Post-workshop effect of a values-based prevention curriculum on HIV-positive couples from four regions in Ethiopia

Abstract

Background

As evidence increasingly reveals that much of the heterosexual HIV transmission in southern and east Africa takes place within marriage or cohabitation, there is growing recognition of the need for culturally aware, locally developed, gender-sensitive, evidence-based programs that address the context within which most sexual transmissions of HIV occur: committed, couple relationships. Unfortunately, current "prevention with positives" (PwP) models focus primarily on the individual. Toward this end, CRS aims to help build the case for couples-centered PwP programming by evaluating a recently modified curriculum focused on strengthening the relationships of couples living with HIV.

Methodology

The evaluation population consisted of 204 couples (408 individuals) from Addis Ababa, Oromia, Tigray and Dire Dawa regions in Ethiopia. A convenience sampling method was used to gather names of interested couples enrolled in HIV care and support programs of six community organizations. The couples were then randomly distributed equally between the intervention and control groups. Before the distribution assignments, focus group discussions were conducted with nine couples to provide qualitative baseline information and common responses for the survey answer choices. In May 2011, both groups completed a quantitative baseline survey. A workshop was provided to the intervention group, and the post-test survey was conducted immediately afterward with the intervention group only. All data was entered into a Microsoft Access database and then cleaned and analyzed using Excel and STATA. Statistical analysis was conducted, comparing matched baseline and post-test changes between the intervention groups. A three-month follow-up survey will be conducted in August 2011 for both control and intervention groups.

Results

The average age of participants was 35 years, with women on average 8.5 years younger than their male partner. Educational attainment was higher in men, and most couples were either married traditionally or cohabiting. Eighty-eight percent of participants had received a positive HIV test result. Baseline and post-workshop data showed statistically significant ($p<0.01$) improvements in: quality of relationship and couple communication; joint decision-making for care of children, financial matters, sexual activity, accessing HIV services and other important family matters; self-efficacy and intention to discuss sexual issues with their daughters and sons; willingness to disclose HIV status to children over 13 years and have untested children tested for HIV; intention to attend a support group; and intended male involvement in antenatal care (ANC) and prevention of mother-to-child transmission (PMTCT) visits. Clinical findings from the baseline include: 18 percent are not adherent to their medicine regimen; 30 percent have experienced an opportunistic infection in the last three months; and 16 percent have attended the health facility more often than their follow-up protocol required. In comparison to HIV-negative couples in Ethiopia, HIV-positive couples had a higher baseline communication rate with their partners regarding sexual issues, double the percentage of reported physical violence and less secrecy around males' additional, regular sexual partners.

Conclusions

Overall, the preliminary findings show "The Faithful House, Couples Affirming Life and Love" (TFH-CALL) curriculum positively impacted the knowledge, perceptions, attitudes and intended behaviors of HIV-positive couples' relationships. Given the limited evidence for couples-centered PwP interventions, these findings indicate the potential for TFH-CALL to be a resource to the international community committed to providing more holistic programming for couples living with HIV. The planned three-month follow-up surveys will be critical in determining sustained impact on health status, attitudes and behaviors.

Project Background

Summary of the Literature

People living with HIV (PLHIV) have always had an essential role to play in preventing new infections, but prevention campaigns have been slow to address their unique prevention needs as individuals[1]. Throughout most of the epidemic, the emphasis of care communities and funding streams has been on providing care, treatment and support services to those already infected with HIV, whereas prevention efforts have been focused on persons who were HIV negative—with little interconnection between the two populations. Although in the past there was justifiable concern that focusing prevention efforts on PLHIV would further stigmatize a population that already faced discrimination and life-threatening illness, today there are new reasons for a sharper focus involving them in prevention. Growing numbers of people with the virus are living longer, experiencing a higher quality of life and still desiring intimacy, pregnancy and a healthy sexual life. Thus, there is an urgent need to move forward with prevention interventions focused on helping PLHIV to live optimistically and to avoid passing HIV on to others. In short, there is a tremendous need for culturally aware, locally developed, evidence-based programs that acknowledge and address the context within which most sexual transmissions of HIV occur: committed, couple relationships.

Critical epidemiological trends such as those emerging from the recent national studies in Uganda and Kenya indicate that half of new HIV infections are occurring in married people[2]. Being unfaithful to your current partner remains a key area of concentration for HIV-prevention programming. From a faith-based perspective, strengthening the couple relationship or marriage should be the focal point for combating this issue. However, HIV-prevention interventions generally focus on individuals rather than specifying couples as a unit of change and analysis, neglecting the potentially crucial role of *the partner* in sexual behavior[3,4]. Examination of the broader literature on partner influences in health behavior demonstrates that partners and accompanying relationship factors need to be included in how we conceptualize health behavior change[5]. This may be especially relevant for HIV-related prevention with PLHIV[6]. Leveraging our collective experience with couples' HIV testing and counseling, couples-focused HIV-prevention programs provide an opportunity to tackle the dynamic and interactional forces within dyads that contribute to sexual risk behavior, including gender roles, power imbalances, communication styles, child-bearing intentions and quality of relationship issues (e.g., commitment, satisfaction, intimacy)[6].

