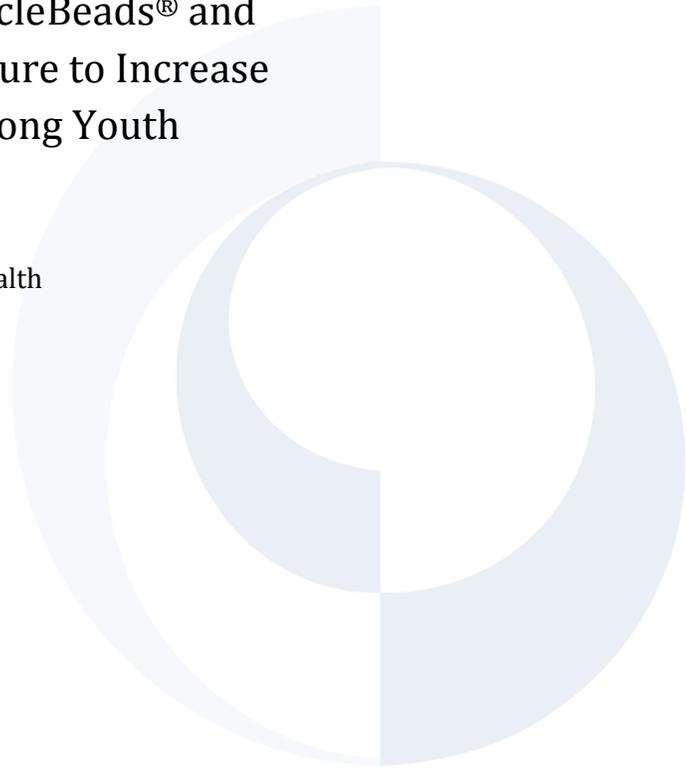


Developing the CycleSmart™ Kit: Guatemala Country Report

Exploring the Use of CycleBeads® and
an Informational Brochure to Increase
Fertility Awareness among Youth

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The Institute for Reproductive Health
Georgetown University



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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.

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Acronyms

Institute for Reproductive Health.....	IRH
Fertility Awareness-based Methods.....	FAM
Focus Group Discussions.....	FGD
Family Planning.....	FP
Standard Days Method.....	SDM
Sexual and Reproductive Health.....	SRH
Sexually Transmitted Infection.....	STI
Very Young Adolescent.....	VYA

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Executive Summary

Fertility awareness is fundamental to understanding and making informed decisions about sexual and reproductive health (SRH) and is especially important for boys and girls as they enter puberty. Providing adolescents with accurate and age-appropriate information and tools to understand fertility and manage pubertal transition can empower them to make appropriate decisions about sexual behavior and protect their reproductive health across the life course. Studies with adolescents have shown that appropriate content and methodologies combining body and fertility awareness, gender, and sexuality, improve knowledge and increase social awareness leading to healthier behaviors among boys and girls (Palmer, 2010; IRH 2013).

CycleBeads[®], the color-coded beads typically used with the Standard Days Method (SDM) of FP to track the fertile days of the woman's menstrual cycle, have also been used in some programs as a visual and tactile way to teach young girls about their menstrual cycle, puberty-related changes, risk of pregnancy, and fertility (Lavoie, 2009; Aumack Yee, 2010). However, there is little information or practical guidance on how to use CycleBeads to help girls learn about their menstrual cycle, and whether CycleBeads could be effective in helping both girls and boys learn about and reflect on fertility, puberty, gender roles and other issues important to their reproductive health.

IRH partnered with the Population Council in Guatemala to develop an instructional brochure that would explain how to use CycleBeads to track the menstrual cycle and provide information on puberty and then test the feasibility of using CycleBeads as a fertility awareness tool with adolescents. The brochure and CycleBeads would then be combined with a calendar, and a weekly diary to form the CycleSmart kit (*Conociendo mi Ciclo*, in Spanish), a package of materials that could be distributed to youth and utilized as an educational tool in youth programs.

The development of the CycleSmart brochure, was conducted in two phases with the following components:

1. Product development
 - a. Desk review of local youth SRH materials and resources
 - b. Interviews with key informants from youth-serving organizations
 - c. Focus group discussions with male and female older adolescents (separately)
2. Product validation
 - a. Focus group discussions with parents of younger adolescents
 - b. Focus group discussions with male and female young adolescents (separately)

The table below details the characteristics of participants involved in product development and validation.

	Age range	Male	Female	Total
Product development				
Adolescents	12-18	27	28	55
Key informants	N/A	10	6	16
Product validation				
Adolescents	12-15	17	16	33
Adolescent in follow-up interviews	12-14	--	8	8
Parents	N/A	4	5	9

Table 1: Participants of product development and validation

1. Phase I: Product Development

Puberty and sexual education materials were reviewed to guide development of the brochure. The desk review provided ideas for the brochure’s format and style, as well as vocabulary and examples of activities. It also helped conceptualize content appropriate for rural, indigenous Guatemalan adolescents, the target audience for the brochure.

Focus groups with older adolescent served to explore puberty and fertility knowledge and asked adolescents to provide recommendations for educating other youth on these topics. Stakeholder interviews explored perceptions of youth’s knowledge and needs, barriers to discussing puberty and sexuality, and identified opportunities to increase fertility awareness.

Stakeholders believed youth should have more information on puberty and fertility and that most youth were eager for information. They noted that many youth are not unaware of puberty until they experience it and are thus surprised by the physical changes they see in their bodies. According to stakeholders, information is needed to counter myths surrounding menstruation that are common in some communities, such as restrictions on eating certain foods. They also felt youth should have information on sexual health, pregnancy, sexually transmitted diseases (STIs), and contraception to empower them to make better decisions. Stakeholders felt dialogue around sexual and reproductive health (SRH) between parents and adolescents is important and hoped the CycleSmart Kit would facilitate such dialogue. Stakeholders recommended the brochure include information on puberty and anatomy, gender equality, and sexual and reproductive rights. They thought both boys and girls should be included in brochure illustrations to break down taboos related to discussing changes experienced during puberty and create dialogue on gender norms. Overall, stakeholders saw CycleBeads as a useful tool for educating adolescents about the menstrual cycle and fertility, and addressing concerns adolescents have during puberty. However, some were concerned that adolescents would begin using it as a FP method.

Focus group discussions with adolescents (ages 12-18) revealed differences in puberty and SRH knowledge and experiences between the sexes:

- Many boys and girls are unaware of the changes related to puberty until they experience them, thus physical changes, particularly menstruation, can be surprising or scary.
- Older adolescents generally have accurate information about the biological significance of menstruation, but myths are common.
- Girls' and boys' puberty knowledge is based mostly on changes they easily see in their bodies and those of the opposite sex. Participants mentioned pregnancy as a consequence of puberty and the initiation of sexual activity.
- Boys gave more accurate answers than girls for questions on human anatomy.
- Boys tend to have positive feelings about reaching puberty, but girls' feelings tend to be more negative. Boys experience new freedoms and feel more mature during puberty, while girls experience are embarrassed about the bodily changes they experience and fear being teased by boys.
- Participants believe young people have little access to information on puberty and sexuality. They believe this information would be beneficial for them at an early stage in life.
- Friends and other youth who are slightly older are important sources of information on puberty and sexuality.

Overall, youth found it difficult to discuss puberty and SRH with adults. Few discuss these matters with parents or family members of the same sex, but many obtain information from peers and other youth who have already gone through puberty. Most say they would have liked more information before entering puberty themselves and would share information with younger family members.

2. Phase II: Product Validation

Focus group discussions were held with younger boys and girls (ages 12-15) to validate the CycleSmart brochure once it had been developed.

Girls thought the brochure was something they and their friends could easily use, would be interested in reading, and that it would help them learn about changes occurring in their bodies. They appreciated seeing girls and women talking about menstruation and that adolescent girls are talking to trusted adults about changes during puberty. Girls identified the following key messages in the brochure:

- Changes during puberty are normal and should not be feared,
- Taking care of oneself and personal hygiene becomes more important during puberty,
- Parents or trusted adults are resources for advice about menstruation,
- Girls should not tolerate groping or teasing by boys and men because they are developing physically,
- Girls should know when their next period will arrive and be prepared.

