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Commercial sex workers in five Ethiopian cities: A baseline survey for USAID Targeted HIV Prevention Program for most-at-risk populations

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COMMERCIAL SEX WORKERS IN FIVE ETHIOPIAN CITIES:

A BASELINE SURVEY FOR USAID TARGETED HIV PREVENTION
PROGRAM FOR MOST-AT-RISK POPULATIONS

COMMERCIAL SEX WORKERS IN FIVE ETHIOPIAN CITIES:

A BASELINE SURVEY FOR USAID TARGETED HIV PREVENTION PROGRAM FOR MOST-AT-RISK POPULATIONS

Woldemariam Girma
Annabel Erulkar

September 2009

With support from the American people, the Targeted HIV Prevention Program (THPP), funded by USAID, is being implemented by a team of four international health organizations: Population Services International (PSI), Abt Associates, EngenderHealth and Population Council. It started operations on March 14, 2008. Though it is a national program, THPP's intervention primarily focuses on the four highly populated regions: Addis Ababa, Amhara, Oromiya and Southern Nations, Nationalities and People's Region (SNNPR). Based on PEPFAR partners' reach Commercial Sex Workers (CSWs), Sexually Active Youth (SAY) and People Living with HIV/AIDS (PLHA) were chosen as the primary targeted most at risk populations (MARPs). THPP is strategically implemented to reach this and other MARPs groups by leveraging PEPFAR and other partners working on HIV/AIDS in Ethiopia.

The aim of THPP is to initiate and support targeted condom promotion services for and increase condom availability to MARPs in major urban centers, transportation corridors, and other hotspot areas. The goal of the project is to reduce the incidence of HIV infections in Ethiopia by increasing correct and consistent use of male condoms among MARPs.

The Targeted HIV Prevention Program (THPP) is supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the largest commitment ever by any nation for an international health initiative dedicated to addressing a single disease. PEPFAR is a multi-faceted initiative for combating HIV/AIDS around the world through programs to prevent HIV infection and provide comprehensive care and treatment to those affected and infected by HIV/AIDS.

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The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
CSW	Commercial Sex Worker
FCSW	Female Commercial Sex Worker
FGAE	Family Guidance Association of Ethiopia
HAPCO	HIV/AIDS Prevention and Control Office
HIV	Human Immunodeficiency Virus
IPC	Intra Personal Communication
M&E	Monitoring and Evaluation
MARPs	Most-at-Risk Populations
PEPFAR	United States President's Emergency Plan for AIDS Relief
PSI	Population Services International
SNNPR	Southern Nations, Nationalities and People's Region
STI	Sexually Transmitted Infection
THPP	Targeted HIV Prevention Program
USAID	United States Agency for International Development

EXECUTIVE SUMAMARY

The Targeted HIV Prevention Program (THPP) for most-at-risk populations (MARPs) is a five-year project, funded by the United States Agency for International Development (USAID) and the United States President's Emergency Plan for AIDS Relief (PEPFAR), promoting correct and consistent male condom use among groups at high risk for HIV infection. THPP is a national program focusing on urban and peri-urban areas of Ethiopia, where HIV prevalence is highest. Population Services International (PSI) leads the THPP project.

In order to contribute to condom promotion strategies, the Population Council undertook baseline surveys among selected MARPs. This report presents findings from a baseline of survey of commercial sex workers (CSWs) that was undertaken in five Ethiopian cities: the national capital, Addis Ababa, and four regional capitals. In order to identify CSWs for the survey, bars, hotels, and red light districts were mapped in each of the five cities, enumerating the approximate number of CSWs that frequent these locations. Establishments were selected proportionate to the size of the eligible population, and CSWs were sampled systematically on-site. In all, 2,050 CSWs were interviewed for the baseline survey.

Sex workers in the study were disproportionately young, with the majority (71%) in their young adult years (aged 15–24), and 33% adolescents (aged 15–19). Respondents came from extremely disadvantaged backgrounds: one-third had never been to school, and 36% had less than seven years of education. While most respondents were never married (64%), the vast majority of ever-married respondents were divorced (87%), reflecting marginalization among this group. A considerable number of respondents were orphans: among those aged 15–19, 41% had lost one parent, and 16% had lost two parents, a factor that may have led respondents to sex work.

Few respondents had any financial support from others such as parents or relatives. However, a considerable proportion (43%) were responsible for providing financial support, especially to children and other family members. Most entered sex work from another profession, mainly domestic work (44%), waitressing (21%), or working in a bar (16%). Most cited negative circumstances or family responsibilities that led them to sex work including escaping other exploitive forms of work such as domestic work (39%), the need to support children (32%), following divorce (29%), following school drop-out or non-attendance (28%), and after death of a parent (22%). This pattern suggests that young women — especially those who are divorced,

with children, or orphaned — need additional support and opportunities, particularly in terms of education, to enter safer and non-exploitive forms of work.

Respondents' mean age at sexual initiation was 15.8, with first sexual partners being boyfriends (38%) or husbands/fiancés (36%). Only 5% had their first sex with a paying client. A significant proportion experienced non-consensual first sex (45%), which is significantly higher compared to similar studies of adolescents in developing countries (see, for example, Jejeebhoy and Bott, 2003).

Most CSWs maintained only commercial / non-regular sexual partners (76%), while one-quarter had regular cohabitating or non-cohabitating partners. Respondents had an average of 4.2 paying clients in the past week, with those working in red light districts having considerably more partners (mean 5.8 partners) compared to those working in hotels or bars (mean 2.9 partners). Some respondents reported violence by their sexual partners, with 7% experiencing violence from their regular partners in the last month, and 10% reporting that at least one of their last five clients was violent with them. Few programs address violence among this marginalized group of Ethiopian women, underscoring the need for additional attention to this issue.

Condom use was very high, with 99% reporting condom use during last sex and 98% reporting consistent condom use with their five most recent non-regular partners. Consistent condom use was lower with regular partners (61%), with significantly lower use among respondents in Mekelle. At the same time, 9% of respondents reported a suspected or confirmed sexually transmitted infection (STI) in the previous 12 months, suggesting that condom use is over-reported or that consistent condom use is a recently adopted practice. Additional research may be needed to explore possible biases in reporting of condom use.

Nonetheless, the high reporting of condom use suggests that HIV programs have been largely successful in promoting condoms within commercial partnerships, but less-so in regular partnerships. HIV prevention programs targeting CSWs should therefore focus specifically on promoting condoms in regular partnerships, as well as reinforcing messages related to condom use with commercial partners. In addition, more focus should be given to CSWs in red light districts, as they have a larger number of clients and a lower level of condom use within their regular partnerships.

Brand choice of condoms was influenced by quality and affordability. Hiwott and Sensation were the most widely used brands, and the main sources were kiosks and groceries. Most respondents were able to pay 0.25 Birr-cents for condoms. Respondents reflected a high level of self-efficacy related to condoms, with 95% reporting that they can obtain a condom easily or somewhat easily, and 75% saying they feel comfortable purchasing condoms. In addition, there is considerable social support to use condoms; 82% of respondents reported receiving peer support and motivation to use condoms, and 72% reported support from other CSWs. Only 25% of employers and 10% of regular partners provide such support, however, suggesting the need for additional advocacy among these groups.

