

MELA RESEARCH

**Baseline survey on Most
at-risk population for
HIV/AIDS: *A study
conducted for the USAID
TransACTION program in
Ethiopia***

**This study was sponsored by Save the Children
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ACRONYMS

AIDS	Acquired Immuno-Deficiency Syndrome
ART	Antiretroviral Viral Therapy
ARV	Anti-retroviral
BCC	Behavioral change communication
BSS	Behavioral Surveillance Surveys
CBO	Community based organization
CSA	Central Statistical Agency
CSW	Commercial sex workers
DHS	Demographic and Health Survey
EPHA	Ethiopian Pubic Health Association
FGD	Focus Group Discussion
HAPCO	HIV and AIDS Prevention and Control Office
HCT	HIV Counseling and testing
HIV	Human Immunodeficiency Virus
IDI	In-depth Interview
KII	Key Informants Interview
MARPs	Most at risk populations
MOH	Ministry of Health
NGO	Non Governmental Organization
OSY	Out-of-school youth
PLHIV	People living with HIV
PRA	Participatory Rapid Appraisal
PSU	primary sampling unit
SC/US	Save the Children/USA
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
VCT	voluntary counseling and HIV testing

EXECUTIVE SUMMARY

The TransACTION program in Ethiopia, a collaborative effort of the Save the Children Federation, Inc. (SC/US) and its partners, aims to reach out to the most at risk population (MARP) in 120 towns of Ethiopia through HIV/STI prevention, care and support intervention activities. The TransACTION strategic objectives envisages at preventing new HIV infections among at risk population and strengthening linkage to care and support services in towns and commercial hotspots along or linked to with major transportation corridors.

As part of the initial activities of the program, the TransACTION program conducted a baseline survey in a sample of its project focus towns. The baseline survey seeks to generate project baseline indicators and sets benchmarks with reference to HIV/AIDS/STI knowledge, attitude and behaviors of MARPs in the project target towns, which will be used as important inputs for the monitoring and evaluation of project intervention efforts. The baseline survey targeted sex workers, truckers, male and female daily laborers and waitresses in objectively selected 12 program implementation towns. Field data collection was conducted during the period March 21-April 12, 2010.

Below is a summary of the salient findings of the baseline survey by target group.

Sex Workers

Socio-demographics:

- Four-hundred sex workers were interviewed – the majority (53.8%) in large-sized towns, the remaining 31.2% and 15%, respectively, in medium- and small-sized towns. Most sex workers included in this study (74.8%) were working in bars or hotels. This was followed by local drink houses (14.2%) and red-light houses (11%).
- Sex workers were young and had their average age at 21 years. About 28% of the sex workers cannot read/write and 46% had 7 or more years of schooling. As expected, the vast majority of the sex workers (70.3%) were never married and 25% were divorced or widowed.
- Only 7% of the sex workers reported to be involved in other income generating activity on top of sex work.

Entry into sex work:

- The average age at start of sex work was 18.5 years. A third reported to start sex work between the ages 15 and 17 years.
- Varying entry routes into sex work was reported. About 27% reported that they were students just before joining sex work. This was followed by those working as waitresses in bar/hotel (15.8%), house maids (14%), waitresses in cafe/pastry (12.8%), and out-of-school youths (OSY) who were living with family (12.3%). Other engagements immediately before joining sex work reported to include working in boutiques (5%), farming (2.3%) and cleaner in bars/hotels (2%).

Sexual behaviors and type of partners:

- Eighty-five percent of the sex workers reported to have had sex with a paying client in the previous 7 days. The mean numbers of paying clients in the previous 7 days was 4.3.

- Thirty-five percent of the sex workers reported to have had sex with one or more non-paying partners in the previous 3 months

Condom use:

- Condom use with paying clients reported to be high but not universal. Ninety-six percent reported using condom with the most recent paying clients in the previous 7 days. Consistent condom use with all paying clients in the previous 7 days was also reported to be 92%.
- Condom use with paying clients appears to vary significantly by the size of towns included in this survey. The reporting of consistent condom use with all paying clients in the previous 7 days was the highest in large-sized towns at 96.2%, followed by 89.6% and 83.3%, respectively, in medium- and small-sized towns
- Condom use with paying clients appears to vary significantly by type of sex work establishments. The highest consistent use of condom (previous 7 days) was reported among sex workers in bars/hotels at 94.5%, followed by those in red light (88.6%) and local drink houses (83.7%).
- Condom use with non-paying partner is remarkably low. Only 54.6% reported using condom with the most recent non-paying partners in the previous 3 months; consistent condom use with all non-paying partners during the same period reported at about 50%. In particular, this was reported the lowest among sex workers in small-sized towns (36.4%) and among those in local drink houses (30%).

HIV counseling and Testing (HCT):

- HCT is notably low among sex workers in the study towns. Only 44.8% of the sex workers reported to have had HCT in the previous 3 months. This was recorded the lowest at 30.4% among sex workers in the medium-sized towns.