Girls generally reacted negatively to seeing boys and men depicted in the brochure that they see as a tool for girls and women, and several recommended removing all images of males. However, few disagreed because they thought males should also be aware of the changes that occur in girls' bodies.

While girls enjoyed learning about CycleBeads during the first focus groups, most did not remember how to use them during the follow-up discussion six weeks later. Only three girls used CycleBeads, others did not use them either because they were too busy, they forgot, or because they had not menstruated in the weeks between focus group discussions. Girls who tracked their cycles found it difficult to remember to use the accompanying diary; at least one girl used it occasionally, others did not. Some girls showed CycleBeads to their mothers, aunts, and other female relatives. However, they were not able to explain to their family members how to use CycleBeads or what the different colors signified. Despite difficulty remembering the details of how to use CycleBeads, girls thought being able to track one's menstrual cycle was useful, and they intended to use CycleBeads in the future. In both groups girls said they would want to learn about CycleBeads through a class or workshop, rather than just reading the instructions in the brochure.

Focus groups with boys revealed that they appreciated that CycleBeads could be a tool to learn about puberty and fertility. However, others thought they would also need information on girls' risk of pregnancy during certain times of the menstrual cycle. Boys wanted information on irregular cycles, sexual intercourse, pregnancy, and contraception. They pointed out that if adolescents should not use CycleBeads for contraception, information on methods that are appropriate for youth should be included. They thought the brochure should do more to address biased sources of information, such as pornography and the internet. Boys said they would be very interested in a brochure targeted at adolescent boys. They recommended that such a brochure include information on STIs, FP and contraceptive methods, as well as masturbation, and myths surrounding boys' puberty.

Parents thought CycleBeads were an appropriate tool for teaching their daughters and other adolescents in their community about puberty, and consider the information in the brochure important for adolescents. They noted that many youth think bodily changes during puberty are abnormal and agree it is important to make an effort to address this. Parents identified the brochure's key messages as the importance of informing girls about puberty and creating an environment in which girls can discuss these topics without being scolded or embarrassed. They found the brochure attractive, thought the illustrations were well done, and that the images, dialogue, and vocabulary would be appealing to youth. Participants expressed interest in having access to CycleBeads and the brochure for both their daughters and themselves.

3. Conclusions and Recommendations

The results of focus group discussions with adolescents, parents of adolescents, and stakeholders who work with adolescents indicate that many adolescents in Guatemala lack adequate information on puberty and would welcome more information, particularly before they enter puberty. The CycleSmart brochure and CycleBeads were deemed a culturally appropriate resource for meeting this need. Participants thought that tracking one's menstrual cycle using CycleBeads would be

useful. Schools and health centers were cited as places where the brochure should be available. While adolescent girls enjoyed learning to use CycleBeads, a single session explaining how to use CycleBeads was not sufficient for most girls. Organizations that incorporate the CycleSmart kit into programs for adolescent girls should note that it may be best to introduce the brochure and CycleBeads over the course of several sessions, to reinforce its messages, ensure girls remember instructions on how to use CycleBeads, and respond to questions that arise as girls learn to track their cycles.

Programs that utilize the CycleSmart kit should also consider ways to educate parents as well as youth about the changes that adolescents experience during puberty and on other SRH topics. Due to high levels of pregnancies among teenagers, some participants recommended including information on avoiding pregnancy and contraceptive options in the brochure. While the brochure is intended for younger adolescents, most of whom are not having consensual sex, programs using the brochure should be aware that questions about contraception and avoiding pregnancy are likely to arise and be prepared to respond these questions and provide youth with relevant resources.

Introduction

Fertility awareness is fundamental to understanding and making informed decisions about sexual and reproductive health (SRH) and is especially important for boys and girls as they enter puberty. A review of the literature indicates that girls and boys often begin puberty without sufficient information about their changing bodies and emerging fertility to make critical decisions needed to protect their health, including preventing undesired pregnancy (Carvacho et al., 2006; Sommer, 2009). Adolescents often lack the skills and information to deal with physical, social, and emotional changes associated with this time of rapid transformation. Furthermore, many parents, schools, youth organizations, and religious institutions are ill-prepared to help young people understand and prepare for puberty (Chong et al., 2006).

Providing adolescents with accurate and age-appropriate information and tools to understand fertility and manage pubertal transition can empower them to make appropriate decisions about sexual behavior and protect their reproductive health across the life course. When young people are better aware of how their bodies work and what changes to expect as they become adults, they are better prepared to deal with SRH issues and challenges, including future family planning (FP) decision-making and use (Palmer, 2010).

Studies with adolescents have shown that appropriate content and methodologies combining body and fertility awareness, gender, and sexuality, improve knowledge and increase social awareness leading to healthier behaviors among boys and girls (Palmer, 2010; IRH 2013). CycleBeads®, the color-coded beads typically used with the Standard Days Method (SDM) of FP to track the fertile days of the woman's menstrual cycle, have also been used in some programs as a visual and tactile way to teach young girls about their menstrual cycle, puberty-related changes, risk of pregnancy, and fertility (Lavoie, 2009; Aumack Yee, 2010). However, there is little information or practical guidance on how to use CycleBeads to help girls learn about their menstrual cycle, and whether CycleBeads could be effective in helping both girls and boys learn about and reflect on fertility, puberty, gender roles and other issues important to their reproductive health.

Youth-serving organizations, teachers, and health workers in countries where IRH works have also noted that CycleBeads could be a useful tool for teaching adolescents about the menstrual cycle and fertility. IRH partnered with the Population Council in Guatemala to test the feasibility of using CycleBeads as a fertility awareness tool for very young adolescent (VYA) girls and boys, ages 10-14 and to develop and test a package of tools to help them learn about menstruation, puberty, fertility, and gender roles.

Puberty and sexual education materials were reviewed and a series of focus group discussions (FGDs) with older male and female adolescents (ages 15-18) as well as interviews with key informants who work with adolescents were conducted to guide the development of the brochure. Based on the results of those discussion groups and interviews, a brochure was designed that uses colorful illustrations, young protagonists, and storytelling to convey information related to tracking, understanding, and preparing for menstruation; understanding the physical, psychological, and sociological changes that accompany puberty; and reflect on gender roles.

The brochure and CycleBeads were combined with a calendar, and a weekly diary to form the CycleSmart kit (*Conociendo mi Ciclo*, in Spanish), a package of materials that could be distributed to youth and utilized as an educational tool in youth programs. The package can also be distributed with sanitary pads, as was done in another country where it is also being tested. Focus group discussions with younger adolescents (ages 12-15) and parents of adolescents were held to validate the brochure and evaluate the feasibility of introducing the CycleSmart Kit to adolescents as a tool for understanding the menstrual cycle and fertility.

Background

Guatemala has one of the highest rates of adolescent fertility in Latin America (Figueroa et al., 2006:1; Remez et al., 2009:1). National statistics show that at least 67% of women between 15 and 24 years old had sex for the first time before they were 18. Among this group of young women, only 3.5% of them reported having received some form of sexual education - 34% in elementary school and 92% in high school. Early sexual initiation increases the chance of unintended pregnancy and sexually transmitted infections (STIs) and HIV. According to the Reproductive Health Observatory of Guatemala, most pregnancies in adolescents under age 15 are unwanted pregnancies and are a result of a complex factors such as poverty, limited access to education, limited knowledge of the human body and reproduction, and restricted access to contraception (OSAR, 2011:1).

Research on SRH among adolescents and young people in Latin America has concluded that strategies to improve youth's well-being should involve a collaborative effort between health and education systems. Young people should have access to information and health services in order to make informed decisions that best meet their needs. If sexually active adolescents can communicate openly about sex, they tend to practice safer sex.

