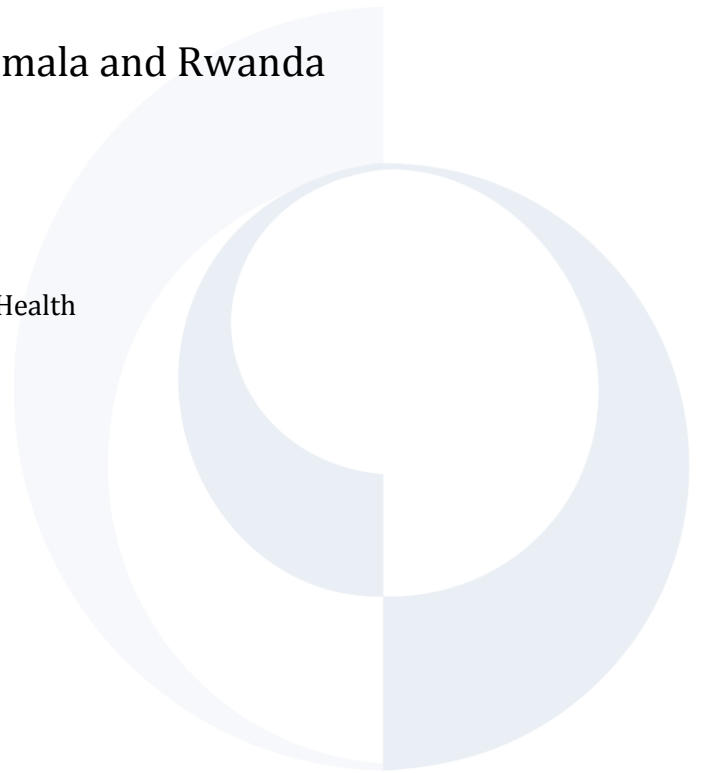


**My Changing Body: Puberty and
Fertility Awareness for Young
People, 2nd Edition**
A Pilot Study in Guatemala and Rwanda

Submitted December 2011
The Institute for Reproductive Health



USAID
FROM THE AMERICAN PEOPLE



© 2011. Institute for Reproductive Health, Georgetown University

Recommended Citation:

My Changing Body: Puberty and Fertility Awareness for Young People, 2nd Edition. A Pilot Study in Guatemala and Rwanda. December 2011. Washington, D.C.: Institute for Reproductive Health, Georgetown University for the U.S. Agency for International Development (USAID).

The Institute for Reproductive Health (IRH) is part of the Georgetown University Medical Center, an internationally recognized academic medical center with a three-part mission of research, teaching and patient care. IRH is a leading technical resource and learning center committed to developing and increasing the availability of effective, easy-to-use, fertility awareness-based methods (FAM) of family planning.

IRH was awarded the 5-year Fertility Awareness-Based Methods (FAM) Project by the United States Agency for International Development (USAID) in September 2007. This 5-year project aims to increase access and use of FAM within a broad range of service delivery programs using systems-oriented scaling up approaches.

This publication was made possible through support provided by the United States Agency for International Development (USAID) under the terms of the Cooperative Agreement No. GPO-A-00-07-00003-00. The contents of this document do not necessarily reflect the views or policies of USAID or Georgetown University.

The FAM Project

Institute for Reproductive Health
Georgetown University
4301 Connecticut Avenue, N.W., Suite 310
Washington, D.C. 20008 USA

irhinfo@georgetown.edu
www.irh.org

Acknowledgements

We would like to acknowledge the following individuals for their contributions to the development and completion of this report: Rebecka Lundgren, Susan Igras, Marie Mukabatskinda, David Colon Cabrera, Irit Sinai and Elizabeth Salazar. We also recognize the efforts of Marcus Catsum and Lissa Glasgo for substantial editing of the report. Finally, we would like to thank the staff and youth workers of APROFAM and CRS for their enthusiasm and hard work revising and testing the [My Changing Body](#) curriculum.

Table of Contents

Acronyms.....	i
List of Tables	ii
Executive Summary.....	iii
1. Introduction.....	1
1.1. Background.....	1
1.2. Problem Statement.....	1
1.3. Intervention.....	2
2. Study Methodology.....	3
2.1. Study Objective and Design.....	3
2.2. Methods and Tools.....	4
2.3. Analysis.....	4
3. Implementation.....	5
3.1. Rwanda	5
3.1.1. Partnership and Coordination.....	5
3.1.2. Study Participants	5
3.2. Guatemala.....	6
3.2.1. Partnership and Coordination.....	6
3.2.2. Study Participants	7
4. Results.....	7
4.1. Rwanda	7
4.1.1. Pre-Post Test Results	8
4.1.2. Qualitative Results	11
4.2. Guatemala.....	16
4.2.1. Pre-Post Test Results	16
4.2.2. Group Discussion Results.....	19
5. Conclusions	21
6. Dissemination of Study Results	22
6.1. Guatemala.....	23
6.2. Rwanda	23
Appendices.....	24
Appendix A: Group Discussion Guide	24
Appendix B: Note-Taking Form for Group Discussions	28
Appendix C: Pre-/Post-Test Instrument for Parents.....	40
Appendix D: Pre-/Post-Test Instrument for Youth.....	46
References.....	24

Acronyms

APROFAM	Association for the Well Being of the Family in Guatemala
CRS	Catholic Relief Services
DHS	Demographic and Health Survey
FHI	Family Health International
IRH	Institute for Reproductive Health, Georgetown University
MCB	My Changing Body
NGO	Non-governmental organization
PEPFAR	President's Emergency Plan for AIDS Relief
SRH	Sexual and reproductive health
STI	Sexually transmitted infection
USAID	United States Agency for International Development
VYA	Very young adolescent

List of Tables

Table 1: VYA participation in Rwanda..... 6

Table 2. VYA participation in Guatemala..... 7

Table 3. Percent change in puberty knowledge (baseline to endline) in MCB participants in Rwanda 8

Table 4. Percent change in fertility knowledge (baseline to endline) in experimental and control groups in Rwanda 9

Table 6. Percent changes in VYA perceptions of their parents’ capacity to give advice (baseline to endline), experimental group 9

Table 8. Percent changes in parental knowledge, attitudes, and communication practices between baseline and endline in Rwanda, intervention group..... 11

Table 8. Percent change in fertility knowledge between baseline and endline, MCB participants..... 16

Table 9. Knowledge of fertility among experimental and control group participants in Guatemala, endline 17

Table 10. Percent change in Guatemala VYA perceptions of parents’ capacity to give advice, experimental group..... 17

Table 11. Guatemala VYA perceptions of parents’ capacity, experimental and control groups at endline 18

Table 12. Percent changes in Knowledge, Attitudes, and Communication among Guatemalan Parents Who Completed MCB..... 19

Executive Summary

This report presents the results of the revision and pilot testing of My Changing Body (MCB), a training manual for youth originally developed by the Institute for Reproductive Health in collaboration with Family Health International (FHI) with support from the U.S. Agency for International Development (USAID). The updated version, [*My Changing Body: Puberty and Fertility Awareness for Young People, 2nd Edition*](#), consists of six participatory education sessions for 10-14 year olds and their parents. Partnering with youth-serving organizations in both Guatemala and Rwanda, IRH implemented interactive sessions designed to teach girls and boys ages 10 to 14 about puberty, including fertility and the body, self-image, gender norms and roles, communication, protective and risk behaviors, and relationships within and outside the home. A corollary set of participatory exercises for parents improves their understanding of puberty-related issues and builds their skills to support their children as they navigate puberty. Take-home exercises also help facilitate communication between young adolescents and their parents. The curriculum, which was integrated into ongoing life skills programs in youth-serving organizations, was implemented in Rwanda by Catholic Relief Services (CRS) and its partner Caritas and in Guatemala by the Association for the Well Being of the Family in Guatemala (APROFAM) with 268 adolescents and 117 parents.

The assessment used a modified nonequivalent control group design to measure changes in knowledge, attitudes and behaviors related to puberty and fertility awareness, gender roles, intergenerational relationships, and interpersonal communication, in both parents and youth. Data was collected through individual and group interviews involving 176 adolescents and 107 parents from an experimental group and 74 adolescents from a control group. Participatory learning and action exercises, including card games, modified pile sorts, storytelling and discussion of photo series were used to facilitate interviews.

Baseline results demonstrated similarities in both countries: low levels of knowledge regarding puberty, especially fertility, discomfort with puberty-related changes and lack of awareness of how gender influences sexual and reproductive health (SRH) choices. Endline results revealed significant increases in knowledge and awareness of developmental changes, including fertility. At endline, experimental group participants were also more aware of gender roles than those in the control group and more likely to challenge traditional gender roles. The intervention also improved self-efficacy among adolescents and parents related to challenging traditional gender roles through role modeling and advice-giving.

Overall, results indicate that introducing topics of fertility and body awareness while weaving in gender and sexuality is an effective way to improve knowledge and increase social awareness, and leads to more healthy behaviors of boys and girls. What youth learn from an intervention that includes MCB can help them become more self-confident, practice good health habits, and gain a positive self-image — all of which contribute to their future sexual and reproductive health. Findings from this evaluation have important implications for the development of effective, feasible and replicable strategies focused on the 10-14 year old age group that has traditionally been neglected by sexual and reproductive health programming.

1. Introduction

1.1. Background

Early adolescence is a critical time in the life of a young person. In addition to the physical, cognitive and emotional changes that come just before and during puberty, very young adolescents (VYAs) between ages 10-14 are acquiring information, developing attitudes and experimenting with behaviors that will affect their future health and well-being. While these changes during adolescence are universal, every person will experience them differently and in relation to the norms and values transmitted through socialization, a process unique to every society.

Early adolescence is also a time of developing sexuality¹, including the exploration of masculine and feminine roles and the acquisition of a gender identity including sexual orientation.² Fertility awareness is important for both boys and girls as it is key to understanding their gendered, sexual selves. Body literacy enables young people to recognize how their sexual and reproductive health is influenced by gender and social norms. The resulting knowledge, social awareness, and skills facilitate passage through puberty and prepare youth to care for their own health and that of their partners. Fertility awareness and body literacy empower young people in navigating puberty.

The societal messages that children acquire about their bodies and body functions during this time can influence them throughout their lifetime. The accuracy of the information they acquire about sex and reproduction, their attitudes about sexuality and gender roles and whether they become sexually active at an early age are among the most important issues facing VYAs and the adults who care about them.

Sexual and reproductive health (SRH) programs for VYAs are challenged to help young girls and boys to navigate these physical, emotional, and social changes in diverse cultural contexts around the world.

1.2. Problem Statement

The VYA age group presents a window of opportunity to intervene before most youth become sexually active and before gender roles and norms with negative SRH consequences become solidified. The knowledge, attitudes and skills acquired during the ages of 10 to 14 set the stage for healthy sexual relationships and self-care practices that prevent unintended pregnancy and disease.

Increasing evidence suggests that gender norms – social expectations of appropriate roles and behaviors for men (and boys) and women (and girls) – as well as the social reproduction of these norms in institutions and cultural practices directly influence health-related behaviors (Barker 2007; Aronson 2003; Courtenay 2000). Gender norms and attitudes established during this phase of development are particularly influential for future SRH outcomes. Indeed, gender relations are considered among the most

¹ Sexuality is the variety of ways that we express ourselves as sexual beings. Expressions of sexuality vary and are a sub-set of an individual's expressions of self and relationships with others, including use of power in relationships. Our sexuality depends heavily on personality, experience, and physical and social environments. Sexuality is expressed in the ways we communicate and in our behaviour and self-perception, which can be negative or positive for every person involved. (CARE USA operational definition of sexuality).

