Contribution of the anti HIV/AIDS community conversation programs in preventing and controlling the spread of HIV/AIDS

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Abstract

Background: HIV/AIDS has now been around for about three and half decades since first diagnosed in 1981. If we wish to curb the spread of HIV/AIDS effectively and sustainably, we need to design strategies that help mobilizing communities at large. Anti-HIV/AIDS Community Conversation (CC) Programs are part of community mobilization activities introduced for the purpose of preventing and controlling the spread of HIV/AIDS.

Objectives: The main objective of this study was to examine the contribution of these programs focusing on those implemented in Adama.

Methods: Data were collected through key informant interviews (held with 3 CC Program coordinators and 2 CC group facilitators), Likert-type rating scale (questionnaire) administered to a sample of 200 participants (half of them CC program participants and the remaining half non-CC program participants), one focus group discussion consisting of nine discussants working as facilitators of CC groups, and (researchers), and attendance of 3 sessions of CC program meetings. Qualitative and quantitative data were thematically organized and then descriptively analyzed. Attempts were also made to compare groups using an independent sample t-test.

Results: It was observed that the CC programs were in Adama Town nearly for 6 years and there were, until the date of data collection for this research, about 10 CC groups composed of CSWs, PLHIV, daily laborers, taxi cleaners, and parking lot workers. Findings indicated that participation in CC programs has promoted desirable HIV/AIDS-related behaviors (awareness about HIV/AIDS, VCT use, safe sexual practice, and non-stigmatizing and non-discriminatory behavior) challenged some harmful and encouraged useful practices. Opportunities for 'experience sharing', 'members' cohesiveness', and 'self- disclosure' were amongst the major factors for the success of the CC programs. However, evidences also suggested that a number of technical, professional and budgetary constraints were affecting the implementation of these programs.

Conclusion and recommendations: The findings of this study generally suggested that the CC programs implemented so far in Adama appeared to make contributions to the prevention and control of HIV/AIDS and, hence, need to be scaled up. Suggestions were given as to how to improve and scale up these approaches so as to address the growing needs in the country for intervention strategies to quell the spread of the virus. [*Ethiop. J. Health Dev.* 2013;27(3):216-229]

Introduction

Despite some positive developments, HIV/AIDS remains to impact on societies in many ways and at different levels (1). It has, at an individual level, caused loss of multitude of lives and large number of infected persons. In Ethiopia, for example, an estimated 1.1 million people are living with HIV and this makes the Country one of the most HIV infected nations in the world (2, 3). In 2011, adult HIV and AIDS prevalence in Ethiopia was estimated at 1.5 percent (4). HIV/AIDS has, in the same way, caused over millions of orphaned children globally of whom about one million AIDS orphans are found in Ethiopia (5). HIV/AIDS has also removed large number of children from schools to care for parents and family members, and significantly increased school dropout (6).

Prevention approaches implemented so far have generally attempted to apply biomedical technologies, induce behavioral changes, or modify social environments. Biomedical interventions have been focusing on preventing the transmission or acquisition of HIV by moderating the influence of biological or physiological factors that may increase infectiousness or susceptibility to HIV or to prevent infection from progressing after actual exposure. These interventions include 'reducing iatrogenic transmission', 'managing STIs', 'antiretroviral' (for preventing mother to child transmission, post-exposure prophylaxis, and for preventing sexual transmission), vaccines, microbicides, and cervical barrier methods (7). Social interventions were all focused on appropriating social arrangements, institutions, laws, policies and customs so that individuals would engage in protective behaviors and use biomedical technologies to avoid becoming infected with HIV (2, 8).

Behavior change interventions are the third group of interventions that aim to reduce the risk of HIV-related sexual (delay the onset of sexual intercourse, reduce the number of sexual partners, and increasing condom use)

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and drug-use behaviors (addiction treatment programs and face-to-face counseling, reducing or eliminating the incidence of drug injecting and sharing needles, syringes and other drug-use equipment) (2, 6, 9). These interventions have been conducted through small-group cognitive behavioral interventions. face-to-facecounseling (individuals, couples and small groups interventions sometimes include HIV testing), workshops and other programs that provide education and information, and skill building programs (for example, teaching proper condom use, negotiation and refusal skills, sex education, instructions on how to use condoms and other harm reduction strategies) (7).

Hundreds of studies of behavioral change interventions have been conducted since the early 1980s, both in the developed and the developing world. Review of many of these interventions indicates that there is a large quantity of evidence from experimental and observational research as well as from practical real-world experiences supporting the contributions of a number of interventions and strategies. At the same time, however, findings indicate that there is disparity between knowledge about HIV/AIDS and reported protected sexual practices (e.g., 10), incidence of HIV and reported positive behavioral changes in which the former was not found declining while significant improvements were reported in the latter (11), and findings of different behavioral intervention outcomes posing doubt about the effectiveness of HIV prevention strategies so far (10). Hence, there is still a need to continue to develop new and effective interventions (6, 9) while attending, at the same time, to a number of behavioral and social issues that are virtually cross-cutting the various interventions designed to prevent the spread of HIV.

Even more important in the Ethiopian context is the fact that despite the widely expanding application of the various intervention services mentioned above, people do not seem to utilize them as expected (possibly due to lack of awareness, the problem of accessibility to users and fear of stigma and discrimination) (12). These support services are provided externally from elsewhere rather than emerging from within the communities and may, therefore, be expensive (9). Although their contributions cannot be denied (7), they may not empower people and communities to develop capacities and strengths to cope effectively with their problems. Communities may not feel owning them as they are imported from elsewhere and hence hardly identify themselves with these services. Such services may relegate the communities to a state of help seekers, dependents, and passive service consumers. As they tend to provide what is missing in the communities, can be called 'deficiency-based approach', they may not build the capacity of communities for managing their own problems by themselves and on sustainable basis. Hence, we may need to experiment on the preventive role of community-based sort of interventions that are likely to base on social dynamics as well as concerns and resources of local communities.

Drawn from 'spaces' of trust, where listening takes place and mutual respect generated, such approaches appear better positioned to provide opportunities for interaction among members eventually stimulating changes from within (9). Furthermore, because many communities have developed a wide range of innovative strategies to survive the adverse impacts of HIV/AIDS (12), these experiences may contribute a lot to bring to light these strategies so that they can be scaled up. Communities are still needed to prepare themselves to take leadership, demonstrate ownership and devise ways of sustaining the activities they initiate. Hence, if we need to quell the spread of HIV/AIDS successfully, we may need to design strategies that are rooted in the communities and help mobilizing them at large.

Community Conversation is one such potentially useful community-centered approach that needs to be tried out to enhance strengths for fighting HIV/AIDS from within. As an approach, it emerged from the work done by the Salvation Army in Zambia and Enda Tiersm Monde/Sante in Senegal (9). In 2001, UNDP adopted and enhanced the approach as part of its leadership development program and launched it in the capital cities of nine regions and two city administrations to combat HIV/AIDS in Ethiopia (9). Due to the success of the pilot project in changing people's behavior, the Government of Ethiopia rolled out the approach to 550 woredas in 2006 (13).