Sexual education alone is not enough to tackle the complex issues surrounding youth SRH; programs addressing behavioral change are also needed. Discussion of puberty, reproduction, and safer sex should not be limited to the classroom; additional spaces for discussion need to be created so youth can feel comfortable communicating with partners, peers, and parents on these issues. Furthermore, many young people have limited access to quality education, so improving puberty and sexuality education in and outside the classroom is important. In addition to enhanced education on puberty and sexuality, efforts should be made to promote counseling, empowerment and negotiation skills for youth (Rodríguez, 2009:104-105).

Guatemala's legal framework includes policies with specific objectives that support the development of children, adolescents and youth, some of which address SRH. One of the binding laws within this framework is the *Law of Universal and Equal Access to Family Planning Services* and its integration into the National Reproductive Health Program of the Ministry of Health. Passed in 2005, this law establishes that Guatemalans should have access to FP, including information, counseling and SRH education. It is important for SRH education to be made available in public schools and health centers and that strategies to ensure comprehensive and differentiated services for adolescents are developed. Sexual education content should educate youth on self-care, rights and responsibilities, sexuality, pregnancy, and the risks of sexual activity.

Though all young people should have access to sexual education under this framework, it is not being taught in the majority of public schools in Guatemala. While there are some sexual education components in the National Basic Curriculum, the content is considered insufficient by youth organizations. Additionally, not all teachers have been trained to teach the content, and despite its inclusion in the curriculum, puberty and sexuality education are still controversial issues in the country and are not actively taught. Dialogue around puberty could serve as a starting point to delve into topics such as fertility, safe sex practices, and sexual and reproductive rights.

Phase I: Product Development

In the product development phase, the Population Council/Guatemala sought to identify adolescents' existing knowledge and needs on topics related to puberty and fertility. A desk review of youth SRH materials and resources was conducted to inform the development of the informational brochure. Focus groups with older adolescents and key informant interviews were also held to gain a better understanding of knowledge on puberty, fertility, sexuality, and reproduction among adolescents; existing gaps in knowledge and resources, and the type of information that would best serve this population. Opinions on currently available information, social norms for VYAs, and the feasibility of introducing CycleBeads as an educational tool were also explored. A brochure was designed based on the information collected from the interviews, focus groups and desk review. The table below details participants involved in the product development.

	Age range	Male	Female	Total
Adolescents	12-18	27	28	55
Key informants	N/A	10	6	16

Table 2: Participants of product development

1. Desk Review

A desk review was conducted of materials currently available in Guatemala and throughout Central America for teaching youth about puberty and SRH. The Population Council analyzed eight sets of educational materials available in print and electronic form. The format and style of materials, the vocabulary used, and the types of activities included were documented.

In addition to learning from the content of materials, the review helped conceptualize a brochure that would be appropriate for the rural, indigenous Guatemalan context, which would be the target audience for the CycleSmart brochure in Guatemala. The following materials were identified as useful examples of puberty education resources:

- Club en Conexión 11-session workshop (PASMO)
- *Un Solo Currículo* (Population Council, et al)
- Proyecto Formacion's 10 modules on gender and human rights (AEN et al)
- Asociación Equipo Maiz's informational brochures:
 - ¿Qué es la sexualidad?
 - Los órganos genitales y reproductivos
 - La regla ¿una sangre diferente?
- Derechos Sexuales y Reproductivos de las Mujeres (UNAMG)
- Comprendiéndome como adolescente (Grajeda de Paz)
- Mi Cuerpo Esta Cambiando, 2nda edicion (IRH)
- Abriendo Oportunidades (Population Council)

These materials provided ideas for visual and written content that could be incorporated into the brochure, insight into the type of language used, and practical activities that can facilitate learning about puberty, fertility, and menstruation.

2. Key Informant Interviews

Sixteen stakeholders, adults who work with adolescents and young people in Kaqchikel communities, were interviewed. The group included six women and ten men, and a variety of occupations were represented, including teachers, political leaders, non-governmental organizations staff members, health personnel and religious leaders. Interviews explored stakeholders' perceptions of youth's knowledge and needs related to puberty, existing cultural barriers to discussing puberty and sexuality, and opportunities to incorporate these topics into other spaces, such as schools, health centers, and churches. Fourteen stakeholders completed university and two had completed secondary school. Seven identified themselves as Evangelical Christian, eight as Catholic, and one as practicing Mayan Cosmology.

Stakeholders recommended proving youth with information on:

- Body literacy, including fertility
- Sexual and reproductive rights
- Implications of unwanted pregnancy for both men and women
- Physical and psychological changes that occur during puberty
- Contraceptive methods

According to stakeholders, this information should be taught by people who are comfortable working with youth, can discuss these topics in a natural way, and can answer questions about puberty.

Stakeholders who work with youth held a variety of opinions regarding what should be included in puberty and sexuality education for adolescents. Puberty, sexuality, and reproduction are generally considered taboo topics in Guatemala. Many parents do not discuss these matters with their children, so youth tend to rely on friends and peers for information. One interviewee said, "Adolescence and youth are stages in which one has a mountain of questions, and nobody gives you an answer." Though some information is taught in schools, sexual education tends to be very basic, and many adolescents only learn about puberty when they start to experience changes in their own bodies. Many stakeholders see a need for more comprehensive puberty and sexual education, noting that they have been approached by adolescents with questions. They believe it is important for boys and girls to know their own bodies and to be aware of changes that occur during puberty so they can prepare for them. Access to accurate information would make this stage of their lives easier and empower youth to make informed decisions. They also believe it is important for youth to be aware of the implications puberty has for fertility, the potential for unwanted pregnancies, and how this can impact a young person's life.

Stakeholders said some parents do not know how to discuss puberty and sexuality with their children, a finding that was confirmed by parents themselves in later FGDs. Parents may be hesitant to discuss these topics because it is not culturally acceptable and talking about sexuality continues to be considered embarrassing or even sinful by some. Furthermore, many parents were never taught this information themselves. When parents and other family members do discuss puberty and sexuality with youth, it is usually along clearly defined gender lines: girls talk to their mothers, grandmothers, aunts and female cousins; while boys talk to the men in their family. Stakeholders think it is beneficial for parents to discuss these issues with their children and that such conversations should be encouraged, as they can influence youth to make healthy decisions.

Apart from conversations with peers, youth obtain most of their information on puberty from churches, schools, and health centers. Christian Churches teach chastity and monogamy and since the Church's influence extends into other spheres, this may affect the type of information that is shared within families and at school, or whether discussions are held at all.

The quality of puberty and sexual education in schools varies. Instruction can range from limited information about personal hygiene to complex topics, such as precautions for avoiding pregnancy and sexual violence. Stakeholders noted that some teachers do not feel capable or equipped to talk with students. Additionally, not all youth are in school, so efforts should be made to educate youth through other venues also. Health centers also provide some information on sexual health, but generally have limited personnel dedicated to this task, and there are few organizations that work on these topics at the community level.

Stakeholders noted that adolescents often find it difficult to discuss questions related to sexual health, sexuality and puberty with adults. They recommend that puberty and sexual education

Key Findings from Interviews with Stakeholders:

- Many youth are not given information about puberty before they experience it. Many girls are surprised by their first period and boys are often surprised by their first erection and ejaculation.
- Youth tend to seek information on puberty from their friends and peers, who are also going through or have gone through puberty.
- Schools, health centers, and churches are important spaces for talking about puberty.
- Adolescents have a difficult time talking about puberty and related topics with adults
- There is a distinction between rural and urban areas in terms of access to information on sexual education in schools and health centers, as well as in terms of access to sanitary pads.
- Knowledge of the male reproductive system and how it relates to fertility is low.
- Stakeholders thought CycleBeads would be a useful tool for girls to have and would help address questions adolescents have. However, some expressed concern that adolescents would start using it as a FP method.

programs for adolescents be led by young adults, so age difference is not so great and adolescents feel more comfortable discussing potentially embarrassing topics. A mix of scientific information and personal experiences should be included in sexual education programs.

