Advancing Promising Program and Research/Evaluation Practices for Evidence-based Programs Reaching Very Young Adolescents: A Review of the Literature

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I. Introduction

Between the ages of 10 and 14, boys and girls are beginning to solidify their identities and develop attitudes and skills that lay the foundation for future sexual and reproductive health and well being. Yet, sexual and reproductive health (SRH) programming for this age group, often called very young adolescents (VYA), is in its infancy. During this period, boys and girls experience a variety of changes – to their bodies and brains, emotionally and socially. It is also a time of developing sexuality,[1] including the exploration of masculine and feminine roles and the acquisition of a gender identity (including sexual orientation).[2] Given the central role of gender in sexuality, it is critical that SRH programs tackle the issue of gender and its influence on SRH outcomes. 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. SRH programs for VYAs are therefore challenged with helping young girls and boys to navigate these physical, emotional, and social changes in diverse cultural contexts around the world.

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 future relationships and communication with sexual partners about rights and responsibilities and for developing self-care practices and behaviors to prevent unwanted sexual relationships, unintended pregnancy, and disease. Gender norms and attitudes established during this phase of development are particularly influential for future sexual and reproductive health outcomes. Indeed, gender relations are considered among the most influential social determinants of health. [3]

Although parents or guardians generally still have significant influence in VYA's lives, they often find it difficult to cope with the changes their child is 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. The challenges of parenting

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[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.

[2] *Breinbauer, Cecilia and Matilde Maddaleno. 2005. Youth, Choices, and Change. Promoting Healthy Behaviors in Adolescents. Presentation last accessed May 1st 2010 www.paho.org/English/DD/PUB/Youth_Presentation_June_2005.pdf*

[3] *Sen, Gita, Piroska Ostlin, and Asha George. 2007. Final Report to the World Health Organization Commission on the Social Determinants of Health.*

young adolescents, especially in regards to SRH, and the influence of other adult community members on youths' lives, are additional considerations that SRH programs must take into account.

Evidence increasingly suggests that good sexual and reproductive health is intimately related to equitable power relations. In addition, 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 are increasing being proven to directly influence health-related behaviors.[4] 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, avoiding unintended pregnancy, gender-based violence, parenting and health-seeking behavior.[5] A recent 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.[6]

Thus, interventions for VYAs which address puberty, fertility, gender and sexuality 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, strong self-esteem, and decision-making and communication skills, as well as fostering self-respect and respect for others, rather than a narrow focus on sexually transmitted infections (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.

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[4] *Barker, Gary, Christine Ricardo, and Marcio Nascimiento. 2007. Engaging men and boys in changing gender-based inequity in health: Evidence from programme interventions. Switzerland: World Health Organization.*
Aronson, Robert E., Tony Whitehead, and Willie L. Baber. 2003. Challenges to Masculine Transformation among Urban Low-Income African American Males. American Journal of Public Health 93(5):732-741.
Courtenay, Will. 2000. Constructions of masculinity and their influence on men's well-being: a theory of gender and health. Social Science and Medicine 50:1385-1401.

[5] *Marsiglio, William. 1988. Adolescent Male Sexuality and Heterosexual Masculinity: A Conceptual Model and Review. Journal of Adolescent Research, 3(3-4):285-303.*
Kirkman, Maggie, Doreen Rosenthal, and Shirley Feldman. 2001. Freeing up the subject: Tension between traditional masculinity and involved fatherhood through communication about sexuality with adolescents. Culture, Health and Sexuality 3(4):391-411.
Bowleg, Lisa. 2004. Love, Sex, and Masculinity in Sociocultural Context. Men and Masculinities 7 (2):166-186.
Asencio, M. 1999. Machos and Sluts: Gender, Sexuality and Violence among a Cohort of Puerto Rican Adolescents Medical Anthropology Quarterly 13 (1):107-126.

[6] *Marston, Cicely and Eleanor King. 2006. Factors that shape young people's sexual behaviour: a systematic review. The Lancet 368(9547): 1581-1586.*

As the *Investing When it Counts* technical meeting held by UNFPA and Population Council in 2003 affirmed, a new generation of research and program interventions dedicated to VYAs is needed. Programs are needed that address the "hearts and minds" of this age group and can be effectively scaled-up in diverse contexts. New, ecologically-framed research is needed to understand these young peoples' lives and the factors that protect them, particularly the role of parents and other adults involved in their lives. New approaches and methodologies for quantitative and qualitative inquiry are also needed to help young people voice their concerns and provide guidance to programming.

This paper reviews and describes research practices and program interventions addressing the SRH of VYAs and identifies promising program components and research/evaluation practices. The paper is not exhaustive but serves as a tool for further discussion of what is needed in VYA programming and research that will occur at a June 2010 technical meeting of experts convened by Georgetown University's Institute for Reproductive Health.

II. Methods

For the review, two methods were employed to capture as broad a range of programs targeting this age group as possible. The first method consisted of entering search terms into JSTOR and Sciencedirect.com and systematically selecting articles. Search terms were variations of the following: "sex," reproduct," or "gender" cross-listed with variations of "adolescen," "early adolescen," "young adolescen," preadolescen," or "very young adolescen." The search was limited to articles published in the 2000s, in English,[7] and on programs for youth in developing countries. Articles with the terms "young adult" in their keywords were excluded. This initial search returned approximately 3000 articles.

From this list of results, articles that were clearly unrelated to the review were removed (for example, those focusing solely on obesity, depression, or nutrition). From this shortlist, programs were only reviewed in depth if articles described in detail programs that included 10 to 14 year old youth in their target group or evaluated VYA programs.

The second method to gather documentation involved surveying publications, program reports, evaluations, briefs, and findings not published in peer-reviewed journals—"grey literature"—from organizations working with this age group. This material was found largely by searching on Google and by contacting professionals with expertise with youth and adolescents for their suggestions. Programs were reviewed in-depth if they targeted 10-14 year old youth, or if they evaluated VYA programs.

[7] This may have limited the search to some degree as there have been many programs in Latin America which presumably would have been evaluated in Spanish. However, several of these programs were captured by the second method for finding literature.

Despite all efforts to be as comprehensive as possible, the authors recognize that some programs and interventions may not be included in the review, especially those not in English. Additionally, some programs recommended for review to the authors often did not have sufficient documentation available.

Finally, the authors did not review U.S.-based programs because of the sheer volume of available literature. A future review focused on analyzing best or promising practices found in the U.S. or European countries may provide valuable ideas of program and research practices to be adapted to lower and middle income country settings.

III. Overview of Types of Programs Targeting 10 to 14 Year Olds

This review has found that SRH programs often do not distinguish 10 to 14 year olds from older adolescents. Many programs target "adolescents" or "youth" variously defined, spanning the 10 to 18 or 10 to 24 age range. Notably, these programs rarely adapt materials or program content according to age; or, if they do, documentation detailing activities for VYAs is absent. Because of the difficulty of identifying promising approaches for 10 to 14 year olds from programs which target adolescents as a homogenous group, this review will focus mainly on those programs designed specifically for adolescents under 15 years of age. First, however, this section will give a brief description of the types of programs targeting VYAs in general. Initiatives that include 10 to 14 year olds span a variety of program types including: school-based, community-based, faith-based, media-based, teacher-led, peer-led, life skills oriented, gender focused, and livelihoods structured. These programs are delivered in a didactic teaching format or by using participatory learning methods. A notable absence in the literature is programming for hard-to-reach and vulnerable populations, for example, youth not in school, those without parents, refugees or transient populations, and the urban poor.

More than any other adolescent SRH issue, HIV prevention programming seems to lead the way in terms of number of programs (at least published) and availability of an evidence-base. There have been several systematic reviews in recent years attempting to identify what works in HIV/AIDS prevention programming for youth.[8,9,10,11] These reviews provide an excellent overview of promising program components; however, they rarely break out findings by age group.

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[8] *Ross, David A., Bruce Dick, and Jane Ferguson (eds). 2006. Preventing HIV/AIDS in Young People: A Systematic Review of the Evidence from Developing Countries. Geneva: World Health Organization.*

[9] *Mavedzenge, Sue Napierala, Aoife Doyle, and David Ross. 2010. HIV Prevention in Young People: A Systematic Review. London: London School of Hygiene and Tropical Medicine.*

[10] *Gallant, Melanie and Eleanor Maticka-Tyndale. 2004. School-based HIV prevention programmes for African youth. Social Science & Medicine 58: 1337–1351*

[11] *Harrison, Abigail, Marie-Louise Newell, John Imrie, and Graeme Hoddinott. 2010. HIV Prevention for South African Youth: Which Interventions Work? A Systematic Review of the Evidence. BMC Public Health 10:102.*

An interesting group of programs attempt to emulate work originating in the U.S. in one of two ways – either by adapting to the local context those programs proven effective in the U.S., or by using approaches driven by theory.[12,13] Findings suggest that if carried out meticulously by exploring the cultural context and its implications for implementation first and then adapting program content accordingly, replication of evidence-based U.S. programs could yield positive results. Likewise, theory-driven programs may also hold promise in the developing world context because they can guide the interventions and help explain the pathways to change.[14]

Appendix A presents details of four programs illustrating the variety of SRH programs and the extent to which they target 10 to 14 year olds distinctly. As far as programs targeting VYAs specifically, this review was able to identify 18 initiatives with reasonable program documentation. Many of these programs are innovative and distinct from broader ASRH initiatives. The next section will review these programs in more detail.

IV. Description of Programs Targeting 10 to 14 Year Olds Only

This section presents a description of the key characteristics and interventions of programs targeting 10 to 14 year olds, and an overview of their research and evaluation designs, and program impacts (see Appendix B for additional information and details of evaluation methods, measures, and indicators). Programs are organized according to the key program characteristic as presented in the program descriptions. Programs contain multiple, overlapping characteristics, and Table 1 compares the characteristics of all the programs (see next page).

The 18 programs represent a wide variety of interventions from sports-based to gender-focused. Of the 18 programs, eight were implemented in Africa, three in Asia, two in Latin America, two in the Caribbean, and three were multi-regional. Seven programs were predominantly HIV/AIDS focused, and seven were designed around SRH issues. Only five programs had peer-reviewed documentation (see Appendix C).

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[12] *Kinsler, Janni, Carl D. Sneed, Donald E. Morisky, and Alfonso Ang. 2004. Evaluation of a school-based intervention for HIV/AIDS prevention among Belizean adolescents. Health Education Research 19: 730–738*

[13] *Chen, Xinguang, Sonja Lunn, Lynette Deveaux, Xiaoming Li, Nanika Brathwaite, Lesley Cottrell, and Bonita Stanton. 2009. A Cluster Randomized Controlled Trial of an Adolescent HIV Prevention Program Among Bahamian Youth: Effect at 12 Months Post-Intervention. AIDS Behavior 13:499–508.*

[14] Theories can be broad-ranging, from cognitive-behavioral to behavior change and social science to public health.