Roughly 71% of the CSWs had ever tested for HIV, and additional efforts should be devoted to providing testing for this at-risk population. Many CSWs disclosed their profession to the service provider when receiving counseling and testing or STI treatment, which allows providers to have a better understanding of clients' risk and provide appropriate support. Only a small minority felt the provider was discriminatory or judgmental, a positive reflection of medical professional who serve these groups.

I. BACKGROUND

Ethiopia is significantly affected by the HIV/AIDS epidemic, with an estimated one million people living with the virus and approximately 2.3% of the population infected (FMOH/FHAPCO, 2007). HIV prevalence among Ethiopian women is 1.5 times higher than among men. The HIV prevalence in urban areas of Ethiopia is an estimated 7.7%, with 9.3% prevalence among women and 6.2% prevalence among men. Biomarker data from the most recent Ethiopia Demographic and Health Survey (EDHS) reflects a particularly high prevalence among women having sexual intercourse with non-marital and non-cohabitating partners (12%) (CSA/Macro, 2006).

Globally and in Ethiopia, commercial sex workers (CSWs) are considered a most-at-risk population (MARP) for HIV infection, and their clients play an important role in the spread of HIV to the general population (Morris, Podhisita, Wawer, et al. 1996). Surveys of Ethiopian CSWs, including biomarker data, demonstrate that this population is disproportionately affected by HIV. The first prevalence study, conducted in 23 urban areas in 1988, revealed a mean HIV prevalence of 17%, with site-specific estimates ranging from 5-38% (Mehret, Khodakevich, Zewdie, 1990a). Other surveys conducted in 1989 and 1990 showed a significant prevalence of HIV among CSWs in Addis Ababa and four major cities, ranging from 25% to 50% (Mehret, Khodakevich, Zewdie, et al., 1990b, FMOH, 1996). A more recent study showed a prevalence of 73% among CSWs attending sexually transmitted infection (STI) clinics in Addis Ababa, though this sample is likely to have a higher prevalence than the general population of CSW (Aklilu, Messele, Tsegaye, et al., 2001). Several risk behaviors, including multiple partnerships, alcohol consumption, and erratic use of condoms have been associated with STIs and HIV among CSWs in Ethiopia (Alem, Kebede, Mitike, et al., 2006).

To reduce the risk of HIV among CSWs and other MARPs, in 2008, the United States Agency for International Development (USAID) contracted Population Service International (PSI) and sub-partners to implement the program "Targeted HIV Prevention Program (THPP) for MARPs." THPP is a program implemented countrywide in Ethiopia, with a focus on urban and peri-urban areas where prevalence is highest. THPP partners work with other HIV implementing partners to ensure availability and distribution of male condoms as well as correct and consistent use of them. Condoms are distributed and promoted through organizations working on HIV prevention, including PEPFAR partners.

In order to inform promotion efforts of implementing agencies, the Population Council undertook baseline surveys of selected MARPs. This report describes findings of the baseline survey among CSWs undertaken in Ethiopia's capital, Addis Ababa, as well as four regional capitals: Adama in Oromiya Region; Hawassa¹ in Southern Nations, Nationalities and People's Region (SNNPR); Bahir Dar in Amhara Region; and Mekelle in Tigray. Results of the baseline research will be used to inform evidence-based interventions for CSWs in Ethiopia.

II. OBJECTIVES

This research serves as the baseline for a condom promotion project to be undertaken in urban and peri-urban areas of Ethiopia. The information will be used to inform appropriate condom promotion efforts undertaken by partner organizations.

The specific objectives of the research are:

- To understand the level of condom use and its determinants among CSWs in urban areas of Ethiopia;
- To understand patterns of sexual behavior among CSWs, including patterns in partnerships, and related risk behavior;
- To understand the experience of CSWs in Ethiopia and the nature and context of transitions to sex work.

III. RESEARCH DESIGN & METHODOLOGY

Those who were eligible for the survey were CSWs aged 15 to 49 working in bars, hotels, red light districts (locations where individual CSWs work from their own homes), and establishments selling locally brewed alcohol. These locations were selected based on earlier studies in Ethiopia enumerating CSWs and mapping their usual locations (FHI & AACAHB, 2002). CSWs soliciting clients on street corners were not eligible for the study because it was not anticipated that THPP implementing partners would promote condoms among this category of CSW. All respondents self-identified as being engaged in commercial sex work. The interviews were undertaken in five urban areas of Ethiopia: Adama, Addis Ababa, Bahir Dar, Hawassa and Mekelle. With Addis Ababa as the nation's capital and the other cities as regional capitals, these areas were identified as HIV hotspots in which the THPP would be implemented. In addition, locations were selected to span the major regions in Ethiopia.

¹ Throughout this report, the capital of SNNPR is referred to as 'Hawassa,' formerly known as 'Awassa.'

The sample size was determined using the following formula and assumptions:

$$n' = \frac{\left(z_{1-\alpha/2} \sqrt{2\bar{P}(1-\bar{P})} + z_{1-\beta} \sqrt{P_1(1-P_1) + P_2(1-P_2)} \right)^2}{(P_1 - P_2)^2};$$

where n' is the minimum sample size per group, $\alpha = 0.05$ (two-tailed test of significance), $\beta = 0.20$ (or $1 - \beta$ power = 0.80), P_1 is the assumed proportion for baseline group, P_2 is the assumed proportion for endline group, and $\bar{P}$ is the average of the two proportions. Including a 20% adjustment for non-response, the sample size was calculated to be 2,450, or 490 CSWs in each location.

The sampling frame was built using mapping techniques. In each city, areas where CSWs are common were identified through consultation with city and kebele² administrators, as well as through reference to previous studies of CSWs conducted in these locations (FHI & AACAHB, 2002). Within these areas, kebele administrators and peer educator CSWs served as key informants to identify establishments where CSWs were located. Hotels, bars, and liquor houses were visited by interviewers to collect information on the number of CSWs as reported by the owner or responsible person, the observed number of CSWs present during the visit, and convenient days and times for follow-up interviews. During this visit, researchers obtained consent from the establishment owner allowing interviewers to return to conduct interviews. In the case of red light districts, key informants were used to indicate the number of houses used by CSWs and number of CSWs working in specified locations.

The number of CSWs sampled per location was proportionate to the number of CSWs working at a given location. Respondents were selected for the survey based on venue-time methods: selection of sample CSWs was made from those present at a given establishment at the survey time. Once at the site, research supervisors determined a sampling interval, mentally numbered CSWs present, and selected respondents for inclusion in the study.