² Cecilia Breinbauer and Matilde Maddaleno. Youth: Choices and Change. Promoting Healthy Behaviors in Adolescents. Washington D.C.: PAHO

influential social determinants of health.³ Inequitable gender norms influence the ways men and women behave which are related to a wide range of issues, including preventing the transmission of HIV and sexually transmitted infections (STIs), avoiding unintended pregnancy, gender-based violence, parenting and health-seeking behavior (Marsiglio 1988; Kirkman 2001). A global systematic review of factors shaping young people's sexual behavior confirmed that gender stereotypes and differential expectations about appropriate sexual behavior for boys compared with girls were key factors influencing their sexual behavior (Marston and King 2006).

The challenges of parenting young adolescents, especially in regards to SRH, and the influence of other community members on youth, are additional considerations that SRH programs must take into account. Although parents or guardians generally have significant influence in VYAs' lives, they often find it difficult to cope with the changes their children are experiencing and may lack the knowledge and skills needed to help them through this period. Early adolescence is often a time of increasing conflict between children and parents as parental expectations and concerns begin to clash with adolescent's needs and wants.

Thus, interventions for VYAs that address puberty, fertility, gender, sexuality and parent-child communication are critical to build a firm foundation for later SRH interventions. At this age, VYA programs will generally need to focus on developing positive gender attitudes, body and fertility awareness, self-esteem, and decision-making and communication skills, as well as fostering self-respect and respect for others, rather than a narrow focus on STIs or pregnancy prevention. That is not to deny the importance of knowledge; the literature is replete with examples of boys and girls who are frightened and confused by the changes they are experiencing, and who struggle to navigate puberty successfully. The challenge for VYA programming is to understand what information and skills are age-appropriate and necessary throughout the 10 to 14 year period.

1.3. Intervention

In 2003, Georgetown University's Institute for Reproductive Health (IRH) and Family Health International (FHI) developed the MCB manual for very young adolescent girls and boys, a set of six participatory sessions led by adult facilitators and designed to build knowledge and create healthy VYA attitudes towards pubertal changes. The first edition of MCB had a particular focus on improving fertility awareness and knowledge, self-confidence and self-care behaviors during puberty. In the years since the first edition was published, new evidence has emerged on the importance of addressing gender inequalities to achieve better SRH outcomes and the importance of parenting as a protective factor, particularly in VYAs.

IRH received funds from the United States Agency for International Development (USAID) to better understand the SRH-related issues that confront VYAs and to use the finding to revise the first edition. Several key findings from formative research with VYAs and parents conducted in Guatemala and Madagascar guided a round of modifications. Based on these findings, IRH adapted adolescent education materials from a variety of sources, integrated gender and sexuality concepts throughout the manual and created a session for parents to increase their knowledge of puberty, gender, and sexuality, and build intergenerational communication skills.

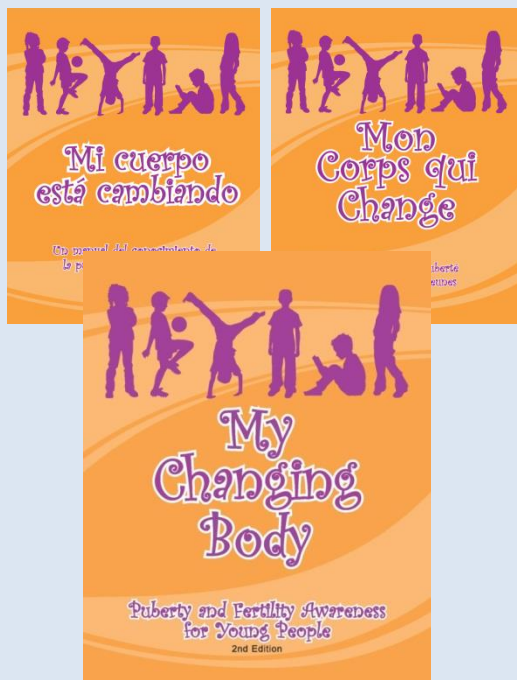
³ Gita Sen, Pirooska Ostlin, Asha George, 2007, Final Report to the WHO Commission on the Social Determinants of Health.

MY CHANGING BODY

Puberty and Fertility Awareness for Young People, 2nd Edition

The curriculum, which includes participatory learning and action exercises, consists of six sessions exploring the following themes:

- Physical and emotional changes experienced by both boys and girls during puberty
- How and when puberty occurs
- Physical development and body image
- Sexual feelings
- The process of conception and the definition of female and male fertility
- Myths around female and male fertility
- The process of fertilization
- Signs of fertility
- Practices for maintaining good hygiene
- Socially-constructed and expected gender roles and their influence on decision making and interactions
- Communication with parents and peers about puberty



The “My Changing Body: Puberty and Fertility Awareness for Young People, 2nd Edition” Curriculum

My Changing Body: Puberty and Fertility Awareness for Young People, 2nd Edition is a curriculum for use with 10 to 14 year old girls and boys that introduces the concept of body literacy and adds cross-cutting topics and activities that help youth become more aware of gender roles and other social changes that occur with the onset of puberty and developing gender identity and sexuality. The curriculum aims to improve knowledge, social awareness, and skills to facilitate passage through puberty and prepare youth to care for their health. The curriculum also hopes to instill self-confidence and a healthy self-image. The curriculum includes two sessions for adults to provide care-givers information on puberty, sexuality, and gender as well as suggestions to help develop adult-child communication skills so that they may better support children during this developmental stage.

MCB is designed for adults who teach sexuality and life skills education to youth in schools, clubs, or community centers, and can be used as a stand-alone curriculum or as a supplement to other reproductive health training materials for youth. The parents’ session is an independent course specifically targeting parents.

The curriculum takes a participatory and fun learning approach to help participants share their feelings and emotions while mastering knowledge about the topics discussed. Each session includes interactive activities, such as role-playing, crafts, or games. Depending on the amount of time available, the course can be taught over a series of weeks, days, or during a two- or three-day workshop. Each session follows a consecutive order and the amount of time between each can vary based on a program’s needs. The parent’s session can be taught in two separate sessions or as one complete session.

2. Study Methodology

2.1. Study Objective and Design

To contribute to development of better program practices, particularly appropriate methodologies and information content to include in programs for very young adolescents, IRH piloted the MCB curriculum with participating VYA and

parents, as well as a control group of VYAs recruited through local implementing partners in Guatemala and Rwanda. The curriculum was tested in two different contexts to increase the generalizability of results, and was developed in partnership with two differing organizations: one a Catholic non-governmental organization (NGO), the other a rights-based family planning agency.

The assessment used a modified nonequivalent control group design to measure changes in knowledge, attitudes and behaviors related to puberty and fertility awareness, gender roles, intergenerational relationships, and interpersonal communication, in both parents and youth. The design included interviews with boys and girls and their parents both before and after participation in the program. Youth and parents participating in the educational sessions were interviewed prior to the first session and one month after participating in the last educational session. Interviews were also conducted with a control group of youth with similar characteristics who did not participate in MCB. The control group was small due to budget constraints, and results should be interpreted with caution.

2.2. Methods and Tools

Data were collected through both individual and group interviews. Individual interviews – administered through interactive activities such as card games, pile sorts and stories designed to keep VYAs engaged – provided quantifiable data measuring pre- and post-test changes. The specific tools and techniques used in the interviews are included in [Appendix A](#).

Discussion groups were held with boys and girls to collect in-depth, qualitative information on their perceptions of puberty changes and other topics explored in the MCB curriculum. Separate sessions were held with youth who participated and those who did not participate in the program. Two youth observers attended each session, taking notes and photographing the visual output. Two youth facilitators led the activities and discussion, at times dividing the groups into smaller discussion groups to provide more time for all of the children to participate. The discussions included participatory activities such as collages, social mapping and games, and were carefully documented by the facilitator and observer using a structured matrix. Matrices were developed for the facilitators and observers to record key points of each discussion, and where appropriate, quantify results. The observations and quotes recorded in the matrix, as well as photographs of the visual output, were compared during the analysis.

The study protocol and tools were approved by the Institutional Review Board of Georgetown University and in-country ethics committees. Parents signed consent forms for themselves and for their children participating to the study. VYA provided written assent for their participation as well. Interviews and focus group discussions were conducted in private and in-school settings or another place identified by partner organizations.

2.3. Analysis

Different analysis procedures were used in each country. In Rwanda, the local consultant did not understand that the design called for matched cases and instead, at endline, interviewed a cross-sectional sample of VYAs who had participated in MCB sessions. Although participants in pre and post-MCB evaluation activities should have been the same individuals, at endline, less than 100 of the VYAs who participated in the baseline were available. To address attrition, the consultant also recruited seven (7) VYAs, who had completed MCB sessions but did not participate in the baseline. Since the coding that would have allowed case matching was not done, it was not possible to match individuals' pre- and post-MCB

participation. Thus, the more robust tests of significance of individual change used with Guatemala data were not used with the Rwanda data.

3. Implementation

3.1. Rwanda

In Rwanda, over 40% of the population is below the age of 14, and programs targeting VYAs are therefore uniquely positioned to impact the health and family planning choices of a large and important subpopulation within the country. According to the most recent Rwanda Demographic and Health Survey (DHS), roughly 6% of teenagers have begun childbearing, an increase from the 4% reported in 2005.

IRH partnered with Catholic Relief Services (CRS) and its partner, Caritas, to integrate MCB sessions into its President's Emergency Plan for AIDS Relief (PEPFAR)-funded *Avoiding Risk, Affirming Life* program. Implemented in partnership with Caritas diocesan offices in several districts of Rwanda, the *Avoiding Risk, Affirming Life* program worked with a broad range of faith- and community-based partners to equip youth (10-19 years old) and young adults with the values, attitudes, skills, and support to abstain from sex prior to marriage, adopt secondary abstinence, and remain faithful in marriage. The *My Changing Body* pilot reached VYAs and their parents in collaboration with CRS and Caritas in the rural area of Nyundo Diocese in Ngororero and Rutsiro Districts (Western Province) and in peri-urban communities in Butare Diocese in Huye District (Southern Province).

Pre-intervention data collection occurred about one month prior to beginning MCB. About one month after completion of the last MCB session, post-intervention data was collected in eight parishes engaged in the *Choose Life* program in these dioceses. A post-intervention-only comparison group of children was interviewed in the adjacent Kibuye Diocese, in which CRS planned to introduce MCB after it had been field-tested in Kibungo and Butare dioceses. Endline data collection in intervention and control dioceses took place during two weekends in mid-February 2010 and the first three weekends of May 2010, as youth were only available weekends during the school year.

3.1.1. Partnership and Coordination

In Rwanda, the study was conducted under the supervision of IRH/Washington with direct coordination of local IRH and CRS staff. CRS coordinated all logistics of the research and hired a local evaluation consultant. IRH provided orientation and support to the consultant and later conducted data entry and analysis. The role of Caritas in the research was to recruit study participants. Although working with Catholic implementing partners, recruitment of VYAs and parents was done outside of church settings.

3.1.2. Study Participants

The intervention took place in rural schools within walking distance from participants' homes to ensure that parents would not need to spend money on transport. Local Caritas coordinators worked with primary school teachers to identify youth from 5th and 6th grade classes and to invite their parents to meet the program facilitators to learn about MCB and participate in the evaluation.

CRS staff, guided by the evaluator, identified and invited 105 VYAs for participation in the experimental group and 30 VYAs for participation in the control group based on purposive sampling of 10-14 year old girls and boys who lived walking distance to the site where MCB sessions would be held (Table 1). Study

groups were about equally divided between boys and girls. Fifty-nine parents or adult guardians of VYAs who participated in the experimental group were purposively selected using the same criteria as for VYA selection. Although a considerable number of parents finished the course, fewer men than women participated in the evaluation.