Table 1: Key Program Characteristics

	Life skills & SRH info	Puberty transition	Parenting & parent-child communication	School & community based	Comprehensive programs	Theory-based	Gender-based or girls empowerment	Sports-based	Peer educators	School-based only	SRH info only	Creation of safe spaces	Livelihoods	Health Services
Tuko Pamoja	**X**						X			X				
Choose Life	**X**								X					
Chill Club	**X**						X			X				
Growth & Changes		**X**					X							
My Changing Body		**X**	X				X							
Cool Parent Guide			**X**								X			
PSABH				**X**			X				X			
KGGA	X			**X**			X		X					
Entre Amigas	X	X	X		**X**		X	X	X			X		X
ISHRAQ	X	X			**X**		X	X	X			X	X	X
PRACHAR		X			**X**		X							
Youth.now					**X**						X			X
FOYC	X		X			**X**		X						
Soccer Schools						X	X	**X**			X			
Choices							**X**							
PeacePlayers	X							**X**						
GEMS Project	X						X			X				
Adolescent and Risk Avoidance for Youth Programme	X	X	X											

(Notes: Key classifying characteristics bolded and underlined)

LIFE SKILLS CURRICULA

"Tuko Pamoja" – PATH: Kenya; "Choose Life" -- World Relief: Rwanda, Mozambique, Kenya, and Haiti; and "Chill Club" -- PSI: Kenya

While not programs in and of themselves, there are a handful of curricula targeting 10 to 14 year olds. Three examples[15] combine a life skills approach with activities to improve SRH knowledge. Notably, these curricula do not discuss ways to prevent STIs/HIV or unintended pregnancy other than abstinence. The curricula follow a very similar progression through topics and include discussions on values and gender. All three curricula take a participatory learning approach. One is peer-led, and two are intended for anyone working with young people. The guides contain minimal training or instruction for those implementing the curriculum. In two curricula, the wider community is not engaged but parental permission is sought and in one curriculum, there is a homework assignment to ask parents about their experience with puberty. The third curriculum (the *Chill Club*) encourages involvement of parents in a more meaningful way. For two of the curricula, no documentation was found detailing their use as part of a project and therefore there are no corresponding evaluations (although the *Chill Club* manual states it was intended for use in the "Abstinence for Youth" program). The *Tuko Pamoja* curriculum was revised based on its use in the Kenya Adolescent Reproductive Health (KARH) Project. The original curriculum did not distinguish topics by age as the revised version does, nor are details available of how the KARH project targeted 10 to 14 year olds separately. However, evaluation findings of KARH do distinguish 10 to 14 year olds from older adolescents.

Abstinence and Risk Avoidance for Youth Programme or "ARK" -- World Vision & Johns Hopkins Center for Communication Programs: Kenya, Tanzania, and Haiti

This set of curricula consists of guides for adults to facilitate interactive exercises—including role plays, games, puzzles, and group discussions—with to youth influence them to make responsible choices. The guides are designed to reduce young people's risk of contracting HIV and/or STI by increasing their knowledge and encouraging them to change their attitudes and behaviors. The goal of the guides is to promote positive changes in norms related to sexual expression and promote abstinence to prevent HIV or STI infection.

The curriculum for 10-14 year olds differs only in that several sections have been removed from the 15-24 year olds' curriculum. These are: a session on getting comfortable with Sexual Terms to help both the facilitator and youth feel comfortable discussing sex; games to teach youth about how quickly an STI can spread through a group of people and how HIV can be transmitted throughout a population; and a goal-setting activity. Furthermore, the guide for the age group 10-14 strongly encourages the facilitator to emphasize *abstinence*

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[15] *2006. Tuko Pamoj: Adolescent Reproductive Health and Life Skills Manual. Kenya: PATH.*
2006. Choose Life: Guide for Peer Educators and Youth Leaders. MD: World Relief.
2005. Chill Club: Adolescent Reproductive Health and Life Skills Curriculum for Upper Primary School Youth. Kenya: Population Services International.

throughout implementation of the guide whereas the guide for the older age group encourages the facilitator to emphasize *abstinence, secondary abstinence, and faithfulness.*

This program has an accompanying communication guide for parents and other responsible adults titled "Tambua Life" to help adults communicate effectively about their children's sexual health and future.

PUBERTY-FOCUSED

"Growth and Changes" Girls Puberty Book -- Marni Sommer, Columbia University: Tanzania

This short book aims to provide 10 to 14 year old girls in Tanzania[16] with guidance on early puberty and body changes, along with pragmatic advice on how to manage their menstruation (in school). The book is divided into three sections - 1) basic puberty guidance and menstrual management information, 2) a selection of menstrual stories written by older girls (16 to 18), and 3) activities about puberty, for example teaching girls to keep a menstrual calendar, menstrual myths, and a question and answer section answering anonymous puberty questions submitted by girls involved in the research for the book.

The book was pre-tested prior to widespread distribution. Desired outcomes from reading the book include improved knowledge, self-esteem and self-efficacy, and girls who are empowered by a new understanding of their changing bodies. The development of the book was part of a larger research study investigating the connection between onset of menses and school attendance. Therefore, increase in school attendance could possibly be an additional measure.

In developing the book, feminist participatory research was conducted with 16 to 18 year olds to understand how girls experience menarche and puberty and to assess their knowledge levels. A feminist participatory approach recognizes the researcher's own role in the research process, the power dynamics of conducting research, and the necessity of partnering with research participants.[17] Participatory activities included collecting research participants' anonymous puberty questions, asking them to design a puberty curriculum and to write stories describing their own transition through puberty. The book was distributed by NGOs.

The book distribution process was evaluated using process and monitoring data collected from the NGOs and teachers who distributed the books. Process evaluation findings indicated that parents were very comfortable with the book and requested that girls all over Tanzania receive the book. In terms of impact, pre and post-test evaluation findings are currently being analyzed, but initial qualitative findings show that girls were very positive about the book and requested that it be widely distributed to girls and their

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[16] Marni Sommer is currently seeking funding to adapt it to other contexts.

[17] *Sommer, Marni. 2009. Ideologies of Sexuality, Menstruation and Risk: Girls' Experiences of Puberty and Schooling in Northern Tanzania. Culture, Health & Sexuality 11:383-398.*

mothers. Girls also wanted more books to be developed to teach girls about other important topics (including a book for older girls who have sexual pressures).

"My Changing Body" – The Institute for Reproductive Health: Rwanda and Guatemala

My Changing Body is a fertility-awareness and body literacy curriculum for 10 to 14 year old girls and boys. Fertility awareness (an understanding of our reproductive functions) is important for both boys and girls as it is core to understanding our gendered, sexual selves. Body literacy enables young people to recognize how their sexual and reproductive selves are influenced by gender and social norms. The resulting knowledge, social awareness, and skills facilitate passage through puberty and prepare youth to care for their health and that of their partners. The curriculum also hopes to instill self-confidence and a healthy self-image. Originally developed in collaboration with FHI, the curriculum has recently been revised by IRH to strengthen cross cutting themes of gender and sexuality throughout the curriculum. It is for use by anyone working with VYAs and takes a participatory and fun learning approach. The curriculum is designed to be an add-on to existing SRH or general youth programs covering other issues. Topics on sexual behaviors and practices are not discussed overtly but the guide contains possible questions and answers which might arise in discussion. The guide contains sessions on: puberty; male and female fertility; fertilization; concerns about fertility including concerns about menstruation, nocturnal emissions; and hygiene and puberty. In addition to the main curriculum, sessions for adult care takers have been added. This component was designed based on the results of formative research conducted recently by IRH indicating that that parents wanted more information to help them discuss fertility and puberty issues with their children. A facilitator's training course accompanies the curriculum.

My Changing Body has been implemented in Guatemala and Rwanda and evaluations of the programs are currently underway using a pre- and post- design with nonequivalent matched control groups. Changes in knowledge as well as gender perceptions and attitudes are being measured. Preliminary findings indicate: that, in the intervention group, there is an increase in fertility knowledge among the intervention group; parents believe they are more accepting towards their children's sexuality; both parents and youth report greater confidence and the ability to communicate; and there is a shift towards more equitable gender attitudes among both parents and youth.

PARENTING AND PARENT-CHILD COMMUNICATION

"The Cool Parent's Guide" – Save the Children: Malawi

As part of a larger project ("School Health and Nutrition"), *The Cool Parent's Guide* was developed in Malawi for parents of seven to 11 year olds to help them discuss sexuality and SRH issues, in particular HIV, with their children. Prior participatory research had revealed that while there was good knowledge around HIV and positive attitudes towards abstinence, sexual debut, sometimes occurred before age 10. Lack of parental supervision

was linked to early sexual debut and children expressed a desire for better communication and relationships with their parents. The research also found children had high levels of trust for their parents. After testing various different interventions, *The Cool Parent's Guide* was developed and distributed by chosen members of the community. The distributors were chosen in collaboration with community leaders and given training on how to hold education sessions with parents about the guide.

The guide contains HIV facts as well as suggestions about how to talk to their children, what to say, and strategies for helping their children avoid potentially risky situations. Parents were encouraged to talk one-on-one with their child every week using the guide and to monitor their children's participation in potentially dangerous situations, such as going to manganje dances. Additionally, parents were given examples about how to positively communicate with their children in general to develop trust and mould positive behaviors.

A qualitative endline evaluation revealed that the guide helped many parents change the way they talked to their children, and children also felt it improved their communication with their parents. Since receiving the guide, most parents were discussing SRH and related topics with their children. Most children reported that they have decreased their exposure to risk-associated situations. However, the guide was not used by all parents, especially not by those who could not read.

SCHOOL AND COMMUNITY-BASED PROGRAMS

Primary School Action for Better Health (PSABH) – Center for British Teachers and the Ministry of Education: Kenya

This large-scale project in the Nyanza and Rift Valley Provinces of Kenya targets upper primary school pupils and aims to create positive behavior change in sexual relationships to reduce the risk of HIV transmission. As a first step, the project conducted research analyzing the social and policy environments acting as barriers to change. Findings revealed that beyond the lack of knowledge about HIV/AIDS, existing HIV information was confusing, for example, multiple sources with conflicting messages. The Ministry of Education remained silent on the issue of condoms further adding to conflicting messages spread by teachers, church and community leaders, and parents. Additional research findings showed schools were poorly equipped to implement sexuality education curricula, and poverty resulted in many girls dropping out of school and engaging in the sex trade.

The project was designed with intensive training components for teachers, community leaders and parents. The project aim is to provide accurate information on prevention, to promote abstinence, and to delay the onset of sexual activity. Improved educational materials were distributed to schools and teachers were trained to incorporate HIV knowledge and awareness into the normal curriculum using innovative teaching methods. The project uses participatory activities and aims to include the wider community, for example by holding inter-school drama competitions.