This approach is part of community mobilization exercises that employs community meetings to educate people, recruit volunteers, or publicize new programs. It is a kind of dialogue that engages everyone in communities in examining their and the communities' norms, values and principles and the effect of such norms on relationships, individuals, families, friends and, more importantly, on the spread of HIV epidemic (14). It involves trained local facilitators in moderating a process of developing the capacities of communities to fight with HIV/ AIDS. Bearing the objectives of creating interactive spaces within communities to address individual and collective attitudes and behaviors embedded in social systems and structures (12), some evidences suggest that CC may contribute in the prevention and control of HIV/AIDS. It is, for example, reported that CC is more cost-effective intervention while being the least visible and more powerful method of passing on information about HIV/AIDS to the general public (15); more contextually relevant (emerges from local conditions, is responsive to local needs, reflects local forms of organizing and acting and draws on local resources) (17); fosters empowerment and leads to social change and development (10);promotes development perspectives that go beyond self to civic responsibilities; enables HIV prevention programs address social networks, values, and behaviors (7,17); helps mobilize local communities to provide support to affected families; helps in raising AIDS awareness, engenders compassion and reduces discrimination (3); encourages participants to undergo through blood test (9).

Some evidences drawn from small scale local investigations (11, 18-20) also suggest that CC appears to make important contributions in preventing and controlling HIV/AIDS. It was reported that CC has a significant role in expanding services and improving accessibility, raising community awareness (21), improving members' perceptions of their own concerns and ability to effect positive change in attitudes related to HIV/AIDS, increasing community initiatives prevention and home-based care, changing negative socio-cultural/ harmful practices spreading HIV/AIDS, reducing stigma and discrimination, supporting orphans, increasing voluntary counseling and testing, creating community ownership attitude to HIV/AIDS prevention and controlling activities, improving understanding and use of the importance of utilizing VCT services (18, 19).

The CC program was introduced in Adama in 2008 with the support of Medan ACTS and in collaboration with the National Alliance of State and Territorial AIDS Directors (NASTAD). The first pilot study was done in Dire Dawa, and after making the necessary modifications, it was scaled up and then implemented in Adama Town. This Adama CC Program targeted most at risk population for HIV/AIDS infection: commercial sex workers (CSWs), peoples living with HIV/AIDS (PLHIV), daily laborers, bajaj taxi cleaners and parking lot workers. Until the time of data collection, there were a total of 10 CC groups operating in this Town. An average of about 38 members was contained in each of these groups with a total of 378 (111 males and 267 females) members. Each group conducts one session weekly meeting to discuss about the nature of HIV/AIDS, prevention and control mechanisms of the spread of the virus, and coping with stigma and discrimination. These CC programs have a Steering Committee established to oversee their implementation. It is composed of members widely represented from Heath Bureau, HIV/AIDS Prevention and Controlling Office, Family Guidance Association, Mekedem Ethiopia, Tesfa Goh, Social Affairs Office, Commercial Sex Workers' Associations, Police Force, kebele leaders, Micro-Finance Association, representatives, Women and Children's Affairs Office, and religious leaders.

This research attempts to determine the contribution of the Adama CC Intervention program in preventing and controlling HIV/AIDS. More specifically, it attempts to examine if participation in CC program can contribute significantly more than non-CC program participation to building Knowledge about HIV/AIDS, safer sexual practices, desirable attitude towards and practicing of VCT, and reducing stigma and discrimination against PLHIV and orphans. Furthermore, it attempts to explore some of the reasons why the CC program would make a difference, if so, and the challenges that would emerge while implementing the CC programs. Finally, it attempts to draw implications for improving and scale up of the CC program in Ethiopia.

Methods

Design:

To examine the contribution of the Adama CC program, the study employed a comparative design in which anti-HIV/AIDS CC program members and non-members are compared for differences in four dependent measures: knowledge about HIV/AIDS, stigma and discrimination, safe sexual practice, and VCT experiences.

Data Sources:

The study site is limited to CC program in Adama Town because of the CC program in Adama has more crystallized relatively better than other places where the programs are still under formulation and reformulation.

The research participants were drawn from CC and comparative non-CC groups. Nearly a quarter (n=10) of the CC members of each group (10/38) were drawn adding up to a total of 100 CC participants being considered out of the 10 CC groups with 387 CC members. A comparative group was also sampled from non-CC participants (n=100) only for comparative purposes. That is, a total of 200 persons were generally drawn as research participants. This was decided based Drapper and Smith's (22)formula

$$n = 10 \sum_{i=1}^{n} F_i C_k$$

in which sample size (n) is defined in terms of the number of factors (Fi) and categories (Ck) involved in a research such that a minimum of 10 observations is required for each category of a factor. Accordingly, there are 2 categories (CC and non-CC participants) of factor 1 (group type) X 10 categories of factor 2 (vulnerability types) X at least 10 observations for each category (=200 participants).

The procedure of sampling the CC members was simple random technique while the non-CC group members were drawn based on careful matching exercise. The non-CC participants were considered in such a way that they would characteristically compare with the CC members. Attempts were made to match the non-CC participants with the background of the CC participants except for membership status in the CC program. To ensure comparability of the two groups, the sampled CC participants were invited to bring in a non-CC participant friend like them (in place of residence, work engagement, education, sex, age, HIV status, and family background) for inclusion into the research. They were given orientation about these and other related homogenizing criteria before making a final decision as to whom to bring in for participation in the research.

The profile of the sample is generally that: about 64% of them were females; 82% were aged from 15-35 years; and similar proportion (82%) with primary and secondary education. About a third were PLHIV (32%), followed by commercial sex workers (28%), parking lot workers (16%), daily laborers (14%), and, finally, Bajaj taxi operators (10%). The same proportion of participants were drawn from the non-CC participant groups.

Instruments and Procedures:

First and foremost, local document review (CC activity plans, reports, and guidelines) was made to learn about the background, goals, principles and strategies of the CC program under implementation in Adama Town. Second, this was followed by a key informant interview with 3 program coordinators and 2 facilitators in the area to learn further about the design and implementation of the CC programs including its contributions and challenges. Third, FGD was also conducted to examine the contributions, performances, and opportunities of the CC program. In fact, only one FGD was conducted consisting of 9 discussants who were facilitators of each of the CC groups. Fourth, one of the present researchers has also attended CC meetings of three groups (one session in each case) to get a feel of the group dynamics at work while the conversations were going on among the CC members. This researcher kept a personal memo of the meetings to be used as another data source. Last, a rating type questionnaire was administered to a sample of 200 participants to examine their HIV/ AIDS-related behaviors. As this questionnaire was the major instrument used to generate primary data, more details are presented below about it.