The questionnaire was close-ended and included questions on demographic characteristics; knowledge about STIs, HIV/AIDS, and condoms; sexual behavior and partnerships; and condom use. The questionnaire was drafted in English, translated into Amharic, and pretested through two rounds in Addis Ababa. In cases where the respondent did not speak Amharic or English, interviewers used other regional languages, Tigrigna and Oromiffa.³ Interviewers had a minimum 12th grade education and previous experience on survey research. Interviewers and supervisors took part in a one-day training prior to mapping and a four-day training before conducting the interviews.

² Kebeles are the lowest administrative unit in Ethiopia.

³ Eighty percent of interviews were conducted in Amharic, 19% in Tigrigna, and 1% in Oromiffa.

Selection and interviewing of CSWs was undertaken in late 2008 and early 2009. All respondents provided informed consent to participate in the study. Given the dire poverty of the respondents and the loss of income during the interview, respondents were given bar soap following the interview. The study received ethical approval from the institutional review board of the Population Council as well as the ethnical review board in Ethiopia. The data was entered in CSDPro and converted to SPSS for analysis. All questionnaires are maintained in a locked storage facility of the Population Council for a period of years, before they are destroyed.

The study has limitations. Exclusion of CSWs working on street corners means that our sample may not be representative of all women in sex work. Similarly, all of our respondents identified themselves as commercial sex workers. Our sample was limited to girls and women who admitted involvement in sex work, possibly biasing our information toward respondents who openly engage in this type of work, versus those for whom the work is undertaken covertly.

IV. RESULTS

A. Sample characteristics

In all, 2,050 respondents were interviewed in the five cities, amounting to an 84% response rate. More than half of the respondents were recruited from bars or hotels where they work (53%), while 47% were from red light districts or local liquor houses (Table 1). Respondents were predominantly young. Mean age of the sample was 22 years and one-third of respondents (33%) were in the 15-19 year age group. Respondents were youngest in Bahir Dar — with 48% younger than age 20. CSWs working in bars and hotels were significantly younger than those working in red light districts. On average, respondents working in hotels and bars were younger than those working in red light districts (21.1 years versus 23.5; $p < 0.001$). The young age of sex workers reflected in these data is comparable to similar studies of this group in Ethiopia (DKT, 2008).

The vast majority of commercial sex workers were migrants from other places, mainly rural areas or small towns.

A significant proportion of respondents had never been to school (34%), and only 9% had nine or more years of schooling. Respondents from Bahir Dar and Mekelle were the least educated with more than 40% never having been to school. The main reasons cited for not attending school were poverty/ability to afford schooling (33%), parental disapproval (22%), and death of parents (13%). The vast majority of respondents were migrants to the area (86%), with roughly 27% having migrated to the area in the year prior to survey. Most migrants came from rural areas (41%) and small towns (34%).

Table 1: Demographic characteristics of commercial sex workers, by site, 2008/2009

Background characteristics	Addis Ababa	Bahir-Dar	Adama	Hawassa	Mekele	All Respondents
Place of work*						
Bar/hotel	46.2	42.3	59.6	84.4	30.6	52.6
Red light/ local drink house	53.8	57.7	40.4	15.6	69.4	47.4
Mean age*	21.7	20.6	21.7	21.8	25.2	22.2
Age group*						
15-19	33.2	48.2	34.0	31.8	15.7	32.7
20-24	36.4	33.2	39.3	41.1	39.0	37.8
25-49	22.7	14.6	21.6	19.7	9.0	24.8
Don't know	7.5	3.5	5.1	7.4	0.0	4.7
Highest year school completed*						
None	36.1	45.9	23.3	22.9	41.7	34.0
1-6 years	34.4	32.4	37.9	45.0	31.1	36.1
7-8 years	18.0	14.5	25.5	22.1	22.5	20.5
9+ years	11.5	7.1	13.3	10.1	4.7	9.4
Literacy (reads newspaper)*						
Easily	46.1	35.4	51.3	51.1	38.0	44.4
With difficulty	13.8	14.4	19.3	17.5	17.0	16.4
Not at all	40.1	50.2	29.4	31.3	44.9	39.2
Marital status*						
Never married	66.8	71.2	61.0	66.3	55.1	64.1
Currently married	1.2	0.2	0.7	0.0	2.9	1.0
Divorced/separated	30.2	27.3	36.1	32.2	37.7	32.7
Widowed	1.7	1.2	2.2	1.5	4.2	2.1
Has children*	30.1	22.0	42.5	35.7	57.5	37.6
Migrant to the location*	84.3	91.6	87.5	95.8	70.3	85.9
(N)	416	407	412	407	408	2050

* Differences between groups significant at $p < 0.001$

B. Families & living arrangements

Only 40% of respondents had two living parents, while 40% had lost one parent, and 20% were double orphans. Among adolescents aged 15 to 19, 57% had lost at least one parent, and 16% were double orphans, which is a significantly higher rate of orphanhood compared to other studies of adolescent girls in urban areas of Ethiopia (Erulkar and Ferede, 2009; Erulkar et al., 2004). Among those who had lost a parent, 5% reported that the death was AIDS-related, while 27% were not sure if AIDS was the cause of death.

Two-thirds of respondents (64%) had never been married. However, among the 36% of respondents who had ever been married, 87% were divorced. Among ever-married respondents, median age at first marriage was 15. Fifty-six percent of first marriages were arranged by families, and 44% were

Among commercial sex workers in the study, 40% had lost one parent and 20% were double orphans. Most sex workers had never been married. Among those that had been married, 87% were divorced.

chosen by the bride and groom. Arranged marriages occurred at significantly younger ages than chosen ones (mean age of 13.5 versus 17.2; $p < 0.001$). However, there was no significant difference in divorce rates among marriages that were arranged versus chosen.

Thirty-seven percent of respondents had at least one child. Most mothers in the sample had one child (73%) or two children (18%). Those with children were significantly more likely to have been married; 64% of ever-married respondents had children compared to 22% of never married respondents. Twelve percent of respondents reported that they would like to get pregnant in the next 12 months.

While 37% of respondents have children, only 16% are living with their children.⁴ Other than their own children (16%), most respondents lived away from family members. Only 6% of CSWs lived with an adult member of their family (parents, siblings, or other relatives). One-quarter (25%) lived with co-workers; 15% with female friends; and 15% with employers. Most respondents either rented their dwelling places (51%) or were provided a place to stay by their employer (40%), including 57% of respondents working in bars or hotels.

C. Livelihood patterns

While 43% of respondents are providing financial support for others, few (11%) received any such support. On average, CSWs were supporting one to two other people, other than themselves.

Pathways into sex work

On average, girls and women in the sample started paid work at age 17.3, while sex for pay started roughly two years later, at age 19.3. Prior to becoming a sex worker, most respondents were working in domestic work (44%), waitressing (21%), working as a barmaid (16%), engaged in manual labor (7%), or making local brews (6%). The finding that many sex workers in poor urban areas of Ethiopia start work life in domestic work has been supported anecdotally in other studies, given the long hours and low pay involved in domestic work (Erulkar and Mekbib, 2007).