Youth in Guatemala are not given information about puberty before they experience it, and thus find themselves surprised by the physical changes in their bodies. Many girls are not aware or prepared for menstruation before they experience their first period, and many boys are surprised when they experience their first erection, ejaculation, and wet dream. Some girls are afraid of changes, both physical and social, that puberty brings. In some communities, as soon as a girl menstruates she is considered a woman and ready to be married. Some boys assume that as soon as they experience physical changes they are ready to begin having sexual relations, yet they know little about fertility and pregnancy. Neither girls nor boys have adequate information on fertility, pregnancy, and sexually transmitted infections (STIs). Stakeholders feel it is important to educate youth about fertility and sexuality so that they can avoid unplanned pregnancies and STIs.

Stakeholders noted a distinction between rural and urban areas in terms of access to information in schools, health centers, on the internet, and in access to products such as sanitary pads. Practices for dealing with menstruation likewise tend to vary along urban and rural lines. While sanitary pads are commonly used in urban areas, in rural communities girls tend to use cloths or rags because pads are not sold in their communities or girls do not have money to purchase them, or simply because they are embarrassed to buy them. Most girls do not track their menstrual cycles; those that do typically use a calendar, and track their cycles so that they can be prepared for when their next period arrives.

Some communities consider menstruation to be an illness, particularly in communities that do not have access to sanitary napkins and pain relievers. Girls often prefer to stay at home when they have their periods. While it is common to take pills for menstrual cramps, some girls leave school when their cramps become too painful. According to stakeholders, some use a “cream” during menstruation, although it is unclear where the cream is applied and why it is used. One stakeholder mentioned that incorrect information about how to care for oneself during menstruation could result in infections from poor hygiene or wearing clothes that are too tight. Stakeholders generally thought that CycleBeads would be a useful tool for girls to keep track of their menstrual cycles and would help to address questions adolescents have about their bodies. However, some expressed concern that it could be used as a FP method, even though it would be an inappropriate option for adolescents, who often have irregular menstrual cycles.

Stakeholders said knowledge of the male reproductive system and male fertility varies among youth but is generally low, and that this lack of knowledge is related to high rates of pregnancy during adolescence. While some youth want information on the male body and how it works, many find this topic embarrassing. Males generally have more knowledge about the female body than vice versa. Girls are often afraid to ask questions about the male body for fear of how

the question will be perceived. Though adolescent males may be more open to discussing these topics than females, they are not necessarily knowledgeable on them.

Male adolescents may acquire information about puberty and sexuality from videos, media outlets, educational materials, and peers, but conversations amongst male friends are often intertwined with jokes and profanity. Even in the classroom, lessons on male physiology may devolve into an environment of laughter and wisecracks. The female body is often viewed as a source of pleasure for males, but unrelated to fertility or reproduction; it does not occur to most adolescents who engage in sexual activity that pregnancy could result. Meanwhile, there is a belief within some communities that “the man who has more children is more of a man” and thus some males are not interested in or concerned about the risk of pregnancy.

3. Focus Group Discussions with Older Adolescents (Girls and Boys)

Two focus groups with females and two with males ages 12-18 were conducted with Kaqchikel adolescents to explore their knowledge and experience of puberty as well as their recommendations for educating youth on puberty. While there were distinct discussion guides for girls and boys, they covered similar issues. There were differences in knowledge on puberty-related topics between the sexes. Facilitators attributed these differences to the places where boys and girls spend time; apart from school, adolescents gather in different places. Billiards halls, arcades, and canteens are considered spaces exclusively for males, while areas for milling corn and beauty salons are female spaces. Many families subscribe to traditional notions of gender norms and teach their children, “There are certain places that only men can go to because women are weak...and there are places which are specifically for women.” The separate environments contribute to a gendered gap in knowledge about puberty and SRH.

Facilitators noted that girls participated more than boys in the discussions, but boys gave more accurate answers to questions on human anatomy. Puberty knowledge among boys and girls is related primarily to changes they can easily see in their bodies and the bodies of the opposite sex. Adolescents associate male puberty with changes in height, voice, muscle size, the size of the penis, and pubic hair growth. They associate female puberty with the development of breasts and hips, pubic hair growth, and the onset of menstruation.

Social changes are less concrete but quite influential. There is a perception that once males reach puberty they are ready for sex, and they are viewed as braver and bolder. In contrast, females are perceived as vulnerable when they enter puberty, and are advised to be cautious with men and boys. As a girl becomes a woman, she “cannot walk alone in the street because it is dangerous.” Meanwhile, boys associate positive feelings with reaching puberty. A boy said that at this stage, “one begins to reason, think about what is correct and incorrect; one begins to

“One begins to reason, think about what is correct and incorrect; one begins to mature.”
– Adolescent boy

“When we were little girls boys didn’t bother us, but once you get you period and your breasts begin developing, boys begin bothering you.”
–Adolescent girl

mature.” However, girls tend to associate negative feelings with this stage of development. Girls experience embarrassment, discomfort, and fear because they do not know what is going on, and see themselves as losing certain liberties. “You can no longer go out because now you can’t talk or chat with any person because you now have to be careful... it prohibits opportunities.” Many participants mentioned pregnancy as a consequence of puberty and the initiation of sexual activity.

Most participants believe that young people receive little formal education on puberty and sexuality. Youth do discuss these issues, primarily with friends, and sometimes with other “trustworthy” individuals. Adults are seen as people with experience in these issues, and certain adults, such as parents, were mentioned as people adolescents could trust to talk to about puberty and sexuality. However, they noted that it can be difficult to speak with adults, as these issues are considered embarrassing and private. When youth talk with their parents, it is usually along gendered lines - girls talk with their mothers and boys with their fathers. While boys said they would or have talked about puberty with girlfriends, girls said that it would be difficult to discuss puberty with a boyfriend, as boys and girls go through different experiences. Some girls feared that boys will make fun of or criticize them. Most participants thought it would have been helpful to have talked and learned about these issues before they started going through puberty.

Not all girls receive information about menstruation, and are therefore surprised or concerned when it occurs. “Before it happened I didn’t know what menstruation was, and I would have liked to know before it happened to me because it scared me and I thought it was a disease.” Girls said they also would have wanted information on bodily changes, such as growth of breasts, hips, and hair, before they occurred. Most girls in the focus groups had already gone through

Key findings from FGDs with older girls and boys

- Some boys and girls are not told about puberty before they go through it, thus physical changes, particularly menstruation, can be surprising or scary.
- Older adolescents generally have accurate information about the biological significance of menstruation, but myths are common.
- Girls and boys’ puberty knowledge is based mostly on changes they can easily see in their bodies and those of the opposite sex.
- Boys gave more accurate answers than girls for questions on human anatomy.
- While boys tend to have positive feelings about reaching puberty, girls’ feelings tend to be more negative. Girls experience embarrassment because they do not understand what is happening to their bodies.
- Many participants mentioned pregnancy as a consequence of puberty and the initiation of sexual activity.
- Most participants believe young people have little access to information and education on puberty and sexuality. They believe this information would be beneficial for them at an earlier stage in life.
- Friends and other youth who are slightly older are an important source for information on puberty and sexuality.

puberty. They knew that menstruation signifies that a girl is entering adolescence, developing into a woman, and can now have children. Several were aware of the physiological processes that underlie the menstrual cycle. However, it is clear that a variety of myths surrounding menstruation remain. Some said menstruation was “bad blood that we get rid of every month” and one thought menstruation was a vaginal infection. Most said that there are restrictions on diet and strenuous physical activity during menstruation. Beans, eggs, and avocados were mentioned as foods that should not be eaten. Some said that you should not run, jump, carry heavy items, swim, or have a haircut during menstruation. They also noted that some adolescents, “do not know the parts of a woman and sometimes become pregnant and do not know it.”

