Health and Life Skills Project (HELP) among House Girls in Nairobi

An evaluation of the effect of HELP on house girls' vulnerability towards STI/HIV and unintended pregnancy

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Executive Summary

With funding from the United States Agency for International Development's Presidential Emergency Fund for AIDS Relief (USAID/PEPFAR), FHI 360 (formerly known as Family Health International) and Kenyatta University (KU) carried out an evaluation of the effect of the house girls Health and Life skills project (HELP) on the house girls' vulnerability towards STI/ HIV and unintended pregnancies between July 2010 and August 2010.

In-depth interviews with 18 church members and 27 employers of house girls, and face-to-face survey interviews with 166 house girls aged 16-24 from 7 project church sites in Nairobi, revealed that house girls shared the same demographic factors as other house girls that have been demonstrated to increase vulnerability towards HIV/AIDS and unintended pregnancies. The house girls in the project had poor socioeconomic background and largely isolated with Sunday being the only day they were allowed to leave the employers house and attend church service. However, compared to their peers (from previous studies with house girls), the house girls who participated in the project had more appreciation of their work, were confident, had improved on their communication skills and had increased or initiated saving.

At the end of the project, house girls demonstrated increased knowledge of modes of transmission and prevention of HIV/AIDS, reproductive health indicators and indicated taking precaution to prevent unintended pregnancy at last sex with majority indicating they used condoms. However, knowledge on the woman's menstrual cycle remained low.

On the training, the modules on STIs and self-esteem were indicated as the most beneficial to the participants who attributed the improved communication skills, appreciation of their work and increased confidence to the training. Employers and church members also acknowledged that these were positive outcomes of the training. As a result of the training the house girls indicated that they were now saving more money and more than half indicated that they had since opened bank accounts in their names. Employers' concerns were related to the time the girls spent at the training since they had to get alternative help or do the work themselves. Additionally, the employers worried that as a result of the training the girls may become more marketable and leave their employment.

Overall, house girls, employers and church members would recommend the training to other house girls, adding that the target group should be widened to include house girls above 24 years. Proposals were also made to include topics on housekeeping, nutrition, cooking, baking, baby care, hygiene and reading skills in the training.

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Acronyms

ACCS	Adventist Center for Care and Support
FBO	Faith Based Organizations
FHI 360	Family Health International
HELP	Health and Life skills Project
HIV	Human Immuno-deficiency Virus
IUCD	Inter Uterine Contraceptive Device
KES	Kenyan Shillings
KLC	Kingdom Life Centre
KNH-ERC	Kenyatta National Hospital Ethics and Research Committee
KU	Kenyatta University
NPC	Nairobi Pentecostal Church
PHSC	Protection of Human Subjects Committee
PCEA	Presbyterian Church of East Africa
PEPFAR	Presidential Emergency Plan for AIDS Relief
RA	Research Assistant
RH	Reproductive Health
STI	Sexually Transmitted Infection
SRH	Sexual and Reproductive Health
TA	Technical Assistance
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WEL	Women's Empowerment Link
WHO	World Health Organization

Introduction

In 2005, FHI 360 (then known as Family Health International) and Kenyatta University (KU) conducted a qualitative formative assessment on the vulnerability of house girls to HIV infection and unintended pregnancies. The study was conducted with 18 house girls aged between 18 and 22 years at Presbyterian Church of East Africa (PCEA) Bahati Martyrs Parish. House girls were identified as a population particularly vulnerable to HIV infection and unintended pregnancy because of: 1) their socioeconomic background; 2) isolation and lack of social support; 3) the low status of their work; and, 4) their previous experiences with sexual coercion and violence. The formative research revealed that house girls have some knowledge of modes of transmission and prevention of HIV; however, knowledge and use of contraception including condoms were low.[1]

To validate the formative research findings and further inform intervention design, a baseline survey was conducted in 2007 with 153 house girls 16 to 22 years of age. The survey corroborated formative research findings on house girls' knowledge of HIV, STIs, and unintended pregnancies. However, the survey findings also showed that except for their isolation and hence limited access to health information and services, house girls' level of risk of STIs including HIV and unintended pregnancies was similar to risk reported in other studies for other girls in this same age group[2]. Consequently, an intervention was designed in collaboration with Kenyatta University and PCEA Bahati Martyrs Parish to offer house girls health and life skills training to reduce their vulnerability towards STIs including HIV and unintended pregnancies.

Intervention

The intervention, referred to as house helps Health and Life skills project (HELP), was implemented in September 2009 to June 2010 in collaboration with interested faith-based organizations (FBOs) and involved raising awareness among congregants of the FBO and the surrounding community, as well as offering health and life skills training on STIs including HIV and unintended pregnancy prevention to house girls. It was designed to be accessible and friendly to house girls and the demands of their job. Therefore, training was free for all participating house girls and is conducted on Sunday afternoons since many house girls get time off on Sunday. The training sessions were held at host FBO sites for 2½ hours on Sunday afternoons for a total of 24 Sundays. Additionally, 1-hour interactive radio talk-shows are held on local FM stations, with opportunity for listeners to call in or send text messages during the show. The girls were taken through a seven module curriculum covering 1) Self-esteem and communication skills; 2) Sexual and reproductive Health (SRH); 3) STIs including HIV prevention and protection; 4) Sexual violence, alcohol and drug abuse; 5) Personal savings and financial management; 6) Basic household safety and security; and, 7) Basic first aid.

HELP was first piloted at PCEA Bahati Martyrs Church in Nairobi between December 2007 and August 2008 with funding support from President's Emergency Plan for AIDS Relief (PEPFAR). Of the 50 girls registered, 44 completed training and were certified. House girls who participated in the training reported increased knowledge on how to protect themselves and how to make responsible decisions to avoid STIs including HIV and unintended pregnancies; and increased competence and improved

[1] More details on the results of the assessment are available in Appendix B.
[2] A summary of the baseline survey results is available in Appendix C.

relationships at work. Employers have also reported seeing positive changes in their house girls particularly in their communication skills and responsibility in the household. The 44 house girls who successfully completed the training have since been trained as peer educators and are currently reaching out to their peers with STIs including HIV and unintended pregnancy prevention messages.

In 2008 and 2009, the project received additional funding to generate more lessons and expand the intervention to six other sites in Nairobi namely; PCEA Kariobangi South, PCEA Lang'ata, Kingdom Life Centre (KLC) Ngara, Adventist Center for Care and Support (ACCS), Nairobi Pentecostal Church (NPC) Parklands, and PCEA Nairobi West. In total, the project was undertaken in seven sites including PCEA Bahati[3]. Training of the house girls began in September 2009 and ended in June 2010. As part of the training, pre- and post- training tests were conducted to assess knowledge on each of the seven topics taught.

The seven sites enrolled in the project were divided into technical assistance sites (TA sites) and replication sites. In TA sites, volunteer trainers are identified from the congregation or sites and are invited for a five day training of trainers' course where they are taught facilitation skills and organized into training teams based on their strengths on the 5 modules that the house girls are taught. The teams then go back and prepare their lesson plans and conduct trainings with the house girls. The volunteer trainers receive technical support from the pool of expert trainers attached to the intervention on a regular basis and all training materials save for the training venue are provided by the program. At the replication sites, the trainings are conducted using experienced trainers attached to the project with the assistance of volunteer trainers recruited from the church and the project supports all other activities as in the TA sites save for venue. In comparison, providing technical assistance is cheaper in the long run and it was anticipated it would enable the churches to take over full project implementation while replication is more expensive and would be used in sites with minimal technical capacity.

Rationale

There is little research that has been conducted on the situation of house girls and through this research the experiences and learning from this unique intervention can be documented and used to inform future programming. The intervention was implemented with technical support from KU and FHI 360. It was planned that in the future the churches would be able to take on full implementation of the intervention, hence the introduction of the two approaches.

The intervention was intended to improve house girls' knowledge and utilization of STIs including HIV and unintended pregnancies prevention approaches. It was to enable the house girls to identify risks and take appropriate actions to reduce their vulnerability of STIs including HIV infection and unintended pregnancies. The further scale up of this intervention will depend not only upon its effectiveness to promote usage of STI including HIV and unintended pregnancy prevention methods, but also upon its acceptability among stakeholders. Therefore, the study will incorporate in-depth interviews with church leaders/ members and employers of house girls. The church leaders are essential in obtaining buy-in from their congregants and supporting the intervention through provision of training hall and facilitating church announcements while the employers directly influence the decision of the house girls to attend the interventions held every Sunday and would ideally note

[3] PCEA Bahati is continuing programmatic activity with technical support from the project team

changes in the house girls attitude and behavior particularly as relates to basic household security and first aid.

Goals and Objectives

The overall goal of this evaluation was to describe the effect of the intervention on house girls' knowledge and practices as relates to HIV and unintended pregnancy prevention.

Specifically, the objectives were:

1. To examine house girls' sources of vulnerability to STIs including HIV and unintended pregnancy, their post training knowledge of these subjects, and their sexual and reproductive health behaviors.
2. To describe house girls' capacity to take risk-reduction action on STIs including HIV and unintended pregnancies
3. To descriptively compare the outcomes of the intervention in areas characterized by differences in the socioeconomic status of the population
4. To determine perceptions and attitudes towards the program by the house girls, their employers and church members.

Study Design

This evaluation used a combination of quantitative and qualitative methods. A post- intervention, cross sectional survey was conducted with house girls aged 16 – 24 years who participated in the intervention. In addition, in-depth interviews with employers of house girls who participated and church members at the sites where the trainings took place were also conducted. The evaluation was approved by FHI360's Protection of Human Subjects Committee (PHSC) and the Kenyatta National Hospital Ethics and Research Committee (KNH-ERC).