Sexually transmitted diseases (STD):

- Sex workers knowledge of STD can be considered low and incomplete. About 72% ever heard the disease STDs and only 52.2% knew at least one symptom of STD.
- Whereas knowledge of STD is low among sex workers across all towns, those in small-sized towns in particular have found to be the least informed about STDs. In small-sized towns, only half of the sex workers ever heard of STD and a much lower proportion (27%) were able to name at least on STD symptom.
- STD symptom reported to be common amongst the sex workers in this study. The previous 1 month incidence of self-reported STD symptoms was 20%, indicative of the commonness of STDs in this population of sex workers. Genital discharge was reported to be the leading symptom as reported by a tenth of the sex workers. Other commonly reported symptoms include pain/burring during urination at 8.3%, genital rash (7.3%), lower abdominal pain (6.8%), and foul smelling discharge (5%). Few also reported genital ulcer, swelling in groin and itching in genital area.
- STD checkup by the sex workers reported to be quite low with only 14.5% of the sex workers had STD checkup in the previous 1 month.

Waitresses

Socio-demographics:

- Four-hundred waitresses were sampled from large-sized (62.5%), medium-sized (31.3%) and few (6.2%) from small-sized towns.

- The workplaces of waitresses were broadly categorized into two - (1) those selling coffee/tea, pastry, etc but non alcohol liquors (cafe/pastry) and (2) those selling alcohol liquors and food (bars/hotels). Most of the waitresses included in this study (54%) were working in bars or hotels while the remaining 46% in cafes or pastries.
- The waitresses were predominantly young, unmarried and most have some education. Their mean age was 22 years, 72% unmarried, and over half had 7 or more years of schooling.

Sexual behaviors:

- The majority of the waitresses (82%) have ever had sex and 72% reported to have had sex in the previous 12 months.
- About 37% the waitresses reported to have had sex with one or more non-regular partner in the previous year.
- Two or more sex partners (any) in the previous 12 months were reported by 17% of the waitresses.
- About 6% of the waitresses reported to have had sex with 2 or more sexual partners in the previous one month, which can be considered as having concurrent sexual relationships.
- Cross-generational sex appears to be common among the waitresses studied. Among those who had a non-regular partner in the previous year, about a quarter said their partner was more than 20 years older. A little bit over a tenth reported a partner was 10-20 years older than them. Another 15% said they had sex partner who was 5-10 years older.
- Transactional sex is reported to be quite common among this population of waitresses. Among those who had non non-regular partner in the pervious year, 74.2% reported to have received money/gift from such partners.
- Waitresses in bars/hotels are in general highly exposed to risky sexual behavior than those working in cafes/pastries. These waitresses are found to have relatively higher number of sexual partners, more involved into concurrent sexual relationship and transactional sex.
- Waitresses in large-sized town appeared more likely than those in medium/small town to have had non-regular partners and concurrent sexual relationship.

Condom use:

- Waitresses' condom use was found to be notably low. Condom use with the most recent non-regular sex partner in the previous year was reported at 63.3%. Consistent condom use with all such partners was ever lower at 53.2%.
- Consistent condom use with all non-regular partners in the previous year appeared significantly higher among waitresses in the medium/small-sized (70.4%) towns than in large-sized (49.1%).
- Higher condom use with non-regular partners among waitresses operating in bars/hotels than those in cafes/pastries was reported (58.4% vs. 46.9%).

HIV Counseling and Testing:

- Fifty percent of the waitresses reported to have had HIV testing in the previous 6 months.
- Among those waitresses who have spouse or live-in-partner, about two-third (66.4%) reported their spouses/live-in partners were tested for HIV in the previous 6 months.

Sexually transmitted diseases (STD):

- Only 54% of the waitresses have ever heard of STDs. The knowledge of the different STD symptoms is even lower with only 35.3% of the waitress were able to report one or more correct symptoms of STDs.

- One or more STD symptoms (in the previous 6 months) were reported by 11% of the waitresses. Pain/burning during urination appeared the most common symptom as reported by 6% of the waitresses. This was followed by genital discharge (3.8%), genital rash (3.5%), itching in genital area (3.3%), foul smelling discharge (2.5%), among few others.
- STD checkup by waitresses can be considered low. On the whole, only 10.3% of the waitresses had STD checkup in the previous 6 months.
- There appears notable different in having STD checkup by size of town and type of venue. In large-sized towns, 13.6% of the waitresses reported having had STD checkup during the previous 6 months, which is significantly higher than the only 4.7% reported in medium/small sized town. Those waitresses in bars/hotels were found significantly more likely than those in cafes/pastries to have had STD checkup in the previous 6 months (13.9% vs. 6%).

