

Freedom from Hunger and Reach India

Advancing Women's and Adolescent Girls' Access to Resources and Influence in Rural India

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Acronyms

CINI	Child in Need Institute
CMF	Center for Microfinance (at the IFMR)
FGD	Focus-Group Discussion
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICRW	International Center for Research on Women
IFMR	Institute for Financial Management and Research
ORS	Oral Rehydration Solution
RCT	Randomized Controlled Trial
Rs.	India Rupees
SMVS	Sri Mayapur Vikas Sangha
SC	Service Center
SCM	Service Center Manager
SHG	Self-Help Group
SHPI	Self-Help Promoting Institution
STI	Sexually Transmitted Infection
TOT	Training of Trainers

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EXECUTIVE SUMMARY

Background

Approximately 20 percent of India's one billion citizens are adolescent girls between the ages of 10 and 19 years old. These girls are often caught in a cycle of poor health, early marriage, early and repeated pregnancies, limited mobility and poverty. Freedom from Hunger developed an education curriculum particularly for these adolescent girls, called *Learning Games for Adolescent Girls and Their Mothers* (hereafter: *Learning Games*) to improve their health and financial status. This report presents the results from an outcomes assessment with the Reach India network of self-help promoting institutions (SHPIs) in the five states of east and northeast India as well as a randomized controlled trial evaluation, consisting of baseline, midline and end-line studies conducted with Sri Mayapur Vikas Sangha (SMVS), a SHPI located in Nadia, West Bengal.

Outreach

By November 2009, the Reach India network had trained 166 SHPIs in the *Learning Games* curriculum. To estimate the total number of girls reached with the *Learning Games* during the 4-year project period, 51 SHPIs receiving the original training-of-trainers events from February through December 2008 were assessed to project total outreach. As of November 2009, approximately 36,000 girls had participated in the *Learning Games*. These girls were reached through three delivery mechanisms:

1. Self-help Groups (SHGs) consisting of adult women members who invited their daughters or other adolescent girls to their SHG meetings, in which both the women and the girls received the *Learning Games* together (Mixed Groups)
2. SHGs made up of adolescent girls (Girls-Only Groups)
3. Girls reached through non-SHG methods (Other), such as school programs, after-school programs or other mechanisms

Program Implementation

Organizations already serving girls or adolescent populations achieved more implementation of the *Learning Games*. Organizations that had no prior experience of working with girls or implementing dialogue-based education faced more obstacles to reaching girls and providing consistent education delivery and, therefore, are candidates for some type of technical assistance to break through barriers to reaching girls and scaling up products and services for them. The quality of education delivery is an important predictor of whether strong outcomes and impacts are seen at the girl/participant level. Organizations committed to scaling impacts to massive numbers of girls and mothers must take steps to ensure quality delivery of the *Learning Games*.

Program Effectiveness

For both Reach India network results and the randomized controlled trial results, we found that participation resulted mainly in improved confidence levels of the daughters (and mothers) regarding their money management. Statistically significant improvements in savings levels and effective bargaining were not detected in the quantitative studies. External factors (such as repayment issues at the partner institution and deteriorating economic conditions) likely contributed more to the lack

of improvement in savings rates than ineffective education, given the confidence levels of the daughters and mothers regarding their money management abilities. Many of the mothers and daughters felt they had gained important knowledge and experience through the *Learning Games* regarding their abilities to save money, bargain more effectively and reduce their expenses. However, the Financial Games appeared to have been less popular than the Health Games.

Although improved gains in knowledge, attitudes and behaviors were expected in the health categories, the only topic with significant gains in the randomized controlled trial evaluation was HIV/AIDS. All other topics, such as hand-washing, diarrhea, nutrition and reproductive health, saw few significant differences between those who participated in the Games and the control groups. Where there were gains, they were seen in the girls' comfort levels in discussing the topics with their family members. Where products were promoted (such as soap for hand-washing, oral rehydration solution for treating diarrhea, and foods rich in iron and protein), we saw no significant improvements in the use of these products, likely due to their perceived costs. This suggests that when products such as these are promoted, there should either be some initiative to increase access to them or suggest a process to help families prioritize their use.

The qualitative studies revealed overall satisfaction with the Games. When mothers and daughters participated in the Games together, they enjoyed the opportunity to learn together and to communicate with each other about important topics. When girls participated in girls-only groups, they appreciated having the space to discuss reproductive and sexual health and HIV/AIDS without the presence of adults.

Conclusions

The *Learning Games* curriculum was popular among the Reach India network SHPIs as well as for the girls and mothers they serve. By implementing the *Learning Games* with a parallel evaluation design—the monitoring and outcomes research with a sample of SHPIs from the network as well as intensive and rigorous research with one SHPI—we have a fairly rich understanding that the Games are effective as long as the SHPIs are able to fully implement them, with high levels of delivery quality. Some Games were more popular among girl and women participants, and some of them generated more impact. The Financial Games likely need more sessions and more time to be truly effective, and some of the Health Games need additional sessions or more technical skill to ease the participants into discussions about sensitive topics.

Communication with parents and community members prior to implementing the Games is an important and crucial step to ensure support for girls' participation as well as to minimize misinformation about the purpose of the *Learning Games*. Working with adolescent girls and/or providing education for the first time requires full organizational commitment, purposeful integration, and intentional design for programs to be effectively delivered at massive scale.

BACKGROUND

The background section is divided into two key sections: (a) a background on the *Learning Games for Adolescent Girls and Their Mothers* (hereafter: *Learning Games*) implementation, which will provide the rationale and description of the curriculum as well as the delivery mechanisms for implementing them, and (b) an outline and description of the monitoring and evaluation plan and activities.

Program Background

Rationale for Program

In 2006, approximately 20 percent of India's one billion citizens were adolescent girls between the ages of 10 and 19.¹ These girls were often caught in a cycle of poor health, early marriage, early and repeated pregnancies, limited mobility and poverty. Sixty to 70 percent of Indian adolescent girls were anemic²; more than one-half were married before reaching the legal age of 18 years,³ and 30 percent of women ages 15–49 years gave birth for the first time before the age of 18. By age 25, 85 percent of women had given birth.⁴ Young age at marriage and first pregnancies are both strongly associated with limited educational and economic opportunities, perpetuating gender inequities.

For many girls, adolescence marks initiation into economic roles. Adolescent girls learn to assist their mothers in almost all tasks and often take over their mothers' domestic chores, adopting stereotypical gender roles.⁵ A study by the Population Council in India revealed that if a girl earns money from an economic activity, in most cases these earnings are handed over to others.⁶ This lack of decision-making over their own finances continues into adulthood, increasing their own vulnerability to financial and health shocks, and reducing their opportunity to work towards their own financial goals.

Because adolescence is a transitional stage to adulthood, how adolescent girls navigate social and economic changes, as well as the changes in their bodies and health, determine their own future well-being as well as the future livelihoods of their own children, communities and ultimately their country. Thus, adolescence is considered a pivotal intervention point to assist girls in gaining greater access to and control over their health, improving their food security and improving social and economic resources and opportunities.

Self-help Groups (SHGs), built fundamentally on small savings and credit transactions, represent a critical economic opportunity and social support network for millions of women in rural India. There is estimated to be more than three million women's SHGs in India, encompassing more than 50 million members, and this dynamic phenomenon is growing fast. The possibility for women's

¹ International Institute for Population Sciences (IIPS) and Macro International. 2007. *National Family Health Survey (NFHS-3), 2005–06: India: Volume I*. Mumbai: IIPS.

² International Center for Research on Women (ICRW). 2004. *Reducing Iron-Deficiency Anemia and Changing Dietary Behaviors among Adolescent Girls in Maharashtra, India*. <<http://www.icrw.org/docs/2004indiareprohealth8.pdf>> (October 8, 2008).

³ Family Health International (FHI). *Health Adolescent Project in India*. 2001. <<http://www.fhi.org/en/RH/Training/trainmat/hapiindiaprogram.htm>> (March 28, 2007).

⁴ International Institute for Population Sciences (IIPS) and Macro International. 2007. *National Family Health Survey (NFHS-3), 2005–06: India: Volume I*. Mumbai: IIPS.

⁵ CEDPA. September 2001. *Adolescent Girls in India Choose a Better Future: An Impact Assessment*. Washington, D.C.

⁶ Ram, F., R.K. Sinha, S.K. Mohanty et al. 2006. *Marriage and Motherhood: An exploratory Study of the Social and Reproductive Health Status of Married Young Women in Gujarat and West Bengal, India*. Population Council: New Delhi, India. <<http://www.popcouncil.org/pdfs/MarriageMotherhood.pdf>> (March 28, 2007).

SHGs to eventually link to formal financial institutions further enhances opportunities for women by providing a secure and supportive place to save and borrow. These funds help women cope with economic and health shocks, seize economic opportunities, and meet life-cycle needs.

Despite the success of the SHG movement and the impacts of savings and credit on family well-being,⁷ the development community realized that other services—in addition to credit and savings—must be available for families to lift themselves out of poverty. Freedom from Hunger, known for its promotion of integrated services for groups of poor women,⁸ developed *Learning Games for Adolescent Girls and Their Mothers*, which are dialogue-based education sessions that focus on health, social and economic topics that are critical to the food security and well-being of adolescent girls and young women.

In addition to the need for integrated services, it was recognized that the quality of the products and services provided by the self-help promoting institutions (SHPIs) was not consistent and that the animators hired by the SHPIs were not always highly educated individuals, many with high school degree or less. Training and education products designed for and used by many SHPIs were too complicated and often not used. Thus, Freedom from Hunger set out to develop a simpler education design that would allow SHPIs with lower skilled animators to help develop their skills in providing education as well as provide this education at a high quality. As Freedom from Hunger developed the education for the Reach India network, it was piloting the use of single thematic sessions as well as a new education design known as *Learning Conversations*. Freedom from Hunger’s typical education consists of single-topic education modules consisting of several sessions. So for example, the Diarrhea module consists of seven sessions on prevention and treatment of diarrhea. The Games, in most cases, were designed as single thematic sessions, such as the entire Diarrhea module was condensed into one Game. The theory behind condensing an entire module into one Game was that you’d share only the most critical information and that, for organizations that might not deliver an entire module, you would only have one chance at sharing important, in some cases, life-saving information. The education designed for adult SHG members, the *Learning Conversations*, was designed with simplicity in mind as well and, in addition, was designed with a predictable process for delivery. The theory behind this education design change was that lower skilled animators would get comfortable with a predictable process of

Box I. Learning Games for Adolescent Girls and Their Mothers Terminology

<i>Learning Games</i>	Italics represents full module title
Games	Generic term that represents one or more individual games in the module
Health Games	Represents the five health games in the full module
Financial Games	Represents the five financial games in the full module
“Food and the Flag”	Games set in quotation marks represent the actual name of an individual game

⁷ Khandker, S. 2005. “Micro-Finance and Poverty: Evidence Using Panel Data from Bangladesh.” *World Bank Economic Review* 19(2): 263-286.; Dunford, C. and A. Watson. 2006. *From Microfinance to Macro Change: Integrating Health Education and Microfinance to Empower Women and Reduce Poverty*. United Nations Population Fund; Zeller, M., M. Sharma, A.U. Ahmed and S. Rashid. 2001. *Group-Based Financial Institutions for the Rural Poor in Bangladesh: An Institutional- and Household-Level Analysis*. International Food Policy Research Institute (IFPRI), Research Report No. 120, Washington, DC.

⁸ MkNelly, B & C. Dunford. (2002). Using microfinance to improve health and nutrition security. *Global HealthLink*. 118: 9, 22. Retrieved December 30, 2009 from: <http://www.globalhealth.org/publications/article.php3?id=878>.

delivering an education session and the introduction of a new topic would not require multiple trainings. This paper will only focus on the *Learning Games* and not the other education topics delivered by the Reach India network; however, it is important to note that the lessons learned and the results from the rigorous evaluation have to take into context that a new education design was also being tested for the first time.

The *Learning Games* were designed to help adolescent girls gain the knowledge, skills and attitudes needed to improve their lives and become healthy, food-secure, informed and empowered adult women. Although adolescent girls face particular risks and challenges, there are few services available to meet their specific needs. They also operate in a home and community environment in which they have few resources and assets. They have very little decision-making authority and mobility. The *Learning Games* begin to address that gap by covering topics of importance and interest to adolescent girls—health and finance—using fun and interactive activities. These activities focus on behavioral changes within the girl’s control—practices she can implement in spite of restrictions in her environment.

The first set of Games consists of ten 30-minute sessions. An introductory session provides an overview of the entire module that encourages exchange among mothers and daughters (“Getting to Know Each Other”). Four sessions focus on financial education and are designed to equip girls to save money, bargain, prioritize spending, and develop and follow a savings plan (“Ways to Save Money,” “Steps of Bargaining,” “What to Spend Money On” and “Making a Savings Plan”). The other five sessions focus on health topics such as prevention and treatment of diarrhea, nutrition, sexual and reproductive health and HIV/AIDS (“How to Prevent and Treat Diarrhea,” “Practicing Hand-Washing,” “Knowing Our Bodies,” “Food and the Flag” and “How to Protect Against HIV/AIDS”). Table 1 outlines the Games and their respective objectives.

Number and Title	Objectives
1. Getting to Know Each Other	<ul style="list-style-type: none"> ▪ Identified themselves as thinkers, feelers or doers ▪ Reviewed how thinkers, feelers and doers contribute to a group
2. Ways to Save Money	<ul style="list-style-type: none"> ▪ Determined the easiest ways for them to try to save money
3. Steps of Bargaining	<ul style="list-style-type: none"> ▪ Named items they can try to get a lower price for by bargaining ▪ Practiced or observed others practicing, using the steps of bargaining
4. What to Spend Money On	<ul style="list-style-type: none"> ▪ Prioritized what they spend money on
5. Making a Savings Plan	<ul style="list-style-type: none"> ▪ Practiced making a savings plan
6. How to Prevent and Treat Diarrhea	<ul style="list-style-type: none"> ▪ Discussed ways to prevent and treat diarrhea
7. Practicing Hand-Washing	<ul style="list-style-type: none"> ▪ Analyzed why hand-washing is important and when to wash hands ▪ Practiced the steps of hand-washing
8. Knowing Our Bodies	<ul style="list-style-type: none"> ▪ Discussed the female and male reproductive systems and pregnancy
9. Food and the Flag	<ul style="list-style-type: none"> ▪ Practiced how to use the colors of the flag to make healthy meals
10. How to Protect Against HIV/AIDS	<ul style="list-style-type: none"> ▪ Discussed ways that HIV is and is not spread ▪ Identified ways to protect against HIV/AIDS.

The sessions are designed to meet adolescent girls’ desire for lively, creative activities—games, stories, skits, songs, rhymes, etc.—to learn new information and skills. Pair- and group-work also provide girls with a non-threatening way to talk, address problems and bond around common solutions and actions. Even the quietest of girls can be drawn into the Games. In the process, the Games

- develop key life skills, such as decision-making, assertiveness, negotiating and self-awareness;
- give girls a chance to share and improve practical skills related to caring for their health and finances; and
- build a platform for girls’ entry into SHGs, which are important providers of social networks and financial resources for women.

Reach India Network

To scale the delivery of innovations such as *Learning Games*, Freedom from Hunger launched Reach India in 2007, a social enterprise modeled on commercial franchise principles to deliver proven products to the many local organizations that serve poor people through SHGs in India. In July 2009, Reach India became an independent Indian non-governmental organization. Reach India’s mission is to bring knowledge, life skills, microfinance and linkages to massive numbers of poor rural women to build futures of health, hope and dignity for themselves and their families.

Using the SHG platform, Reach India delivers the *Learning Games* through a low-cost, sustainable network of Service Centers that promote and train a vast existing network of self-help promoting institutions (SHPIs). These SHPIs already reach millions of women in some of the poorest rural communities of the poorest states of India. By utilizing the existing field agents working with SHGs as the animators for *Learning Games*, Reach India optimizes the most ubiquitous microfinance platform in India today. Through this existing network of women SHGs, adolescent girls are invited by their mothers or mothers-in-law to participate jointly in the *Learning Games*.

Reach India’s “Capacity Center” staff in Kolkata acts as a franchisor, recruiting and training a growing network of independent Service Centers (SCs). The Capacity Center ensures quality control, provides start-up financing, adapts materials and trains SCs on the standard business systems.

SCs are independent, for-profit entities that derive revenue from two sources: SHPIs that have training budgets or corpus funds that can be used to cover the cost of training their staff, and third-party payers—local, regional, national or international organizations that sponsor individuals from one or more SHPIs to participate in a Reach India training delivered by an SC. Many of these third-party sponsors are international non-governmental organizations that provide support to local organizations. These organizations include World Vision, Catholic Relief Services, or Christian Children’s Fund. Local government also sponsors participants, as do some international donors, such as the Nike Foundation and David and Lucile Packard Foundation.

Program Design and Goals

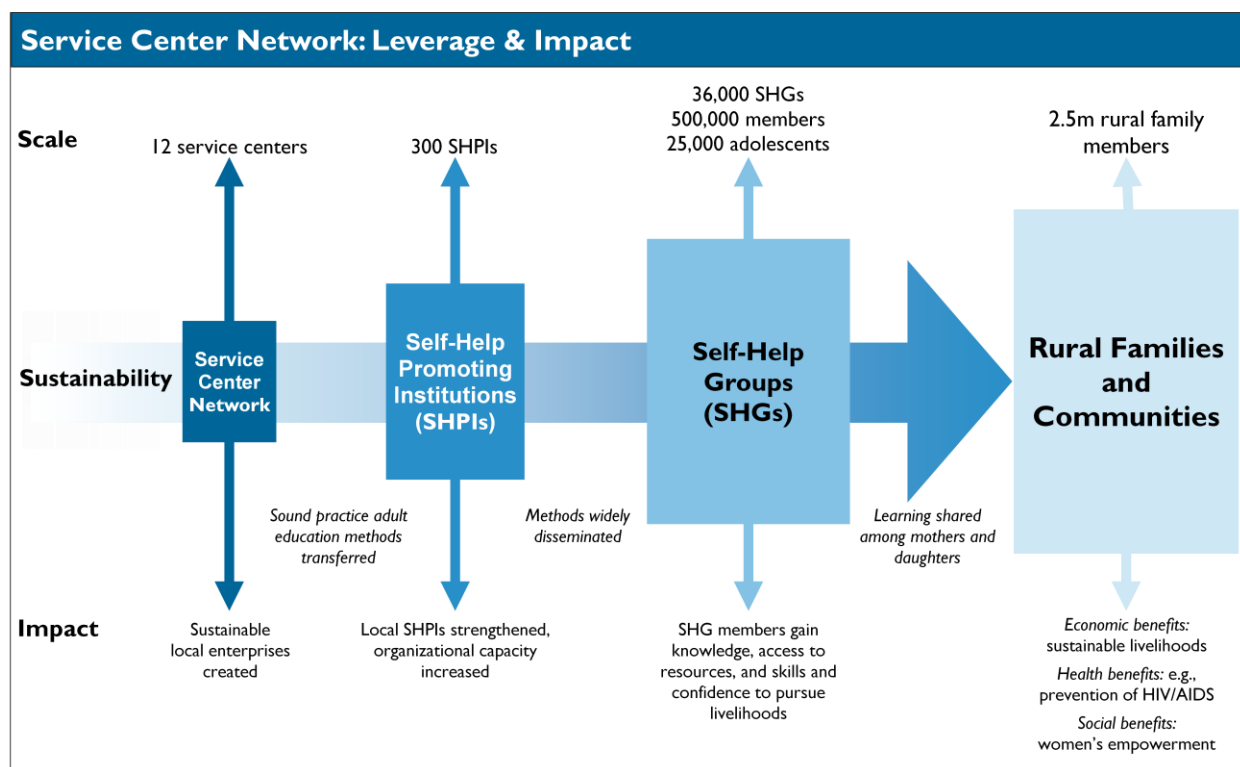
The overarching goals of this initiative were to advance adolescent girls’ and young women’s access to critical social and economic resources and influence in rural India through the following:

- Expanding the innovation of *Learning Games* to address the needs of girls and young women
- Building local capacity to disseminate *Learning Games* on a mass scale

- Promoting adolescent girls’ rights and increased access to critical social and economic resources

To achieve these objectives and outcomes, Reach India projected to deliver the *Learning Games* to and achieve positive outcomes in the lives of at least 25,000 girls—between the ages of 10 and 19 years, with a primary focus on girls between the ages of 17 and 19—directly in SHGs and indirectly through mothers and mothers-in-law. Figure 1 below is the original depiction of the goals and objectives and model used to describe how it would achieve the scale or outreach to adolescent girls, how products and services would be sustainably delivered and the projected outcomes and impact.

Figure 1



For a more extensive list of indicators measured and tracked for this initiative, please see the Assessment Plan.

Principal Partners

In order to achieve these objectives, Freedom from Hunger and Reach India worked in strategic alliance with the following organizations:

- Reach India network design: GlaxoSmithKline, Accenture and Worldways Social Marketing;
- Piloting, Testing and Evaluating *Learning Games* and other *Learning Conversations*: Catholic Relief Services (CRS) India; and Sri Mayapur Vikas Sangha (SMVS);
- Research: the Women’s Global Health Imperative (WGHI) of the Research Triangle Institute, San Francisco; the Center for Microfinance (CMF) at the Institute for Financial Management and Research (IFMR); GfK Mode; the Child in Need Institute (CINI); International Center for Research on Women (ICRW) in the United States and in India; and independent consultants

Jennifer Sebstad, Arna Seal, Kim Wilson from Tufts University and Benjamin Crookston from Brigham Young University.

Evaluation Background

Two types of research were employed to evaluate the outcomes and impacts of the *Learning Games*. The first type we have defined as “monitoring and cascading research.” The purpose of this research was to assess the outreach and the outcomes of the *Learning Games* for a sample of Reach India network SHPIs that delivered the *Learning Games* between February and December 2008. This type of research consists of methods used by the Reach India network to evaluate all of its education interventions.

The second type of research was a randomized controlled trial evaluation (RCT) that was conducted with one organization served by the Reach India network in West Bengal, Sri Mayapur Vikas Sangha (SMVS). The purpose of this research was to apply a rigorous methodology to evaluate the effectiveness and impacts of the *Learning Games* on both women and their adolescent daughter or daughter-in-law participants. Table 2 below is a synopsis of the number and types of activities conducted for both types of research. The details of these activities will be described in greater depth below.

		Reach India Network “Cascading Research”	SMVS “RCT”
Scale		<ul style="list-style-type: none"> SHPI surveys conducted with 51 of a possible 79 organizations trained in <i>Learning Games</i> 	<ul style="list-style-type: none"> Attendance records and RCT survey results used to project participation
Impact: Monitoring	Quantitative	<ul style="list-style-type: none"> 95 girls randomly selected to participate in a survey on key outcomes from participating in <i>Learning Games</i> (selected from the 51 organizations who provided the education) 	<ul style="list-style-type: none"> Exit interviews conducted with 10 girls who dropped out of the <i>Learning Games</i>
	Qualitative	<ul style="list-style-type: none"> 20 adolescent girl and mother “impact story” in-depth interviews 	
Impact: Evaluation	Quantitative		<ul style="list-style-type: none"> RCT with a baseline, 6- and 12-month follow-ups. Comparing results from mother-daughter groups and control groups
	Qualitative		<ul style="list-style-type: none"> In-depth interviews with fathers, mothers, community members/leaders and SMVS leadership Focus-group discussions with SMVS animators, girls-only groups, mother-daughter groups

Design of Monitoring and Cascading Research

To assess outputs and outcomes at the Reach India network, several tools and processes were employed. These tools and processes are described by the level or topic of analysis: quantity of training, quality of training, SHPI-level outputs and outcomes, girl-level outputs and outcomes.