Across populations, 1 in 3 persons with HIV continues practicing HIV-transmission risk behaviors at least intermittently. This is attributed to relationship factors, economic conditions, emotional states, violence in the home, substance abuse and personality dispositions[7,8]. High-risk behaviors are more likely with another infected person, but alarming rates of risk behaviors are observed with HIV-negative partners and partners of unknown HIV status. Risk practices are also affected by disclosure of HIV status and by perceptions of how anti-HIV medications may affect infectivity[7]. The Ethiopia Demographic and Health Survey (DHS) 2005 found that 2.1 percent of married individuals were HIV positive, and of these, 85 percent were found to be in discordant couple relationships[9]. Experts recognize that there is a critical need for new behavioral and socio-cultural intervention models that blend HIV-prevention strategies with HIV care and treatment services. Antiretroviral therapy (ART) programs should work to extend their reach in favor of a more holistic view of the illness by addressing disclosure, partner testing and behavioral risk reduction to prevent transmission of the virus to others, including primary partners of PLHIV. Patients enrolled in HIV care and treatment programs are

a logical focus for PwP programs. Supporting these patients to disclose their HIV status supports broader public health goals, while also building psychosocial support systems to reduce feelings of isolation and discrimination. It is important to note that those who need PwP programming most of all—PLHIV who are not yet eligible for ART—are generally the most difficult to reach and retain in care: a concerted effort is needed to engage and support them.

Toward this end, Catholic Relief Services (CRS) aims help build the case for couples-centered PwP programming by evaluating a recently modified curriculum that focuses on strengthening the relationship of couples living with HIV.

Local Response

CRS has been working with community organizations and faith-based institutions to address HIV since 1986, although CRS has had a presence in Ethiopia since 1958. The Faithful House (TFH) program was collaboratively developed by CRS and Maternal Life International/Uganda. It is a faith-based, skills-building curriculum that aims to strengthen the family through enhanced couple communication. This is achieved through a three- to five-day workshop composed of skills-building activities, positive peer mentoring and provision of a safe environment for couples to dialogue around quality-of-relationship issues and interactional forces that contribute to sexual risk behavior. Over the course of its implementation, TFH program has collected baseline and post-workshop surveys from over 600 beneficiaries, and these surveys have demonstrated perceived improvements in communication between partners in areas such as household finances, household roles and responsibilities, power imbalances, sexual intimacy, and parenting and communication with children around sex-related issues.

Justification for Curriculum Modification

Although the short-term findings for TFH are positive, the program lacked evidence of sustained behavior change as a result of TFH intervention. Thus, a large multi-country evaluation was designed to assess the short and long-term impact of the curriculum, in its three-day format, on couple relationships. This was carried out from September 2010 to September 2011. During the course of the evaluation, it became apparent that a revised curriculum was needed for couples already living with HIV, a high percentage of whom are in discordant relationships. In-depth discussions with local community partners confirmed the existence of this gap area. To meet this need, TFH curriculum was modified to produce "Couples Affirming Life and Love" (TFH-CALL), which addresses issues of concern to HIV-positive couples through a five-day workshop, including: encouraging discussion around sex, fertility desires, children and disclosure in the context of HIV; enhancing couple awareness about HIV risk and building skills to address those risks; and stressing the importance of appropriate clinical, prevention, psychosocial, spiritual and other community resources for those living with HIV[*]. In addition to the workshop, couples are invited to participate in regular traditional coffee ceremonies, where discussion fosters peer support.

[*] The curriculum adaptation was carried out with in-country partners (CRS Ethiopia and church and community partners), the original developers of The Faithful House (including Maternal Life Uganda), and CRS Headquarters and East Africa Regional staff. Field testing was conducted through one workshop with 10 couples. Quantitative surveys associated with TFH (baseline and post-test) were also tested. Focus group discussions with the workshop participants, recommendations from master trainers and workshop participants, and a revision process culminated in a complete TFH-CALL workshop package.

Evaluation Description

Goal of the Evaluation

This report consists of an assessment of the adapted curriculum using all of the "package" materials. The specific goal of this evaluation was:

1) To assess the impact of the adapted TFH curriculum on participant couples living with HIV, specifically investigating:
   a) Couples' communication, quality of relationship issues and interactional forces that contribute to sexual risk behavior.
   b) Family strengthening attitudes and behaviors .
   c) Couples' health maintenance behaviors such as participation in ART, TB and other clinical services.