Respondents were read a list of circumstances and asked if each led to their initiation into sex work. The vast majority of CSWs (85%) initiated sex work following a negative event such as escaping abusive work, such as domestic work (39%), following a divorce (29%), following school drop-out (28%), and following death of a parent(s) (22%) (Table 2). Thirty-two percent reported the need to support children as a reason for starting sex work.

⁴ Data was not collected on the living arrangements of respondents' children.

Table 2: Context of initiating sex work (n=1,983)

	Percentage ^a
To escape other forms of abusive work such as domestic work	38.5
To support children/other family members	32.0
Following divorce	29.0
After drop out from school	28.2
After death of parents	21.5
After abandonment by family	13.0

^a Percentages may sum to over 100, as more than one response was possible

Fifty-two percent of respondents reported having been pressured by peers/friends and 2% reported pressure from family members to enter sex work. Those reporting pressure from friends were significantly more likely to be young (aged 15–19) compared to those aged 25 and over (41% versus 21%; $p < 0.001$).

Earnings from sex work

For most respondents (96%), sex work was their main source of income, though a few reported work as barmaid or making local brews as their main income source. On average, respondents were working 37.5 hours per week and earning 912 Birr (US\$73) per month from sex work. CSWs in Addis Ababa earned the most, with about 1352 Birr (US\$108) in monthly earnings. CSWs in Bahir Dar and Mekelle earned the least (608-636 Birr; US\$49-51 per month). CSWs who worked in licensed establishments, bars, and hotels, earned significantly more (average of 1171 Birr per month; US\$94) than those who worked in informal settlements such as red light districts or informal brewing houses (625 Birr; US\$50). However, respondents working in red light districts also worked fewer hours, an average of 34 hours per week, compared to 41 hours worked by CSWs in bars and hotels, a difference that was statistically significant. While number of hours worked did not differ significantly by age group, younger respondents reported earning more than older respondents, with girls aged 15-19 earning an average of 1068 Birr (US\$85), compared to those older than age 25 earning 625 Birr (US\$50), difference that was statistically significant. In addition to cash earning, some respondents received other payments in-kind such as clothing (14%) and housing (13%).

D. Sexual activity & partnerships

Sexual initiation

Seventy-seven percent of respondents first had sex before age 18, with 23% before age 15. Mean age at first intercourse was 15.8, with no significant

Prior to becoming sex workers, respondents were mainly domestic workers (44%) waitresses (21%) or barmaids (16%).

The vast majority of commercial sex workers reported starting the work following negative events in their lives such as escaping domestic work, follow a divorce, or following death of a parent.

The level of violence and coercion experienced during first sexual intercourse was high.

differences between regions. First sexual partners were mainly boyfriends or fellow students (38%) or husbands/fiancés (36%). Only 5% first had sex with a commercial client who paid them. Only 17% of respondents used a condom during first intercourse.

The first sexual experiences of respondents reflected significant levels of violence and coercion (Table 3). Forty-five percent reported at least one form of coercion including insistence (31%) and physical force (30%) on behalf of their sexual partner. This level of violence and coercion is significantly higher than other studies of girls' sexual initiation in urban Ethiopia (Erulkar and Ferede, forthcoming). Those whose sexual initiation occurred at younger ages were more likely to have been victims of non-consensual first sex. On average, coercion victims experienced first sex at age 15.4, compared to 16.2 among girls for whom first sex was wanted, a difference that was statistically significant. The highest levels of coerced first sex were reported by respondents from Bahir Dar (55%), followed by Hawassa (48%), Addis Ababa (47%), and Adama (44%), and Mekelle (30%), which is consistent with similar estimates of coercion for urban females in Ethiopia.⁵

Table 3: Percent of respondents experiencing coercive first sex (n=2,040)

	Percentage ^a
Man/boy insisted/would not take 'no' for an answer	31.4
Physical force used	29.6
Partner hit/beat you to have sex	12.7
Drugs/alcohol were used to obtain sex	9.9
Any form of coercion	44.8

Sexual partnerships

Sexual partnerships were categorized as 'regular' or 'non-regular' in the questionnaire. The questionnaire defined three categories of regular partnerships: 1) a man who is married to the respondent, either legally or customarily, 2) a man who is not married to the respondent, but who has sexual relationship with the respondent and lives with the respondent ('co-habiting partner'), and 3) a man who has a sexual relationship with the respondent, but is neither married to nor living with her ('non-cohabiting partner'). Non-regular partners include casual partners or commercial clients.

More than three quarters (76%) of the respondents had only commercial clients (Figure 1), and 24% reported having regular partners in addition to commercial clients in the month prior to survey. Among these, 3% had husbands or co-habiting partners and 21% had non-cohabiting partners.

⁵ A study conducted in low income urban areas Addis Ababa, Bahir Dar and, Gondar found that 29% of sexually experienced girls aged 10-19 experienced non-consensual first sex. See Erulkar and Ferede (forthcoming).

A relatively high proportion of the CSWs in Addis Ababa and Mekelle were married or had cohabiting partners (Table 4). The duration of the relationship with the last regular partner was an average of 16 months, and the mean age difference between respondents and their regular partners was 6.4 years.

Regular partnerships included experiences of violence. Among respondents with regular partners, 12% experienced violence from their partners with 7% experiencing violence in the last month. Thirty-nine percent of respondents with regular partners reported that they are unable to refuse their partners sex. Further, 40% reported that their partners regularly consume alcohol.

Commercial clients

Respondents reported an average of four commercial clients in the last seven days. CSWs in Addis Ababa and Mekelle had a higher number of clients weekly (more than five) compared with the other cities, a difference that was statistically significant (Table 5). Respondents working in red light districts from their homes had significantly higher numbers of clients (average of 5.8

Table 4: Type of partnerships and characteristics of regular partnerships, by city

	Addis Ababa (n=416)	Bahir Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekelle (n=408)	All (n=2,050)
Married or cohabiting partner	5.0	2.0	1.9	1.5	5.2	3.1
Regular, non-cohabiting partner	25.1	13.4	26.8	31.8	9.1	21.2
Commercial partners only	70.0	84.6	71.3	66.7	85.7	75.6
Age difference with regular partner (mean)*	6.6	6.0	6.8	6.9	4.5	6.4
Duration of relationship with regular partner (mean in months)*	12.7	12.9	16.3	15.1	25.5	15.8

* Among those with regular partners

clients) than those working in hotels and bars (2.9) over the last seven days. The mean number of commercial clients on the last working date was 1.7, with an average of 2.1 acts of intercourse during that time.

Table 5: Pattern of commercial clients among CSWs, by city

	Addis Ababa (n=416)	Bahir- Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekele (n=408)	All (n=2,050)
No. of clients in last 7 days (mean)*	5.3	4.6	3.5	2.8	5.2	4.2
Red light district/ home-based	7.9	6.4	4.6	3.9	5.6	5.8
Hotel/bar-based	3.2	2.5	2.9	2.6	4.2	2.9
No. of clients on last working day (mean)*	2.5	1.6	1.4	1.3	1.6	1.7
No. of sex acts on last working day (mean)*	2.6	2.2	2.1	2.0	1.8	2.1

* Differences between groups significant at $p < 0.001$

When asked about their five most recent commercial partners, 10% of respondents reported that at least one was violent with them.