Quantity of Training

The Reach India Service Center Managers (SCMs) were in charge of keeping track and reporting to the Reach India Capacity Center the numbers of SHPIs trained on the *Learning Games* curriculum, as well as the number of SHGs and adolescent girls reached by the SHPIs. These monthly reports were submitted to the Reach India Capacity Center and used to help estimate and account for the number of SHPIs who, as a result of their participation in the *Learning Games* Training of Trainers (TOT), had subsequently trained their own staff and begun delivering the *Learning Games* (or “cascaded” the training) to their SHG members.

Quality of Training

Two activities employed by Reach India are designed to ensure that education delivery is consistent and of quality. The first method is direct observation and the second is a follow-up service meant to address any challenges at the SHPI level.

Although the SCMs of the Reach India network are trained in how to use an “Observation Checklist” form to evaluate animators and other trainers directly when they visit SHPIs, this tool is not currently mandated for use. For the randomized controlled training (RCT) evaluation with SMVS, the Burdhaman (West Bengal) SCMs were tasked with utilizing the Observation Checklist to evaluate the quality of the sessions being delivered by the SMVS SHPI staff. These checklists evaluate the field staff or animators on quality of meeting management, accuracy of the content delivered, and management of adult learning principles. An example of an Observation Checklist is provided in the Appendix.

Learning Games being delivered by the Reach India Network SHPIs are also supposed to be offered “follow-up services” to provide additional technical assistance on implementation and training. The follow-up services might be additional training by the SCMs or other services as requested by the SHPI.

SHPI Interview

A sample of 51 (of a possible 79) SHPIs (at the time of initiating the cascading research during second quarter of 2009) were interviewed using an SHPI interview tool. This tool evaluated the SHPI’s self-reported activities regarding type of trainings provided, estimated number of girls likely reached, what worked well, what challenges they faced, and what additional support they needed from the Reach India Capacity Center. These results were compiled to help understand the likely quality of the education delivery as well as the relationship between the girl-level outcomes and the quality of training indicators.

Mini-Surveys and Client “Impact Stories”

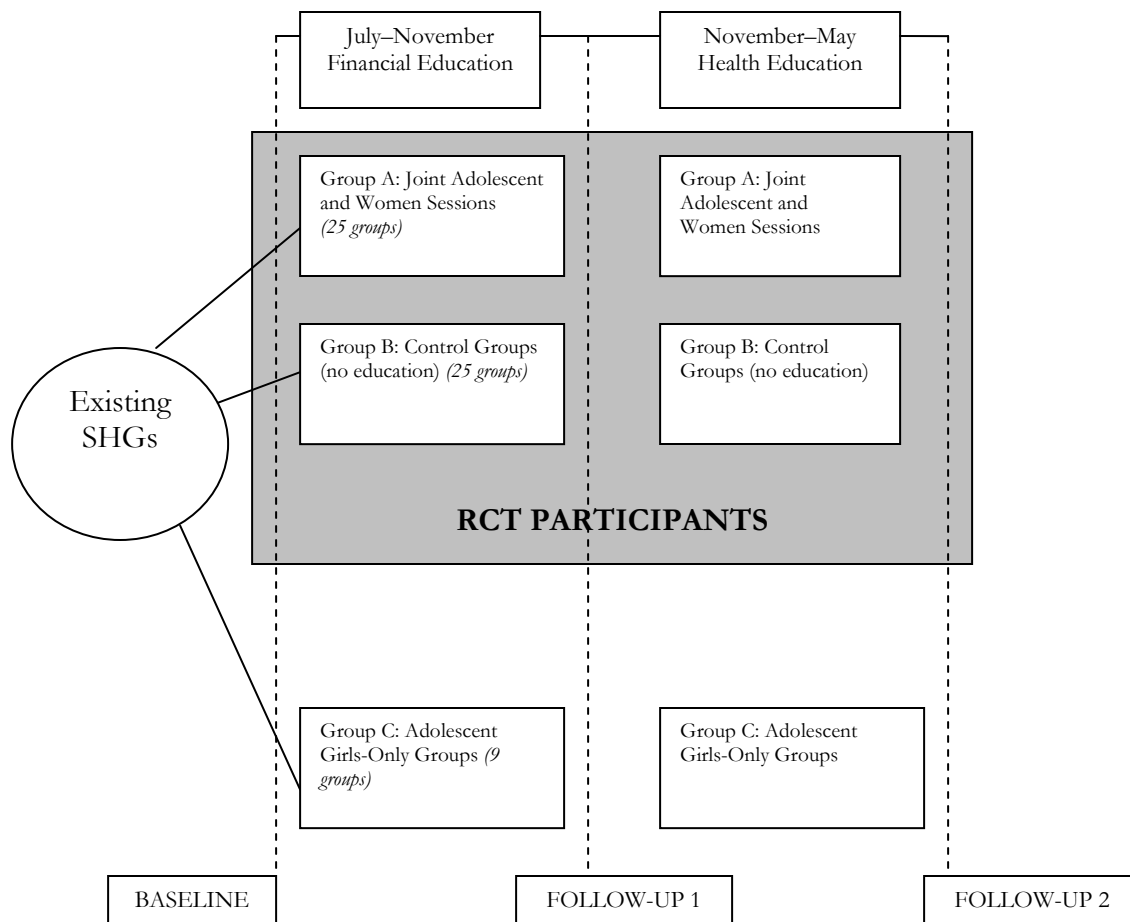
Of the 51 SHPIs interviewed, a lot quality assurance sample (LQAS) of adolescent participants of the *Learning Games* at these institutions participated in a quantitative survey to evaluate their levels of knowledge, attitudes and stated behaviors after having participated in the Games. When applying LQAS at the Reach India network level, we randomly selected 19 girls from each of the five States served by Reach India: Assam, Bihar, Jharkhand, Orissa and West Bengal. Thus, a total of 95 girls were randomly selected to participate in the survey. Of the 95 girls selected, four girls and their mothers from each of the five states were selected to participate in a lengthier qualitative interview called an “impact story.” The purpose of the impact story was to understand more their hopes and

aspirations, how their life is similar or different from their mother’s, their decision-making power, and their descriptions of what was most interesting or useful from the *Learning Games*.

Design of the Randomized Controlled Trial with SMVS

We used a community randomized trial design with SMVS to compare the financial and health-related knowledge, attitudes and behaviors of SHG members and their adolescent daughters and daughters-in-law receiving the *Learning Games* curriculum (hereafter: mother and daughter participant groups) to SHG members and their daughters and daughters-in-law who were recruited to participate, but who did not ultimately receive the *Learning Games* (hereafter: mother and daughter control groups). Thus, at baseline, all mother participants were current SHG members. The evaluation evaluated the same mothers and daughters at all three evaluation points; thus, at the 6- or 12-month evaluation, they may no longer have been SHG members, but still part of the evaluation. Figure 2 below depicts the original RCT design.

Figure 2



Intervention randomization occurred at the community level. We conducted a baseline, 6-month midline and a 12-month follow-up assessment on the same population of girls and mothers evaluated at baseline. We hypothesized that at the 6-month follow-up, mother and daughter participant groups would have better financial knowledge and demonstrate more optimal financial

behaviors (such as increased savings) than the mother and daughter control groups. We hypothesized at the 1-year follow-up, the mother and daughter participants would have improved family food security, a more diversified diet, reduction in and duration of diarrhea episodes and increased formal and informal savings and bargaining power compared to mother and daughter control groups.

The Center for Microfinance (CMF) collected baseline data. Midline and end-line data were collected by GfK Mode. Before the *Learning Games* were delivered, 145 of SMVS's self-help groups were randomly selected to participate in the study, and then selected communities within the SMVS program area were randomly assigned to participant and control groups by the Freedom from Hunger research team. All participants in the study were recruited in the same manner. Existing SHGs members were encouraged to invite their daughters and/or daughters-in-law to participate in an introductory education session.

In addition to the quantitative surveys, end-line qualitative interviews and focus-group discussions (FGDs) were conducted with mother and daughter participants, mother and daughter controls, participant fathers, control fathers, community leaders in both treatment and control villages, as well as SMVS leadership and implementing staff. The purpose of these interviews was to help explain “why” some of the financial and health changes occurred or did not occur as a result of participating in the *Learning Games*.

PROGRAM OUTREACH

As of November 2009, the Reach India network had trained 166 SHPIs in the *Learning Games* curriculum.⁹ To arrive at an estimate of the total number of girls reached by the *Learning Games* during the 4-year project period, 51 SHPIs that received the original training-of-trainers' (TOT) events from February through December 2008 were assessed and this data was used to project total outreach. As of November 2009, approximately 36,000 girls were estimated to have participated in the *Learning Games*. Please see the Reach India Cascading Report for a detailed description of how the estimates were calculated.

Between these TOTs and a follow-up assessment that occurred from June through July 2009, the SHPI partners trained their own staff and ultimately their SHG members in the *Learning Games*. There were three modes of implementation by the SHPIs trained to reach adolescent girls:

1. SHGs consisting of adult women members who invited their daughters or other adolescent girls to existing SHG meetings where both the women and the girls received the *Learning Games* together (hereafter: Mixed Groups)
2. SHGs made up of adolescent girls (hereafter: Girls-Only Groups)
3. Girls reached through non-SHG methods (hereafter: Other), such as school programs, after-school programs or other mechanisms.

The purpose of this section is to describe the benefits and challenges of the models pursued by the SHPIs to reach adolescent girls with the *Learning Games* and the estimated outreach per model.

Models Pursued to Reach Adolescents

The SHPIs served by the Reach India network were already reaching thousands of women in some of the poorest rural communities of the poorest states of India prior to the launch of the *Learning Games*. From the outset, it was assumed that the *Learning Games* would continue to mobilize the strengths of SHGs because SHGs represented

- a forum for social support to girls;
- an opportunity to save and borrow—enhancing girls' economic opportunities;
- an opportunity to share knowledge and skills—leading to positive changes in behavior;
- an expansion of girls' social networks; and
- along with the growth and influence of SHGs in village life, potential influence and leadership opportunities for girls.

It was hypothesized that SHPIs could utilize their existing field agents working with SHGs for implementing the *Learning Games*. Through this existing network of women SHGs, adolescent girls could be invited by their mothers or mothers-in-law to participate jointly in the *Learning Games*. Or, SHPIs, who naturally already worked with groups of girls, could deliver the *Learning Games* directly to the girls. Three models, described below, ultimately were employed by SHPIs to deliver the *Learning Games*.

⁹ At no point during the Reach India network "Cascading Research" do we include outreach or evaluation data. Although SMVS has been trained by the Reach India network, we have not included this in the analysis. It is estimated that in total, SMVS would add approximately 500 girls to the total outreach numbers.

Women SHGs and Daughters Together (Mixed Groups)

Prior to the TOT activities, the pilot-test of the *Learning Games* with SMVS revealed that mothers and daughters actually enjoyed participating in the Games together. Although it was assumed that the most indirect way of delivering the *Learning Games* might be through providing them directly to the mothers with the aim that the mothers would in turn share what they had learned with their daughters, it was discovered that working through existing SHGs and encouraging the mothers or mothers-in-law to invite their daughters, daughters-in-law, or other adolescent girls to the Games was going to be a more effective model for delivery. Consequently, the *Learning Games* were adjusted for the Reach India network to include instructions on how to deliver the Games with mothers in attendance.

The field agents or animators who already served the women SHGs were able to incorporate the Games and adolescent participants either during already scheduled meetings or for special mother-daughter meetings. The benefit of this model is that mothers and daughters were able to learn together, play together, and it was discovered that the mothers often appreciated the fact that the Games “initiated” some discussions about sexual and reproductive health that they felt uncomfortable themselves initiating. The challenge to this model is that often the animators had to schedule special meetings or that the meetings did not always coincide with school schedules that allowed consistent and active participation by the girls. Based on the assessment of 51 of the 166 organizations, 30 percent of the girls reached with the *Learning Games* were reached through the Mixed mechanism, accounting for 2,685 of the 9,092 girls reached by the 51 organizations.

Girl SHGs (Girls-Only Groups)

Delivering the *Learning Games* directly to groups of girls already served by the SHPIs was the most natural fit for the Games, as their design was primarily for adolescent girl participants. Also, SHPIs that were already serving groups of girls had, in most cases, already worked out some of the delivery issues, such as when to provide the Games so that the greatest number of girls could participate as well as already having an “open door” to communicating directly with the girls. The benefits of this model included these delivery advantages and provided girls a private place to discuss the topics covered in the Games without the threat of their mothers or mothers-in-law inhibiting their participation or discouraging open discussion. One small drawback from this delivery model was the reduced communication between mothers (or mothers-in-law) and their daughters (or daughters-in-law) regarding the topics covered in the Games. Based on the assessment of 51 of the 166 organizations, 43 percent of the girls were reached through the Girls-only mechanism, accounting for 3,915 of the 9,092 girls reached by 51 organizations. Reaching girls through the Girls-Only Groups was the most successful model in terms of total number of girls reached with the *Learning Games* during this time period.

Box 2. Delivery Mechanisms for the *Learning Games*

Mixed Groups

SHGs consisting of adult women members who invited their daughters or other adolescent girls to existing SHG meetings at which both the women and the girls received the Games together

Girls-Only Groups

SHGs made up of only adolescent girls

Other Groups

Girls reached through non-SHG methods, such as school programs, after-school programs or other mechanisms

Non-SHG Adolescent Outreach (Other Groups)

Non-SHG adolescent groups were those from after-school programs or groups of girls who came together, such as in a camp setting, to participate in the *Learning Games*. The non-SHG adolescent girls groups experienced the same benefits and challenges as the Girls-Only groups as long as the SHPIs were working through existing groups of girls or structures. While they might have experienced different benefits, there were challenges in reaching girls in general, such as engaging the gatekeepers to allow active participation, scheduling around school hours (for school girls), scheduling around household chores (for school girls and girls no longer in school) and encouraging participation from married adolescent girls. An additional delivery challenge may have occurred in organizing girls into smaller groups as prescribed by the methodology. As the *Learning Games* are designed for small-group interaction through SHG animators, the lack of this structure for other adolescent girl interventions may have diminished the learning of key messages. On the flip-side, this same challenge provides the likely benefit of exposing more girls to the *Learning Games*. Based on the assessment of 51 of the 166 organizations, 27 percent of the girls reached through the “other” mechanism accounted for 2,492 of the 9,092 girls reached by 51 organizations.

The outreach by delivery mechanism is summarized below in Table 3. We have added an additional column to demonstrate what our original assumptions were when estimating the number of girls reached prior to the Cascading Assessment. Although we reached the target set out by the initiative of 25,000 girls reached directly or indirectly through existing women SHGS, we were projecting greater scale than 25,000 due to some original assumptions we had about the likely outreach. As we rolled out the *Learning Games* to SMVS before the full rollout with the Reach India network, we used our knowledge of the outreach at SMVS as a predictor of what we would see across the network. This was the best information we had at the time for developing a model to help predict outreach before we were able to have more concrete information, as is being provided through the Cascading Assessment. For example, we assumed that to estimate the number of girls reached through the mixed method, we would take the SHPIs’ numbers of SHGs (as indicated in the training reports provided by the SCMs) and discount it by 25 percent. At the time, Reach India was using a discount of 25 percent to indicate that of all possible SHGs that could receive the *Learning Games*, we would only assume 25 percent of those groups would actually receive the education. Since SHPIs count number of SHGs more accurately and don’t always estimate or directly count the exact number of people in those SHGS, we assumed a multiplier of 10, indicating that of the Mixed Groups, 10 girls were likely to participate in the *Learning Games*. Thus, using the table below for Mixed Groups under the “Predicted Outreach for the 51 SHPIs” column, we would have predicted that 20,520 girls would have been reached through the 51 organizations ($8,208 \text{ SHGs} \times .25 \times 10$). We used the same methodology for the Girls-Only Groups, except we predicted 14 girls would be reached. Since we weren’t sure what the Other Groups category would always consist of, we simply took 25 percent of the total SHGs reported. Consequently, based on our original assumptions prior to the Cascading Research, we would have predicted 34,193 girls to have received the *Learning Games* when in actuality, 9,000 girls from the 51 organizations assessed received them. This suggests that the multipliers have to be adjusted down, to approximately two to four girls for Mixed Groups and 11 for Girls-Only Groups and the 25 percent discount used by Reach India for counting outreach to women SHGs typically served by the Reach India network might have to be a reduced further for the *Learning Games*.

	Prior to Cascading Assessment	Post-Cascading Assessment	
	Predicted Outreach for the 51 SHPIs	Estimated Outreach for 51 SHPIs after Cascading Assessment	Percentage Outreach per Mechanism (Post Cascading Assessment)
Mixed Groups	20,520	2,685	30%
Girl Groups	7,217	3,915	43%
Other Groups	6,456	2,492	27%
Total	34,193	9,092	100%

Lessons Learned About Outreach to Adolescents

It was well-known from the beginning of this project that “how” to reach girls was going to be more difficult than the actual delivery of the *Learning Games* themselves. The following describes our lessons learned regarding reaching adolescent girls with services in general as well as with the *Learning Games*. Our lessons are presented as statements of “what we would do differently next time” or when talking to organizations new to working with adolescent girls or education.

1. **Start by working with organizations already working with adolescent girls and then expand.** SHPIs that were already reaching girls or adolescents were early adopters of the *Learning Games* curriculum (compared to other SHPIs not already working with adolescents). Because they already had the structures and recruitment processes in place, the *Learning Games* curriculum was a simple add-on to work they were already conducting. SHPIs already serving girls or adolescents also reached the most number of girls. Some of this can be explained by the fact that they were already working with girls, but also, building new groups takes time, it takes adjusting systems and processes for outreach if this is not already a target group served, and it takes an organizational learning curve that constrains rapid uptake of the *Learning Games*.
2. **Plan on spending more time working with organizations not already reaching adolescents to help address delivery and training issues.** SHPIs not already working with girls struggled more with designing a delivery mechanism appropriate for their adolescent population. This is not a surprising finding and simply reflects the natural situation of reaching a new target group, with the added challenges of reaching an already difficult-to-reach population. SHPIs that tried to serve girls through the Mixed Groups methodology struggled with scheduling existing SHG meetings in order to accommodate the members’ work schedules as well as the girls’ school or household chore schedules. SHPIs that tried to build all-girl groups for the first time struggled with the questions of whom to reach, when to reach them, and how to reach them. Organizations trying to incorporate girls into their programs for the first time could greatly benefit from strategic and operational planning assistance in order to break through these barriers to outreach. We know that most of the organizations that provided *Learning Games* during this time period were working through existing channels (existing SHGS or Girls-Only Groups) and very few tried to build or organize new groups from scratch.
3. **Anticipate that not all organizations will provide a new product/service to all girls in their programs.** The cascading results suggest that only a subset of the total possible population of girls who could receive the *Learning Games* had received them at the time of the assessment. This can be explained in part by SHPIs being resource-constrained to achieve a full rollout and

suggests they are considering a cautious rollout of the *Learning Games*. For some organizations, this type of education product is new and deserves its own pilot phase before rollout to all possible participants. For these reasons, overall outreach to girls was lower than expected for all three models, considering initial projections made by the SCMs of the potential outreach of the *Learning Games* during the TOT activities as well as our initial assumptions about outreach (in particular, the estimated number of girls per group was overestimated for all models). Reach India was still able to achieve the goal of reaching 25,000 girls during the assessment period, but as a result of the *Learning Games*' TOTs with the SHPIs, the estimated or projected outreach by the SHPIs was lower than anticipated at evaluation time. However, it is anticipated that outreach to girls will only continue to grow by breadth and depth of SHPI implementation. Even most microfinance partner organizations that have worked with Freedom from Hunger in the past rarely conduct a full rollout of the education within a year's time and tend to roll out the education more broadly as they build their capacity and systems to accommodate greater outreach with the education.

4. **Plan and conduct activities for community sensitization.** Trying to reach adolescents, and adolescent girls in particular, requires community-level and at a minimum parental-level communication regarding the program to be implemented. This is particularly important when the topics are sensitive, such as sexual and reproductive health. Parents interviewed felt that if they had known more about the content, they could have participated in conversations at home and also felt that they would have been less sensitive about some topics if they had known what was specifically going to be covered. Any "chatter" resulting from the *Learning Games* would have been correctly interpreted and would not have been found to be alarming.

PROGRAM IMPLEMENTATION

The focus of this session is to outline Reach India’s promoted methodologies for delivering the *Learning Games* (as well as any education curriculum designed for SHGs), describe how organizations implemented the Games, and present the predictors of quality delivery.

Although this section will delve into specifics about how SHPIs were evaluated, the *Learning Games* Trainer’s Guide promotes that the Games should be scheduled at the convenience of the girls—perhaps weekly or every other week. School exam periods need to be considered, particularly for girls ages 14 and 15 who take matriculation tests at the 10th standard. It was recommended, though, that the first several sessions be scheduled close together—perhaps every few days or once a week—in order to build excitement and momentum with more girls gathering each time. As a key rule, the facilitator should conduct only one Game per visit so the girls are not overloaded with new information and have time to practice new behaviors.

This section will describe implementation for the Reach India network as well as describe implementation issues for SMVS. Although the SMVS evaluation’s goal was primarily to evaluate outcomes and not process necessarily, this description is provided as an example of an organization that had never worked with girls before. The RCT evaluation influenced some of the implementation and will be equally analyzed. Thus, the SMVS example is not meant to be considered a “success” or “failure” in terms of implementation but more as a description of the process and challenges for one typical SHPI.

Reach India Network

As part of their mandate and desire to ensure trainings delivered directly to girls adhere to a high level of quality, the Reach India SCMs and, consequently, the SHPI trainers, were trained and evaluated on a series of training and facilitation standards. This section describes Reach India’s expectations for quality education delivery as well as how a sample of SHPIs actually delivered the *Learning Games*.

The quality of education delivery by SHPIs was evaluated across several indicators:

- The SHPI communicated with community gatekeepers prior to implementation
- Delivered all the Games
- Facilitated the “Knowing Our Bodies” session on sexual and reproductive health along with the supporting graphics
- Facilitated the Games along with the supporting songs
- Facilitated the sessions as separate, individual sessions
- Facilitated the sessions within one week to one month apart
- Facilitated sessions with 20 or less participants in their groups
- An animator or community worker delivered the session
- Staff members felt very confident delivering the Games

In addition to these delivery indicators, the SHPIs were asked about prior experience with sexual and reproductive health issues with women and adolescents as possible predictors of quality of the “Knowing Our Bodies” and “How to Protect Against HIV/AIDS” Games.

The SHPIs were asked to evaluate themselves and the girls were asked similar questions to determine how well the *Learning Games* were delivered.

Most SHPIs revealed that they began training their groups on average one month after the training by Reach India. SHPIs in Assam indicated, on average, that they provided one long session to complete all the *Learning Games*, whereas most of the other SHPIs provided on average the eight Games in five or six separate meetings. This difference in length of the Game appears related to the final outcomes, which were very poor in Assam compared to the other states.

Barely 70 percent of the SHPIs indicated they made community contact prior to implementation. Only 78 percent of the organizations delivered all of the Games. Seventy-two (72) of the SHPIs reported that their implementing staff members were very confident in delivering the Games. Almost half of the organizations reported having prior experience with sexual and reproductive health education for either women or adolescents.

Only 29 percent of girls reported receiving the Games from an animator or community worker, which was the method promoted to minimize cost and increase outreach, particularly for the Mixed Groups and the Girls-Only Groups. Most of the remaining girls received Games from supervisors, directors, junior researchers, or they just didn't know who the person was.