Methodology

Quantitative data methods were used to assess the effectiveness of TFH curriculum on behavioral attitudes and (intended) practices related to couple relationship satisfaction, mutual respect and fidelity, partner communication and HIV risk. Qualitative research was conducted using focus group discussions (FGDs). The qualitative methods focused on topic areas of interest/concern uncovered in the quantitative data analysis, offering a complementary view of the data. Data presented reflects participants' feedback (perceptions, attitudes and intentions) in response to TFH curriculum.

The evaluation was conducted in four regions (Addis Ababa, Oromia, Tigray and Dire Dawa) where CRS Ethiopia works with local organizations. Through six partner organizations, a convenience sampling method was used, with each partner mobilizing 30 self-selecting couples from their ongoing HIV care and support program. Eligibility criteria included: at least one of partners was HIV positive and both partners (identified as being in a long-term cohabiting or married relationship) were willing to participate. Lists of 30 couples from each local organization were sent to the local consultant, and a randomized sampling method using Microsoft Excel was used to divide the couples into intervention and control group members. Written consent was collected from each participant at the outset and unique identifiers (IDs) were used on the surveys to maintain confidentiality.

Enumerators were competitively hired and were provided a one-day training from the local consultant in Ethiopia on how to conduct the surveys. Workshop facilitators were provided a week-long training on the modified TFH curriculum by the TFH trainer of facilitators couple from Uganda.

Baseline survey data collection for participants occurred at the workshop site the day before the workshop began. The corresponding control group was interviewed the first day of the workshop, while the intervention group was attending TFH. All workshop attendees returned to the site for the post-test survey, conducted the day after the workshop ended. Participants who did not have both a baseline and post-test survey completed were deleted from the data set, along with their partner, and neither were included in analysis (N = 9 couples).

All data from the Microsoft Access databases was exported and manipulated in Microsoft Excel for the initial frequency analyses and unique patterns/associations. All cleaned data was then entered into STATA, and statistical analysis was run on comparisons of baseline scores between the control and intervention groups (to ensure a true comparison group for subsequent follow-up surveys), baseline and post-test comparisons for the

intervention groups, and sex stratifications. Due to the smaller sample size between the regions, all analyses were conducted on the groups as a whole, not disaggregated regionally.

Quantitative and Qualitative Findings

Findings from the intervention group are presented in the results section. The control group, only sampled for the baseline, was found to be a comparable group and thus will be presented in the analysis of follow-up comparisons.

Sample Characteristics

A total of 408 individuals (both control and intervention group) were sampled. See Table 1 for an exact breakdown of the sample between regions and intervention vs. control group.

Table 1: Breakdown Couples/Individuals in the Sample

Target zones	# of couples in control group	# of couples in intervention group	Total # of couples sampled	Total # of individuals sampled
Addis Ababa	43	44	87	174
Oromia	29	30	59	118
Tigray	15	13	28	56
Dire Dawa	15	15	30	60
TOTAL	102	102	204	408

The demographics of evaluation participants (see Annex 1) in the intervention group are as follows: The mean age for men was 38.8 and women 30.9 years. Women were less educated: 28 percent had never attended school, and only 11 percent had secondary or higher education compared to 30 percent of men. Over 90 percent are Orthodox Christians, and most couples attend religious services and activities on a weekly basis. Most couples had been traditionally married (45 percent) or cohabiting (43 percent) for 8.4 years at the time of the baseline survey. Thirty-one percent of men report being married to more than one wife; only 19 percent of women say their partner is married to more than one wife, and another 6 percent say their partners have other regular or cohabiting partners. A total of 88 percent report having biological children, with 31 percent of these having biological children with someone other than their current spouse/partner. Additionally, 18 percent of households are caring for nonbiological children (orphans or vulnerable children or OVC) with an average of 1.7 children per household. The most common response for men's employment status was "self-employed", and the most common response for women was "housewife, never employed outside the house". An average 12.5 percent unemployment rate was reported. The quantitative survey also revealed 24 percent of participants ever having been separated from their current partner, with the most common frequency rate—"for more than one month a time"—caused by external requirements such as job or education.

A current health status of the participants is presented in the following section, as well as the baseline health-seeking behaviors. The reported results presented in this section are perceptions and determinants of behaviors, not actual behaviors of the participants; these perceptions and determinants either affect particular attitudes and behaviors or address barriers to behavior change. All results are self-reported and are not

verified through other sources. It is important to note that all changes reported are immediately post-intervention; sustained effects can only be concluded after subsequent follow-up collections.