The quasi-experimental evaluation showed that the program has reduced the number of pupils having sex, delayed sexual debut, and increased the number of girls reporting condom use. However, teachers and community leaders continue to present conflicting information about prevention strategies. Institutionally, participating schools have developed more comprehensive HIV curriculums and nonparticipating schools have started to implement the program because of the interest shown by the government.

Kenya Girl Guides Association (KGGA) HIV/AIDS Peer Education Program – KGGA, PATH, and Family Health International: Kenya

The KGGA HIV/AIDS Peer Education Program targeted school-going 10 to 14 year olds. The program aimed to impact social wellbeing, gender equity, and HIV-related attitudes, knowledge and behavior of Girl Guides and their peers. The program involved training Guide Leaders using the *Participatory Peer Education for HIV and AIDS Prevention: A Life Skills and Peer Education Manual*. Sections covered the following: personal, family, and community values; gender roles and equality; adolescent development; sexuality; relationships; preventing pregnancy; sexually transmitted infections, HIV, and AIDS; and communication skills and self-esteem.

After completion of training, Guide Leaders then trained Patrol Leaders as peer educators who subsequently educated Girl Guides in their patrols. Peer education involved routine discussions, short lectures, case studies, role-playing, games, and brainstorming sessions. Girl Guides then became disseminators of the information to their classmates and community members.

Program monitoring results showed substantial variation in the implementation of the intervention across sites and many schools had not completed the curriculum. Poor project implementation likely affected the project outcomes.

The program was evaluated using a quasi-experimental design. Improvements were seen on measures of self-confidence, gender equity, and some positive changes in attitudes towards people living with HIV between comparison and intervention schools. With the exception of Girl Guides, knowledge about HIV did not improve. Indeed, Girl Guides consistently improved on many measures compared to their classmates. The program did not affect sexual behavior and in fact, the intervention schools saw an increase in the percentage of students, including Girl Guides, who reported engaging in sexual activity (evaluators suggest this may reflect an increase in reporting, not in sexual activity).

Equity Movement in Schools (GEMS) Project -- ICRW: India

This project uses the public school education system as a platform to initiate discussions and challenge harmful gender norms with the overarching objective of promoting gender equity in the school system. Using a Group Education Activity-based curriculum, the GEMS program engages boys and girls, aged 12-18 yrs, in a self-reflective, introspective discourse to question existing stereotypes, improve attitudes toward gender-equitable norms, and

reduce gender-based violence and risk behaviors in the school setting. The programs are tailored depending on the age group and have been piloted and tested in Goa, Mumbai, and Rajasthan using different models for implementation. GEMS was evaluated in Mumbai using a multi-arm quasi-experimental design in 45 municipal schools divided into three arms – two intervention arms (one with education and campaign and another with only campaign) and one control arm. Findings at the initial stages reflect significant positive changes in the gender attitudes among the boys and girls exposed to the intervention.

COMPREHENSIVE PROGRAMS

Entre Amigas – PATH, Center for Studies and Social Promotion, Puntos de Encuentro, University of Leon: Nicaragua

To determine the program design and strategy, implementing partners first conducted formative research to identify the barriers to good SRH for 10 to 14 year old girls. This qualitative assessment provided information on opinions and attitudes related to pre-adolescent girls' lives, SRH, and their support networks. Interviews were also conducted with parents, health workers, and teachers. Baseline quantitative data were also collected. The research uncovered many key findings including that girls had few tools to negotiate SRH issues, had poor social support networks (including poor relationships with their mothers and girlfriends), and lived in a social context that devalued women and girls. In response, *Entre Amigas* was designed to empower girls, build relationships, and create a supportive environment for girls. The project adopted a social ecological approach by targeting interventions at individual, family, community, and societal levels. It also took a multi-pronged approach relying on media (a soap opera with a 12 year old girl as a central character), weekend activities for girls in safe community locations (such as schools), and activities with parents, teachers, and health professionals. Gender transformative and life skills approaches were used throughout activities.

Full details of the final evaluation findings are unavailable, but evaluators found positive changes in knowledge, attitudes, and behaviors among the girls and their mothers. Additionally, a cost study found the project to be feasible and affordable.

ISHRAQ – Caritas, the Centre for Development and Population Activities, the Population Council, Save the Children, the Ministry of Youth and the National Council for Childhood and Motherhood: Egypt

ISHRAQ is a comprehensive program designed to address the root causes of intergenerational poverty, high levels of fertility, and poor health of very young adolescent out-of-school girls. The program is gender transformative, aiming to change gender norms and community perceptions of girls and their role in society. ISHRAQ is a holistic program, targeting not only health, but also education, skills development, civic engagement, and empowerment of girls.

The key interventions included the creation of safe spaces where girls can meet and undertake activities, a life skills curriculum, livelihoods training activities, and the development of group sports opportunities for girls. Other integral activities included: creating community committees to help with community buy-in, sensitization, and to problem solve around implementation issues; the training and use of remunerated young women (17 to 25 years of age) to act as peer mentors and deliver the life skills curriculum; a life skills curriculum for boys which tackled gender inequity among other subjects; and engaging parents in discussion and workshops. A future additional component will help improve girls' access to and use of health services.

ISHRAQ is a time intensive program for girls – during the pilot they met for three hours per day, four days per week for participatory literacy classes (which included securing identity cards for girls). The sports activities ran for 13 months, twice a week, with each session lasting 90 minutes. Girls attended two sessions of the *New Horizons* life skills curriculum weekly, each session lasting 90 minutes. Livelihoods activities were additional and ranged from training in electrical appliance management and repair to hairdressing to sweets production.

The program instituted ongoing monitoring to reflect on progress and make needed changes to the model. The pilot was evaluated using a quasi-experimental design with a matched control group over the 30 months of the program's pilot phase. The evaluation showed that the program fulfilled many of its aims. The majority of participants had improved literacy levels and re-entered school, desired to marry at an older age and choose their husband, objected to female genital cutting, and had higher levels of self-confidence. The program also improved civic engagement, and communities began to adopt more progressive views regarding girls and women.

Implementers believed the partnership structure between NGOs and governmental agencies has assisted with program sustainability. As the program scales up, the hope is to include girls as young as 11.

Promoting Change in the Reproductive Behavior of Youth (the PRACHAR Project) – Pathfinder International: India

Although PRACHAR did not focus solely on VYAs, it contained a distinct project component for 10 to 14 year old girls and is illustrative of how a holistic program that targeted different levels of the community achieved success. Implemented in 452 villages in Bihar, India, PRACHAR aimed to change traditional customs of early childbearing to improve the reproductive health of young women and their children. Interventions targeted 12 to 14 year old girls, 15 to 19 year olds, childless newlywed couples, young couples with one child, families of young couples (especially mother-in-laws), and respected elders and community members. By working with and mobilizing virtually all levels of society, the project hoped to create an "enabling social environment". Although the program expected

to find tough resistance to the dissemination of SRH knowledge, in reality the communities welcomed the information.

The intervention directed at 12 to 14 year olds involved education about puberty, menstruation, personal hygiene, and nutrition. However, the project decided not to introduce topics relating to reproductive health, family planning, and STI/HIV prevention with the VYA group. Besides raising knowledge, the project also wanted to start a process of empowerment with the young women "to develop a new level of control over their lives". Girls received two training sessions, each two and a half hours in length using Pathfinder's *Reproductive Health Guide for Educators of 12-14 Year Old Girls*. Implementation was staggered to ensure adequate testing of the different model components.

For the impact evaluation, the project conducted pre and post-surveys in a representative sample of intervention and control villages. Evaluation findings showed significant changes in attitudes and practices related to childbearing age and the use of family planning to space children. For example, the fertility rate among 15 to 19 year olds declined by 14.3 percent. However, the impact on 10-14 year olds was not assessed.

Youth.now – Futures Group, Margaret Sanger Center International, Dunlop Corbin Communication: Jamaica

Youth.now used a combination of health services improvement, training of health service personnel, pastors, peer educators, media-based communication strategies (including a television magazine program), and three targeted interventions for early teens, boys, and transport operators.

The program objectives included improved RH knowledge and skills, increased access to and use of quality RH and STI services and preventive practices, and national policies and guidelines supportive of ASRH. The program recognized that to achieve its objectives, it needed to engage key stakeholders throughout the community and create supportive environments. As such, interventions target: providers of care; pastors (engaging the church is seen as critical to success); peers; parents; partners; and adolescents. The program also tackles policy level barriers.

The intervention for 10 to 12 year olds centered on a behavior change communication (BCC) strategy promoting abstinence through radio (songs), TV (magazine program), and print advertisements. The same BCC methods were used for 13 to 15 year olds with an emphasis on abstinence but also on self-knowledge and "knowing yourself". An evaluation (details unavailable) of the impact of the mass media campaign found that 82% of adolescents and 90% of adults recalled program messages, with 49% of the former saying that the messages would affect their thoughts and behaviors (no breakdown by age). The message of abstinence resonated strongest with young women and with youth ages 10-12.

THEORY-BASED

Focus on Youth - Wayne State University School of Medicine and The Bahamas Ministries of Health and Education: The Bahamas

Focus on Youth was a community-based program originally developed for implementation in a Baltimore housing estate and proven effective through randomized controlled trials. The program model was based on the social cognitive model, Protection Motivation Theory (PMT). PMT explains two cognitive pathways of decision-making that can result in either protective or risk behaviors. The program intervention involved skills building to enable youth to engage in thoughtful decision-making and move away from risk behavior. In addition to PMT, the implementers used a sub-group analytical approach to acknowledge that not all youth have a similar "sexual behavioral progression" and developed measures to identify sexual trajectories, that is, the space of time it takes to move from the intention to have sex to having sex.

In collaboration with the Ministries of both Health and Education, the program implementers adapted Focus on Youth to The Bahamian school context among 10 to 11 year olds. *Focus on the Youth – Caribbean* (FOYC) became a ten-session, ten-week intervention emphasizing skills development and enabling practice in decision-making, negotiation, and communication. Ethnographic research had indicated parents also wanted to be involved; therefore, FOYC also had a separate parental intervention (unrelated to PMT).

The program was evaluated using a clustered randomized controlled trial with random assignment to the intervention at the level of school. The evaluation identified two types of sexual trajectories: slow and quick progressors. The FOYC intervention was able to slow the progression of the quick progressors and reduce the likelihood of becoming a quick progressor. Further, the study replicated outcomes of the U.S.-based program of increased knowledge and increased use of condoms. In terms of PMT, the study confirmed that several constructs of PMT were related with outcome measures (perceived vulnerability, response efficacy, and intrinsic and extrinsic rewards). For example, FOYC increased among research subjects perceived vulnerability to HIV, thereby enhancing the threat appraisal pathway and resulting in a protective decision on the part of the adolescent.