The HIV/AIDS-Related Behaviors' Rating Scale was a five point Likert-type rating scale (1=strongly disagree to 5=strongly agree) used to measure the HIV/ AIDSrelated behaviors: knowledge about HIV/AIDS, extent of practice of safe sex, stigma and discrimination, and attitude towards VCT. Knowledge about HIV/AIDS refers to awareness about methods of transmission, protective methods, symptoms, and gender-wise vulnerabilities of HIV/AIDS. Safe sexual practice involves comfortably buying and consistently using condoms, sexual practice that is free from sex after drinking heavy alcohol, STIs-free life style, and free from forced-sex. Stigma and discrimination involves disclosing one's status if tested HIV positive, sharing meals with and caring for PLWHA and OVC. Attitude towards VCT refers to the extent to which VCT is valued, practiced and also recommended for others to follow the same.

About five items were developed to measure participants' standing along each of the four variables; a total of 21 items being included in the final version. Items were partly assembled from the 'Sexual Behavior Questionnaire' of the Russian Academy of Sciences (23), Margaret and Lynn's (24) description of risky sexual behavior among adolescent women, and Schwartz and colleagues' (25) health risk behavior descriptions in Tanzania. Having assembled the items from these

sources, then the instrument was checked for face and content validity by professionals from public health and language studies. Items that appeared peripheral and vague were removed and then further subjected to a pilottest.

The pilot test was done using 20 participants from Selam Sefer CC Group, Adama. Again, some unclear and vague items were discovered during administration and it was also learned that researchers'-assisted administration of the instrument is more appropriate than the self-administered version. Excluding about 4 items from the list, the reliability indices were calculated using the Cronbach Alpha's measure of internal consistency respectively yielding 0.82, 0.74, 0.76 and 0.78 for knowledge, safer sex practice, stigma and discrimination, and attitude towards VCT.

Data Analysis:

Responses to items of the questionnaire were numerically recoded in such a way that 'strongly agree' takes a scale value of '5' ... and 'strongly disagree' takes a value of '1'. However, the scoring direction was reversed ('strongly agree'=1...and 'strongly disagree=5') if the opposite is rather indicative of possession of the quality represented by each of the four variables (see items with '*' in the summary tables). Total scores were then derived by summing up the numerical versions of the responses for each variable. Then, a descriptive summary table was prepared depicting the responses (frequencies, percentage, and mean rating) of each group (CC participants and non-Participants) to the items constituting the respective variables. This descriptive analysis was followed by an independent sample t- test (using SPSS Version 20) to determine if mean ratings are statistically different for the two groups (with an alpha level of 0.05). As regards the qualitative data, quite extensive information was generated through the three instruments (FGD, interview, and researchers' memo of the CC group meetings). A task-based analytical technique (22, 26) was followed to present relevant data for analysis. In this approach, salient responses are to be selectively presented verbatim under a predetermined criterion or subheading to serve as prototypical responses of the participants. Qualitative data that did not fit into the predefined themes of analysis were isolated and then subjected to further inspection to identify other recurrent themes that would possibly emerge from the data. Although the discussions were held in Amharic, the free-English translations were presented in italics. The sources of these responses are cited in parenthesis. In the interest of space, only few selected quotes are presented in a form of a telegraphic speech were contents of a communication are maintained at the expense of auxiliaries and other texts that are less useful for the purpose.

Generally, the analysis was organized in such a way that both the qualitative and quantitative data were thematically integrated against each of the four major

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variables. Then, analysis of data followed from other emerging themes from the qualitative data. Finally, factors explaining contributions of CC and challenges were also presented at last.

Ethical Considerations:

The authors of this article secured ethical clearance from the Ethical Review Committee of the Psychology Unit at Addis Ababa University. Then a letter of cooperation was presented to the CC Coordinating Office at Adama where permission was obtained to conduct the research. Participants filling out the questionnaire were informed about the purpose of the research and gave their written consent to fill out the questionnaire. In fact, they were also informed that they have the right to decline from the study at any time they feel uncomfortable while responding to the questionnaire. The CC meetings were also attended after getting consent from the facilitators. The participants of the FGD as well as the discussants of the CC group meetings were asked for permission to record the discussions. The researcher was in fact allowed to take his own memo but audio recording was felt uncomfortable and, therefore, avoided.

Results

The descriptive report (of both the qualitative and quantitative responses) is presented first and then possible differences are examined next. This is followed by analysis of the possible reasons justifying differences between the two groups. Finally, the challenges experienced in implementing the CC programs are highlighted.

Contributions of the Anti- HIV/AIDS CC Programs: Descriptive presentation: We present below data that appear thematically relevant under each of the four possible (awareness about HIV/AIDS, safe sexual practice, VCT, and stigma and discrimination) contributions. Other themes emerging from the qualitative data were also presented separately after these four themes.

Awareness about HIV/AIDS: Attempts were made to compare CC program participants and non-participants on level awareness about HIV/ AIDS. As it can be referred to from Table 1, the majority of CC program participants appear to have awareness about HIV/AIDS compared to non-participants. More specifically, the majority (72%) of the CC program participants seem to know that oral contraceptives don't really protect from STDs. This is in comparison only to 42% of the non-CC program participants who have awareness about this phenomenon. In the same way, nearly half of the CCprogram participants (50%), compared to less than a third of the non-CC participants (30%), have an understanding that sexual intercourse is not the only method of transmission for HIV- 'sex-free' person is not necessarily 'HIV-free'. We would accordingly say that while 78% of the CC program participants have a proper understanding that a person looking physically healthy may have HIV/AIDS (78%), only 44% of the non-CC participants have such an understanding. Again, coughing and sneezing don't spread HIV/AIDS for 66% of CC program participants compared to 56% of the non-CC participants. Finally, it is noted that 82% of the CC participants seem to agree that males are not more vulnerable than females compared to 18% of the non-CC participants accepting the unfounded assumption that males are more vulnerable than females. In fact, research findings rather suggest that females are more vulnerable to HIV infection than males. The gender-wise comparison of the HIV statistics (28) also seems to support females', rather than males', vulnerability.

Table 1: CC program members and non-CC members' awareness about HIV/AIDS (N-200)

Items	Groups	Strongly Agree (=5)	Agree (=4)	Not Sure (=3)	Disagree (=2)	Strongly Disagree (=1)	Mean
Oral contraceptive like birth	CC members	16	8	4	14	58	3.9
control pills can protect STDs*	Non-CC members	8	12	38	23	19	3.3
Someone who didn't have	CC members	12	8	28	6	46	3.7
sex in life is free from HIV*	Non-CC members	10	11	49	25	5	3
A person looking health	CC members	66	12	2	8	12	4.1
can have HIV/AIDS	Non-CC members	24	20	36	17	3	3.5
Males are more vulnerable	CC members	6	0	12	12	70	4.4
than females for HIV infection*	Non-CC members	28	18	36	7	11	2.6
Coughing/sneezing do not	CC members	62	4	4	14	16	3.8
spread HIV	Non-CC members	34	22	32	12	0	3.8
Total		CC men	nbers				19.9
		Non-CC m	embers				16.2

^{*}Scoring reversed

The percentage of CC members having awareness on different issues of HIV/AIDS appears consistently higher than the non-CC participants. Hence, the mean ratings of the CC program participants (mean rating=19.9) is well above the expected mean (5 items X 3 midpoint of the scale =18) and also appears better than the non-CC participants (16.2). The significance of differences between the means of these two groups is made in a separate section after finishing the descriptive presentation of responses.