Current Health Status and Health-Seeking Behaviors

All participants (100 percent) had previously been tested for HIV in their lifetime, and 88 percent have received a positive test result (12 percent are in discordant relationships). More women report being HIV positive than men: 89 percent vs. 86 percent. Of those people who have never received a positive HIV test result (HIV negative), roughly 72 percent reported their last HIV test to have been more than four months ago (10 percent reported last test at four to six months ago, 7 percent seven to 12 months ago, and 55 percent more than one year ago). The vast majority (97 percent) of those with HIV report having known their status for six months or more. Table 2 provides an overview of their health/HIV status and health-seeking behavior indicators. Roughly 13 percent of HIV-positive participants have visited the health facility more times than their number of regular scheduled appointments, possibly to address opportunistic infections or drug regimen issues such as contraindications or early refill requests. The exact reasons for these additional visits will be explored further in the final FGDs.

Table 2: Indicators for Health/HIV Status, Service-Related and Health-Seeking Behavior

Health Status and Service-Related Indicators	Baseline
% currently accessing HIV care and treatment services	96%
% currently taking antiretrovirals (ARVs)	69%
% currently taking cotrimoxazole prophylactic therapy (CPT)/bactrim	16%
% currently not taking any medication for HIV	12%
% that self-report as non-adherent to their regimen*	18%
% that have had an opportunistic infection (OI) in the last three months**	28%
% of all participants (HIV negative and positive) that have been diagnosed with a sexually transmitted infection (STI) in the last three months	7%
* Non-adherent defined by three or more missed doses in the last month **Of those with OIs, 40% had diarrhea, 32% had herpes zoster and 25% had TB	
Health-Seeking Behavior Indicators	**Baseline**
# of health-related medical appointments scheduled by a health facility (for participant) in the last three months	1.79
% of participants that missed at least one of these visits	11%
% of participants that visited the health facility more times than their number of regular, scheduled medical appointments	13%

Factors That Affect Couple Relationship Satisfaction

The perceptions and attitudes measured on the quantitative surveys and explored in the FGDs center on factors that affect the couple relationship. Associated indicators measured include but are not limited to: overall relationship rating; quality of communication; level of respect received from and given to partner; sexual satisfaction; level of sharing of financial information; use of partner for confiding personal problems and sexual issues; rate of couple's unfaithfulness; attitude toward male and female lifetime monogamy; attitude toward fault in unfaithfulness; and perceived adequacy of knowledge level, values and skills needed to be faithful.

Although many of these indicators will not change in real terms in a matter of five days, perceptions on intended change was measured following the workshop. Table 3 shows all statistically significant changes. Only one baseline indicator provided results that were statistically different (p<0.01) between male and female respondents—"a man is able to be faithful to one partner his entire lifetime": 79 percent of men agreed with this statement vs. 51 percent of women.

Table 3: Indicators That Affect Couple Relationship Satisfaction

Indicator	Baseline	Post-Test
On a scale from 1-10, with 1 the lowest and 10 the highest:		
Quality of relationship**	7.3	9.3
Quality of communication**	7.4	9.4
Level of respect received from partner**	7.9	9.4
Level of sharing of personal income and financial assets**	7.5	9.3
Level of adequate knowledge, values and skills to be faithful to partner**	7.9	9.4
Ability to have an open and frank discussion with partner about sex**	7.9	8.9
% of participants who:		
Will confide in partner for personal problems*	84%	92%
Believe a man can be faithful to one partner his entire lifetime*	65%	86%
Believe a woman can be faithful to one partner her entire lifetime*	74%	90%

* = statistically significant change (p<0.01) ** = statistically significant change (p<0.001)

In the pre-workshop FGD, the group unanimously felt that unfaithfulness was a problem in their communities; survey responses indicated this struggle was also evident in their own relationships. In the quantitative survey, participants were asked directly about unfaithfulness in their current relationships. Men reported significantly (p<0.01) higher rates of unfaithfulness than the women: 12 percent compared to 1 percent.

Two key objectives of TFH curriculum are providing relevant strategies for strengthening the bond between couples and breaking barriers to faithfulness. Pre-workshop FGDs revealed economic factors, lack of communication and sexual dissatisfaction as the top three reasons for infidelity in relationships in which one partner is HIV positive. FGDs also revealed a "blame" theme when talking about unfaithfulness. Unfaithfulness of one partner was often blamed for how HIV was "brought into the home". Surprisingly, many FGD participants felt the blame was placed on the *faithful* partner: that the partner did not care enough; could not provide enough (financially); did not pay enough attention to or did not satisfy the spouse sufficiently, thereby "causing" him/her to seek a relationship outside the marriage/partnership.

Following the workshop, the post-test revealed that roughly 53 percent of participants had experienced barriers to faithfulness in their own relationships but now reported a significant increase of confidence (from 7.7 to 9.5) in their ability to maintain a happy and strong union with their partners.