GENDER-BASED

Soccer Schools "Playing for Health" -- throughout the Americas: PAHO

Soccer Schools in Argentina, Brazil, Chile, Mexico, Paraguay and Venezuela attempt to present alternative models of masculinity that support good health to pre-adolescents. The schools are based on the theory that masculinity is a social construct that negatively impacts health. Soccer clubs are an inter-generational arena where masculinity is played out and "learned". The program trained coaches using a manual developed for the program which instructed coaches on how to integrate public health messages and gender-equitable norms into the game of soccer. For example, should a fight start on the soccer field, the

coach can talk about nonviolence. The manual was pre-tested with coaches and pre-adolescents. An evaluation was planned for 2005 but details are unavailable.

Choices – Save the Children: Nepal

Choices is a gender transformative pilot project in Nepal with 10 to 14 year old boys and girls, implemented through local NGOs in child clubs with youth facilitators. The approach is based on the assumption that changing the gender related attitudes and behavior of pre-adolescent boys will lead to a change in the treatment of girls and women in Nepali society and ultimately to improved health. The project focused only on gender roles and does not tackle health issues. In this respect, *Choices* is a departure from the other studies presented in this review. However, increasingly, the literature indicates that the influence of gender on the ability of adolescents to negotiate good SRH can be predicated on gender dynamics.[18] The *Choices* project opens dialogue as to whether gender transformative programs have merit as SRH interventions.

To determine the program content for *Choices*, formative research using projective techniques was employed. Projective techniques uncover emotional drivers of behavior and interventions are designed to target these emotional motivators.[19] The curriculum was designed to empower 10-14 year old boys and girls to make choices in their lives that will lead to more gender-equitable behaviors. It includes eight age-appropriate participatory activities designed to stimulate discussion and reflection.

Evaluation is underway consisting of an experimental pre and post-test design with a non-equivalent control group.

SPORTS AS A PROGRAM PLATFORM

PeacePlayers International, South Africa HIV/AIDS Awareness Program – PeacePlayers International: South Africa

PeacePlayers International-South Africa (PPI-SA) was originally founded to use basketball as a way to tackle racial barriers among 10 to 14 old boys and girls. The program has now extended its efforts to include a focus on HIV/AIDS using a life skills and HIV/AIDS awareness curriculum.

Basketball coaches are trained to lead life skills sessions and are assigned to schools where they work with sixth, seventh, and eighth grade students after school twice a week. The life skills sessions take place next to or near the basketball court and are held once per week before practice begins. The life skills program covers HIV/AIDs awareness, drugs & alcohol awareness, racism and diversity, personal development and conflict resolution. Monthly clinics are also held combining basketball instruction with social and health-focused workshops. Clinic participants are drawn from schools and clubs.

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[18] *Barker, Ricardo, & Nascimento. 2007.*

[19] *2010. Pam McCarthy, Personal communication with author.*

Once a year, PPI-SA holds a three-day kid's retreat for one boy and one girl from each participating 6th and 7th grade class. Coaches choose the children for the retreat based on their perceived leadership qualities. When they return to their schools they act as peer educators. Retreat activities include team building exercises and workshops focusing on HIV/AIDS awareness, drugs and alcohol abuse, racism and diversity, and conflict resolution.

A pre- and post-test questionnaire of program participants evaluated the HIV/AIDS component. Findings suggest that the program was a good source of knowledge regarding HIV/AIDS for respondents; it increased participant's knowledge of HIV/AIDS transmission routes; and challenged prejudicial beliefs regarding HIV/AIDS.

V. Research and Evaluation

This section will review the research and evaluation designs and methods used in the studies described in the previous section. Appendix B provides a comparative review of the evaluation design, methods, indicators and measures used in each program.

Investing When It Counts: Generating the Evidence Base for Policies and Programs for Very Young Adolescents[20] provides excellent guidance on conducting research with VYAs including appropriate research methods for this age group. Box 1 provides a summary of the guide and it will not be discussed in detail here.

Formative Research: "Reality as the Starting Point"[21]

At least seven of the programs this paper reviewed conducted formative research prior to the design and implementation of the intervention (see Appendix B). Formative research answers questions such as: What interventions do VYAs want? What unmet needs do they have? What are the social, cultural, and structural barriers to achieving good SRH? Or, what protectors for SRH do VYAs have access to? What program content is age and culturally appropriate? If and how do perceptions of gender roles impact SRH? Where do VYAs currently get their information about puberty and is it factually correct? Quantitative formative research can gather information about health status and demographics.

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[20] *Chong, Erica, Kelly Hallman, and Martha Brady. 2006. Investing When It Counts: Generating the Evidence Base for Policies and Programs for Very Young Adolescents." New York City: UNFPA and Population Council. https://www.popcouncil.org/pdfs/InvestingWhenItCounts.pdf*

[21] *2004. Preadolescent Girls: The Hidden Population. Findings from the Entre Amigas Baseline. Washington D.C.: PATH.*

Exploratory research helps strengthen an intervention by ensuring it is context-appropriate and identifies potential barriers to implementation, such as an unsupportive community. It can also be very helpful during scale up of a program into new settings to understand if and how the program needs to be adapted.

Box 1: Summary of Investing When it Counts

Investing When it Counts is a guide and toolkit to assist with creating an evidence-base for SRH programming for VYAs. The guide reviews the cognitive and developmental changes during early adolescence and their implications for research. The authors also discuss ethical issues of conducting research with this age group. Recommendations include: put the child's interests first; engage children's participation; gain consent; consult widely with the community; be prepared to address unintended consequences of the research (for example, uncovering cases of abuse). The ethics section also discusses how to ask questions on sensitive topics about sexual activity. In terms of guidance on research methods, the toolkit portion of the guide provides a review of the advantages and disadvantages of different research methods and rationale for their use. The authors describe the following methods: focus group discussions; community mapping; individual in-depth semi-structured interviews with key informants; photo-voice techniques; diary-keeping; structured surveys and their use at different developmental stages of adolescence. The guide also provides a review of secondary survey data sources that target 10 to 14 year olds.

Monitoring and Process Evaluations: Responding to Implementation Challenges and Providing Continual Feedback

Throughout the literature, there is a consistent recommendation for more rigorous program monitoring as a key part of evaluation efforts.[22] Program monitoring data may be able to explain unexpected results, such as lack of effect due to poor program coverage. For example, the KGGA project found that the degree of implementation varied between schools, and most schools had only gotten halfway through the curriculum by endline. Process evaluations provide information to the question, "was the program implemented as intended?" Monitoring data can highlight problems in the delivery of a program that need to be addressed/ resolved before replication or scale up, or identify ways to simplify interventions without jeopardizing outcomes. Process evaluations can also yield data regarding the number of VYAs reached to date by the program, often useful for funders and to track implementation progress. Only a handful of programs included in this paper conducted monitoring and process evaluation activities.

Program monitoring is a key part of evaluation efforts, as it may explain unexpected results, such as lack of effect due to poor program coverage. A dose-response analysis may be especially useful.

[22] *Gallant & Maticka-Tyndale, 2004.*

Table 2: Research Design Summary

	Formative research	Process & Monitoring	RCT	Quasi-experimental			Pre-post no control group	Endline only	No Evaluation Found
				Matched sample	Representative sample	Non-equivalent control			
Tuko Pamoja									X
Choose Life									X
Chill Club									X
Growth & Changes	X	X				**Unclear**			
My Changing Body	X	X		X		X			
Cool Parent Guide	X							X	
PSABH	X	X	X						
KGGA				Unclear if matched or non-equivalent					
Entre Amigas	X			Unclear if matched or non-equivalent					
ISHRAQ	X	X		X					
PRACHAR		X			X				
Youth.now									X
FOYC	Unclear/ probable		X						
Soccer Schools									X
Choices	X	X				X			
GEMS						X			
PeacePlayers							X		

Impact Evaluations: Did the Program Meet its Objectives?

Impact evaluations are essential to understanding if a program was successful, but only rigorously designed and implemented evaluations will be able to answer the question, "Did the program meet its objectives?" Planning for an evaluation from the conception of a project will assist in collecting meaningful data prior to intervention exposure. Failing to conduct a "pre-test" or collect baseline data will complicate the evaluation design and may lead to a less rigorous evaluation. Agreement on key, measurable objectives is critical. However, it can be difficult to develop meaningful indicators for VYA program outcomes which can be reliably measured within traditional project timelines.

Randomized controlled trials (RCTs) are often considered the gold standard for assessing effects of an intervention, however they are expensive, difficult to implement well and can present ethical challenges. However, they do yield important evidence about a program's

success. In this review, two programs used a RCT design for their evaluations. Conducting a limited package of interventions, or implementing the intervention on a delayed schedule are sometimes chosen to ensure the control group also benefits from the program.

A quasi-experimental design is common – at least five of the programs reviewed in this paper conducted quasi-experimental evaluations using either a matched comparison group or a non-equivalent control group. The PRACHAR program conducted a cross-sectional survey at baseline and endline that drew a representative sample from intervention and control villages. Quasi-experimental studies (especially with a matched control group) are fairly robust in answering questions about the program success. However, there will always be an element of doubt concerning how the characteristics of each group differ and the implications of these differences for study findings.

The time interval of collecting evaluation data is an important consideration. As mentioned, programs can encounter implementation delays (such as KGGA) and it may take longer than anticipated to see results (especially for behavior change). The PRACHAR, PSABH, and ISHRAQ programs continue to evaluate their programs over multiple years.

Box 2: Examples of Scales to measure Gender Norms

- Attitudes Toward Women (ATW) measures beliefs about the rights and roles of women, in comparison to men (1972, by Spence and Helmreich)
- Gender-Equitable Men Scale (GEM) directly measure attitudes toward "gender-equitable" norms (2008, developed by Horizons and Promundo)
- Male Role Attitudes Scale measures attitudes towards male roles and helps explain how the idea of masculinity can impact gender roles and relationships (1993, Plech, Sonenstein, and Sku)
- Sexual Assertiveness Scale for Women (SAS) measures sexual assertiveness in women by combining initiation of wanted sexual experience, refusal of unwanted sexual experience, and prevention of pregnancy/STIs with a regular partner (developed by Patricia Morokoff)
- Sexual Relationship Power Scale (SRPS), measure powers in sexual relationships and to investigate the role of relationship power in sexual decisionmaking and HIV risk (2000, developed by Pulerwitz, Gortmaker, and DeJong)

Because ISHRAQ and PSABH are reviewing findings over several time points, they have both detected a dose-response relationship between intervention exposure and impact on several measures.

A difficulty of evaluating programs for this age group is how to operationalize and measure changes in gender attitudes and norms, self-esteem and other elusive constructs. Many programs for younger adolescents are designed to lay a strong foundation for future sexual and reproductive health. Measuring the effect of these programs on behaviors which will take place years in the future is challenging. One final issue to consider is the questionable reliability and validity of information collected from very young adolescents. Researchers who study children have struggled for many years with the challenge of providing children a strong voice and

ensuring valid results. The development of feasible, effective evaluation methods would improve our ability to develop and test effective strategies for VYAs.