Table 1: VYA participation in Rwanda

Groups	Number of VYA participants	
	Pre-test	Post-test
Control	30	30
Experimental	105	133
Total	135	163

The MCB facilitators lived in the same area as participants; some were teachers at the school, others worked with youth programs at the local church. All activities were conducted under the coordination of the priest of the parish. Participants were not paid for their participation, but all the adolescents were given school bags and notebooks, and provided snacks during the activity.

3.2. Guatemala

Currently, Guatemala has one of the highest teen pregnancy rates in Central America, mostly within the rural population. According to the last Guatemala DHS, 4.3% of women age 15-19, the youngest age group interviewed, reported being pregnant with their first child while the average age of all first pregnancies was 20 years old. Beyond early childbearing, HIV and AIDS also affect young people in Guatemala disproportionately. Half of all new reported cases of HIV infection in Guatemala are among young people aged 15 to 34 (2007 Guatemala National Epidemiological Center Report).

One of the key factors influencing early sexual debut among girls – and subsequent unintended pregnancy – is the lack of appropriate and accurate information. In Guatemala, discussions of sexuality are considered taboo: condemned by churches and until recently prohibited in schools. In addition, many parents, also lacking this information, fail to address sex and puberty with their children. This information vacuum leads curious adolescents to look to their peers, television and radio for information, leading to a high level of misinformation. For these reasons, there is an urgent need to address fertility awareness with VYAs before they become sexually active, to help them understand their maturing bodies and how to protect their own reproductive health.

3.2.1. Partnership and Coordination

In Guatemala, IRH collaborated with the Guatemalan Association for Family Well Being (APROFAM, in Spanish) to pilot the revised MCB curriculum. APROFAM is a Guatemalan NGO and International Planned Parenthood Federation affiliate that offers family planning services throughout the country, working with private physicians and clinics in areas with poor access to health services. APROFAM offers community health programs – including programs for adolescents – and has extensive experience conducting research. IRH and APROFAM collaborated previously to test the first edition of MCB manual in 2007.

3.2.2. Study Participants

In order to recruit adolescents and their parents, 13 educational institutions were selected to participate in the study, covering three cities in two departments: Sacatepéquez and Guatemala City. Institutions were selected based on ongoing relationships with APROFAM. These educational institutions included all-girl, all-boy and co-ed schools. A total of eight public schools and five public educational institutes or public charter schools were included. Before beginning the study, APROFAM sought approval from school districts in the two areas of the study, Sacatepéquez and Guatemala City. Once approval from the district was received, APROFAM staff visited each school and met with authorities to invite them to participate in the study. All agreed and the schools sent a letter explaining the study to parents and inviting them to a school meeting. Parental consent was obtained during this meeting. Subsequently, APROFAM staff visited classes to invite youth to participate in MCB activities and obtain their assent to participate in the assessment.

IRH and APROFAM conducted interviews and discussion groups to evaluate the MCB manual with 163 adolescents and 58 parents in the experimental group and 44 adolescents in the control group (Table 2). As in Rwanda, the study groups were equally divided by sex. A total of 58 parents also participated in the evaluation, 46 were from Guatemala City and 12 from Sacatepéquez. Despite efforts to recruit both men and women, many more mothers than fathers participated in the study.

Table 2. VYA participation in Guatemala

Groups	Number of VYA participants	
	Sacatepéquez	Guatemala
Control	22	22
Experimental	82	81
Total	104	103

4. Results

The results of the qualitative and quantitative assessment of the MCB curriculum are discussed below, by country. In both Guatemala and Rwanda, youth who participated in MCB showed increased knowledge of physical and emotional changes during puberty, were better able to reflect on the significance of those changes than adolescents who did not participate, and reported increased comfort with talking about puberty issues with their parents. Many participating VYAs, in fact, reported a sense of responsibility to share their new knowledge with peers who did not take part in the program. While understanding of puberty and related issues increased significantly among VYAs in the MCB program, VYAs in both countries had some distinguishing between sex and gender and reflecting on traditional gender roles, though MCB participants' perceptions of gender roles in both countries were slightly less rigid than those of their control-group peers.

4.1. Rwanda

The quantitative and qualitative results are presented below in separate sections. Both quantitative and qualitative data from Rwanda suggested that MCB led to important increases in VYA knowledge of fertility and puberty-related issues – most notably understanding the menstrual cycle and nocturnal ejaculation – and that MCB had more influence on attitudes toward puberty changes than attitudes related to masturbation or sexual feelings.

4.1.1. Pre-Post Test Results

The tables below present the percent of knowledge increase between baseline and endline of young people and parents who participated in MCB. We also present results from interviews with youth who did not participate in the program (control group). The areas covered in the assessment include knowledge of female and male fertility, attitudes towards sexuality and puberty, youth perceptions of the ability of their parents to advise them on puberty-related topics and the knowledge and parental knowledge, attitudes and capacity.

VYA Knowledge of female and male fertility

An accurate understanding of male and female fertility provides boys and girls a solid foundation for future reproductive health decision-making. The formative assessment conducted in 2009 during the development of the original MCB curriculum revealed that VYAs had little to no understanding of fertility, yet it is during the 10-14 year old period that VYAs will experience the first signs of fertility – menstruation and ejaculation. While children in Rwanda learn about reproductive anatomy in school between the ages of 11 and 12, this information is not always provided in an accessible or usable format. MCB provides opportunities for girls and boys to learn about male and female fertility in participatory ways that allow learning in same-sex as well as mixed groups.

Knowledge of the essential fertility information covered in MCB increased between baseline and endline among MCB participants, including understanding the menstrual cycle and nocturnal ejaculation and awareness and understanding of secretions (Table3).

Table 3. Percent change in puberty knowledge (baseline to endline) in MCB participants in Rwanda

Topics	Change (n=103)
Female fertility	
Awareness of Importance of Observing Secretions	34%
Knowledge of Functions of Secretions	47%
Understanding Menstrual Cycle	75%
Identifying Fertile Days	17%
Understanding Variability of Menstrual Cycle	34%
Male fertility	
Nocturnal Ejaculation is a Sign of Fertility	69%
Boys are Fertile Every Day	26%
Can Get a Girl Pregnant Before First Ejaculation	5%
First Ejaculation Occurs Between 10-14	23%

Knowledge of male and female fertility increased in both control and experimental groups; however knowledge gains were greater in the experimental group (Table 4).

Table 4. Percent change in fertility knowledge (baseline to endline) in experimental and control groups in Rwanda

Topics	Experimental (n=103)	Control (n=30)
Female fertility		
Awareness of importance of observing secretions	25%	11%
Knowledge of Functions of Secretions *	82%	39%
Understanding Menstrual Cycle *	74%	19%
Identifying Fertile Days *	72%	33%
Understanding Variability of Menstrual Cycle *	41%	14%
Male fertility		
Nocturnal Ejaculation is a Sign of Fertility *	74%	29%
Boys are Fertile Every Day *	49%	27%
First Ejaculation Occurs Between 10-14 Yrs *	78%	47%

* $p \leq 0.05$, Chi Square test

VYA attitudes towards sexuality and puberty

The MCB curriculum sought to encourage positive attitudes towards sexuality among VYA. The data presented in Table 5 suggests that MCB had mixed success in promoting acceptance of masturbation as healthy sexual expression during adolescence.

Table 5. Percent change in attitudes related to sexuality (baseline to endline) in experimental group in Rwanda

Topics	Change (n=103)
Romantic Feelings Are Normal	7%
Masturbation Is Not Dangerous	-4%
Masturbation Is Common Among Young People*	25%

VYA perceptions of parental knowledge, accessibility and comfort

The pilot explored the perceptions of youth related to the capacity of their parents to support them during puberty, and also assessed parents' perception of their own performance in this area. Table 6 presents the percent increase in MCB participants who perceived that their parents had sufficient knowledge to advise them, and considered them "askable" parents.

Table 6. Percent changes in VYA perceptions of their parents' capacity to give advice (baseline to endline), experimental group

Topics	Change (n=103)
Parent Has Sufficient Knowledge	36%
Parent Doesn't Scold	11%
Child Can Ask Parents About Sex	22%
Child Can Ask Parent About Sex Without Suspicion	38%
Comfortable Talking With Parent About Sex	35%
Easy To Talk with Parent About Sex	30%

Feels Welcome to Discuss Sex With Parent	11%
Discussed Crushes Last Month With Parent	15%
Discussed Body Changes Last Month With Parent	47%

A greater percentage of children perceived that their parents had sufficient knowledge to discuss puberty and felt comfortable talking with them about these topics at endline, as compared to baseline. In addition, a higher percentage of VYAs discussed crushes and body changes with their parents at endline, as compared to baseline.

To assess whether these changes were due to participation in MCB or other factors, results of youth who participated in the MCB experimental group were compared with those of the control group (Table 7). These data suggest that MCB participants were more comfortable talking with their parents about sex and were more likely to talk with their parents about romantic relationships and puberty than VYAs who did not participate in MCB, however, they did not perceive their parents to be more knowledgeable.

Table 7. Rwanda VYA perceptions of parents' capacity to give advice, control and experimental groups at endline

Topics	Experimental (n=103)	Control (n=30)
Parent Has Sufficient Knowledge	88%	85%
Parent Doesn't Scold	82%	74%
Child Can Ask Parents About Sex	85%	85%
Comfortable Talking With Parent About Sex	78%	60%
Easy To Talk with Parent About Sex	75%	52%
Embarrassed to Talk About Sex With Parent	84%	74%
Feels Welcome to Discuss Sex With Parent	82%	74%
Discussed Crushes Last Month With Parent	37%	14%
Discussed Body Changes Last Month With Parent	78%	35%

* $p \leq 0.05$, Chi Square test

Differences in knowledge and attitudes by sex and age

Data were disaggregated by age group during analysis to determine whether the youngest participants had less understanding of the topics as compared to older VYAs. There were no statistically significant differences between responses of younger versus older VYAs, affirming that MCB is appropriate for the younger cohort. Similarly, there were no statistically significant differences between the results of girls and boys.

Parental knowledge, attitudes and capacity

During the two-session *My Changing Body for Parents* curriculum, parents receive a 'lighter' version of puberty-related topics and receive more information on sexuality, gender, and parent-child communication skills. Table 8 summarizes the key indicators used to evaluate the effect of adult participation in MCB. Increases were observed in all categories –knowledge, attitudes, and practices. Parents left MCB with more accurate knowledge, and perceived themselves to be more approachable parents. The largest knowledge gains for parents were in understanding the menstrual cycle, and learning about secretions and nocturnal ejaculation. Parents also demonstrated improvements in their ability to encourage their children to discuss puberty and sex.

Table 7. Percent changes in parental knowledge, attitudes, and communication practices between baseline and endline in Rwanda, intervention group

Themes and Topics		Change (n=52)
Correct Information on Female Fertility	Awareness of Importance of Observing Secretions	34%
	Knowledge of Functions of Secretions	22%
	Understanding Menstrual Cycle	47%
	Identifying Fertile Days	10%
	Understanding Variability of Menstrual Cycle	14%
Correct Information on Male Fertility	Nocturnal Ejaculation is a Sign of Fertility	28%
	Boys are Fertile Every Day	2%
	First Ejaculation Occurs Between 10-14 Years	30%
Sexuality Attitudes	Romantic Feelings Are Normal	7%
	Masturbation Is Not Dangerous	17%
	Masturbation Is Common Among Young People	4%
Perception of Being an 'Askable Parent'	Parent Has Sufficient Knowledge	43%
	Parent Doesn't Scold Child	43%
	Child Can Ask About Sex Without Parent Getting Suspicious	24%
	Child Can Ask Parent About Sex	26%
	Parent Comfortable Talking With Child About Sex	18%
	Easy To Talk with Child About Sex	40%
	Parent Embarrassed to Talk About Sex	75%
	Child Feels Welcome to Discuss Sex	43%
Parent-Child Communication	Discussed Crushes Last Month With Child	44%
	Discussed Body Changes Last Month With Child	48%
Comfort With Changes	Feel Comfortable With My Child's Changes During Puberty	27%

In addition, the knowledge, attitudes, and practices of fathers and mothers after participation in MCB were compared. Few differences were observed, with the exception that women were less confident than men in their ability to encourage communication with their children.