Clearly many SHPIs fell short of the expectations Reach India had set in their training of SHPIs for quality of delivery of delivery for the LGs. The Reach India network should engage the SHPIs and SCMs in a discussion of what factors they believe led to high or low performance. For example, these additional questions could be considered:

1. Has the SHPI participated in other Reach India trainings?
2. Has the SHPI delivered other Reach India trainings?
3. Has the region or its specific SHPIs received additional funding for their particular implementation?
4. Is there a difference in training quality at the SCM level?
5. In what other technical partnerships are the SHPIs involved?

SMVS Implementation

Because conducting an RCT with an organization working through the logistics and challenges of implementing any new service or reaching a new target group is in and of itself a challenge, the purpose of this section is to share a description of what implementation of the *Learning Games* looks like with one organization and to account for the adjustments that were necessary because of the RCT. Many of the implementation challenges were caused by the RCT and we feel it is important to be transparent about the boundaries imposed by an RCT as well as to explain some of the outreach and results of the evaluation.

About SMVS

SMVS is a secular, non-government development organization operating in Sri Mayapur, Nadia District, West Bengal, India. The Nadia District is approximately four hours north (106 kilometers) of Kolkata. According to the 2001 census, the district has a population of 4.6 million, 3 million of

which is considered to be rural.¹⁰ SMVS's program area covers a population of 60,000 people in nearly 60 villages. People in this area make their living as small and marginal farmers, artisans and weavers. A particular type of weaving, Dhaniakali *taant*, is well-known in this region and many of the mothers and adolescent girls are involved in the spinning and handloom-weaving of this particular textile.

SMVS currently operates projects to improve health, education and sustainable livelihoods. These projects include reproductive and child health case management for 20 villages, an ambulance service, health outposts in 10 villages, and support to SHGs with the assistance of the National Bank of Agriculture and Rural Development (NABARD). In addition to these activities, SMVS participated in the implementation of the Games. Although they had prior experience working with adolescents under other types of programs, incorporating them into their women SHGs and services was a new activity.

Mixed Groups and Girl Groups

As a result of a pilot stage, SMVS chose to implement *Learning Games* through mixed groups as well as girl groups. The purpose of was to test for changes in knowledge, attitude and practice of the mixed groups compared to groups of mothers and daughters who did not receive the *Learning Games*. The Girl Groups were implemented and evaluated to understand the benefits or challenges of having mothers participate in the groups and any benefits particular to girls having a space of their own, without adult intervention or influence.

Quality of Education Delivery

SMVS animators also were evaluated by the West Bengal SCMs using an Observation Checklist at least once during the Financial Games and once during the Health Games. The purpose of these observations was to help correct facilitation of the Games as well as to provide some support and feedback to the animators. This checklist was also used by the evaluation team to assess delivery quality as our experience has shown that quality of delivery¹¹ is directly related to whether Freedom from Hunger or Reach India's education modules generate strong outcomes.

For the most part, when the participants were asked about their comfort with and trust of the animators, most were pleased with their interactions. *"We were very comfortable with Rumadi. She explains very well and she lives close to us and we know her personally. We were happy with her. We don't think we would be comfortable with anyone else."* However, for some, quality was an issue. One girl explained, *"There were four or five of them who imparted the Games to us. There was Shipra, Lalu and some others. I felt that the people who taught us did not know enough themselves. We need a person who has better knowledge of things."*

While all animators were observed at least once, those who felt the need for additional assistance were observed multiple times by the SCMs. After observing an animator's delivery of education, the SCM provided a constructive feedback post-session on how the animator could improve facilitation and content delivery.

¹⁰ http://nadia.nic.in/District_Profile/District_Profile-Details-page1/district_profile-details-page1.html#1

¹¹ MkNelly, B. and C. Dunford. 1998. *Impact of Credit with Education on Mothers and Their Young Children's Nutrition: CRECER Credit with Education Program in Bolivia*. Davis, CA: Freedom from Hunger.

Quantity of Education Delivery

One important discovery during this evaluation period was a discrepancy between participation rate reported through SMVS staff monitoring of the Games delivery and the girls' self-reported level of participation. This indicates that the communities and groups intended to receive the *Learning Games* did not all receive the Games and that there was inconsistent participation by the girls or their mothers and mothers-in-law in the communities that did receive the Games. Interviews with the mothers and daughters revealed that inconsistent delivery occurred because animators did not schedule the Games to occur at the same time each week or month, which made it difficult for the participants to know when the Games would occur and thereby plan to participate. Like other SHPIs that had not worked with girls before, SMVS found it challenging to integrate a new target group with existing programmatic structures. Our reflection on this issue reveals two challenges in general: 1) accommodating girls for the first time requires working around their schedules and sticking to a schedule and 2) based on our experiences with MFIs, not all SHPIs appear to be as systematic about their contact with their groups. For example, some SHGs might have some members who make payments to another member and then one member might just “catch” the animator to make a financial interaction and thus an actual meeting might not occur. Or, the animator arrives *around* a pre-designated time, thus is operating within a range of hours and not during a specific time. One girl participant shared, “*There is no fixed time for the madams to come. Some days they come at twelve noon. Other days they come at one. We are mostly away at school then and since we have no prior intimation, we are not able to stay back without being marked late or absent for classes.*” Even SMVS shared the difficulty of reaching the girls. “*The main challenge, which I have heard from my colleagues, is to collect the girls and the SHG members to make a group. The reason is most of them are into jobs like weaving or farming or are into spinning threads. To spare half an hour or one hour for them is a financial loss because they are usually paid on an hourly basis. So, in my opinion, to lure them to attend the Games I think some gifts should be given.*” The low participation rates ultimately affected our ability to detect differences between the control and treatment groups in the RCT.

In addition to inconsistent schedules and low delivery in general, the Games were not always integrated with existing SHG meetings as they were supposed to be. Thus the animators had to schedule special sessions with the mothers and daughters, which led to an increased workload for both the animators and the participants.

Lessons Learned about Program Implementation

- 1. Choose partner organizations wisely and seek those with commitment throughout the organization to reaching adolescents (in particular when conducting intensive research).** This particular finding is nothing new, but this experience reinforced the importance of both factors. There are two important issues to consider when selecting an implementing organization: a) strong and prior experience with monitoring and evaluation techniques and the discipline of applying those techniques on a consistent basis—there needs to be an appreciation of the benefits of participating in an RCT; and b) interest as well as organization-wide commitment to the implementation of the program and the evaluation activities. This commitment cannot rest with one “champion.” The commitment must be found from the board level to the animator level.
- 2. Conduct transparent and upfront discussions about the implications of implementation under an RCT—as well as continue to reinforce those implications.** In Freedom from Hunger’s experience, organizations new to RCTs do not fully understand or appreciate the

implications of participating in an RCT until the “rubber hits the road.” Although the research teams can be transparent about what implementation limitations exist, organizations do not always think through possible scenarios in which they might be challenged or be limited in their own implementation plans. Both the research team and the implementing teams must have continual check-ins to discuss challenges as they arise.

3. **Budget for and discuss incentives or an organization implementing an RCT evaluation.**

When existing staff are asked to change or increase their work responsibilities, significant financial or non-financial incentives should be considered to compensate for the increased workload as well as to maintain commitment to the RCT evaluation. These incentives might not be necessary for simply implementing a new program mandated by the organization, but when RCT designs dictate a short-term change in job responsibilities, incentives would be important. We were unable to provide financial or non-financial incentives with SMVS, but in hindsight, they would have greatly improved our ability to adequately compensate the staff and the organization for the increased and changed workload. However, for organizations that conduct RCTs on a regular basis, such as Innovations for Poverty Action or the Poverty Action Lab, incentives are not a standard practice. This may reflect our desire to maintain longer-term relationships with an organization versus short-term relationships to complete an evaluation and the fact that we’re looking for purposeful integration and not simply testing a new strategy for evaluation’s sake.

4. **Plan and conduct activities for community sensitization.** This is a repeated finding from the Program Outreach section, but the experience with SMVS solidified this necessity. Adolescents and adolescent girls in particular are widely protected from outside organizations. Even when the organizations are well-known in the community, new content should be introduced carefully to the community gatekeepers to ensure girls are encouraged and allowed to participate. With SMVS, we assumed incorrectly that their close ties to the communities would compensate for their lack of experience with this type of education for adolescent girls. This error led to some initial challenges to the baseline survey work as well as the delivery of the initial Games. Our interaction with CINI also highlighted the expectation and importance that a community-level strategy be integral to working with adolescent girls.

5. **Anticipate and address cultural norms, particularly around sensitive issues such as reproductive health.** Communities and parents are sensitive about male animators discussing sensitive topics such as reproductive health with their adolescent daughters and in some cases, their wives. Although Freedom from Hunger has had positive experiences world-wide with male animators being trained to deliver adult education to women clients, even on topics such as breastfeeding, HIV/AIDS, women’s health needs, etc., there is much more sensitivity and lack of acceptance of a male delivering similar education to adolescent girls. In SMVS’ case, additional women and community health workers were trained to assist with the two Games that were considered particularly sensitive: “Knowing Our Bodies” and “How to Protect Against HIV/AIDS.” Male animators were able to deliver the other Games without much incident.

6. **Anticipate and develop a plan for providing technical assistance to organizations new to both reaching adolescent girls and new to providing non-formal education.** Fortunately, SMVS was a good test case for understanding what implementation opportunities and challenge would occur for an organization learning how to access girls as well as how to manage SHG

meetings to accommodate both the financial component and the delivery of the *Learning Games*. Unfortunately, SMVS had to work through both challenges on its own.

7. **Anticipate that organizations experiencing financial difficulties will be challenged to remain committed to an “auxiliary” product or service.** Prior to offering the *Learning Games*, SMVS had launched a credit product for its savings-led SHGs. Unfortunately, toward the mid-point of the *Learning Games* implementation, SMVS experienced serious repayment issues and therefore requested that its staff focus on loan recovery. These loan-recovery activities reduced the amount of education implemented during this time period and greatly affected client satisfaction with the organization. Some women under pressure to repay loans at the time they were interviewed indicated they would not recommend the *Learning Games* to anyone, because they were associated with SMVS.

PROGRAM EFFECTIVENESS

The purpose of this section is to review outcomes and impacts in terms of the financial and health knowledge, attitude, and practice indicators evaluated by this project. It is divided into the outcomes measured for the Reach India network and the outcomes and impact results revealed by the RCT at SMVS.

Reach India Network

Participant Characteristics

Table 4 shows some statistics about age, marriage, schooling, SHG membership, food insecurity and poverty of the girls participating in the *Learning Games* through the broader Reach India network.

Average age of girls participating	16 years (range 11–23)
Girls still in school	73%
Average grade level achieved in school	8 th level
Girls unmarried	88%
Average age when married	15 years (range 11-18)
Girls previously members of an SHG	56%
Length of membership in the SHG	8–9 months
Girls scored as food-insecure	32%
Girls likely to be below the national poverty line ¹²	27%
Girls likely to be below the international \$2 per day poverty line	87%

When the mothers and daughters were interviewed about their perception of food insecurity in their communities, it appears that they perceived that their communities face food insecurity, even though the girls and mothers did not talk about it in relation to their particular families. The discussions about food revealed the connection with the rainy season and the crops and that many of these communities rely on agriculture for their financial well-being and food. Chronic flooding destroys many crops and causes significant property damage.

The discussions about types of food eaten by the families reveal that many try to keep milk, fish and meat as a part of their diet, but these items depend on the financial well-being of the family.

According to one 18-year-old girl in West Bengal, *“In our community, people are getting enough food, but due to our financial condition we are not able to eat enough. If we ask for Rs 10 from anybody, obviously, they will give it but we feel shy to ask for money for food. We buy the food from the shop on credit and afterwards repay that.”*

When mothers and daughters were asked whether some members of the family got more or better food or whether the family diet they have now is similar to their mother’s diet as a child, daughters most commonly think they have a similar diet to their mother’s diet as a child or that everyone in their family eats the same; however, mothers feel that their children eat better than they did as a child. Daughters are more likely to indicate different portions for elders or others in their families, while mothers indicate that everyone gets the same amount of food. Mothers feel their children eat better than they did primarily because now there is more knowledge about better foods and because they have more money.

¹² As measured by the Grameen Foundation’s *Progress Out of Poverty Index* measurement tool. The Indian National Poverty line for rural households for 2005-06 was Rs.368 (approximately 7.5–8 USD) per month per head. pbplanning.gov.in/pdf/BPL16-3-07.pdf (January 25, 2010)

A 13-year-old girl from West Bengal shared that she “gets enough food. Sometimes my elder brother is getting more food, like vegetables, than me. Compared to my mother, I get more food. I drink milk, and she doesn’t drink any at all. Presently, we are not keeping milk. But earlier, my brother and I used to consume milk.”

These qualitative findings help us further understand the relationship between the quantitative finding that only 32 percent of the girls felt they were food-insecure and the fact that they do perceive themselves or their communities suffering from hunger or food insecurity. It is important to note here that the food-security measurement tool that was a part of this survey is geared toward adult women. It is assumed that food insecurity will first be experienced by the mother of the family, as she will prioritize feeding her husband and children before herself and, thus, will be most likely detected at her level. The food-security results are much lower than expected, which might suggest that the food-security measure used with adolescents is not a good predictor of family-level food insecurity, but the adolescent’s perception of their food-security status. As we will see with the RCT results, this is likely the case.

Network-Level Results

Although the Reach India Cascading Report goes into much greater detail on the level of performance across the five States served by Reach India, this report will only cover the network-level details and what the results suggest about the performance of *Learning Games* against our expectations.

Financial Outcomes

Table 5 lists the results for financial attitude and behavior indicators that correspond with the two Financial Games implemented across the Reach network. These two Games focused on how to increase savings and how to spend money wisely.

Reported they felt confident they could prioritize what they spend their money on	64%
Indicated they tracked their expenses in the last week	76%
Indicated they put money aside at least 3 times in the past month to save for something	44%
Indicated they have savings	84%
Indicated they added to their savings in the last 3 months	85%
Indicated they had a plan for saving	90%
Felt very confident they could save their money	62%

In this particular survey, there were no financial knowledge indicators. There were two attitude indicators and five behavioral indicators. Interestingly, the results for the attitude questions show a lesser degree of confidence compared to their actual reported behaviors. However, because the questions actually measure the number of girls who felt “very confident” (compared to “somewhat confident” or “not confident at all”), the scores above 60 percent are quite positive.

When the mothers and daughters were interviewed qualitatively about their participation in the Financial Games, they were asked about financial changes that occurred as a result of participation. About one half of the mothers indicated they increased their own savings, while the other half felt that they had maintained their savings behaviors (no influence of the program). They also mentioned they wanted to save more or had not started saving more yet. About half of the girls mentioned they had not started saving yet because they did not have money to save, whereas the other half

mentioned they had started saving more. When girls discussed use of savings, three girls mentioned using it for their own education (purchasing notebooks, supplies, etc.)

The mothers, when asked whether they saw a change in their daughters' financial behaviors, indicated the daughters had increased their spending or they hadn't changed.

A 14-year-old girl and her 39-year-old mother from Assam shared how their savings behaviors had slightly changed as a result of the *Learning Games*. The daughter said, *"I have started to save money for my future. It must help me if I shall have to face any problem regarding health or something else in future."* The mother felt that her daughter's *"habit of saving money has increased. She used to save money in her group and personally saves 50p every day. All savings are for her future life with which she can solve her personal problems."* As for the mother's own personal savings behaviors, *"I never thought of saving money before joining the program. But now I feel the importance of saving money for my bad days. I have saved some money to avoid problems during rainy season. For the treatment of my family members during rainy season I keep some money as savings."*

A 12-year-old girl from Orissa shared that she did not have any savings because she had no source of income. However, *"Whenever I need to spend some money, I ask my mother for it."*

Most mothers indicated they or their husbands made most of the financial decisions for the family. The daughters also indicated this as the most common response. The next most common response from the mothers was that they felt their daughters made better financial decisions because of their level of education and the girls mentioned that they felt they had similar spending or savings habits as their mothers.

A 14-year-old girl and her 42-year-old mother from Orissa have similar perceptions about financial decision-making in their family. The daughter shared that, *"my decision-making capabilities are the same as my mother's, I think. We agree on most of the things. But it depends on the issue concerned. In some serious matters, she definitely is more confident than I am."* The mother slightly differs. *"My daughter's ability to make decisions about money would certainly be higher at my age than what I have right now. She is going to school and getting more opportunities in life and so I would expect her to have that. But right now, she naturally has to depend on me for many things."*

Health Outcomes

Table 6 lists the results for the health literacy and behavior indicators that correspond with the five Health Games, which focused on nutrition, hand-washing, diarrhea, reproductive and sexual health, and HIV/AIDS.

Table 6: Network-Level Health Indicator Results for Girls Participating in Learning Games	
HAND-WASHING	
Reported having used soap over 50% of the time when they washed their hands in the prior 24 hours	24%
Washed their hands at least 3 appropriate times in the past 24 hours	67%
DIARRHEA	
Identified ORS as an appropriate liquid to take during diarrhea	69%
Advised someone to take ORS to treat diarrhea in the last 6 months	53%
Able to identify at least 3 actions to prevent diarrhea	84%
Able to correctly identify the amount of liquid a child with diarrhea should receive	76%
Felt very confident they could prevent diarrhea in their household	67%
NUTRITION	
Reported having eaten iron-rich foods (saag, leafy green veggies) at least 3 times in the last week	94%
Reported having eaten protein-rich foods (meat, poultry, fish, eggs) at least 3 times in the last week	48%
Reported having eaten fresh fruit at least 3 times in the last week	82%
Able to identify iron-rich foods to increase energy	32%
Had given advice to someone about how to eat a balanced diet	60%
KNOWING OUR BODIES	
Correctly identified cause of menstruation	42%
Had discussed with their mother the age at which they should have their first child	8%
Reported they did not plan to marry before age 18 (84 of the 95 respondents answered this question)	100%
Had discussed with their mother when to get married (84 of the 95 respondents answered this question).	18%
HIV/AIDS	
Had heard of AIDS	92%
Knew it was a virus	55%
Reported they had taken a step to protect themselves against HIV	26%
Number that had been tested for AIDS in the last 6 months	1
Correctly identified that AIDS could be transmitted through vaginal sex	84%
Correctly identified that AIDS could be transmitted through using a dirty needle or syringe	87%
Correctly identified that AIDS could NOT be transmitted through mosquitoes	62%
Correctly identified that AIDS could NOT be transmitted through embracing someone	69%
Correctly identified that AIDS could be reduced through use of condoms.	73%
Had given advice to others on how to avoid HIV/AIDS transmission	27%
Felt very confident they could take steps to prevent themselves and their children from getting HIV/AIDS in the future	64%

There were 12 knowledge indicators of the total 27 indicators for the health section. As a generic standard, Freedom from Hunger sets a goal that participants should achieve 80 percent performance on knowledge indicators after participation in education modules. This percentage can be adjusted when baseline data is available or when there is knowledge that baseline knowledge on a topic might be very low or if the knowledge indicator is a complex one. In this case, we did not have a baseline, so we benchmark the follow-up performance to this expectation of 80 percent on knowledge indicators.

Seven of the 12 knowledge indicators are in the HIV/AIDS sub-section. Of the 12 knowledge indicators, there was less than 80 percent performance on eight of them; four of them are in the HIV/AIDS section. There are three indicators for which knowledge was more than 20 percentage points below 80 percent:

1. Those who can identify iron-rich foods to increase energy (32 percent)
2. Those who can correctly identify the cause of menstruation (42 percent)

3. Those who can correctly identify HIV as a virus (55 percent)

If the girls had participated in these sessions, we should have seen much better performance in these indicators. It will be important to review the three Games that include these learning points to determine whether the design of the Games themselves did not promote these learning points clearly or to assess other reasons why knowledge change did not occur. It may also be important to assess whether the learning point itself is a critical one that should be measured to assess the performance of a particular session. When we consider the HIV/AIDS section, perhaps low performance occurred because of the numerous knowledge indicators being promoted in the session as well as evaluated. Is it better to have very high performance on a few indicators, or marginal performance on several? This is a question to be considered both by the designers of the sessions and those evaluating future health sessions.

When assessing behaviors, some of the poor performances are to be expected or likely have economic or cultural explanations that a single education session cannot be expected to influence in a short period of time. For example, only 18 percent of girls had talked to their mothers about marriage. Given the cultural sensitivities about decisions made concerning marriage, this outcome is not particularly alarming or an indicator of failure of the education design or delivery. Although it is hoped that in places where mothers and daughters likely participate in the Games together you would see higher performance, we cannot tease this out using this particular database of information. In addition, some indicators were not directly included in the content of the Games. For example, seeing only one person seek out an HIV/AIDS test is not an indicator of failure but simply reflective of the sampled population's behavior during the time period of the *Learning Games*. Finally, only 26 percent of the girls gave advice about HIV/AIDS. Given the sensitivity of the topic, it is likely a fairly respectable outcome to see 26 percent of an adolescent population indicating they've given advice to another person about how to avoid HIV/AIDS.

Although from the data it appears that more girls ate iron-rich foods compared to knowing which foods were rich in iron, it is important to note that the knowledge question asked the girl to choose an iron-rich food among a list of foods. The behavior question asked them directly if they ate any one of the iron-rich foods. For example, "Of the following foods, which food increases energy levels in your body?" (knowledge) compared to "In the past week, did you any of the following foods?" (behavior).

Despite having low expectations for some behaviors from the outset, there are some poor performers that should be considered:

1. Only 24 percent indicated they used soap at least half of the time when washing their hands in the last 24 hours. Is this because the session did not emphasize the importance of soap enough or is it due of the lack of availability of soap on the market or lack of financial accessibility to soap?
2. Only 48 percent of girls had eaten protein at least three times in the last week, but 94 percent had eaten iron-rich foods and 81 percent had eaten fruit at least three times. This indicator is likely influenced more by family preferences (vegetarian) or due to the economic situation of the family. In order to understand the relationship between what they know they should eat and the actual behavior of consuming the food product, it is likely necessary to add some knowledge indicators here to determine the link between the need to eat protein compared to whether they do or not.

When interviewed, the most commonly mentioned change for both mothers and daughters was cleanliness and hygiene. The girls also mentioned HIV/AIDS.

A 38-year-old mother from Assam shared that, *“I have learned many things about cleanliness, malaria, AIDS from this program. I used to discuss all these things with the other people in my community who did not participate in this program as well as with my husband and my children.”*

A 13-year-old daughter and her 37-year-old mother both shared that as a result of the *Learning Games*, the daughter had started eating more vegetables. *“After the Games, I changed my food habits. Previously I didn’t take vegetable, now I eat all vegetables regularly. Previously I was not washing my hands regularly. Now, after the program, I wash my hands before taking food.”* The mother shared that, *“One change I observed was that she has started eating vegetables. Previously, she didn’t take vegetables at all. But after taking part in the Games, I have seen this change. She learned about hand-washing, how to care for the diarrhea patient. Recently one of our neighbor’s children was suffering from diarrhea...she told me to bring ORS for that child, so she understands about the usefulness of ORS.”*

An 18-year-old girl from West Bengal shared that, *“I will discuss the AIDS Games with my friends, mainly the girls, and tell them to participate. I think this is a very important matter for the girls of my age. They are not very conscious about AIDS. Though very few persons are affected by AIDS, I think we should be aware and conscious about it.”*

Satisfaction with the *Learning Games*

Most mothers and daughters would recommend the *Learning Games* to others. Of those who responded to this question, 100 percent of both mothers and daughters would recommend the *Learning Games*.