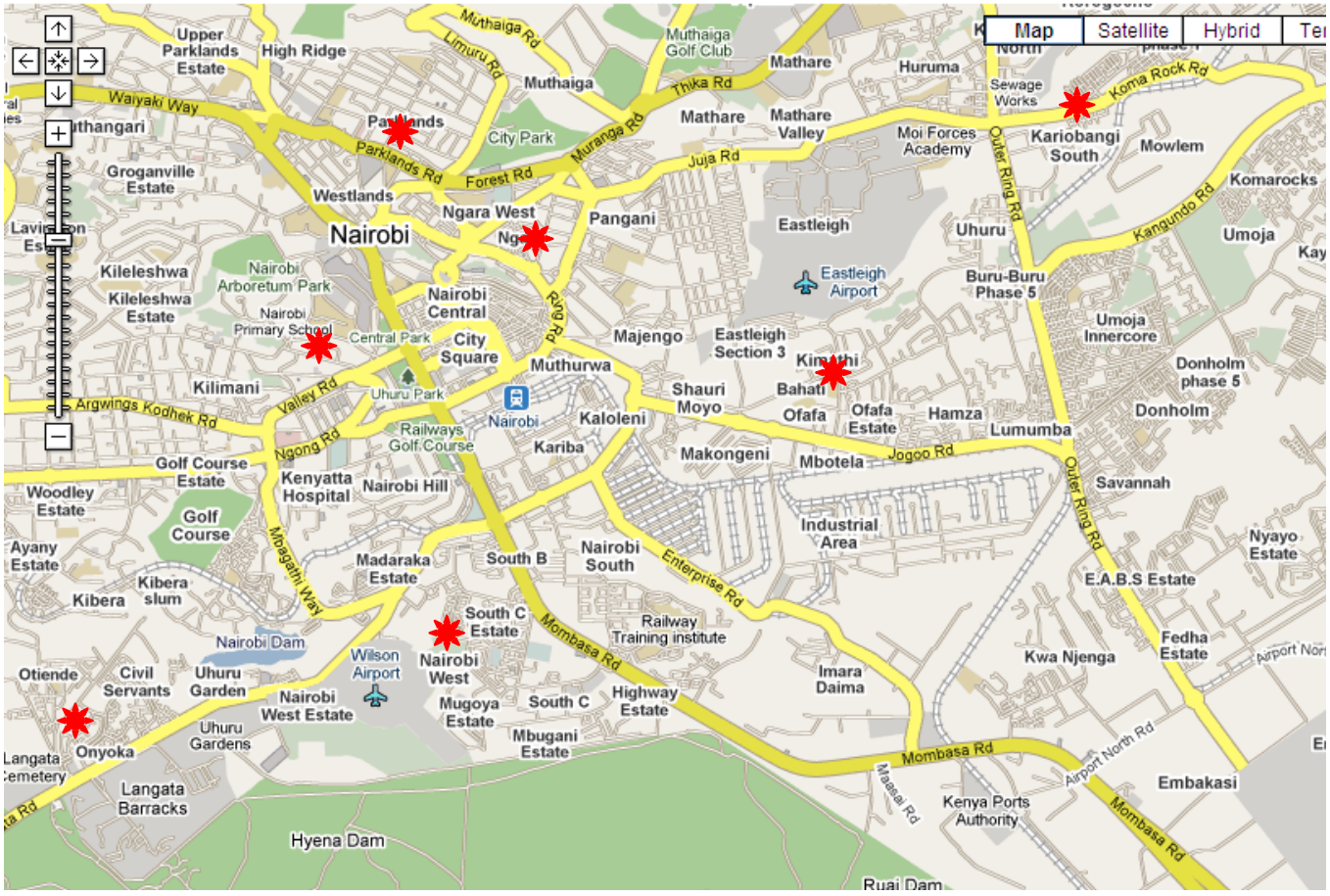
Study setting

The intervention was implemented in five out of eight constituencies in Nairobi (Figure 1). The study was conducted at all seven project sites located in the five constituencies including PCEA Kariobangi South, PCEA Lang'ata, PCEA Nairobi West, Kingdom Life Centre (KLC) Ngara, Adventist Centre for Care and Support (ACCS), NPC Parklands and PCEA Bahati. Together the seven sites reach between 16,000 and 17,000 congregants; PCEA Bahati has the largest congregation and PCEA Lang'ata and KLC Ngara the least as indicated in Table 1.The training sessions took place from November2009 to July2010 and the evaluation followed in August2010.

Table 1: Estimated congregation in the targeted churches

Name of church	Constituency	Estimated congregation[4]	Number of targeted girls
PCEA Lang'ata	Lang'ata	500	50
KLC Ngara	Starehe	500	50
NPC Parklands	Westlands	1,000	50
ACCS	Westlands	4,500	50
Kariobangi South	Embakasi	1,800	50
PCEA Nairobi West	Lang'ata	700 – 800	50
PCEA Bahati	Makadara	7,000 – 8,000	50
Total		**16,000 – 17,100**	**350**

Figure 1: Map of project site location



Study population

The three target groups for this study were house girls, employers of house girls and church members who volunteered to assist with the training sessions. For a house girl to be eligible to participate in the study she needed to meet the following criteria:

[4] Estimates provided by the Reverend/ Pastor in charge of the churches

1. Completed the intervention training at one of the intervention sites
2. Aged 16 – 24[5] years
3. Employed as a house girl in Nairobi;
4. Living with employer;
5. Not planning on leaving employment in the next year;
6. Affiliated to the church either directly through their employer or themselves being church members or indirectly through referrals by other church members not their employer.

All employers whose house girls participated in the intervention and whose house girls consented to them being interviewed were eligible for inclusion in the in-depth interviews. The church members who were volunteer trainers or other church leaders were also eligible for inclusion in the in-depth interviews.

Study methods

House girl identification and screening

The house girls to be included in the survey participated in the house helps' project and consequently attended training sessions as part of the project. The survey was introduced to the girls on the last day of their training where they were given information about the objectives of the survey, its implications and their role in the survey before being invited to participate.

The Research Assistants (RA) subsequently made appointments with those willing to participate to be interviewed at a specific pre-arranged time that was convenient for the house girl. The participants who respected their appointments were reimbursed at a standard flat rate of 200 Kenya shillings (estimate US$2.70[6]) for their travel. Oral Informed consent was administered to all eligible participants who presented themselves at the interview locations and those who consented were interviewed. A structured questionnaire was used to collect information and covered the seven topics from the training sessions. Questions assessed knowledge from the sessions, related behaviors, social support systems, self-efficacy and perceptions of the training sessions.

The intervention with house girls targeted 50 house girls per site bringing the total number of house girls expected to enroll to participate in the project to 350. It was assumed that the project would have a completion rate of 85% and that 80% of the girls approached would accept to participate in the study, thus a total number of 238 girls were expected to participate in the study. However, the project was affected by the Christmas break which occurred midway through the training program. The break resulted in a large dropout of house girls from the project as they took up employment with new employers. Hence the total number of house girls who participated in the study was 166.

Employer identification/ selection

Once the house girls were interviewed they were asked whether it would be okay to interview their employers. The participants who consented to have their employers interviewed were given a consent package composed of a brief on the survey and its objectives, a request to conduct an interview and a

[5] Although the baseline protocol had anticipated reaching house girls 14-22 years of age, the actual survey reached a minimum age of 16. In all intervention sites so far we have not come across house girls below this age. The upper age limit is set at 24 to include those who had expressed interest to join an expanded phase of the study, following media publicity of the pilot phase certificate award ceremony at PCEA Bahati in August 2008.

[6] Exchange rate 1 USD = KES 73.94 (as at 7th April 2010)

form for telephone contacts for those willing to be contacted for interviews to take home to their employers.

The house girls were asked to bring back the duly signed forms which were then used to randomly select the employers to interview. A transport reimbursement of Kenya shillings 200 was given to the house girls who returned the duly signed forms with employer contacts. A total of 27 employers were randomly selected representing three to four per site. A semi-structured questionnaire was used to assess employer perceptions of the training, what they liked and did not like about it and their thoughts on the effect it had on their house girl.

Church members' identification/ selection

Church leaders, church project coordinators, and church volunteer trainers were purposively selected for interviews depending on their availability and willingness to be interviewed. A total of 18 church members were randomly selected, i.e. one or two volunteer trainers and one church leader/coordinator per site.

Interview selection and training

The survey employed 10 research assistants (RAs) for the duration of data collection. The RAs had basic counseling skills and were required to complete the FHI360 research ethics curriculum training which was further reinforced during a five day survey specific training. The RA training also covered survey instrument and informed consent administration, participant identification and general interviewing techniques. RAs were trained to be particularly aware of the nuances of conducting surveys with youth, and to ensure that there is full compliance with concepts of privacy and confidentiality. A half-day of training was devoted to sensitization in such nuances, and conducted by the Women's Empowerment Link (WEL).[7] The same organization also provided on-site counseling support in case survey respondents get so affected by interview questions as to need such support. RAs were sensitized during training to be able to identify such needs as they arise during individual interview sessions. The same RAs also conducted the in-depth interviews and had special training on handling open-ended questions, probing and prompting.

Data management and analysis

Survey data were entered into an Epi-Info database and converted to SPSS version 17.0 for analysis. Descriptive analysis was conducted and presented in tables showing the distribution of responses to each question. No statistical tests were performed. Open-ended questions were categorized and the most frequent responses presented.

In-depth interviews were recorded on paper using pens as well as audio-taped. The discussions were then simultaneously transcribed and translated into English. The employer data was then transferred into SPSS while the church member data was transferred to Excel. The responses were summarized and the most frequent responses identified. Divergent responses are also reported to present a full range of opinions.

[7]WEL is a non-governmental, non-profit making organization whose major role is to promote and uphold women and girls in society through advocating for opportunities that explore the potentials of women and girls.

