. Parents who agreed were invited to move to a private room near the ward to read the information and consent form, and ask any questions they might have, and begin the interview. Interviews were recorded using a smart phone and later stored using a password-protected laptop only accessed by the principle investigator.

In outpatient unit,the data collector initially approached parents before consultation in the waiting room, and introduced himself, explained the purpose and process of the study, and invited them to participate in the interview. After they had completed their consultation, parents who accepted, were invited into a small private room in the OPD clinic. They were given the chance to read the information and consent form, ask any questions they might have, and begin the interview.

c. Data collection tools

The data collection tool (the interview guide) was developed based on information gained from literature review, considerations of local context, and observations during daily clinical activities. The data collector used an interview guide for parents that was including seven sections:

Section 1: Socio-demographic characteristics of parents

Section 2: General perceptions on SRH education to children

Section 3: Elements to be taught to children regarding SRH

Section 4: Responsible to provide SRH education to children

Section 5: Age at which SRH education should be initiated

Section 6: Methods that should be used to educate SRH issues to children

Section 7: Challenges and suggested solutions from parents

d. Tool translation and testing

The in-depth interview guide was translated from English to Kinyarwanda and back translated to English. The tool was tested on two cases before its use to ensure the accuracy and completeness. In any discrepancy, the modifications was done and accepted after retesting.

e. Datamanagement, analysis and finding presentation

Data entry and analysis were performed using Microsoft Excel 2007. Descriptive analysis was applied to express the demographic data and qualitative data analysis was done using thematic analysis. The data were collected using digital voice recording along with additional field notes. There was a review of records in order to get transcripts. Each interview was transcribed, translated and coded prior to proceeding to the next interview. This was to ensure that no additional subjects were recruited once saturation was reached. Transcription was performed by a trained research assistant and then double checked by the principal investigator. Translation was performed by a research assistant competent in English and Kinyarwanda. The translation was double-checked by the principal investigator.

Thereafter, there was a production of needed, significant data (data reduction). All data were reviewed and coded based on topics that were repeatedly reoccurring. These were grouped into meaningful topics according to their contents. The findings from socio-demographic analysis of interview respondents are presented in table 1. The different topics that emerged from interviews are presented into different sections in the results chapter. From the analysis, the investigator developed final conclusions.

f. Ethical considerations, funding and conflicts of interest

The departmental academic staff and the IRB of CMHS and CHUK ethical committee first approved the research proposal of this study before starting data collection. No funding has been sought for this project and the principle investigator declares no conflict of interest.

g. Confidentiality and informed consent

No data containing intimate identity of parents was made public. The data collection tool, which was used as well as all information, only have a code number (example: T_3) not the parent's name or origin and it is stored in a secure place.The data collector used the code (numbers) rather than the parent's name. The electronic data have no parents' identification. All investigator documents related to this research have no identification of any participants.The papers of collected data are kept in a safe, secured place without access from external persons. The electronic data is stored in password-protected file within a password-protected computerto avoid any external access. All supervisors as well as translator of this study have access to the document for research purpose only. The data will be kept for five years and discarded afterward.

Parents were asked to consent before interview. The data collector introduced himself to parents; explained the purpose, objectives, and process of the study, explained them their rights regarding participation, and invited those who agreed in a private room where they were able to read the consent form, ask questions and decide about participation. The participation in the interview was voluntary. The subjects chose or not to participate in this study for any reason. Choosing to participate or not did not affect thecare of their patients in any way. In case they might change their mind in either way during or after the study, they might inform the investigator, and he would comply with their wishes. They could also refuse to answer any of the questions in the interview for any reason.

h. Incentives and potential risk to subjects

Participants received no incentives for their participation.There is no anticipated physical risk for the participants.There is a minor risk of their views being disclosed and to mitigate this risk, electronic data were kept in locked computer while hard copies were kept by the principal investigator after collection with restricted access. Parents may feel the study will unveil their thoughts; therefore, we explained well the concept of the research and applied the privacy policy, to mitigate this risk.There is no legal risk for participants of this study and no financial risk is anticipated for participants, they were not asked to spend any money for the sake of this study. They just had to allow taking some of their time to participate.

CHAPTER IV: RESULTS

The present study intended to find out perceptions of Rwandan parents regarding sex and reproductive health education to their children. The objectives were to identify the age that Rwandan parents consider to start SRH education, the topics that need to be discussed, the challenges they face and to whom belongs the responsibility of SRH education to children, the methods to be used, in addition to the reason of giving this education to children. A qualitative approach was used to collect data through in-depth interviews that were thematically analyzed and results are presented below.

4.1.Characteristics of participants

Fifteen parents enrolled after giving their consent to participate. Of those who participated 66.6% were female, the median age was 34years (IQR:13) with the oldest being 60 years old and the youngest was 24years old. Allweremarried and 66.6% were in category III of Ubudehe (income category). Forty percent of the participants had a university level of education. Most of them (66.6%) use CBHI, whereas 66.6% of them were from Kigali city and none of them was from southern province. All participants were Christians, 33.3% were members of SDA, another 33.3% from Roman Catholic Church.

All parents reported to have children, with the average of three children per parent, the oldest child was 34 years and the youngest was two weeks old. None of the parents reported having a child who suffered from STIs or who had unintended pregnancy. These characteristics are summarized in Table1.