Indicators and their Measures: Tailor to Fit the Program

The programs under review here offer a wide variety of indicators and measures (see Appendix B). Knowledge, attitude, and behavior (KABs) indicators and measures tend to be fairly standard across those programs using surveys as an evaluation method. As noted earlier, many programs have a gender or girls' empowerment component. Certain indicators used to measure change in gender-related attitudes or behaviors, are used frequently such as self-confidence, assertiveness, and self-efficacy. Programs measuring gender norms often create gender scales combining several measures or items using a Likert scale operationalizing these indicators. This technique is problematic because many measures rely on scales which are oftentimes not applicable with younger adolescents. Box 2 presents a list of some of the scales used in VYA evaluation. In choosing indicators and their measures, programs should be guided by their logic model, search the literature to tailor existing measures, and be creative. Box 3 lists a variety of outcomes used by the programs included in this review.

Methods: Experiment and Innovate

Research and evaluation using mixed methods is popular and often combines the use of surveys and focus group discussions or participant interviews. Eight of the programs reviewed used both qualitative and quantitative data collection methods (see Appendix B). While quantitative methods collect statistics regarding change, qualitative methods can yield rich detail and assist with defining new quantifiable measures. Less used in the programs under review, but popular in the anthropological literature are participant observation and life histories.

To keep VYAs engaged and to work at an appropriate cognitive level, creative participatory techniques may be helpful. A variety of innovative data collection methods were used in the VYA programs reviewed. For example, Sommer asked girls to draw the ideal girls' toilet.[23] Sommer's research methods were feminist and participatory simultaneously drawing out of girls' voiced expressions and empowering them. For example, the girls knew their menstrual stories would be directly used in the books. The game-based evaluation methods used in the *My Changing Body* evaluation were fun, targeted cognitive level appropriately, and also quantified findings. For example, evaluators asked program participants to sort cards - that named characteristics such as intelligence, strength, violence, penis and beauty - into piles based on masculine, feminine, or neutral gender attributes. Changes from baseline to endline in the number of cards classified as gender-neutral indicated a change in perceptions of gendered activities. Additional innovation in research techniques was used in the Choices program, which used projective techniques

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[23] *Sommer, Marni. 2009. Where the Education System and Women's Bodies Collide: The Social and Health Impact of Girl's Experiences of Menstruation and Schooling in Tanzania. Journal of Adolescence 33(4):521-9.*

during the formative evaluation (see Box 3). Innovative, participatory techniques were also used in the summative evaluation, for example using photos to elicit reflection on gender norms among boys and girls and their parents.

Box 3: Selected Outcomes for VYA Programs

Agency:
- Self efficacy
- Self esteem
- Self confidence
- Assertiveness

Fertility Awareness/Body Literacy:
- Understanding male/female/combined fertility (ability to identify fertile days during menstrual cycle, onset of male/female fertility, cervical secretions, sex and conception)
- Accepting sexuality (masturbation, nocturnal emissions)
- Understanding physical, emotional, intellectual changes during puberty
- Self-care
- Intergenerational communication skills
- Self-advocacy of these topics with peers, parents and other adults

Gender:
- Gender consciousness (e.g. understanding influence of gender and sexual norms on experience of puberty)
- Attitudes toward gender roles and gender equity
  - Ideal age at marriage/first child
  - Girls education
  - Division of labor
  - Sexual identity/acceptance of sexual diversity
  - Masculine/feminine roles
- Gender equitable behavior
  - Division of labor in home (e.g. helping sisters with chores, advocating for sisters' education)
  - Opposing teasing/bullying of boys/girls
  - Mobility of girls
  - School enrollment and retention
  - Attendance during menstruation

Sexual Behaviors:
- Delay of early marriage
- Age at first intercourse/child
- Contraceptive use
- No. of adolescent/unintended pregnancies
- STI prevention behavior: no. of partners, abstinence, condom use

HIV/STI Prevention:
- Understanding risky and protective behaviors, symptoms, routes of transmission
- Communication (e.g. condom negotiation, seeking advice from providers)

Gender-based Violence (continuum from bullying/teasing to sexual assault, female circumcision):
- Acceptability of GBV
- Experience of GBV

Environmental:
- Availability of peer networks
- Social support
- Safe spaces
- Parental supervision
- Asset building opportunities
  - Infrastructure for menstruation management
- Availability of youth friendly services
- Availability of gender-equitable recreational opportunities, such as sports and other activities

Finally, research ethics must be carefully considered (although most of the programs reviewed did not discuss in-depth how they complied with good ethical standards for working with young adolescents). *Investing When it Counts* and *Ethical Approaches to Gathering Information from Children and Adolescents in International Settings: Guidelines*

and Resources[24] provide excellent guidelines on how to ensure research with VYAs meets high ethical standards.

Box 4. Projective Techniques

Projective techniques are little known in the public health field but widely employed in corporate marketing. Based on psychological and psychoanalytic theory and methods, they seek to identify the motivating emotions behind behavior. Projective techniques are based on the theory that our actions are not always based on rational decisions but are driven by subconscious feelings. During the research process, projective techniques provide a "safe" way for participants to express their innermost feelings, for example how a sex worker feels about her clients, and in the process can illuminate subconscious decision-making pathways. Projective techniques often use objects to transfer emotions onto, for example asking children to choose a plastic animal that represents a man and one that represents a woman. In terms of designing an intervention, projective techniques identify an "emotional promise" that a program can make to research participants if they change their behavior. For example, instead of using logical reasoning such as "use condoms to prevent HIV transmission", an emotion-based program message could be "use condoms so that you can be there for your child". This emotional promise would be based on a research finding that a woman's greatest joy in life is spending time with her child.

VI. Promising Program Components

SRH programming and research targeting VYAs is a new frontier in the public health field. While there is insufficient evidence-based programming and research to draw firm conclusions about lessons learned for VYA SRH programming, there are emerging themes which hold promise. This section outlines promising program components and highlights programs from the review which contain these components. As this list only draws from the programs under review, it is not exhaustive.

First Discuss Puberty

Many VYAs are transitioning through puberty without adequate knowledge of what to expect and how to manage the intellectual, emotional, physical, and biological changes they are experiencing. Understanding these changes is a necessary foundation for tackling broader SRH topics with VYAs, such as sexuality. Often puberty signals the beginnings of sexual attraction and experimentation. Therefore it is important that programs that educate on puberty also discuss fertility-related issues – such as sexuality and sexual health. In terms of including program content on sexuality, programs may need to first identify rates and types of sexual activity, knowledge levels, what information VYAs need and desire, and should also consult guidelines on cognitive and age appropriate topics. Programs that aim to increase knowledge about puberty also can help VYAs understand their feelings about body changes and promote the development of social skills, such as decision-making.

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[24] *Schenk, Katie and Jan Williamson. 2005. Ethical Approaches to Gathering Information from Children and Adolescents in International Settings: Guidelines and Resources. Washington, DC: Population Council. http://www.popcouncil.org/pdfs/horizons/childrenethics.pdf*

Relevant Programs:

- *My Changing Body* and *The Growth and Changes Book* both aim to increase VYA's understanding about puberty and fertility and empower youth to manage the changes taking place.
- No programs under review use puberty as a gateway to broader SRH topics, although *My Changing Body* is intended for use as an add-on or introduction to other SRH programs.

Comprehensive Programs that Target Multiple Levels and Sectors

"Successful behavior change is best achieved if multilevel inputs are provided to support and reinforce this change synergistically"[25]. Programs that go beyond the individual level to take into account the influence of inter-personal, community, and policy level factors on SRH hold promise. School-based efforts to provide new information to VYAs and encourage them to adopt healthy behaviors may fail if adolescents return home to conflicting messages. Additionally, non school-based programs should consider reaching out to VYAs' wider social network, for example by including a parenting intervention or involving the entire community. Research should identify important social actors to include. Parents in the programs highlighted in this review mostly welcomed the opportunity for both their children and themselves to learn about these issues, but this might not always be the case.

Relevant Programs:

- Programs targeting multiple levels: Entre Amigas; ISHRAQ; PRACHAR; PSABH; Youth.now
- Programs with a parenting intervention: My Changing Body; Entre Amigas; ISHRAQ; FOYC

Tackle Gender Inequities - a Barrier to Good SRH Outcomes

The majority of programs under review included a focus on gender inequity in recognition that it can be a barrier for young girls (and boys) in achieving good SRH. However, the extent to which gender inequities were targeted in programs varied greatly. A WHO review of men and boys' gender programming found that gender transformative programs were more effective than gender neutral or gender sensitive projects at achieving behavior change in regards to SRH outcomes. More evidence is needed about the most effective way to integrate gender transformative aims into programs. However, starting earlier than traditional gender focused programs (i.e. middle adolescence when gender norms are firmly entrenched) may be more effective at transforming gender relations and structures. It is not clear to what extent a program can successfully achieve behavior change objectives if only one structural issue is targeted (i.e. gender).

Relevant Programs: Tuko Pamoja; Chill Club; Growth and Changes Book; My Changing Body; PSABH; KGGA; Entre Amigas; ISHRAQ; PRACHAR; Soccer Schools; GEMS; Choices

Consider the Role of Peers Carefully

The peer education model is common in youth SRH programming but less frequent in the VYA programs under review. Interestingly, two programs (Entre Amigas and ISHRAQ)

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[25] *Breinbauer & Maddaleno, 2005.*

highlight how the lack of friends and opportunities for girls to come together result in social isolation. Under such circumstances, a peer education model would likely fail, unless peer networks were first established. The use of older peer mentors may be a more appropriate program strategy for VYAs.

Relevant Programs: Choose Life; KGGA; Entre Amigas; ISHRAQ

Identify the Most Appropriate Pathways in Each Community for Delivering SRH Information

It is important to understand the preferred medium in each community for receiving SRH information, who VYAs trust the most, and who harder-to-reach groups such as orphans turn to for advice. The answer to these questions may be different for 10 year olds compared to 13 or 14 year olds and will vary from across communities and countries. The role of media-based messages should be explored for their ability to reach a large segment of the community (for example, the soap opera as part of Entre Amigas). In communities where they still exist, ceremonies for rites of transition could be considered as a programming platform to deliver positive and factually correct messages.

Relevant Programs: Cool Parent Guide; Entre Amigas; ISHRAQ; Youth.now

Understand the Heterogeneity within the VYA Group

Programs should avoid treating 10 to 14 year olds as a homogenous group. The location of girls and boys in the broader social structure impacts the resources they have access to and also their needs. As Judith Bruce comments, "… the most socially anchored adolescents with the least risks are given the most resources, while those with few social assets and at most risk have the least access"[26]. A related point is that a large percentage of VYA program resources are dedicated to school-based programs, which often serve the least vulnerable youth. Programs need to be conscious of reaching hidden VYAs (for example, those out of school, married girls, and girls in domestic service).