Girls had greater knowledge than boys of menstruation, though it should be noted that their discussion guide had more questions on this topic. Both boys and girls said that menstruation involves physical as well as psychological changes for women. Boys associated menstruation with girls being emotional, while girls associated it with cramps. Male and female participants also associated menstruation with pregnancy, fertility and ovulation. Most agreed that sexual intercourse during menstruation is not appropriate. Boys and girls were aware that sexual intercourse can result in pregnancy. One boy noted that having sexual relations is the ‘easy part’, but that you can easily acquire an STI from doing so. Boys thought that pregnancy was more likely after menstruation, while girls did not know if pregnancy was most likely before, during or after menstruation. Girls expressed that it is easy for a boy or man to impregnate a woman but they may fail to take responsibility for the child. “They don’t accept that the person they had relations with is pregnant, and then say that the child is not theirs.” Girls thought it was easy to get an STI if you did not use a condom.

Girls and boys alike thought it would be useful for girls to have a calendar to keep track of their menstrual cycles, so that girls could be better prepared for menstruation. Girls thought that CycleBeads would be an important tool for understanding their own bodies, and welcomed the idea of sharing this knowledge with other girls and women. Some boys said they had seen CycleBeads before. They thought it was important to understand how to use them correctly so that a woman would know when to expect her period, as well as the days when sexual intercourse would be risky. Boys’ responses regarding “risky” days indicate that older adolescents are concerned with avoiding pregnancy and see how CycleBeads can be used to avoid pregnancy. Programs that use CycleSmart should be prepared to provide youth with age-appropriate information on available methods of contraception.

Most participants said that they would want to learn more about puberty and be able to share this information with younger siblings and cousins. Most boys openly said that they are interested in knowing about women’s bodies. Girls were less open about their curiosity, but also said that they would welcome additional information on women’s and men’s bodies.

Phase II: Product Validation

Based on information gathered from the desk review, interviews with stakeholders, and focus groups with older adolescents, IRH developed an informational brochure that teaches youth about puberty and fertility through a series of drawings accompanied by brief text (See Appendices). The *Conociendo Mi Ciclo* or CycleSmart brochure was validated in four focus groups with adolescent boys and girls ages 12 to 15*, and one focus group with parents of adolescents. Additionally, at the end of the focus group with girls, girls were given CycleBeads to track their cycles over the course of a month, and then reconvened to provide feedback on their experiences. Unfortunately, only half of the girls in the initial focus group returned for the follow-up group and only a few of these girls have used CycleBeads to track their menstrual cycles, therefore the information obtained from that group is limited due to the small sample size.

Focus groups were also held with parents of adolescents to assess its acceptability. Overall, adolescents and parents found the brochure to be useful and culturally appropriate. Girls said they and their friends would use such a brochure, boys said they would want to see a similar brochure targeted at males, and parents thought it would be a useful resource for teaching their children about puberty. Below, the details of participants involved in the product validation.

	Age range	Male	Female	Total
Adolescents	12-15	17	16	33
--Adolescent in follow-up interviews	12-14	--	8	8
Parents	N/A	4	5	9

Table 3: Participants of product validation

1. Focus Group Discussions with Parents

A FGD was held with a group of five mothers and four fathers who have adolescent daughters between the ages of 10 and 14. Parents gave detailed reactions to the brochure and discussed the concept of adolescent girls using CycleBeads to track their menstrual cycles.

The focus group with parents was conducted in Spanish and held in San Juan Comalapa, Chimaltenango. Overall, parents deemed the brochure and CycleBeads appropriate for their daughters and other adolescents in their community, and thought that the information contained in the brochure is important for adolescents to have.

Key messages they identified in the brochure are: the importance of informing, orienting, and training girls about puberty, and creating an environment in which girls can discuss these topics without being scolded or embarrassed. They found the brochure attractive, thought the illustrations were well done, and that the images, dialogue, and vocabulary would be appealing to youth. They noted that many youth are not prepared for puberty before experiencing it and thus think it is something abnormal; they agree it is important to make an effort to address this. "Many times girls or boys are not prepared for these changes and believe that they are something abnormal, while the information that the brochure brings tells them, don't worry,

* It is worth noting that the target age for CycleSmart is 10 to 14. However, in order to recruit girls that were menstruating, the criteria for participation in these FGDs was 12-15.

“You have to educate [adolescents] to avoid pregnancies.”

- Mother of adolescent

“One of the principle problems that confronts our country is mothers at an early age. They become pregnant at a young age because they don’t know how the body functions and the time in which they can become pregnant.”

- Mother of adolescent

“The message is that all of these changes that happen in boys and girls mean that they are ready to have children but not that they are ready to be parents, ...youth receive this information in schools but it is not sufficient because young girls become pregnant and they don’t finish their studies and they are not prepared.”

- Mother of adolescent

this is normal, the only thing is that during this time you have to be very careful,” said one father.

All participants expressed interest in having access to CycleBeads and the brochure for both their daughters and themselves. “I take the opportunity to talk [to my daughter], and for me, this would be a nice material for talking with her,” said one mother.

Parents thought there was still a lot of work to do at the national level to transform sexual education, but they agreed they should play an active role in preparing their children for puberty and creating spaces that allow these conversations to take place without fear of misunderstanding or judgment. Several parents pointed out the importance of including mothers and fathers in the education process, especially because some of the scenes in the booklet include interaction with mothers. “We as the parents of the family also have to be able to educate our daughters, beginning in our own homes to help them,” one mother said. Mothers

said they would feel comfortable talking and using this booklet with their daughters, while fathers thought it was better for their daughters to talk with women rather than men.

One mother, who was familiar with CycleBeads as the visual aid of SDM, was concerned that the brochure does not contain information on other FP methods, so that youth have information on how to avoid pregnancy. Another parent, a father, agreed that pregnancies among VYAs are an issue and that information on contraceptives ‘other than SDM’, should be included. Here it seems parents confused the purpose of the CycleSmart brochure with instructions on how to use CycleBeads for FP, and they agreed it was important to add information on ways to prevent pregnancy through FP methods. Meanwhile another parent disagreed and expressed concern that teaching youth about FP could be sending messages that lead them to engage in sexual activity early on.

Overall, parents agreed that they do not have sufficient information on puberty themselves, particularly those with low levels of education. Most do not feel adequately prepared to educate their children on these issues. “Normally, we parents don’t have the ability or capacity...because we aren’t educated to talk about these topics.” As a result they thought the brochure and the information it contains would be useful for parents and adult women as well. They recommended making the brochure and CycleBeads available in health centers and schools, where experts are available to answer questions.

2. Focus Group Discussions with Very Young Adolescents

CycleSmart Kit was validated in FGDs with male (17) and female (16) adolescents ages 12 to 15. Of the female participants, four participants had also participated in the product development FGDs; the topic was new to all other participants. Discussions explored adolescents' reactions to the brochure, their understanding of its key messages, and suggested changes. At the end of the FGD girls were given CycleBeads to track their cycles over the course of six weeks, an additional focus group was held at that time for girls to provide feedback on their experience. Below, the details of these FGDs.

2.1. Initial Focus Groups with Girls

Two focus groups were held with adolescent girls in Chuasij Comalapa, Chimaltenango and Buena Vista, Solola in November 2012. There were eight participants ages 12- 13 in the Chimaltenango group and also eight participants ages 13-15 in the Solola group. Participants came from the departments of Chimaltenango, Solola and Alta Verapaz. The focus groups were held in the adolescents' native languages: Kaqchikel for the Chimaltenango group and Kiche for the Solola group. All but two participants were attending school at the time. With the exception of one participant who lived with her grandparents, all participants lived with their parents. Thirteen girls were participating in the *Abriendo Oportunidades* program[†] and three were part of religious or musical groups. Both groups were led by the same facilitator, a multi-lingual youth leader from the *Abriendo Oportunidades* program.