Girls ranked the “health” topics altogether as the most appreciated. Specifically, HIV was second most mentioned, followed by diarrhea, saving money, and nutrition. Mothers also ranked “health” first with “saving money” second followed by hygiene and nutrition. When asked what topics they would suggest for future topics, both mothers and daughters agreed “health” and “finances.” Girls mentioned most often that cleanliness and hygiene and then HIV/AIDS were what they felt they learned the most. Mothers also felt their daughters had learned the most about hygiene. Mothers felt they learned the most about hygiene and cleanliness followed by savings and nutrition. Mothers also mentioned they felt their daughters learned independence, responsibility, experience of being part of a group, and ability to avoid early marriage.

A 14-year-old girl from Orissa said, *“If we really have any opportunity to play the Games, I could encourage everyone to play them, not just my mother. I would certainly tell them that these are valuable educational sessions that we have very few opportunities to learn from and so we must all be eager to participate.”* Her 42-year-old mother said, *“The poor can only participate when there is adequate time and also some incentives. It is hard for people to leave work and join the sessions if they are busy in the fields or at their businesses. In order to ensure participation, we need to have an organized village-level effort to bring the people together.”*

A 13-year-old girl from Jharkhand indicated, *“The Games have been very inspiring to me. I cannot express it enough. I have learned so many things and had lots of fun. I think it is the best way to learn; my outlook on health and family issues has changed.”*

A 36-year-old mother from Orissa shared, *“To have been able to participate in group sessions and learning together was a unique experience for me. I have not had this experience in a long while. Even in school we never had so much fun learning anything.”*

Challenges to Putting Suggested Behaviors into Practice

Most mothers and daughters felt they faced no challenge in putting what they learned into practice. If they faced a challenge, it was because they were seen as being too young (*“Sometimes when I tried to give some advice to others about health, they told me that being a young girl I was unable to give them the right advice and they did not give me any importance.”*), had no time or were too poor. However, a few mothers had interesting opinions on why some of the daughters might not be able to put what they learned into practice which revealed the connection between food and energy levels and attention spans.

A 40-year-old mother from Bihar shared, *“We want a good system of teaching, using TV for showing this program. Teach them how they can establish their lives in the future, about their health, how they can take care of their child. Tell them how they can take care of their families and how they can give education to their children after marriage. Provide them pen, pencil, copy, Games and materials and arrange for a place to sit. Tell them about sources of income, how they can earn money in the future. Arrange food for them if they are sitting for two or three hours, because they will feel hungry. If they can get some food, then they can concentrate better.”*

A 31-year-old mother from Jharkhand felt, *“It is difficult to follow all practices if the family is very poor and cannot afford good food for a balanced diet. There are shortages in time as well.”*

A 36-year-old mother from Orissa indicated that it was *“sometimes hard to follow all the practices because of lack of time. Also, if we are not reminded of these practices from time to time, people tend to forget and the importance is reduced.”*

However, a 13-year-old girl from West Bengal felt there were no challenges for her. *“Whatever I learned from these Games is very easy to practice at home and even in the community. Like eating vegetables, washing hands, all these can be very well practiced anywhere, at any point of time. I feel that if the poor people of my village learn these Games, it will help them. One can save hospitalization charges, too.”*

A 14-year-old girl and her 39-year-old mother from Assam summarized the importance of the Learning Games: *“Education in health and financial aspects should be there. If somebody is aware of the financial aspects, she can cope with any kind of difficulty in future life.”* *“Education helps a person to go ahead in her life. Education should be the most important part of this program. If there is education the attitude to life is built automatically. ‘Education is power.’”*

Analysis of Results

The quantitative results suggest programmatic achievements on a number of key knowledge and behavioral outcomes for the entire network:

- Financial Outcomes:
 - 84% of girls indicated they have savings
 - 85% of girls indicated they added to their savings in the last three months
 - 90% of girls indicated they had a plan for saving
- Health Outcomes:
 - 84% of girls were able to identify at least three actions to prevent diarrhea

- 94% of girls reported having eaten iron-rich foods (saag, leafy green veggies) at least three times in the last week
- 100% of the unmarried girls reported they did not plan to marry before age 18
- 92% of girls had heard of AIDS
- 84% of girls correctly identified that AIDS could be transmitted through vaginal sex
- 87% of girls correctly identified that AIDS could be transmitted through using a dirty needle or syringe

The Health Games should be reviewed for key messages that achieved lower-than-expected quantitative results. This includes messages on the use of ORS, hand soap, knowledge on the importance of iron-rich foods and menstruation.

Although the financial literacy outcomes met most quantitative expectations, the qualitative data suggests that girls were less interested in the Financial Games than in the Health Games. Some sessions, such as HIV/AIDS, Diarrhea and Hand-washing appeared to be more interesting than others. The girls and mothers seemed to be most interested in the Health Games and this is likely due to the fact that these are likely more “manageable” topics—where making the link between what they learned and their ability to take personal action appears to be simpler and something within their control. Because we were not able to do market research in each region regarding financial needs, the two financial literacy sessions may need to be reassessed for how they are addressing the financial needs of adolescent girls in each region. There appears to already be an appreciation for savings. Perhaps savings and other financial behaviors should be “couched” in other relevant and important topics to girls, such as their education, their vanity (make-up and clothes) or health to heighten the relevance of the financial topic or to help them take steps that take into account their limited financial capabilities.

Most of the impact story interviews revealed a rich relationship between participation in the *Learning Games* and what the mothers and daughters felt they took away from the Games. They also revealed that mothers learned from their own participation or their daughters’ participation in the sessions:

Financial Games

Most girls agreed to the importance of saving and actually revealed a high level of savings behaviors. The qualitative data helps us understand that, although we do not have baseline data, many of the girls and mothers felt they had tried to save or were able to increase their savings as a result of the Games. Their main constraints were lack of income or their own money to save. When they did save, it was likely from money given to them by their parents.

Hand-washing and Diarrhea

The quantitative results reveal that the two hand-washing behaviors are relatively low compared to the results from many of the other topics. From the outset, it was not expected that there would be low behaviors regarding hand-washing. The qualitative results also confound this finding because much of the appreciation from the Health Games, overall, is that mothers and daughters most appreciated learning about “hygiene” and “cleanliness.” Perhaps the emphasis on using soap in the quantitative survey suggests that the concept of having clean hands and bodies was absorbed by the daughters and their mothers, but they may not have been using “soap” for all of their “changed behaviors.” As indicated earlier in this report, if soap is not readily available or is too costly, putting hand-washing behaviors into practice that require soap may not be easily affected without addressing the reason why people cannot access or afford soap.

This same issue arises with the connection between diarrhea and having access to ORS. The qualitative results did not suggest people could afford or access ORS, but it is equally likely an issue if ORS is being promoted.

Nutrition

It is important to keep in mind the constraints they mention in having to all the types of foods they would like to eat. Performance in the nutrition variables could have been higher had there been a structure or program in place to relate those nutritional education objectives with financial assistance to purchase more higher-quality foods or to find ways to include them in their diet. Where girls did not eat vegetables before and now eat them, results revealed that as long as they have easy access to those foods, they are able to relate the nutritional value to actually consuming the food. However, lower performance in being able to eat high-protein foods and fruits is likely explained less by lack of desire to change behavior and more by financial constraints.

Sexual and Reproductive Health and HIV/AIDS

The qualitative data did not help explain good or poor performance of the sexual and reproductive health and HIV/AIDS indicators. The mothers rarely talked about either session on these two topics, whereas the girls did. Fewer mothers and daughters discussed the topics covered in the Knowing Our Bodies session than about HIV/AIDS, which suggested that perhaps HIV/AIDS (regardless of the stigma it may face in general) is a safer topic to talk about than the sexual and reproductive body parts of the male and female. Also, perhaps girls are more embarrassed to talk about menstruation than the concept of HIV/AIDS, because as one girl put it, *“We don’t know a lot of people with HIV/AIDS, but it is good for us to know about it.”*

Use of Results for Reach India Network and Implementing SHPIs

If we had baseline data for the implementation of the *Learning Games*, we might be able to more confidently and clearly determine whether important improvement in the indicators occurred in any of the States served by Reach India; however, the analysis of benchmarking and setting expectations for knowledge, attitude and behavior change is equally important, as is comparing performance among the States for the purpose of decision-making at the Reach India network level. A baseline was not originally planned as prior experience demonstrated the challenge of conducting a baseline when the actual cascading that occurs might not actually reach the girls who originally participated in the baseline—making follow-up comparisons somewhat challenging.

The point of this exercise is to engage the Reach India network and its SHPI partners in a discussion about the results to determine what is working in one State versus another and where resources should be applied to help poorer-performing States. If Reach India repeats this exercise, regardless of the topic, and certain States continually underperform, this may be a clearer indicator of performance than the results from just one survey, indicating where resources should be allocated and effectively employed.

This analysis has helped identify where we can learn from high performers (on a State level, SHPI level and even at the indicator-level) as well as work to improve where there is lower performance. Overall, the results from this study suggest important achievements of the *Learning Games* implementation led by the Reach India network—achievements for the girls, the mothers and the organizations serving them.

SMVS Impact Evaluation

This section covers the findings from the randomized controlled trial evaluation with SMVS, one of the SHPIs served by the Reach India network. The manuscript of this study is a separate document; however, the data tables are provided in the Appendix. The points covered here are the key findings.

To interpret our data, our original design was to compare results from the treatment (mothers and daughters randomly assigned to receive the *Learning Games*) to the control group (mothers and daughters randomly assigned to NOT receive the *Learning Games*). To determine who was a “mother” and who was a “daughter” we chose to divide results into married vs. unmarried women and girls. The girls in the unmarried category are considered our potential girl participants and the women in the married category are considered our potential participating mothers. There were very few participating girls under the age of 19 and married. Thus, the married girls would not likely skew either the mother or daughter results.

After the completion of the follow-up quantitative work, we discovered that actual participation rates were much lower than we had anticipated based on our assumptions of how the model worked and monitoring of attendance throughout the implementation of the education. One of the complicating factors in designing an evaluation to measure the *Learning Games* effectiveness was the utilization of an implementation model of which we had little understanding. At the time of the evaluation design, the assumption was that SHPIs delivered Reach India education modules to most of their SHGs after training by Reach India. Subsequent research of the Reach India network has suggested that SHPIs deliver the education to a much smaller percentage of their SHGs, more like 25 to 35 percent of their available SHGs. Had this knowledge been available at the time of RCT design, we would have likely increased our sample size and implemented the evaluation over a larger pool of SHGs to ensure sample sizes large enough to detect differences between the intent-to-treat and control groups (to account for less participation by girls per group and inconsistent participation).

We found inconsistent participation in both the Financial and Health Games. After the Financial Games and the mid-point evaluation, looking at only financial outcomes, anecdotally we learned that some women and their daughters realized they were supposed to be provided an education product but had not been receiving it and had begun putting pressure on the field staff to provide the education. Unfortunately, this initial spike in participation and implementation of the Health Games was not sustained. When asked why they missed any one of the Games, 21 percent of them indicated it was due to school, 39 percent because they did not know that the session was being offered, and 32 percent for “other” reasons. Only 1.4 percent of them indicated it was because they did not enjoy the Games.

Consequently, to detect actual changes in a small and fluctuating group of participants, we first had to find a way to identify who in the study population was intended to receive the education, who actually participated in the Financial Games, who actually participated in the Health Games, and who was considered the control group. The analysis was conducted in this manner because the basic comparison of control versus treatment was unable to detect any changes due to the fact that so few of the full “treatment” population actually participated. Thus, we broke the analysis into the following groups:

1. Intent-to-Treat. Those mothers and girls who were randomly assigned to participate in the *Learning Games* and who participated in the introductory Game. They may or may not have participated in any subsequent Games.
2. Attended Health Games. Those mothers and girls who were a subset of the Intent-to-Treat group who indicated they participated in the HIV/AIDS Game and were likely to have participated in all other Health Games. Although the HIV/AIDS session was the final session and it had the lowest participation of all Health Games, we felt this would create the most common denominator to represent all Health Games. If they participated in the HIV/AIDS Game, they were likely to have participated in the other, less-threatening Games.
3. Attended Financial Games. Those mothers and girls who were a subset of the Intent-to-Treat group who indicated they participated in the first Savings Game and were likely to have participated in subsequent Games. Unlike the Health Games, there was consistent participation across the Financial Games.
4. Control. The full population of mothers and girls who were randomly assigned to NOT receive the full curriculum, but who participated in the first introductory session like the intent-to-treat group.

Demographics

The mothers and daughters in this study were primarily Hindu and Muslim, Hindus generally being the larger percentage; (51 to 63) percent Hindu for mothers and (59 to 74 percent) for daughters. The first number in the range of percentages provided here represents the percentage for the control group participants and the second number represents the Intent-to-Treat participants. The difference for both mothers and daughters was found to be statistically significant.

In addition to this peculiarity, the Intent-to-Treat mothers were statistically significantly younger (31.3 years) than the control-group mothers (35 years). This is not surprising, as younger mothers were more likely to participate in *Learning Games* designed for adolescents. In addition to this finding, the Intent-to-Treat mothers were more likely to have ever attended school (65 percent) compared to school attendance for control-group mothers (58 percent), which indicates that the Intent-to-Treat mothers and daughters were likely influenced by the mother's education level. The girls who participated were on average 15 years old. The girls who indicated they participated in the Financial Games were significantly younger than the control-group girls, younger than the girls who participated in the Health Games, and younger than the Intent-to-Treat group intended to receive the entire curriculum. This may suggest that SMVS was able to encourage younger girls earlier on to participate in the *Learning Games* and as the Health Games were added, older girls either were able to participate or became more interested in participating. This may also confirm feedback provided by animators that the Health Games, particularly the sexual and reproductive health ones, were not appropriate for the younger girls.

Approximately 32 percent of the Intent-to-Treat mothers scored as food-insecure, indicating that at some time during the year they were unable to provide the quality and quantity of food necessary for their families' needs. However, the daughters scored 25 percent food-insecure. There were no significant differences in food security levels between the Intent-to-Treat and control villages. This suggests, as do the data from the Reach India network, that daughters are less likely to indicate their family is suffering from food insecurity than are their mothers. The food security survey was designed to detect food insecurity at the mother's level, because mothers are more likely to reduce their food consumption before their children's or husband's food consumption and, thus, be the

first victim of food insecurity in the family. The results suggest here that utilizing a food security measure with adolescents is not likely to be as sensitive as it is with the mother of the family.

Based on the Progress Out of Poverty Index score (developed by the Grameen Foundation) to determine the likelihood that a person is below any of the existing poverty lines, approximately 14.9 percent of the study population is likely to fall below the national poverty line, 45.4 percent below the \$1.25 per day (PPP), and 84.7 percent below the \$2 per day (PPP). There were no statistically significant differences among of the groups, suggesting a study population fairly comparable in food security and poverty likelihood percentages.

The average age of marriage for the mothers was 16 years. There was a high level of school attendance for the daughters, approximately 98 percent of them reported to still be attending school. When daughters indicated they were no longer in school, they reported that the cost of school was prohibitive or that they simply were not interested in being in school. There are more daughters who had ever been to school (98 percent) compared to mothers (65 percent).

Results

The results below focus on statistically significant differences and primarily on the girls, unless there is an important finding from the mothers that contradicts, supports or is important for understanding the results found for the girls. The discussion that follows seeks to explain why we did not see differences where expected.

Financial Results

Knowledge (Table 10 in the Annex)

Knowledge of how to save was equally high at baseline for both intent-to-treat and control groups. Seventy-seven percent of the control group compared to 74 percent at baseline knew they could save money by setting money aside. There were no significant differences between the intent-to-treat and control groups at baseline, 6 and 12 months. There were also no significant differences when comparisons were made between the girls who attended the Financial Games and the control group or the girls who were in the intent-to-treat group. Knowledge about bargaining as a method for saving was equally low in both groups of daughters at baseline (8.5 percent) and did not increase over the 6- and 12-month study period even with the intervention. There were also no significant gains for the mothers in terms of knowledge change or differences among the groups between baseline, 6 months and 12 months.

Attitudes

Confidence in saving skills, motivation to save, and empowerment to control savings were assessed at baseline, 6 months and 12 months (*Table 11 in Annex*). For the daughters who participated in the Financial Games, confidence scores (1=very confident to 4=very unconfident) regarding prioritizing spending, managing income and saving income improved and were significantly different from the control group between baseline and 6 months.

At six months, the daughters who had participated in the Financial Games had improved their confidence in saving and managing income significantly more than the control group and more than the girls who had not attended the Financial Games. However, at 12 months, this improvement had not been sustained, and there were no differences among the groups. When comparing the intent-to-treat with the control group, the intent-to-treat group was more confident in their ability to

prioritize their spending at the 12-month mark, but at 6 months there was no difference (*Table 10 in Annex*). Comparing the girls who attended the Financial Game with the control group, the girls who attended the Games were more confident in prioritizing spending at the 6-month and 12-month marks compared to the control group. For the girls who attended the Games compared to those who did not, there was improvement of their confidence in prioritizing spending at 6 months, but at 12 months there was no difference.

Although not asked at baseline, motivation to save money over the next three months was assessed at midline and found to be significantly higher in the intent-to-treat group as compared to the control group ($p < 0.05$). However, these gains were lost at 12 months and there were no significant differences among the groups. Girls who participated in the Games were no more confident talking to family about their income than the other groups. In all, there is a fairly high level of confidence when talking to family about money issues (approximately 90 percent for both intent-to-treat and control groups).

Empowerment to control savings (“the best person to make decisions around my money is myself”) was measured and found to be the same for the intent-to-treat and control group at baseline, 6 months and 12 months.

For the mothers (*Table 4 in Annex*), confidence in bargaining and prioritizing spending was significantly improved for the mothers who attended the Games at 6 months and 12 months compared to the control group and those who did not attend the Financial Games. Confidence in managing income was significantly improved for the mothers who attended the Games at 6 months but not at 12 months compared to the control group and those who did not attend the Financial Games. Unlike their daughters, there were no statistical improvements for the mothers regarding their confidence in their ability to save their money.

Behaviors

The number of daughters who participated in the Financial Games and had a plan for savings was significantly higher at 6 months compared to the control group but was not significantly different at 12 months (*Table 11 in the Annex*).

For the daughters, saving behaviors improved significantly from baseline to six months for both the intent-to-treat and control groups. The mean number of times that money was put aside for savings at baseline was 2.1 times over the past three months compared to 6.19 times at midline ($p < 0.001$). For the control group, the mean number of times at baseline was 1.4 compared to 5.9 at follow-up ($p < 0.001$). There was a fairly large drop at the 12-month mark, which is likely also significant and is almost equal to baseline savings behaviors (2.2 times for intent-to-treat compared to 2.5 for control at 12 months).

There were no differences among the groups in terms of whether they had savings or not. Like the mean number of times money was put aside, there were increases at six months for all groups and drops in savings at 12 months for all groups.

Like the daughters, there were increases for the mothers in the number of times money was put aside as well as whether they indicated they had a savings between baseline and six months, but a fairly significant drop to baseline levels of savings at 12 months. The qualitative research revealed two possible reasons for these significant drops in savings: SMVS’s initiative to recover outstanding

loan payments, which likely diminished the savings for some, and the world food and economic crisis that has hit poor families quite dramatically. This was detected more from the interviews with fathers and some of the mothers. One father expressed, *“Savings is a far cry for us now. We can’t even keep a book with Bikas Sangha, as we are unable to pay a loan back. Now expenses have increased. If we required one kilo of potatoes before, we now have to make do with half a kilo, so our situation remains the same but the expenses have increased compared to last year. Look in the past year, the prices of essential commodities have risen so much that we are finding it very hard to make ends meet. Saving anything is a far cry now.”*

Despite the obvious drops in saving behaviors and levels, the qualitative interviews revealed that some girls were saving for the first time. *“My daughters have learned to save. They used to spend all the money they got for Tiffin (snacks) but now they put half of what they get [away].”* Another mother shared, *“My daughter never wanted to work at the weaving job that we do at home, but after the Games, she has started to work and is putting away small amounts with which she buys what she requires. My daughter used to spend all the five rupees I used to give her for school. Now she spends one rupee for bus fare. She eats tidbits for another one at school and returns home with three rupees which she saves in a small earthen pot at home. She has learned this from the Games. I think that is very good. She is learning how to save.”* A girl shared that, *“I bought spiced puffed rice with the Rs. 2 that I had saved from the bangle shop!”*

The qualitative also helped reveal that the small amounts girls hold onto are not always identified as savings, because they relate savings to having earned money. *“We do not have any regular income, from where would we save?”* *“I know when you have some earning, only then you can save. It is not possible to save my taking money from mother. You can meet your needs by taking from others but for saving you should have your own earning.”*

The girls also indicated that if they had more savings, they wanted to save their money in a bank because it was safer, more reliable, and they felt that the SHGs required too much interaction to get their money back. *“It’s not that I don’t trust the group but both my parents have bank accounts. I would like to save money there. I think it is safer and easily accessible. In a group one has to depend on other people’s opinions and time. In a bank one can withdraw or make deposits as per one’s wish.”*

In addition to savings, they put into practice some of the bargaining behaviors, *“I went to buy bangles and a necklace. The shopkeeper asked for Rs. 10 for what I wanted but I bargained and he gave the item for Rs. 8. If anybody comes to our locality to sell we laugh a lot remembering the Game of bargaining.”*

Health Results

The results for the health indicators are analyzed and presented in the same way as the Financial Games, comparing the intent-to-treat group to the control group and the Attended Health Games group to the control group. Although we had anticipated increased participation due to some increased and focused monitoring, in fact we discovered the same low participation rates.

For the evaluation of Health Games, in contrast with evaluation of Financial Games, we only have baseline and 6-month follow-up results. That is, we are comparing baseline to results immediately following the implementation of the Health Games, whereas for the Financial Games we had both 6-month and 12-month follow-up data. The Health Games results are broken out by topic: Diarrhea Prevention and Treatment, which includes hand-washing; Anemia Prevention, which includes “Food and The Flag”; Reproductive Health Awareness, which includes “Knowing Our Bodies” and HIV/AIDS.

Knowledge

There were no meaningful or statistical differences among the intent-to-treat group, Attended Health Games group, and the control groups regarding diarrhea and hand-washing knowledge, anemia prevention, or reproductive awareness (*Table 13 in Annex*). Knowledge about importance of using soap when washing one's hands was already high across all groups (88 percent for intent-to-treat and 84 percent for the control group) as well as saag (99 percent for the intent-to-treat group and 98 percent for the control group) and drumstick being sources of iron (93 percent for the intent-to-treat group and 90 percent for the control group). Knowledge that a child with diarrhea should get more to drink was low for all groups at the 6-month follow-up (46 percent for intent-to-treat, 43 percent for group that Attended the Health Games and 50 percent for the control group) there were no significant differences among these groups.

The qualitative data reveals however that there was some knowledge improvement regarding these topics. *"We have been benefitted in many ways. We have learned that we should wash our hands with soap after using the latrine. That way we do not suffer from stomach problems or other diseases as much as before."*

"It was known that dirty hands may cause stomach infection but not that it has so much importance. But after seeing it presented by playing a drama, I feel uneasy if I have not washed my hands."