Female daily laborers

Socio-demographics:

- We interviewed 400 female daily laborers from towns of varying size. The majority (57.5%) were sampled from large-sized towns. A quarter was from small-sized and the remaining 17% from medium-sized.
- At the time of interview, the vast majority of the female daily laborers (72.3%) were working in building construction sites and the remaining 27.7% in road construction.
- Female daily laborers represent the youth whose mean age 22 years. Most (70.2%) had some education while 30% can not read or write. A little bit over half (58%) were never married while nearly 17% reported to be either divorced or widowed. A quarter of the female daily laborers reported to be currently married.

Sexual behaviors:

- On the whole, 63.3% reported to have ever had sex and 52% reported to have had sex in the previous 12 months. Two or more sexual partners in the previous year were reported by only 3.8% of the female daily laborers.
- About a tenth of the female daily laborers reported to have had sex with a non-regular partner in the previous 12 months.
- The reporting of non-regular partner was by far the highest at 20.6% among the female daily laborers in small-sized towns. This was followed by those in large-sized town at 7% and the lowest was reported by those in the medium-sized towns (2.9%).
- Female daily laborers in building construction site were more likely than those in road to report non-regular partner in the previous year (11.4% and 5.4%, respectively).
- Concurrent sexual relationship was rarely reported by the female daily laborers included in this study. In the previous one month, 28% reported to have had sex. However, only 0.5% reported to have had 2 or more sex partner last month.
- Cross-generational sex appeared to be common among those female daily laborers having had sex with non-regular partners. A fifth of the female daily laborers had their non-regular partner more than 20 years older. A little bit over a tenth (10.3%) reported a partner was 10-20 years older than them. A quarter of them (25.6%) said they had sex partner who was 5-10 years older.
- Transactional sex reported to be common among those female daily laborers who have had sex with non-regular partners in the previous year. Fifty-one percent (51%) of such female

daily laborers reported to have received money/gift from a non-regular partner in the previous year.

Condom use:

- On the whole, condom use by the female daily laborers can be considered low. Condom use with the most recent non-regular partner was reported at 48.7%. Consistent condom use with all non-regular partners (the previous year) was much lower at 35.9%.

HIV Counseling and Testing:

- Forty-three percent (43%) of the female daily laborers reported to have had HIV testing in the previous 6 months.
- Among those female daily laborers who had spouses/live-in partners in the previous year, 53% reported their spouses/live-in partners were tested for HIV in the previous 6 months.

Sexually transmitted diseases (STD):

- Ever heard of STDs is strikingly low at 39.3% among these female daily laborers. Only 21% were able to mention at least one or more correct symptoms of STDs.
- About 9% of the female daily laborers reported to have had one or more STD symptoms in the previous 6 months. Genital discharge was reported by 6% of the female daily laborers, lower abdominal pain by 4%, and pain during urination by 3.3%. Other symptoms were also reported but by the few.
- STD checkup by the female daily laborers is virtually non-existence. Only 4.8% of the female daily laborers had STD checkup the previous 6 months.

Male daily laborers

Socio-demographics:

- Four hundred male daily laborers were interviewed in towns representing varying population size. Most (56.3%) were in large-sized towns, a quarter in medium-sized and about 19% in small-sized.
- In terms of their workplace, 52.3% were working in building construction, 18.7% in road construction and the remaining 29% in marketplaces.
- The male daily laborers represent the youth with a mean age of 26 years. About two-third (65.7%) were in the age group 20-29 years. They reported to have better education than their female counterparts. Nearly half of them had 7 or more years of schooling. Most (69%) were never married.

Sexual behaviors:

- Three-quarter of the male daily laborers reported to have ever had sex in their lifetime and 69.5% had sex in the previous year.
- Partner change appears to be common among this population of male daily laborers. In the previous year, two or more sex partners were reported by 21.2% of the male daily laborers and 7.3% reported 5 or more partners.
- Paid sex with commercial sex workers in the previous year was reported by 14.8% of the male daily laborers.
- About 19% reported to have had sex with a non-regular partner (non-sex workers) in the previous year. Two or more of such partners was reported by 7.5% of the male daily laborers.
- Sexual behaviors of the male daily laborers reported to vary by town size and workplace. The prevalence of paid sex was the highest among the male daily laborers in large-sized

towns compared to any of those in others. Notably, the male daily laborers in marketplaces exhibited the highest sexual risk behaviors than any of the other groups.

- Data on sex partner concurrency of the male daily laborers showed that 5.3% had sex with 2 or more partners in the previous month. The highest sex partner concurrency was reported by the male daily laborers in marketplaces at 9.5%. This was reported at 3.4% and 4%, respectively, among those in building and road construction sites.