Table1: Participants characteristics

Characteristics		N(%)or Median(IQR)
Gender	Male	5(33.3)
	Female	10(66.6)
Age (years)		34(13)
Marital status	Single	0(0)
	Married	15(100)
	Widow	0(0)
	Divorced	0(0)
Level of education	No formal education	2(13.3)
	Primary level	4(26.6)
	Secondary level	3(20)
	University level	6(40)
Income category (Ubudehe)	Cat I	29(13.3)
	Cat II	3(20)
	Cat III	10(66.6)
Healthy insurance	CBHI	10(66.6)
	RSSB	4(26.6)
	MMI	1(6.6)
Religious preference	Restoration church	1(6.6)
	Catholic	5(33.3)
	ADEPR	3(20)
	EAR	1(6.6)
	SDA	5(33.3)
Place of residency	Nyarugenge	3(20)
	Gasabo	4(26.6)
	Kicukiro	4(26.6)
	Karongi	1(6.6)
	Musanze	1(6.6)
	Burera	1(6.6)
	Rwamagana	1(6.6)
Number of children in the household		3(3)
Age of the oldest child (years)		10(17)
Number of children who had unintended pregnancy or STIs		0(0)

4.2.General views on SRH education to children

All parents responded in favor of SRH education to children, they consider it to be a need for every child for the future adult life with adequate knowledge on SRH.

> *"Yes it is important to educate them so that they know consequences that are there, we think we have to educate them and tell them"*(Male, 56years, no formal education, Karongi, EAR).

"It is good because it is beneficial for them, as some of them don't know anything about it which may make them fall into bad behaviours or others without knowing what is going on"(Female,48 years, university level, Gasabo,Catholic).

4.3.Reasons for educating children on SRH

There were many mentioned reasons justifying the importance of SRH education to children:

a) To equip children with adequate knowledge.

Many participants viewed this education as a tool to equip childrenwith knowledge that is required for them to be able to make good decisions regarding sex, knowledge about their bodies and how to conduct themselves. Fathers and mothers who participated agree that this education is beneficial:

"Because it helps the child to grow with enough knowledge about how the body changes with age and this will help them to make decisions on their lives"(Female, 31years, University level, Nyarugenge, Catholic).

b) To protect children

Other respondents regards SRH education as a protective tool that children need to protect themselves from STIs, sexual abuse, teen pregnancies and risky sexual behaviours:

"They have to be taught on that subject to protect them from all those consequences and to avoid further ruining of their lives" (Male, 32 years, no formal education, Burera, Catholic).

c) Preparation of future parenthood

Some parents also considered SRH education to children an approach that prepares them to be future parents and that they can be able to decide to have a number of children they are able to raise.

"It is about self-protection against misbehaviours. It is in order to be able to have children that we are able to raise" (Female, 24 years, secondary level, Gasabo, SDA).

4.4.Topics to include when educating children on SRH

The list of topics seems to be long but participants gave their major topics:

a. Puberty and associated changes

Many parents considered changes that come with puberty on the physiology and anatomy of the body to be among major topics that has to be taught to children when talking about SRH:

"The topics to focus on, we may focus on those related to life, the child is born, grows and get into puberty, the way the body changes. Then to insist on the sexual activities, because children fall into these behaviours because they do not have enough information" (Female, 31years, university level, Nyarugenge, Catholic).

Among changes that come with puberty, menstruations and menstrual cycle were highlighted that need to be focused, when educating children especially girls:

"The menstrual cycle has to be focused, because these pregnancies are not accidental, they have agreed with their boyfriends but because of inability to calculate those days and know 'I'm in the fertile period, or usual safe days', I think first of all they need to be taught how to count their days" (Male, 29 years, university level, Kicukiro, ADEPR).

b. Sexual intercourse, risk of STIs, and unintended pregnancies

Parents showed that being educated about sexual intercourse, risk of STIs and unintended pregnancies, may be a protective way to keep children in a safe position:

"And tell her that when she is out of it (menses) she has to abstain from having intercourse with a male because of the risk of getting pregnancy" (Male, 32years, no formal education, Burera, Catholic).

"About their bodies' changing physiology, sexuality and prevention of STIs or unintended pregnancies; diseases and pregnancy goes together" (Female, 40 years, university level, Gasabo, Restoration church).

Some other parents brought up the need to educate children about having protected or safe sex, they considered self-protection if abstinence fails to work:

"I think the one educating children should educate them about sexual activities; when they are allowed or not allowed to do it, even the one unable to abstain might use another way. They need to have all those information in order to avoid the mistake of getting pregnant or impregnating at a very young age"(*Female,31 years, university level, Nyarugenge, Catholic*).

c. Homosexuality,Sexual abuse and violence

Parents also mentioned the need to educate children about homosexuality, sexual abuse and violence. To know their existence and protect themselves:

"You must tell her to have good conduct so as to avoid being deceived by adultery or homosexuality"(Female,37 years, Primary level, Kicukiro, SDA).

"*And also focus on the issue of sexual violence .... You see the child can fall into a trap to get sexually abused, so the child must know how to behave in these situations*" (Female, 60 years, University level, Kicukiro, Catholic).

d. **Culture and religious values**

Parents state that children need to be educated about moral valuesfrom religion and fundamental values from the culture:

"The first thing we have to take, let us agree upon bringing back the culture of the past, of self-respect, let us value the culture of the past, that is the first thing. The

second,I want to say for Rwandans, it is needed to make people hate the sin of what?Adultery"(Male,43 years, secondary level, Musanze, ADEPR).

"I think self-respect is the first thing to teach, self-respect is to give yourself value, self-respect when lost; it makes others disrespect you, when you respect yourself and have values, others will respect you. Me, I would educate them about self-respect, self-value, use of their brains and activate their ideas. That is where self-discipline and self-respect start" (Female, 33 years, primary level, Rwamagana, SDA).

e. Family planning and protective methods

Our study participants showed that children need to know about family planning methods and other protective ways that may be used in case for protection:

"*Another point is about family planning methods. For me I think if an adolescent girl uses contraceptives instead of getting pregnant when still young at an age with no means, still requiring education and care, even the family planning methods can be taught to them"*(Female, 31years,university level, Nyarugenge, Catholic).

"To be taught how to protect themselves; protection,if it means to use condom or even, if things are not under control use condom, if you think it is important, protect yourself. Educate them about STIs and other opportunistic risks that may come if unprotected" (Male, 29 years, university level, Kicukiro, ADEPR).

f. Illicit drugs and their effects on life

Our study also found that issues associated to drugs have to be discussed with children and educate them about the effects of these drugs including the risk of unsafe sexual behaviours:

"There is something I have forgotten that sometimes make children or young people have unhappy life, especially when they fall into drug abuse, thatis where come those sexual intercourse those adultery" (*Male, 35years, Secondary level, Nyarugenge, ADEPR*).