Factors That Affect the Family Unit of PLHIV

Family strengthening is an important desired outcome of TFH program, as the curriculum addresses issues that act as stressors on the couple and their children. One of those stressors derives from the social and gender norms in the country context (e.g., gender roles and equality in the marriage). TFH curriculum also discusses the importance of giving age-appropriate messages to children and youth about abstinence before marriage,

delaying sexual debut, and risk and transmission methods of HIV and STIs. Parents are coached on how to talk to their children about these issues and encouraged to do so. Factors affecting the family unit measured in the quantitative surveys include equitable distribution of household tasks, decision-making power in family matters, views and practices regarding children and youth, HIV testing of children under 18, violence in the home, and drug/alcohol use among participants. Table 4 shows initial attitude and perception changes between the baseline survey and post-test. Interestingly, for all "equality in marriage" indicators, significantly more men reported a higher belief of equality in decision-making than women ($p<0.05$).

Table 4: Indicators That Affect the Family Unit

Indicator	Baseline	Post-Test
% of participants who reported BOTH partners ("equality in marriage"):		
Responsibility for looking after the children**	60%	87%
Decision-making power in important family matters**	52%	89%
Decision-making power in when to have sex**	44%	83%
Decision-making power in accessing HIV services**	67%	90%
% of participants who "agree/strongly agree":		
Boys can abstain from sex until marriage*	51%	62%
Girls can abstain from sex until marriage**	56%	66%
On a scale from 1-10 (with 1 the lowest and 10 the highest):		
Comfort level in discussing sexual matters with sons (10-18 years old)**	3.9	7.2
Comfort level in discussing sexual matters with daughters (10-18 years old)*	5.6	7.1

* = statistically significant change ($p<0.01$) ** = statistically significant change ($p<0.001$)

Additionally, 88 percent of participants had children under 18 years, and in 86 percent of those households, all the children had been tested for HIV. For the remaining 14 percent, over half of the children in these households are between the ages of 6 and 17 years old. When participants were asked about the likelihood of having their untested children tested for HIV in the next three months, the baseline rating (on a scale from 1-10) was 6.7; at post-test, this significantly ($p<0.05$) increased to 8.5.

Perceptions and Attitudes on Disclosure, Reducing Stigma and Cultural Norms That Contribute to Risk Behavior

The TFH-CALL curriculum encourages couples to live positively with HIV and brings into discussion the psychosocial factors that affect health status, attitudes, behaviors and practices. These factors include disclosure to partners (and children, if appropriate), stigma, involvement in social and community support structures, protective measures for children (such as will-writing and guardianship), violence and drug/alcohol consumption. Each of these sensitive topics is addressed through facilitated discussion. On the post-test, 100 percent of participants reported that their partner knows their HIV status, and 99 percent of participants reported that they know their partner's HIV status. Of those, however, only 73 percent had ever gone for HIV couples testing, which is an opportunity for couples to learn of each other's status together through a counseled meeting. For the four participants who had not disclosed their HIV status at post-test, they declared the likelihood of disclosure in the next three months was 5.3, indicating a significant level of residual ambivalence.

Disclosure to children is also an emphasized component of positive living. At baseline, 44 percent of participants reported either having already disclosed their HIV status to their children over 13 years or all of their children were under 13 years. For those that had not (56 percent), participants were asked to rate (on a scale from 1-10) the likelihood of this disclosure in the next three months. From baseline to post-test, commitment increased significantly from 6.9 to 8.6.

Participation in community support structures is one way of dissolving stigma and reducing isolation. Active involvement in support groups is encouraged by the modified TFH program. After the workshops, participants are invited to participate in support groups—structured around traditional coffee ceremonies—to continue discussion about TFH-CALL messages. At baseline, 52 percent of participants reported being a part of a support group but most had not attended a meeting for more than a month. At post-test, 79 percent of participants reported an intention of joining a support group (or continued attendance to a current one).

Risk of further transmission or re-infection is a significant concern for couples where at least one individual in the relationship is HIV positive. At baseline, roughly 82 percent of participants were using a protective method to prevent HIV transmission or re-infection. Six percent of participants reported using abstinence as their protective measure, 72 percent were using condoms on every sexual encounter, 21 percent report using condoms "sometimes", and 1 percent were using withdrawal. Of those who were not using any protective measure at baseline (N = 37, 18 percent), participants rated their likelihood of using a protective measure in the next three months at 5.7. At post-test, these same participants gave a rating of 7.5.

Eight women reported being pregnant at baseline. Out of these, 69 percent reported an intention to access ANC during their pregnancy, but only 58 percent reported an intention to access PMTCT services. Both statistically increased at post-test. Another promising response from men alone was their reported intention to attend ANC (increasing from 74 percent to 92 percent) and PMTCT services (increasing from 77 percent to 92 percent), if their partner gets pregnant. Many men consider accompanying their wives to ANC/PMTCT a good practice, but in reality, only a few men actually do it. Thus, this indicator will require long-term tracking in order to see if TFH has a sustainable impact on men's behavior. Additionally, women in the FGD mentioned the issue of hiding pregnancies as a barrier to adhering to PMTCT protocols, as the women fear their husbands will force termination of the pregnancy (if he does not want more children), and the secrecy will often last up to six months. Out of the eight women pregnant, three had not told their male partners about the pregnancy.