Condom use:

- Condom use by the male daily laborers is yet to reach universal. Among those male daily laborers who had sex with sex workers in the previous year, 89.8% reported using condom during their most recent sex with a sex worker. Consistent (every time) condom use with all sex workers in the previous year was reported at 82.8%.
- Condom use with non-regular partners was notably low. Only 60% of those male daily laborers who had sex with a non-regular partner in the previous year reported using condom during their most recent sex with such a partner. Consistent condom use with all non-regular partners is even lower at 52.1%.
- With the most recent non-regular partner, the male daily laborers in building construction sites in particular exhibited the lowest condom use at 52.9%. Whereas the corresponding figures were 72.8% and 60.7%, respectively, for those in road construction sites and marketplaces.

HIV Counseling and Testing:

- Forty-five percent of the male daily laborers reported to have had HIV testing in the previous 6 months.
- Among those male daily laborers who had spouse/live-in partners in the previous year, 43.6% reported their spouses/live-in partners were tested for HIV in the previous 6 months.

Sexually transmitted diseases (STD):

- Knowledge of STD of the male daily laborers can be considered low. Only 62.5% reported had heard of STD and 43.5% were able to report at least one correct STD symptom.
- About 12% of the male daily laborers reported to have had at least one STD symptom in the previous 6 months. Genital rash was reported by 5.8%, followed by genital discharge (4%), lower abdominal pain (3.8%), and genital ulcer (2.8%) among few others.
- Only 9% of the male daily laborers had STD checkup in the previous 6 months.

Truckers

Socio-demographics:

- A total of 370 truckers were included in this study, which represents a completeness rate of 92.5%, as we anticipated to interview 400 truckers. The truckers were interviewed in selected towns they pass by and in dry ports in Adama and Addis Ababa.
- The majority of the truckers included in this study were working in the north route (39.5%) followed by east (34%) and other routes (26.5%).
- Truckers represent the adult, middle-aged population whose mean age was nearly 40 years. The vast majority of trucker (87.5%) can read or write, 26.2% reported to have had 12 or more years of schooling. The majority of the truckers were married (71.1%).

Sexual behaviors:

- Virtually all truckers (98.7%) reported to have ever had sex in their lifetime and 95% had sex in the previous year.

- Partner change by truckers appeared to be common. About 26% of the truckers reported to have two or more partners in the previous year; about a tenth 5 or more sex partners. On average truckers reported to have had 3 sex partners in the previous year.
- In the previous year, 16.8% of the truckers had paid sex with one or more commercial sex workers. Paid sex with 2 or more sex workers in the previous year was reported by 14.1% of the truckers. Four or more sex workers in the previous were reported by 7.1% of the truckers.
- About 15% of the truckers reported to have sex with non-regular partners (non-sex workers) last year with 8% having had 2 or more non-regular partners.
- There appeared variation in sexual behavior of truckers in accordance with the transport route. Truckers operating in the northern route were significantly more likely than the others to visit sex workers. Unlike paid sex, having non-regular partners appear to be more common in either east or other transport route than in the north.
- The proportion that had sex with 2 or more sex partners (any) in the previous year was found to be significantly higher by truckers operating in the northern routes (30.1%) than those in the eastern (23.8%) or in the other routes (22.5%).
- Sex partners' concurrency reported to be low among this truckers population. Although 65% of the truckers reported to have had sex in the previous one month, only 3.5% had 2 or more sex partner during the period.

Condom use:

- On the whole, truckers' condom use with sex workers was found to be quite high with about 97% reported using condom during their most recent sex with a sex worker and 95% used condom every time they had sex with a sex worker the previous year.
- Condom use with a non-regular partner by truckers is high but still way off the desired rate of 100%. Eighty-two percent of the truckers reported using condom with their most recent non-regular partner the last time they had sex with. Similar rate of consistent condom use with such partners was also reported by these truckers.
- Truckers' condom use with non-regular partners appears to significantly vary in accordance with their transportation route. In particular, those operating in the east reported to have the lowest condom use rate at 66.7% with their most recent non-regular partner in the previous year. This was reported at 100% and 82.4%, respectively, among those in the north and other routes.

HIV Counseling and Testing:

- Only 34% of the truckers reported to have tested for HIV in the previous 6 months.
- Amongst those truckers who have spouse or live-in partners, 46% reported their partners had an HIV test in the previous 6 months.