4.5.Topics to exclude when educating children on SRH

Some parents thought it would be better to avoid some topics because they may be associated with sexual misconduct for children:

a) Contraceptives and condom use

The use of contraceptives was not supported by some of the parents who said it should not be included in package of SRH education because of the risks that are associated with it. Some considered it like a way to promote sexual misconduct among children. Others also mentioned that the use of some contraceptives does only protect against unintended pregnancies but not always protecting against STIs.

> *"You start talking to her and she does not listen,then you teach her to go and get contraceptives,that way you are facilitating her to get into bad habits of sexuality"* (Male,56years,no formal education, Karongi, EAR).

> "*There are times you can tell them (about family planning methods)but when telling them so you are ignoring that they can get HIV infection"* (Female,37 years,Primary level, Kicukiro, SDA).

4.6.Responsible persons to provide SRH education to children

a. Parents

Our study participants viewed parents as the main responsible persons to educate children about SRH:

> *"Mainly, parents have to play a big role!"*(Female,32years,primary level, Kicukiro, Catholic).

More than two third of our participants consider the mother to be the cornerstone of this education based on her daily availability and the fact that children are most often comfortable with mothers than fathers. Some participants consider fathers to be less implicated or not paying much attention to this responsibility and just leaving it to mothers:

"Both parents, but mainly the mother because she is available and caring for children as the fathers are almost always absent, the mother is the main one to teach them"(Male,32years,no education, Burera, Catholic).

"Fathers, I do notknow, I may start with mine (referring to the husband), hhh (laughing), he has tendency to fear does not tell them really how it is, but me I tell them. Both parents have this responsibility as they usually have responsibility to children, that's when children understand well" (Female, 40years, university level, Gasabo, Restoration church).

Participants also have different views regarding whether both parents can educate children on SRH regardless of sexual differences; some consider that there is no difference and any parent can educateany child:

"Both boys and girls are children and the others are their parents. Given that the mother may be not around or not alive, it's possible that the mother can teach the boy or the father teach the girl. It's possible that both parents can teach children, boys and girls alike" (Male,35 years, Secondary level, Nyarugenge, ADEPR).

But there are others who consider mothers more fit to educate girls and fathers to educate boys as they have anatomic similarities and have experienced the same events at young age:

"For me,the father can educateboth male and female children, the mother focus on female children because they are the most vulnerable and explain to them about reproductive health. But later they need to meet together and discussed these issues together; this is when children take it serious" (Female, 40 years, university level, Gasabo, Restoration church).

b. Family members and family friends

Our study participants also consider the large family members to have a role in the education of children about SRH, including older siblings, uncles and aunts among others:

"Parents, the family, friends, teachers (can teach/educate them)" (Female, 33years, university level, Nyarugenge, SDA).

"Or even their elder sister or brother who is more mature (can educatethem)" (Female, 24 years, secondary level, Gasabo, SDA).

c. Teachers

Teachers are also considered in the education of children on SRH, as they have a complementary role in education with parents:

"And then when they go to school, teachers add something or in the youth forum" (Female, 31years, university level, Nyarugenge, Catholic).

d. Health care personnel

Health care personnel are among the most trusted and our study points them out also as main contributors in SRH education to children:

"Health care personnel, parents, and teachers can educate children" (Female, 24 years, secondary level, Gasabo,SDA).

e. The community members

Community members have responsibility upon any child in the neighbourhood or in any situation, to educate and correct when needed, like stated by one father in our study:

"Normally the first responsibility should come to Rwandese whoever he is, whoever he is" (Male, 43 years, secondary level, Musanze, ADEPR).

4.7.Age at which SRH education should be initiated

a. Puberty

More than 90% of participants considered puberty as the right age time to initiate SRH education to children, the age range between nine years and 18 years. Some as early as nine years:

"For me I think from the time the child get into puberty, starts to show signs of puberty in the body, from nine years and above. I think one can begin to discuss with them because their bodies are changing and they need to understand what is happening to them." (Female, 31years, university level, Nyarugenge, Catholic)

While few other parents considered 18 years as the appropriate time:

"Like 18 years almost, because that is when they start to have good understanding of things knowing what to do intelligently, telling them before like at five years will be too early, too young, they may not understand it well" (Female,24 years, secondary level, Gasabo, SDA)

b. School age

Some of the participants show that children should start having SRH education at school age:

"Usually the child should start to be educated (about SRH) from primary 2" (Male,43 years, secondary level, Musanze, ADEPR)

c. Pre-school age

Our study also showed that the age of initiation of this education should be early and some parent point out that it needs to start as early as five years of age:

"At five years, me I started to tell her at five years, that they should not touch her or that she should not show her body to passengers" (Female, 33 years, university level, Nyarugenge, SDA)

4.8.Methods for educating children about SRH

a) Family based discussions

The importance of the family in educating children about SRH was supported by almost 100% of our study participants, pointing out that parents and children should have this discussion in a familial environment. Regarding duration, parents considered that this discussion would take not less than 15 minutes but also not more than 45 minutes in general.

For some parents there is a need of didactic material that might help the parent when educating children about SRH:

> *"They may discuss at home, as they have time for watching movies, they can discuss at home like in the evening when everyone is at home. They can discuss calmly with none drunk or other distracting events and so on, so as to maximize interaction, and this discussion should spend between 15 and 30 minutes*" (Female,60 years, University level, Kicukiro, Catholic).