Early on in the discussion, each girl was given a set of CycleBeads and a draft of the CycleSmart brochure. Girls were also given an overview of what CycleBeads are and asked for their opinion on the brochure, panel by panel. The facilitator then provided a detailed explanation of how to use CycleBeads and what the different color beads signify. Girls were asked to mark the first day of their period on a calendar and move the ring on CycleBeads to the corresponding day.

2.2. Initial perceptions of the CycleSmart brochure

Girls in both focus groups thought the brochure was something they and their friends could easily use and that they would be interested in reading it. Girls also said the brochure would help them learn about the changes that occur in their bodies. Among their initial reactions, girls mentioned that they appreciated seeing girls talking about menstruation with trusted adults. Girls mentioned this on several occasions throughout the initial discussion. "I like that some women are sharing ideas about how their menstruation began and also that girls talk to their moms about menstruation." They said the illustrations are "an example for us to learn from".

[†] *Abriendo Oportunidades* is an program managed by the Population Council in Guatemala which provides indigenous Mayan girls with personal and professional development skills, mentorship, and leadership opportunities.

One key message identified was that girls should talk to parents or trusted adults about menstruation or visit a health center, especially if there is something that concerns them. Comfort in discussing puberty and other changes with adults seemed to be complex issue for girls - a finding that was also confirmed in the stakeholder interviews. While all girls in the Chimaltenango group said they could share the brochure with their mothers without feeling uncomfortable, none of the girls in the Solola group said they could. Both groups said they could share it with a female teacher or a female friend, as long as it was someone they trusted. Girls characterized the mothers in one image as “brave” for meeting to ask for information on puberty, indicating girls would welcome open discussion of the topic and additional information about menstruation from adults.

2.3. Key messages obtained from the brochure

Girls said that from this brochure, people would learn that changes happen to the bodies of both men and women, and that such changes are normal. They also said they will learn, “not to be afraid of changes in their bodies,” implying that currently there is fear and discomfort surrounding these changes.

The panel with chalkboards describing physical changes that occur during puberty and the panel about CycleBeads and the menstrual cycle impressed upon the girls the importance of good hygiene. The points about greasier skin and body odor, using sanitary pads, and bathing every day during menstruation stood out to girls, and their conclusion is that taking care of one’s body becomes more important during puberty. Girls interpreted the panel to mean that “we must bathe every day so that we don’t have bad odor, if we don’t, pimples will grow on our face.” They also identified the importance of hygiene as a key message of the brochure.

Girls said the brochure teaches them that they should learn their cycle better in order to be prepared for the days of menstruation and that the purpose of using CycleBeads is to be aware of when your period will come. “[I should] know my cycle in order to be prepared for these days of menstruation,” was the most important message girls took

Key messages identified in the brochure by younger girls:

- Girls should talk to their parents or a trusted adult about menstruation and anything that concerns they may have
- Changes to the body are normal as their bodies develop and should not be feared
- Taking care of oneself and personal hygiene become more important during puberty
- Girls should use CycleBeads to track their menstrual cycles so that they will be prepared for their next period
- Women are the owners of their own bodies and should not tolerate groping or teasing by men
- Girls should take precautions and protect themselves during puberty

from the portion of the brochure that describes the use of CycleBeads. Girls appreciated references to and depictions of mothers and daughters discussing CycleBeads, and said the brochure would teach girls that they should ask their mothers how to use them.

Another key message identified is that girls must take precautions once they begin menstruating. Girls knew that they can become pregnant once they begin menstruating and that pregnancies before age 20 are considered risky. Though the decision to engage in or avoid sexual activity is not explicitly addressed in the brochure, participants said girls would learn that adolescents should not have sexual relations from it. Both groups recommended including messages about not having sexual relations at an early age.

2.4. Attitudes perceived towards gender relations

Girls generally reacted negatively to seeing boys and men depicted in a brochure they see as a tool for girls. Their responses likely reflect cultural norms around discussing these issues with the opposite gender, as well as fear of being teased by males. Girls mentioned that one reason to wear sanitary pads is that men will “think badly” if they see menstrual stains on a woman’s clothes.

Girls in both groups agreed they could share the brochure with a female friend or teacher, but not with a male friend or teacher. They said discussing this with a male would be an invitation for him to embarrass a girl. Upon seeing the brochure, one girl said the male characters are “foolish” for asking the female characters about menstruation and that the women do not want to talk to them. Girls did not approve of boys and men talking about menstruation and CycleBeads, or seeing conversations between men and women. Girls particularly disliked the comment a boy makes about finding pornographic materials on the internet.

The first drawing (see Figure 1, left) in the sequence resonated with girls, but it is not clear that all took away the intended message. The statement made by a female -

“I am the owner of my own body” stood out as a key message of that panel. Some interpreted the message as being that girls are the owners of their own bodies and that men should not touch them or make them feel uncomfortable about their bodies. However, others said that you should not leave your house or associate with men while you are menstruating because “men will grope you”. Some girls did see a positive side to including boys in the brochure, “it’s not just us who should know about our changes but also men so

Figure 1. First panel in CycleSmart brochure



that there's not pregnancy." Another girl said the message was that men should also be spoken to about the changes that happen to girls.

The concept that boys should not touch girls was important to participants, and one girl recommended revising the second drawing in the sequence (about one boy looking at pornographic content online) to further emphasize this message. "Change what this boy is saying; maybe don't speak about [videos on the internet], he should say that now I am learning more things about menstruation and that you don't have to touch women." As references to men groping, abusing, and touching women came up at several times in the discussion, this may reveal an opportunity to show males disavowing negative behaviors and promoting equitable perspectives. These comments suggest that while girls said they think images of boys should be removed, images of males may actually encourage questioning of gender barriers surrounding knowledge and discussion of menstruation.

Also noteworthy is that, many of the words related to the body and physical developments during puberty were not understood. This could indicate a lack of knowledge of these issues, but could also result from a language barrier if they have learned these concepts in their mother tongues but have not yet learned them in Spanish.

As mentioned previously, the FGDs concluded with a demonstration of how to use CycleBeads to track one's menstrual cycle. Girls were excited and interested when the explanation of how to use CycleBeads was given, and they played with the beads throughout the session. None of the girls had any questions about how CycleBeads work for tracking their menstrual cycle. After reading the brochure panel with instructions on using CycleBeads, the girls responded accurately to questions about the use of the beads for tracking the menstrual cycle.

2.5. Follow-up Focus Groups with Girls (Use of CycleBeads)

Half of the original FGD participants (8 of the original 16) did not participate in the follow-up focus groups. It was revealed that some girls had not yet started menstruating and some who had begun menstruating had not seen their period in the six weeks between the focus group discussions, so many did not have a reason to use CycleBeads in that timeframe.[‡] Additionally, some participants simply did not return for the follow up discussion. From the Solola group, three of the eight girls participated in the follow up discussion while from the Chimaltenango group; five of the eight girls did so. Of these girls, three girls used CycleBeads and the others did not use CycleBeads either because they were too busy and forgot or because they had not menstruated in the six weeks between FGDs.

While the previous focus group discussion indicated that instructions on how to use CycleBeads and the significance of the different color beads were clear, follow up discussions with the same girls conducted six weeks later revealed that several girls did not retain much of this information. Girls were asked if they had remembered how to use

[‡] Recruitment of girls for these focus group discussions called for girls who had started menstruating. However, this criterion was not met, resulting in participants who could not use CycleBeads to track their cycles.

CycleBeads, while one group responded that they remembered and it was easy; girls in the other group said, “it was difficult because I didn’t know how to use it” and “it was difficult because sometimes I would forget”. Girls asked that CycleBeads be explained to them again.

While all eight girls did not use CycleBeads to track their menstrual cycles, they shared other experiences they had with the brochure and CycleBeads. Girls who tracked their cycles found it difficult to remember to use the accompanying diary; at least one girl used it occasionally, others did not. Some girls showed CycleBeads to their mothers, aunts, and other female relatives. However, they were not able to explain to their family members how to use CycleBeads or what the different colors signified. The adult women thought it was important and useful to learn how to use CycleBeads, and one mother of a girl was already using them (presumably for FP).