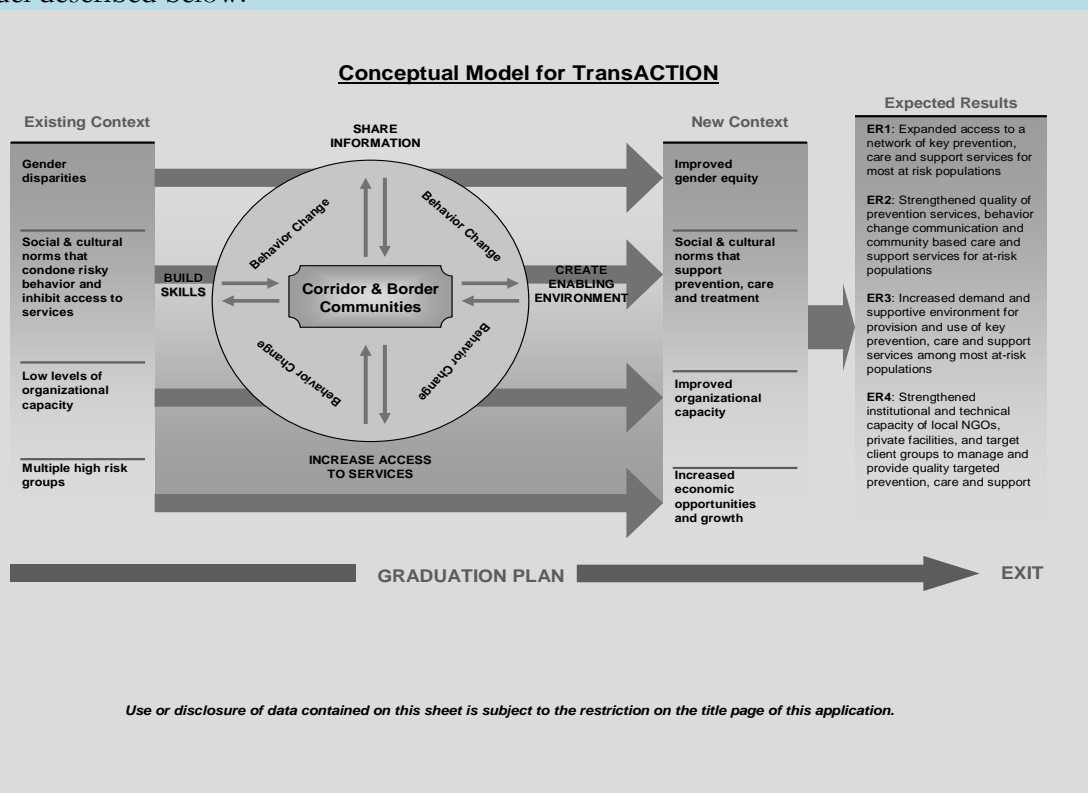
Sexually transmitted diseases (STD):

- About 87% of the trucker ever heard of STD but only two-third (66.5%) knew at least one correct symptom of STDs.
- Only 3.5% of the truckers reported to have had at least one STD symptom in the previous 6 months. Pain/burning during urination was reported by 1.9%, and genital discharge by 1.6%. Other symptoms were reported by very few, 0.5% or less.
- STD checkup by the truckers in the previous 6 months was reported at 6.8%. Truckers in the northern route reported to have had the highest STD checkup rate at 13.7% followed by those in the east at 3.2% and the lowest was recorded at 1% among those operating in the other transport routes.

I. BACKGROUND AND INTRODUCTION

1.1. The TransACTION program in Ethiopia

The TransACTION program in Ethiopia, a collaborative effort of the Save the Children Federation, Inc. (SC/US) and its partners, aims to reach out to the most at risk population (MARPs) in 120 towns of Ethiopia through an HIV/STI prevention, care and support intervention. The TransACTION strategic objectives focus on preventing new HIV infections among at risk population and strengthening linkage to care and support services in towns and commercial hotspots along or linked to major transportation corridors. The program is based on the conceptual model described below.



1.2. Baseline survey objective

As part of the initial activities of the program, the TransACTION program conducted a baseline survey in a sample of its project focus towns. The baseline survey seeks to generate project baseline indicators and sets benchmarks with reference to HIV/AIDS/STI knowledge, attitude and behaviors of MARPs in the project target towns, which will be used as important inputs for the monitoring and evaluation of project intervention efforts.

1.3. The status of the HIV/AIDS epidemic in Ethiopia

With a population estimated at nearly 77 million in Mid-2008, Ethiopia is the second most populous country in Africa next to Nigeria. In Ethiopia, the HIV/AIDS epidemic has remained a major public health problem, mainly affecting people in the productive and reproductive age ranges. HIV prevalence in the general population was estimated at 2.1%¹ in 2008. At present, more than one

¹ Agreement on a point prevalence of 2.1% was reached in April 2007.

million people are estimated to be living with HIV in Ethiopia. Women account for 59% of the HIV-positive population. According to the single point estimate, a total of 79,183 pregnant women were estimated to be HIV positive in 2008. In the same year an estimated 14,093 HIV positive births occurred from those infected mothers. Annually, an estimated of 125,147 people are newly infected and 58,290 people die of AIDS².

Recent epidemiological synthesis of the HIV epidemic in Ethiopia concluded that the epidemic is more heterogeneous than previously believed³. The study further divulged that the epidemic seems to have stabilized or even declined in most of the major urban areas while increasing in smaller towns. Patterns are less clear in rural areas due to the lack of accumulated epidemiological data. Supporting the argument for focusing on particular hotspots and most at-risk population, the study emphasizes that HIV/AIDS programs should not be based on national-level statistics, but need to be more focused geographically, and directed to areas and populations exhibiting higher prevalence rates.