> *"If it is good, you may have didactic materials, even in schools nowadays they have this kind of lessons, if it is a child who does not fear you, s/he will tell you."*(Female,46years,primary level, Gasabo, SDA).

b) Children's forums at village level and specialized centres

Parents in our study have pointed out the need of children's forums to be extended to village level and have weekly gatherings for children, where information and knowledge on SRH can be delivered to them in general:

> *"And like there is an evening for parents, let there be an evening for youth, that evening for youth, let us accept, everyone have commitment that every child must be present, and when present... let take the youth ...like twice a week. But put in energy for mobilization, take those people and make them meet twice a week or a month in the village, then encourage the youth primarily to avoid adultery"* (Male,43 years, secondary level, Musanze, ADEPR).

From our study participants there need to be centres where children will be educated about SRH:

> *"There should be centres, where people may bring their kids like they say that children attend "Urugerero". Girls and boys may join those centres which may educate them; it goes like that like this."* (Male,29 years, university level, Kicukiro,ADEPR).

c. Programs to broadcast on TV or Radio

Drama and other artistic way of delivering message through media were seen by some parents in our study to be useful in educating Children on SRH.Other parents also consider the use these channel in mobilization of parents to be more involved in education of their children about SRH:

> *"Let us find a program and find mature Rwandese, and those one find stories and other words that are appropriate, like that. Let it not be done by children ... To be liked it needs to be done by adult people who prepare a significant thing"*(Male,43 years, secondary level, Musanze, ADEPR).

> *"There need to be radio-televised programs...There need to be that kind of programs that mobilize parents to talk to children not those educating children, the program sensitizing parents to talk to their children"*(Female,60 years, University level, Kicukiro, Catholic) .

d. Involvement of all opinion leaders

Our study shows the need to involve all opinion leaders from different sectors; religious, business, those in charge of culture and values (Itorero) to give their contribution on education of children about SRH issues. It also shows that the strategy of performance contract may be beneficial if applied towards educating children on SRH:

> *"Go in schools, call religious people, ... civil society, private sector and call those in charge of culture, then make them meet and encourage the youth primarily to avoid adultery.... Using the possible ways targeting performance contracts (imihigo), in the youth and may be with some rewards. Let's have goals in youth, and a district say 'I will fight these adultery, unintended pregnancies and illegitimate children'. But let it be in performance goals (imihigo)"* (Male, 43 years, secondary level, Musanze, ADEPR).

e. Integration of SRH education in school programs

School, known as a pool of knowledge, was also regarded as good contributor to SRH education to children by involvement of teachers in mobilizing parents to discuss these issues with children but also by integrating SRH education topics in other topics to be discussed at school:

> *"Likewise, if this kind of education passes through the teacher as a kind of advertisement, he will ask them (children) and mobilize them (parents). Then the child will push parents when at home."*(Female,60 years, University level, Kicukiro, Catholic).

4.9. Challenges and proposed solutions regarding SRH education to children

A. Challenges regarding SRH education to children

a) Very busy and unavailable parents.

The rhythmof daily life that consumes the whole time has been viewed in our studyas one of the major challenges that parents face regarding SRH education to children:

> *"We are no longer available...I leave may be when they are going to schooland I'm back when there are asleep, tomorrow will be like that... so if one month is gone like that, and the second one, willyou know where they spend the day?"*(Female, 46years, primary level, Gasabo, SDA).

b) Uncooperative children

Parents from our study mentioned the challenge of having uncooperative children who are difficult to educate and guide:

> *"The issue is that when you tell a child that he is wrong, and responds to you that you don't have to violate his right, you are not in charge of him, and then you find it is a problem. You tell them what they are in is not valuable, and they just look at you,*

saying you are not in charge of them" (Male, 56 years,no formal education, Karongi , EAR).

Having one of the children in the family who has been already in sexual activity and having to educate themabout SRH, it is a big challenge:

> *"The challenge may rise when there is one …like the most senior of them who have experienced those sexual activities, with you being aware or not,and when you are talking about it you seem like doing nothing. Saying may be:mother is telling us nonsense ...I have been through it and it is not like that,it is not how I found it,I know it. What is she telling me?"* (Female,48 years, university level, Gasabo, Catholic).

c) Lack of harmony in the family

Unhealthy family relationship between parents and their children or parents themselves was regarded in our study as another challenge because children learn a lot by observing parentshabits:

> *"The other one is a parent who has no relationship with children, without unity with the child, that is another challenge too, the child will not feel free with you"*(Male,29 years, university level, Kicukiro, ADEPR).

> *"The time it does not go on well, when there is misunderstandings between mother and father, the mother cannot take this time when she is not in harmony with the husband"* (Female, 48 years, university level, Gasabo, Catholic).

d) Influence of technology

Technology has a side of not being always controllable and it is a challenge for education to children about SRH:

> *"Because of the presence of telephone and televisions, it is different from before. Sometimes a parent educates a child but because of those things they like to watch that they pay too much attention and time,he does not receive the parents'advice seriously"*(Female, 33 years, primary level, Rwamagana, SDA).

e) Parents' fear and lack of adequate knowledge

Some participants showed that there are parents who fear having such discussion on SRH with children:

> *"The challenges may happen when a parent is afraid of talking to children fearing that the child may do it as experimentation*"(Male, 32years, no formal education, Burera, Catholic).

> *"But most of the parents fear to talk to their children, they really fear, like a child in primary school coming and ask a parent, Mummy, I see other children going into menses…,and you fear it...hhh (laughing"* (Female, 40 years, university level, Gasabo, Restoration church).

Lack of knowledge and lack of self-confidence for parents to address SRH education was also pointed out by our study participants as other big challenges some parents face:

> *"Some fear and say: These subjects are for teachers, they have learnt enough at school. Some donot know its importance, another say: how can I approach this big girl or that child, how can you tell her, where you can start?"* (Female, 60 years, University level, Kicukiro, Catholic).

f) Cultural challenges

Some parents consider SRH topics as taboos and do not consider it safe to give this kind of information to children,thinking that it may prompt children to go experiment what they have been taught:

> *"The first challenge is culture there are parents who think that educating children about SRH is making them misbehave or encourage them to go into sexual activities, that mindset of relying on culture, thinking that you cannot give the child an important information"* (Female, 31years, university level, Nyarugenge, Catholic)

g) Lack of serious measures from authorities

Lack of involvement of local authorities in SRH education tochildren has been pointed as another challenge:

> "*There is no tangiblemeasure, when we are searching for illicit drugs like Kanyanga there are strong measures... but today saying our youth is misbehaving, it's just words no one follows up on what's happening"*(Male, 43 years, secondary level, Musanze, ADEPR).