Regarding nutrition, *"The tricolored Game taught us about the types of nutritious foods we should eat. The white color of the Indian flag should remind us that we should take rice, flour and water. The green should remind us of fresh vegetables and the orange should remind us of fruits. If we could include all this in our daily diet, then we would get the right amount of nutrition that our body requires. We told our mothers about this and we also told them to give us that type of food."*

Knowledge about the cause of menstruation remained low at the time of follow-up for all three groups (23 percent for the intent-to-treat group, 26 percent for the Attended Health Games group, and 24 percent for the control group). Although the quantitative data did not show significant knowledge change, the qualitative interviews revealed the importance of the "Knowing Our Bodies" Game. One girl shared, *"We learned about menstruation, when and why it takes place and what we should do if it starts. A lady taught us all this and we did not feel ashamed."* A mother of the girls also felt as though this was the first time she realized she did not have to be ashamed about menstruation. *"There were a lot of things that we were not aware of. The very fact that the menstruation cycle is not something to hate or feel sleazy about is new to me. Of course, I knew that it happens to every woman, but I always took it to be dirty and unclean. Now I know better."*

In contrast to the insignificant changes for hand-washing, diarrhea and nutrition, there were interesting and important improvements in knowledge about HIV/AIDS for the intent-to-treat and Attended Health Games groups compared to the control group. When comparing the Attended Health Games group and the control group, there was improved knowledge about:

- having heard about sexually transmitted infections (STIs) (49.6 compared to 33 percent, $p < 0.001$, respectively) and HIV/AIDS (65.5 compared to 46.2 percent, $p < 0.001$),
- knowing that HIV can be transmitted through vaginal sex (50.4 compared to 33.3 percent, $p < 0.001$), from mother to her unborn baby (54.0 compared to 35.9 percent, $p < 0.001$) and through used needles (59.0 compared to 39.3 percent, $p < 0.001$).
- Fewer of those who Attended the Health Games wrongly believed that HIV can be transmitted by mosquitoes (34.1 compared to 48.3 percent, $p < 0.05$), transmitted through kissing (45.1

compared to 61.9 percent, $p < 0.05$) or through embracing (29.7 compared to 46.9 percent, $p < 0.01$).

- The result for wrongly believing HIV could be transmitted through kissing was also significant at the intent-to-treat level compared to the control group (50.7 and 61.9 percent, $p < 0.05$); it was also significant for wrongly believing HIV can be transmitted through embracing (36.4 and 46.9 percent for the intent-to-treat and the control group, respectively, $p < 0.05$).

Girls in the Attended Health Games were more likely to know where to get an HIV test compared to the control group (19.7 and 12 percent, respectively, $p < 0.05$) and to know that condoms can prevent HIV (35.3 percent compared to 22.3 percent, $p < 0.01$).

Although a sensitive topic, the HIV/AIDS session was greatly appreciated by the majority of the participants. *“And the HIV, a dangerous disease, we, the country woman did not understand so much. Now we are aware and try to be cautious.”*

The qualitative interviews with the mothers from the Reach India network indicated that the HIV/AIDS Game played an important role in introducing the topic to their daughters. A mother who participated in the Games shared, *“The Games were good, as the girls need to be aware of issues like HIV/AIDS and how it spreads. They need to stay healthy as well. These topics are important, and as mothers, I don’t think that we could have ever raised the topic at all with our daughters had the Games not taken place. Now communication is easier and that is good. At least my daughter will be able to tell me now about anything that she might have in mind.”* A mother whose daughter was in a girls-only group agreed, *“We liked the Games. The idea is good. Our daughters are able to learn what we might never be able to tell them like HIV/AIDS.”*

Attitudes

Girls who participated in the Health Games were no more confident than the control group that they could prevent diarrhea but more likely to be somewhat or very comfortable talking to family about treating diarrhea compared to the control group (81.3 compared to 73.6 percent, $p < 0.05$). This difference was also detected at the intent-to-treat level (79.4 and 73.6 percent for the intent-to-treat group and the control group, respectively, $p < 0.05$).

The intent-to-treat and Attended Health Games groups were also more likely to be very comfortable talking to their families about a healthy diet compared to the control group (84.4 percent for intent-to-treat, 85.4 percent for Attended Health Games compared to 78.6 percent for the control group, $p < 0.05$).

There were no significant differences among the groups regarding attitudes towards the ideal age girls and boys should finish their studies, ideal age for marriage or for having a child, or ideal number of children.

Although still low, girls in the Attended Health Games group were more likely to be very confident that they could take steps to prevent getting HIV compared to the control group (29.5 and 17.7 percent, respectively, $p < 0.001$). However, they were no more comfortable talking to their families about HIV compared to the control group.

Behavior

There were no significant differences in behavior regarding hand-washing. There was already a high percentage of girls at baseline and follow-up that indicated they washed their hands after going to

the latrine (approximately 86 percent at baseline to 95 percent at follow-up for all groups). The use of soap when washing hands was low at baseline and follow-up (35 percent at baseline to 43 percent at follow-up for the intent-to-treat group; however, all groups similarly increased their use of soap between baseline and follow-up (50 to 52 percent). There were no significant differences among the groups regarding use of soap. One mother voiced dissatisfaction with the hand-washing Game, which also reveals a possible reason for the low use of soap: its cost. *"We were not told how many times a day we should wash our hands. Is it possible to wash our hands all of the time? There should be a count. If I keep washing my hands all the time with soap, do you realize how many bars I would have to buy in a month? I would rather not spend so much money on soap."*

Fewer girls in the intent-to-treat group at follow-up had diarrhea compared to the control group (18.9 and 25.7 percent, respectively, $p < 0.05$), but there was no significant difference between the Attended Health Games group and the control group, suggesting this was not a meaningful finding.

Girls in the control group were more likely to indicate they increased fluid intake during diarrhea episodes in the past six months, compared to the intent-to-treat and Attended Health Games groups (73.2, 55.6 and 54.4 percent, respectively, $p < 0.05$). There was no difference among the groups in their use of oral rehydration solution (ORS) to treat diarrhea in the past three months. Use of ORS for all girls was low (between 32 percent of the intent-to-treat and 37 percent of control groups indicating they used it).

Girls in the Attended Health Games group were no more likely to eat saag or leafy green vegetables. Consumption of these foods was already high for all groups (76 percent for intent to treat and 80 percent for control groups). Consumption of drumstick, a food high in iron, was low for all groups at baseline and follow-up (3 to 10 percent having eaten it at least three times during the last week), and there were no significant differences among the groups. Girls in the Attended Health Games group were also no more likely to believe they would be able to eat leafy green vegetables than girls in the control group, with approximately 50 percent of all groups being confident they could. One Panchayat leader indicated that eating proper foods was difficult because families were poor and were unable to afford the right foods. *"It is necessary for woman (during pregnancy) to have proper nutritious food. Little bit of khichuri, roti, eggs are all essential parts of the diet. So girls and women need to be aware of this. Mostly I would, however, say families are so poor that they cannot afford this kind of food. Anganwadi centers provide the food to some extent. Women still need this to be explained more so that the issue is emphasized."*

Girls in the Attended Health Games group were no more likely to have had an HIV test in the past three months or know someone who had had a test. However, they were more likely to have indicated they confirmed that a clean needle was used to give injections in the past three months (12.8 percent compared to 5 percent for the control group, $p < 0.01$). Although a larger percentage of the Attended Health Games group indicated they gave advice to someone regarding HIV/AIDS (8.6 percent) compared to the intent-to-treat (2.6) and the control group (2.8), this was not statistically significantly different.

Satisfaction with the *Learning Games*

Overall, the mothers and girls were quite satisfied with the *Learning Games*; their main complaint was the timing of the Games or the lack of a consistent schedule with the Games. One girl shared that *"I did not know that the Games would be held again after the first session. No one told me. Had I known, I would have attended after the first session."* Another girl shared that *"we did not attend sessions only because either we did not know or we had studies."* The inconsistent delivery was also a problem. *"There is no fixed time for the*

madams to come. Some days they come at twelve noon. Other days they come at one. We are mostly away at school then.”

It also appears that they were unable to separate out or understand the relationship between the survey work and the actual Games. For some, the survey was considered part of the program and thus, many were upset with the types of questions they were asked, particularly concerning marriage, child birth and condom use. For example, a girl named Mamoni said, *“Should I say what I did not like? I felt embarrassed when we were asked about how many children we want. We are not married yet and don’t really know all these things. Why were we asked such questions? We were also told about the usage of condoms to avoid HIV/AIDS. But I did not like that.”* However, a fellow participant in the same focus-group discussion countered that, *“I think that we need to know these things so that we can be prepared for the future and know what to do when the time comes. I did not feel bad discussing these topics.”* A mother also shared her dissatisfaction with the survey. *“The Games were clean and we had no objections to them. The only things we did not like were the questions that were asked to our daughters. Some of the questions were embarrassing and made the girls ask us embarrassing questions back home. We could not face them, as they know nothing about these things yet. The questions should have been asked of us and we could have explained it to our daughters before sending them for the survey. That’s the only thing we did not like. Otherwise, we have not objections to the Games.”*

Mother-Daughter Relationships and Communication

The qualitative interviews revealed some interesting dynamics between mothers and daughters as well as between mothers-in-law and daughters-in-law. One of the important questions of this trial with SMVS was to determine how well mothers and daughters could learn together and whether it would affect the girls’ participation in the more sensitive Games. Interviews with the mothers and daughters who played the Games together revealed an appreciation of learning and playing together for most of the Games. The mothers were happy to participate in the “Knowing Our Bodies” and the HIV/AIDS Games with their daughters because of the opportunity to introduce these topics to their daughters. For the most part, the girls were comfortable with their mothers there, but they also shared that they were a bit shy or uncomfortable—not because their mothers were there but because other women were present. The girls who participated in the girls-only groups revealed that they were happy that there were no adults participating during those particular Games but would have enjoyed having their mothers participate in the other Games.

One girl whose mother participated in the Games with her shared, *“I was comfortable in my mother’s presence. I had no problems. Later, we discussed these at home as well.”* Another girl said, *“We are comfortable with our mothers more. We are not able to tell everything to our friends, especially private matters. Those are the things that we like to share with our mothers. And then nowadays, mothers are like our friends. We are more comfortable in their presence than with anyone else.”* A third girl also shared that, *“We prefer learning with our mothers than only with our friends. It’s easier that way.”*

Often, the girls enjoyed “playing” with their mothers, *“When we were playing the ‘Mela’ (bargaining) Game, one of us became the shopkeeper and the others customers. That was lots of fun. We learned to bargain and the mothers who were present here laughed a lot at our inability to bargain like them. It was fun.”*

The girls in the girls-only groups shared that they enjoyed not having their mothers in the Games. *“We don’t want elders to attend the Games. We are not able to be free enough in front of them. It is better we attend these sessions by ourselves.”* Some of the mothers agreed, *“The girls would not open their mouths in front of us. They would be shy in the presence of others. Our daughters discuss things at home with us but would not do that in public.”* Although there was some appreciation that mothers were not part of their group, there was

definitely less information exchange between mothers and daughters when they did not participate in the Games together. *“Our daughters did not discuss HIV/AIDS with us. We don’t know whether those topics were taught or not.”* The mothers also wished they had been able to participate. *“Now we wish that we were intelligent enough to learn more during our younger days. Now our daughters are learning, but we wish to learn with them.”*

Married girls were also interviewed to understand reasons for their inability to participate or how they viewed the Games differently from the unmarried girls. Their individual interviews reveal a much more complicated view of their participation. For the most part, they would like to participate in some Games with their mothers-in-law because it might allow them to be able to discuss some issues openly. *“It would great if mother-in-law also has learned the Games of cleanliness, food and flag. It is good to learn something with mother-in-law. If she learns a woman should not do hard work during her pregnancy, she will not pressure her daughter-in-law to do that kind of work. It helps to increase understanding between the two.”* One Panchayat, or sub-district political, leader also felt that daughters-in-law learning with their mothers-in-law would be beneficial. *“The daughter-in-law and mother-in-law will reach the same decision. Mother-in-law may not accept the suggestion of daughter-in-law in any case, but if they both learn the same thing, then there would be no conflict. It is better to learn the same thing at the same place.”* Another community leader agreed, *“It should be done. If a mother-in-law comes to know that a pregnant woman should take bed rest, she will not pressure her daughter-in-law to do hard work during pregnancy. Domestic problems may be minimized.”*

On the other hand, sensitive topics about reproductive health or HIV/AIDS would be very uncomfortable topics with them. *“I would feel ashamed in front of mother-in-law to hear about reproductive health or HIV/AIDS.”*

They would like for their husbands to participate in family planning or HIV/AIDS sessions because of the importance of this information to them as well. *“Yes, it would be great if he was present at those Games that deal with the AIDS disease or family planning.”* They felt that having a group with other married girls about their same age would be the most beneficial because with younger girls, they feel they can’t talk openly about some topics, and with older women they could feel intimidated. *“If the grown-up girls participate in the Game they may be able to know more things which they used to hesitate to discuss in normal situations with others. I think it is important to learn all those things before marriage.”* *“We had great fun in playing HIV/AIDS. All the secret topics about physical relations were discussed before many persons. We had learned many things and felt very shy.”*

When the girls and mothers were asked about whether they were encouraged or discouraged by anyone to participate in the Games, most of them indicated no one had discouraged them. However, one set of mothers revealed that there had been some objections to their daughters participating. *“There are people who discouraged us. They said that it was useless sending the girls. Just a waste of time. That these people were only earning money and nothing else, and so on. But we sent our daughters anyway, as we wanted to see what would happen. There are elder family members whom we shall not name, who said that the girls would marry soon, so why send them for Games? What use was it?”*

Other Gatekeepers and Community Knowledge of the Learning Games

In addition to interviewing the girls and their mothers and mothers-in-law, fathers and community leaders were also interviewed to understand their views of their daughters and/or wives participating in the Learning Games as well as the roles they would have liked to play. Fathers appreciated that their daughters and wives were learning from the Games, but that they didn’t have a lot of communication with either because they were working. *“Look, what happened was that as we men folk are*

not at home during the day and we do not generally know what goes on during that time unless someone tells us. So most of us do not know about what was taught at the Games except that members of our families attended. Some of our wives and daughters did mention that they were taught about savings and health issues. We did not think it very important to know either.” For most of them, they heard nothing from either their wife or daughter, but for a few, their daughter or wife had shared some of what they had learned. *“I did hear that we should wash our hands with soap after using the latrine and doing any other dirty work.”* *“My wife told me that they were told about HIV/AIDS.”*

Despite not having discussed these topics in-depth with either their daughter or wife, they felt the education was important. *“I think it is very good that our family members are learning these things, because sometime or the other these will come in handy. Knowledge is never useless.”*

Some fathers even had a preference about what they would learn. *“It is most important that they learn about health more than saving money because if one has good health, only then can one have any hope of saving for the future.”* Another father shared, *“This is definitely useful. We are all poor. If they learn how to save then they will be able to contribute in the time of emergencies. For example, if someone falls ill at home, then the saved money can come in very handy for the treatment. Like when my daughter got married, my wife’s savings and a loan against it was very useful for us. I knew that she was saving. In the same way, if other members learn how to save in the same way, then it will be for the good. Nothing bad can come of it.”*

When asked about their comfort level of a male teaching their daughters, most of the fathers felt it would be inappropriate and insupportable if an outsider, especially a male, were to teach their daughters in this type of setting. *“We won’t object to males coming to teach our daughters, but we can’t give permission either. See, we are not comfortable with unknown males coming to teach our young daughters. We have faced various problems here with private tutors as it is. I don’t think that it will be feasible.”* One father suggested that it would be better *“if any of our daughters-in-law of our locality could teach them.”*

Most of the community members were not aware that the *Learning Games* were taking place, but voiced interest in knowing more and appreciated the fact that the women and daughters were getting access to important “education.” *“I don’t know more about the Games. I think anything that girls are able to know is useful for them.”* A few also felt it was particularly important for the girls. *“Adolescent girls are the future mothers. So if we make them aware of family planning for ‘not more than two children,’ then our society will get relief from the huge pressure of population. Their family will also be in good condition.”*

When the Panchayat and other community leaders were aware of the *Learning Games*, most voiced their interest in promoting the work. *“So if an NGO thinks of doing (the Games) anyway, then the NGO needs to talk to the local party people. We can provide support in terms of people or providing space. Except for money, we can provide in all ways.”*

Analysis of Results

The results reveal in some cases clear messages of success, and other cases, contradictions between quantitative and qualitative findings about knowledge and behavior change. A few key themes emerge from the results as well as a few explanations of success where we didn’t anticipate it and vice versa.

Financial education for girls (and their mothers) may have the most influence on their attitudes and confidence when behaviors are hard to put into practice. Results from prior studies on financial education often argue that it is difficult to determine whether or not financial

education is actually effective: financial education initiatives and projects do not always share the same goals, studies often evaluate the respondent's comprehension of the question and not the behaviors themselves, and studies often fail to detect behavior change because people must face a particular challenge or decision point before they can put certain behaviors into practice.

Our results show little knowledge change, which suggests we should review the Financial Games to determine what was ineffective for changing knowledge. We also may have faced the same challenges as prior studies in designing survey questions that were clear to the girls and their mothers. However, a positive finding and a somewhat logical one is that the education changed attitude and confidence levels, which in some way suggests they did learn enough to feel more confident about their abilities to manage their money better. Even for girls who do not have much financial means, this change in confidence may play out in positive behaviors further down the road.

The lack of access to a savings mechanism or product for the girls may have also resulted in lower-than-anticipated saving behavior change, even if the behaviors they could put into practice were more informal in nature, such as saving at home or with their parents. Prior studies on financial education and Freedom from Hunger experience suggest that if you are not able to put a new piece of knowledge into immediate practice, long-term knowledge and behavior change are less likely. Because the girls were not given a mechanism to save, the Games' encouragement to save more was likely less effective. However, both mothers' and daughters' savings increased at the 6-month mark then decreased dramatically by the 12-month mark. Our qualitative findings suggest this was likely due to SMVS pushing for loan repayment and also deteriorating economic conditions. Those girls able to save were influenced more by their abilities to bargain for lower prices or reduce their own expenses, such as spending less on snacks or lunch.

Despite the low saving behavior change, the light at the end of this tunnel is the sustained confidence of the mothers in prioritizing their spending and bargaining for what they want and the confidence of the girls in feeling confident they can prioritize their spending. This is likely to result in positive behaviors in the future.

Putting some positive health behavior into practice depends on the financial means to do so. Like the ability to put financial knowledge into immediate practice, encouraging a health behavior without addressing the financial limitation that restricts access to a product or service hampers positive behavior change as well. Much of the qualitative data revealed that the girls found the hand-washing and nutrition Games very informative and helpful, yet we saw no changes in their use of soap, consumption of healthier foods, or use of ORS. Community leaders, mothers, fathers and the girls themselves pointed to cost as a major factor. Mothers felt soap was too expensive to use every time they wash their hands. Foods high in protein and iron are often beyond the reach of poor families. No one indicated ORS was too expensive; our experience shows that many of them already know how to make their own sugar-salt solution and continue to use this method rather than packaged ORS. If these Games are to be effective, financial access should be addressed in a way that encourage girls and mothers to think about how they might prioritize these needs or discuss with the SHPIs how they might help improve access to these products.

Education on HIV/AIDS: A surprising winner or a different intervention? The HIV/AIDS Game was intended to be primarily a knowledge-enhancing Game. The "Knowing Our Bodies" Game was designed to set the stage for understanding HIV/AIDS. For example, we couldn't talk about the risk of contracting HIV/AIDS through vaginal sex if the girls didn't yet know more about

their bodies and how pregnancy happens. The qualitative results revealed that the mothers and daughters were much more comfortable with the HIV/AIDS Game than the “Knowing Our Bodies” Game. HIV/AIDS seemed less “personal” because a person can get it from dirty needles, blood transfusions and other means. In contrast, “Knowing Our Bodies” focused on understanding the reproductive and sexual organs of the male and female, which is much more personal.

During the baseline survey work, questions regarding these subjects caused quite a bit of discomfort and in some cases anger because of their sensitive nature. Anticipating further community, mother, father and daughter discomfort, we brought in a local Indian NGO called the Child in Need Institute (CINI) to work with SMVS staff on sexual and reproductive health issues in addition to the original training provided by Reach India to the SMVS staff for the Health Games. In addition to extra training by CINI on sexual and reproductive health issues and capacity-building of animators on how to deliver sensitive topics, the Reach India SCMs were contracted to do some extra monitoring of these Games to 1) ensure they were completed and 2) address any animator confidence issues. In some cases, it was reported that the animators handed over major portions of the Game, particularly discussions about condom use, for the SCMs to complete.

While the intention of the additional support was just to ensure that the animators felt confident they could deliver the sensitive topics, this added attention and third-party oversight likely contributed to improved quality of delivery of this Game. There was overall lower attendance for this Game compared with the other Health Games, but the HIV/AIDS Game produced the greatest impacts.

It should not be surprising that the findings here suggest that quality of Game delivery is critical; we have similar findings in other Freedom from Hunger evaluations.¹³ Some of the girls and mothers interviewed also felt that the animator knew very little about the topic being covered and suggested a more informed person be in charge of the Games. This also suggests both Freedom from Hunger and Reach India should address quality-control issues more deliberately to achieve positive impacts, especially at great scale.

Possible Survey Effect. A “survey effect” is the phenomenon in which subjects of behavioral studies change their behaviors solely in response to being surveyed. For example, participants try to please the interviewer by giving answers they assume would be “correct” in the interviewer’s eyes, thus skewing our understanding of actual behavior. When we conducted the midline (6 months) survey of the participants and control groups regarding changes in financial knowledge, attitudes and behaviors, we found that in many cases, the control groups increased knowledge and improved behaviors in the same way as the participants. The final (12 months) follow-up study found the control-group girls increased their hand washing their hands after going to the latrine between baseline and follow-up in the same way as the participant girls. These are just two examples among several identical patterns for the treatment and control groups. This suggested 1) the education was also provided to the control groups (our monitoring indicated this was not the case, and considering the low rate of delivery of the education to the participants, it is unlikely the animators went to extra effort to provide education to the control groups); 2) some other, independent program during the same time was influencing the entire population. We know from the qualitative research that girls feel they get education all the time from their mothers about money, because their mothers are part

¹³ Mknelly, B & Dunford, C. (1998). *Impact of Credit with Education on mothers and their young children’s nutrition: CRECER Credit with Education program in Bolivia*. Davis CA: Freedom from Hunger.

of SHGs and the girls might actually attend the SHG meetings out of curiosity. This could have influenced both the treatment and control-group girls' increase in savings. We also know that in some communities, the Panchayat or community health workers educate their communities about HIV/AIDS, nutrition and women's health issue); or 3) the first survey could have spurred some inquiry to find the correct answers, or the survey could have questions may have suggested the preferred behavior.

In the SMVS qualitative study, it appears that the survey itself gave the "impression" to some participants that they were receiving "education" about the topics covered in the survey. In some cases, they said they learned something from the survey and not from the Games. Some of the control groups felt they had "received some education" from the survey itself. It was sometimes difficult to ascertain whether the girls knew the difference between the two. One girl shared, "*We did not play any Games that taught us about HIV/AIDS. The lady who came for the survey taught us.*" "*Our participation in the surveys has helped us a lot. Earlier we were not aware of so many things that now we know about.*" One girl from the control group shared that the surveyor "*taught me how to make ORS and its use.*" Not all the girls and mothers related the survey to receiving education. A girl from the control group indicated that, "*They have not taught us but only asked questions to know how much we knew about health and nutrition and money and savings.*"

We did not design our study to detect whether the survey alone would somehow be its own intervention. To do that, we would have needed a group randomly assigned to only receive the end line (12 months) survey. We can only speculate that the initial survey might have somehow revealed the "correct" answers to subsequent survey questions or encouraged discussion of the questions with others and thereby resulted in learning similar to that expected from participation in the *Learning Games*.

CONCLUSIONS

The *Learning Games for Adolescent Girls* curriculum was popular among the Reach India network SHPIs as well as for the girls and mothers served by the SHPIs. By implementing the *Learning Games* with a parallel evaluation agenda—the monitoring and outcomes research with a sample of SHPIs from the network as well as intensive and rigorous research with one SHPI—we have a fairly rich understanding that the *Learning Games* are effective as long as the SHPIs are able to fully implement the Games, all of the Games, with high levels of delivery quality. Some Games are more popular among girls and women, and some of them have proven to demonstrate more impact.