The participants were also asked 18 questions about types and frequency of physical abuse or threats of physical violence in the household, including: insulting; swearing; threatening to hurt you; pushing, shoving, shaking, throwing something at you; slapping you or twisting your arm; hitting you with fist or something else; threatening you with a knife or other weapon; kicking or choking you; forcing sex. Among the participants, 46 percent reported living in a household where some form of violence or threat of violence had taken place in the last three months. Sixteen percent experienced physical violence; 58 percent of these were women. Seven percent of participants reported their partner had forced them to have sexual relations in the last three months; 41 percent of those reports were made by men. Twelve percent of participants admitted to being perpetrators of physical violence to their partners in the last three months, and 54 percent of those were women.

In the FGD, alcohol or drug abuse was named as a reason from both gender groups for unfaithfulness. In the baseline survey, participants were asked about their consumption of alcohol and whether their intake was affected by learning their HIV status. Table 5 details the intake of alcohol and the common recreational drug, "khat". Since their partner has learned he/she is HIV positive (of those that drink any alcohol N = 166), 63 percent of men report their HIV-positive female partners have decreased their alcohol consumption and 0 percent have increased consumption. Similarly, 73 percent of women report their HIV-positive male partners have decreased their alcohol consumption, but 12 percent have increased their alcoholic intake since becoming positive. On average, 13 percent of participants have had a dispute with their partner after consuming alcohol.

Table 5: Participant's Consumption of Alcohol and Drugs	Intervention Group
Chews khat weekly	**6%**
Consumes alcohol casually	**37%**
Consumes alcohol regularly	**5%**
Males only	8%
Females only	2%

There were also questions regarding attitudes toward multiple concurrent partnerships (MCP) and other cultural norms, as well as assessing overall knowledge and perceived risk of HIV. These questions asked participants to either "strongly agree, agree, strongly disagree or disagree" with specific statements (Table 6).

Table 6: Questions on Cultural Norms and Views on HIV Risk in Regard to MCP

All (Intervention/Workshop) Participants	Baseline	Post-test
Agreed: Woman is justified in refusing sex with partner if she knows he has had sex with someone else.	85%	83%
Disagreed: A married man having concurrent partners is not harmful as long as he is discrete/provides for family.	90%	92%
Disagreed: There are exceptional cases where a man should be allowed to have sex with another woman.*	78%	84%
Disagreed: There are exceptional cases where a woman should be allowed to have sex with another man.**	83%	86%
Disagreed: A man should be allowed to produce children with another partner if his wife is infertile.**	56%	75%
Disagreed: A woman should be allowed to produce children with another partner if her husband is infertile.**	70%	79%
Disagreed: A person having many partners one after another is at the same risk of getting HIV as someone having many partners at the same time.	26%	35%
Disagreed: Once infected, the chances of a person living with HIV transmitting it to someone else are always the same.	46%	51%

* = statistically significant increase ($p<0.05$) ** = statistically significant change ($p<0.001$)

Self-confidence or willingness/desire to share information—both on how to strengthen the spousal/partner relationships and on the HIV risk associated with MCP—increased after the TFH workshop. The frequency response "at least once a week" increased in all groups for both topics. When probing further about whom participants will share information with about strengthening their partner relationship, the most frequent response was "my neighbor".

Discussion

This review of preliminary findings is important for understanding baseline knowledge, perceptions, attitudes and behaviors around the factors that affect HIV-positive couple relationships and the family unit, as well as on disclosure, reducing stigma and cultural norms that contribute to risk behavior. The initial analysis shows that the modified TFH curriculum had a beneficial effect on the knowledge, attitudes and intended behaviors of HIV-positive couples' relationships. Overall, from baseline to post-test scoring, statistically significant increases occurred among all perceptions of quality of relationship, quality of communication, level of respect received from and shown to partner, and ability to be faithful. Specific communication skills also significantly increased, with participants reporting a higher perceived comfort level in discussing and sharing financial information and discussing sexual matters with partner, as well as with children over 10 years. Perceived equal decision-making power in important family or couple issues showed a statistically significant change, as well as views on lifetime faithfulness, youth's abstinence and cultural norms that encourage seeking sexual partners outside the primary partner. However, our baseline survey findings revealed intimate partner violence to be quite prevalent in HIV-positive couple relationships, with nearly equal percentages of men and women reporting they are victims of violence. This is similar to the findings of the Social Institutions and Gender Index for Ethiopia[10].