Despite difficulty remembering the details of how to use CycleBeads, girls still thought being able to track one’s menstrual cycle was useful, and they intended to use CycleBeads in the future. One girl said, “imagine if you hadn’t taught us this, well, we wouldn’t realize when [our period] would come, how many days [it would last], and how many days until it would come again.” She added that though she forgot to use the calendar, seeing CycleBeads helped her remember to track days. In both groups girls said they would want to learn about CycleBeads through a class or workshop, rather than just reading the instructions in the brochure.[§]

3. Focus Groups with Boys

Two focus group discussions were held with adolescent boys, ages 12 to 15. Facilitators noted that most boys were engaged in the discussion. Boys seemed to know more about girls’ puberty than about changes adolescent boys go through and were eager for information and discussion about these changes. One participant noted that the section where the teacher is talking to students is important, as there is no “appropriate” age to start knowing your own body and that every child should be able to ask questions.

Some boys knew that CycleBeads are related to menstruation and keeping track of days in the menstrual cycle. Some boys appreciated that CycleBeads could be a tool to learn about puberty and fertility, but others thought they would also need information on the risk of pregnancies during certain times of the menstrual cycle. Boys wanted information on irregular cycles, sexual intercourse, pregnancy, and contraception. They pointed out that if adolescents should not use CycleBeads as method of contraception, information on methods that are appropriate for youth should be included. They thought the brochure should do more to address biased sources of information, such as pornography and the internet.

In conclusion, boys said they would be very interested in a brochure targeted at adolescent boys. They recommended that such a brochure include information on STIs, FP and

[§] This information may indicate that the orientation girls received on how to use CycleBeads was insufficient or may need strengthening.

contraception methods, as well as masturbation, and myths surrounding boys' puberty. While boys enjoyed the illustrations and colors in the draft CycleSmart brochure, they suggested less text and greater interaction between characters of the opposite sex.

Conclusions and Recommendations

1. Additional Information to Include

Several adolescent girls and boys and some parents suggested adding information on avoiding pregnancy, and methods of contraception to the brochure. Girls recommended including messages such as 'you don't have to have sexual relations or become pregnant', and that there are risks associated with having sex, such as acquiring STIs.

Participants also suggested information about proper nutrition be included, and some specified that girls should be told what they should eat during menstruation (even though there are no dietary restrictions during menstruation, as the brochure states). Their responses indicate a need to further address common myths surrounding menstruation. Participants thought additional information on the importance of good hygiene should be included. The age range at which puberty occurs should also be added.

Girls in both focus groups listed 'secretions' as a word they were not familiar with and that was not clear to them. Although it is already defined on the panel with the blackboard, additional information about secretions and when in the menstrual cycle they occur should be added. Details on the frequency of changing sanitary pads or cloths and an explanation on differences in levels of bleeding throughout the menstruation may help address concerns.

2. Design and Vocabulary

Adolescents and parents alike thought that the images explained changes and experiences during puberty well. Most said the sequence and structure of the brochure is good, though some adolescents recommended beginning with an explanation of how CycleBeads are used and ending with the chalkboard panel. The illustrations were considered attractive and pleasing. There were a variety of opinions regarding the clothing worn by characters in the brochure; while some girls approved of women wearing both traditional dress and non-traditional dress (i.e. pants or jeans), others did not think that any of the women should be shown wearing pants, and that the men should be shown wearing formal attire rather than jeans.

Both adolescents and parents recommended increasing the size of the letters throughout the brochure and/or changing the color scheme to make it easier to read. Many adolescents did not understand various terms throughout the brochure. The table below lists key changes suggested by adolescents to improve the brochure. It is important to note that some changes, such as focusing solely on girls and removing male characters - a suggestion of younger girls - contradicts information received from boys, who are interested in this information.

Type of modification	Suggested changes	Group(s) who made suggestion
Additional information to include	<ul style="list-style-type: none"> • Details on secretions, including when they occur during the menstrual cycle • Variations in cycle length • Details on female body parts • Clothing, including under garments, to wear during menstruation • Messages about delaying sexual relations • Information on dietary recommendations during menstruation • Age range of body changes during puberty • Information on hygiene during menstruation 	Girls
	<ul style="list-style-type: none"> • Messages about risks of pregnancy and how to prevent pregnancy 	Girls, Boys & Parents
Preferred gender depictions	<ul style="list-style-type: none"> • Remove reference to watching internet pornography and change this to a positive behavior instead • Remove all images of males 	Girls
Design	<ul style="list-style-type: none"> • Use larger font throughout and/or a different color scheme on the cover side to make it easier to read 	Girls, Boys & Parents
	<ul style="list-style-type: none"> • Make brochure tri-fold (rectangular), instead of square to make the sequence easier to follow 	Parents
	<ul style="list-style-type: none"> • Add images of animals to illustrations in the park 	Boys
Vocabulary and changes in text	<ul style="list-style-type: none"> • Replace the following words with simpler vocabulary: <ul style="list-style-type: none"> ○ <i>corporal</i> ○ <i>orgasmos involuntarios</i> ○ <i>la produccion de espermas</i> ○ <i>días fertiles</i> ○ <i>procrear</i> ○ <i>esperma</i> ○ <i>secreciones</i> ○ <i>desprendimiento del tejido</i> ○ <i>planificación</i> • Change 'vos' to 'tu' or 'usted' • Use local vocabulary, such as words used in Mayan languages of indigenous groups represented 	Girls
	<ul style="list-style-type: none"> • User shorter phrases or shorten the amount of text in the brochure 	Boys
Other changes	<ul style="list-style-type: none"> • Use only images of indigenous girls or girls wearing only traditional clothes 	Girls

Table 4: Key suggestions for CycleSmart brochure (adolescents and parents)

Following focus groups with girls, boys and parents, changes were made to the draft version of the CycleSmart brochure. All changes suggested were not possible, but most were taken into consideration and incorporated into a final version of the brochure. For example, suggestions for additional information were not added due to limited space in the brochure and the existing need to make the font of the text in the brochure larger. Simpler vocabulary and changes in text were incorporated. Other changes suggested, such as removing images of males or using only

images of indigenous girls were not included in the final version in order to make the brochure appealing to a greater number of adolescents.

3. Discussion

The results of focus group discussions with adolescents, parents of adolescents, and stakeholders who work with adolescents indicate that many adolescents in Guatemala lack adequate information on puberty and would welcome more information, particularly before they enter puberty. The CycleSmart brochure and CycleBeads were deemed a culturally appropriate resource for meeting this need. Participants thought that tracking one's menstrual cycle using CycleBeads would be useful. Schools and health centers were cited as places where the brochure should be available.

Adolescent girls enjoyed learning to use CycleBeads and considered them a useful tool for tracking their menstrual cycles. However, a single session explaining how to use CycleBeads was not sufficient for most girls. Organizations that incorporate the CycleSmart kit into programs for adolescent girls should note that it may be best to introduce the brochure and CycleBeads over the course of several sessions, to reinforce the messages, ensure that girls remember instructions on how to use CycleBeads, and respond to questions that arise as girls learn to track their cycles.

Parents stated that they would want to be included in the process of educating their children about puberty. However, many felt that they themselves lack adequate information on the topic. Programs that utilize the CycleSmart kit should consider ways to educate parents as well as youth about the changes that adolescents experience during puberty and on other SRH topics.

Adolescents, parents, and stakeholders made connections between fertility, sexual relations, pregnancy, and STIs. Parents and stakeholders noted that pregnancies among teenagers are a problem in Guatemala that needs to be addressed. Participants in all groups recommended including information on avoiding pregnancy and contraceptive options in the brochure. While the brochure is intended for younger adolescents, most of whom are not having consensual sex, programs using the brochure should be aware that questions about contraception and avoiding pregnancy are likely to arise and be prepared to respond to these questions and provide or direct youth to resources. Many adolescent girls and boys recognized that CycleBeads can be used as a FP method, so additional information on why it may not be effective for young adolescents should be included.