Overall, the *Advancing Women’s and Adolescent Girls’ Access to Resources and Influence in Rural India* initiative generated some important learning. . In general, and not surprising, SHPIs with more experience in working with this target group had more success with implementation of the *Learning Games* curriculum. It is very important to avoid “reinventing the wheel” over and over again by sharing this experience through certain protocols and “industry standards” for working with adolescents, and adolescent girls in particular, and for evaluating programs with adolescent girls. The lessons learned documented below serve both Freedom from Hunger and Reach India as they pursue further youth programming and other organizations new to working with youth.

The lessons learned are grouped into four categories: Growth of Programs with Adolescents, Technical Assistance, Education Design, and Conducting Evaluations with Adolescents.

Growth of Programs with Adolescents

- a. **Begin by working with organizations already serving girls and then expand to organizations with less experience.** Because of the particular needs of adolescent girls and the community support needed to make programs serving them successful, there are greater economies of scale by working with organizations that already have experience serving adolescent girls. This does not mean other organizations cannot be targeted, but for gaining experience in reaching and serving girls as well as implementing a new product designed for them, it would be important to start where there is experience already, and build from there.
- b. **Seek out organizations that demonstrate strong commitment or rationale for serving this population.** This is an obvious finding, but one that can be easily overlooked when there are multiple agendas for an initiative and when there are multiple organizations involved. Particularly when serving youth or providing a completely new product is involved, implementing organizations need commitment at all levels—from the board to the field-staff members. “Product champions” are important, but the championing cannot only rest with one person. In addition, motivations from all stakeholders to serve girls as well as provide a new product for girls should be discussed with transparency, and when there are conflicts in motivation, they should be intentionally addressed.
- c. **Seek out organizations that demonstrate strong commitment to providing quality education.** Freedom from Hunger continually finds through its evaluations that the quality of education delivered is a key determinant of the success of the program in producing positive impacts. The delivery of education alone cannot be assumed to lead to positive impacts without paying attention to whether and how the education is delivered. The use of supervisory visits to field staff and use of the observation checklist is one mechanism for monitoring quality—but feedback and support are important follow-on activities.

Technical Assistance

- a. **Anticipate and develop technical support plans for organizations with no prior experience in either serving adolescents or in providing education.** Developing new organizational and programmatic systems, marketing strategies, incentives, etc., in order to incorporate a new target group or a new product often require external support. Ramping up to integrate new clients or new products takes time. This is especially important when there is a short time period allowed for seeing not only uptake but actual delivery and positive impacts from participation. Moreover, providing ongoing external support to organizations would likely improve and increase the likelihood of reaching many more girls.
- b. **Plan for and conduct purposeful discussions up front with organizations about serving adolescents and providing education.** Integrating girls for the first time into an organization's target population or integrating education into a product or service offering cannot be a "one-off" activity. Both require preparation, adjustments to existing processes, determined implementation, and monitoring. Organizations must not assume that serving girls or providing them education for the first time are simple additions. Discussions about what "integration" requires is a critical first step.

Education Design

- a. **Ensure that education promoting a product or service is linked to that product or service for improved use and relevancy.** When education sessions promote the use of hand soap, ORS, or insecticide-treated mosquito nets, for example, initial research should determine whether there are constraints to accessing or using those products, and then efforts should be made to improve access to those products either through linking the client to an organization that provides the product or, if financial access is a constraint, finding ways to improve access to affordable products. Otherwise, the education sparks the necessary demand but clients are unable to follow through with behavior change or benefit from the use of the product. This can lead to frustration for both the implementer and the client.
- b. **Design or revise existing education to ensure that key themes are repeated over time or that a key objective of a single Game is not diluted by multiple and perhaps competing objectives.** Although there was an attempt to design the Games so that each could stand alone, this was not the best approach to serving girls or their mothers. For example, we had one nutrition Game; there should have been multiple nutrition Games to better build on prior knowledge as well as repeat important themes to ensure that the most important concepts were absorbed and then put into action. Even one of the mothers interviewed shared that, *"If you don't remind me or keep repeating a point, I forget."* In addition, if the one-off Games are the only opportunity to share important life-saving information, the information of the highest order should be prioritized. For example, if the key point of the diarrhea Game is to ensure that when a child has diarrhea they are given more liquid and if this key piece of knowledge does not appear to have been improved, then all other diarrhea messages may have to be dropped to preserve the most important learning and not dilute with competing messages.
- c. **Develop monitoring and evaluation plans to help identify and detect external factors that are likely influencing program outreach, implementation, and effectiveness.** Even when randomized controlled trials are employed, it is critically important to detect and understand external factors that can influence the success of the education. For example, both the

participants and the control groups in the RCT experienced a reduction in their amount of savings or number of times they put money aside. Although this was contradictory to what the education supported and what we hoped we would see as a result of participation in a few savings education Games, we knew that the implementing partner was experiencing repayment problems from a loan product, which was likely directly reducing client savings. Understanding these external factors can help determine whether the education was actually ineffective or simply unable to surmount an unanticipated externality.

Conducting Evaluations with Adolescents

- a. **Seek out evaluation firms that have more experience in interviewing adolescents.** Evaluation firms that normally interview adults do not naturally know how to survey adolescents. In-country research firms are important contributors to conducting good evaluations. They are often assumed to have the necessary knowledge “bank” of how to appropriately approach and interview a participant. Much of their experience in interviewing is with adults, so it should not be assumed that they can parlay that experience into interviewing adolescents, just as we cannot assume our experiences with designing education for adults can easily translate to effective adolescent education design. Firms that have this particular experience or were somehow built to interview this population should be sought out.
- b. **Communicate with community and gatekeepers prior to evaluation and prior to program implementation.** A subset of the point above is the importance of prior communication with the community leaders, and gatekeepers for girls in particular, prior to survey work. That is, community leaders and parents should be approached prior to the survey work to discuss the goal of the survey as well as the types of questions involved to avoid any overreaction or to anticipate problems in some of the questioning. For example, we did not anticipate parental concern about asking daughters about the age at which they would like to have their first child. We ultimately lost some participants because of rumors or negative reactions to this question.
- c. **Develop buy-in from implementing field staff (not just management) for the evaluation.** In addition to building a communication strategy around the community and gatekeepers, the field staff that serve the population should also participate in a discussion about the purpose and content of the survey. They can then assist where there are conflicts at the community level, ensuring there is trust between the surveyor and the community members.
- d. **Work repeatedly to help an implementing organization to fully understand and appreciate the constraints of an RCT evaluation before the “rubber hits the road.”** Although many efforts were made to discuss how the constraints of the RCT would affect implementation, it wasn’t until constraints were faced that this was fully appreciated by the SMVS staff. Initial efforts to describe the RCT should include some scenarios and solutions brainstormed before implementation begins to avoid disruptions and disappointments in both implementation and the evaluation.
- e. **Plan to spend more time and consulting multiple “stakeholders” in developing surveys for adolescents.** Evaluation of financial education demands very careful survey design, even more so for adolescent financial education. Designing questions for an adolescent population is much more challenging and there are fewer examples to follow than for adult-level surveys. More time should be spent designing and testing questions to ensure the questions are

understood as intended. Our field-test of the survey often detected a lack of comprehension of the questions and adjustments had to be made before conducting the survey work.

- f. **Care must be taken to ensure the survey is not perceived as a form of education or inadvertently designed to teach.** The qualitative research with SMVS revealed that some of the control participants thought they had received education by participating in the survey. There are several factors that may have led to this perception. It may simply be that because an “outsider” was asking them questions about their own behaviors, it gave them the impression that they were being taught something. Discussing some behaviors directly, such as whether or not they used ORS the last time they had diarrhea, could have spurred some inquiry or change in behavior just from simple reflection on why the question was being asked or if new terms or topics were being introduced. Surveys have to be carefully designed taken this into account.
- g. **Plan for and conduct qualitative research for interpreting quantitative data and triangulating findings.** This is the case in any social research, but when evaluating changes in adolescents’ knowledge, attitude and behavior regarding money management and their health, we are able to more fully understand the meaning behind the lack of change or the significant change from participating in the *Learning Games*.

Appendix

Final RCT Data Tables—SMVS

TABLE 1a. Population characteristics for married women participants: Comparing 12 month outcomes between groups

Characteristic	Intent-to-treat		Attended HIV Game		Attended Savings Game		Control	
	12 Month (N=359)	12 Month (N=79)	12 Month (N=79)	12 Month (N=109)	12 Month (N=109)	12 Month (N=318)	12 Month (N=318)	
Religion (D1)								
Hindu	62.7 ^{††}	74.7 ^{†††}		73.4 ^{†††}		50.9		
Muslim	37.3	25.3		26.6		49.1		
Caste or Tribe (D2)								
Scheduled caste	21.2	27.9		26.6		22.0		
General	72.1	65.8		69.7		70.4		
Other	6.7	6.3		3.7		7.6		
Not applicable	0.0	0.0		0.0		0.0		
Mean age in years (y101)	31.3 ^{†††}	30.6 ^{†††}		32.0 ^{††}		35.0		
% ever attended school (y102/104/106)	64.9	77.2 ^{††}		65.1		57.9		
Mean age years when married (y108)	16.2	16.5		16.5		16.0		
Mean poverty index score	35.9	39.5		35.5		36.4		
% food insecure	31.6	25.3		36.7		34.3		
% whose husbands travel away for work (y109)	28.6	25.0		27.7		26.1		

Significant difference between each group and control: [†]p ≤ 0.05, ^{††}p ≤ 0.01, ^{†††}p ≤ 0.001

TABLE 1b. SHG program characteristics for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Intent-to-treat		Attended HIV Game		Attended Savings Game		Control	
	Baseline (N=359)	12 Month (N=359)	Baseline (N=79)	12 Month (N=79)	Baseline (N=109)	12 Month (N=109)	Baseline (N=318)	12 Month (N=318)
% participated in programs to learn about savings (y110)	39.6 ^{†††}	59.3	41.8 [†]	76.0 ^{†††}	51.4	73.4 ^{†††}	56.9	54.7
% participated in programs to learn about health issues (y113)	17.3	47.1 ^{†††}	16.5	74.7 ^{†††}	22.9	66.1 ^{†††}	21.1	32.4
% currently a member of an SHG (y116)	80.5 ^{†††}	67.4	88.6	78.5	86.2 ^{††}	78.9	94.7	72.3
Mean number of years as an SHG member (member)	2.5 ^{†††}	3.4 ^{††}	2.6 [†]	3.7	2.6 [†]	3.4 [†]	3.3	4.1
Mean number of members in SHG (y118)	11.9	11.4	12.4	11.6	11.8	11.5	11.6	10.9

Significant difference between each group and control: [†]p ≤ 0.05, ^{††}p ≤ 0.01, ^{†††}p ≤ 0.001

TABLE 2a. Population characteristics for married women participants: Comparing 12 month outcomes between groups

Characteristic	Attended HIV Game		Did not Attend HIV Game		Attended Savings Game		Did not Attend Savings Game	
	12 Month (N=79)	12 Month (N=280)	12 Month (N=109)	12 Month (N=250)	12 Month (N=109)	12 Month (N=250)	12 Month (N=109)	12 Month (N=250)
Religion (D1)								
Hindu	74.7 [†]	59.3	73.4 ^{††}	58.0				
Muslim	25.3	40.7	26.6	42.0				
Caste or Tribe (D2)								
Scheduled caste	27.9	19.3	26.6	18.8				
General	65.8	73.9	69.7	73.2				
Other	6.3	6.8	3.7	8.0				
Not applicable	0.0	0.0	0.0	0.0				
Mean age in years (y101)	30.6	31.5	32.0	31.0				
% ever attended school (y102/104/106)	77.2 ^{††}	61.4	65.1	64.8				
Mean age years when married (y108)	16.5	16.1	16.5	16.1				
Mean poverty index score	39.5 [†]	34.8	35.5	36.0				
% food insecure	25.3	33.3	36.7	29.3				
% whose husbands travel away for work (y109)	25.0	29.6	27.7	28.9				

Significant difference between group who attended game and group who did not attend game: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 2b. SHG program characteristics for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Attended HIV Game		Did not Attend HIV Game		Attended Savings Game		Did not Attend Savings Game	
	Baseline (N=79)	12 Month (N=79)	Baseline (N=280)	12 Month (N=280)	Baseline (N=109)	12 Month (N=109)	Baseline (N=250)	12 Month (N=250)
% participated in programs to learn about savings (y110)	41.8	76.0 ^{†††}	38.9	54.6	51.4 ^{††}	73.4 ^{†††}	34.4	53.2
% participated in programs to learn about health issues (y113)	16.5	74.7 ^{†††}	17.5	39.3	22.9	66.1 ^{†††}	14.8	38.8
% currently a member of an SHG (y116)	88.6 [†]	78.5 [†]	78.2	64.3	86.2	78.9 ^{††}	78.0	62.4
Mean number of years as an SHG member (member)	2.6	3.7	2.5	3.3	2.6	3.4	2.5	3.4
Mean number of members in SHG (y118)	12.4	11.6	11.8	11.4	11.8	11.5	11.8	12.0

Significant difference between group who attended game and group who did not attend game: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 3. Impact of Learning Games on Financial Literacy for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Intent-to-treat				Control							
	N	Baseline	N	6 Month	N	Baseline	N	6 Month	N	12 Month		
Savings												
% Who knew that they could save money by setting money aside 215.1	359	89.4	359	88.6 [†]	359	88.6	318	87.1	318	93.7	318	90.3
% Who have a plan for saving 213a	359	84.4	359	95.8	359	87.7	318	87.1	318	93.1	318	86.8
Mean Confidence Score (1-very confident, 4-very unconfident)												
Save some of your income 216	359	1.7	357	1.6	358	1.9	318	1.7	317	1.7	317	1.8
Mean number of times you put some of your money aside to save for something past 3 months 208	359	2.6	356	7.6 [†]	358	2.3 [†]	318	2.8	318	5.5	318	3.3
% Very Motivated to save money over next 3 months 230	--	NA	359	54.6	359	42.1	--	NA	318	51.3	318	44.3
% who have savings 209	359	86.6 ^{†††}	359	81.9 ^{††}	358	71.8	318	94.7	318	89.6	318	76.4
% who keep their savings												
At home with someone else 217.1	359	0.6	359	2.0 [†]	359	1.4	318	0	318	0.3	318	0.9
At home with me 217.2	359	17.8	359	33.2 ^{††}	359	24.5	318	13.8	318	23.9	318	29.6
At SMVS SHG 217.4	359	76.6 ^{†††}	359	61.8 ^{†††}	359	52.9	318	90.9	318	78.9	318	57.9
At another SHG 217.5	359	6.7	359	13.4	359	9.8	318	5.0	318	10.4	318	14.2
% feel somewhat or very comfortable talking to family about income 605	353	91.5	--	NA	343	87.8	311	91.3	--	NA	306	90.5
Bargaining												
Mean Confidence Score (1-very confident, 4-very unconfident)												
Bargain for what you want 301	359	1.8	358	1.6	355	1.8	318	1.8	318	1.7	318	1.8
% Who knew that they could save money by bargaining for a lower price 215.2 [¶]	359	17.3	359	12.0	359	31.2	318	17.0	318	10.7	318	32.7
Prioritizing Spending												
Who believe the best person to make decisions about their money is "myself" 228	359	56.0	359	47.6	359	50.1 [†]	318	57.9	318	44.7	318	57.9
Mean Confidence Score (1-very confident, 4-very unconfident)												
Prioritize what you spend 203	359	1.6	359	1.4	358	1.6	318	1.7	318	1.5	318	1.6
Manage your income 227	358	1.7	359	1.6	358	1.6	318	1.7	318	1.7	316	1.6

Significant difference between group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 4. Impact of Learning Games on Financial Literacy for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Attended Financial Games				Control					
	N	Baseline	N	6 Month	N	12 Month	N	6 Month	N	12 Month
Savings										
% Who knew that they could save money by setting money aside 215.1	109	89.9	109	91.7	109	93.6	318	87.1	318	90.3
% Who have a plan for saving 213a	109	84.4	109	98.2 [†]	109	90.8	318	87.1	318	86.8
Mean Confidence Score (1-very confident; 4-very unconfident)	109	1.6	109	1.5	109	1.8	318	1.7	317	1.8
Save some of your income 216	109	2.8	107	9.3 [†]	108	2.8	318	2.8	318	5.5
Mean number of times you put some of your money aside to save for something past 3 months 208	--	NA	109	62.4 [†]	109	47.7	--	NA	318	51.3
% Very Motivated to save money over next 3 months 230	109	91.7	109	89.9	109	78.0	318	94.7	318	89.6
% who have savings 209	109	0.9	109	0.9	109	1.8	318	0	318	0.3
% who keep their savings										
At home with someone else 217.1	109	15.6	109	39.5 ^{††}	109	21.1	318	13.8	318	23.9
At home with me 217.2	109	81.7 ^{††}	109	68.8 [†]	109	65.1	318	90.9	318	78.9
At SMVS SHG 217.4	109	4.6	109	17.4	109	10.1	318	5.0	318	10.4
At another SHG 217.5	108	92.6	--	NA	107	88.8	311	91.3	--	NA
% feel somewhat or very comfortable talking to family about income 605										
Bargaining										
Mean Confidence Score (1-very confident; 4-very unconfident)	108	1.9	108	1.5 [†]	107	1.6 ^{††}	318	1.8	318	1.7
Bargain for what you want 301	108	16.7	108	13.0	108	26.9	318	17.0	318	10.7
% Who knew that they could save money by bargaining for a lower price 215.2%										
Prioritizing Spending										
Who believe the best person to make decisions about their money is "myself" 228	85	54.1	85	55.3	85	57.7	318	57.9	318	44.7
Mean Confidence Score (1-very confident; 4-very unconfident)	85	1.6	85	1.3 ^{††}	85	1.4 [†]	318	1.7	318	1.5
Prioritize what you spend 203	84	1.7	85	1.4 ^{††}	85	1.5	318	1.7	318	1.7
Manage your income 227										

Significant difference between group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 5. Impact of Learning Games on Financial Literacy for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Attended Financial Games				Did not Attend Financial Games							
	N	Baseline	N	6 Month	N	12 Month	N	Baseline	N	6 Month	N	12 Month
Savings												
% Who knew that they could save money by setting money aside 215.1	109	89.9	109	91.7	109	93.6 [†]	250	89.2	250	87.2	250	86.4
% Who have a plan for saving 213a	109	84.4	109	98.2	109	90.8	250	84.4	250	94.8	250	86.4
Mean Confidence Score (1-very confident, 4-very unconfident)												
Save some of your income 216	109	1.6	109	1.5 [†]	109	1.8	250	1.8	248	1.7	249	1.9
Mean number of times you put some of your money aside to save for something past 3 months 208	109	2.8	107	9.3	108	2.8	250	2.5	107	6.9	250	2.0
% Very Motivated to save money over next 3 months 230	--	NA	109	62.4	109	47.7	--	NA	250	51.2	250	39.6
% who have savings 209	109	91.7	109	89.9 ^{††}	109	78.0	250	84.4	250	78.4	249	69.1
% who keep their savings												
At home with someone else 217.1	109	0.9	109	0.9	109	1.8	250	0.4	250	2.4	250	1.2
At home with me 217.2	109	15.6	109	39.5	109	21.1	250	18.8	250	30.4	250	26.0
At SMVS SHG 217.4	109	81.7	109	68.8	109	65.1 ^{††}	250	74.4	250	58.8	250	47.6
At another SHG 217.5	109	4.6	109	17.4	109	10.1	250	7.6	250	11.6	250	9.6
% feel somewhat or very comfortable talking to family about income 605	108	92.6	--	NA	107	88.8	245	91.0	--	NA	236	87.3
Bargaining												
Mean Confidence Score (1-very confident, 4-very unconfident)												
Bargain for what you want 301	108	1.9	108	1.5 ^{††}	107	1.6 ^{††}	251	1.8	250	1.7	248	1.9
% Who knew that they could save money by bargaining for a lower price 215.2 [‡]	108	16.7	108	13.0	108	26.9	251	17.5	251	11.6	251	33.1
Prioritizing Spending												
Who believe the best person to make decisions about their money is "myself" 228	85	54.1	85	55.3	85	57.7	274	56.6	274	45.3	274	47.8
Mean Confidence Score (1-very confident, 4-very unconfident)												
Prioritize what you spend 203	85	1.6	85	1.3 ^{††}	85	1.4 ^{††}	274	1.7	274	1.5	273	1.6
Manage your income 227	84	1.7	85	1.4 [†]	85	1.5	274	1.7	274	1.6	273	1.6

Significant difference attended game and did not attend game: [†] p ≤ 0.05, ^{††} p < 0.01, ^{†††} p < 0.001

TABLE 6. Impact of Learning Games on Health Literacy for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Intent-to-treat			Attended Health Games			Control		
	N	Baseline	6 Month	N	Baseline	6 Month	N	Baseline	6 Month
Diarrhea Prevention and Treatment									
% washed hands after last using the latrine (Y403.3=1)	359	88.0	92.5	196	88.3	94.4	318	89.6	94.3
% knew that using soap was a critical part of washing hands (Y416.3=1)	359	90.8 ^{†††}	82.2	196	90.8	77.0	318	82.1	82.4
% used soap when last washing hands (Y404.3=1)	359	35.7	42.1	196	34.2	40.8	318	35.5	44.3
% had Diarrhea in past 6 months (Y406<6 months)	359	16.6	21.2	185	13.0	22.3	311	12.2	19.5
% increased fluids with Diarrhea in past 6 months (Y407.1=1)	57	82.5	76.3	24	91.7	74.4	38	73.7	64.5
% used ORS with Diarrhea in past 6 months (Y408.1=1)	165	46.7	40.5	90	47.8	30.3 [†]	130	43.9	42.2
% knew people who experienced Diarrhea in past 3 months (Y410>0)	359	15.6	19.8	193	14.0	19.7	318	12.0	26.1
% would give a child with Diarrhea more to drink (Y415.1)	359	47.1	55.4	193	47.7	56.5	318	53.8	58.2
% recommended increase fluids with Diarrhea in past 3 months (Y412.1=1)	43	14.0 [†]	25.5	20	10.0	12.9 [†]	23	34.8	33.3
% recommended ORS with Diarrhea in past 3 months (Y412.4=1)	43	67.4	47.3	20	55.0	45.2	23	52.2	54.6
% very confident that they can prevent Diarrhea (Y421.1=1)	359	24.5	33.2	193	25.4	38.9 [†]	318	23.9	28.9
% feel somewhat or very comfortable talking to family about treating diarrhea 607	342	89.5	86.3	187	92.0	89.4	299	88.0	85.7
Anemia Prevention and Treatment									
% eat Saag. Leafy green vegetables ≥ 3 times a week (Y501.04>2)	359	84.4	78.3	150	84.0	76.0	318	82.4	79.6
% eat Drumstick ≥ 3 times a week (Y501.06>2)	359	5.6	2.5	150	5.3	4.7	318	4.7	5.4
% felt tired or run down in past month (Y502>0)	359	51.8 [†]	65.7	150	51.3 [†]	64.0	318	61.0	72.0
% believed that Saag can increase energy (Y503.01=1)	359	98.1	99.2	150	98.7	99.3	318	98.1	99.4
% believe that Drumstick can increase energy (Y503.04=1)	359	92.5	97.5	150	91.3	97.3	318	89.9	97.2
% knew how to create a balanced meal (504-506)	359	15.6	12.5	150	14.7	12.7	318	12.6	11.6
% believe that they will be able to eat leafy green vegetables everyday this week (Y507=1)	359	59.6	46.0	150	60.7	43.3	318	60.1	45.6
% feel somewhat or very comfortable talking to family about eating a healthy diet 608	357	95.0	86.9	150	94.7	91.9	312	92.6	87.1
Adolescent Attitudes on Life Trajectory									
Mean ideal age a girls should finish studies (y705)	353	18.8	19.2	150	18.9	19.4	312	18.7	19.5
Mean ideal age a boy should finish studies (y706)	353	22.3 [†]	23.4	150	22.6 ^{††}	23.4	311	21.7	23.2
Mean ideal age for marriage (y702)	356	19.0 [†]	18.8	153	19.0	18.8	316	18.6	18.8
Mean ideal age for child (y703)	356	21.4	21.3	153	21.4	21.5	315	21.3	21.4