The researchers were able to attend to some of the CC program meetings in which discussions were held about the mode of transmission and prevention mechanisms of HIV. It was noted in one of the CC meetings that CC program participants were really provided with opportunities to develop awareness about the virus. Consider the case of a woman who indicated during discussions that she didn't have any information about STDs before joining the program but the CC participation was a source of enlightenment for her:

I had the symptoms of STIs and I used to question the reason... When I discussed with my friends, they told me that I might have urinated in the direction of the sun. And they advised me to go to a traditional healer. I totally accepted their advice and went to a traditional practitioner. The traditional healer sold me a drug with high price. I took the medicine but the pain persisted. But, after joining the CC program discussions, I realized the real reason of my pain; so now I have decided to go to a health center (Discussant, Researcher's Memo, CC Group Meeting).

One of the key informant interviewees also commented how the misconception of CC participants about HIV medication was improved after joining the CC program:

Previously, they (the CC program participants) used to exchange medicines. They talk about their illnesses among one another and if the symptoms appear similar to them, they would exchange their medicines. But, now this practice has changed and their understanding has improved (Interviewee 1, Key Informant Interview)

This would suggest that the program really plays an important role in improving awareness about HIV/AIDS among the participants.

Safer sexual practice: The sexual practices of research participants were examined and the data are presented on Table 2. As it can be seen on this table, the CC participants still appear to have a better sexual practice

than the non-CC participants: the majority of CC participants indicated that 'they can buy condom without any fear' (79%) and 'use them properly (74%) anytime engaged in sexual intercourse' compared respectively to 55% and 57% of the non-CC participants responding in a similar manner. While about 66 % of the CC program participants indicated that they didn't engage in sexual activities after drinking too much alcohol, about 50 % of the non-CC participants gave a similar answer. Sexually transmitted infections are not concerns for 88 % of the CC participants while they are concerns for 66 % of the non-CC participants. Finally, while about 43 % of the CC program participants indicated that they didn't force (or were not forced by) their partners for a sexual intercourse, only 11 % of the non-CC participants responded in a similar way.

Generally, alike awareness about HIV/AIDS, note here too, that there are differences in the responses of the CC participants and non-participants and the statistical significance of this difference is again to be established in a separate section latter.

The qualitative data obtained through FGD and key informant interviews lend support to the findings presented on Table 2:

This community conversation program...helped me in using condom effectively. I have been working as CSW for the last 5 years. During these years, I was using condom only with new clients but not with regular clients. But...now I have started using condom effectively and continuously even with my Balluka (boyfriend) (Discussant, FGD).

Before taking part in this program, I used to drink too much alcohol until losing control of myself and then practice sex with CSWs. At that time, I used to practice sexual intercourse without condoms; but now thanks to the CC program...I totally stopped drinking alcohol and practicing unsafe sex with my clients (Discussant, FGD).

It is surprising that most CSW give birth to a child from someone whom they don't even know the name...but now, after we held discussions, they...learned about the dual purpose of using condoms...(Interviewee 3, Key Informant Interviewee).

...in CC discussions, the CSW argue that they have properly distributed condoms to their friends to help them protect themselves and also stop the spread of the virus (Researcher's personal memo, CC Group Meetings).

Table 2: CC program members' and non-CC members' ratings of their engagements in safe sex (N=200)

Items	Groups	Strongly Agree (=5)	Agree (=4)	Not Sure (=3)	Disagree (=2)	Strongly Disagree (=1)	Mean
Buy condom without fear	CC members	75	4	9	4	9	4.3
	Non-CC members	22	33	29	10	6	3.6
Use condom anytime I	CC members	62	12	4	10	12	4.0
engage in sex	Non-CC members	21	36	4	33	6	3.3
Engage in sex after heavy	CC members	19	1	14	6	60	3.9
alcohol drinking*	Non-CC members	9	15	26	45	5	3.2
STIs are always problems in	CC members	10	2	0	8	80	4.5
my life*	Non-CC members	28	34	13	13	12	2.5
Force/forced to have sex	CC members	30	15	12	2	41	3.1
with someone*	Non-CC members	13	29	47	5	6	2.6
Total			CC membe	ers			19.8
		No	n=CC mem	nbers			15.2

*Scoring reversed

Voluntary counseling and testing: Note from Table 3 that the majority of CC program participants seem to have positive attitude to VCT compared to the non-CC participants. As we can see the details on this table, about 84% of CC participants, compared to only 14% of the non-CC participants, had positive attitude about VCT. Hence, 89% of the CC participants, compared to the (23%) non-CC program participants, were tested for HIV/AIDS. The majority of CC program participants also indicated that despite their own HIV status, they would initiate others to test for HIV/AIDS (94%); which is not the case for the non-CC Program participants (1%). On the contrary, fewer respondents indicated that they will spread the virus if their test result is positive (8%) compared to the (19%) non-CC program participants.

Table 3: CC program members and non-members' ratings of their attitude towards VCT

Items	Groups	Strongly Agree (=5)	Agree (=4)	Not Sure (=3)	Disagree (=2)	Strongly Disagree (=1)	Mean
Traditional healers have the	CC members	12	8	16	14	50	3.82
ability to know if somebody is HIV infected*	Non-CC members	19	13	43	22	3	2.77
VCT is important to know	CC members	84	2	2	4	8	4.50
someone's HIV/AIDS status	Non-CC members	14	24	36	11	15	3.11
I have been tested for HIV/AIDS	CC members	89	2	0	4	0	4.86
	Non-CC members	23	22	13	24	18	3.09
Whether my blood test is	CC members	92	4	2	0	2	4.84
positive or not, I will encourage others for VCT	Non-CC members	1	16	25	36	22	2.38
If my result is positive, I would	CC members	8	2	2	10	78	4.40
spread the virus to others*	Non-CC members	16	20	40	5	19	2.96
Total				CC membe	ers		22.5
			Non-CC members				

*Scoring revered

Data obtained from the FGD still shows how important this CC program is in initiating members to go for VCT:

This program has initiated us to give a solution to our problems by ourselves. After a long conversation; about 141 participants got Voluntary Counseling and Testing. Moreover, by mobilizing community members of the Town, around 2,123 people were made to be tested (Discussant, FGD).