E. Knowledge & attitudes related to HIV/AIDS and STIs

Table 6 shows respondents' levels of knowledge related to HIV and AIDS. A high proportion knew that one can get HIV by having unprotected sex (95%) and that correct and consistent condom use protects from HIV transmission (94%). Respondents were also aware that abstaining from sexual intercourse (76%) and limiting sex to one uninfected, faithful partner (65%) can prevent HIV transmission. Nearly all (98%) were aware that injections with a needle that has previously been used poses an HIV risk. Despite these high levels of knowledge, there were also some misconceptions; for example, only 52% knew that HIV cannot be transmitted by mosquitoes.

Table 6: Knowledge related to HIV and AIDS (n=2,050)

	Percentage(%)
Know that one can get HIV through injections with a needle that has already been used	98.0
Know that a person can get HIV from unprotected sex	95.3
Know that consistent and correct use of condom protects from HIV infection	93.5
Know that there is medical treatment to support HIV-positive people	84.4
Know that people can protect themselves from HIV by abstaining from sex	76.2
Know there is no cure for HIV	72.6
Know that one can protect oneself from HIV by having one faithful uninfected partner	65.1
Know that person cannot get HIV from mosquito bites	51.9

Overall, 70% had received counseling and testing (CT) for HIV. A larger percentage of respondents from Adama (77%) and Addis Ababa (74%) had been tested. Those in Mekelle were the least likely to report being tested (62%) followed by Bahir Dar (65%). Most decided to have the test because of curiosity about their status (61%), followed by their sexual behavior (15%), experiencing sickness (6%), and condom breakage (6%). Most of those tested had done so in the previous 12 months (74%), and 65% of those who have tested had done so more than once. Sixty-nine percent of respondents receiving CT revealed their profession to the counselor, and only 3% felt the provider was discriminatory or judgmental.

Table 7: Knowledge of STI symptoms in Women (n=2,050)

	Percentage
Genital ulcers / sores	36.7
Discharge	36.0
Burning pain during urination	33.6
Itching	30.8
Foul smelling discharge	25.9
Swelling in the groin area	21.5
Abdominal pain	7.4
Could not name any STI symptom	43.5
Named three or more symptoms	28.4

Eighty-four percent of respondents knew of STIs other than HIV. However, respondents were relatively less knowledgeable about the symptoms of STIs (Table 7): 44% could not name any symptoms, and only 28% could name three or more symptoms.

When asked about experiences of symptoms in the previous 12 months, 16% of respondents reported painful urination, 7% reported discharge, and 4%

The majority of CSWs knew of STIs, HIV/AIDS and condoms. Radio was the most important media in conveying information to CSWs.

Condom use by commercial sex workers was reportedly high with paying clients, but relatively low with regular partners.

reported a genital ulcer or sore. Nine percent of respondents reported they had experienced a suspected or confirmed STI in previous 12 months, and 9% received treatment for the infection. Reporting of STIs in the previous year was highest among respondents from Bahir Dar (15%), Adama (10%), and Hawassa (9%). The most common place for CSWs to seek treatment were private clinics (42%), government hospitals/clinics (33%), and public health centers/health posts (23%). Five percent of respondents received treatment from private pharmacies, and 4% received holy water. The majority (78%) disclosed to the provider that they were engaged in sex work, and only 3% felt the provider was discriminatory or judgmental as a result.

F. Level and dynamics of condom use

Only eight of 2,050 respondents reported having never used a condom (<1%). Patterns of condom use varied depending on whether the partner was regular or non-regular. More than 99% of respondents used a condom with their most recent commercial client, a finding is consistent with other studies of sex workers in Ethiopia (DKT, 2008). Consistent condom use was also very high for the last five non-regular/commercial contacts (99%), with consistent use slightly lower in Bahir Dar (96%). Among respondents with regular partners, 62% reported always using a condom; 32% reported never using a condom; and 6% reported occasional use. Estimates for condom use among regular partners were lowest among respondents from Mekelle, less than half the national average.

Table 8: Patterns of condom use during last intercourse and with most recent partners, by type of partner and city

	Addis Ababa (n=416)	Bahir-Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekelle (n=408)	All (n=2,050)
Non-regular/commercial partners						
Used condom with most recent non-regular/commercial partner	99.5	98.5	99.3	99.8	99.8	99.5
Used condoms with last five non-regular/commercial partners	98.5	96.2	99.3	99.3	99.3	98.5
Regular partners (husbands, boyfriends)*						
Used condom with most recent regular partner	70.6	60.0	66.1	64.9	31.0	62.0
Consistent condom use with regular partner in the last month	67.0	61.0	62.7	68.1	29.3	61.0

* Among those with regular partners

Figure 2 shows patterns of condom use by relationship type. Among respondents with husbands, only 39% used condoms consistently, compared to 65% of those with boyfriends. In contrast, over 99% of the respondents always used condom with their commercial clients.

The main reasons for non-use of condoms with regular partners are presented in Figure 3. Reasons for non-use did not differ significantly between women who had regular co-habiting partners and those who had non-cohabitating boyfriends. A high proportion (59%) mentioned trust as a reason for condom non-use with their husbands or other regular partners, as well as that there was no risk of HIV transmission in the relationship (10%). A considerable number of respondents reported that their partners refused condoms (17%), and 3% feared violence from their partners if they requested using a condom.

"Hiwot Trust" and "Sensation" brand condoms were most preferred, largely because respondents perceived them as high quality.

Preferred condom brand and sources

The most common brands of condoms used regularly by respondents were Hiwot Trust (62%), Sensation (60%), and French Feeling (5%). Less than 1% reported using Durex or unbranded condoms. Main reasons cited for choice of condom were quality, followed by affordability, and availability (Table 9). Color, odor, and size contributed less to choice of a specific condom brand. Unbranded condoms, such as those promoted under THPP, were not in use during the time of survey.

Table 9: Reasons for preferred brand of condom

Reason	Percentage ^a
Quality	60.0
Affordable price	27.3
Prefer odor	9.6
Like how it feels	8.1
Prefer size	7.9
Provided by partner	6.7
Prefer color	5.3

^a Percentages may sum to over 100 as more than one reason was possible

Figure 4 shows the most common sources of condoms among respondents. Most obtained condoms from kiosks or shops (68%), followed by bars/night clubs (33%). A considerable proportion of the respondents also cited sex partners and street vendors as their sources. Other sources mentioned included Family Guidance Association of Ethiopia and peer educators, especially among respondents in Bahir Dar.

Figure 5 shows the amounts respondents' were willing to pay for condoms, as well as what they have paid in the recent past. About half (56%) were willing to pay 25 Birr-cents or less for a single condom, and 25% were willing to pay between 26-50 Birr-cents. Only 7% were willing to pay one Birr or more.