4.1.2. Qualitative Results

The results of the discussion groups held with boys and girls to collect in-depth, qualitative information on their perceptions of puberty changes and other topics explored in the MCB curriculum are presented below.

VYA understanding of puberty changes

While MCB participants were able to articulate physical changes during puberty, the descriptions of puberty changes shared by youth in the control group were more limited. With regards to male puberty changes, MCB

“...As a boy or girl grows, girls get to the age where they have their menstrual period and boys get to the age where they start ejaculating at night.”

– VYA in experimental group

“We feel we have a different understanding about the changes to the body... before the curriculum I did not know that a woman has a menstrual period, for example. Now I know!

- Male VYA in experimental group

participants most commonly mentioned deepening of the voice, nocturnal emissions and the commencement of a man's ability to get a woman pregnant. Several participants also mentioned parts of the male anatomy, such as the penis, testicles, scrotum and epididymis. Regarding women, MCB participants often mentioned breast development, ovulation, menarche, and the ability to conceive, give birth and breastfeed. Many of the groups also noted sexual anatomy and characteristics specific to females, such as the vagina and vaginal secretions, the clitoris and the vulva. In comparison, control group participants did not volunteer substantive discussion about changes that occur during adolescence.

"The differences [between men and women] have to do with the body and the others are about responsibilities."

– VYA in experimental group

"...There are people younger than me who have a big body and others say their bodies aren't proportional to their age! I say to them that people do not grow the same way and that it's not necessary that you age proportionately to your size. One can be small-sized and older or bigger-sized and younger. It all depends on your fertility!"

– VYA in experimental group

MCB participants openly discussed physical aspects of girls' and boys' bodies related to fertility. Comparatively, control group participants did not freely discuss these topics, suggesting that they are either unaware of male and female organs related to fertility and the developmental changes that occur in adolescence, or that they do not feel comfortable talking about these topics in the presence of their peers.

The comments of MCB participants reveal that they also reflected upon the significance of developmental changes. As one MCB participant explained, "*Periods symbolize a step towards adult life. A girl who has started her period is no longer a child.*" Given that control group participants were reluctant to discuss developmental changes, it is not surprising that they did not give voice to reflections on social and/or personal meanings of developmental changes during adolescence.

VYA opinions on curriculum

Youth who participated in MCB were also asked what they had learned from their participation in the program. Most groups reported that they had learned new information, and specifically mentioned male and/or female fertility. Many noted that before MCB, they had never heard of or discussed developmental changes, but that through the program, they were able to learn about these changes. Indeed, one participant commented, "*The changes that happen to adolescents are a secret to our peers/classmates.*" This participant echoed the sentiments expressed by numerous MCB participants: that most peers lack the knowledge and fertility awareness that one gains through participation in MCB. Participants' comments suggest that lack of information is a major barrier to discussing the topic of fertility with peers; social taboos against discussing such information were never mentioned. MCB presented youth with new information to share, and as will be discussed later in this report, many participants felt responsible for sharing this information with their friends who did not participate in the program.

MCB participants were forthcoming in discussing the new knowledge they had gained. Specifically, with regards to male fertility, many participants said that before participating in MCB they had not known about nocturnal emissions and had not been aware that once a boy starts ejaculating, he is capable of impregnating a girl. Participants mentioned learning about a broad range of topics related to female fertility. For example, several noted learning about various facets of the menstrual cycle and hygiene, including the need for careful washing during menstruation and that women develop cervical secretions during the period of ovulation.

Shifting VYA perceptions of gender stereotypes

Across discussions in both control and experimental groups, youth had difficulty distinguishing between sex and gender. Specifically, when participants were asked why there are differences between males and females in terms of their bodies, feelings, roles and responsibilities, youth most often responded that there are differences because men and women are different sexes, rather than mentioning social norms. Overall, given the difficulty participants demonstrated articulating the reasons for differences between men and women, it seems probable that young people have not often reflected upon or challenged traditional gender roles, even though such reflections are integrated into MCB sessions.⁴ After further discussion and prompting, participants in many of the MCB groups and one of the control groups discussed sex and gender differences in very general ways, that is, in relation to body differences and women's and men's responsibilities. The MCB curriculum encourages youth to reflect on widely held gender scripts, from the perspective of their parents, the public, and peers. Perceived gender scripts for men most often centered on men's responsibilities as providers. Control group participants also mentioned their desire for men to be more supportive of the family's needs.

While control group participants perceived gender scripts as more limited, MCB participants discussed a more expansive view of masculinity, including aspects such as showing care and respect for their wives and children. A few of the MCB participant groups also discussed the expectation that men dominate others physically. The discussion suggested that such violence was a common or unsurprising occurrence, and participants neither condemned nor condoned this behavior.

In both the control and experimental groups, adult, peer and public expectations for adolescent males focused on following parental advice and avoiding temptations or "bad behaviors," particularly sex. MCB group participants also noted that others expect them to behave well by focusing on future goals.

Across all groups, participants perceived women's role as focused primarily within the home, as homemaker and child caretaker. Traditional women's roles included preparing food, looking after children, working in the fields, collecting firewood, and doing laundry. A few MCB participant groups also discussed perceptions of women as subservient to men, especially in terms of decision-making and emotions. Some participants seemed uncomfortable with the imbalance of power within the household. As one VYA in the experimental group observed, "*...the wife must feel/experience her love for her husband; but he doesn't appreciate that love at its real value.*"

MCB group participants mentioned that their peers expect the behavior of girls and boys to change as they enter puberty. However, control group participants did not mention any such expectations. Given that control group participants were largely unaware of adolescent developmental changes, it seems likely that they are also unaware of behavioral changes expected of adolescent-age youth.

"Boys and girls who enter adolescence change a lot as a result of the changes to their body; they must behave themselves because it is a period of risk as well. They can contract illnesses or [experience] other consequences."

—VYA in experimental group

⁴ It may also be that facilitators either did not focus enough on or understand gender as well as they should have. Indeed, comparing Guatemala and Rwanda MCB results, gender awareness is much higher in Guatemalan youth than in Rwandan youth. How MCB was taught – the fidelity of MCB implementation – may be influencing these results.

Discussion participants described several gender scripts applicable to both men and women. All groups said that working together to help the family was a shared role for men and women. In addition, experimental groups noted that men and women are both expected to love one another and collaborate to educate their children. These comments demonstrate that youth across discussion groups believe both men and women offer important contributions to the family and household.

In all discussion groups, the perceived “reward” for following prescribed gender scripts was a chance for a successful future. MCB participants also noted that those youth who follow gender scripts are “rewarded” by becoming role models for their peers. The role modeling “reward” is consistent with remarks of MCB youth expressing interest and ability to be peer leaders, suggesting the curriculum bestows a wide-ranging sense of empowerment to its participants.

MCB participants discussed “consequences” for not following prescribed gender scripts. They reported that their parents would scold or punish them, and public reactions could range from shaming the individual to blaming the family for the youth’s aberrant behavior. The consequences discussed included physical harm or illness. As one VYA from the experimental group noted, “...if a girl misbehaves, everywhere she goes people throw stones, yelling that she behaves badly.” In comparison, control groups focused largely on the potential *consequences* of having sexual relations, such as STIs.

Many MCB group participants reported that, based upon their training with the MCB curriculum, they felt empowered to provide advice to their peers on how to behave. Youth who had completed MCB considered themselves savvy in understanding what were accepted gender scripts, and as such, expressed a feeling of empowerment to share this knowledge with others.

“If you behave well, [the public] will ask you to give advice to those who behave badly.”

– VYA in experimental group

“...Because you have learned about it, you should teach [your peers] so that they know how to manage themselves when faced with temptations...those who have participated in MCB must explain to others how to behave.”

– VYA in experimental group

“The husband also knows how to do [housework] because when the wife is sick, [he] takes care of running the home.”

-VYA in control group

Across groups, only a few participants discussed ways in which they could change traditional gender scripts. MCB participants suggested ways in which they themselves could bring about change through role modeling and advice-giving. Control group participants’ comments indicated less confidence that they could bring about change. Rather, control group participants noted instances where change would be *permissible* or suggested ways in which *others* might be able to affect change.

Who influences how VYAs should act

Participants were asked to describe how others expect them to behave, in order to gauge who may be influencing their gender-related attitudes. MCB participants indicated that their parents influence their behavior and equated good behavior with following the advice of their parents. In comparison, while control group participants agreed that parents influence their behavior, these participants did not believe parents always provided enough or positive guidance to their children.

Across all groups, friends were described as influential and trusted sources of advice for VYAs. This finding reaffirms MCB's approach to empower youth to engage and share information with their peers.

Across discussion groups, participants reported a range of people with whom they feel comfortable and who they would be willing to approach with questions about changes to their bodies and adolescence, including parents, teachers and peers. Trust was the most important factor youth cited for identifying a confidante. As a VYA from the control group stated, *"I can confide in all those with whom I have trust: my parents...or my teacher, other students...I have trust in them and I am comfortable with them."*

In addition to trust, one MCB participant (experimental group) noted that knowledge and experience were important factors to consider when identifying someone who could answer their questions. As she stated, *"girls often talk with their mothers...because mother went through the same experiences, the same period that I am entering."*

Participants were also asked whom they would *not* trust as a source for information on fertility and puberty. Across discussion groups, participants expressed hesitation to talk with their fathers about these topics. The common perception was that fathers lack time and interest to offer counsel on topics such as fertility, growth and development.

Many participants noted a range of other individuals in whom they place less trust, such as non-family members, younger children and those whose advice they believe may lead them astray.

Effects of participating in MCB

MCB participants expressed enthusiasm for the fertility knowledge they gained through the curriculum, and indicated this new knowledge has changed the way they communicate about fertility-related topics with parents and peers. Indeed, many MCB participants' comments portray a sense of empowerment to share new information with their parents. And as noted previously, participants report that with their new knowledge, they feel responsible for sharing information with their peers.

Many MCB participants were initially hesitant to talk about instances in which they saw their peers tease someone for the way they looked or because some peers were developing physically at rates different than other peers. This reluctance could indicate that MCB youth believe this sort of teasing is not socially acceptable; or that they refrained from relating these stories in a bid to be viewed more favorably by their peers or the evaluators.

When MCB participants did discuss seeing peers tease someone, many reported that they intervened and told their peers that bodies naturally change at their own pace. These comments suggest that MCB youth

"A father is always occupied with his activities and does not like to hear this type of question...father is not there most of the time."

- VYA in experimental group

"There are...some parents who spend their day in the bar drinking...[the children] are the last thing they worry about...young girls who are not guided by their parents run the risk of getting involved with sugar daddies, taking money or other gifts, with the consequence of getting diseases through such relationships. And the parents blame [the girl] even while they were not taking care of her."

-VYA in control group

"[Conversations with my parents] have changed because before they talked to us about things we knew nothing about, but for the moment we are able to explain some questions to them...I explained to them that my father's spermatozoid encountered my mother's ovum, they made an egg that grew and I was born!"