The FGD participants were also very specific about these changes:

There was a person who had four sexual partners. After he became a member of the CC Program, he was tested for HIV, stopped the relationship with the three and is now living a healthy life only with one of the four women (Discussant, FGD)

An older woman who was a member of the program gave the following remark:

I was sick so many times. One day, I went to a health center and the physician told me that my problem was gastritis and tuberculosis. Then, he prescribed a medicine for me. But, unfortunately this medicine couldn't relieve me. In another day, I happened to meet the leader of the CC program and he invited me to participate in the program. After I started attending the CC program, I decided to get my blood tested and then learned that I was positive...(Researcher's Memo, CC Group Meetings)

Reducing stigma and discrimination: People living with HIV/AIDS reported to face stigma from family members, co-workers, neighbours, caregivers, health workers and generally from the society. This stigma and discrimination would increase the spread of the virus.

Table 4 presents respondents' self-ratings regarding their own experiences of stigma and discrimination.

The majority of CC participants (90 %) indicated that they would not mind sharing food with HIV/AIDS positive persons compared only to 29 % of the non-CC program participants who indicated that they wouldn't mind doing so. Moreover, 88 % of the CC program participants versus 11 % of non-participants reported that they do not discriminate OVC but rather care for them.

Table 4: CC program members and non-members ratings of their attitude towards stigma and discrimination (N=200)

Items	Groups	Strongly Agree (=5)	Agree (=4)	Not Sure (=3)	Disagree (=2)	Strongly Disagree (=1)	Mean
If my HIV test is positive I tell	CC members	78	2	10	2	8	4.4
this to my relatives without fear of stigma	Non-CC members	17	13	41	7	22	3.0
I am willing to share a meal	CC members	90	2	0	0	8	4.7
with HIV positive person	Non-CC members	3	26	43	27	1	3.0
I can care and support a	CC members	88	4	4	2	2	4.7
person affected by HIV/AIDS	Non-CC members	0	17	48	13	22	2.6
I do not discriminate OVC;	CC members	88	6	0	4	2	4.7
instead, I care for them	Non-CC members	11	7	74	3	5	3.2
Total				CC member	S		18.5
			1	Non-CC memb	ers		11.8

It was also learned from the FGD that the CC program would help in coping with stigma and discrimination:

Knowing that I am HIV/AIDS positive, neighbors started to discriminate me from social activities. But, participating in this program, I learned as to how to deal with this stigma and discrimination. (That is), I understood that I don't have to distance myself from others discriminating me. Rather, I decided to go closer to them and taught my neighbors about the nature of the virus. Now, they have stopped discriminating me and other PLHIVs (Discussant, FGD).

Analysis of the qualitative data has yielded that CC program has also made contributions that may not be classified under any one of the contributions presented above. This includes 'changing harmful practices', engagement in 'resource mobilization', and 'developing concerns for others'.

Changing harmful practices: Some of the contributions of the CC program mentioned repeatedly by participants pertain to changing harmful practices:

...the program is very important... in stopping harmful traditional practices, such as polygamy, female genital mutilation, and early marriage (Interviewee 2, Key informant Interview).

We observed radical changes and decline in harmful traditional practices as a result of the CC program... (Interviewee 4, Key Informant Interviewee).

...after developing awareness about HIV/ AIDS through CC program, one of the participants took action on polygamy and decided to stay only with one partner (Discussant, FGD).

Encouraged with ideas raised during CCs, the CSWs exhibited serious intentions to shift their work. They were saving money on weekly basis to initiate their own business and change their work (Interviewee 3, Key informant Interview).

It is known that Adama Town is among the towns where a lot of CSWs are working in hotels, streets, and at home. Especially, Kebeles 6, 7, 9 and 12 are the places where a lot of CSWs and their clients are working. We have seen this program bringing behavioral changes particularly among commercial sex workers and daily laborers (Interviewee 2, Key informant Interview).

Resource mobilization: The importance of the CC programs was also mentioned particularly for resource mobilization:

Resource mobilizations are done by the different groups of participants of the programs. Until now, about Birr 8,100.00 was collected from the members. They are planning to mobilize their resources and start up a profitable business in the future (Key informant interviewee).

The commercial sex workers have strong sense of cohesiveness. After they discussed the problem of

prostitution (such as sexually transmitted disease, HIV/AIDS, stigma and discrimination), they decided to save two Birr a week to start up a new job that will make them more productive and healthier. They have already saved around one thousand four hundred Birr (Discussant, FGD).

Empowered with ideas raised during CCs, the CSWs were striving to shift their work. They were saving money on weekly basis to initiate their own business and change their work (Discussant, FGD).

Concerns for and helping others: The CC members have also described themselves to go beyond their own concerns to help others in critical needs:

One day one of the CC Program participants saw some gangsters trying to rape a girl. This lady then mobilized the neighbors to rescue the girl and then also took the case to the court. Currently, the legal investigation is in progress (Interviewee 5, Key informant interview).

For instance, there was a lady who was paralyzed and stopped working. Members of the group contributed money and bought some knitting materials and they encouraged her to work on knitting (Interviewee 5, Key informant Interviewee).

...a... child in the community once required an eye surgery and the CC group was able to provide partial funding for the operation (Discussant, FGD).

Concern of the people has changed from individualism to communal issues... Every meeting reminded members to be more inclusive in their thinking, thinking beyond oneself to include others (Discussant, Researcher's Memo, CC Group Meetings).

It was also captured from the lengthy interviews and the FGD that the CC programs have generally enhanced many desirable behaviors among participants: the acquisition of knowledge, the capacity and resources of individuals and communities, the culture of saving, condom distribution, proper use of the existing health facilities and services, and open dialogue between people living with HIV/AIDS and the community thereby creating conditions where the two parties understand one another.

Ddifferences between CC Program Participants and Non-participants:

A descriptive analysis of response of CC and non-CC participants' was presented earlier. As it can be learned from this analysis, there are differences in the responses of the two groups and the mean ratings of the CC participants appear to be consistently higher. The question is, however, how statistically significant these differences are so that we would say the differences are real. The analysis summarized on Table 5 addresses this question.

Table 5: an independent t-test of mean differences between the CC program participants and non-participants on four HIV/AIDS related measures

Dependent measures	Groups	Mean	t	df	Sig.
Awareness about HIV/AIDS	CC members	19.9	6.663	198	0.000
	Non CC members	16.2			
Safer sexual practice	CC members	19.8	7.024	198	0.000
•	Non CC members	15.2			
VCT	CC members	22.5	16.743	198	0.000
	Non CC members	14.3			
Stigma and discrimination	CC members	18.5	21.970	198	0.000
	Non CC members	11.8			

As it can be seen on this table, there is a statistically significant difference between mean ratings of the two groups in awareness about HIV/AIDS (t_{198} =6.66, P<.000), safe sexual practices (t_{198} =7.02, P<.000), attitudes towards voluntary counseling and testing (t_{198} =16.74, P<.000), and practices of stigma and discrimination (t_{198} =21.97, P<.000). In all these tests, the CC participants appear to be significantly better in terms of awareness, attitude, VCT, and sexual practice. Below are some of the plausible explanations why this is happening.

Why Did the CC Program Make a Difference?