VI. RESULTS

First we looked at some of the characteristics of the house girl sample including their demographic information, religious and other activities that they undertake and their employment. Next, we examined the sources of reproductive health information that they have access to and their general reproductive health knowledge including knowledge of fertility, pregnancy prevention and STIs/HIV. Third, we explored the reproductive health related behaviors of the house girls including their sexual activity and experiences with sexual violence, contraceptive use and use of RH health services. The next section explored their feelings about their social support system and their self-efficacy. The final section presented results on the training itself through the both the house girls and the employers views on the training.

Socio-demographics

The mean age of the house girls who were interviewed was 21.4 years with a range of 16 to 25 years (Table 1).A little more than half had primary school education or less. Only 18% had completed secondary school or gone on to post-secondary education. Nearly all the house girls had never been married though one-fifth had ever had a child. Most house girls would like to have a child in the future with most wanting to wait until after they are married before having one.

Religious and other activities

To effectively provide information and education to house girls, it's important to know where they spend their time outside of work. Religious venues appear to be a good way to reach large numbers of house girls. The majority of house girls reported that they were Protestant, and most of the rest were Catholic (Table 2).Nearly all of them attend church services with most attending once per week. Youth clubs may be another possible way to reach house girls since nearly one-fourth said that they were members of such a club.

Employment

On average, the house girls in the survey had been with their current employer for 2.8 years (with a range of 1 to 5 years) though had worked as a house girl for an average of 3.4 years (range of 1 to 5) (Table 3).Close to two-thirds of the house girls get one day off per week and many others also get holidays or two or more days off per week. About five percent report that they do not get any days off or only get holidays. The average income per month in their current position is KES 3,221 (US$43.56). Most girls send some money home to their family and on average they send about half of their income. About 90% save money; about half have a bank account in their own name.

Sources of information

Media sources are good ways to reach large segments of the population with information on reproductive health. Most house girls had read a newspaper and listened to the radio at least occasionally; 14.5% and 7.8% respectively reported that they never read a newspaper or listen to the radio (Table 4).The biggest source of reproductive health information for these house girls was the course at the church (64%). But aside from the church, nearly half received this information from the radio and from television. Far fewer report receiving RH information from a newspaper.

Reproductive health knowledge

Reproductive health education was a major component of the HELP training workshop. On the survey, the house girls were asked five basic questions to assess their RH knowledge. Knowledge of some questions was good though gaps were evident (Table 5).Ninety six percent could name at least one modern method of contraception (over 90% could name two and half knew four methods).Most (90%) knew that a girl could get pregnant the first time she has sex. Over three-fourths (82%) knew that a girl could get pregnant if she has sex standing up. Little more than two-thirds correctly stated that pregnancy was still possible even with withdrawal while few (29%) correctly identified the point in a woman's menstrual cycle when she was most likely to become pregnant. For those who named specific modern methods of contraception (pills, IUCD, injectables, male condom, male sterilization and female sterilization) they were asked to describe how to use the method; more than 75% could correctly describe the pill, injectables, male condoms and male sterilization. Fewer could explain how the IUCD works (64%) and very few could explain female sterilization (20%). All of the house girls got at least one response correct but only 13% got all five. Most got three or four correct (data not shown).

Knowledge of STIs including HIV

Some gaps were also evident from the results of their STI knowledge. Some of the main symptoms of STIs include abnormal discharge, itching or burning in the pelvic region, sores or warts on the penis, painful urination and pain during sex. Table 6 shows that while just over half named itching and sores as symptoms fewer could name some of the other symptoms. All the house girls interviewed had heard of HIV and nearly all know it can be acquired through sexual intercourse. They were less likely to state some of the other ways that HIV can be acquired such as through sharing of needles and medical equipment; blood transfusions and from mother to child through birth or through breastfeeding. Most house girls cited abstinence and condom use as the main ways to avoid HIV. These were also the two main ways cited to avoid all STIs (data not shown). Most (89%) know that condoms offer protection from both HIV and pregnancy.

Sexual activity and sexual violence

Sexual activity was fairly widespread among this group though most did not appear to be having multiple partners. Nearly two-thirds of the house girls interviewed had ever had sexual intercourse. A similar percent reported that they had a boyfriend at the time of the interview; of those with a boyfriend, 56% reported they had had sex with him. Of those who have had sex, the average number of lifetime sexual partners is 1.7 with an average of 0.97 partners in the past year.

Among those who had had sex, 8% reported that they had received a reward or gift in exchange for sex. About one-fourth of those who had had sex said that they had been forced to have sex (representing 15% of the total study population) and of these house girls, 15% (4 house-girls) said that an instance of forced sex had happened in their employer's home (not necessarily in their current employer's household).

Contraceptive use

Contraceptive use was high among the sexually active house girls with 79% reporting that they had done something to avoid pregnancy and 74% reporting they had done something the last time they had sex. The most common means used to prevent pregnancy at last sex was male condoms though pills and injectables were also used by about 4% (though 10% have ever used each of these methods). Not all the house girls are relying on modern methods and 10% reported that they avoided pregnancy

at last sex by relying on safe days or periodic abstinence. For those who didn't use a contraceptive method the last time they had sex the main reasons why they did not were because: they don't know what they are; they didn't think about it; their partner does not like methods or they wanted to get pregnant (data not shown).

RH and other services sought

Over half of the study sample had sought out selected RH services in the past 12 months with VCT being the service most commonly used (Table 9). Only a few sought out services for family planning, rape or violence. Almost all of the house girls knew where to go if they want to get tested for HIV with the greatest numbers saying they would either go to a hospital or the VCT new start center. Nearly three-fourths have already been tested for HIV. Only 12 house girls reported that they had had an STI symptom in the last 12 months; of these eight girls went to the hospital and four said they did nothing and it went away without treatment (data not shown).

Social support and self-efficacy

The house girls were asked 14 questions to assess their feelings about their social support network (Table 10).The results show that overall most of the girls in the survey feel that they have a strong social support system. Between 60- 88% either agreed or strongly agreed with statements that reflect being cared about or respected by people in their lives e.g. their employer, employer's spouse, children and relatives; their church and their community. The statements where the fewest house girls agreed or strongly agreed were about their employer's spouse or employer's relatives caring about them, but higher percentages felt that these two groups respected them. For the house girls who had negative responses about their social support system there was no evident pattern of certain girls having virtually no social support; of the 14 questions only 5% had negative responses to at least half the questions (and no one had more than eight negative responses)..

In addition, house girls were asked eight questions to assess their self-efficacy, or their confidence in their ability to control who to have sex with and when, their use of condoms and their ability to seek out health care or other services or information (Table 11).Between 83- 99% expressed that they were either confident or very confident in their ability to self-decide. The scenarios where house girls showed the least confidence were in their ability to choose who to have sex with (16% not confident or not at all confident) and to visit a reproductive health clinic (7%).Similar to the social support findings, there was no pattern of certain girls having low self-efficacy, in fact, 62% of the house girls showed positive self-efficacy on all eight questions and only two house girls had negative responses to more than two questions (for both girls they showed negative self-efficacy on four questions).

HELP Training

The list of training topics the house girls attended is shown in Table 12.Participation was greatest in "self-esteem and communications" and "STIs including HIV prevention." The topic of "Sexual violence, alcohol and drug abuse" was attended by the fewest of those surveyed. Self-esteem and STIs were the two topics that house girls said that they benefitted from the most. Others that over 40% said that they benefitted from include: personal savings and financial management; basic first aid, sexual and reproductive health and basic household security. The majority did not name any topic as the one from which they benefitted the least.

For each individual topic, the majority of house girls reported that they are doing something different as a result of having attending that particular session (Table 13). The most changes were reported as a result of the sessions on self-esteem and personal finance while the fewest reported changes were from basic first aid and sexual and reproductive health. Nonetheless, at least half of the house girls reported making some change as a result of every training topic. The main reported changes for each topic are listed in Table 14.

The house girls' employers who participated in the in-depth interviews primarily learned about the training through a church announcement (52%) or word of mouth (30%). The majority of employers agreed to allow their house girl to attend the training because they thought it would benefit her, providing her with education and skills. Most agreed that they thought the training was beneficial and some specifically said it was *"motivational"*, *"enlightening"*, *"empowering"* or *"informative"*. Some of the ways they saw the benefits was in that *"self- esteem went up"*, *"the house girl was grateful"* and *"the house girl is more confident and enjoys her work. "*Some specific advantages that were noted by more than one employer are better time management skills, increased knowledge about reproductive health issues (e.g. HIV, STIs and pregnancy), she is saving more and her hygiene has improved. Several also commented that their house girl now has an improved attitude about her work.

Of the 18 church members interviewed all played a role in the training program either as a volunteer trainer, coordinator or liaison. All of the church members thought the training was a positive activity and all would recommend it to others. One called the training an *"eye opener"* and another said that *"from the changes in the girls one can note how far they have come."* Yet another commented that it is *"good because very few groups think of house girls."* The main positive effects that the church members noted about the training was improved communication skills including being more empowered to talk, improved self-esteem, a more positive attitude, improved knowledge and financial management skills.

No employers made negative comments about the training and few saw any disadvantages, though a few did comment about the time it took away from the house or that the employer had to do the cleaning herself on Sundays. Most, however, agreed that Sunday is a good day for the training though there are some that would prefer the training in the morning and others who would prefer the afternoon. All but one employer said they would recommend the training to other employers of house girls.

While many church members also reported that there were no disadvantages to the training there were others who said that some employers had indicated that they feared their house girls would leave (escape or runaway from) their households after the training. Also, a few said that there were comments from people that girls would pick up bad habits from each other or become disrespectful to their employers.

Almost all of the church members interviewed had recommendations for the training. Many said that more time is needed to cover the topics. Several commented on increasing the age range and one suggested that there should be different classes based on age; one each for 16-18 year olds, 19-24 year olds and 25-30 year olds. Many also recommended adding extra topics including housekeeping, nutrition, cooking, baking, baby care, hygiene, and reading skills. Even though other topics were requested, most said that they would keep all of the current topics in the training.