- VYA in experimental Group

are able to accept developmental differences in their peers and that some will intervene when teasing occurs. This commitment to share information and to stand up for others is consistent with other comments about taking responsibility to educate and give advice to their peers.

4.2. Guatemala

The results of the MCB assessment in Guatemala were similar in many ways to the Rwanda results; however participants in Guatemala were more cognizant of gender differences and were less rigid in their perceptions of gender roles.

4.2.1. Pre-Post Test Results

The section presents the results of the pre-post test administered to VYAs and their parents before and after participation in MCB. Results from the control group are also presented here. The pre-post test included questions to assess fertility and puberty knowledge, attitudes towards sexuality and puberty and the ability of parents to support their children during puberty, from the perspective of both parents and children.

VYA knowledge of female and male fertility

Pre- and post-test results from the experimental group show a significant increase in knowledge regarding female fertility across almost all topics, including function of secretions (56%), understanding the menstrual cycle (67%) and identifying fertile days (62%) (Table 8). The lowest increase in knowledge was on the question regarding the possibility of pregnancy before the first menstruation.

Table 8. Percent change in fertility knowledge between baseline and endline, MCB participants

Topics	Change (n=81)
Female fertility	
Awareness of Importance of Observing Secretions	56%
Knowledge of Functions of Secretions	68%
Understanding Menstrual Cycle	67%
Identifying Fertile Days	62%
Understanding Variability of Menstrual Cycle	33%
Pregnancy not Possible Before First Menstruation	15%

Participants in MCB showed greater knowledge of female fertility at endline than their peers in the control group (Table 9). Knowledge of male fertility increased substantially between pre-and post-tests among MCB participants; and participants were more knowledgeable than youth in the control group. Male fertility topics included knowing that males are fertile every day and that the first ejaculation occurs between 10-14 years of age.

Table 9. Knowledge of fertility among experimental and control group participants in Guatemala, endline

Topics	Experiment (n=81)	Control (n=22)
Female fertility		
Awareness of Importance of Observing Secretions	67%	10%
Identifying Fertile Days	85%	19%
Understanding Variability of Menstrual Cycle	54%	5%
Pregnancy not Possible Before First Menstruation	83%	52%

VYA attitudes towards sexuality and puberty

At endline, 90% of VYAs in the experimental group considered romantic feelings during puberty normal, as compared to 65% at baseline. Furthermore, 60% thought masturbation was common among young people at endline compared to only 15% at baseline. Of concern, however, is the finding that more participants in both groups thought masturbation was dangerous at endline; and a greater percentage of MCB participants than control group members considered masturbation dangerous.

Participants in the experimental group were more comfortable with puberty changes (32%) than the control group (19%).

Parental knowledge, accessibility and comfort

VYA assessment of the level of puberty and sexuality knowledge their parents hold and their perception of their parents' accessibility will ultimately determine whether they are comfortable asking them for advice on puberty changes and other related topics. The 2nd Edition of the MCB curriculum includes a training component for parents to improve their ability to communicate with their children about puberty and sexuality. As Table 10 shows, VYA perceptions about parent knowledge, accessibility and attitudes increased in every category from pre- to post-test, although only moderately. The only notable change was feeling they were able to ask their parent about sex without suspicion.

Table 10. Percent change in Guatemala VYA perceptions of parents' capacity to give advice, experimental group

Topics	Increase (n=50)
Parent Has Sufficient Knowledge	6%
Parent Doesn't Scold	10%
Child Can Ask Parents About Sex	4%
Child Can Ask Parent About Sex Without Suspicion	18%
Comfortable Talking With Parent About Sex	3%
Easy To Talk with Parent About Sex	7%
Embarrassed to Talk About Sex With Parent	4%
Feels Welcome to Discuss Sex With Parent	10%

The perceptions of youth about the capacity of their parents to provide advice and information on puberty and sexuality were assessed at baseline and endline in both control and experimental groups. The control group (91%) was more likely to believe that their parents had sufficient knowledge than the experimental group (69%). On the surface this finding may seem surprising; however, this difference may be due to the fact that participants in MCB were more knowledgeable and more aware of the gaps in their parents’ knowledge. Of note is the finding that, perhaps not surprisingly, fewer than half of the youth in both study groups judged that talking to their parents these topics is “easy”.

Table 11. Guatemala VYA perceptions of parents’ capacity, experimental and control groups at endline

Topics	Groups	
	Experimental (n=81)	Control (n=22)
Parent Has Sufficient Knowledge	69%	91%
Parent Doesn’t Scold	82%	81%
Can Ask Parent About Sex	77%	76%
Child Can Ask Parent About Sex Without Suspicion	84%	86%
Comfortable Talking With Parent About Sex	60%	62%
Easy To Talk with Parent About Sex	44%	48%
Embarrassed to Talk About Sex With Parent	48%	52%
Feels Welcome to Discuss Sex With Parent	82%	81%

The evaluation included two questions regarding communication between parents and VYAs in the month previous to the evaluation to gauge changes in behaviors. Participants were asked whether they had discussed ‘crushes’ and body changes with their parents. There was a modest increase in communication among MCB participants and their parents; an additional 8% of the youth reported that they discussed crushes with their parents and 11% stated that they had discussed body changes. The youth who had participated in MCB were more likely to have discussed these topics with their parents than those in the control group.

Differences in knowledge and attitudes by VYA age

Managers considering implementing MCB are sometimes concerned about the cognitive ability of 10-11 year olds to understand the information covered in the curriculum. Age-segmented analysis (10-11 year olds, 12-14 year olds) was conducted to determine any differences between the groups. Although the sample size is too small to permit definitive conclusions; the data do not suggest differences in the two groups.

Differences in knowledge and attitudes by VYA sex

The evaluation did reveal, however, some differences between boys and girls, although the sample size was small. On average girls were slightly more knowledgeable than boys about the contents of the MCB curriculum, including the topics related to male fertility. On the other hand, boys were more likely to believe that romantic feelings are normal, and that masturbation is common and not harmful. In addition, girls generally felt more comfortable talking to their parents about puberty-related issues than boys.

However, more boys thought parents had sufficient knowledge (73%) than did girls (64%); boys were also slightly more likely to discuss crushes.

Parental knowledge, attitudes and capacity

Pre-post test results with parents of VYAs from the experimental group show that parents who participated in MCB improved their understanding of female and male fertility and had attitudes more conducive to parent-child communication. The endline results show an increase in almost all areas covered by the post-test. The most notable increase in knowledge occurred in fertility and sexuality attitudes, with only a small increase in the topics related to being an “askable” parent.

Table 12. Percent changes in Knowledge, Attitudes, and Communication among Guatemalan Parents Who Completed MCB

Themes and Topics		Change (n=52)
Correct Information on Female Fertility	Awareness of Importance of Observing Secretions	48%
	Knowledge of Functions of Secretions	69%
	Understanding Menstrual Cycle	74%
	Identifying Fertile Days	53%
	Understanding Variability of Menstrual Cycle	37%
	Pregnancy not Possible Before First Menstruation	24%
Correct Information On Male Fertility	Nocturnal Ejaculation is a Sign of Fertility	38%
	Boys are Fertile Every Day	26%
	Can Get a Girl Pregnant Before First Ejaculation	39%
	First Ejaculation Occurs Between 10-14 Years	37%
Sexuality Attitudes	Romantic Feelings Are Normal	27%
	Masturbation Is Not Dangerous	-14%
	Masturbation Is Common Among Young People	39%
Perception of Being an ‘Askable Parent’	Parent Has Sufficient Knowledge	31%
	Parent Doesn’t Scold Child	4%
	Child Can Ask About Sex Without Parent Getting Suspicious	9%
	Child Can Ask Parent About Sex	2%
	Parent Comfortable Talking With Child About Sex	7%
	Easy To Talk with Child About Sex	5%
	Parent Embarrassed to Talk About Sex	5%
	Child Feels Welcome to Discuss Sex	4%
Parent- Child Communication	Discussed Crushes Last Month With Child	16%
	Discussed Body Changes Last Month With Child	29%
Comfort With Changes	Feel Comfortable With My Child’s Changes During Puberty	27%

4.2.2. Group Discussion Results

Comparison of the results of the discussions held with boys and girls participating in MCB and those in the control group provided useful insight into understanding of puberty changes and gender norms, social influences and the potential effect of MCB on youth in Guatemala. Although the qualitative results on their

own cannot be taken as evidence of the effectiveness of the curriculum, they do provide insight into what young people think about the value of their participation in MCB. They also illustrate the ways participatory activities such as those included in MCB can stimulate reflection and behavior change, especially as related to gender norms

VYA knowledge of puberty changes

During the body mapping exercise, VYAs discussed differences between girls and boys and women and men. VYAs who participated in MCB described the biological, physical, social and emotional characteristics of boys and girls in more depth than their counterparts in the control group. Moreover, they did so in ways that suggested they had greater experience reflecting on the intersections between gender and puberty.

VYA understanding of gender norms

VYAs in both the experimental and control groups talked similarly about the expected gender scripts that they should follow as adults. VYAs in both groups used gender stereotypes (men as strong, jealous, 'machistas'; women as sensitive, flirty, kind, untrustworthy). However, VYAs who completed MCB were somewhat less likely to employ gender stereotypes than control group participants.

In general, VYAs in both groups held traditional perceptions of gender roles, with women's responsibilities defined in terms of caring for their husbands and children and men's responsibilities defined in economic terms (e.g., breadwinners versus homemakers). Nevertheless, VYAs in the experimental group demonstrated increased openness to non-traditional gender roles as compared to the control group. VYAs in the experimental group were also more likely to discuss women's roles outside the household than those in the control group.

There was a distinct difference in the way that VYAs in control and experimental groups discussed men's roles. The experimental group tended to focus on men's *responsibilities*, while the control group emphasized ways to demonstrate masculinity, such as early sexual debut and acting 'manly.' VYAs in the experimental group demonstrated greater understanding that gender roles can shift over time and recognized generational and social barriers to change. Both groups mentioned the challenges of shifting to more gender-equitable roles, including social exclusion. For example, VYA mentioned that men with "*refined*" mannerisms – such as being extremely polite in a perceived effeminate way – experience social rejection and exclusion.

Who influences how VYAs should act

Girls and boys named their parents and immediate family members – including brothers, sisters, aunts, and uncles – as

"Women don't like 'refined' men because they think they are gay... they are perceived to be wrong, because they are not the same as [other men], therefore, they [are] rejected from society"

–VYA in experimental group

"[Friends] expect that we dress and do what we see on television, and if you don't do it they will make fun of you, but I think that we should all be how best we feel with ourselves, and not what others want us to be."

–VYA in experimental group

"What I heard from my parents is that girls must learn to do house work like wash and iron clothes...on the other hand, men must work. But I don't think that's right, because both (men and women) have the same responsibilities."

-VYA in experimental group

"I won't talk to my grandparents. They scold me all the time... I respect my parents and my uncles very much, but they sometimes are very angry...I don't tell my friends about my changes because they are young, and gossip about everything..."

-VYA in experimental group

individuals who influence their perceptions of gender roles. The strong influence of peers on their behavior was also identified: VYAs in the experimental group emphasized that they do not necessarily agree with their friends' views and do not always conform to them.

When asked whom they turn to for information and support, VYAs in the experimental group mentioned friends, sisters, brothers, aunts and uncles. Some mentioned God. The control group mentioned fewer advice-givers, mostly older siblings and parents. Both groups mentioned impediments to discussing gender and sexuality, such as fear of being reprimanded or misunderstood, religious beliefs and not feeling like people would listen to them. Both experimental and control group participants were hesitant to openly discuss their own developmental changes with classmates and friends, for fear they would betray the participants' confidence.