Stakeholders recommended that males receive information about menstruation also, so that they may gain insight into the physical and physiological changes girls experience and to create a dialogue on gender norms and appropriate behavior between sexes. Boys agreed that they should receive information on male and female puberty and welcomed a similar brochure addressing their needs. While many girls disliked seeing females talking to males about menstruation in the illustrations, a few thought it was important for males to have this

information. Including images of males in the brochure may help to break down some of the cultural taboos regarding discussing this topic with the opposite sex.

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Appendices

Los cambios que podés ver durante la adolescencia son normales:

mujeres

- Crecen los pechos
- Crecen las caderas
- Inicia la menstruación
- Comienzan las secreciones: Un flujo normal y húmedo en los genitales entre una menstruación y la siguiente

hombres

- Crece el vello facial
- La voz se pone grave
- Inician los orgasmos involuntarios durante los sueños
- Inicia la producción de espermatozoides
- Crece el pene

cambios en ambos

- Crecen vellos o pelos en las axilas y el área genital
- La piel se pone más grasosa y a veces salen espinillas
- Hay más sudor y olor corporal
- Aumenta la estatura

FERTILIDAD

- El inicio de la menstruación indica que la niña puede quedar embarazada.
- El espermatozoide indica que el niño puede causar un embarazo si tiene relaciones sexuales con ella en sus días fértiles.
- Aunque las niñas y niños estén físicamente listos para tener hijos, no quiere decir que estén listos para ser padres.
- Los embarazos antes de los 20 años son considerados de alto riesgo.

Conociendo mi Ciclo

APRENDAMOS MÁS SOBRE LA REGLA

¿Cómo podemos saber más sobre la menstruación usando este collar?

Yo le pregunté a mi mamá y ella me explicó, ahora yo les puedo decir cómo funciona.

Desde que uso el collar del ciclo sé cuáles son las días de posible embarazo.

yo ya conozco mi ciclo y me preparo para esos días.

sí, ahora comprendo las distintas etapas del ciclo menstrual.

En el Collar del Ciclo, cada cuenta o perla es igual a un día del ciclo menstrual. Así se usa el Collar:

La FLECHA muestra hacia donde mover el anillo.

El día que te baje la regla mové el anillo a la perla ROJA

Quando vuelva a bajar tu regla mové el anillo a la perla ROJA

Los perlas CAFÉS marcan los días de poco riesgo de embarazo

Quando el anillo esté en cualquier perla BLANCA hay mas probabilidad de embarazo. Hay 12 perlas BLANCAS.

Todos los días mové el anillo a la perla siguiente. Movélo aún en los días que estés con la regla

LAS Y LOS ADOLESCENTES NO DEBEN USAR EL COLLAR DEL CICLO PARA PREVENIR EMBARAZOS PORQUE NO FUNCIONA BIEN PARA LAS JOVENES

Si vos o alguien que conocés necesitan un método de planificación familiar, hablá con un profesional de salud o con un adulto con quién tengas confianza

La menstruación o regla comienza con la liberación del tejido del útero en forma de sangre. Dura de 3 a 7 días. En los días que tenés la regla podés utilizar toallas sanitarias o retazos de tela para no manchar tu ropa y tu ropa interior.

Durante esos días debés: Bañarte todos los días, cambiarte las toallas sanitarias o telas y la ropa interior las veces que sea necesarias, tomar suficiente agua y continuar con tu alimentación normal diaria.

Si sentís dolor podés tomar té de hierbas, pastillas de acetaminofén o ibuprofeno. El Collar del Ciclo te puede ayudar a familiarizarte con tu propio ciclo menstrual.

Si hay algo que te preocupa, habla con alguien de tu confianza o asistí a un centro de salud o clínica especializada.

Información y dudas:
 Pop Council tel: 502 2369-2760 dirección: 23 av. 3-45 zona 15, Vista Hermosa 1, Guatemala
 APROFAM: 2321-0000 - 2321-0101
 Tu centro de salud:

Figure 2: Brochure Cover

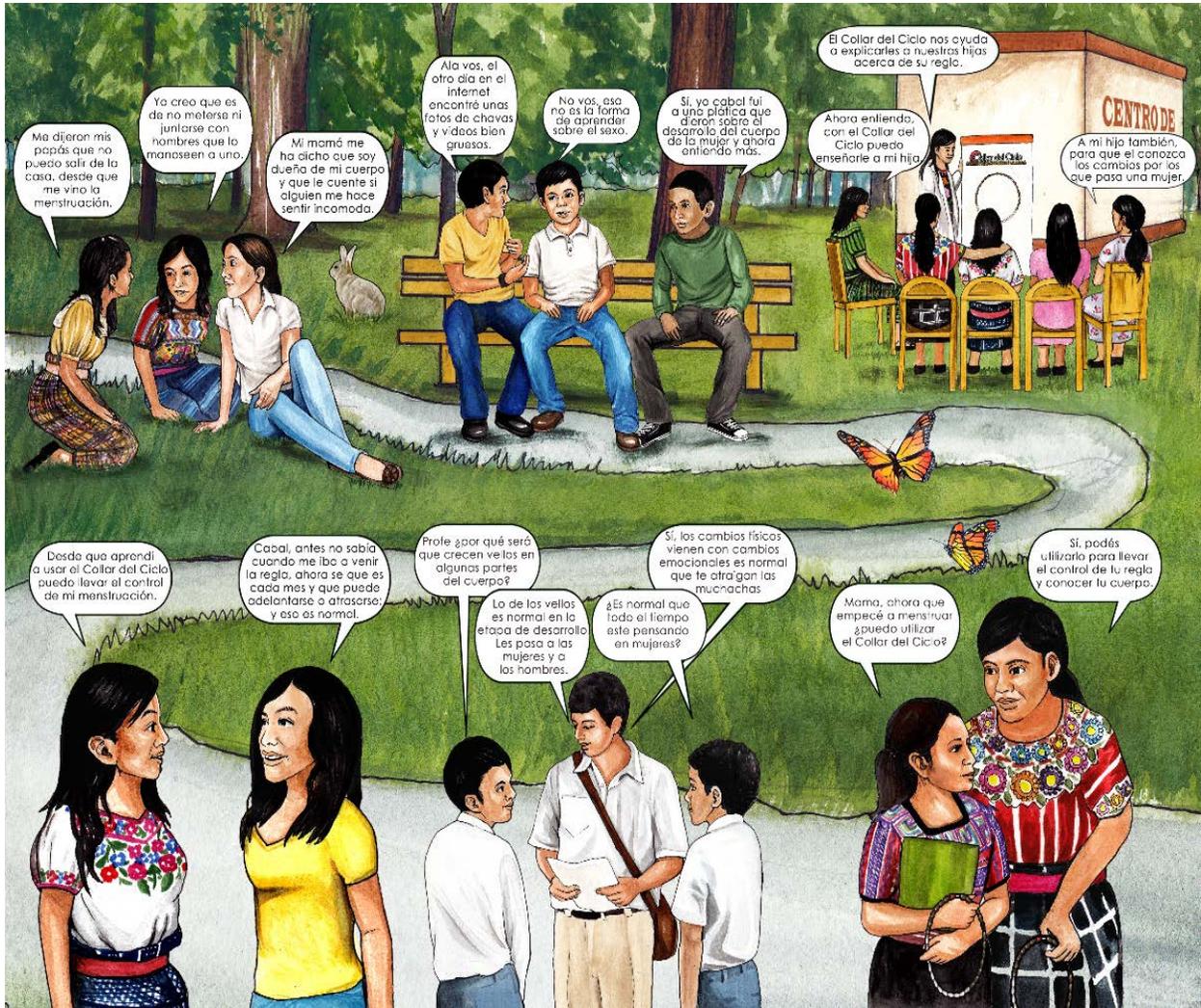


Figure 3: Brochure Interior