B. Solutions to identifiedchallenges

1. Very busy and unavailable parents.

To overcome this challenge, parents need to get time for their children regardless of the daily stress:

> "E*very parent should have time to educate children. Let's not abandon children, parents should find time to talk to children …. Parents should do their best to get time for children"* (Female, 60 years, University level, Kicukiro, Catholic).

Or as the availability of parents remains a problem, some parents think there need to be special centres where children may be gathering and educated about SRH issues:

> *" There should be centres, where people may bring their kids like they say that children attend "urugerero" girls and boys may join those centres which may educatethem, it goes like that like this"*(Male,29 years, university level, Kicukiro, ADEPR).

2. Uncooperative children

Regarding uncooperative children, some parents consider that local authorities must have a regulating role and get more involved in the process of educating children especially regarding SRH:

"The solution should be that local authorities may stand up and be involved, to help us for these young people"(Male, 56years, no education, Karongi, EAR).

3. Lack of harmony and bad examples from parents

Harmony and team spirit is fundamental for families to thrive as highlighted by participants, parents need to strive to keep it and preserve relationship with children:

"You see, wife and husband know what is wrong, and after knowing what is wrong , forgive each other and come back in harmony, when you are a wife or a husband, you show him or her the ways of the children, how to groom them and give them advices" (Female,37 years, Primary level, Kicukiro, SDA).

"Parents needs to be in harmony with children, when you are in harmony with a child, she does not hide anything....Relationship, without close relation, Close contact to be closer, she hide everything and you get to know it when it falls on you" (Male, 29 years, university level, Kicukiro, ADEPR).

4. Influence of technology

Parents suggest to discourage the use and availability of smart phones for children, and to minimize the time children spend in front of screens*:*

" There is no way a parent whose child is still at school and the parent dares to buy a Smartphone for that child, there is no way a child in S5 or S6 and let that child emerge in television watching movies…. I think parents should limit these activities for children who are still at school" (Female, 33 years, primary level, Rwamagana, SDA).

5. Parents' fear and lack of knowledge

Education and mobilization are two strategies proposed by some parents in order to overcome fear and lack of knowledge:

"It is about mobilization those who are able, to mobilize those who aren't.The solution is to mobilize people to do it, to discuss with children because it is something to be done repetitively"(Female, 40 years, university level, Gasabo, Restoration church).

6. Cultural challenges

There is a need to change the mindset in order to overcome the cultural challenges and provide adequate SRH education to children:

"I think we need to change our minds, and understand that telling a child what concerns her or what might happen to her is not blaspheme. That it is not encouraging her to go into sexual activities; to understand that giving them reliable information is not going to make them misbehave but will help them to be able to take decision when required" (Female, 31years, university level, Nyarugenge,Catholic).

7. Lack of serious measures from authorities

To overcome this challenge, parents considered that the authorities need to be more involved and take serious measures to make children education more strong and fruitful:

"Like measure are taken for illicit drugs and are taken regarding other decisions, and these are immediately applied, it should be the same for these youth issues that is the solution" (Male, 43 years, secondary level, Musanze, ADEPR).

Generally, participants were in favor of SRH education to children as it is beneficial for the future sexual behaviors of children. Majority showed that parents are the primary responsible personsto give this education despite many challenges. Puberty was mainly regarded as appropriate age to start this education while the topics to discuss include pubertal changes, sexual abuse and homosexuality among others.Family based discussion was one of the favorable approaches while specialized centers and children's forums were proposedtoovercome the main challenge that is unavailability of parents.

CHAPTER V: DISCUSSION

This study investigated specific reasons to why Rwandan children should be or should not be educated about SRH, topics that should be discussed with children about SRH, and the responsible person for educating children about SRH.It also investigated the ageto introduce SRH education to Rwandan children, methods to use for educating Rwandan children about SRH, challenges that are faced by parents regarding SRH to children, and proposed solutions.

Generally, parents responded in favour of this education and they pointed out its importance in equipping children with adequate knowledge, protecting children from unintended pregnancies and STIs and preparing them for becoming future responsible parents. These results were in congruency with the UNESCO recommendations, which states that SRH knowledge and motivation is required to delay sex and protect oneself from pregnancies and STIs (UNESCO and UNFPA 1998). Likewise, study results in USA, India and Zanzibar were affirmative regarding the education on sexuality issues (Fisher et al 2015; Ali and Manongi 2010; Parwej et al 2005).This can be understandable in the Rwandan context where cultural tradition urges that children need to be educated about SRH before they get sexually active.

Reasons to educate children on SRH in our study were similar toBangladesh findings where SRH education was regarded as a prerequisite for better decision making in adolescents regarding sex (Bosch 2008). In south Africa and Nigeria parents were aware that SRH education is a crucial need nowadays that should be highly considered by parents (Mudhovozi 2012; James 2012). Additionally, similar findings were noted in a study from USA about middle school and family based SRH education programs that resulted in delayed sexual intercourse in students who participated (Grossman et al 2014). Rwandan parents are no exceptional because, like many other societies, they have a protective culture for their children and giving them knowledge about SRH has been one of the strategies that were used in families to prepare children for the future.

Concerning the topics to be included in SRH education to children, our study found puberty and associated changes, sexual intercourse and its consequences, and homosexuality. It includes also the risk of STIs and pregnancies, culture and moral values, family planning, and protective methods, illicit drugs and their effects as well as sexual abuse and violence. These findings were not far from what is recommended by UNESCO that human and Sexual development, reproductive anatomy and physiology,puberty and physical, psychological, socio-cultural changes, conception and pregnancy, development of self-awareness and self-esteem are essential topics to be introduced to children respective to ages (UNESCO and UNFPA 1998).