Effects of participating in MCB

The boys and girls who participated in MCB valued the experience; they reflected on how their attitudes had changed as a result of learning and coming to terms with puberty changes. As one young girl said, *"...I can't believe that I thought what was going on with my body was like a curse, because I didn't like menstruation, but now I know it is normal..."*

Participants in MCB also remarked that the quality of communication with their parents had improved. They expressed increased confidence to discuss about puberty and other topics, and more trust in their parents.

"...We have explained to other girls that menstruation is not something that is bad, that is a normal process that all women go through...girls that don't know this information about their bodies are in danger."

—VYAs in experimental Group

Boys and girls who had completed MCB said that they intended to share the new information they had learned with their friends. They explained that this information addressed many misconceptions and that they found their new knowledge empowering. In contrast, the control group VYAs did not talk with their peers about their body changes and felt a need to conform to group pressure to tease their friends even though they knew it was wrong. As one control group participant said, *"...we feel bad, because these are things that happen to everyone, but we can't defend them because then they will make fun of us, too..."*

5. Conclusions

The results of the *My Changing Body Manual 2nd Edition* evaluation suggest that participation in this program significantly increases the knowledge of 10-14 year old girls and boys related to puberty and has a positive influence on young people's confidence to act on this knowledge – by discussing puberty-related issues with their parents, sharing information about puberty with peers or intervening when peers are teased about developmental changes – and increases their awareness of gender roles and norms. For parents participating in the two MCB sessions, there was also a significant increase in puberty knowledge, including fertility, and slight improvements in their ability to discuss topics related to puberty and romantic relationships with their children.

Overall, youth who participated in MCB in both countries were enthusiastic about their increased understanding of their fertility. MCB participants were better able to articulate physical and emotional change during puberty, and to reflect on the significance of these changes than non-participants.

Participants expressed a sense of empowerment to share this new information they received with their parents and peers. Some participants even reported a sense of responsibility to dispel myths about puberty held by their peers. As a result of increased knowledge about puberty, youth reported increased comfort with developmental changes and greater confidence intervening in situations of teasing and bullying.

Although the qualitative data showed gender awareness among youth was higher in Guatemala than Rwanda, in general, youth in both countries had difficulties distinguishing between sex and gender and reflecting on social norms and traditional gender roles. However, MCB participants' perceptions of gender scripts in both countries were less rigid than those in the control group. In Guatemala, participants were more aware of gender differences and open to the possibility of less traditional gender norms.

The qualitative data confirms the results of MCB formative research which suggested that young adolescents confide mostly in their parents and peers and to a lesser extent other family members and teachers regarding issues related to puberty. Youth reach out to those they trust and perceive to be knowledgeable and experienced. Interestingly, a number of youth in Rwanda and one boy in Guatemala stated that they did not feel comfortable talking with their fathers about puberty because they lacked time and interest to offer advice on these topics. Overall, MCB participants were more likely to talk with their parents about puberty and romantic relationship than control group members, although they were still somewhat uncomfortable.

Overall, parents who participated in MCB showed improvements in knowledge, attitudes and self-reported communication with their children. The greatest gain in parents' knowledge was in relation to female fertility, specifically understanding the menstrual cycle and the function of secretions. Parents' self-reported confidence in their knowledge and ability to discuss puberty-related issues with their children increased in both countries, but was greater in Guatemala. Parents judged their knowledge and accessibility more favorably than their children.

In conclusion, these results indicate that incorporating gender and sexuality topics in a puberty education curriculum is an effective way to improve knowledge, increase gender awareness, and improve parent-child communication. MCB can help youth and parents become more self-confident, practice better health habits, and gain a more positive self-image, all of which have the potential to contribute to their future well-being.

6. Dissemination of Study Results

The MCB curriculum and the evaluation of its implementation have been widely disseminated by IRH on its website, through e-blasts and at domestic and international conferences, including the 2011 International Family Planning Conference in Dakar, Senegal. There, the MCB CDs were one of the most popular IRH exhibit materials. In addition to dissemination efforts at the central level, local partners in



Boys participating in a *My Changing Body* session in Guatemala. Photo Credit: Rebecka Lundgren, IRH

Guatemala and Rwanda have disseminated the curriculum and efforts to integrate it into existing youth programs.

6.1. Guatemala

In late November of 2011, APROFAM and IRH conducted a two-day training-of-trainers for 38 Guatemalan educators, psychologists and trainers from youth-serving organizations. Within the context of significant national interest in quality programs to address the needs of youth, this training provided new content and methodology to an enthusiastic group of participants who plan to integrate MCB into their diverse sites. Each participant received a CD of the MCB manual and had the opportunity to practice facilitating the activities. Participants also determined next steps for integrating MCB into their programs. As one participant said:

“It’s innovative, it’s a tool for youth to know about this topic and have more respect and justice in their lives... It’s a simple resource to bring to the community, because with a short and basic training we can easily reach youth and help them develop healthy and responsible sexuality.”

In addition to preparing participants to plan and conduct the educational sessions of this curriculum, the training fostered local collaboration and support between youth-serving organizations.

6.2. Rwanda

In Rwanda, the Ministry of Health and its partners are working to bridge the gaps in reproductive health needs among young people and are collaborating to develop interventions for VYAs. It is in this context that the Ministry of Health, with IRH and CRS, organized a meeting for partners to exchange ideas on interventions to serve the SRH needs of VYAs. Under the Coordination of the Ministry of Health’s Maternal and Child Health/Adolescent SRH Section, 54 partners working in adolescent SRH met in September 2011 to: 1) share tested approaches and results in adolescent SRH; and 2) discuss the way forward for improving adolescent SRH. During this meeting, IRH and CRS shared the results of the evaluation of MCB tested in Rwanda with Caritas.

The My Changing Body Manual 2nd Edition is available to download at http://www.irh.org/sites/default/files/My_Changing_Body-Eng_FEB_2012.pdf

Appendices

Appendix A: Group Discussion Guide

Very Young Youth and MCB Study
Qualitative Evaluation Instrument
Version of 9 March 2009

READ THE FOLLOWING GREETING BEFORE BEGINNING THE ACTIVITY.

Hello, my name is _____. I work for the Institute for Reproductive Health. I would like to invite you to do some activities and to talk about the activities for about one and one-half hours. This is not a test; we want to find out your thoughts and feelings about being young people on your way to becoming adults, some of the things that you talked about as you did the MCB activities in the past months. During these activities and discussions, you do not have to talk if you don't want to. You can refuse to answer any questions you don't want to answer. I will be writing down some of the things you say, so that we can summarize what everyone is saying, but no one will know what you said in particular. Do you have any questions?

Verbal consent: Do you agree to participate in the activities and discussions?

1- GIRLS! BOYS! GENDER! CARD GAME (35 minutes)

This activity helps assess how participants perceive differences between girls and boys (eg, distinguishing between biological, gender, and other differences), and their awareness that adults can expect certain roles of boys and girls as they enter and move through puberty.

Materials needed:

- Blank index cards
- Crayons or markers
- Big sheets of paper
- Tape or glue

Instructions:

Divide into X groups (mixed, male only, female only). Each group gets a pile of blank cards and a marker.

NOTE: This could also be done in one group, if number of participants is not too large.

Explain that we are going to play a card game but first you will need to make the cards. In the next five minutes, please make a list of all the ways girls are different from boys. Each idea should have its own card.

Once done, ask the group to make X copies of each card so that all groups can get a similar set of cards.

Each group then gets a complete set of cards and are asked to look at the cards and make piles of cards that have words/ideas that seem to be alike/similar.

Once card piles are created, ask the group to give them a name/label for each pile.

After 10 minutes, ask each group to tape their sorted card groups on sheets of paper and label the different groups.

Ask participants to circulate among different groups so they can see how other groups made their groupings.

Questions for discussion:

1-Was it easy or difficult to organize the cards the way you did? What was difficult? Easy? Did you have any cards that did not seem to fit anywhere? Which were they and what did you do with them?

2-As you get older, have you noticed how your friends/ cousins/classmates expect you or your friends to behave in certain ways? What do they expect of girls? Of boys? How does this make you and your friend feel? Why?

3-As you get older, have you noticed how your parents and other adults expect you or your friends to behave in certain ways? What do they expect of girls? Of boys? How does this make you and your friends feel? Why?

4-Since you have finished with MCB: Do you think differently of how boys and girls are similar and different from each other? Do you think differently about how adults expect girls and boys to behave? Please explain.

2-ACTIVITY: MY UNIVERSE (30 minutes)

This activity helps assess how clearly/consciously participants recognize the changing parent-adolescent relationship during puberty and their ability and level of confidence to discuss topics related to puberty with parents, peers, and others.

Materials needed

- Local materials or flip chart paper,
- Colored paper cut in different sizes of shapes,
- Crayons, markers or pens,
- Glue or tape

Instructions

Explain that this next activity is an individual activity and everyone is going to produce a map of his or her personal universe.

Ask participants to close their eyes and think for a minute about the important people in their lives (for example, parents, family, friends, neighbors, teachers, pastors, etc.).

Distribute the materials and ask each participant to make his or her universe, showing all the important people in their lives.

Explain:

Each participant places his or herself at the center of the universe.

Give each person in the universe a shape and size (the most important people have the largest sizes) and cut out a shape for each person.

Think about how close each person is to you, and how easy they are to talk to, what kinds of things you talk about.

Place the people who are closest to you, and easiest to talk to, close to you on the diagram.

After about 10 minutes of drawing, pasting or gluing shapes on the paper, ask each participant to explain their universe to the group.

Questions for discussion

1-Which of the people in your universe can you talk to about your changing body, or romantic feelings, or dealing with sexual pressures when you are not ready? Why do you feel comfortable talking with them? (PROBE for each of the above three situations.)

2-Which of the people in your universe can you NOT talk to about such issues? Why?

3-Which of the topics we just discussed are easier to discuss? Why?

4-What of the topics we just discussed are difficult or impossible to discuss? Why?

5-Think about your parents in your universe before and after going through MCB . Has MCB changed the way you talk with your parents? Has it changed the things you can discuss? In what ways?

BREAK FOR SNACKS AND DRINKS AND BALL TOSS! (30 min)

3-ACTIVITY: LIVING WITH OUR CHANGING BODIES (30 min)

This activity helps assess how participants feel are about their body during puberty, and their reported actions /positive behaviors towards developmental differences of friends.

Materials

- Series of five pictures of adolescent girls in different stages of physical development, shapes, and sizes – pictures pasted on a giant piece of paper with space to write words below each picture
- Series of five pictures of adolescent boys in different stages of physical development, shapes, and sizes – pictures pasted on a giant piece of paper, with space to write below each picture.
- Crayons or markers

Instructions

Explain that we are going to do one last activity.

Divide participants into X groups (female only, male only)

Distribute the pictures: Girl groups get the girl series and boy groups get the boy series.

Ask each group to spend 10 minutes and brainstorm a list of words that describe the person in each picture and write words underneath the picture.

Questions for discussion

(The two discussions occur simultaneously, with two different facilitators.)

GIRLS:

1-Which girl in the pictures seems most like you? Why? Which girl would you most like to be? Why?

2-We all grow up at different speeds. Do you talk about differences between girls in your class/club/neighborhood? What do you talk about?

3-Can you think of a time when one of your close friends ever teased someone in a way that was hurtful? What did you do? Would you react differently now that you have done MCB? How?

4-You have done MCB now. Do you think of yourself differently than before? How?

BOYS:

1-Which boy in the picture seems most like you? Why? Which boy would you most like to be? Why?

2-We all grow up at different speeds. Do you talk about differences between boys in your class/club/neighborhood? What do you talk about?

3-Can you think of a time when one of your close friends ever teased someone in a way that was hurtful? What did you do then? Would you react differently now that you have done MCB? How?