Interestingly, in comparison to a larger TFH evaluation conducted in Ethiopia with couples of unknown HIV status (but assumed to be predominantly HIV negative), these positive/discordant couples scored more strongly, at baseline, on questions related to communicating with their partners around sexual issues. For example, 84 percent of HIV-positive couples said they would confide in their partners on sexual issues, compared to 78 percent from the larger evaluation. Whereas 45 percent of HIV-positive couples reported that both partners should decide when to have sex, only 33 percent reported "both" from the larger evaluation. Lastly, on a scale from 1-10, HIV-positive couples gave a rating of 7.9 for "ability to have an open and frank discussion about sex with their partner", and couples in the TFH evaluation reported an average rating of 6.6. This could be explained by the HIV-positive couples' need to discuss sex in order to avoid transmission or re-infection. Being enrolled in a care and treatment program that includes counseling (which most likely raises issues regarding safer sex) could also be a factor in these higher reported rates. Additionally, twice as many PLHIV reported being victims of physical violence in comparison to HIV-negative individuals. Finally, although unfaithfulness was reported in relatively the same percentages between men and women whether or not they had HIV, the females with HIV were more aware of their partner's other regular sexual partners than those without it.

This evaluation also provided the opportunity to collect baseline health information as it relates to HIV status and vital health maintenance behaviors. These indicators will be the key to assessing the impact of the curriculum on any clinical changes and sustained attitude and behavior changes. From the initial findings, willingness to join and participate in a support group was significantly increased, as well as male involvement in ANC and PMTCT visits with their pregnant partners. The potential value in these significant changes cannot be overstated.

Evaluation Limitations

One limitation experienced during data collection was the lack of supervision of the enumerators. With workshops being conducted almost simultaneously in each of four regions, there was inadequate supervisory input on verification of translation, interpretation of questions and impromptu challenges with the survey.

A related limitation resulted from a lack of time to translate the English version of the surveys into Amharic or even a few of the local languages. It is very possible that differences in interpretation or translation occurred.

A final limitation was the convenience sampling methodology. This could introduce a bias into the findings, as all couple participants were self-selecting and only eligible if both partners were available to attend.

Conclusions

To many couples in Ethiopia, a diagnosis of HIV is a diagnosis of unfaithfulness, and a sure sign that your partner will leave you when your status is discovered. During a review of seven local partner treatment facilities' HIV care and support enrollment lists, it was noted that the majority of clients are abandoned or "recently single" women and mothers. Fear of abandonment and marriage dissolution is a major barrier to treatment access, disclosure and adherence, and illuminates a significant gap in programming for people living with HIV. Furthermore, the structural and culturally rooted barriers to faithfulness that exist in Ethiopia are also present in HIV-positive couple relationships. Significantly, however, unfaithfulness for HIV-positive couples has important consequences, not only for the HIV-positive individual and their primary partner, but also for possible "outside" partners. TFH-CALL focuses on keeping the couple and the family unit together, healthy and living a positive life.

This curriculum's aim was to reach couples who were struggling with a positive diagnosis and help them in their journey toward acceptance, to reaffirm their commitment to each other (through faithfulness) and to build a strong family for the future. The evaluation revealed that couples' confidence levels in their ability to maintain a happy and strong union with their current partner significantly increased. Thus, TFH-CALL curriculum should be incorporated into the package of services offered for recently diagnosed individuals. Couples HIV testing should be a recommended part of the program in order to determine discordancy and the most appropriate guidance for living positively together. From the initial findings of the workshops, TFH-CALL has the potential to help couples overcome the diagnosis together and, hopefully, avert the relationship/marriage dissolution and family separation that has been the norm.

Thirty-one percent of male participants in the evaluation report being in a relationship with two regular partners; thus, it is possible that there is a spousal partner who is unaware of her risk of HIV infection. If at all feasible, more information needs to be gathered on this additional partner, including HIV status and sexual behaviors.

The secrecies of pregnancy among mothers living with HIV (37.5 percent of pregnancies reported were unknown to male partners) poses significant risk to the mother and infant, as it cripples efforts to increase PMTCT services for HIV-positive women and thereby decrease rates of vertical transmission to baby. Family-planning guidance and support needs to be strengthened with HIV-positive couples, as a way of assisting

mothers who have HIV with fertility needs/desires, reducing unintended pregnancies and, ultimately, improving uptake of ANC/PMTCT services.

Given the increased willingness to share information regarding family strengthening and HIV risk (including MCP) with friends and communities, equipping couples with information in the form of an easy-to-understand handbook of key messages could help increase their effectiveness. Additionally, certificates of completion should be given out to those who have completed the workshop. If these were displayed the homes of the graduate couples, they could serve to prompt discussion with neighbors and other visitors, and help to reduce stigma and discrimination. Model HIV-positive couples should be considered for future TFH-CALL workshop facilitation.