The list of topics from our study seems more inclusive and shed more light on what needs to be included when educating children on SRH. It shows the importance that parents put on SRH education to their children; they need it to be thorough and rich in content. Similar to other studies findings; menstruations, contraceptives, and HIV/AIDS are the topics to be predominantly discussed during SRH education in Namibian families (Nambambi and Mufune 2011). However, a study in Uganda found that call to avoid sexual acts, self control, avoiding people of the opposite sex, abstinence faithful marriage, and use of condom were the main topics (Muhwezi et al 2015). Our findings also included other issues like the use of illicit drugs that is a huge challenge to the youth and increases the risk of sexual misconduct as previous studies has argued (Nigeri 2014).

Condom and contraceptives use were not supported by some parents from our study who argued it would encourage children to engage into sexual activities. Similarly previous studies also mentioned this conservative and controversial attitude of parents towards these topics that some parents thinks should not be brought to children's attention (Emelumadu et al 2014; Mudhovozi 2012; Briggs 1998). The fact that most of the participants were Christians can have an influence on this controversial finding; given that some religions discourage the use of contraceptives. However, others were in favor of these topics and argued that condom and contraceptive use need to be considered in SRH, which is similar to previous study findings (Beckett et al 2009).

Regarding the responsible persons for SRH education to children; parents, family members and friends, teachers, health care personnel, and the community members were highlighted to have the responsibility. This is similar to the recommendations from UNESCO (UNESCO

and UNFPA 1998), and several previous studies had similar findings; like in Tanzania where teachers were perceived to have significant impact on SRH to prevent HIV transmission (Kawai et al 2008) and parents especially mothers were pillars in SRH in South Africa (Mudhovozi 2012). Likewise, the mother was considered by many of our participants as the main educator of children as she is always one closer to them. Family members and peer groups also are considered in different cultures to have a secondary influence after parents on sexual behaviours (Nigeri 2014). In agreements with this, our study findings suggest that these groups, mainly parents should be involved in giving education aboutSRH to children.

One of the big issues about SRH education to children is about the age that is suitable to initiate this education. According to Rwandan culture children need to be educated from early age if one wants to be successful in that education; as they say that the future development of the child depends upon good parenting during the early life; hence reasons of some participants considering it at early age. Majority of our study participants pointed puberty as appropriate age to initiate SRH education to children, with ages of initiation varying between nine years and 18 years. This is similar to the previous findings in Africa and other places where puberty was the hallmark of the age to initiate SRH education to children (Kunnuji 2012; Nigeri 2014; Ancheta 2005; Fentahum et al 2012; Parwej et al 2005). On the other hand, some participants argued that this education should be initiated earlier. One of them argued to start as early as five years, which also is similar to what has been highlighted in other studies from communities like Latinos and others who consider that SRH education should be introduced at early age (Maureen & Sandy 2013; Fentahum et al 2012). Developmentally speaking, initiation of age appropriate education about SRH can make a difference in the child's life because each age has sexual risks and curiosities that may be prevented by this education.

Another objective was to find out methods that should be used for educating children on SRH. To this, our participants provided family based discussion, children's forums at village level, specialized centres for the children's education; programs to broadcast on TV or radio, involvement of all opinion leaders, integration of SRH education in school programs, and involvement of the wholecommunity as suitable methods for SRH education to children. Most of these methods were also shown by UNESCO to be more suitable in modern era for SRH education to children (UNESCO and UNFPA 1998) and have been shown from other

studies to be efficient. Likewise, in Nigeria the importance of community mobilization for SRH education was noted (Odeyemi et al 2014) . School programs should be adapted to provide adequate SRH knowledge (Mturi and Hennink 2005),though some school programs were found to have poor contents regarding SRH education (Irala 2008).

Messages from media were found to have impact on the parent-child communication quality on SRH (Evans et al 2012). There is evidence that when used appropriately media plays a huge role in SRH education as it has a massive coverage in short time and may allow access to explicit advices by appropriately organized programs with music or other artistic work. On the other hand if not well used media can destroy the community (UNESCO and UNFPA 1998; James at al 2011; Guilamo-ramos et al. 2015). Our study findings also acknowledge the power of media to the population and shows that this power needs to be positively used to strengthen SRH education to children. Given the quick spread of the influence of media and social media on communities, using it to promote SRH education might be of great advantages.

Different studies agree with our findings regarding challenges to SRH education.Very busy and unavailable parents, uncooperative children, lack of harmony in the family, influence of technology, parents' fear, cultural challenges, lack of serious measures from authorities, and parents' lack of adequate knowledge were the highlights from our study findings. Most of these challenges were found in a previous study in Rwanda (Bushaija et al 2013), where gender differences, education, traditional norms, religion and occupationwere the main barriers to parents adolescent SRH communication. Similar findings also were shown in the region as summarized in a review of studies on the subject in East Africa (Kamangu 2017). Many studies highlighted cultural based barriers and parental beliefs to have a huge impact on parental attitude towards SRH education to children (Sridawruang et al. 2010). Furthermore, others noted limited sexual health knowledge, perceptions of adolescents' readiness for sex, parental comfort discussing sex, and demographic factors as challenges about SRH education to children (Mona and Beckmeyer 2016; Fisher et al 2015; Bastien 2011). As stated by some participants, having to work for the welfare of the family makes parents availability for children very limited, which is a big challenge to SRH education at home, hence some of solutions below.