V. Discussion

Although the study design was not pre- and post-intervention design, the results suggest that the training may have had a positive effect on the participants. The house girls reported good knowledge and use of RH and contraceptives, strong social support and positive self-esteem. Furthermore, the house girls reported adopting positive behaviors such as initiating or increasing their savings and opening bank accounts in their names.

Sources of vulnerability

This study of house girls in Nairobi in the HELP project supported earlier findings that house girls' had poor educational and economic background, and were isolated which when combined with the low status associated with domestic work increased their vulnerability to STI/HIV and unintended pregnancies. Low social and economic status has also been associated with less ability to negotiate condom use or to get out of abusive relationships (WHO, 2002). The house girls' poor socioeconomic status means that they might be more likely to fear a) losing one's job, b) letting one's family down, c) destitution, and d) abandonment thus reducing their ability to negotiate for safe sex (Zierler & Krieger, 1997). However, it was established that this was not the case with house girls who had gone through the HELP project. These house girls demonstrated higher self-efficacy and confidence in their ability to control who to have sex with and when.

The house girls' live with the employers and hardly had any free time to be with family and friends. This parental absenteeism further predisposes them to HIV and unintended pregnancies. In a study among urban youth who did not live with their parents showed that the youth were more likely to be sexually active and have unintended pregnancies than their peers (Ngom, Magadi, & Owuor, 2003).

The minimum wage of a house girl in Nairobi as recommended by the government of Kenya at the time of the study was 6,743/month (about $91.2/month) (Ministry of Labour, 2010). However, the project established that most times the house girls received less than half the recommended amount (average of $44/ month). Despite the low earnings, the house girls reported sending about half of their wages to support their families (parents and siblings) back in the village which undoubtedly laid financial strain on them. Nevertheless, high proportion of house girls reported saving money with half of them stating that they had functional bank accounts in their names. The issues of finance remains important as studies continue to demonstrate that money and other financial benefits impact sexual activity (Nobelius, Kalina, Pool, Whitworth, Chesters, & Power, 2011). In introducing financial management as one of the course for the house girls in the project, it was hoped that the girls would save or increase their saving, gain financial independence and ultimately increase their ability to negotiate for safe sex.

Ability to take risk reduction measures

Knowledge of reproductive health and STI/HIV was higher among the house girls compared to their peers on most of the indicators including awareness of at least one modern method of contraceptive, dispelling of myths on how pregnancy occurs, awareness of at least one mode of HIV transmission and at least one sign and symptom of STIs. The proportion of those who were aware of the period during a woman's menstrual cycle when she is most likely to get pregnant was no different from that of their peers (KDHS, 2008-09; Buga, Amoko, & Ncayiyana, 1996). Another positive outcome of the project was the higher contraceptive use among sexually active house girls. The study showed that a higher

proportion of house girls reported having had sex in the past (65%) compared to girls their age in the general population (35%) (KDHS, 2008-09). However, unlike the girls their age in the general population (28%), the house girls reported higher incidence of taking precautionary measures to prevent unintended pregnancy (74%)(KDHS, 2008-09). As their peers, condoms and other short acting contraceptives were the most used in pregnancy prevention. The study did not explore the consistency of condom use among the house girls. That withstanding, condom use should be encouraged while incorporating messages on dual method use and continuing education on the menstrual cycle to enhance outcome of the barrier methods and short acting methods used. Additionally, shift from short acting methods to Long Acting methods should be promoted amongst house girls who are sexually active and have sex regularly.

House girls reported the lowest self-efficacy in their ability to access RH services. Thus, there is need to explore ways of providing house girls with contraceptive services in a way they are comfortable accessing. As a first step, the project could consider mapping out RH services in the region with a special focus on facilities with Youth Friendly Services (YFS) and provide these as referral points during training.

Furthermore, about 15% of the house girls who have had sex had experienced an episode of sexual coercion and violence, some of which occurred in the employers' household (not necessarily current employer). Past studies indicate that these girls are likely to experience subsequent incidents of forced sex, as well as (consensual) sexual risk-taking behaviors including multiple sexual partners and non-use of condoms, and consequently increased risk of unintended pregnancy and sexually transmitted infections (STIs) including HIV (Ganju, et al., 2004). Although this study establishes that there are incidences of forced sex occurring in an employer's household (not necessarily current employer), the findings are not sufficient to conclude that the nature of the work puts the women at more risk of sexual exploitation. However, what is clear is that the house girls are at risk of STI/HIV and unintended pregnancies due to their past exposure to forced sex.

Studies have shown that female adolescents with low self-esteem tend to think of intimate relationships as imperative to a positive self-concept (Raiford, Seth, & Diclemente, 2012). Consequently, interventions with adolescents have focused on increasing their self-esteem and strengthening their social support network. In this study, it was established that the house girls in the project demonstrated self confidence in their ability to make decisions affecting their sexual activity and had high self-esteem.

VI. Conclusion

Overall, the study has demonstrated that the training provided an opportunity for the house girls to receive information that otherwise proved elusive to them given the nature of their work. Improved self-esteem and efficacy and the increased financial management realized among the house girls have been directly attributed to their participation in the project by the house girls themselves, their employers and by the church members interviewed. Increased knowledge on STIs (including HIV prevention) and prevention of unintended pregnancies was realized. After the training the house girls said that their communication skills improved, they had better appreciation of their work and they were more confident. These same observations were made by the employers and church members as well. Reservations about the training as expressed by the employers included fear that the house girls would leave once trained and the time spent by the house girls during training. All in all, employers, church members and the house girls would recommend the project to others.

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Appendix A: Tables referenced in report

Table 1:Socio-demographic characteristics of house girls		
	N	Mean, Range or Percent
Age at last birthday (mean, range)	165	21.4 (16-25)
Highest level of school (%)	166	
Primary incomplete		8
Primary complete		50
Secondary incomplete		22
Secondary complete		16
Post-secondary education		1
Vocational/Tertiary		2
Marital Status (%)	166	
Never married		99
Divorced		<1
Ever had a child (%)	165	20
Would like a/another child in the future (%)	164	94
When would like to have a child/ another child (%)	147	
Now		3
After marriage		80
Other		8
2-9 years		5
later/older		1
1 year		<1
pregnant already		<1
Refused/No response		<1

Table 2:Religious and other activities in which house girls participate		
	N	Percent
Religious Denomination	165	
Catholic		19
Protestant		78
Muslim		<1
Other		3
How often church services attended:	165	
Less than once a month		<1
Once a month		6
Once a week		83
More than once a week		6
At least once a month		4
Don’t attend religious services		<1
Member of a youth club	165	23

Table 3: House girls' employment		
	N	**Mean, Range or Percent**
Years of employment with current employer (mean, range)	150	2.8 (1-5)
Years employment as a house girl (mean, range)	152	3.4 (1-5)
Days off (%)	164	
None		4
Only holidays		2
One day per week		63
One day per week and holidays		13
Two days per week		14
Two to four days per week (with or without holidays)		2
Other		2
Income per month (Kenyan shillings) (mean, range)	165	3,221 (1,000-7,000)
Send home money to family (%)	166	95
Amount of money sent home to family last time sent money home (Kenyan shillings) (mean , range)	157	1,550 (300-5,000)
Save money through: (%)	166	
Through groups (Mary go round)		4
Savings account		49
Employer		5
Do not save money		9
Other		2
Relative		4
Mpesa		9
Envelope/bag/piggy bank		10
Home bank		7
Refused/ No response		<1
Have a bank account in own name (%)	165	55

Table 4: Respondents' access to and sources of RH information		
	N	**Percent**
Frequency read newspaper	166	
Every day/ Almost every day		26
At least once a week		41
At least once a month		11
Less than once a month		6
Never		14
Other		2
Frequency listen to radio	166	
Every day/ Almost every day		79
At least once a week		11
Less than once a month		<1
Never		8
Other		1
Sources of information on sexual and reproductive health		
Radio	165	47
Television	166	46
Newspaper	166	17
Magazine	166	4
Other house girls	166	8
Friends who are not house girls	166	14
Course at church	165	64
Someone else at church	164	12
Employer	166	10
Health care provider	166	11
Boyfriend	165	2
Family member	165	6
HELP course/training	165	10
None	162	1

Table 5: House girls' reproductive health knowledge		
	N	**Percent**
Correctly identified the point in a woman's menstrual cycle when she is most likely to become pregnant	164	29
Knows that a girl can get pregnant the first time she has sex	165	90
Knows that a girl can get pregnant if she has sex standing up	165	82
Knows that pregnancy is still possible even with withdrawal	164	36
Knowledge of modern contraceptive methods: Identified *at least one* modern way to avoid getting pregnant* Identified *at least two* modern ways to avoid getting pregnant Identified *at least three* modern ways to avoid getting pregnant Identified *at least four* modern ways to avoid getting pregnant	165	 96 91 76 50
If named above, could explain how a person uses the following methods:		
Pill	122	78
IUD	58	64
Injectables	84	82
Male condom	146	94
Male sterilization	11	82
Female sterilization	16	20

- *Modern methods are OC pills, IUCDs, injectables, diaphragms, male/female condoms, implants, male/female sterilization, and emergency contraception.