1.4. Most at risk population for HIV

It is well recognized that vulnerability for HIV is substantially higher in some specific population groups than in the general population and such population groups are identified as most at risk populations (MARPs) for HIV. A MARP is defined as a group within a community with an elevated risk for HIV, often because group members engage in some form of high-risk behaviors; in some cases the behaviors or HIV sero-status of their sex partner may place them at risk.

The national HIV/AIDS policy's IEC strategy⁴ gives proper emphasis to vulnerable groups including women, youth, sex workers, mobile groups, street children, and prisoners. Likewise, the strategic framework for the multi-sectoral response for 2004-2008 identified commercial sex workers (CSWs), truckers, migrant laborers, uniformed people, teachers, students and out of school youth (OSY) as the most important vulnerable groups that require special attention. It aims to reduce vulnerability among these special target groups through a number of strategies by: (1) Promoting HIV counseling and testing (HCT) and other behavioral change interventions; (2) Promoting the use of male and female condoms; (3) Providing youth-friendly reproductive health and STI services; (4) Enhancing bargaining and negotiations skills for safe sex where applicable; (5) Strengthening and expanding school anti-AIDS clubs and mini-Medias; (6) Integrating HIV/AIDS in life skills education and basic curriculum; (7) Developing youth centers and enhancement resorts; (8) Organizing the youth on voluntary basis and providing peer education; (9) Developing youth centers and entertainment resorts; and (10) Providing safe and alternative income generating and employment opportunities where applicable.

Despite the policy statements and strategies, appropriate prevention interventions are often lacking among MARPs in the country and this represents important challenges within the groups as well as the general population. This is further complicated by the lack of data on the magnitude and spread of HIV, as well as the circumstances that put them at risk, among MARPs in the country.

² HAPCO. Multi-sectoral HIV/AIDS Response Annual Monitoring & Evaluation Report 2001 Ethiopian Fiscal Year [July 2008- June 2009]. Unpublished.

³ Berhane Y. Mekonnen Y, Seyoum E, D. Wilson, L. Gelmon. HIV/AIDS In Ethiopia: an epidemiological synthesis. World Bank Global AIDS Program. April 2008

⁴HAPPCO and FMOH. Ethiopian Strategic Plan for the multisectoral HIV/AIDS response, 2004-2008. Addis Ababa. December 2004.

The TransACTION program pre-determined some population groups for its program intervention. These groups encompass the globally recognized MARPs including sex workers and truckers as well as locally relevant MARPs including waitresses, male and female daily laborers and out-of-school youth. A brief overview of these groups, concerning the spread of HIV and their vulnerability, based on previously available studies and information is detailed below.

Sex workers: Due to their high HIV prevalence, their increased ability to transmit HIV when co-infected with other STIs, and the broad population groups they reach through their clients, sex workers have often been described as a ‘core group’, namely, a small group in which the infection is endemic and from whom it spreads to the population at large⁵. The most recent seroprevalence data on sex workers is available from 594 sex workers who tested via mobile HIV counseling and testing in 40 towns in 2008. Of the 594 female sex workers with HIV results available, 25.3% tested positive⁶. Other recent data on sex workers emerged from the 2008 MARPs study of Amhara. Among 349 sex workers, 37% tested positive for HIV. HIV prevalence appeared to increase with age - from 26% among the 14-19 years old to 37.7% and 47.7%, respectively, among the 20-24 and 25 or older age groups. Indeed, the recently documented HIV prevalence rates among sex workers compare well with available HIV prevalence data that date back from the late 1980s and early 1990s. The first HIV prevalence survey among female sex workers in the country was available from 1988, i.e. only four years after the first HIV cases were detected in the country. The survey covered 6234 female sex workers operating in 23 major urban areas on the main trading roads of Ethiopia. HIV prevalence rates ranging between 5.3% and 38.1% with a mean prevalence of 17% was reported. A year later, a survey showed about a quarter (24.7%) of the sex workers in Addis Ababa was already infected⁷. By 1990, HIV prevalence reached 50% among sex workers in four major urban areas of the country⁸.