Programs must ensure that their content and format are appropriate for each age and developmental stage. Ten year olds are distinctly different from 14 year olds cognitively, physically, socially, and emotionally. No programs under review considered if and how program content should be delivered differentially by age within the VYA group. Further complicating the design of programs is the fact that VYAs are not all on the same sexual trajectory[27,28,29] and different VYA subgroups could require different types of interventions.

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[26] *Bruce, Judith. 2007. Orphans and Vulnerable Children: The Girls Left Behind: Out of the Box and Out of Reach. Presented at the OVC IATT Meeting, April 24th 2007, Washington DC.*

[27] *L'Engle, Kelly Ladin, Christine Jackson, and Jane D. Brown. 2006. Early Adolescents' Cognitive Susceptibility to Initiating Sexual Intercourse. Perspectives on Sexual and Reproductive Health 38:97-105.*

[28] *Chen et al., 2009.*

[29] *Ott, Mary A., and Elizabeth J. Pfeiffer. 2009. "That's Nasty" to Curiosity: Early Adolescent Cognitions about Sexual Abstinence. Journal of Adolescent Health 44:575-581.*

Explore the Role of Health Services and the Physical Environment

Most of the programs reviewed are "software" focused; that is, they provide education and information, or focus on transforming values and relationships rather than seek to improve the delivery of health care services or improve the physical environment in which VYAs reside. However, attention should also be given to improvements needed in SRH "hardware" to support programming efforts. The 10 to 14 year old age group is generally considered to be a healthy demographic group and are not typically visiting health facilities for well visits, such vaccinations. Programs should consider whether or not health facilities or health personal have a role to play. Other "hardware" programs could include building suitable toilets for pubescent girls – both at school and in the community – and the development of safe meeting spaces for girls.

Relevant Programs: Entre Amigas; ISHAQ; Youth.now

Understand the Rrole of Theory

Experts are calling for theory-based VYA programming[30]. Adaptation of Western theories should be conducted with attention to the cultural context, and theories originating in the developing world (especially anthropological) should be explored.

Relevant Programs: FOYC; Soccer Schools

Involve Youth in Program Development and Use Participatory Exercises

In terms of the actual design of a program, youth involvement can build buy-in and empower participants. It can also ensure the program is appropriate for participants. There are few examples of how to engage VYAs in program design, but working with older adolescents to design programs for the younger adolescents offers promise (for example, *The Growth and Changes Book*). Program content that includes group-based, fun, participatory exercises may better engage VYAs.

Relevant Programs:

- Participatory program development: Growth and Changes Book; Entre Amigas (girls assisted with the writing of TV scripts)
- Participatory program content: Most programs reviewed adopted a participatory approach to program activities.

Research and Evaluation as an Integral Program Component

There are many issues that must be thoughtfully researched and understood prior to designing an intervention and beginning implementation. High quality formative research can help develop appropriate program responses to the most pressing SRH problems. Evaluation must be planned in concert with program development. The use of logic models helps to align program objectives and evaluation measures. Implementers should

[30] *Breinbauer & Maddaleno, 2005.*

recognize that it will take time to obtain significant results time, necessitating the collection of data at several points over time.

Relevant Programs: The majority of programs under review contained an evaluation component of some kind.

Innovate with Research Methods

Research methods must be appropriate for the cognitive level and cultural context of program participants. Many suggest that traditional methods such as focus groups and surveys are unlikely to yield meaningful data, especially with the youngest adolescents. Innovating with game-based methodologies and projective techniques shows promise.

Relevant Programs: Choices; My Changing Body; Growth and Changes Book

Monitor Continuously and Give Feedback

Programs with a strong monitoring system are able to identify problems in implementation and program design and make timely corrections. Close monitoring also allows for the careful documentation of implementation that is needed to understand which program components were critical to success.

Relevant Programs: Growth and Changes Book; PSABH; PRACHAR

Document and Share Program Experiences and Lessons

This review has been hindered by the lack of available documentation. In order to advance VYA programming, it is important to dedicate time and resources to find out and share what works and what does. NGOs and other implementers should make a point of publishing program reports to their websites. Such reports could include not only description of activities undertaken but analysis of program lessons learned and if possible, descriptions of innovative approaches. Peer-reviewed documentation is especially hard to attain but understandable given the time and funding constraints of NGOs. Greater attention is needed to discussion of replication and scale-up of these programs, for example analysis of whether these approaches will be effective in different contexts. *These issues were rarely addressed in the literature.*

One-size-fits-all interventions are unlikely to work but careful adaptation of programs proven effective in other settings could be considered. Formative research and pre-testing of interventions are prerequisites to replicating or scaling up a program. Government interest and multi-sector support may help scale up to new areas within a country.

Relevant Programs: ISHRAQ; PSABH; PRACHAR

Think about Sustainability – an Unknown

In general, the programs reviewed did not address the issue of sustainability. This may be because many programs were not sustained or because sustainability was not a long-term objective. However, available evidence suggests that institutionalizing activities within

local structures – both governmental and non-governmental – could be key. This is an important area for further work.

Relevant Programs: ISHRAQ

Take Lessons from the U.S. and the ASRH Field

This review of VYA programs has found common themes with older adolescent programming. For example, recommendations for community involvement, comprehensive programming, attention to context, participatory approaches, and research and evaluation are not exclusive to VYA programming and research. Other best practices from programming for older adolescents should be cautiously explored to understand their implications for the younger age group.

The United States has a wealth of information about programming for VYAs and younger children. A review of better practices in the U.S. context may reveal program elements that are transferable to international contexts. Further, it may be possible to replicate entire programs after conducting research and field-testing to adapt evidence-based programs to local contexts.

Relevant Programs: FOYC

Appendix A: Examples of Programs Targeting 10 to 24 Year Olds

Program name, country, implementer, dates	Program description	Evaluation
Abstinence and Risk Avoidance for Youth ▪ World Vision ▪ Kenya, Tanzania, Haiti ▪ 2005-2010	HIV prevention with an abstinence focus primarily for girls aged 10 to 24 years with a secondary focus on boys the same age. The program also aims to create a supportive community and family environment. Intervention includes: ▪ Youth and parent meetings ▪ Peer and adult educators (faith leaders, teachers, and community leaders) ▪ Interactive drama ▪ Community radio ▪ Age-appropriate (10 to 14 and 15 to 24 years) participatory "Value-Based Life Planning Skills Guides" to promote abstinence and faithfulness. ▪ Parent communication guide to help parents talk with their children about sexual health and their futures	A qualitative assessment of the ARK process and outcomes is in the final stage.
Bright Futures "Biruh Tesfa" ▪ The Ethiopia Ministry of Youth and Sports with TA from the Population Council ▪ Ethiopia ▪ Dates unknown	HIV prevention, life skills, and education program for domestic workers, orphans & migrant slum-dwelling girls aged 10 to 19 years old. Intervention includes: ▪ Recruiting out-of-school girls by female mentors ▪ Following up on absenteeism by mentors ▪ Meetings of girls with female mentors in community spaces 3 to 5 times per week ▪ Groups are formed based on age and skills and education level ▪ Project identification cards given to girls ▪ Girls also receive books, pens/pencils, re-useable sanitary napkins, and bars of soap ▪ Wellness check ups and health screenings at government centers ▪ Partnership with an organization working with victims of sexual abuse to provide counseling and shelter to girls ▪ Partnership with an organization that provides shelter and livelihoods training to girls ▪ Partnership with an organization working with disabled girls	Quasi-experimental over 2 years using surveys of participants and non-participants. Key findings: ▪ Increase in % reporting friendships ▪ Increase reporting availability of safe space to meet ▪ Participants more likely to be "socially participatory" than control group ▪ Increase in % of participating girls who had voluntary counseling and testing for HIV compared to the control group

Program name, country, implementer, dates	Program description	Evaluation
New Horizons ▪ CEDPA ▪ Egypt ▪ 1999-2002	A life skills and RH program targeting disadvantaged 9 to 20 year old girls. The program aims to alter the underlying gender inequity impacting girls education, RH outcomes, and life skills. Intervention includes: ▪ A life skills and RH curriculum led by trained facilitators. Meetings take place in community meeting spaces ▪ An outreach component to gain support from parents and community members ▪ Parents could choose to not allow their 9 to 12 year olds attend the RH sessions.	Focus groups with participants and non-participants and in-depth interviews with key stakeholders at baseline and endline. Key findings: ▪ Improved and more open communication between girls and family members (especially male) indicating increased self-confidence ▪ Participants (girls and community members) demonstrated more gender equitable attitudes and behaviors toward education, health, and the status of women in the community ▪ Increase in life skills such as analyzing problems and creating solutions. ▪ Raised awareness on gender issues and discrimination
Sexuality and Youth Project (SAY) ▪ CARE ▪ Sierra Leone ▪ 2004-2007	A SRH program using the "Sissy Animata" curriculum for 12 to 19 year olds aimed to improve youth decision-making around SRH issues. Sissy Aminata is a respectable older sister one seeks out for advice. Intervention included: ▪ In-school participatory curriculum involving age and gender-based groups discussing a letter sent to Sissy Aminata and her response. Quiz competitions, drama competitions and football matches were also organized for motivation and to reinforce learning ▪ Weekly radio broadcasts taping discussions in the project villages facilitated by Sissy Aminata. Broadcasts included discussions and answers to letters sent in by youth. These broadcasts addressed both the social and the technical aspects of letters ▪ Community activities including awareness-raising activities to increase parental support for SRH education ▪ Out of school youth clubs using taped versions of the Sissy Aminata curriculum.	Quasi-experimental involving pre and post-intervention surveys of sampled control and intervention groups. Focus group discussions with students and teachers in intervention and control villages. Key findings: ▪ Improvement in SRH knowledge and attitudes ▪ Improved communication between children and parents ▪ Improved self-efficacy (only in respect to SRH)
Zomba Cash Transfer Program ▪ World Bank	Conditional cash transfer to families and 13 to 22 year old girls based on the condition of attending school (or returning to school). Aim to delay	RCT using surveys at baseline and one year later.

Program name, country, implementer, dates	Program description	Evaluation
▪ Malawi ▪ 2007 to 2008	sexual activity. Intervention included: ▪ An average offer to households of $10/month –$100 for the school year - with 30% going to the schoolgirl. ▪ The project paid secondary school fees directly to the schools upon confirmation of enrollment.	Key findings: ▪ Increase in school enrollment ▪ 40% reduction in marriage rate of those not in school at baseline ▪ Those not in school at baseline were 5.1% less likely to become pregnant compared to the control group ▪ Reductions in the onset of sexual activity of 46.6% and 31.3% for those not in school at baseline and school girls participating in the project.