The amount respondents were willing to pay was lower than what was actually paid when the price was more than 25 cents. On the other hand, when the price of a condom was 15 cents or less, respondents were willing to pay more.

Condoms appeared to be easily accessible to respondents.

Attitudes & beliefs about condoms

Respondents were read a series of questions related to attitudes and beliefs about condoms and asked to respond (Table 10). A considerable proportion (61%) wrongly believed that using two condoms is better than one. Roughly half believed that condoms decrease men's pleasure, and 20% believed that condoms decrease women's pleasure. More than 40% of respondents believed that people who use condoms are generally promiscuous.

Table 10: Beliefs and attitudes about condoms (percentage agreeing with statements) (n=2050)

	Percentage
Using two condoms at the same time is better than using just one	60.8
Condoms decrease men's pleasure	46.5
Most people who use condoms are promiscuous	42.1
Condoms decrease intimacy or emotional closeness	33.7
Condoms break easily	28.7
Condoms decrease women's pleasure	21.2
Condoms are too tight	20.7

Opportunities, ability and motivation

Condoms appeared to be easily accessible to respondents (Table 11). Eighty-six percent reported that affordable condoms are available, and the average time to travel to their preferred source of condoms was only four minutes. Fewer than 5% of respondents had to travel more than five minutes

Respondents reported a highly supportive environment for condom use; 82% have at least one friend or associate who supports and motivates them to use condoms.

to obtain a condom. About one-quarter of respondents had experienced stockouts from their preferred condom source, but the vast majority (94%) were able to obtain condoms from an alternate source.

Table 11: Patterns of availability and accessibility of condoms (n=2,050)

	Percentage
Condoms are bought or given	
Bought by respondent	76.5
Given to respondent	2.6
Both bought and given	20.9
There are condoms sold at affordable prices	86.1
Average time to source of condom (minutes)	4.1 minutes
Current source is preferred source of condom	96.4
Experienced stockout of condom at usual source	26.1
When stockout experienced, was able to get from other source	94.3

The majority of respondents (95%) reported that they can obtain condoms with ease, either 'very easily' (49%) or 'somewhat easily' (47%), which reflects the considerable availability of condoms (Table 12).

Likewise, there is a high level of self efficacy among CSWs towards condom use. Three-quarters of respondents felt comfortable buying and carrying condoms, and requesting that their partner use one. Feelings of self-efficacy as reflected in the four statements presented in Table 12 were highly correlated. Sixty-six percent of respondents agreed with all four statements, while 19% disagreed with all four. Measures of self-efficacy were highest in northern regions, with 89% of respondents in Mekelle respondents and 80% of those Bahir Dar agreeing with all four statements related to ability/self-efficacy to use condoms. In contrast, only 49% of respondents from Addis Ababa agreed with all statements.

Respondents reflected a highly supportive environment for condom use. Eighty-two percent reported at least one person who supports and motivates them to use condoms, and 68% had someone to talk to about condoms. Most of these supporters were other CSWs (71%). Fifty-three percent of respondents reported that their clients support condom use. However, only 24% were motivated and supported by their employers, and only 10% by their regular partners.

Table 12: Opportunities, abilities, and motivations related to condoms use

	Percentage
Opportunity/availability	
Finds condom very easily	48.6
Finds condom somewhat easily	46.9
Finds condom not easily	4.5
Ability/self efficacy	
Feels comfortable buying condoms	75.1
Feels comfortable carrying condoms in bag	74.5
Feels comfortable requesting my partner to use condoms	74.4
Feels comfortable putting condom on my client	72.9
Feels comfortable in all four circumstances (above)	66.1
Motivation/social support	
There is someone who motivates and supports my condom use	81.8
Other CSWs motivate and support condom use	71.2
Talks to someone when having questions or concerns about condoms	67.9
Clients motivate and support condom use	53.1
Employer motivates and supports condom use	23.7
Non-CSW friends motivate and support condom use	18.1
Regular sexual partner motivates and supports condom use	10.3

Factors associated with consistent condom use

Multivariate logistic regression was used to identify factors that are significantly associated with the likelihood of condom use. We considered only consistent condom use among respondents with regular partners, as there was nearly universal use of condoms with non-regular partners (Table 13).

Three variables were included to reflect opportunity/availability, self-efficacy, and motivations to use condoms. Those who reported they can access condoms 'very easily' were coded as having opportunity/availability to use condoms. Self-efficacy was measured by asking respondents if they felt comfortable buying, carrying, negotiating, and placing condoms on partners. Those who answered 'yes' to all four questions were coded as having self-efficacy related to condom use. Motivation was measured by asking respondents if their regular partner motivates and supports them in condom use.

Three characteristics were significantly associated with consistent condom use with regular partners: location of respondent, respondents' place of origin, and type of partnership. CSWs in Mekelle were 82% less likely to use condom consistently with their most recent regular sex partners, compared to those from other locations. This finding seemingly contradicts the high levels of self-efficacy measured among respondents in Mekelle. Respondents were nearly three times as likely (OR=2.7) to use condoms with non-cohabiting regular partners, compared to their husbands or other partners with whom they live. CSWs who moved to their current place of residence from big cities were more than twice as likely (OR=2.1) to use condoms with regular partners, compared

to those who moved from rural areas. Notably, none of the indicators reflecting opportunity/ability, self-efficacy, or motivation were significantly associated with the likely of using condoms consistently with a regular partner.

Table 13: Adjusted odds ratios (and 95% confidence intervals) from logistic regression for predictors of consistent condom use with regular partners (n=443)

	Adjust OR	95% confidence interval
City		
Addis Ababa (ref)	1.00	
Bahir-Dar	0.78	(0.38 – 1.63)
Adama	0.74	(0.41 – 1.34)
Awassa	0.88	(0.49 – 1.57)
Mekelle	0.18	(0.08 – 0.39)***
Type of Venue		
Red-light/local drink house (ref)	1.00	
Bar/Hotel	0.85	(0.52 – 1.38)
Age of respondent		
15-19 (ref)	1.00	
20-24	1.07	(0.64 – 1.78)
25+	1.08	(0.48 – 2.47)
Don't know	0.76	(0.31 – 1.90)
Educational Status		
Illiterate (ref)	1.00	
1-6 Grade	0.92	(0.52 – 1.63)
7-8 Grade	1.01	(0.52 – 1.93)
9+ Grade	1.25	(0.53 – 2.93)
Age at first sex for money	1.05	(0.96 – 1.15)
Migrate to current place from		
Rural (ref)	1.00	
Small city	1.35	(0.77 – 2.38)
Big city	2.12	(1.13 – 3.98)*
Resident since birth	1.88	(0.90 – 3.93)
Partnership status		
Regular husband/cohabiting (ref)	1.00	
Regular & non cohabiting	2.72	(1.41 – 5.23)**
Number of information sources on HIV or condom		
None (ref)	1.00	
One or two	0.86	(0.46 – 1.59)
More than two	1.43	(0.66 – 3.09)
Opportunity/availability: Can access condoms 'very easily'		
No (ref)	1.00	
Yes	1.06	(0.74 – 1.59)
Self efficacy to buy, carry and use condoms		
No (ref)	1.00	
Yes	1.24	(0.80 – 1.92)
Regular partner motivates/supports condom use		
No (ref)	1.00	
Yes	0.89	(0.58 – 1.37)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