The analysis so far suggests that participation in the CC programs seems to make better contribution in promoting knowledge, VCT use, safe sexual practice, and non-stigmatized and discriminatory behavior, challenging

harmful practices, and encouraging useful practices like resource mobilization and showing concern for others. Some of the plausible reasons attributed to this success of CC program were found in the qualitative data indicated below.

CC as an experience sharing forum: CC was found to be a source of new insights and a challenge against established "wrong" beliefs.CC was considered during the FGD as a new opportunity for members to share experiences and learn from one another:

In our CC group, we make discussions regularly and learn from one another and share experiences about HIV/AIDS (Interviewee 4, Key Informant Interview).

This program has initiated the communities of CC participants to express their feelings regarding HIV/AIDS and other social problems (Interviewee 3, Key Informant Interview).

CC appears to be a useful experience sharing forum on various dimensions of life including issues that are the prime concerns of adults including their "job". For example, one of the CC participants (of the 'Commercial Sex workers' Group) expressed her concern during discussions as follows:

I need to stop this job, but I am afraid I can handle properly if I join another one. Fearing this condition, I am still doing this work (Discussant, Researcher's Memo, CC group meeting).

Following the above idea, another participant shared her experience that would inspire the previous speaker for a better move as follows:

I have a relative with whom I discussed about possibilities of changing her work. One day, she decided and started her own business taking money from her account in a bank and borrowing additional money from the Government. Now, she has two big shops and is leading a better life with her husband and child. If one decides and starts up another work, he/she can succeed as my relative has succeeded (Discussant, Researcher's Memo, CC group meeting).

CC is still a lively discussion that provides opportunities for participants to debate with fellow persons, challenge their views, and change inappropriate beliefs and practices regarding HIV/AIDS. Consider the case of a participant who reported during discussions that he was penalized for disclosing his HIV status:

Disclosing oneself will make someone to be stigmatized and discriminated. I am saying this from what has happened to me in the past. I was living in a rented house before I disclosed myself to the house renters. But, having known that I am positive, they forced me and my family to leave the house. After that experience, I stopped disclosing myself to anybody anymore (Discussant, Researcher's Memo, CC group meeting).

This kind of attitude is, however, more likely to be challenged by others or by the facilitators during discussions:

We know that such kinds of discrimination also happen in most cases in this Town. But, stopping self-disclosure is not a solution to avoid discrimination. Rather, disclosing even more than before and mobilizing all the community members to attend this program is a solution to such problems. As we all know, failure of selfdisclosure will make it difficult even to take the medicine properly; consequently the virus will adapt the medicine and then will lead to other opportunistic infections and this may result in death (Discussant, Researcher's Memo, CC group meeting).

In the discussion, an HIV positive CC participant supported the facilitators' view about self-disclosure and presented his own persuasive arguments:

I am working in a parking lot. I disclosed my HIV/AIDS status in 1995 E.C but during that time the community in general and my friends in particular discriminated me from all aspects of social life. ... yet I did not stop disclosing myself ... I persisted describing about the virus and how I was infected. Doing this, I was finally able to change the community's attitude... Besides, I also encouraged them to get their blood tested (Discussant, Researcher's Memo, CC group meeting).

Other CC participant also said:

I am a Gari (traditional vehicle) driver. Most of the time, I forget bringing water with me from my home to swallow the ART; instead, I usually swallow the drug by requesting water from the hotels. At this time, my friend used to follow what I was doing in clandestine and one day asked me what I was doing. I told him about my status. After understanding the case, he told me that he, too, has the virus in his blood but never disclosed himself and did not even start taking a drug because of fear of stigma and discrimination. After he told me his experience, I advised him to disclose himself... I told him that he should start disclosing himself and start taking the drug. Then, he changed his mind and started taking the drug. Now, he is in good health (Researcher's Memo, CC group meeting).

At the end of their conversation, the participants agreed on the importance of disclosing oneself for the betterment of life in general.

The CC program meetings were, therefore, extremely educative to members in many ways because issues raised are not lectures about untested theories but are real life experiences, told from the horse's mouse and at the time the information is most needed.

CC groups eventually growing into cohesive units: It appears that the CC groups are gradually evolving from sets of unfamiliar, stranger and heterogeneous creatures to persons with a sense of togetherness as indicated by key informants:

When they started CC meetings, they usually did not talk to each other. But after sometime, they start talking openly and become very close to each other. They started talking openly about their lives and how they can prevent the spread of the virus (Interview3, Key informant interview).

CSWs have developed a sense of friendship, belongingness and togetherness; an experience that was

not observed before this program was initiated (Interviewee 1, Key Informant Interview).

Another interviewee expressed how participation in the CC program helped improving the relationship of members from that of a rivalry to collaborative and supportive spirit:

In the CC groups, most CWSs used to drink too much alcohol try to take the clients of their friends, and quarrel each other bitterly because of feelings of jealousy and envy, and they were not talking each other about their lives. But after joining CC, they start talking openly and become very close to and helping each other (Interviewee 2, Key Informant Interview).

Generally, this sense of togetherness seems to make the CC participants help each other, provide care and support for needy fellow participants and OVC, and also mobilize their resources to start up a better work as indicated in the previous discussions.

Challenges of Implementing the CC Program:

Despite the contributions recorded above implementation of CC programs is likely to experience different challenges due in part to limited experiences in implementing them. Interview held with CC coordinators and facilitators underscored the following major challenges experienced so far.

Facilitators' roles: The researchers' participation in the CC discussions had given them opportunities to look into some of the challenges of the CC program. One such challenge pertains to the roles of the CC facilitators. The roles of facilitators were outlining the topics for discussion and to give space for participants to discuss the topics, and allow the participants to identify their own concerns and solutions. It is also their responsibility to record the minutes and prepare and serve the refreshments. However, few of the facilitator saw their role as being someone who is visionary to support the participant to explore alternatives or as someone who understands that the present community environment will not support the behavior change being suggested by the community. Some of the facilitators did not have sufficient skills or educational level to guide the process the program.

Payment for participation: The NGO mentality commonly prevailing in many communities (that need to be supported even for doing one's own work) of the NGO operating areas in Ethiopia seems to manifest itself during CC participation as one of the CC coordinator has expressed it during the interview:

Some participants needed to be paid for participation. As the facilitators reported, some NGOs paid money when they created a community forum. Thus, some participants expected to be paid for participating in CCs. Some poor community members came to the CC sessions expecting

fellow participants and facilitators to solve their individual monetary and social problems. This shows that the NGO culture of paying people for participation in traditional for such as the CCs has had a negative effect on people's expectations in Ethiopia (Interviewee 4, Key Informant Interview).