Solutions were directly targeting the above-mentioned challenges. Regarding the parents' lack of time, many participants argued that parents should do their best to avail themselves and provide SRH education to children or if that cannot work, the suggestion is to have specialized centres and youth forums that can focus on provision of SRH education to children similar to what have been successfully tried in other areas (Cherie and Frances 2012). For uncooperative children, some participants contemplate the use of punitive measures from local authorities to be one of additional ways that may help parents to achieve this task. In families that lack harmonious spirit, some of our participants argued that parents need to fix their quarrels before they separate them from their children's trust, as good family functionality is associated with good SRH communication at home (Adebayo 2016). For technological issues our study suggests that parents should limit and regulate children's access to technological tools that rob them of their time and lead them into sexual misconduct. This is really a crucial point to consider in both sides, on one hand technology needs to be promoted in children and as a tool to facilitate them in the learning practice. On the other hand there is this distracting effect of technological tools that robs the time of children, become like an illicit drug that might end up in poor school performance and drop outs. Reconciling the two aspects of technology is the challenge for anyone involved in education of children in this era (Ugochuku et al 2011; UNESCO and UNFPA 1998).

For lack of parental knowledge and cultural barriers, our study suggests that parents should be mobilized and sensitized about the need to be more involved in SRH education to their children and its benefits. Our findings were similar to what was shown by Bushaija (Bushaija et al 2013), where sensitization of the parents was highlighted as the main solutions to overcome many barriers in SRH education to children.In a country where illiteracy is still a big issues, the need to empower parents with knowledge about SRH is paramount.

Study limitations

While our study provided parental perceptions on SRH education to children in Rwandan settings, it has some limitations. First, it was conducted in a single hospital in Kigali city on parents that some had sick children, which might influence the way of responding. Furthermore, factors that may influence parental perceptions were not explored. However, this study paves a way towards understanding Rwandan parents' perceptions on SRH education to children.

CHAPTER VI: CONCLUSION AND RECOMENDATIONS

5.1.Conclusion

Our findings show that parents support the provision of SRH education to children. Most of them argue that it as a way to equip children with knowledge that will help them to have wise decisions in regard to SRH related matters. Parents are the main responsible persons to provide this education and they should start it around puberty. SRH education to children should use different strategies including family discussions, TV shows and involvement of the community among others. Topics to cover also include puberty related changes to pregnancy, STIs and use of contraceptive measures including condom. SRH education also faces many challenges, the main one being unavailability of parents because of work and special programs are suggested to overcome these challenges, some of them shown in the following recommendations.

5.1.Recommendations

To parents, families and the community:

1. To make all possible and get time to be more involved in SRH education to children

To the Ministry of education:

a. Teachers to be more involved in providing SRH to children

To the Ministry of Health, Ministry of local governance and Ministry of youth

1. To develop programs for parents' mobilization on SRH education

2. To consider creating and organizing youth forums at village level to promote SRH education to children

To the local government:

1. To work with parents and get them more involved in SRH education to children

To researchers:

1. To conduct studies to find out more about use of contraceptives and condomsin children and the perceptions of parents on this practice to have a better understanding that may help appropriate policy making process and SRH education program design.

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APPENDICES

Appendix 1: Search terms (MeSH terms in italics)

	(Parent OR *parents* OR caregivers OR caregiver OR maternal OR mother OR paternal OR father)
AND	(knowledge OR attitude OR attitudes OR attitude* OR behavior OR behavior OR behaviors OR behaviors OR behavior* OR behavior* OR perception* OR *perception OR perceptions)*
AND	*(reproductive health* OR reproduction health OR sexual health OR sex education)
AND	*(Child* OR *adolescent* OR children OR *child, preschool* OR *pediatrics* OR pediatric OR paediatrics OR teenager OR teenagers)
AND	(qualitative research OR qualitative OR interview OR interviews OR focus groups)
NOT	(newborn OR barbers OR Infant OR infants OR toddler OR toddlers)
AND	*(Developing Countries* OR developing country OR countries, developing OR nations, developing OR developing nations OR *Poverty* OR resource poor country OR resource-poor country OR low income country OR low-income country OR *Global Health* OR third word OR Africa)
LIMITS	The search was limited to papers about humans, in the English language and French as the languages of the authors of this proposal.
Search repeated	27/3/2018, and 20/04/2018

Appendix 2: interview guide questionnaire

Section 1: Socio-demographic characteristics of parents

a. Gender: Female ☐

Male ☐

b. Date of birth/ Age.....

c. Marital status: Single ☐

Married ☐

Widow ☐

Divorced ☐

d. Highest grade or level of education

1.Primary school ☐

2. High school degree ☐

3.University degree ☐

4. Others ☐

(Specify) .....

5. No Schooling at all ☐

e. Income Category (Ubudehe).....

f. Type of health insurance.....

g. Place of Residence (District, sector).....

h. What is your religious preference?

1. Muslim.....

2. Catholic.....

3. Others (specify).....

i. How many children in household?

(Are all yours)

j. How old is the oldest child? .....
k. Did any of them have an STI or get unwanted pregnant? .....

Section 2: General perceptions on SRH education to children

a. What do you think about SRH education to children in general?
b. Why (or why not) should children be taught about sex and reproductive health?

Section 3: Elements/topics to be taught to children regarding SRH

a) What topics should be discussed with children about SRH? (Which topic is considered a priority)

Section 4: Responsible to provide SRH education to children

a) Who is actually responsible to provide this education about SRH to children? (Is it the same if it's about a boy or girl)

Section 5: Age at which SRH education to be initiated

a. At which age do you think it is reasonable to start talking about SRH issues to children?

(Why this age?)

Section 6: Approaches/Methods that should be used to educateSRH issues to children

a) How should the parent-child conversations on SRH be held? (settings, trigger)

Section 7: Challenges and suggested solutions from parents

b) What are the challenges?
c) What solutions do you propose?

Thanking the participant and closing.

Appendix 3: Consent form for participation in a study

Study title "PARENTAL PERCEPTIONS ON EDUCATION OF CHILDREN ABOUT SEX AND REPRODUCTIVE HEALTH

ParticipantsID: _____ Date: _____

By signing the form below, I confirm that the consent form has been explained to me in terms that I understand.

I consent for being involved in this study. I understand that the information may be used in expanding knowledge about sex and reproductive health educations in Rwandan families, for purposes of medical educating, or publication in medical textbooks or journal and electronic publications. By consenting to this study participation I understand that I will not receive payment from any party. Refusal to consent to this study participation will in no way affect the medical care for my child or me.