Table 6: Knowledge of STIs including HIV		
	N	**Percent**
Spontaneously identified signs and symptoms of an STI:		
Abnormal discharge	166	48
Itching or burning in pelvic region	165	56
Sores or warts on penis	166	60
Painful urination	166	38
Pain during sex	166	16
Don't know/ remember	154	8
Has heard of HIV	163	100
Believes HIV can be acquired through:		
Sexual intercourse	166	99
Sharing needles & medical equipment	166	77
Blood transfusions	166	58
From mother while in womb	166	4
Mother to child at birth	166	24
Mosquito or insect bite	165	1
From breastfeeding	165	23
Casual contact with infected person	165	19
Kissing ("deep kissing" or "kissing w/ open sore")	166	20
Contact with open wound, blood, or other body	166	8
fluid	149	3
Don't know	166	5
Other		
Believes HIV can be avoided by:		
Abstinence	166	86
Staying faithful to one partner who was tested	165	23
Staying faithful to one partner	166	19
Encouraging partner to stay faithful	166	1
Avoiding contaminated blood	166	20
Using condoms	166	90
Avoiding sharing needles	166	24
Avoiding casual partners	166	4
Avoiding sex with sex workers	166	3
Avoiding anal sex	166	<1
Nothing	164	0
Don't know	151	<1
Other	166	11
Knows condoms protects from HIV and pregnancy	166	89

Table 7: Sexual activity and sexual violence		
	N	**Mean, Range or Percent**
Ever had sexual intercourse (%)	166	65
Has a boyfriend (%)	166	64
If has a boyfriend, has had sex with boyfriend (%)	106	56
Number of sexual partners, among girls who have had sex (mean, range)	105	1.7 (1-5)
Number of sexual partners in the last year, among girls who have had sex (mean, range)	103	0.97 (0-4)
Has received reward or gift in exchange for sex, among girls who have had sex (%)	108	8
Has been forced to have sex, among girls who have had sex (%)	107	24
If forced to have sex, did any of these times happen in employer's home (%)	26	15

Table 8: Contraceptive use		
	N	**Percent**
Have done something to avoid pregnancy, among girls who have ever had sex	106	79
Used something to avoid getting pregnant last time had sex	106	74
If used something to avoid pregnancy, method used:		
Pill	77	4
Injectable/Depo-Provera/Noristat	77	4
Diaphragm/foam tablets/jelly/cream	77	1
Male condom	77	72
Female condom	77	5
Safe days/periodic abstinence	77	10
Emergency contraception	77	3
Withdrawal	77	4

Table 9: Knowledge and use of RH and other services		
	N	**Percent**
Services sought out in last 12 months		
VCT	165	57
FP	165	4
Legal Help Rape Crisis Center	165	3
Coalition on Violence Against Women	163	2
Knows where to get tested for HIV	165	99
Knows the following places to get tested for HIV:		
Private doctor	163	10
Hospital	165	75
Health Center	164	18
Private clinic	165	22
VCT Newstart center	165	81
Other	165	15
Has been tested for HIV	164	73
Has had symptoms of an STI in the last 12 months	166	7
Course of action if had STI symptoms:		
Went to hospital	12	67
Nothing, it went away without treatment	12	33

Table 10: House girls' Social Support		
	N	Percent
Have a special person to share joys and sorrows	166	
Strongly disagree		9
Disagree		13
Agree		32
Strongly agree		46
Can talk to friends about problems	166	
Strongly disagree		10
Disagree		19
Agree		50
Strongly agree		20
My employer cares about me	166	
Strongly disagree		7
Disagree		12
Agree		47
Strongly agree		34
Not sure/ not applicable		<1
My employer respects me	166	
Strongly disagree		4
Disagree		7
Agree		38
Strongly agree		50
Not sure/ not applicable		1
My employer's children care about me	166	
Strongly disagree		7
Disagree		11
Agree		40
Strongly agree		31
Not sure/ not applicable		11
My employer's children respect me	166	
Strongly disagree		4
Disagree		10
Agree		40
Strongly agree		37
Not sure/ not applicable		9
My employer's spouse cares about me	166	
Strongly disagree		7
Disagree		10
Agree		38
Strongly agree		25
Not sure/ not applicable		20
My employer's spouse respects me	166	
Strongly disagree		7
Disagree		3
Agree		39

Table 10: House girls' Social Support		
	N	Percent
Strongly agree		36
Not sure/ not applicable		16
My employer's relatives care about me	166	
Strongly disagree		10
Disagree		20
Agree		38
Strongly agree		22
Not sure/ not applicable		10
My employer's relatives respect me	166	
Strongly disagree		3
Disagree		11
Agree		48
Strongly agree		26
Not sure/ not applicable		11
People in my church care about me	166	
Strongly disagree		5
Disagree		8
Agree		43
Strongly agree		33
Not sure/ not applicable		10
People in my church respect me	166	
Strongly disagree		4
Disagree		2
Agree		47
Strongly agree		41
Not sure/ not applicable		7
People in my community care about me	166	
Strongly disagree		8
Disagree		19
Agree		43
Strongly agree		22
Not sure/ not applicable		8
People in my community respect me	166	
Strongly disagree		4
Disagree		12
Agree		52
Strongly agree		24
Not sure/ not applicable		7

Table 11: House girls' self-efficacy in ability to choose sex and to seek out health care and information		
Confidence in…	**N**	**Percent**
…ability to choose who have sex with	166	
Not at all confident		2
Not confident		13
Confident		24
Very confident		60
Not sure		<1
… to avoid sex any time	166	
Not at all confident		0.0
Not confident		5
Confident		27
Very confident		66
Not sure		2
… to refuse to have sex if boyfriend will not use a condom	166	
Not at all confident		<1
Not confident		4
Confident		26
Very confident		66
Not sure		3
…to discuss contraceptives with a health care provider	166	
Not confident		2
Confident		37
Very confident		59
Not sure		2
… to discuss STIs/HIV/AIDS with a health care provider	166	
Not confident		<1
Confident		34
Very confident		64
Not sure		<1
… to visit a reproductive health care clinic	166	
Not at all confident		<1
Not confident		6
Confident		32
Very confident		60
Not sure		<1
… to visit a counselor if you were raped	166	
Not at all confident		1
Not confident		2
Confident		30
Very confident		66
Not sure		<1
… to attend a sex education class	166	
Not at all confident		2
Not confident		2

Table 11: House girls' self-efficacy in ability to choose sex and to seek out health care and information		
Confidence in…	**N**	**Percent**
Confident		30
Very confident		67

Table 12: HELP Training		
	N	**Percent**
Topics Covered During HELP Training:		
Self- esteem and communications	166	90
Sexual and reproductive health	165	62
STIs including HIV prevention	165	81
Sexual violence, alcohol and drug abuse	166	49
Personal savings and financial management	166	69
Basic household security	166	70
Basic first aid	165	76
None	155	<1
Topics personally benefited from:		
Self -esteem and communications	166	73
Sexual and reproductive health	166	45
STIs including HIV prevention	166	68
Sexual violence, alcohol and drug abuse	165	30
Personal savings and financial management	166	55
Basic household security	165	42
Basic first aid	166	47
None	157	2
Don't know	154	1
Other	166	2
Least beneficial of the topics:		
None	166	76

Table 13: Percent reporting changes in behaviors as a result of various training topics		
	N	**Percent**
Are you doing anything different as a result of having attending the training in…?		
Self-esteem and communications	165	81
STIs including HIV prevention	166	64
Sexual violence, alcohol and drug abuse	165	64
Sexual and reproductive health	165	51
Personal savings and financial management	164	76
Basic household security	153	68
Basic first aid	161	49

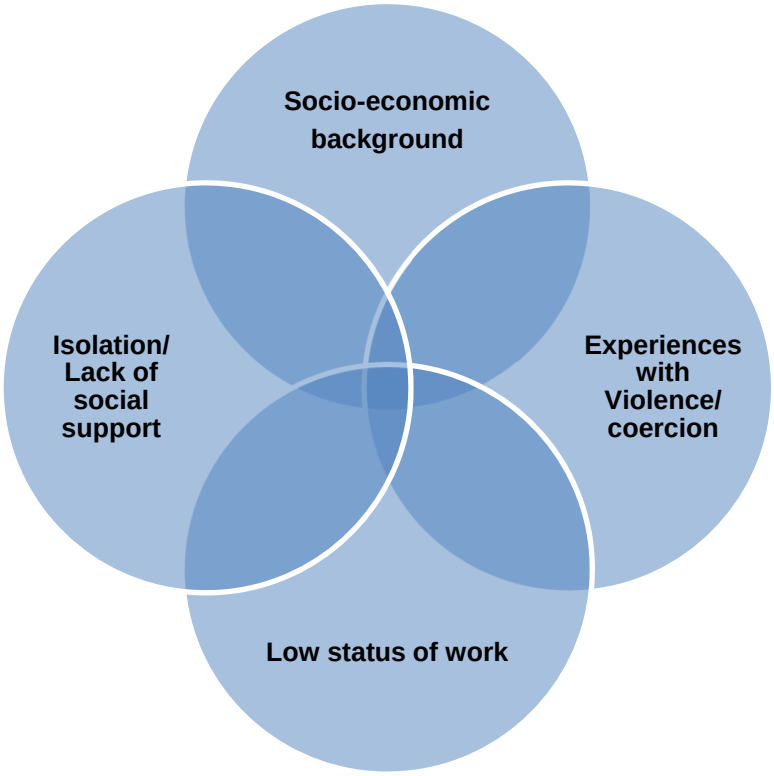
Table 14: Main reported behavior changes as a result of various training topics
Self-esteem and communications
Has increased respect for self, employer and/or others
Communicates better (can say no, is more open, more polite)
Appreciates her work more/ is proud of being a house girl
More confident
Values herself more/ increased self-esteem
STIs including HIV prevention
Plans to abstain/ abstain until marriage
Uses condoms/ protects herself from infection
Is being faithful
Tells her friends about STIs and HIV
Sexual violence, alcohol and drug abuse
Avoids dangerous/isolated places that can lead to rape
Avoids bad influences/ bad company/ peer pressure
Avoids drugs and alcohol
Sexual and reproductive health
Abstains
Uses condoms
Protects against unwanted pregnancy/ using family planning
Shares information with friends
Personal savings and financial management
Saves more money
Made a budget
Does not spend as much
Opened savings account/ saving through home bank
Basic household security
Keeps household doors and windows closed/ locked
Doesn't open the door/ gate to strangers
Doesn't leave house keys anywhere/ with anyone
Basic first aid
Does basic first aid (handles cuts, bleeding, fever…)
Is more careful in house
Knows what to do if someone chokes
Knows how to handle an emergency/ more confident

Appendix B: Results of the Formative Assessment

The qualitative formative assessment was carried out in the absence of any detailed or reliable information about the potential sources of vulnerability of house girls to STIs/HIV and unintended pregnancies and about the feasibility of reaching them with interventions, or even assessments. The results indicated that house girls are highly vulnerable, and that they are willing and able to participate in interventions through the church. Below is a summary of those findings.