Truckers: Truckers have received significant attention with respect to HIV prevention in Ethiopia. The reason for this attention in relation to HIV is that truckers move between regions and towns with different rates of HIV and have multiple sexual contacts with sex workers, local populations and women of varying backgrounds. Their work is often stressful and involves alcohol use, commercial and transactional sexual relationships. Recent sero-epidemiological data on truckers, is in general, lacking in Ethiopia. Of note, the limited data collected on truckers as part of the Amhara MARPs study hinted that truckers are among the most affected by the HIV epidemic. Among 51 truckers tested, 13 were found positive for HIV, giving a prevalence rate of 25.5%⁹. Consistent with the high prevalence rate, a considerable high active Syphilis infection rate was also documented (9.8%) in the group. Self-reported STIs were found to be 6%. In the early years of the HIV epidemic in the country, consistently high HIV prevalence was documented among truckers. HIV prevalence was already 13% in truck drivers in 1988¹⁰. At that time, the rate was less than 5% in the general population, as indicated by pregnant women attending ANC in Addis Ababa. In 1989, the

⁵ Aklilu M, Messele T, Tsegaye A, Biru T, Mariam DH, Van Bethem B, et al. Factors associated with HIV-1 infection among sex workers of Addis Ababa, Ethiopia. *AIDS* 2001, 15:87-96.

⁶ Mekonnen, Y. June 2009. Mobile HIV Counseling and Testing: A new lens through which to view the urban HIV epidemic in Ethiopia. Bethesda, MD: Private Sector Partnerships-Ethiopia, Abt Associates Inc.

⁷ Mehret M, Khodakevich L, Zewdie D., Aychunie S, Shanko B, Gizaw G, et al. HIV-1 infection and some related risk factors among female sex workers in Addis Ababa. *Ethiop J Health Dev.*1990c, 4 (2): 171-176.

⁸ MOH. AIDS in Ethiopia: 1996. Addis Ababa

⁹ Survey on MARPs in Amhara region. EPHA 2008

¹⁰ Mehret M, Khodakevich L, Zewdie D. HIV-1 infection among employees of the Ethiopian Freight Transport Corporation. *Ethiop J Health Dev.* 1990b., 4(2): 177-182.

prevalence among truck drivers increased to 17.3%¹¹. Very high prevalence rates were then documented in 1994 (40%) and 1995 (26.7%) among drivers in Gondar, Northwest Ethiopia¹².

Daily laborers: The vast majority of daily laborers in Ethiopia are young people and are characterized by high mobility. The recent expansion of roads, buildings and other construction works in the country result in an unprecedentedly high influx of young people from the rural to urban areas. The association between poverty, mobility and infection with HIV has been documented elsewhere in Africa^{13,14}. Only recently has the 2005 Behavioral Surveillance Survey (BSS)¹⁵ of Ethiopia included road construction workers among the identified high-risk groups and found this group exhibiting high risk behaviors. For the first time ever, the Amhara MARPs study gathered serologic data data among daily laborers. The study found an HIV prevalence rate of 15.2% among 349 daily laborers of both sexes¹⁶. The noted HIV prevalence in this group appeared 7.5 times higher than the national single-point prevalence estimate of 2.1% and nearly 2.8 times higher than the 5.5% HIV prevalence documented for urban Ethiopia in the 2005 DHS, suggesting that these daily laborers are indeed among the most-at risk population. Frequent partner change, compounded by concurrent sexual relationships with casual, commercial and regular partners as well as low and inconsistent condom use in high-risk sex characterize the sexual behaviors of these daily laborers. The study also confirmed the role of frequent partner change, as measured by the lifetime numbers of sexual partners, as the single most important predictor of HIV risk among the laborers after controlling for socio-demographics and STIs.

Waitresses: There is neither sero-prevalence nor behavioral data that signify the risk and vulnerability of waitresses in the country. Nevertheless, anecdotal evidence suggests that waitresses working in cafes/pastry shops/bars/hotels are exposed to the risk of HIV due to the nature of their work that involves frequent interactions with new customers who are often seeking sexual relationships. The high prevalence of transactional and cross-generational sexual relationships among these groups has become a subject of discussion recently. This group has been included recently among MARPs targeted by mass media and radio programs.

¹¹ Mehret M, Khodakevich L, Zewdie D, Shanko B. Progression of Human Immunodeficiency Virus epidemic in Ethiopia. *Ethiop J Health Dev.* 1990e, 4 (2): 183-187.

¹² Rahlenbeck SI, Yohannes G, Molla K, Reifen R, Assefa A. Infection with HIV, syphilis and hepatitis B in Ethiopia: a survey in blood donors. *International Journal of STD & AIDS*, 1997, 8:261-264.

¹³ Bwayo, J., Plummer, F., Omari, M., Mutere, A., Moses, S., Ndinya-Achola, J., et al. (1994). Human immunodeficiency virus infection in long-distance truck drivers in east Africa. *Archives of Internal Medicine*, 154(12), 1391-1396.

¹⁴ Rakwar, J., Lavreys, L., Thompson, M. L., Jackson, D., Bwayo, J., Hassanali, S., et al. (1999). Cofactors for the acquisition of HIV-1 among heterosexual men: prospective cohort study of trucking company workers in Kenya. *AIDS*, 13(5), 607-614.