Budget constraints: During interviews, it was learnt that the CC sessions were underfunded probably due to budget constraints suffered by the sponsoring institution, MEDAN ACTS. The coordinators, all facilitators and many of discussants pointed out that one way of making the CC sessions attractive was by having coffee ceremonies or tea programs. They reported that previously MEDAN ACTS had enough budgets for coffee or tea ceremonies and many participants, especially house wives and the elderly, took part in CC discussions with utmost interest, but when MEDAN ACTS decreased funding such ceremonies, the number of participants dwindled. According to the facilitators:

CC participants wanted coffee or tea to socialize with other members of their community because sharing tea and coffee is part of Ethiopian communal life (Interviewee 5, Key Informant Interview).

Absence of content experts: This study also found that absence of subject content experts was another challenge for the proper implementation of the CC initiative. Facilitators and some FGD participants reported that on some occasions participants raised issues which were beyond the facilitators' and other participants' knowledge:

For issues that could not be thoroughly discussed and dealt with by facilitators and participants, the participation of other relevant stakeholders such as experts from the medical and other professions could have contributed a lot (Interviewee 3, Key Informant Interview).

Withdrawal of trained facilitators: Beside the above listed challenges the followings are indicated by facilitators and coordinators:

There are no governmental or nongovernmental sectors that support and monitor us except Medan ACTS Adama branch. This has caused lack of motivation among facilitators. Moreover, there is a problem of facilitation skill among facilitators (Interviewee 4, Key Informant Interview).

Lack of meeting hall is the most serious problem for the participant; we are conducting meeting in the street of the town, where we are usually disturbed by noises of a different kind (Interviewee 5, Key Informant Interview).

Sometimes there is disagreement among the participant of the program over money. For example, the group's members usually engage in a conflict during in the decision of how much money have to be save in each month (Discussant, FGD)

In most cases issues raised by communities were not discussed in platforms such as keble and executive meetings so that solutions could be found and feedback given to communities. This was aggravated by the fact that most of the leaders did not attend the community conversations. To some extent, this demoralized both communities and community facilitators. For the later, it made their job difficult as communities lost trust and confidence in them (Interviewee 2, Key Informant Interview).

Lack of adequate attention from responsible agents: All interviewees were with the opinion that the responsible NGOs and GOs were not with the same momentum of commitment to lead and support the CC groups as they used to do at the time the groups were established. Obviously, the sustainability of the CC groups requires them to gradually evolve from dependency to self-sufficiency and the supporting organizations may, therefore, be required to gradually pull their hands out but this has to be a very gradual process.

Discussion

CC program was introduced in Ethiopia by UNDP in 2001 to serve as a strategy for combating HIV/AIDS (9). Since then, it was implemented in different towns and rural communities of Ethiopia. It was introduced in Adama in 2008 and subsequently expanded in to more than 10 CC groups.

Attempts made to unravel its contribution indicated, among others, that the CC program in Adama was indeed able to promote knowledge about HIV/AIDS. Some previous reports about its role have also shown that CC was helping in community mobilization (21), raising AIDS awareness (28) and in breaking the silence of disclosing HIV status (in Alaba and Yabello Districts) (12).In fact, it was found out in another study that CC program is amore powerful strategy of informing the general public about HIV/AIDS (15).

In a similar vein, the CC program was found to promote safer sexual practices. Earlier reports have, corroborating this finding, indicated that CC has been instrumental to reducing risky behaviour towards HIV and encouraging participants to undergo through blood test (13) in Harar (30), Jijiga (31), Mersa, North Wello (18), Alaba and Yabello Districts (9).

The CC programs is again found to help changing those negative (socio-cultural) harmful practices and beliefs that cause the spread of HIV/AIDS in the community and minimize stigma and discrimination in Ethiopia (20. Characteristically, CC is in fact a strategy that encourages communities utilizes their own capacity to prevent the spread of HIV, care for those affected,

change harmful attitudes and behaviors and sustain hope in the midst of the epidemic. Basically, CC is a method of dialogue that has everyone in the community engaged in examining their and the community norms, values and principles and what effect they have on relationships, individuals, families, friends and in particular what effect they have on the HIV epidemic (12).

Hoping for a better future and working towards it by way of mobilizing the resources at their disposal, and concerns for others are still the other important contributions noted in the present research. In a similar situation, it was also noted in earlier reports that the CC programs had contributed in community mobilization in Hawassa and Nekemte (19), developing perspectives that cares for others' business (30), and promoting a sense of compassion (12). These CC participants' self-initiated resource mobilization and concerns for others were not, however, properly guided and supported by relevant agents so that they would ultimately move into fruition.

There are a number of reasons behind the success of the CC programs at large. First and foremost, it may pertain to the very dynamics of groups; that they tend to develop over time like living things. A CC group may begin as a collection of strangers at the beginning, but uncertainty would give way to coherence, collegiality and trust as members become bound to their group by strong social forces (31). In tune with this idea, the experiences of CC participants indicated that CC members tended to move from anonymity, sense of mistrust, feeling of reservation, and limited interaction and communication to a relationship imbued with openness, care and concern for others, and (emotional, material and social) support. This would in turn provide CC participants with opportunities to learn from and influence one another and eventually move into unison; individuals with common visions and plans. CC is commonly characterized as a strategy promoting mutual learning of the parties involved: facilitators with community, community with facilitators, community with community, between community members, organization to organization (12).

What is peculiar about these groups is that it employs pparticipatory approaches with space for listening, inclusion, agreements, expressions of concerns, etc. (10), that there is interaction and cohesiveness among members, that group members perceive themselves as a distinct unit and demonstrate a level of commitment to it, that they share a common purpose or goal for being together, that the group endures for a reasonable period of time (not only for a minutes), and that it has developed some sort of salient 'internal structure' including the regulation of entry into and departure from the group rules and standards of behaviour for members (32). The findings of this research have indicated that the CC groups have a strong sense of cohesiveness that would help freely talking about their problem, disclosing their HIV/AIDS status and working for solutions (10). The practice was that as a partner opens up and discloses the

other ends up disclosing as well. As one partner's disclosure increases in intimacy, so too does the other disclosure. Because self-disclosure is reciprocal, it both influences and is influenced by the intimacy level between two people or group. Disclosure works out uncertainties, sense of mistrust, conflicts, rivalries and gradually opens up the door for cohesiveness which in turn leads to envisioning common goals and then work towards the realization of these goals (e.g. resource mobilization, care and support for others...).

Finally, it needs to be noted that despite the fact that the CC program is with a number of encouraging evidences about its role in preventing and controlling the spread of HIV/AIDS; it also has certain implementation challenges.People working together would inevitably encounter problems coordinating and maximizing their efforts. One can imagine quite a number of (e.g., technical, budget and resource) constraints possibly acting as barriers to the smooth functioning of CC. But, the present research has slightly scratched over this aspect with a felt need to underscore the positive aspect and with an understanding that the challenges were adequately documented in previous (office and research) reports and works (19).