The results of the formative assessment with 18 house girls aged 18-22 showed that house girls are a particularly vulnerable group to STIs/HIV and unintended pregnancies, because of the combination of their poor socioeconomic background, their isolation and lack of social support, the low status of their work, and their experiences with sexual coercion and other forms of violence (Figure 1).

Figure 1: Sources of Vulnerability for House Girls in Bahati, Nairobi



The 18 house girls with whom we conducted in-depth interviews were primarily from large, poor, rural families who migrated to Nairobi to support themselves and their families. Almost all stopped their schooling after primary school for financial reasons. There is strong evidence to suggest a direct link between women's low economic status and their vulnerability and exposure to HIV (WHO, 2002; Ziegler & Krieger, 1997). In particular, house girls' poor socioeconomic situations increases their vulnerability to HIV and unintended pregnancy because they may be more likely to fear a) losing their job, b) letting their family down, c) destitution, and/or d) abandonment, which means that they may be more likely to put up with abusive situations at work.

The assessment also revealed that domestic work is considered a low status job in Kenya by both house girls and society. This means that despite the enormous amount of work that house girls perform for the families where they work – 18-hour days being the norm – they are not paid a commensurate salary, or even minimum wage8, and they are treated as inferior members of society. The low status of domestic work may lead to a low (or lower) self-esteem because of being systematically treated by society and their immediate contacts as inferior. These factors may increase house girls' vulnerability to STIs/HIV because low social and economic status has also been associated with less ability to negotiate condom use or to get out of abusive relationships (WHO, 2002).

House girls are isolated from their families and the rest of society at their places of work, and are allowed little time off from work, which means that they have less access to social support than other young Kenyan women. Twelve of the house girls worked more than 100 kilometers from their home of origin. Several reported that when they came to Nairobi they did not know their way around and did not have anyone to help them. They also reported that that when they have problems in the households where they work they often have no one to turn to. Developing and accessing these sources of social support is an important protective factor for risky behavior that is not available to house girls (Springer et al, 2006; Ngom, 2003). Some house girls can ask for time off, under special circumstances, but others only get time off for church on Sundays (and then they are often accompanied by the children of the family).

House girls' isolation and poor socio-economic background are also likely the causes of the lack of information and low use of services that we saw among the house girls we interviewed. For example, although most had had sex, many did not know what an STI was (except for HIV), and among those who did, many could not name their symptoms. None had visited a voluntary counseling and testing center.

At the same time, the house girls we interviewed were not currently sexually active – only four of them said they had had sex in the last six months. Most were either not interested or simply have no time. But this does not mean that they are less vulnerable to future risky sex. On the contrary, it may be that their isolation means that they are not gaining the negotiation skills that their peers are more likely to be getting so that when they do initiate sex they will be more at risk. This seems to be substantiated by those who are sexually active, several of whom are in risky sexual relationships, either because their partner has multiple partners, or because they are not using condoms.

House girls are also vulnerable due to their previous experiences with violence and sexual abuse, both outside and inside the workplace. In this assessment, eight of the house girls said they had experienced unwanted advances by either a male member or a male friend of the employer's family, which could take the form of verbal harassment, inappropriate touching, or attempted rape. In addition, most of the house girls had previous experiences of violence and sexual coercion. Multi-country research has found that experience of sexual coercion as an adolescent is associated with a greater likelihood of experiencing multiple episodes of sexual coercion, risky sexual behaviors, adverse mental outcomes (such as low self-esteem, depression, anxiety), and a greater incidence of STIs, HIV, and unintended pregnancy (Ganju et al, 2004). Thus, this group of women is prone to behaviors and abusive situations that would place them at a higher risk of HIV and unintended pregnancies.

[8]The average monthly salary of the house girls we interviewed was KES 1,650/month (23 US$). The official level of minimum wage in Kenya is KES 2.500/month (34 US$).

A final source of vulnerability for house girls is their age. In this assessment, we were unable to interview house girls under 18 because of lack of access to parental consent and because we were unwilling to ask employers for permission for fear of coercion. There are no reliable statistics on the age of house girls in Kenya, but one publication estimated that over 90% were under 18 (RoK/Kenya, 1997). Domestic workers are amongst the most excluded and invisible children in the globally, and thus some of the most vulnerable. The most recent State of the World's Children defines exclusion and invisibility in the following manner:

> *"Children are considered as excluded relative to other children if they are deemed at risk of missing out on an environment that protects them from violence, abuse and exploitation, or if they are unable to access essential services and goods in a way that threatens their ability to participate fully in society in the future. Children may be excluded by their family, the community, government, civil society, the media, the private sector and other children." (UNICEF, 2006, p. 7)*

According to this definition, and taking into account the results above, adolescent house girls would certainly be considered a particularly vulnerable group.

Feasibility

In order to determine the feasibility of an intervention with house girls to reduce their vulnerability to STIs/HIV and unintended pregnancy we looked at five aspects: 1) house girls' interest and availability, 2) employers' interest and house girls availability from the employers' perspective, 3) the types of information house girls would like to receive, 4) the types of information that employers want their house girls to receive, and 5) house girls' literacy levels and access to media. To summarize, all house girls were interested in participating in some kind of an intervention, but said they would need to get permission from their employers. Employers also said they would have no problem with house girls participating in an intervention to reduce their risk of HIV and unintended pregnancy, but they would need more information to make sure that it was legitimate. However, they did not think that other employers would agree, either because they do not see house girls as human beings or because they would be afraid that the house girl would leave their employ. House girls said they were available on Sundays, but employers generally preferred their house girls to take time off during weekdays when their children were in school. In terms of training topics, house girls tended to mention improving their health knowledge and joining together with other house girls for support and advocacy. Employers also mentioned support and information for house girls, but also focused on concrete job skills such as tailoring and baking. Almost all house girls said that they listen to a radio during the day. Some had access to television or print media.

APPENDIX C: House Girls phase 2 Baseline Survey, Summary of findings

INTRODUCTION

The President's Emergency Fund for AIDS Relief allocated funds in 2007 for a multilayered church-based intervention with house girls and other members of the community in and around the Bahati Estate in Nairobi with the overall goal of reaching house girls with HIV and unintended pregnancy prevention messages. The award was based on results from a qualitative, formative assessment carried out with 18 house girls aged 18-22 by FHI 360 and Kenyatta University (KU) at the Presbyterian Church of East Africa (P.C.E.A.) Bahati Martyrs Parish that identified house girls as a population particularly vulnerable to HIV and unintended pregnancy. Specifically, the formative assessment revealed that house girls are at significant risk of acquiring HIV and unintended pregnancies because of 1) their socioeconomic background; 2) isolation and lack of social support; 3) the low status of their work; and 4) their previous experiences with sexual coercion and violence. Finally, the formative research revealed that house girls have some knowledge of modes of transmission and prevention of HIV, but knowledge and use of contraception and condoms are low9.

The formative assessment provided a contextual basis for the development of a program to reduce house girls' vulnerabilities, but the sample was small and it was limited to house girls aged 18-22. Given the likelihood of younger house girls being more vulnerable to all of the factors mentioned above, it was important to collect information from a sample that also included younger women. Thus, using the results of the formative assessment as a basis, a survey was planned targeting approximately 100 house girls aged 14-22 in the PCEA Bahati Martyrs Parish.

GOALS AND OBJECTIVES

This survey's goal was to validate the findings in the formative assessment (Thomsen et al, 2007). By expanding the sample to at least 100 using a primarily quantitative instrument, we would be able to determine if the sources of vulnerability to HIV are shared in the larger house girl population in the church. The survey was intended to provide a more representative sample of house girls from the church in order to inform the program activities by interviewing all eligible house girls' ages 14-22 consenting to interviews. However, the youngest house girl who participated in the survey was 16, and thus we were unable to collect data from younger house girls who may be the most vulnerable group.

The survey had the following primary and secondary objectives:

Primary objective:

1) To assess house girls' knowledge of HIV, sexually transmitted infections (STIs), and reproductive health.

Secondary objectives:

2) To examine house girls' sources of vulnerability to STI/ HIV and pregnancy.
3) To document house girls' sexual behavior
4) To determine house girls' capacity to take risk-reduction action

[9] More details on the results of the assessment are available in Appendix A.

METHODS

The site for the survey was the PCEA Bahati Martyrs Parish in the Bahati estate of Nairobi which has between 7-8,000 congregants, making it one of the largest congregations in Nairobi. This is the same site as that of the formative assessment. A cross-sectional survey of all eligible and consenting house girls aged 14-22 in the congregation was conducted.

The survey was administered to house girls whose employers attend the PCEA Bahati Martyrs Parish. In some cases the house girls also attended the church, but this was not a requirement for participating in the survey as long as the employer was a congregant. In addition, the participants needed to meet the following criteria:

1. Living with employer;
2. Not planning on moving in the next year;
3. Aged 14-22[10]

The projected sample size was 100 house girls, with a provision to continue to include interested eligible participants since sufficient resources were available. The final number interviewed was 153. House girls who participated in the survey ranged in age from 16-22. Because of the lack of younger girls (aged 14-15), results were not stratified by age.

RESULTS AND DISCUSSION

Socio-demographic information

General socio-demographic information for the 153 house girls shows they ranged in age from 16 to 22, with an average age of about 20 years. Only ten percent were under the age of 18. The youngest house girl who participated in the survey was 16, and thus we were unable to collect data from younger house girls who may be the most vulnerable group.