4-You have done MCB now. Do you think of yourself differently than before? How?

Discussion: Take notes or record the discussion of each group. After the session, review your notes and the recording and fill out the table below. *NOTE: If the group is mixed, be sure to identify the responses of the girls and the boys.*

Group A: BOYS___ GIRLS___ (Note how many boys and girls in each group)

Why do you think these differences exist? What do you think of these differences?	
Do you think these differences always exist or can they change? What can you do to change them?	
Do your parents expect boys and girls your age to behave the same or differently? In what ways do adults expect them to behave differently?	
Does this change as boys and girls get older?	
¿Do you agree with this? Why/why not?	
What do you think would happen if boys were to act differently from what their parents expect?	
How would people react if girls acted differently from what is expected?	
Do kids your age have certain expectations about how boys and girls should behave? For example, how they should dress, act, talk or look?	
How do boys think other boys should act? Other girls?	
What about the expectations of girls? How do girls think boys should act? Other girls?	
Do you agree with this? Why/why not?	
What happens if a boy behaves differently than what is expected for boys?	

¿ What happens if a girl behaves differently?	
Since you participated in the My Changing Body workshops, do you have any different ideas about how boys and girls should be (dress, act, talk or look)?	

Group B: BOYS___ GIRLS___ (Note how many boys and girls in each group)

Discussion: Take note or record the discussion of each group. After the session, review your notes and the recording and fill out the table below. *NOTE: If the group is mixed, be sure to identify the responses of the girls and the boys.*

Why do you think these differences exist? What do you think of these differences?	
Do you think these differences always exist or can they change? What can you do to change them?	
Do your parents expect boys and girls your age to behave the same or differently? In what ways do adults expect them to behave differently?	
Does this change as boys and girls get older?	
¿Do you agree with this? Why/why not?	
What do you think would happen if boys were to act differently from what their parents expect?	
How would people react if girls acted differently from what is expected?	
Do kids your age have certain expectations about how boys and girls should behave? For example, how they should dress, act, talk or look?	
How do boys think other boys should act? Other girls?	
What about the expectations of girls? How do girls think boys should act? Other girls?	
Do you agree with this? Why/why not?	
What happens if a boy behaves differently than what is expected for boys?	
¿ What happens if a girl behaves differently?	
Since you participated in the My Changing Body workshops, do you have any different ideas about how boys and girls should be (dress, act, talk or look)?	

2. My universe

Identify the maps with the sex and age of each participant. Take a photo of each.

Discussion: Take notes or tape the discussion of each group. After the session review the tape and your notes and fill out the table below.

Note: if the group is mixed, be sure to identify the responses of the boys and the girls.

Group A: BOYS___ GIRLS___ (Note how many boys and girls are in each group)

Sex <i>Indicate Boy (B) or Girl (G)</i>	Individuals with whom you feel comfortable talking about changes in your body and feelings during adolescence or about relationships between boys and girls. (Mark with an X in mother or father column or specify another person in the "other" column)			Why do you feel comfortable talking with these people? (Record the answers word for word)
	Mother	Father	Other (specify)	

Sex <i>Indicate Boy (B) or Girl (G)</i>	Individuals with whom you cannot talk to about these topics			Why not?
	Mother	Father	Other (specify)	

Have your conversations you with your parents about these topics changed in any way since you participated in the My Changing Body workshops?			If so, how have they changed?
Sex	Yes	No	

Group B: BOYS___ GIRLS___ (Note how many boys and girls are in each group)

Identify the maps with the sex and age of each participant. Take a photo of each.

Discussion: Take notes or tape the discussion of each group. After the session review the tape and your notes and fill out the table below.

Note: if the group is mixed, be sure to identify the responses of the boys and the girls.

Sex <i>Indicate Boy (B) or Girl (G)</i>	Individuals with whom you feel comfortable talking about changes in your body and feelings during adolescence or about relationships between boys and girls. (Mark with an X in mother or father column or specify another person in the "other" column)			Why do you feel comfortable talking with these people? (Record the answers word for word)
	Mother	Father	Other (specify)	

Sexo <i>Indicate Boy (B) or Girl (G)</i>	Individual with whom you cannot talk to about these topics			Why not?
	Mother	Father	Other (specify)	

Have your conversations you with your parents about these topics changed in any way since you participated in the My Changing Body workshops?			If so, how have they changed?
Sex	Yes	No	

3. Living inside our changing bodies

Group A: BOYS___ GIRLS___ (Note how many boys and girls in each group)

Discussion: Take note or record the discussion of each group. After the session, review your notes and the recording and fill out the table below. *NOTE: If the group is mixed, be sure to identify the responses of the girls and the boys.*

Record the words that the participants list to describe each photograph. (Be sure to be consistent and keep track of which photo responds to the number in the column).

Photo 1	Photo 2	Photo 3	Photo 4

¿Which girl do you like most? Why? Why do you like her better than the others?	
Do you talk to your friends about how you and your friends are developing? What do you talk about?	
Have you ever heard a friend making comments or teasing someone about how they look? How did that make you feel? What did you do?	
¿Would you do anything differently now that you have participated in the My Changing Body workshops	
Now that you have participated in these workshops, do you feel any differently about your body?	

1. Living inside our changing bodies

Group B: BOYS___ GIRLS___ (Note how many boys and girls in each group)

Discussion: Take note or record the discussion of each group. After the session, review your notes and the recording and fill out the table below. NOTE: If the group is mixed, be sure to identify the responses of the girls and the boys.

Record the words that the participants list to describe each photograph. (Be sure to be consistent and keep track of which photo responds to the number in the column).

Photo 1	Photo 2	Photo 3	Photo 4

¿Which girl do you like most? Why? Why do you like her better than the others?	
Do you talk to your friends about how you and your friends are developing? What do you talk about?	
Have you ever heard a friend making comments or teasing someone about how they look? How did that make you feel? What did you do?	
¿Would you do anything differently now that you have participated in the My Changing Body workshops	
Now that you have participated in these workshops, do you feel any differently about your body?	

Appendix C: Pre-/Post-Test Instrument for Parents

**Quantitative Instrument: Parents
“My Changing Body”**

Interviewer: _____		
Date: □□/□□/□□ <div style="text-align: right;">Day/Month/Year</div>		
Place: 1 2	Pre or Posttest: Pretest.....1 Post Test.....2	
Code of person interviewed:	□□□	
Introduction (INTRODUCTION AND WELCOME)		
N.º	Question	Response categories
1	Sex	Male 1 Female 2
2	Age	□□
3	Religion	Evangelical 1 Catholic 2 Other.....5 None 6
4	¿How many times a month do you attend religious services?	□□
5	¿Did you go to school?	Yes 1 No 2
6	¿What is the highest level of school that you completed?12 345
7	¿Have you ever participated in any sex education talk or activity?	Yes 1 No 2
Card game: facts, advice and opinions		
SAY: “We are going to begin with a card game. There are three types of cards – the red cards have questions about		

facts, the green ask what advice you would give other young people, and the yellow ask about you to give your opinion on different topics. Throw this die to see what color card you will get, then I will read you the question for you to answer.”

Red cards (facts)		
8	¿Why do you think that some boys and girls are more sensitive and change their moods easily during adolescence?	Changes in the hormones in their bodies..1 Other 2 Don't know 9
9	¿True or false? A girl can become pregnant before her first menstruation.	True 1 False 2 Don't know..... 9
10	¿Why is it important to keep your body clean when you enter adolescence?	Hormonal changes cause more sweating and the skin becomes more oily..... 1 Other 2 Don't know.....9
11	¿Why should women pay attention to their vaginal secretions? (MARK ALL OPTIONS MENTIONED)	In order to recognize what is normal. 1 In order to recognize their fertile days....2 Other _____ 8 Don't know 9
12	¿True or false? Boys have their first ejaculation between the ages of 10 and 14.	True 1 False 2 Don't know.....9
13	¿True or false? It is common for boys and girls to touch themselves or their genitals (masturbate) in order to feel good.	True 1 False 2 Don't know.....9
Green cards (advice)		
14	A 12 year old girl tells you that all of her friends already have breasts, but she is flat as a board. What would you say to her?	Each girl develops at her own pace, this is normal..... 1 Other _____ _____ 8 Don't know 9
15	A niece who started getting her period last year is concerned that something bad is happening to her because her period doesn't always come at the same time. What would you tell her?	This is normal when girls begin to menstruate. Their cycles become more regular with time..... 1 It is not normal 2 Other _____ _____ 8 Don't know 9
16	A boy tells you that sometimes he wakes up and his underwear is damp. This embarrasses him a lot. What would you tell him?	This is normal. It is not something that boys can control. 1 Other _____ _____ 2 Don't know 9
17	A friend of your son/daughter tells you that	Talk with an adult they trust to ask for help and

	someone in their family touches them in a way they don't like. They already told their aunt, but she thinks they are making it up. What would you say?	continue asking as many people as necessary until someone takes action 1 Other _____ 8 Don't know 9
Yellows cards (opinions)		
18	Agree or disagree. It is normal that boys and girls begin to have romantic feelings once their bodies begin to develop.	Agree 1 Disagree 2
19	Agree or disagree. If a family does not have enough money for all of their children to go to school, they should send the boys instead of the girls.	Agree 1 Disagree 2
Gender roles game		
<p>SAY: "Now we are going to play a different game. Here are cards with words people use to describe the characteristics, abilities and roles of men and women. We are going to make three columns: one for men, one for women, and one for men and women. Take a card, read the word on it and place it in the column where you think it belongs."</p> <p>1 provider 7. trustworthy 13. sexy 2. pregnancy 8. lazy 14. jealous 3. beauty 9. menstruation 15. strong 4. violence 10. breasts 16. penis 5. tenderness 11. goodness 17. obedience 6. intelligence 12. power 18. faithful</p>		
20	Masculine characteristics	
21	Feminine characteristics	
22	Masculine and feminine characteristics	
Sarah's story		

<p>SAY: "Now we are going to talk about a 14 year old girl named Sarah. About a year ago she got her period for the first time. That day her mother explained to her what a menstrual cycle is and that from then on she needed to be careful of men. Recently she has noticed a little dampness on her underwear some days of the month. She doesn't know what this means and is worried about the comment her mother made about men."</p>		
23	¿When does the menstrual cycle begin and end? (mark all of the options mentioned)	It begins the first day of menstruation...1 It ends one day before the next menstruation...2 Other _____ .8 Don't know 9
24	¿What does this sensation of dampness that Sarah feels mean? (mark all of the options mentioned)	She is ovulating 1 She is fertile.....2 Other _____8 Don't know 9
25	If Sarah had sexual relations, could she become pregnant on any day of her cycle?	Yes 1 No 2 Don't know 9
26	¿During what part of the menstrual cycle does Sarah have the most risk of becoming pregnant if she has sex? (mark all of the options mentioned)	In the middle of the cycle..... 1 When she feels secretions..... 2 Other _____8 Don't know 9
<p>John's Story</p> <p>SAY: "This is the story of a 14 year old boy named John. Last month when he woke up his underwear was wet and he realized that he had had his first ejaculation. Sometimes his penis gets hard when he sees someone he likes. He is not sure if this is normal, but he is too embarrassed to talk about this with anyone."</p>		
27	¿Is it normal that John gets an erection when he sees someone he likes?	Yes 1 No2 Don't know 9
28	¿Do you think that John could have gotten a woman pregnant before he had this first ejaculation?	Yes..... 1 No2 Don't know.....3
29	¿Do you believe that John needs to ejaculate every time he has an erection?	Yes 1 No 2 Don't know 9
30	¿Is touching his genitals (masturbating) often bad for John?	Yes. 1 No 2 Don't know 9