TABLE 6. Impact of Learning Games on Health Literacy for married women participants: Comparing Baseline and 6 month between groups (continued)

Characteristic	Intent-to-treat			Attended Health Games			Control		
	N	Baseline	6 Month	N	Baseline	6 Month	N	Baseline	6 Month
Mean ideal number of children (y704_1)									
Mean ideal number of sons (y704_2)	359	1.9	2.0	153	1.8 [†]	2.0	318	2.0	318
Mean ideal number of daughters (y704_3)	359	1.0	1.0 [†]	153	1.0	1.0 ^{††}	318	1.0	318
Reproductive Health Awareness									
% know that ovaries store eggs (y901)	359	0.9	0.9	153	0.8	0.9	318	0.9	318
% know that menstruation comes when an egg has not united with a male sperm (y903)	--	NA	67.6	--	NA	68.0	--	NA	64.8
HIV/STI Transmission Knowledge									
% have heard of STI (Y1001=1)	359	35.7	45.8	153	33.3	49.0	318	31.1	47.8
% have heard of HIV/AIDS (Y1003=1)	359	28.1	39.9	79	41.8	63.3 ^{†††}	318	31.8	38.1
% know that HIV is a virus (Y1004_3=1)	359	35.7	54.2	79	50.6 [†]	78.5 ^{†††}	318	36.5	51.9
% know that HIV is transmitted through vaginal sex (Y1006.01=1)	359	11.1	17.0	79	15.2	30.4 ^{††}	318	12.9	15.1
% know that HIV is can be transmitted through used needles (Y1006.02=1)	359	33.2	43.9	79	48.1 [†]	69.6 ^{†††}	318	34.6	39.3
% know that HIV can be transmitted from a mother to her unborn baby (Y1006.04=1)	359	31.8	45.5	79	44.3	65.8 ^{†††}	318	34.0	40.3
% wrongly believe that HIV can be transmitted by Mosquitoes (Y1006.03=1)	359	30.1	42.2	79	41.8 [†]	62.0 ^{†††}	318	29.6	39.0
% wrongly believe that HIV can be transmitted through kissing (Y1006.05=1)	128	44.5	61.5	40	55.0	57.1	116	47.4	58.8
% wrongly believe that HIV can be transmitted through embracing (Y1006.06=1)	128	43.0	55.9	40	45.0	52.4	116	46.6	64.2
HIV Testing									
% with an HIV Test in past 3 months (Y1005.02=1)	128	35.2	43.1	40	45.0	44.4	116	39.7	48.5
% know someone who has gotten an HIV test (Y1005.03=1)	359	0.3	1.1	79	0.0	1.3	318	0.6	0.3
% know where to go to get an HIV test (Y1005.04=1)	359	1.4	0.3	79	0.0	0.0	318	1.3	0.3
HIV Prevention									
% know that condoms can prevent HIV (Y1006.7=1)	359	12.3	18.7	79	20.3 [†]	29.1 ^{††}	318	11.6	14.8
% confirmed clean needle with shot or immunization past 3 months (Y1005.05=1)	359	28.1	37.2	79	36.7	57.0 ^{†††}	318	30.8	35.9
% gave advice to use condoms to prevent HIV past 6 months (Y1008.2=1)	280	5.7	11.2	51	7.8	25.0 ^{†††}	240	4.6	8.9
% Very confident that you will be able to take steps to prevent getting HIV (Y1009.1=1)	243	2.9	8.6	42	4.8	25.9 ^{†††}	213	3.3	4.2
% feel somewhat or very comfortable talking to family about preventing HIV 609	359	15.9	23.2	79	26.6	41.8 ^{†††}	318	17.9	19.8

TABLE 6. Impact of Learning Games on Health Literacy for married women participants: Comparing Baseline and 6 month between groups (continued)

Characteristic	Intent-to-treat			Attended Health Games			Control		
	N	Baseline	6 Month	N	Baseline	6 Month	N	Baseline	6 Month
Sexually Active									
% who have ever been sexually active 904	144	63.2 [†]	52.4	43	62.8	69.4 ^{††}	142	50.7	46.9
% sexually active in the past 3 months 905	359	99.2	99.4	79	100.0	100.0	317	98.1	99.0
% used condoms when having sex in past three months 906	356	88.2 ^{††}	85.6	79	93.7 ^{††}	94.8 ^{††}	310	80.3	81.6
% currently preventing pregnancy consistently or once in a while 908	314	9.6	9.3	74	9.5	9.6	249	7.6	5.2
Acceptability of Learning Games									
Favorite game (of those who attended all games) (Y1403)	353	69.4	66.3	78	71.8	61.0	309	74.8	67.3
How to prevent and treat Diarrhea									
Hand washing						28.0			
Knowing your bodies – reproductive health						8.0			
Food and the flag – anemia prevention						20.0			
How to protect against HIV/AIDS						24.0			
Reason for missing games (Y1407)						20.0			
School			2.7			4.4			
Work			24.5			29.0			
Did not know about session			34.4			30.4			
Did not enjoy games		302	0.3			1.5			
Others			38.1			34.8			

Significant difference between group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 7. Impact of Learning Games on Financial Literacy for married women participants: Comparing Baseline and 6 month between groups

Characteristic	Attended Health Games			Did not Attend Health Games		
	N	Baseline	6 Month	N	6 Month	12 Month
Diarrhea Prevention and Treatment						
% washed hands after last using the latrine (Y403.3=1)	196	88.3	94.4	163	87.7	90.2
% knew that using soap was a critical part of washing hands (Y416.3=1)	196	90.8	77.0 ^{††}	163	90.8	88.3
% used soap when last washing hands (Y404.3=1)	196	34.2	40.8	163	37.4	43.6
% had Diarrhea in past 6 months (Y406≤6 months)	185	13.0 [†]	22.3	158	20.9	19.9
% increased fluids with Diarrhea in past 6 months (Y407.1=1)	24	91.7	74.4	33	75.8	78.8
% used ORS with Diarrhea in past 6 months (Y408.1=1)	90	47.8	30.3 ^{†††}	75	45.3	54.7
% knew people who experienced Diarrhea in past 3 months (Y410>0)	193	14.0	19.7	166	17.5	19.9
% would give a child with Diarrhea more to drink (Y415.1)	193	47.7	56.5	166	46.4	54.2
% recommended increase fluids with Diarrhea in past 3 months (Y412.1=1)	20	10.0	12.9 [†]	23	17.4	41.7
% recommended ORS with Diarrhea in past 3 months (Y412.4=1)	20	55.0	45.2	23	78.3	50.0
% very confident that they can prevent Diarrhea (Y421.1=1)	193	25.4	38.9 [†]	166	23.5	26.5
% feel somewhat or very comfortable talking to family about treating diarrhea 607	187	92.0	89.4	155	86.5	82.5
Anemia Prevention and Treatment						
% eat Saag. Leafy green vegetables ≥ 3 times a week (Y501.04>2)	150	84.0	76.0	209	84.7	79.9
% eat Drumstick ≥ 3 times a week (Y501.06>2)	150	5.3	4.7 [†]	209	5.7	1.0
% felt tired or run down in past month (Y502>0)	150	51.3	64.0	209	52.2	67.0
% believed that Saag can increase energy (Y503.01=1)	150	98.7	99.3	209	97.6	99.0
% believe that Drumstick can increase energy (Y503.04=1)	150	91.3	97.3	209	93.3	97.6
% knew how to create a balanced meal (504-506)	150	14.7	12.7	209	16.3	12.4
% believe that they will be able to eat leafy green vegetables everyday this week (Y507=1)	150	60.7	43.3	209	58.9	47.9
% feel somewhat or very comfortable talking to family about eating a healthy diet 608	150	94.7	91.9 [†]	207	95.2	83.3
Adolescent Attitudes on Life Trajectory						
Mean ideal age a girls should finish studies (y705)	150	18.9	19.4	203	18.6	19.1
Mean ideal age a boy should finish studies (y706)	150	22.6	23.4	203	22.1	23.4
Mean ideal age for marriage (y702)	153	19.0	18.8	203	19.0	18.9
Mean ideal age for child (y703)	153	21.4	21.5	203	21.5	21.2
Mean ideal number of children (y704_1)	153	1.8 [†]	2.0	206	2.0	2.0
Mean ideal number of sons (y704_2)	153	1.0 [†]	1.0 [†]	206	1.1	1.0
Mean ideal number of daughters (y704_3)	153	0.8	0.9	206	0.9	1.0
Reproductive Health Awareness						
% know that ovaries store eggs (y901)	--	NA	68.0	--	NA	67.3
% know that menstruation comes when an egg has not united with a male sperm (y903)	153	33.3	49.0	206	37.4	43.4
HIV/STI Transmission Knowledge						
% have heard of STI (Y1001=1)	79	41.8 ^{††}	63.3 ^{†††}	280	24.3	33.3
% have heard of HIV/AIDS (Y1003=1)	79	50.6 ^{††}	78.5 ^{†††}	280	31.4	47.3
% know that HIV is a virus (Y1004.3=1)	79	15.2	30.4 ^{†††}	280	10.0	13.3
% know that HIV is transmitted through vaginal sex (Y1006.01=1)	79	48.1 ^{††}	69.6 ^{†††}	280	28.9	36.6
% know that HIV is can be transmitted through used needles (Y1006.02=1)	79	44.3 ^{††}	65.8 ^{†††}	280	28.2	39.8

TABLE 7. Impact of Learning Games on Financial Literacy for married women participants: Comparing Baseline and 6 month between groups (continued)

Characteristic	Attended Health Games			Did not Attend Health Games		
	N	Baseline	6 Month	N	6 Month	12 Month
% know that HIV can be transmitted from a mother to her unborn baby (Y1006.04=1)	79	41.8 [†]	62.0 ^{††}	280	26.8	36.6
% wrongly believe that HIV can be transmitted by Mosquitoes (Y1006.03=1)	40	55.0	7.1	88	39.8	63.6
% wrongly believe that HIV can be transmitted through kissing (Y1006.05=1)	40	45.0	52.4	88	42.1	57.6
% wrongly believe that HIV can be transmitted through embracing (Y1006.06=1)	40	45.0	44.4	88	30.7	42.4
HIV Testing						
% with an HIV Test in past 3 months (Y1005.02=1)	79	0.0	1.3	280	0.4	1.1
% know someone who has gotten an HIV test (Y1005.03=1)	79	0.0	0.0	280	1.8	0.4
% know where to go to get an HIV test (Y1005.04=1)	79	20.3 [†]	29.1 ^{††}	280	10.0	15.8
HIV Prevention						
% know that condoms can prevent HIV (Y1006.7=1)	79	36.7	57.0 ^{††}	280	25.7	31.5
% confirmed clean needle with shot or immunization past 3 months (Y1005.05=1)	51	7.8	25.0 ^{††}	229	5.2	7.8
% gave advice to use condoms to prevent HIV past 6 months (Y1008.2=1)	42	4.8	25.9 ^{††}	201	2.5	5.6
% Very confident that you will be able to take steps to prevent getting HIV (Y1009.1=1)	79	26.6 ^{††}	41.8 ^{††}	280	12.9	17.9
% feel somewhat or very comfortable talking to family about preventing HIV 609						
Sexually Active						
% who have ever been sexually active 904	43	62.8	69.4 ^{††}	101	63.4	46.9
% sexually active in the past 3 months 905	79	100.0	100.0	280	98.9	99.3
% used condoms when having sex in past three months 906	79	93.7	94.8 ^{††}	277	86.6	82.8
% currently preventing pregnancy consistently or once in a while 908	74	9.5	9.6	240	9.6	9.3
Acceptability of Learning Games						
Favorite game (of those who attended all games) (Y1403)	78	71.8	61.0	275	68.7	67.8
How to prevent and treat Diarrhea						
Hand washing	25		28.0			
Knowing your bodies – reproductive health			8.0			
Food and the flag – anemia prevention			20.0			
How to protect against HIV/AIDS			24.0			
Reason for missing games (Y1407)			20.0			
School	79		4.4	233		2.2
Work			29.0			23.2
Did not know about session			30.4			35.6
Did not enjoy games			1.5			0.0
Others			34.8			39.1

Significant difference attended game and did not attend game: † p ≤ 0.05, †† p ≤ 0.01, ††† p ≤ 0.001

TABLE 8a. Population characteristics for unmarried girl participants: Comparing 12 month outcomes between groups

Characteristic	Intent-to-treat		Attended HIV Game		Attended Savings Game		Control	
	Baseline (N=669)	12 Month (N=669)	Baseline (N=139)	12 Month (N=139)	Baseline (N=220)	12 Month (N=220)	Baseline (N=319)	12 Month (N=319)
Religion (D1)								
Hindu	74.3 ^{†††}	72.7 ^{††}			75.9 ^{†††}	59.3		
Muslim	25.7	27.3			24.1	40.8		
Caste or Tribe (D2)								
Scheduled caste	20.0	18.0			22.7	23.8		
General	68.6	68.4			68.6	68.0		
Other	11.2	13.7			8.2	8.2		
Not applicable	0.2	0.0			0.5	0.0		
Mean age in years (y101)	15.1	15.0			14.7 ^{††}	15.5		
% ever attended school (y102/104/106)	97.9	100.0			98.2	97.8		
Mean poverty index score	36.7	34.5			36.4	35.0		
% food insecure	24.9	25.9			20.9	24.5		

Significant difference between each group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 8b. SHG program characteristics for unmarried girl participants: Comparing Baseline and 6 month between groups

Characteristic	Intent-to-treat		Attended HIV Game		Attended Savings Game		Control	
	Baseline (N=669)	12 Month (N=669)	Baseline (N=139)	12 Month (N=139)	Baseline (N=220)	12 Month (N=220)	Baseline (N=319)	12 Month (N=319)
% participated in programs to learn about savings (y110)	4.6	23.6 ^{†††}	8.6	50.4 ^{†††}	3.6	42.7 ^{†††}	4.4	7.5
% participated in programs to learn about health issues (y113)	4.0	27.5 ^{†††}	7.9	61.2 ^{†††}	5.0	47.7 ^{†††}	4.1	9.7
% currently a member of an SHG (y116)	6.4	9.1	13.0 [†]	18.7 [†]	5.5	10.0	7.2	10.3

Significant difference between each group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 9a. Population characteristics for unmarried girl participants: Comparing 12 month outcomes between groups

Characteristic	Attended HIV Game		Did not Attend HIV Game		Attended Savings Game		Did not Attend Savings Game	
	Baseline (N=669)	12 Month (N=669)	Baseline (N=139)	12 Month (N=139)	Baseline (N=220)	12 Month (N=220)	Baseline (N=319)	12 Month (N=319)
Religion (D1)								
Hindu		72.7		74.7		75.9		73.5
Muslim		27.3		25.3		24.1		26.5
Caste or Tribe (D2)								
Scheduled caste		18.0		20.6		22.7		18.7
General		68.4		68.7		68.6		68.6
Other		13.7		10.6		8.2		12.7
Not applicable		0.0		0.2		0.5		0.0
Mean age in years (y101)		15.0		15.2		14.0 ^{††}		15.3
% ever attended school (y102/104/106)		100.0		97.4		98.2		97.8
Mean poverty index score		34.5		37.3		36.4		36.9
% food insecure		25.9		24.6		20.9		26.8

Significant difference between group who attended game and group who did not attend game: † p ≤ 0.05, †† p ≤ 0.01, ††† p ≤ 0.001

TABLE 9b. SHG program characteristics for unmarried girl participants: Comparing Baseline and 6 month between groups

Characteristic	Attended HIV Game		Did not Attend HIV Game		Attended Savings Game		Did not Attend Savings Game	
	Baseline (N=669)	12 Month (N=669)	Baseline (N=139)	12 Month (N=139)	Baseline (N=220)	12 Month (N=220)	Baseline (N=319)	12 Month (N=319)
% participated in programs to learn about savings (y110)	8.6 [†]	50.4 ^{†††}	3.6	16.6	3.6	42.7 ^{†††}	5.1	14.3
% participated in programs to learn about health issues (y113)	7.9 ^{††}	61.2 ^{†††}	3.0	18.7	5.0	47.7 ^{†††}	3.6	17.6
% currently a member of an SHG (y116)	13.0 ^{†††}	18.7 ^{†††}	4.7	6.6	5.5	10.0	6.9	8.7

Significant difference between group who attended game and group who did not attend game: † p ≤ 0.05, †† p ≤ 0.01, ††† p ≤ 0.001

TABLE 10. Impact of Learning Games on Financial Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups

Characteristic	Intent-to-treat				Control			
	N	Baseline	6 Month	12 Month	N	Baseline	6 Month	12 Month
Savings								
% Who knew that they could save money by setting money aside 215.1	669	73.5	87.9	81.9	319	77.1	89.3	81.5
% Who have a plan for saving 213a	669	78.2	90.4	84.3	319	77.4	88.1	84.3
Mean Confidence Score (1-very confident, 4-very unconfident)								
Save some of your income 216	669	2.1	1.8	2.0	319	2.0	1.9	2.0
Mean number of times you put some of your money aside to save for something past 3 months 208	669	2.1	6.9	2.2	319	1.4	5.9	2.5
% Very Motivated to save money over next 3 months 230	--	NA	46.2 [†]	37.5	--	NA	37.6	31.1
% who have savings 209	669	30.8	55.0	37.4	319	33.5	52.7	39.5
% who keep their savings								
At home with someone else 217.1	669	5.1	7.9	6.1	319	7.2	5.3	7.2
At home with me 217.2	669	32.1	46.5	33.8	319	31.0	41.1	32.3
At SMVS SHG 217.4	669	5.7	5.2	5.4	319	6.9	6.3	6.6
At another SHG 217.5	669	0.6	0.5 ^{††}	0.5 ^{†††}	319	0.3	2.2	4.1
% feel somewhat or very comfortable talking to family about income 605	660	90.5	NA	79.0	305	89.8	NA	74.1
Bargaining								
Mean Confidence Score (1-very confident, 4-very unconfident)								
Bargain for what you want 301	669	2.2	1.8	2.1	319	2.1	1.8	2.0
% Who knew that they could save money by bargaining for a lower price 215.2%	669	8.5	6.0	19.1	319	10.7	6.3	19.1
Prioritizing Spending								
Who believe the best person to make decisions about their money is "myself" 228	669	38.4	34.4	32.3	319	38.9	32.3	34.5
Mean Confidence Score (1-very confident, 4-very unconfident)								
Prioritize what you spend 203	669	2.1	1.6	1.7 [†]	319	2.1	1.6	1.8
Manage your income 227	669	1.9	1.6 [†]	1.8	317	2.0	1.7	1.8

Significant difference between group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 11. Impact of Learning Games on Financial Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups

Characteristic	Attended Financial Games				Control									
	N	Baseline	N	6 Month	N	Baseline	N	6 Month	N	12 Month				
Savings														
% Who knew that they could save money by setting money aside 215.1	220	73.6	220	86.4	220	84.1	220	84.1	319	77.1	319	89.3	319	81.5
% Who have a plan for saving 213a	220	75.0	220	93.6 [†]	220	86.4	220	86.4	319	77.4	319	88.1	319	84.3
Mean Confidence Score (1-very confident, 4-very unconfident)														
Save some of your income 216	220	2.2 [†]	220	1.7 ^{†††}	220	1.9	220	1.9	319	2.0	319	1.9	316	2.0
Mean number of times you put some of your money aside to save for something past 3 months 208	220	1.5	219	7.7	217	2.7	217	2.7	319	1.4	317	5.9	318	2.5
% Very Motivated to save money over next 3 months 230	--	NA	220	54.6 ^{†††}	220	34.1	220	34.1	--	NA	319	37.6	318	31.1
% who have savings 209	220	25.9	220	52.7	220	38.6	220	38.6	319	33.5	319	52.7	319	39.5
% who keep their savings														
At home with someone else 217.1	220	6.8	220	7.7	220	5.9	220	5.9	319	7.2	319	5.3	319	7.2
At home with me 217.2	220	31.4	220	45.9	220	35.9	220	35.9	319	31.0	319	41.1	319	32.3
At SMVS SHG 217.4	20	5.0	220	5.5	220	4.6	220	4.6	319	6.9	319	6.3	319	6.6
At another SHG 217.5	220	0.0	220	0.5	220	0.0 ^{††}	220	0.0 ^{††}	319	0.3	319	2.2	319	4.1
% feel somewhat or very comfortable talking to family about income 605	219	89.0	--	NA	214	79.0	214	79.0	305	89.8	--	NA	309	74.1
Bargaining														
Mean Confidence Score (1-very confident, 4-very unconfident)														
Bargain for what you want 301	202	2.3 [†]	202	1.7	202	2.0	202	2.0	319	2.1	319	1.8	318	2.0
% Who knew that they could save money by bargaining for a lower price 215.2%	202	9.4	202	7.9	202	26.2	202	26.2	319	10.7	319	6.3	319	19.1
Prioritizing Spending														
Who believe the best person to make decisions about their money is "myself" 228	162	34.6	162	39.5	162	32.1	162	32.1	319	38.9	319	32.3	319	34.5
Mean Confidence Score (1-very confident, 4-very unconfident)														
Prioritize what you spend 203	162	2.0	162	1.5 [†]	162	1.7 [†]	162	1.7 [†]	319	2.1	317	1.6	319	1.8
Manage your income 227	162	2.0	162	1.5 ^{†††}	162	1.8	162	1.8	317	2.0	319	1.7	316	1.8

Significant difference between group and control: [†] p ≤ 0.05, ^{††} p ≤ 0.01, ^{†††} p ≤ 0.001

TABLE 12. Impact of Learning Games on Financial Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups

Characteristic	Attended Financial Games				Did not Attend Financial Games									
	N	Baseline	N	6 Month	N	6 Month	N	12 Month	N	Baseline	N	6 Month	N	12 Month
Savings														
% Who knew that they could save money by setting money aside 215.1	220	73.6	220	86.4	220	86.4	220	84.1	449	73.5	449	88.6	449	80.9
% Who have a plan for saving 213a	220	75.0	220	93.6 [†]	220	86.4	220	86.4	449	79.7	449	88.9	449	83.3
Mean Confidence Score (1-very confident, 4-very unconfident)														
Save some of your income 216	220	2.2	220	1.7 ^{††}	220	1.9	220	1.9	449	2.1	449	1.9	449	2.0
Mean number of times you put some of your money aside to save for something past 3 months 208	220	1.5	219	7.7	217	2.7	217	2.7	449	2.4	449	6.6	443	2.0
% Very Motivated to save money over next 3 months 230	--	NA	220	54.6 ^{††}	220	34.1	220	34.1	--	NA	449	42.1	449	39.2
% who have savings 209	220	25.9	220	52.7	220	38.6	220	38.6	449	33.2	449	56.1	449	36.8
% who keep their savings														
At home with someone else 217.1	220	6.8	220	7.7	220	5.9	220	5.9	449	4.2	449	8.0	449	6.2
At home with me 217.2	220	31.4	220	45.9	220	35.9	220	35.9	449	32.5	449	46.8	449	32.7
At SMVS SHG 217.4	20	5.0	220	5.5	220	4.6	220	4.6	449	6.0	449	5.1	449	5.8
At another SHG 217.5	220	0.0	220	0.5	220	0.0 ^{††}	220	0.0 ^{††}	449	0.9	449	0.5	449	0.7
% feel somewhat or very comfortable talking to family about income 605	219	89.0	--	NA	214	79.0	214	79.0	441	91.2	--	NA	435	79.1
Bargaining														
Mean Confidence Score (1-very confident, 4-very unconfident)														
Bargain for what you want 301	202	2.3	202	1.7	202	2.0	202	2.0	467	2.2	467	1.8	467	2.1
% Who knew that they could save money by bargaining for a lower price 215.2%	202	9.4	202	7.9	202	26.2 ^{††}	202	26.2 ^{††}	467	8.1	467	5.1	467	16.1
Prioritizing Spending														
Who believe the best person to make decisions about their money is "myself" 228	162	34.6	162	39.5	162	32.1	162	32.1	507	39.6	507	32.7	507	32.4
Mean Confidence Score (1-very confident, 4-very unconfident)														
Prioritize what you spend 203	162	2.0	162	1.5 ^{††}	162	1.7	162	1.7	507	2.1	507	1.6	507	1.7
Manage your income 227	162	2.0	162	1.5 ^{††}	162	1.8	162	1.8	507	1.9	507	1.7	507	1.8