More than half of the house girls had only received primary school education. About one-quarter of house girls reported being a member of a youth club or organization.

Data about house girls' employment showed the average length of time a study participant had worked as a house girl is 2 years and the average length of time with the current employer was 1 year. Given the average age of the survey population as 20, this means that, on average, these house girls started working at the age of 18.

Eighty-seven percent of all house girls have part or all of Sunday off from their duties as a house girl. This indicates that Sundays might be the best choice of time for an intervention or program designed to assist house girls.

House girls' knowledge of HIV, STIs, and reproductive health

Most house girls knew that a girl can get pregnant the first time she has sex. However, just under half knew that a girl can get pregnant if she has sex while standing up. Around one-tenth of the house girls

10 It was important to include house girls under 18 because they are likely more vulnerable than their older counterparts. The upper age limit is set at 22 to include those who participated in the formative research study if they desire.

knew that a girl can get pregnant if the boy withdraws before ejaculation. Less than 15% knew that a woman has the greatest chance of becoming pregnant in the middle of her menstrual cycle. This lack of knowledge about when a girl can get pregnant could make house girls vulnerable to unintended pregnancies.

Knowledge of signs and symptoms of STIs was relatively low; the most commonly mentioned sign was burning pain or itching in the genital area, mentioned by under 40 percent of house girls. Knowledge of ways to avoid STIs was better, with more than half of the house girls knowing that abstinence and/or condoms could prevent STIs. However, almost half of house girls did not spontaneously mention condoms as a way to avoid getting STIs. House girls' lack of knowledge about STIs could put them at risk of being infected; in addition, their low knowledge of signs and symptoms of STIs could indicate that some house girls are infected without realizing it.

More than half of the house girls surveyed knew that abstinence and/or condoms could prevent AIDS. Avoiding needles and being faithful to one partner were other commonly mentioned prevention methods. Over three-quarters of the house girls knew that condoms could prevent pregnancy and STIs including HIV. The generally stronger knowledge about HIV among house girls is potentially an indication of the effectiveness of HIV information programs. However, whatever information house girls are getting about HIV may be neglecting to inform them about the risks of STIs.

Ninety-two percent of house girls named two or more advantages of using condoms. Eighty-five percent said that pregnancy prevention and HIV prevention were two advantages of using condoms.

Disadvantages of condom use were generally mentioned by fewer house girls. Around one-quarter of them said that condoms could burst. Fifteen percent said that condoms were unsafe or not 100 % effective. Twelve percent said that there were no disadvantages of using condoms and 45% said they didn't know the disadvantages of using condoms.

House girls' sources of vulnerability to STI/ HIV and pregnancy

The formative assessment revealed that house girls lack strong social support in the communities where they work. This lack of support leaves them without someone to talk to or seek advice from, and thus leaves them vulnerable to STIs including HIV and unintended pregnancy.

Table 1 shows the Sense of Belonging scale and score. Respondents were read a series of statements about their social support and community appreciation and asked to strongly disagree, disagree, agree, or strongly agree. There was no option for don't know, unsure, or no answer. Answers were scored from 1 for strongly disagree to 4 for strongly agree. The total score possible was 40 and one house girl scored 40. The lowest possible score was 10; the lowest score recorded was 15. The average total score was 30.5 out of 40.

Table 1: Sense of Belonging

Social Support	% (n=153)			
	Strongly disagree (1 pt)	**Disagree (2 pts)**	**Agree (3 pts)**	**Strongly agree (4 pts)**
There is a special person with whom you can share joys and sorrows	12	10	27	51
You can talk about your problems with your friends	17	14	39	30
Your employer cares about you	20	13	40	27
Your employer respects you	16	16	33	36
Your employer's other family members care about you	25	19	29	28
Your employer's other family members respect you	14	16	34	36
People in your church care about you	6	5	25	64
People in your church respect you	2	1	27	70
Other community members care about you	9	18	41	33
Other community members respect you	5	8	39	49
Overall Sense of Belonging score (max possible =40)				
Lowest	**15**			
Highest	**40**			
Mean	**30.5**			

Three-fourths of the house girls agreed or strongly agreed that there is a special person with whom they can share joys and sorrows. Approximately 90 percent of house girls either agreed or strongly agreed that people in their church care about them and that people in their church respect them. House girls may consider church to be a safe haven, where they are well-treated. This is a further indication that churches may be a good site for any outreach programs for house girls.

For no statements did more than half of the house girls disagree or strongly disagree. The strongest area of disagreement was with the statement "Your employer's other family members care about you," with approximately 44% disagreeing or strongly disagreeing. "Other family members" is unclear and could include the spouse of the employer, the employer's children, or other members of the extended family. House girls' employers are generally the women in the family, so "other family members" could include husbands.

Data on the house girls' relationship and sexual history show that just over half of all house girls reported that they had a boyfriend at the time of the survey. Of those, under half said that they had had sex with their current boyfriend. Just over half of all house girls reported ever having sex, including consensual, non-consensual, and transactional sex. Of those, about 40 percent had only had one

partner in their lifetime, 36% had had two partners, and 22% said they had had two or more partners. In the past year, most house girls with consensual sexual experience (65%) had one partner and about one-fourth said they had no partners in the past year.

Data about house girls' experience with non-consensual and transactional sex shows that of 80 house girls who reported ever having sex, 12 percent (ten house girls) said they had ever received money, gifts, or rewards for sex. Eight percent (six house girls) said they had ever been physically forced to have sex; four of these house girls stated that they were physically forced to have sex in an employer's house. However, there is no information on who forced them to have sex within their employer's house. Ninety-six percent of the 80 house girls said that they had ever had consensual sex, or sex that they desired. The remaining three house girls reported only ever having unwanted or non-consensual sex.

Contraceptive use by house girls who had sex in the past 12 months is shown in Table 2.

Table 2: Contraceptive Use by House Girls Who Had Sex in the Last 12 Months

Contraceptive Use	**%**
Used any contraceptive methods in the last 12 months	(n=59)
Yes	83
No	17
Methods used*	(n=49)
Condom	78
Safe days/periodic abstinence	16
Pill	10
Norplant/Implants	4
Emergency contraception	4
Injectable/Depo-Provera/Noristerat	2
*Multiple responses are possible.	

Among those who had sex in the past 12 months, more than 80 percent used a contraceptive method. The most commonly used method was a condom. Safe days or periodic abstinence was the second most commonly used method. Only 16 percent of these house girls had used a modern, hormonal method of contraception, including the pill and implants.

Seven house girls reported using two methods in the last 12 months, although it is impossible to know if these methods were used for the same sex acts. Two house girls said they used both pills and condoms; two said they used both emergency contraception and condoms; two said they used safe days/periodic abstinence and condoms; and one reported using both implants and condoms (data not shown).

For the ten sexually active house girls who did not use a method in the last 12 months, the most common reason given was that they did not know what contraception was, mentioned by three house girls. Two said that their partner did not like contraceptives. One twenty-one-year-old house girl said she wanted to get pregnant and one girl said that she did not use a method because the sex was forced. Table 3 shows other information on the reproductive health history of house girls.

Table 3: Reproductive Health History

Reproductive Health History	%
Partner has ever used male condom with her	(n=77)*
Yes	75
No	23
Don't know/Don't remember	1
Any STI symptoms in last 12 months	(n=77)*
Yes	6
No	92
No answer	1
Ever been pregnant	(n=77)*
Yes	27
No	73
Ever tested for HIV	(n=153)†
Yes	49
No	51
Ever tested for HIV (only those who ever had sex)	(n=80)‡
Yes	64
No	36

*Among house girls who reported ever having consensual sex
†Among all house girls
‡ Among house girls who reported ever having sex

Among the 77 house girls who have ever had consensual sex, three-quarters said that a partner had used a male condom with her. Only five reported having symptoms of an STI in the past year; all of these house girls said they sought treatment for those symptoms.

About one-quarter of house girls who had ever had consensual sex reported ever being pregnant. These girls were not asked about the outcomes of their pregnancies.

Data on HIV testing is shown for all house girls; just under half reported being tested for HIV. For the 80 house girls who ever reported having sex, including the three house girls who had only ever had non-consensual sex, 64% said they had been tested for HIV. About one-third of the house girls who reported never having sex said they had been tested for HIV (data not shown). House girls were not asked to share the results of their HIV test.

House girls' capacity to take risk-reduction action

House girls' capacity to reduce their risk of acquiring HIV/AIDS or unwanted pregnancy is related to the personal and social resources to which they have access. This includes their access to media and information about HIV/AIDS. It also includes their confidence in their own ability to make certain choices or take specific actions.

Table 4 shows information about house girls' access to media.

Table 4: Access to Information

Access to Information	%
Frequency of reading a newspaper or magazine	(n=153)
Every day or almost every day	10
At least once a week	41
Once a month or less often	23
Never	25
No answer	1
Newspapers or magazines read*	(n=113)
Daily Nation Newspaper	57
Parents Magazine	46
Sunday Nation Newspaper	12
East African Standard Newspaper	11
Taifa Leo Newspaper	11
Frequency of listening to the radio	(n=153)
Every day or almost every day	84
Once a week or less often	10
Never	6
Radio stations listened to*	(n=144)
Kameme FM	62
Kiss FM	41
Inooro FM	28
Easy FM	19
Metro FM	18
Citizen FM	18
Cooro FM	16
Frequency of watching TV	(n=153)
Every day or almost every day	63
At least once a week	22
Never	14
*Multiple responses are possible; only selected items shown.	

The most commonly read magazines were the Daily Nation Newspaper and Parents Magazine. About half of house girls said they read a newspaper or magazine at least once a week. The radio stations most commonly listened to by house girls at the time of survey were Kameme FM and Kiss FM.