Conclusions and recommendations

It was found out that the CC program was making important contribution in preventing and controlling the spread of the virus because the CC member' shad significantly better awareness about HIV/AIDS than nonmembers, (safe) sexual engagement than non-members, attitude towards and participation in VCT than nonmembers and lesser stigma and discriminatory attitude. A number of other contributions were also captured from the qualitative data. Changing harmful traditional practices, resource mobilization, and care and concern for others were amongst the most recurrent themes that emerged as added contributions of the CC program. We can also conclude that experience sharing, group members' cohesiveness, and self- disclosures were amongst the factors contributing for the success the CC programs. It needs to be noted, however, that these programs were not without problems. Evidences indicated that they are rather with a number of (technical, administrative, and resource) constraints, though such constraints were not found to seriously compromise the contributions of CC so far. In fact, attempts that scale up the CC programs at a national level need to specifically address these limitations beforehand as per the following recommendations:

• To increase utilization of VCT services and to achieve the national ART target set in the Road Map in Ethiopia (20, 21), strengthening large-scale CC programs need to be given more attention;

There is a need for a more operational plan, organizational setup, and resource allocation scheme at national level utilizing CC programs;

- The operational framework for CC still needs to be aligned with the social welfare policy to give space for supporting vulnerable groups in their efforts to terminate their engagement in risky income generating activities like CSW;
- Particularly, NGOs need to be encouraged to fuel further expansion of the CC strategy of community mobilization among different groups;
- While CC groups are expected to be dynamically selfevolving, there has to be a strategy for monitoring their progress towards the desirable end;
- Training and new facilitation skills need to be given at regular intervals for those who are working as CC program trainers and facilitators; and
- The CC program participants' resource mobilization schemes need to be non-sporadic, more systematic, efficient, modernized and supported.

References

- ESPIMS. Ethiopian Strategic Plan for Intensifying multi-Sectoral HIV/AIDS Response 2008.
- FHAPCO.(2010) Federal HIV/AIDS Prevention &ControlOfficeFHAPCO).http://www.unaids.org/en /dataanalysis/monitoringcountryprogress/2010 progress reports submitted countries/ thiopia_2010_country_ progress report ep.df (Accessed September 12, 2011).
- USAIDS. Results of Orphans and Vulnerable Children in Zambia, Lusaka. Unpublished document,
- Central Statistical Agency of Ethiopia and ICF International. Ethiopian Demographic and Health Survey 2011. Addis Ababa, Ethiopia 2012
- FHAPCO. Federal HIV/AIDS Prevention and Control Office (FHAPCO) 2012.
- AVERT. AVERT Organization Information Center on HIV/AIDS.2008 [cited 2013]: Available at: URL:http://WWW.avert.org.
- Auerbach JD, Haves R, Kandathil S. Overview of effective and promising interventions to prevent HIV infection. In Ross David A, Dick Bruce, Ferguson (Edrs), Preventing HIV/AIDS in young people: A Systematic review of the evidence from developing countries. 2010;43-78.
- Campbell C, Foulis A, Maimane S. The impact of social environment on effectiveness of youth HIV prevention. A South Africa case study. AIDS Care 2005;17(14):471-478.
- UNDP. Up-scaling community conversation in Ethiopia: Unleashing capacities of communities for the HIV/AIDS response. UNDP; 2004.
- 10. Goldman BM, Kernis MH. The role of authenticity In healthy psychological functioning and subjective well-being. Annals of the American Psychotherapy Association 2002;5:18–20.
- 11. Valdiserri RO. Ogden McCray LL, Accomplishments in HIV prevention science: implications for stemming the epidemic. Nature Medicine 2003;9:881-886.

- 12. UNDP. Rapid appraisal of the community capacity empowerment program and leadership development for results: Components enhancing an integrated response to HIV/AIDS and poverty program. Unpublished document; 2004.
- Assefa SC. Community conversations on HIV-AIDS

 the superman approach. MPH thesis: Malmo University, 2009.
- 14. .Poku NK, Whiteside A, Kjaer BS (eds). AIDS and governance. Aldershot: Ashagate Press; 2007.
- 15. Byrne A, Hunt J. To change the dance, you must change the music: Youth programs in Ethiopia aimed at HIV/AIDS (cited 2013); Available at: URL:http://www.communicationforsocialchange.org/mazi-articles.php?id=287.
- Office of the Special Advice on Africa (OSAA). Response of universities in Africa to HIV/AIDS: Special attention on Africa. Washington: ADEA Working Paper; 2005.
- 17. Clements M, Prestage G, Grulich A, Van de Ven P, Kippax S, Law MG. Modeling Trends in HIV incidence among Homosexual Men in Australia. *Journal of AIDS* 2006; 35:401-406.
- 18. Bekele S. Assessment of voluntary HIV/counseling and testing service utilization among 15-49 years of age group in Mersa Town of Harbu District, North Wollo, Zone, Amhara Region, Ethiopia. Unpublished document; 2007.
- 19. FHI. Community capacity enhancement-CC. Unpublished document; 2010.
- 20. Federal Ministry of Health (FMOH, Ethiopia. Guideline for implementation of anti-retroviral therapy in Ethiopia: Addis Ababa: FMOH; 2007.
- 21. Federal Ministry of Health (FMOH), Ethiopia. AIDS in Ethiopia (6th ed.). Addis Ababa: FMOH; 2007.
- 22. Tefera B. Research methods. A textbook for graduate students. Addis Ababa University; 2013.

- Russian Academy of Sciences. Sexual behavior Questionnaire: Longitudinal monitoring survey. University of North Carolina at Chapel Hill Institute of Sociology; 2001.
- 24. Margaret T, Lynn R. Risky sexual behavior among Adolescent Women. *Journal of the Society of Pediatrics Nurses* 2000;5(1):15-25.
- 25. Schwartz SJ, Forthun LF, Ravert RD, Zamboanga BL, Umaña-Taylor AJ, Filton BJ, et al. Identity consolidation and health risk behaviors in college students. *Am J Health Behav* 2010;34(2):214-24.
- 26. UNAIDS. Report on the Global AIDS Epidemic Geneva: UNAIDS; 2004.
- 27. EIFDDA. The Ethiopian Interfaith Forum for Development Dialogue and Action (EIFDDA) 2009 annual report (cited 2013); Available at: URL: http://www.eifdda.org/DownloadDoc/ovc_quality_se rvice_mamual.pdf.
- 28. UNAIDS/WHO. Epidemiological fact sheets on HIV/AIDS and sexuality. Geneva: WHO: 2008.
- 29. Getaneh H, Yalemeshet M, Frehywot E, Pose B. CC as a catalyst for stigma reduction and behavior change: Lessons learned from a CARE Project in Ethiopia. Unpublished document; 2008.
- 30. JamilI, Muriisa R. Building social capital in Uganda: The role of NGOs in mitigating HIV/AIDS challenges. Paper presented at the Conference of the International Society for Third Sector Research (ISTR), Toronto, 2004.
- 31. Zenebu Y. Determinants of Counseling and Testing Utilization among Youth in Jigjiga Town, Ethiopia. MPH thesis, 2005.
- 32. Donelson RF. Group dynamics (5thed). University of Richmond; 2010.