Significant difference attended game and did not attend game: † p ≤ 0.05, †† p ≤ 0.01, ††† p ≤ 0.001

TABLE 13. Impact of Learning Games on Health Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups

Characteristic	Intent-to-treat			Attended Health Games			Control		
	N	Baseline	6 Month	N	Baseline	6 Month	N	Baseline	6 Month
Diarrhea Prevention and Treatment									
% washed hands after last using the latrine (Y403.3=1)	669	86.4	669	317	85.8	317	319	86.8	319
% knew that using soap was a critical part of washing hands (Y416.3=1)	669	87.7	669	317	87.4	317	319	83.4	319
% used soap when last washing hands (Y404.3=1)	669	35.4 [†]	669	317	36.9	317	319	43.3	319
% had Diarrhea in past 6 months (Y406<6 months)	652	15.5	668	320	15.3	324	316	13.9	319
% increased fluids with Diarrhea in past 6 months (Y407.1=1)	101	65.4	126	49	67.4	68	44	72.7	82
% used ORS with Diarrhea in past 6 months (Y408.1=1)	183	35.5	289	86	31.4	137	86	33.7	137
% knew people who experienced Diarrhea in past 3 months (Y410>0)	669	20.8	669	324	23.2	324	319	20.7	319
% would give a child with Diarrhea more to drink (Y415.1)	669	39.5	669	324	33.6 ^{††}	324	319	44.8	319
% recommended increase fluids with Diarrhea in past 3 months (Y412.1=1)	53	11.3	80	27	18.5	44	21	14.3	37
% recommended ORS with Diarrhea in past 3 months (Y412.4=1)	53	43.4	80	27	48.2	44	21	38.1	37
% very confident that they can prevent Diarrhea (Y421.1=1)	669	10.8	669	324	11.1	324	319	11.6	319
% feel somewhat or very comfortable talking to family about treating diarrhea 607	590	76.6	607	294	76.2	294	264	78.8	303
Anemia Prevention and Treatment									
% eat Saag, Leafy green vegetables ≥ 3 times a week (Y501.04>2)	669	78.5 [†]	669	252	79.8	252	319	84.3	319
% eat Drumstick ≥ 3 times a week (Y501.06>2)	669	9.1	669	252	7.9	252	319	10.3	319
% felt tired or run down in past month (Y502>0)	669	31.5	669	252	27.8 [†]	252	319	37.0	319
% believed that Saag can increase energy (Y503.01=1)	669	98.5	669	252	98.0	252	319	97.5	319
% believe that Drumstick can increase energy (Y503.04=1)	669	92.7	669	252	92.9	252	319	90.0	319
% knew how to create a balanced meal (504-506)	669	13.6	669	252	14.8	252	319	12.5	319
% believe that they will be able to eat leafy green vegetables everyday this week (Y507=1)	669	53.5	669	252	12.7	252	319	12.5	319
% feel somewhat or very comfortable talking to family about eating a healthy diet 608	665	86.6	661	251	87.7	247	313	85.6	317
Adolescent Attitudes on Life Trajectory									
Mean ideal age a girls should finish studies (y705)	648	19.3	597	218	19.3	202	303	19.3	290
Mean ideal age a boy should finish studies (y706)	643	22.1	582	217	22.2	199	299	21.9	279
Mean ideal age for marriage (y702)	594	19.4	628	203	19.1	217	267	19.1	305
Mean ideal age for child (y703)	553	21.8	552	193	21.5	188	247	21.6	273
Mean ideal number of children (y704.1)	669	1.4	668	231	1.3	231	319	1.3	318
Mean ideal number of sons (y704.2)	669	0.7	668	231	0.7	231	319	0.6	318
Mean ideal number of daughters (y704.3)	669	0.7	668	231	0.7	231	319	0.7	318
Reproductive Health Awareness									
% know that ovaries store eggs (y901)	--	NA	668	--	NA	231	--	NA	318
									54.7

TABLE 13. Impact of Learning Games on Health Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups

Characteristic	Intent-to-treat			Attended Health Games			Control		
	N	Baseline	6 Month	N	Baseline	6 Month	N	Baseline	6 Month
% know that menstruation comes when an egg has not united with a male sperm (y903)	669	18.2	22.5	231	17.3	26.0	319	16.9	24.2
HIV/STI Transmission Knowledge									
% have heard of STI (Y1001=1)	669	23.2	35.9	139	25.9	49.6 ^{†††}	319	19.1	33.3
% have heard of HIV/AIDS (Y1003=1)	669	33.5 [†]	50.9	139	35.3 [†]	65.5 ^{†††}	319	25.4	46.2
% know that HIV is a virus (Y1004.3=1)	669	19.7	28.0	139	20.1	33.1	319	15.7	26.1
% know that HIV is transmitted through vaginal sex (Y1006.01=1)	669	28.1	36.1	139	29.5	50.4 ^{†††}	319	23.2	33.3
% know that HIV is can be transmitted through used needles (Y1006.02=1)	669	30.2 [†]	44.8	139	31.7	59.0 ^{†††}	319	23.8	39.3
% know that HIV can be transmitted from a mother to her unborn baby (Y1006.04=1)	669	27.7 [†]	39.2	139	28.8	54.0 ^{†††}	319	21.6	35.9
% wrongly believe that HIV can be transmitted by Mosquitoes (Y1006.03=1)	224	36.6	47.5	49	26.5	34.1 [†]	81	33.3	48.3
% wrongly believe that HIV can be transmitted through kissing (Y1006.05=1)	224	36.2	50.7 [†]	49	38.8	45.1 [†]	81	29.6	61.9
% wrongly believe that HIV can be transmitted through embracing (Y1006.06=1)	224	33.5	36.4 [†]	49	34.7	29.7 ^{††}	81	30.9	46.9
HIV Testing									
% with an HIV Test in past 3 months (Y1005.02=1)	653	0.3	0.2	134	0.0	0.0	315	0.0	0.3
% know someone who has gotten an HIV test (Y1005.03=1)	666	0.6	0.8	138	0.0	0.0	318	0.0	0.3
% know where to go to get an HIV test (Y1005.04=1)	665	8.3	14.6	138	7.3	19.7 [†]	318	6.0	12.0
HIV Prevention									
% know that condoms can prevent HIV (Y1006.7=1)	669	22.4 [†]	27.3	139	23.0	35.3 ^{††}	319	16.3	22.3
% confirmed clean needle with shot or immunization past 3 months (Y1005.05=1)	501	6.8	8.1	101	6.9	12.8 ^{††}	260	3.5	5.0
% gave advice to use condoms to prevent HIV past 6 months (Y1008.2=1)	456	1.1	2.6	92	1.1	8.6	241	0.0	2.8
% Very confident that you will be able to take steps to prevent getting HIV (Y1009.1=1)	669	14.7	18.0	139	16.6	29.5 ^{††}	319	12.5	17.7
% feel somewhat or very comfortable talking to family about preventing HIV 609	244	60.7 ^{††}	36.3	52	55.8	39.3	98	41.8	33.9

TABLE 13. Impact of Learning Games on Health Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups (continued)

Characteristic	Intent-to-treat		Attended Health Games		Control	
	N	6 Month	N	6 Month	N	6 Month
Acceptability of Learning Games						
Favorite game (of those who attended all games) (Y1403)			52	34.6		
How to prevent and treat Diarrhea				28.9		
Hand washing				13.5		
Knowing your bodies – reproductive health				11.5		
Food and the flag – anemia prevention				11.5		
How to protect against HIV/AIDS						
Reason for missing games (Y1407)						
School	555	21.6	124	24.2		
Work		7.4		8.9		
Did not know about session		38.6		30.7		
Did not enjoy games		1.4		1.6		
Others		31.0		34.7		

Significant difference between group and control: † p ≤ 0.05, †† p ≤ 0.01, ††† p ≤ 0.001

TABLE 14. Impact of Learning Games on Health Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups

Characteristic	Attended Health Games			Did not Attend Health Games		
	N	Baseline	6 Month	N	6 Month	12 Month
Diarrhea Prevention and Treatment						
% washed hands after last using the latrine (Y403.3=1)	317	85.8	95.3	317	86.9	93.2
% knew that using soap was a critical part of washing hands (Y416.3=1)	317	87.4	84.5	352	88.1	87.2
% used soap when last washing hands (Y404.3=1)	317	36.9	52.1	352	34.1	50.0
% had Diarrhea in past 6 months (Y406≤6 months)	320	15.3	21.0	332	15.7	16.9
% increased fluids with Diarrhea in past 6 months (Y407.1=1)	49	67.4	54.4	52	63.5	56.9
% used ORS with Diarrhea in past 6 months (Y408.1=1)	86	31.4	37.2	97	39.2	27.6
% knew people who experienced Diarrhea in past 3 months (Y410>0)	324	23.2	26.9 ^{††}	345	18.6	17.7
% would give a child with Diarrhea more to drink (Y415.1)	324	33.6 ^{††}	42.9	345	44.9	49.0
% recommended increase fluids with Diarrhea in past 3 months (Y412.1=1)	27	18.5	34.1	26	3.9	19.4
% recommended ORS with Diarrhea in past 3 months (Y412.4=1)	27	48.2	50.0	26	38.5	44.4
% very confident that they can prevent Diarrhea (Y421.1=1)	324	11.1	15.7 [†]	345	10.4	22.6
% feel somewhat or very comfortable talking to family about treating diarrhea 607	294	76.2	81.3	296	77.0	77.6
Anemia Prevention and Treatment						
% eat Saag, Leafy green vegetables ≥3 times a week (Y501.04>2)	252	79.8	75.8	417	77.7	76.7
% eat Drumstick ≥3 times a week (Y501.06>2)	252	7.9	2.8	417	9.8	4.1
% felt tired or run down in past month (Y502>0)	252	27.8	49.6	417	33.8	47.7
% believed that Saag can increase energy (Y503.01=1)	252	98.0	99.2	417	98.8	99.5
% believe that Drumstick can increase energy (Y503.04=1)	252	92.9	95.2	417	92.6	96.4
% knew how to create a balanced meal (504-506)	252	12.7	13.9	417	14.2	15.4
% believe that they will be able to eat leafy green vegetables everyday this week (Y507=1)	252	56.4	42.5	417	51.8	42.9
% feel somewhat or very comfortable talking to family about eating a healthy diet 608	251	87.7	85.4	414	86.0	83.8
Adolescent Attitudes on Life Trajectory						
Mean ideal age a girls should finish studies (y705)	218	19.3	19.8 [†]	430	19.4	20.5
Mean ideal age a boy should finish studies (y706)	217	22.2	22.8 ^{††}	426	22.1	24.0
Mean ideal age for marriage (y702)	203	19.1 ^{††}	18.6 [†]	391	19.5	19.1
Mean ideal age for child (y703)	193	21.5 [†]	20.9	360	22.0	21.5
Mean ideal number of children (y704_1)	231	1.3	1.8	438	1.4	1.8
Mean ideal number of sons (y704_2)	231	0.7	0.9	438	0.7	0.9
Mean ideal number of daughters (y704_3)	231	0.7	0.9	438	0.7	0.9
Reproductive Health Awareness						
% know that ovaries store eggs (y901)	--	NA	56.7	--	NA	56.3
% know that menstruation comes when an egg has not united with a male sperm (y903)	231	17.3	26.0	438	18.7	20.6
HIV/STI Transmission Knowledge						
% have heard of STI (Y1001=1)	139	25.9	49.6 ^{†††}	530	22.5	32.2
% have heard of HIV/AIDS (Y1003=1)	139	35.3	65.5 ^{†††}	530	33.0	47.1
% know that HIV is a virus (Y1004.3=1)	139	20.1	33.1	530	19.6	26.7
% know that HIV is transmitted through vaginal sex (Y1006.01=1)	139	29.5	50.4 ^{†††}	530	27.7	32.3
% know that HIV is can be transmitted through used needles (Y1006.02=1)	139	31.7	59.0 ^{†††}	530	29.8	41.0
% know that HIV can be transmitted from a mother to her unborn baby (Y1006.04=1)	139	28.8	54.0 ^{†††}	530	27.4	35.4

TABLE 14. Impact of Learning Games on Health Literacy for unmarried girl participants: Comparing Baseline and 6 month between and within groups (continued)

Characteristic	Attended Health Games		Did not Attend Health Games	
	N	Baseline	N	6 Month
% wrongly believe that HIV can be transmitted by Mosquitoes (Y1006.03=1)	49	26.5	91	34.1 ^{††}
% wrongly believe that HIV can be transmitted through kissing (Y1006.05=1)	49	38.8	91	45.1
% wrongly believe that HIV can be transmitted through embracing (Y1006.06=1)	49	34.7	91	29.7
HIV Testing				
% with an HIV Test in past 3 months (Y1005.02=1)	134	0.0	137	0.0
% know someone who has gotten an HIV test (Y1005.03=1)	138	0.0	135	0.0
% know where to go to get an HIV test (Y1005.04=1)	138	7.3	137	19.7
HIV Prevention				
% know that condoms can prevent HIV (Y1006.7=1)	139	23.0	139	35.3 [†]
% confirmed clean needle with shot or immunization past 3 months (Y1005.05=1)	101	6.9	109	12.8 [†]
% gave advice to use condoms to prevent HIV past 6 months (Y1008.2=1)	92	1.1	58	8.6 ^{††}
% Very confident that you will be able to take steps to prevent getting HIV (Y1009.1=1)	139	16.6	139	29.5 ^{†††}
% feel somewhat or very comfortable talking to family about preventing HIV 609				
Acceptability of Learning Games				
Reason for missing games (Y1407)	52	55.8	112	39.3
School				
Work				
Did not know about session			124	24.2
Did not enjoy games				8.9
Others				30.7
				1.6
				34.7

Significant difference attended game and did not attend game: [†]p ≤ 0.05, ^{††}p ≤ 0.01, ^{†††}p ≤ 0.001

TABLE 15. Impact of Learning Games on Health Literacy for married women participants: Regression results comparing those who attended HIV games versus control

Characteristic	Odds Ratio	SE	95% CI	p-value
HIV/STI Transmission Knowledge				
Heard of STI (Y1001=1)	2.14	0.761	1.07-4.30	0.032
Heard of HIV/AIDS (Y1003=1)	2.45	0.926	1.17-5.14	0.017
Know that HIV is a virus (Y1004.3=1)	1.94	0.739	0.92-4.10	0.081
Know that HIV is transmitted through vaginal sex (Y1006.01=1)	2.96	1.151	1.38-6.34	0.005
Know that HIV is can be transmitted through used needles (Y1006.02=1)	2.22	0.758	1.14-4.34	0.020
Know that HIV can be transmitted from a mother to her unborn baby (Y1006.04=1)	1.95	0.672	0.99-3.83	0.054
Wrongly believe that HIV can be transmitted by Mosquitoes (Y1006.03=1)	0.92	0.440	0.42-2.05	0.847
Wrongly believe that HIV can be transmitted through kissing (Y1006.05=1)	0.61	0.677	0.27-1.35	0.221
Wrongly believe that HIV can be transmitted through embracing (Y1006.06=1)	1.01	0.326	0.53-1.93	0.970
HIV Testing				
Know where to go to get an HIV test (Y1005.04=1)	1.75	0.593	0.90-3.40	0.097
HIV Prevention				
Know that condoms can prevent HIV (Y1006.7=1)	1.73	0.543	0.94-3.20	0.081
Confirmed clean needle with shot or immunization past 3 months (Y1005.05=1)	3.11	1.687	1.07-9.00	0.036
Gave advice to use condoms to prevent HIV past 6 months (Y1008.2=1)	5.28	3.457	1.46-19.05	0.011
Very confident that you will be able to take steps to prevent getting HIV (Y1009.1=1)	2.59	1.162	1.08-6.24	0.034
Feel somewhat or very comfortable talking to family about preventing HIV.609	2.68	1.191	1.12-6.40	0.027
Each model was adjusted for religion, age, education, and poverty index score				
Odds ratio indicates the odds of the outcome for those who attended HIV games compared to those in the control group				

TABLE 16. Impact of Learning Games on Health Literacy for unmarried girl participants: Regression results comparing those who attended HIV games versus control

Characteristic	Odds Ratio	SE	95% CI	p-value
HIV/STI Transmission Knowledge				
Heard of STI (Y1001=1)	2.88	1.052	1.41-5.90	0.004
Heard of HIV/AIDS (Y1003=1)	3.55	1.476	1.57-8.02	0.002
Know that HIV is a virus (Y1004.3=1)	1.65	0.516	0.89-3.04	0.111
Know that HIV is transmitted through vaginal sex (Y1006.01=1)	3.18	1.157	1.55-6.49	0.002
Know that HIV is can be transmitted through used needles (Y1006.02=1)	3.47	1.389	1.59-7.60	0.002
Know that HIV can be transmitted from a mother to her unborn baby (Y1006.04=1)	3.04	1.149	1.45-6.38	0.003
Wrongly believe that HIV can be transmitted by Mosquitoes (Y1006.03=1)	0.48	0.777	0.23-1.00	0.051
Wrongly believe that HIV can be transmitted through kissing (Y1006.05=1)	0.50	0.646	0.26-0.93	0.028
Wrongly believe that HIV can be transmitted through embracing (Y1006.06=1)	0.48	0.765	0.23-0.97	0.041
HIV Testing				
Know where to go to get an HIV test (Y1005.04=1)	2.57	1.165	1.06-6.25	0.038
HIV Prevention				
Know that condoms can prevent HIV (Y1006.7=1)	2.91	0.991	1.49-5.67	0.002
Confirmed clean needle with shot or immunization past 3 months (Y1005.05=1)	3.01	1.581	1.07-8.43	0.036
Gave advice to use condoms to prevent HIV past 6 months (Y1008.2=1)	14.18	13.438	2.21-90.84	0.005
Very confident that you will be able to take steps to prevent getting HIV (Y1009.1=1)	2.41	0.759	1.30-4.47	0.005
Feel somewhat or very comfortable talking to family about preventing HIV 609	1.56	0.607	0.72-3.34	0.258

Each model was adjusted for religion, age, and poverty index score

Odds ratio indicates the odds of the outcome for those who attended HIV games compared to those in the control group

TABLE 17. Impact of Learning Games on Financial Literacy for married women participants: Regression results comparing those who attended savings games versus control

Characteristic	Odds Ratio	SE	95% CI	p-value
Know that they could save money by setting money aside 215.1	1.52	1.020	0.41-5.67	0.535
Have a plan for saving 213a	1.43	0.684	0.56-3.65	0.454
Mean Confidence Score (1=very confident, 4=very unconfident)	1.09	0.317	0.59-2.03	0.783
Save some of your income 216	-0.42*	0.959	-2.30-1.47	0.665
Mean number of times you put some of your money aside to save for something past 3 months 208	1.20	0.445	0.58-2.48	0.631
Very Motivated to save money over next 3 months 230	0.99	0.384	0.46-2.12	0.973
Have savings 209				
Keep their savings				
at home with me 217.2	0.73	0.261	0.37-1.47	0.384
at SMVS SHG 217.4	1.58	0.623	0.73-3.42	0.247
at another SHG 217.5	0.57	0.275	0.22-1.47	0.240
Feel somewhat or very comfortable talking to family about income 605	1.30	0.668	0.48-3.56	0.608

Each model was adjusted for religion, age, education, and poverty index score

Odds ratio indicates the odds of the outcome for those who attended Savings games compared to those in the control group

*Indicates a linear model, estimate is not an odds ratio

TABLE 18. Impact of Learning Games on Financial Literacy for unmarried girl participants: Regression results comparing those who attended savings games versus control

Characteristic	Odds Ratio	SE	95% CI	p-value
Knew that they could save money by setting money aside 215.1	1.29	0.510	0.59-2.80	0.521
Have a plan for saving 213a	1.34	0.485	0.66-2.72	0.416
Mean Confidence Score (1-very confident, 4-very unconfident)				
Save some of your income 216	1.38	0.212	0.91-2.09	0.128
Mean number of times you put some of your money aside to save for something past 3 months 208	0.25*	0.395	-0.52-1.03	0.521
Very Motivated to save money over next 3 months 230	1.34	0.335	0.82-2.19	0.239
Have savings 209	0.99	0.222	0.65-1.54	0.997
Keep their savings at home with me 217.2	1.25	0.287	0.80-1.96	0.335
at SMV/S SHG 217.4	1.06	0.827	0.23-4.90	0.945
Feel somewhat or very comfortable talking to family about income 605	0.64	0.216	0.33-1.24	0.187

Each model was adjusted for religion, age, and poverty index score
Odds ratio indicates the odds of the outcome for those who attended Savings games compared to those in the control group
*Indicates a linear model, estimate is not an odds ratio

Observation Checklist

Observation Checklist for SHPI's Animators Delivering Technical Learning Conversations (TLC)

Date:		Animator:	
Location:		Observer:	
Module:		Technical Learning Conversation #:	

BEHAVIOURS OBSERVED	YES*/ NO** 1 / 0	Comments and Examples
Session Preparation and Management		
a. Arranged group to sit in a circle, semi-circle or to face each other		
b. Had all visuals (pictures, reminder cards, etc.) or other materials prepared and available to use or distribute when needed		
c. Reviewed what was learned or the results of the commitment in the previous TLC		
d. Introduced the topic that will be covered in the TLC		
e. Allowed enough time in part 3 for participants to engage with/apply the new information		
f. Encouraged participants to make a commitment in part 4 of the TLC		
g. Gave/followed instructions as written in the TLC		
h. Followed all the steps of the TLC		
i. Followed steps of the TLC in the correct order		
j. Used the facilitator guide		
Technical Content		
a. Presented information completely and as written in the TLC		
b. Provided accurate technical information when answering questions and/or acknowledged when s/he doesn't have the answer		
Presentation Skills		
a. Positioned himself/herself so all participants could see him/her and looked at all participants when speaking		
b. Spoke clearly and neither too fast nor too slow		
c. Told stories in an expressive manner using tone and gestures for variety and emphasis		
d. Ensured that participants could see all visuals		
Facilitation Skills		
a. Encouraged more than one person to speak during discussions		
b. Asked open-ended questions as written in the activity		
c. Used respectful language		
d. Affirmed participants' contribution and efforts		
e. Used small groups and pairs to encourage sharing of ideas among participants		
TOTAL ***		

* If observed "most of the time," it's a YES. Put 1 in the Yes/No Column.
 ** If observed "rarely," it's a NO. Put 0 in the Yes/No column.
 *** To have the final score, add up the total of 1.

<i>Appreciation:</i>	<i>Score:</i>	<i>Check</i> (✓)
<i>If total ≥ 15 : Good Performance</i>		
<i>If total < 15 : Needs improvements</i>		