Appendix B: Program and Evaluation Design Summaries

Life Skills and Reproductive Health Curricula	
Program name: Tuko Pamoja: Adolescent Reproductive Health and Life Skills Curriculum **Implementers:** Revised by PATH and the Population Council, Originally designed for the *Kenya Adolescent Reproductive Health Project* **Dates:** Published in 2006	
Target population, location	In school 10 to 19 year olds with special sections only for 10 to 14 year olds or 15 to 19 year olds.
Intervention	Life skills curriculum with a focus on increasing RH knowledge through group participatory learning activities. Abstinence only approach. 10 to 14 year olds do not receive classes on: communication; romantic relationships; love and infatuation; sexual exploitation, rape, and violence; teenage pregnancy; parenthood; and unsafe abortion.
Evaluation Design	The pilot Kenya Adolescent Reproductive Health Project was evaluated, however no details are available on how this larger project targeted 10 to 14 year olds. However, findings are disaggregated by age. The revised curriculum with age appropriate sections was only used in scale up; no evaluation findings are available for the scaled up project.
Key Indicators	The main measurable objective of the interventions for the 10-14 year olds (not described) was to delay age at first sex
Reference	*www.popcouncil.org/pdfs/frontiers/ Manuals/KARHP_**guide**1.pdf*
Program name: Choose Life: Guide for Peer Educators and Youth Leaders **Implementers:** World Relief, Originally for use in Haiti, Rwanda, Kenya, and Mozambique **Dates:** Published in 2006	
Target population, location	10 to 14 year olds (a separate curriculum for 15 to 19 year olds is also available)
Intervention	Peer or youth-led curriculum using participatory learning activities to develop self confidence, acquire correct puberty and SRH knowledge (specifically HIV/AIDS), dispel myths, develop positive values and attitudes, and adopt responsible practices in their relationships. Abstinence only approach.
Evaluation Design	No available information
Key Indicators	No available information
Reference	*worldrelief.org/Document.Doc?id=649*
Program name: 'Chill' Club Adolescent Reproductive Health and Life Skills Curriculum **Implementers:** Population Services International (based on Tuko Pamoja), for use in PSI's Abstinence for Youth Program (details unavailable) **Dates:** Published in 2005	
Target population, location	In school 10 to 15 year olds
Intervention	The curriculum is designed to delay sexual debut and promote sexual and reproductive health by addressing gender, reproductive health, preventive behaviors, sexually transmitted infections, HIV and AIDS, abstinence, gender violence, decision-making, and communication skills. Implemented in primary schools using a teacher-led participatory learning approach.
Evaluation Design	Not available

Key Indicators	Not available
Reference	Not available
Puberty-focused	
Program name: Growth and Changes Girls' Puberty Book **Implementers:** Marni Sommer, Columbia University **Dates:** Dates unknown	
Target population, location	10 to 14 year old girls in Tanzania
Intervention	Guidance on early puberty and changes, and pragmatic advice on managing menstruation.
Evaluation Design	Process and pre- and post-test evaluations. Data collection: Process: NGOs who distributed the books were given forms for their field staff or teachers to complete. Pre-and post-test: girls survey and qualitative participatory exercises and in-depth interviews. A second evaluation wave is planned.
Key Indicators	Process: feedback on the uptake of the book, parental responses, girls' responses, teacher's impressions, how many books were given out and how. Pre-and post-test: data forthcoming.
Reference	▪ Marni Sommer. "Where the Education System and Women's Bodies Collide: The Social and Health Impact of Girl's Experiences of Menstruation and Schooling in Tanzania." *Journal of Adolescence* 2010; doi:10.1016/j.adolscence.2009.03.008 ▪ Marni Sommer. "Ideologies of Sexuality, Menstruation and Risk: Girls' Experiences of Puberty and Schooling in Northern Tanzania." *Culture, Health & Sexuality 2009;11:383-398.* ▪ Personal communication
Program name: My Changing Body: Fertility Awareness for Young People **Implementers:** Institute for Reproductive Health and Family Health International, Guatemala and Rwanda **Dates:** 2003-present	
Target population, location	10 to 14 year olds and their parents.
Intervention	A fertility-awareness, gender-based curriculum to be used as an add-on to existing SRH programs. Parental component. Participatory learning activities.
Evaluation Design	▪ Modified nonequivalent control group evaluation design using quantitative and qualitative methods. ▪ Quantitative methods used at baseline and endline and qualitative only at endline. ▪ Innovative participatory data collection methods were used for both qualitative and quantitative components, for example using a card game to quantify change. ▪ Interviews included a matching game, stories about girls and boys in puberty, and a series of questions about parent-child communication, which respondents answered by choosing visual cues (cards with Likert scale options represented by sad/happy faces). ▪ Baseline and about 1 month after completion of six sessions.

Key Indicators	Key indicators include: ▪ Changes in fertility awareness (measured by: Knowledge of menstrual cycle among youth and parents before and after MCB; Knowledge of male fertility among youth and parents before and after MCB; Sexuality attitudes among youth and parents before and after MCB) ▪ Changes in parent-child communication (measured by: Who do you talk with about the changes you are experiencing as you grow up?; Talked about crushes last month with parent/youth; Talked about changes in body last month with parent/youth; Degree of comfort with changes in child's/own body during puberty) ▪ Changes in gender norms (indicators include: Parents hold less stereotyped gender norms than youth; Parents shift towards less stereotyped gender norms; Youth shift towards less stereotyped gender attitudes after MCB)
Reference	Igras, Lundgren, Bijou, Mukabatsinda. "Evaluating programs reaching very young adolescents Experiences and lessons from My Changing Body, a body literacy and fertility awareness course." Presentation, Kampala November 9th 2009.
Parenting and Parent-Child Communication	
Program name: The Cool Parent's Guide **Implementers:** Save the Children, Malawi **Dates:** 2004	
Target population, location	Parents of 7 to 11 year olds
Intervention	The guide aims to help parents talk to their children about HIV/AIDS by improving their knowledge, skills, attitudes, and actions. The guide includes the sections: 'How to talk with a young child about forming good behaviors to prevent HIV', and 'Questions to ask and answer with your young child'.
Evaluation Design	Comparative qualitative endline evaluation of parents, children, distributors of the guide in two regions using a survey.
Key Indicators	Themes addressed included: ▪ Effectiveness of the distribution process ▪ Impressions of concerned stakeholders about the Cool Parent Guide ▪ Acceptance and use of the Cool Parent Guide ▪ The guides' contribution towards behavior change in children and parents ▪ Suggestions on how the guide can be improved.
Reference	http://www.who.int/child_adolescent_health/documents/9789241595667/en/index.html
School and Community-Based	
Program name: Primary School Action for Better Health, Kenya **Implementers:** Center for British Teachers 2002-2007; Ministry of Education 2008-present **Dates:** 2002-present	
Target population, location	In school 12 to 14 year olds
Intervention	HIV/AIDS prevention program with school and community sensitization components
Evaluation Design	▪ Action research evaluation model using a quasi-randomized ▪ controlled cross-sectional. ▪ Data collection methods include: surveys, focus groups, interviews, and the collection of pregnancy data in schools. ▪ Data collected in multiple waves throughout the project's duration.

Key Indicators	Key Indicators: ▪ Program participation and awareness ▪ Knowledge, attitudes, and behaviors with respect to HIV/AIDS and general SRH (for example, condom use and the ability to say no to intercourse). ▪ Teacher's attitudes towards teaching about and knowledge of HIV/AIDS. Examples of measures include: I can say no to playing sex; A girl means 'no' when she says 'no'; You should use a condom when playing sex; Remain virgin in past year; Never engaged in playing sex; Condom used at last sexual intercourse.
Reference	http://www.psabh.info/
Program Name: Kenya Girl Guides Association HIV/AIDS Peer Education Program **Implementers:** Kenya Girl Guides Association, PATH, Family Health International, Kenya **Dates:** 2004-2005	
Target population, location	In school 10 to 14 year olds, Kenya
Intervention	School-based peer-led program aimed to communicate key information and concepts about topics such as HIV prevention, relationships, and self-esteem, to other Girl Guides, and to their school peers. Life skills and SRH focus.
Evaluation Design	Quasi-experimental. Surveys conducted at baseline and 12 months later at endline. Focus groups and baseline and endline.
Key Indicators	Key indicators included: ▪ Changes in: self-confidence and social connectedness; support for gender equity; attitudes toward people living with HIV; knowledge about HIV and AIDS; sexual risk-taking. ▪ Perceptions of the intervention Examples of measures include: I feel proud of myself; I feel I can refuse to do certain things just because others want me to; I feel I can say no to sex; Boys and girls should be treated the same; Girls can do as well as boys in science subjects; You cannot tell if someone has HIV by looking at them.
Reference	www.popcouncil.org/pdfs/horizons/KenyaGirlGuidesEval.pdf
Comprehensive Programs	
Program name: Entre Amigas **Implementers:** PATH, Center for Studies and Social Promotion, Puntos de Encuentro, University of Leon, Nicaragua **Dates:** 2002-unknown	
Target population, location	10 to 14 year old girls, their parents, teachers, and health personnel.
Intervention	Inter-sectoral, integrated risk-prevention interventions targeted support networks and aimed to empower girls while increasing knowledge of SRH and strengthening their support networks. Specific interventions included: Safe spaces for girls to meet in; soap opera with a teenage girl; meeting groups between mothers and mothers and daughters; soccer teams; peer educators; school visits by health personnel.

Evaluation Design	▪ Impact evaluation conducted, only baseline evaluation report available. ▪ Baseline methods: survey of girls and focus groups with girls, mothers, health personnel, and teachers. ▪ Endline methods: survey of girls
Key Indicators	▪ Limited information available for impact evaluation. ▪ Baseline indicators included: self-esteem; sense of worth; self-assertion; gender in relation to sexuality and reproduction; identification of risks related to STIs; violence; support networks and enabling environment. ▪ Available impact indicators: self-efficacy; self-assertiveness; ▪ Example of impact measures: "I don't believe it's my fault if I'm treated badly"; "I have the right to speak out if something is bothering me".
Reference	http://www.path.org/projects/entre_amigas.php
Program name: ISHRAQ **Implementers:** Caritas, the Centre for Development and Population Activities, the Population Council, Save the Children, the Ministry of Youth and the National Council for Childhood and Motherhood. **Location:** Egypt **Dates:** 2001-present	
Target population, location	13 to 15 year-old out-of-school girls with components for the community, parents, and adolescent boys.
Intervention	Girls' interventions: A curriculum targeting Literacy, life skills development classes, livelihoods courses, and team sports. The creation of safe spaces was integral to the delivery of the interventions. Activities involved a female mentor. Community interventions: with boys, parents, community leaders, and promoters.
Evaluation Design	▪ Quasi-experimental with a matched control group. ▪ Pre and post-test over a 30-month period with a mid-point survey for new participants not included in the baseline. ▪ Data collection methods: girls survey, focus groups, unstructured interviews, and observations.
Key Indicators	Indicators: ▪ Changing attitudes of girls, boys, parents and community members ▪ Knowledge of key health and rights issues ▪ Gender role attitudes ▪ Literacy and educational aspirations ▪ Friends and peer networks ▪ Work and livelihood skills ▪ Harassment of girls and constraints on their mobility ▪ Sports participation ▪ Key issues related to marriage. Examples of measures include: % of girls who had entered middle school by the end of the program; % of girls who report a preference to be married before age 18; % of girls who say that family members alone should select a girl's husband; % of girls who say they desire fewer than three children; % of girls who intend to circumcise their daughters in the future; % of girls who report experiencing verbal harassment; % of girls who agree that a girl should be beaten if she disobeys her brother; Changes in gender role attitudes were measured by a gender role attitude index combining responses to ten statements.