Lastly, prevention is a lifetime activity for PLHIV. In the National Institute of Mental Health study the "Healthy Living Project", which followed HIV positive individuals in the U.S. for more than 25 months, the most significant differences in control and intervention groups emerged 20 months after an intervention took place[11]. Hopefully, the support groups that form after a TFH workshop will support this sustained attitude and behavior change. In order to determine long-term changes, it would be ideal to conduct a follow-up survey on this initial cohort after one year and after two years, if funds allow. However, withholding this intervention from the current control group is unethical; thus, a new control group would be needed. If the program or study is able to continue, collaborating with other in-country PwP players should be considered to maximize effects for HIV-positive couples.

References

[1] Collins, C., Morin, S.F., Shriver, M.D., and Coates, T.J.. Prevention with Positives: A Guide to Effective Programs. AIDS Policy Research Center & Center for AIDS Prevention Studies at the *AIDS Research Institute, University of California, San Francisco.* Policy Monograph Series – March, 2000.

[2] 2009 AIDS Epidemic Update. UNAIDS, World Health Organization, 2007. Available at: http://data.unaids.org/pub/Report/2009/JC1700_Epi_Update_2009_en.pdf

[3] Allen, S., Meinzen-Derr, J., Kautzman, M., Zulu, I., Trask, S., Fideli, U., et al. (2003). Sexual behavior of HIV discordant couples after HIV counseling and testing. *AIDS*, 17, 733–740.

[4] Painter, T.M. (2001). Voluntary counseling and testing for couples: A high-leverage intervention for HIV/AIDS prevention in sub-Saharan Africa. *Social Science & Medicine*, 53, 1397–1411.

[5] Lewis, M.A., McBride, C.M., Pollak, K.I., Puleo, E., Butterfield, R.M., and Emmons, K.M. (2006). Understanding health behavior change among couples: An interdependence and communal coping approach. *Social Science & Medicine*, 62, 1369–1380.

[6] Burton, Darbes and Operario. Couples-Focused Behavioral Interventions for Prevention of HIV: Systematic Review of the State of Evidence. *AIDS and Behavior* 2010, 14:1–10.

[7] Kalichman, S.C. HIV Transmission Risk Behaviors of Men and Women Living With HIV-AIDS: Prevalence, Predictors, and Emerging Clinical Interventions. *Clinical Psychology: Science and Practice,* March 2000, 7(1): 32–47.

[8] Jewkes, R.K., Dunkle, K., Nduna, M., and Shai, N. "Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: a cohort study". *The Lancet. 2010 Jul 3;376(9734):41-8.*

[9] Demographic and Health Survey, 2005. Ethiopia. Available online at: http://www.etharc.org/amhara/Asset/Dowloadables/DHS%202005%20Ethiopia.pdf

[10] Social Institutions and Gender Index (SIGI): Ethiopia. Retrieved online at http://www.genderindex.org/country/Ethiopia.

[11] Healthy Living Project Team. Effects of a behavioral intervention to reduce risk of transmission among people living with HIV: the healthy living project randomized controlled study. *J Acquir Immune Defic Syndr*. 2007 Feb 1; 44(2):213-221.

Annex

Annex 1: Demographics of sample

Demographics	PLHIV Intervention Group	
Average Age of All Participants (years)	34.9	
Average Age Males (years)	38.8	
Average Age Females (years)	30.9	
Average Age Difference Between Spouses (years), by Couple	8.5	
Employment status:	Males	Females
Housewife, never employed outside the home	0%	32%
Housewife, looking for employment/currently employed outside the home	0%	22%
Employed (government or business)	21%	4%
Self-employed	40%	29%
Unemployed	19%	6%
Other	20%	7%
Type of marriage/union:		
Cohabiting	43%	
Church/religious marriage	6%	
Civil/municipality marriage	6%	
Traditional marriage	45%	
Average # of years married	9.1 years	
Place of residence:		
Urban	98%	
Peri-urban	1%	
Rural	1%	
Highest level of education:	Males	Females
No formal education	16%	28%
Uncompleted primary	25%	38%
Primary	28%	23%
Secondary	26%	10%
Preparatory, vocational or tertiary level institution	4%	1%
Religion:		
Orthodox	93%	
Catholic	1%	
Protestant	3%	
Muslim	2%	
Frequency of religious services/activities:		
Daily	17%	
Weekly	62%	
2-3 times a month	11%	
Monthly	7%	
Yearly	3%	
Has biological children	88%	
Has children from other than current partner	31%	
Caring for other, nonbiological children (OVC)	18%	
Average # OVC	1.7	

*Note: Some indicators do not sum to 100% due to exclusion of "other", "don't know" and "no response" choices.