Overall, 90 percent of the house girls said they read a newspaper or magazine, listened to the radio, and/or watched TV every day or almost every day. Nine percent said they accessed at least one of these forms of media weekly; one house girl said she accessed at least one of these forms of media monthly. Two house girls reported no regular access to any of these media. These data show that house girls have regular access to different forms of media, where they could hear HIV/AIDS or other important messages.

House girls' sources of information about HIV/AIDS are shown in Table 5; the data are presented in several categories. Media sources were mentioned the most frequently, with radio and television

mentioned the most often overall. This corresponds with house girls' regular access to media, particularly radio and television.

Table 5: Information about HIV/AIDS

Information about HIV/AIDS	**% (n=153)**
Sources of information on HIV/AIDS in past 12 months*	
Media	
Radio	73
Television	50
Newspaper	20
People	
Someone at church	41
Friends (not house girls)	21
Health care provider	20
Other house girls	17
Relative	14
Employer	11
Other	
Course at Bahati Martyrs PCEA Church	11
School	10
None	1
*Multiple responses are possible; only selected items shown.	

Among people mentioned, someone at church was mentioned by about 40 percent of house girls. Friends (not house girls), health care providers, and other house girls were all mentioned by around one-fifth of house girls as sources of information.

Only two house girls said they had no source of information about HIV/AIDS; both of these house girls said they listened to the radio and watched television every day or almost every day.

House girls' access to health and social services is displayed in Table 6.

Table 6: Access to services

Access to services	**%**
Services sought in past 12 months*	(n=153)
VCT	30
Family planning	7
Legal help	2
Rape crisis center	1
Coalition on Violence against Women (COVAW)	3
None	66

Source of advice on services sought in past 12 months*	(n=53)
A relative	25
Friends (not house girls)	23
Health care provider	17
Nobody	13
Other house girls	9
Employer	9
Knows where to go for an HIV test	(n=153)
Yes	95
No	5
Where to go for an HIV test*	(n=146)
Public/Government Health Facility	84
VCT/Newstart Center	83
Private Health Facility	46
*Multiple responses are possible; only selected items are shown.	

Thirty percent of the house girls had sought VCT services in the past 12 months; this included 30 house girls who reported ever having sex and 16 house girls who said they had never had sex. Other services sought were family planning, legal help, and the Coalition on Violence against Women (COVAW). One house girl, who said she had been raped in the employer's home, sought services at a rape crisis center.

Sixty-six percent of house girls said they had sought no services in the past 12 months. House girls got advice on the services sought from various people, including relatives, friends, and health care providers.

All but seven of the 153 house girls knew where to go for an HIV test. Among those who knew where to go for an HIV test, more than 80 percent said HIV tests were available at public/government facilities and/or VCT/Newstart centers.

Self-efficacy questions indicated that three-quarters of the house girls surveyed definitely could discuss STIs/HIV with a health care provider, visit a counselor if raped, and/or attend a sex education class. Two-thirds of the house girls said they definitely could discuss contraceptives with a health care provider. Over half of the house girls said they definitely could avoid sex any time they didn't want it, refuse to have sex if their boyfriend will not use a condom, and/or visit a RH clinic.

About one-quarter of the house girls said they definitely could not refuse to have sex if their boyfriend would not use a condom. In addition, about one-quarter of the house girls said they either definitely could not or probably could not avoid sex any time they didn't want it.

It should be noted that the highest levels of confidence involve matters not directly related to sex. For issues involving sex, the percent of house girls who responded "Definitely could" drops from the 60s to around 50 percent. These data reveal house girls' potential vulnerability to non-consensual or unprotected sex.

Overall vulnerability

To evaluate house girls' overall vulnerability, a composite score was created, incorporating items from the tables presented above. Because only about half of the house girls reported ever having sex, the list of score elements was expanded beyond sexual experience to include items from the Sense of Belonging and Self Efficacy scores.

The risk score included the following items:

Sexual behavior:

- Multiple partners in the last 12 months
- Ever have had transactional sex
- Ever physically forced to have sex
- STI symptoms in last 12 months

Self-Efficacy:

- Definitely could not choose sexual partner
- Definitely could not avoid sex
- Definitely could not refuse sex with a boyfriend who won't use a condom

Sense of Belonging:

- Strongly disagree about having a special person to talk to
- Strongly disagree about being able to talk about problems with friends

The goal of the composite vulnerability score was to determine how many house girls had more than one of these risk factors listed above. The score was not weighted, but each item was given one point, with a total possible score of 9. Results from the composite score are shown in Table 7.

Table 7: Composite Vulnerability Score

Score	**% (n=153)**
0	42
1	32
2	16
3	6
4	2
5	2
Mean score	1.0

Forty-two percent of house girls had none of the above risk factors. Thirty-two percent only had one. One-quarter of the house girls had two or more risk factors; this group is the group we examined more closely to see which risk factors co-occurred.

Among these house girls with two or more risk factors are all six house girls who reported ever being forced to have sex, eight of the ten house girls who said they had ever exchanged sex for money or gifts, and four of the five who reported having symptoms of an STI in the past year. No house girl reported all three risk factors of rape, transactional sex, and STI symptoms, although six house girls reported two out of the three. Only one of the three house girls who reported only ever having non-

consensual sex had more than one risk factor; the other two scored very well on both the Sense of Belonging and the Self-Efficacy scales.

Twelve house girls who reported never having sex had more than one risk factor. For each of these girls, their only risk factors came from the two scales, with an emphasis on the three factors from the Self-Efficacy scale. These house girls could benefit greatly from an intervention that would include esteem building or empowerment exercises.

House girls in the high risk category (two or more risk factors) were compared to those with no risk factors or only one risk factor. There were no statistically significant differences in terms of age, having any time off work, education, access to media, or average monthly income. This means that it may be very difficult to target these vulnerable house girls for interventions or programs.

CONCLUSIONS

This survey verified the findings of the formative assessment and provided a greater understanding of the knowledge of STI/HIV/AIDS and behavior of house girls in the PCEA Bahati Martyrs Parish. The survey results also reveal the extent and various causes of this population's vulnerability to HIV, suggesting potential linkages to risk-reduction interventions.

House girls' have poor to fair knowledge of issues concerning reproductive health and STIs/HIV/AIDS. Of particular concern is the fact that under 15 percent of house girls surveyed knew the time during the menstrual cycle when a woman can get pregnant. Also of concern is that house girls had very poor knowledge of symptoms of STIs.

One of the results that could be of most utility to future interventions was condom use. Knowledge of condoms was good, with the condom being cited as a way to avoid pregnancy, a way to avoid STIs, a way to avoid HIV/AIDS, and as the method that will prevent both pregnancy and STIs/HIV/AIDS. In addition, more house girls cited advantages of condom use than disadvantages. Also, three-quarters of the house girls who had ever had consensual sex reported using a condom with their partner at least once. However, over a third of the house girls said they either "definitely could not" or "probably could not" refuse to have sex if their boyfriend refused to have a condom. This indicates that house girls would benefit from counseling on negotiating condom use.

Awareness of some modern contraceptive methods was good, especially for pills (71%) and the injectable (53%). However, among those who had heard of the different modern methods, only about half could describe how the method works. In addition, use of modern contraceptive methods was low, with only a small number saying that they had used the pill, the injectable, or Norplant in the past 12 months. Most house girls who had used a method to prevent pregnancy in the last 12 months said they had used condoms; safe days or periodic abstinence was the second most common method, and the pill was third. Four of the ten house girls who said they used no method to avoid pregnancy in the last 12 months indicated that lack of knowledge of methods or of how to use methods was the main reason they did not use one.

House girls would benefit from education or counseling on reproductive health and STIs and HIV/AIDS. For reproductive health, topics should include basics like the menstrual cycle, modern methods of contraception, and how those methods work to prevent pregnancy. Only a few house girls had sought FP services in the past 12 months, so any education on reproductive health should include information on where and how to obtain modern contraceptive methods.

Education or counseling on STIs and HIV/AIDS should include the symptoms of STIs, so that house girls will know when they need to seek treatment. There should also be an emphasis on ways to avoid STIs and HIV/AIDS, since a sizeable majority did not know the best ways to avoid these infections. It is important that this education include both STIs and HIV/AIDS, as house girls' knowledge of STIs is especially lacking.

Other information to emphasize in education or counseling for house girls should include financial training, specifically in the area of saving. This would also help increase the girls' self-esteem and give them confidence to negotiate safer sexual health practices.

Most house girls have some time off during the week, with some time on Sundays being the most common among our population in the PCEA Bahati Martyrs Parish. Thus, an intervention to target house girls should be scheduled on Sundays, or whatever the community Sabbath or prayer day is, in order to reach the maximum number of house girls. In addition, most house girls have access to media on a daily or almost daily basis. An intervention through the media, targeting some popular newspapers, magazines, radio stations, and TV channels, could reach house girls.

One-quarter of the house girls surveyed could be considered highly vulnerable, having more than one selected risk factors. This sub-set of house girls is indistinguishable from the rest of our study population in terms of socio-demographic information, so it may be difficult to target them specifically. However, they are also not different from other house girls in terms of access to media or time off from work, so any intervention to target house girls through the media or during expected time off would reach this group at higher risk.

It is also important to remember that house girls are a special out of school youth group who are not considered and do not consider themselves part of the mainstream youth for whom HIV prevention messages are developed. Building house girls' self-esteem and self-worth could help them appreciate their own value and not as societal misfits. This could make them more open to receiving broader HIV prevention messages.

This study was intended to interview house girls aged 14-22, but only house girls aged 16-22 volunteered, with only a handful being under the age of 18. Another potential limitation to this survey was that house girls who were interviewed were those with time off on Sundays so they could attend church. It is probable that the most vulnerable house girls, including those under the age of 16 and those who are unable to get time off to attend church, were not reached by this study. This is still a population in need of attention.