31	From now on, will John be fertile every day or only some days?	Everyday 1 Some days..... 2 Don't know 9
Talking with your children		
SAY: I would like to end our discussion today talking about the conversations you have with your children about the changes boys and girls experience during adolescence and topics related to reproductive health and sexuality.		
32	¿Which adult do you think your son/daughter feels comfortable talking to about these topics? (REFER TO THIS PERSON IN THE FOLLOWING QUESTIONS)	Mother1 Father2 No one..... 3 Otro 8
33	¿Last month did you talk with your son or daughter about the changes taking place in their body during adolescence?	Yes.....1 No 2 Other8
34	¿Last month did you talk with your son or daughter about the boy or girl that s/he likes?	Yes 1 No 2 Other.....8
35	¿Do you feel embarrassed talking with your son or daughter about sex education? IF S/HE ANSWERS YES, ASK: ¿Does it embarrass you a lot or a little?	No 1 A little embarrassed 2 Very embarrassed3
36	¿Do you feel that you know enough about these topics to discuss them with your son or daughter?	Yes 1 No 2 Don't know 9
37	¿Is it easy or difficult for you to talk with your son or daughter about these topics?	Easy 1 Difficult 2 More or less 3
38	¿Do you think that your son or daughter feels embarrassed or does not feel embarrassed talking with you about these topics?	Yes, it embarrasses him/her 1 No, It does not embarrass him/her2 Don't know 9
39	¿Would you think that your son or daughter was doing things that you don't approve of if they were to ask you about these topics?	Yes 1 No 2 Don't know
40	¿Do you think that your son or daughter feels they can ask you anything they want to know about these topics?	Yes 1 No 2
41	¿Do you scold your son or daughter when you	Yes 1

	talk to them about these topics?	No 2 Some times 9
Conclusion		
42	¿Have you begun to notice that the body of your son or daughter is starting to develop?	Yes.....1 No.....2
43	¿How do you feel about these changes? (READ THE OPTIONS)	Comfortable.....1 More or less2 Uncomfortable..... 3
44	(ONLY ASK AT POSTTEST) ¿How do you feel about the changes in your son/daughter's body after participating in this workshop?	(Write answer word for word)
45	ONLY ASK AT POSTEST ¿Have you noticed any difference in how you get along with your son or daughter since you participated in this workshop?	(Write answer word for word)

Appendix D: Pre-/Post-Test Instrument for Youth

**Quantitative Instrument: Youth
“My Changing Body”**

Interviewer: _____		
Date: <input type="text"/> / <input type="text"/> / <input type="text"/>		
Day/Month/Year		
Place: 1 2	Pre or Posttest: Pretest.....1 Post Test.....2	
Code of person interviewed:	<input type="text"/>	
Introduction (INTRODUCTION AND WELCOME)		
N.º	Question	Response categories
1	Sex	Male 1 Female 2
2	Age	<input type="text"/>
3	Religion	Evangelical 1 Catholic 2 Other.....5 None 6
4	¿How many times a month do you attend religious services?	<input type="text"/>
5	¿Who do you live with? (READ OPTIONS)	Mother and father 1 Mother only 2 Father only3 Other4
6	¿What grade of school are you in?12 34 5
7	¿Have you ever participated in any sex education talk or activity?	Yes 1 No 2
Card game: facts, advice and opinions		

SAY: "We are going to begin with a card game. There are three types of cards – the red cards have questions about facts, the green ask what advice you would give other young people, and the yellow ask about you to give your opinion on different topics. Throw this die to see what color card you will get, then I will read you the question for you to answer."

Red cards (facts)		
8	¿Why do you think that some boys and girls are more sensitive and change their moods easily during adolescence?	Changes in the hormones in their bodies..1 Other 2 Don't know 9
9	¿True or false? A girl can become pregnant before her first menstruation.	True 1 False 2 Don't know..... 9
10	¿Why is it important to keep your body clean when you enter adolescence?	Hormonal changes cause more sweating and the skin becomes more oily..... 1 Other 2 Don't know.....9
11	¿Why should women pay attention to their vaginal secretions? (MARK ALL OPTIONS MENTIONED)	In order to recognize what is normal. 1 In order to recognize their fertile days....2 Other _____ 8 Don't know 9
12	¿True or false? Boys have their first ejaculation between the ages of 10 and 14.	True 1 False 2 Don't know.....9
13	¿True or false? It is common for boys and girls to touch themselves or their genitals (masturbate) in order to feel good.	True 1 False 2 Don't know.....9
Green cards (advice)		
14	A 12 year old girl tells you that all of her friends already have breasts, but she is flat as a board. What would you say to her?	Each girl develops at her own pace, this is normal..... 1 Other _____ _____ 8 Don't know 9
15	A friend who started getting her period last year is concerned that something bad is happening to her because her period doesn't always come at the same time. What would you tell her?	This is normal when girls begin to menstruate. Their cycles become more regular with time..... ..1 It is not normal 2 Other _____ _____ 8 Don't know 9
16	A friend tells you that sometimes he wakes up and his underwear is damp. This embarrasses him a lot. What would you tell him?	This is normal. It is not something that boys can control. 1 Other _____ _____ 2 Don't know 9

17	A class mate tells you that someone in their family touches them in a way they don't like. They already told their aunt, but she thinks they are making it up. What would you say?	Talk with an adult they trust to ask for help and continue asking as many people as necessary until someone takes action 1 Other _____ 8 _____ 8 Don't know 9
Yellow cards (opinions)		
18	Agree or disagree. It is normal that boys and girls begin to have romantic feelings once their bodies begin to develop.	Agree 1 Disagree 2
19	Agree or disagree. If a family does not have enough money for all of their children to go to school, they should send the boys instead of the girls.	Agree 1 Disagree 2
<p>Gender roles game</p> <p>SAY: "Now we are going to play a different game. Here are cards with words people use to describe the characteristics, abilities and roles of men and women. We are going to make three columns: one for men, one for women, and one for men and women. Take a card, read the word on it and place it in the column where you think it belongs."</p> <p>1 provider 7. trustworthy 13. sexy 2. pregnancy 8. lazy 14. jealous 3. beauty 9. menstruation 15. strong 4. violence 10. breasts 16. penis 5. tenderness 11. goodness 17. obedience 6. intelligence 12. power 18. faithful</p>		
20	Masculine characteristics	
21	Feminine characteristics	
22	Masculine and feminine characteristics	
Sarah's story		

<p>SAY: "Now we are going to talk about a 14 year old girl named Sarah. About a year ago she got her period for the first time. That day her mother explained to her what a menstrual cycle is and that from then on she needed to be careful of men. Recently she has noticed a little dampness on her underwear some days of the month. She doesn't know what this means and is worried about the comment her mother made about men."</p>		
23	¿When does the menstrual cycle begin and end? (mark all of the options mentioned)	It begins the first day of menstruation...1 It ends one day before the next menstruation...2 Other _____ .8 Don't know 9
24	¿What does this sensation of dampness that Sarah feels mean? (mark all of the options mentioned)	She is ovulating 1 She is fertile.....2 Other _____8 Don't know 9
25	If Sarah had sexual relations, could she become pregnant on any day of her cycle?	Yes 1 No 2 Don't know 9
26	¿During what part of the menstrual cycle does Sarah have the most risk of becoming pregnant if she has sex? (mark all of the options mentioned)	In the middle of the cycle..... 1 When she feels secretions..... 2 Other _____8 Don't know 9
<p>John's Story</p> <p>SAY: "This is the story of a 14 year old boy named John. Last month when he woke up his underwear was wet and he realized that he had had his first ejaculation. Sometimes his penis gets hard when he sees someone he likes. He is not sure if this is normal, but he is too embarrassed to talk about this with anyone."</p>		
27	¿Is it normal that John gets an erection when he sees someone he likes?	Yes 1 No2 Don't know 9
28	¿Do you think that John could have gotten a woman pregnant before he had this first ejaculation?	Yes..... 1 No2 Don't know.....3
29	¿Do you believe that John needs to ejaculate every time he has an erection?	Yes 1 No 2 Don't know 9
30	¿Is touching his genitals (masturbating) often bad for John?	Yes. 1 No 2 Don't know 9

31	From now on, will John be fertile every day or only some days?	Everyday 1 Some days..... 2 Don't know 9
Talking with your parents		
SAY: I would like to end our conversation today talking about the conversations you have with your father, mother or other adult that you trust about the changes boys and girls experience during adolescence and topics related to reproductive health and sexuality.		
32	¿Who is the adult that you can talk with about these topics? (REFER TO THIS PERSON IN THE FOLLOWING QUESTIONS)	Mother1 Father2 No one..... 3 Otro _____ 8
33	¿Last month did you talk with -----about changes in your body?	Yes.....1 No 2 Other _____8
34	¿Last month did you talk with ----- about the boy or girl that you like?	Yes 1 No 2 Other _____8
35	¿Do you feel embarrassed talking with ----- about sex education? IF S/HE ANSWERS YES, ASK: ¿Does it embarrass you a lot or a little?	No 1 A little embarrassed 2 Very embarrassed3
36	¿Does ----- know enough about these topics to talk with you about them?	Yes 1 No 2 Don't know 9
37	¿Is it easy or difficult for ----- to talk with you about these topics?	Easy 1 Difficult 2 More or less 3
38	¿Do you think that talking about these topics makes _____feel embarrassed or not?	Yes, it embarrasses him/her 1 No, It does not embarrass him/her.....2 Don't know 9
39	¿If you were to talk with ----- about these topics, do you think he or she would think you were doing things they don't approve of?	Yes 1 No 2 Don't know
40	¿Can you ask ----- anything you want to know about these topics?	Yes 1 No 2

41	¿Does ----- scold you when you talk about these topics?	Yes 1 No 2 Some times 9
Conclusion		
42	¿Have you begun to notice the changes in your body that we have been talking about?	Yes.....1 No.....2
43	¿How do you feel about these changes? (READ THE OPTIONS)	Comfortable.....1 More or less2 Uncomfortable..... 3
44	(ONLY ASK AT POSTTEST) ¿How do you feel about your body after participating in this workshop?	(Write answer word for word)
45	ONLY ASK AT POSTEST ¿Have you noticed any difference in how you get along with your parents since you participated in this workshop?	(Write answer word for word)

References

Breinbauer, Cecilia, and Matilde Maddaleno. *Youth: Choices and change: Promoting healthy behaviors in adolescents*. Vol. 594. Pan American Health Org, 2005.

Instituto Nacional de Estadística, INE, Ciudad de Guatemala, Guatemala and Macro International Inc. 1999. *Guatemala Encuesta Nacional de Salud Materno Infantil 1998-1999*. Calverton, Maryland, USA.

Kirkman, Maggie, Doreen A. Rosenthal, and S. Shirley Feldman. "Freeing up the subject: tension between traditional masculinity and involved fatherhood through communication about sexuality with adolescents." *Culture, Health & Sexuality* 3, no. 4 (2001): 391-411.

Marsiglio, William. "Adolescent male sexuality and heterosexual masculinity: A conceptual model and review." *Journal of Adolescent Research* 3, no. 3-4 (1988): 285-303.

Marston, Cicely, and Eleanor King. "Factors that shape young people's sexual behaviour: a systematic review." *The Lancet* 368, no. 9547 (2006): 1581-1586.

National Institute of Statistics of Rwanda (NISR), Ministry of Health (MOH) [Rwanda], and ICF International. 2012. *Rwanda Demographic and Health Survey 2010*. Calverton, Maryland, USA: NISR, MOH, and ICF International.

United States Agency for International Development (USAID). 2007. *HIV/AIDS Health Profile, Guatemala*. 2007.