I understand that the results of this study may be read by members of general public, in addition to scientists and medical researchers that regularly use these publications in their professional education. Although my information will be used without identifying data such as my name or the name of my relatives, I understand that it is possible that someone may recognize that I participated in such study. If I have any questions or wish to withdraw this consent in the future, I will contact:

1. Dr Jean Pierre BUCYANAYANDI: bujepie@gmail.com, +250 788 639 913 or
2. Dr JanvierHITAYEZU :jhitayezu @gmail.com, +250 788 491 748
3. Dr NaphtalNYIRIMANZI:naphtal07@gmail.com,+250 783 156 255
4. Chairperson of the CMHS IRB (**0788 490 522**) or Deputy Chairperson (**0783 340 040**)

Names and phone number of the parent: _____

Signature:

Names of Witness: _____

Signature:

AMASEZERANO YO KWEMERA KUJYA MU BUSHAKASHATSI KU BUSHAKE

"Uko ababyeyi babona ibyerekeye kwigisha abana kubuzima bw'imyororokere"

Nomero y'umubyeyi: _____Itariki : _____

Mbere yo gusinya ikicyemezo, nabanje gusobanurirwa ibirimo mu rurimi numva.

Ndemerako amakuru yanjye yakoreshwa n'abaganga mu bushakashatsi.

Maze gusobanurirwa n'abaganga ko amakuru yanjye akenewe mu gufasha abandi baganga kungurana ubumenyi ndetse no gufasha abandi babyeyi kuzamura ubumenyi n'uburyo bwo guha abana ubumenyi kubuzima bw"imyororokere, nemeye ko amakuru yanjye yakoreshwa muri ubu bushakashatsi. Nemeyekoibizavamuriububushakashatsibizakoreshwa mu bitangazamakuru byanditswe cyangwa bikorerakuri Murandasi ndetse n'ibitabo byose bikoreshwa mu kwigisha abaganga. Ndabyemeye, ariko ntagihembo nteze guhabwa ndetse ndamutse ntabyemeye nziko nta ngaruka byagira kubuvuzi mpabwa cyangwa undi wo mu muryango wanjye ahabwa.

Nasobanuriwe ko ayo makuru abasha gusomwa n'abandi bantu bose bakoresha ibi bitabo cyangwa ibitangazamakuru bya kiganga ariko byose mu rwego rwo kwigisha. Nziko n'ubwo ntamazina yanjye azatangazwa, hari ubwo ayamakuru ashobora gutuma abantu bamenya ko nagiye muri ubu bushakashatsi ariko ntacyo bitwaye. Ndamutse ngize ikibazo cyangwa nshaka ko uyu mwanzuro mfashe uhinduka, nzitabaza :

1. Dr Jean Pierre BUCYANAYANDI: bujepie@gmail.com,+250 788 639913 cyangwa
2. Dr JanvierHITAYEZU :jhitayezu @gmail.com, +250 788 491 748
3. Dr NaphtalNYIRIMANZI:naphtal7@gmail.com,+250 783 156 255
4. Abakuriyeubushakashatsimuri CMHS **0783 340 040**cyangwa**0788 490 522**)

Amazinanatelefone y' Umubyeyi: _____

Umukono

Amazinay'Umuhamya: _____

Umukono

Appendix 4: IRB approval

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 26th/10/2018

Dr BUCYANAYANDI Jean Pierre
School of Medicine and Pharmacy, CMHS, UR

Approval Notice: No 356/CMHS IRB/2018

Your Project Title ***"Parental Perceptions on Education of Children about Sex and Reproductive Health-A Qualitative Study at Kigali University Teaching Hospital"*** has been evaluated by CMHS Institutional Review Board.

		Involved in the decision		
		Yes	No (Reason)	
Name of Members	**Institute**		**Absent**	**Withdrawn from the proceeding**
Prof Kato J. Njunwa	UR-CMHS	X		
Prof Jean Bosco Gahutu	UR-CMHS	X		
Dr Brenda Asiimwe-Kateera	UR-CMHS	X		
Prof Ntaganira Joseph	UR-CMHS	X		
Dr Tumusiime K. David	UR-CMHS	X		
Dr Kayonga N. Egide	UR-CMHS	X		
Mr Kanyoni Maurice	UR-CMHS	X		
Prof Munyanshongore Cyprien	UR-CMHS	X		
Mrs Ruzindana Landrine	Kicukiro district		X	
Dr Gishoma Darius	UR-CMHS	X		
Dr Donatilla Mukamana	UR-CMHS	X		
Prof Kyamanywa Patrick	UR-CMHS		X	
Prof Condo Umutesi Jeannine	UR-CMHS		X	
Dr Nyirazinyoye Laetitia	UR-CMHS	X		
Dr Nkeramihigo Emmanuel	UR-CMHS		X	
Sr Maliboli Marie Josee	CHUK	X		
Dr Mudenge Charles	Centre Psycho-Social	X		

After reviewing your protocol during the IRB meeting of where quorum was met and revisions made on the advice of the CMHS IRB submitted on 16th October 2018, **Approval has been granted to your study.**

Please note that approval of the protocol and consent form is valid for **12 months**.

You are responsible for fulfilling the following requirements:

Changes, amendments, and addenda to the protocol or consent form must be submitted to the committee for review and approval, prior to activation of the changes.

2. Only approved consent forms are to be used in the enrolment of participants.
3. All consent forms signed by subjects should be retained on file. The IRB may conduct audits of all study records, and consent documentation may be part of such audits.
4. A continuing review application must be submitted to the IRB in a timely fashion and before expiry of this approval
5. Failure to submit a continuing review application will result in termination of the study
6. Notify the IRB committee once the study is finished

Sincerely,

Date of Approval: The 26th October 2018

Expiration date: The 26th October 2019

Professor Kato J. NJUNWA
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:

- Principal College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate Studies, UR