G. Media access and preferences

The THPP includes media interventions promoting use of condoms, intended to be aired when MARPs are likely to be listening. Table 14 shows access to and listenership of radio, as well as preferred stations and listening times. Only 44% of respondents own a radio, but 73% are able to listen regularly. Radio is the most common information source about condoms (73%), followed by television (45%). These are also the sources preferred by respondents. Preferred radio stations include FM 97.1 (31%) and Ethiopian Radio (22%). Regional FM stations were also the preferred choice by residents of corresponding cities. Morning hours were the preferred time to listen to radio (47%), as were the weekends, preferred by more than 60% of respondents.

Table 14: Media access and preferences (n=2,050)

	Percentage
Owns radio	43.5
Listens to radio regularly	73.2
Has listened to radio in the last week	61.6
Received information on condoms in last three months from:	
Radio	72.7
Television	44.6
Magazine	11.4
Billboards	11.3
Newspapers	9.4
Pamphlets/flyers	8.8
Other	17.0
Preferred source for information on condoms	
Radio	71.3
Television	46.8
Magazine	12.6
Newspapers	10.7
Billboard	10.3
Pamphlets/flyers	9.9
Other	24.0
Preferred radio station	
FM 97.1	31.4
Ethiopian Radio	22.3
FM 96.3	7.0
FM 98.1	5.0
FM 102.3	4.4
Radio Fana	4.3
Preferred time to listen radio	
Early morning	3.1
Morning	46.8
Midday/lunch time	13.4
Early afternoon	17.7
Late afternoon	7.9
Evening	8.6
Late evening	2.5
Days most often listen to radio	
Monday	40.6
Tuesday	41.7
Wednesday	43.8
Thursday	40.4
Friday	40.3
Saturday	67.3
Sunday	64.0

V. CONCLUSIONS & RECOMMENDATIONS

This study serves as the baseline survey for the THPP for MARPS and provides valuable insights into the lives of CSWs in Ethiopia, as well as direction for project interventions. More than 2,000 CSWs were sampled from bars, hotels, and red light districts in five major towns of Ethiopia. Respondents were extremely young, with the majority younger than age 25. They came from extremely disadvantaged backgrounds, with low levels of education, and many were orphans and/or divorcees, conditions that may have contributed to their entry into sex work. Indeed, most cited negative circumstances that led them to sex work including escaping other exploitive forms of work, following divorce, following school drop-out or non-attendance, and following death of a parent. This pattern suggests that young women—especially those who are divorced, with children, or orphaned—need additional livelihoods support and opportunities to enter safer and non-exploitive forms of work, as well as expanded educational opportunities.

Respondents' mean age at sexual initiation was 15.8, with first sexual partners being boyfriends (38%) or husbands/fiancés (36%). A significant proportion of respondents experienced non-consensual first sex (45%), which is significantly higher than similar studies conducted in developing countries (see, for example, Jejeebhoy and Bott, 2003). Most CSWs maintained only commercial / non-regular sexual partners (76%), while one-quarter had regular cohabitating or non-cohabitating partners. Respondents experienced violence within their regular partnerships, with 7% having experienced violence from their regular partners in the last month. In terms of commercial partners, respondents had an average of 4.2 paying clients in the past week, with those working in red light districts having more partners (mean 5.8 partners) compared to respondents working in hotels or bars (mean 2.9 partners). Ten percent of respondents reported that at least one of their last five clients was violent with them. The experience of violence contributes to diminished ability to use condoms, in addition to a host of other negative outcomes. Few programs address the experience of violence among Ethiopian women, generally, or among marginalized groups or women, specifically, who are at high risk of being victims of violence. It is recommended that HIV prevention programs address the experience of gender based violence and undertake strategies to reduce its occurrence.

There was a very high level (99%) of condom use during the last sex and consistent condom use with the five most recent non-regular partners (98%). Consistent condom use was lower among those who with regular partners (61%). However, the fact that one out of ten respondents reported an STI

in the last year suggests either misreporting of condoms or STI transmission with regular partners. Additional research is needed to understand potential biases in reporting of condoms use. HIV prevention programs targeting CSWs should specifically focus on promoting condoms in regular partnerships. In addition, more focus should be given to CSWs in red light districts as they have a larger number of clients and a low level of condom use within their regular partnerships.

Quality and affordability were two characteristics influencing brand choice of condoms. Most respondents were able to pay 0.25 Birr-cents for condoms. Respondents reflected a high level of self-efficacy related to condoms, with 95% reporting that they can obtain a condom 'easily' or 'somewhat easily', and 75% saying they felt comfortable purchasing condoms. In addition, there is considerable social support to use condoms; 82% of respondents reported receiving peer support and motivation to use condoms and 72% reported support from other CSWs. Only one-quarter of employers and 10% of regular partners provide such support, however, suggesting the need for additional awareness-raising among these groups.

Among respondents reporting a suspected STI, most described visiting private clinics, followed by government clinics. Among those who disclosed their professional status to service providers, the vast majority felt no discrimination from them, reflecting a high degree of professionalism among service providers.

The findings suggest that CSWs in Ethiopia come from extremely vulnerable circumstances, leading them to enter sex work. CSWs have experienced high levels of violence, both during their sexual initiation and in regular and commercial partnerships. Many are orphans or come from broken marriages. HIV prevention efforts should go beyond raising awareness and information levels, to address the lack of opportunities and support available to many vulnerable young women in the country.

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APPENDIX

Table A1. Main sources of condoms by city

Source of condom	Addis Ababa	Bahir Dar	Adama	Hawassa	Mekelle	All cities
Kiosk/shop	65.6	61.5	66.9	56.4	56.4	56.4
Bar/night club	33.0	31.9	37.2	53.7	7.9	32.8
Street vendor	18.1	8.3	22.2	21.4	21.4	16.5
Peer educator	1.2	19.2	4.4	1.2	1.2	11.4
Sex partner	8.5	8.5	10	11.9	11.9	9.4
Pharmacy	9.7	2.0	4.6	3.7	4.0	4.8
Other	2.5	25.8	10.7	10.6	10.6	15.9