Reference	Brady, Assaad, Ibrahim, A. Salem, R. Salem, and Zibani. Providing new opportunities to adolescent girls in socially conservative settings: The ISHRAQ program in Rural Upper Egypt. New York: Population Council, 2007.
Program name: Promoting Change in the Reproductive Behavior of Youth (the PRACHAR project) **Implementer:** Pathfinder **Location:** India **Dates:** 2001-present	
Target population, location	Community-wide including a component for 12 to 14 year old girls.
Intervention	Reproductive health communication model to increase girls' age at marriage, delay the first birth after marriage until the age of 21, and ensure spacing of at least three years between the first and second births. Intervention for 12 to 14 year olds: two training sessions, each two and a half hours in length using Pathfinder's Reproductive Health Guide for Educators of 12-14 Year Old Girls.
Evaluation Design	▪ Process and impact evaluations. ▪ Impact evaluation design: pre and post-survey in representative sample of intervention and control villages. ▪ Data collection methods: baseline and endline surveys; project records and service statistics; longitudinal analysis of project records and service statistics; pre- and post-training tests; a survey to measure the effectiveness of BCC messages (endline only). ▪ Baseline and endline surveys were conducted 2 years apart.
Key Indicators	The program used 14 different indicators, most did not pertain to 12-14 year olds; rather they measured birth spacing, newlywed's contraceptive use for delaying pregnancy, and interval between marriage and first child. Indicators that may relate to younger adolescents include: % youth who believe that family planning to delay first child is necessary and safe; and % of youth who believe that early childbearing is injurious to health of mother.
Reference	Mizanur Rahman and Elkan E Daniel. *A Reproductive Health Communication Model That Helps Improve Young Women's Reproductive Life and Reduce Population Growth: The Case of PRACHAR from Bihar, India*. Pathfinder International, 2010 *www.pathfind.org/site/DocServer/India-Prachar_Project.pdf*
Program name: Youth.now **Implementers:** Futures Group, Margaret Sanger Center International, Dunlop Corbin Communication **Location:** Jamaica **Dates:** 2000-2004 (unclear if sustained further)	
Target population, location	10 to 19 year olds with separate interventions for 10 to 12 year olds and 13 to 15 year olds. Interventions also targeted to wider community.
Intervention	Intervention for 10 to 15 year olds used radio, TV, and print advertisements with targeted messages for 10 to 12 and 13 to 15 year olds.
Evaluation Design	An evaluation was conducted between 2001 and 2002. No details are available regarding methodology.

Key Indicators	Key indicators: delay first sex; delay first pregnancy; number of adolescent pregnancies; proportion of planned adolescent pregnancies; number of new cases of STIs; use of quality RH and STI Services and preventive practices; increased access to quality services and preventive practices; Improved knowledge and skills of adolescents and providers of care
Reference	*www.kaisernetwork.org/**health**_cast/…/**Youth.now**congress10.pdf* *www.fhi.org/NR/rdonlyres/…/RussellBrown.ppt*
Theory-based	
Program name: Focus on Youth – Caribbean **Implementers:** Wayne State University School of Medicine; The Bahamas Ministries of Health and Education **Location:** The Bahamas (Island of New Providence) **Dates:** unknown	
Target population, location	In school 10 to 11 year olds.
Intervention	Ten-session school-based intervention. Games and interactive exercises emphasize skills development and practice in decision-making, negotiation and communication.
Evaluation Design	▪ Clustered randomized controlled trial. ▪ Data collected using the Bahamanian Youth Health Risk Behavioral Inventory questionnaire. ▪ Data collected at 6 and 12 months post intervention.
Key Indicators	Indicators: ▪ Sexual behavior progression (measures included: intention to have sex in next 6 months; whether subject had engaged in penile-vaginal or penile-anal sex in his/her life. Those who answered positively were asked: if they had engaged in sex in the past 6 months and if so, the number or partners, the frequency of sexual intercourse in the past 6 months, and the frequency of condom use). ▪ PMT constructs (measured by a 5-point Likert scale) ▪ Threat appraisal pathway, perceived severity (measured by negative feelings about HIV infection, STD, and pregnancy) ▪ Perceived intrinsic rewards (measured by pleasure from having sex) ▪ Perceived extrinsic rewards (measured by desire peers to know that the individual is not a virgin, is having sex, and perceived number of boys, girls and close friends who have had sex) ▪ Coping appraisal pathway or perceived self-efficacy (measured by resisting pressure to engage in sex under various circumstances) ▪ Perceived response cost (measured by four items concerned with the possible negative consequences of refusing sex) ▪ HIV/AIDS knowledge (measured by a set of 15 statements – both correct and incorrect) ▪ Condom use (measured by 15 statements – both correct and incorrect).
Reference	Daniel EE, Masilamani R, Rahman M (2008): “The effect of Community-based reproductive health communication interventions among young couples in Bihar, India”, International Family Planning Perspectives, 34(4):189 97.
Gender-based	
Program name: Soccer Schools – Playing for Health **Implementer:** PAHO **Location:** Argentina, Brazil, Chile, Mexico, Paraguay and Venezuela **Dates:** 2002-unknown	

<table>
<tr><td>Target population, location</td><td>Pre-adolescent boys</td></tr>
<tr><td>Intervention</td><td>Coaches trained on how to integrate public health messages and gender-equitable norms into the game of soccer.</td></tr>
<tr><td>Evaluation Design</td><td>Evaluation planned for but no details available.</td></tr>
<tr><td>Key Indicators</td><td>Not available.</td></tr>
<tr><td>Reference</td><td>Not available.</td></tr>
<tr><td colspan="2">Program name: Choices
Implementer: Save The Children
Location: Nepal
Dates: unknown</td></tr>
<tr><td>Target population, location</td><td>10 to 14 year olds</td></tr>
<tr><td>Intervention</td><td>The intervention is a curriculum that aims to change gender norms among boys and girls
Participatory learning activities are employed as well as strategies to connect targeted emotions with the desired behaviors (based on the theory behind projective techniques).</td></tr>
<tr><td>Evaluation Design</td><td>▪ Modified nonequivalent control group evaluation design using quantitative and qualitative methods.
▪ Quantitative methods used at baseline and endline and qualitative only at endline.
▪ Innovative participatory data collection methods were used for both qualitative and quantitative components, for example providing boys and girls cameras to take pictures in their communities to spark discussion of gender norms.
▪ Data collected at baseline and about 1 month after completion of four month program.</td></tr>
<tr><td>Key Indicators</td><td>Potential indicators include:
Behavioral – measured by:
▪ The uptake of chores by boys;
▪ Helping sisters with school work (for school going sisters);
▪ Teaching sister educational skills by including her in their homework (for non-school going sisters);
▪ Increased advocacy within a household to keep girls in school and delay marriage.

Attitudinal – measured by:
▪ Girls' lives have equal value as boys';
▪ Girls should go to school and can succeed;
▪ Girls can achieve their hopes and dreams;
▪ Boys can help around the house so girls have more time to do school work;
▪ Boys and girls can change gender norms by simple actions; Boys can show their love to their sisters through action;
▪ Boys can enrich the lives of girls by caring actions.</td></tr>
<tr><td>Reference</td><td>Save The Children. Empowering Boys and Girls to Change Gender Norms. Choices: A Curriculum for 10 to 14 Year Olds in Nepal. Save The Children, No date.</td></tr>
</table>

Sports as a Program Platform	
Program name: PeacePlayers International HIV/AIDS Awareness Program **Implementers:** PeacePlayers International **Location:** South Africa **Dates:** 2003-present	
Target population, location	10 to 14 year olds
Intervention	Life skills and HIV/AIDS awareness curriculum is taught by basketball coaches in conjunction with playing basketball.
Evaluation Design	Pre- and post-test using a questionnaire
Key Indicators	▪ HIV/AIDS awareness (measured by: Do you know what the HIV/ AIDS epidemic is?; Do you know anyone infected with HIV/ AIDS?; Do your teachers talk to you about HIV/AIDS?; Do your parents talk to you about HIV/ AIDS?; Do you talk to your friends about HIV/ AIDS?; Are you afraid of HIV/ AIDS?) ▪ Knowledge of HIV/AIDS (measured by: mode of transmission; perceptions of life expectancy) ▪ Attitudes towards HIV/AIDS (measured by ten questions including: HIV/AIDS is only a problem in the black community; God is punishing people infected with HIV/AIDS; HIV/AIDS is only a problem in South Africa)
Reference	*http://www.peaceplayersintl.org/dsp_southafrica_background.aspx*

Appendix C: Overview of programs by region, predominant SRH issue, and peer-review status

	Region	HIV/AIDS	SRH	Puberty/ body changes	Peer-reviewed
Tuko Pamoja	Africa		X		No
Choose Life	Africa and Caribbean	X			No
Chill Club	Unknown		X		No
Growth & Changes	Africa			X	Research component – yes
My Changing Body	Africa and Latin America			X	No
Cool Parent Guide	Africa	X			No
PSABH	Africa	X			Yes
KGGA	Africa	X			
Entre Amigas	Latin America		X		No
ARK	Africa and Caribbean	X	X		Unclear
ISHRAQ	Africa		X		Yes
PRACHAR	Asia		X		Yes
Youth.now	Caribbean		X		No
FOYC	Caribbean	X			Yes
Soccer Schools	Latin America		X		Unclear
Choices	Asia				No
GEMS	Asia		X		No
Parivartan	Asia		X		No
PeacePlayers	Africa	X			No

Appendix D: List of References

2004. Preadolescent Girls: The Hidden Population. Findings from the Entre Amigas Baseline. Washington D.C.: PATH.

2006. Tuko Pamoj: Adolescent Reproductive Health and Life Skills Manual. Kenya: PATH.

2006. Choose Life: Guide for Peer Educators and Youth Leaders. MD: World Relief.

2005. Chill Club: Adolescent Reproductive Health and Life Skills Curriculum for Upper Primary School Youth. Kenya: Population Services International.

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