Table A2. Availability and accessibility of condoms, by city

	Addis Ababa (n=416)	Bahir-Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekelle (n=408)	All (n=2,050)
Buy condoms or given to you						
Buy	90.0	88.3	77.4	91.4	35.1	76.5
Given to respondent	1.3	1.5	4.1	2.0	4.0	2.6
Both bought and given	8.7	10.2	18.5	6.7	60.9	20.9
There are condoms sold at affordable price	81.5	89.3	83.7	85.4	90.5	86.1
Received free condom in past three months	20.2	27.9	35.9	17.6	65.3	33.3
Time to reach source of condom:						
<= 5 minutes	88.0	88.3	85.6	92.0	81.8	87.1
6 – 10 minutes	6.8	7.2	8.9	4.9	12.4	8.1
11-30 minutes	5.1	3.7	5.0	2.8	5.5	4.4
More than 30 minutes	0.0	0.7	0.5	0.3	0.2	0.3
Average time to condom source (minutes)	4.1	4.3	4.0	3.0	5.2	4.1
Current source is preferred source	94.9	96.3	95.6	95.8	99.5	96.4
Ever encountered stockout at source	38.0	23.8	24.1	31.1	13.1	26.1
Why use their preferred brand of condom						
Quality	42.1	70.1	56.9	51.6	80.0	60.0
Affordable price	37.5	21.0	21.7	24.2	31.9	27.3
Fashionable	9.2	2.5	13.9	11.6	10.6	9.6
Like how it feels	8.5	3.5	6.3	6.7	15.3	8.1

Table A3. Proportion of CSWs counseled & tested for HIV, by city

	Addis Ababa (n=416)	Bahir Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekelle (n=408)	All (n=2,050)
Ever counseled for HIV testing	74.8	68.8	78.1	70.2	64.1	71.2
Decided to test after counseling	95.8	85.6	96.6	92.7	90.5	92.4
The last test was						
<= 3 months ago	26.7	44.5	32.6	28.0	35.0	32.9
3-6 months ago	29.7	25.6	25.5	23.5	21.5	25.4
6-12 months ago	19.6	13.9	15.8	14.8	12.2	15.5
>=12 months ago	24.0	15.1	25.8	32.2	30.4	25.6
Don't remember	0.0	0.8	0.3	1.5	0.8	0.7
Number of times tested						
Once	25.6	35.3	34.3	41.9	36.6	34.4
Twice	21.8	30.3	24.6	27.9	28.7	26.4
Thrice	24.9	22.7	20.4	14.3	15.6	19.7
Four or more times	27.6	11.8	20.7	15.8	19.4	19.4
The reason for the last test was:						
Sick	6.4	4.6	7.7	5.7	6.7	6.3
Requested by partner	2.4	2.9	1.9	1.9	1.3	2.1
Before engagement	0.0	2.1	1.3	1.5	1.3	1.2
Curiosity	54.1	59.2	58.7	64.9	67.2	60.5
Condom breakage	6.8	4.6	3.2	3.4	12.8	5.1
Infidelity of self	11.5	29.0	9.0	15.1	11.6	14.8
Infidelity of partner	1.0	2.1	1.6	4.2	1.4	2.0
Other	26.4	10.1	21.0	12.5	7.6	16.3
Received the most recent test result	95.9	96.2	96.2	91.7	92.8	94.6
Revealed sex worker status to counselor	58.0	84.4	84.4	63.4	92.8	69.4

Table A4. Knowledge of HIV transmission and prevention, by city

	Addis Ababa (n=416)	Bahir Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekelle (n=408)	All (n=2,050)
Know that consistent & correct condom use protects from HIV infection	94.9	94.3	92.2	91.2	94.9	93.5
Knows that one can protect oneself from HIV by having one uninfected faithful partner	62.8	65.7	62.4	54.1	80.8	65.1
Knows that person can get HIV from unprotected sex	94.7	96.5	93.9	92.4	98.8	95.3
Knows that people can protect themselves from HIV by abstaining from sex	77.8	79.4	71.5	69.0	83.3	76.2
Knows that one can get HIV from injections with a needle that has been previously used	96.4	98.5	98.3	97.5	99.5	98.0

Table A5. Media access and preferences, by city

	Addis Ababa (n=416)	Bahir Dar (n=407)	Adama (n=412)	Hawassa (n=407)	Mekelle (n=408)	All (n=2,050)
Own a radio	49.5	44.9	30.7	26.5	66.1	43.5
Listen to radio regularly	76.2	77.4	73.7	83.5	55.0	73.2
Received information on condoms in the last three months from:						
Television	31.8	49.0	46.8	38.3	56.9	44.6
Radio	79.1	75.4	67.6	78.4	63.3	72.7
Newspapers	9.9	10.4	10.7	12.5	3.5	9.4
Magazine	10.8	12.2	13.2	13.5	7.1	11.4
Billboards	15.8	7.0	15.1	11.8	6.7	11.3
Pamphlets/flyers	9.1	10.8	10.0	10.1	3.4	8.8
Other	25.3	37.7	15.7	13.8	7.4	17.0
Preferred source of condom information						
Television	37.9	49.8	53.8	42.9	49.8	46.8
Radio	86.0	68.0	70.4	81.3	50.9	71.3
Newspapers	10.8	7.6	15.6	15.7	3.7	10.7
Magazine	14.4	9.3	17.1	17.7	4.4	12.6
Billboards	12.0	4.5	18.1	12.0	4.7	10.3
Pamphlets/flyers	11.4	8.1	15.4	11.4	2.9	9.9
Other	37.7	43.5	25.6	19.6	8.2	24.0
Listened to radio in the last week	60.6	52.1	52.3	63.9	85.1	61.6
Preferred radio station						
Radio Fana	7.4	1.6	7.0	2.9	2.4	4.3
Ethiopian Radio	7.7	37.5	33.1	17.7	13.3	22.3
FM 97.1	66.6	-	64.2	17.1	-	31.4
FM 96.3	21.5	-	7.3	-	-	7.0
FM 98.1	18.0	-	3.0	-	-	5.0
FM 102.3	16.4	-	1.0	-	-	4.4
FM Bahir Dar	-	71.8	-	-	-	-
FM Hawassa	-	-	-	72.6	-	-
FM Mekelle (Demsu Weyane)	-	-	-	-	90.0	-
Preferred time to listen radio						
Early morning hours	2.9	5.1	2.3	0.6	5.4	3.1
Morning	44.8	44.8	39.1	38.8	47.5	46.8
Midday/Lunch time	10.3	6.1	13.9	17.8	20.6	13.4
Early afternoon	11.9	11.9	22.5	33.4	4.9	17.7
Late afternoon	10.0	5.5	10.6	6.2	7.2	7.9
Evening	13.5	6.1	8.9	2.4	14.3	8.6
Late evening	6.6	1.9	2.6	0.9	0.0	2.5
Days most often listen to radio						
Monday	45.0	46.2	33.8	26.3	57.8	40.6
Tuesday	41.7	41.7	37.0	57.7	43.6	41.7
Wednesday	49.5	45.8	37.7	34.6	55.0	43.8
Thursday	41.7	41.7	42.4	26.0	56.0	40.4
Friday	44.0	44.2	37.1	25.7	56.4	40.3
Saturday	63.8	71.2	63.6	73.1	63.2	67.3
Sunday	51.1	75.6	57.9	60.4	79.5	64.0