¹⁵ HAPCO. 2005 Behavioral Surveillance Survey. 2007

¹⁶ *Ibid*, 9

II. METHODOLOGY

2.1. Selection of study towns

This baseline survey was conducted in 12 towns, which were selected objectively from the 120 TransACTION program intervention towns. For the purpose of this study, the towns were broadly categorized as (1) Large-sized towns (Population $\geq 100,000$), (2) Medium-sized (population 30,000-100,000), and (3) Small-sized towns (Population 2000- $<30,000$). Four towns were sampled from each category. The selection of towns involved ranking of towns based on the magnitude and spread of HIV. The ranking of the towns was based primarily upon analysis of available secondary data, which was complemented /supplemented by a participatory research appraisal (PRA).

Secondary data analysis: Town-level HIV prevalence data were not available for most of the TransACTION towns. Available proxy HIV/AIDS data including the number of ART users and ANC based sentinel surveillance HIV data were combined to gauge the spread of HIV/AIDS in the towns. A linear regression model¹⁷ was fitted between town-level HIV prevalence and proportion of "ever started on ART" (for those towns both data were available). The linear regression model was found to be robust in predicting town level HIV prevalence based on the ART data. The number of "ever started on ART" was available from 79 towns and we were able to predict town-level HIV prevalence for all of them.

Participatory Research Appraisal (PRA): The purpose of the PRA was to (1) get expert views on locally relevant most at risk subpopulations in TransACTION program implementation towns (2) and get data from them on distribution and magnitude of these groups in locally relevant terms. The PRA was conducted with selected HIV/AIDS experts from different regions, academic institutions, and other knowledgeable individuals. A PRA guide was developed and employed for the purpose. Based on the findings of the PRA, it was possible to do an independent ranking of the towns by concentration of specific MARPs.

Triangulation and final selection of study towns: Information from the quantitative secondary data and the PRA was triangulated to rank towns according to the spread of HIV/AIDS as well as the concentration of MARPs. Separate rankings were presented by domain – i.e. for large-, medium-and small-sized towns. Four towns with high concentration of HIV within a domain were selected, yielding 12 towns in the three domains. The detailed study methodology and the 12 towns for the study were presented to USAID for approval. Three of the towns originally selected for this study were found overlapping with other partner organizations working on MARPs in the Amhara region. This was shortly resolved by substituting three of the towns originally sampled (i.e. *Babirdar, Dessie and Debreworkos*) with other towns. The final study towns included: *Adama, Asaita, Hawassa, Injibara, Fenote Selam, Yirgalem, Shashemen, Debrebrehan, Mekele, Alamata, Axum, and Maichew*.

2.2. Study design

This baseline survey focused on 5 groups, namely, sex workers, truckers, male and female daily laborers, and waitresses. A quantitative survey using structured individual one-on-one interview was the primary design for the baseline survey.

¹⁷ Predicted town HIV % =[(% ever started on ART + 1.77)/0.46], R=0.75

2.3. Sampling

Selecting Sample clusters for the baseline survey. A formative research using qualitative techniques was conducted to map out the different target populations in the 12 towns. Details about the formative research methodology can be consulted from the report¹⁸. Only a brief description is given here.

The first step involves mapping of the locations of the different target population in the towns, identifying the specific locations (clusters¹⁹) and getting a rough estimate of the size of the target groups in the clusters. In this process the clusters were broadly categorized as (1) Conventional Cluster and (2) Time-Location Cluster in accordance with the nature of the target groups. Conventional clusters were used with “fixed” populations while Time-Location Clusters with “Floating” populations. In this present survey fixed population include sex workers, waitresses, and male and female daily laborers in building construction sites. Whereas the population considered as "floating" include truckers, and male and female daily laborers who were working in marketplaces and road construction sites. As part of the mapping exercise, information was gathered on the location and time of presence of the “floating” MARP groups, which was later on used in creating Time-Location clusters.

In the 12 towns we have identified 67 clusters of sex workers, 25 clusters of truckers, 41 clusters of waitresses, 59 clusters of female daily laborers, and 60 clusters of male daily laborers. These clusters served as Primary Sampling Units (PSUs) for the baseline survey.

Selecting PSUs: Since we collected a rough estimate of the size of each of the clusters, we employed a probability proportional to size (PPS) approach to select conventional clusters for the survey. In the "floating" population, PPS could not be easily implemented due to frequent change of cluster size, and we resorted to convenience sampling approach as suggested elsewhere²⁰.

Respondents Sampling: After selecting the clusters, individual respondents were recruited from each of the selected clusters for inclusion into the survey. In a conventional cluster, listing was made in a given cluster so as to serve as a sampling frame for the selection of individual respondents. Individual respondents were chosen from a list of individuals associated with each of the primary sampling units, using systematic sampling with a random start. Such listing was not implemented in the Time-Location cluster, especially in the selection of truckers and daily laborers in marketplaces. We implemented a “take-all” approach, whereby every population member who appeared at the site during a fixed time interval was included in the sample, irrespective of how many that turned out to be. Due to difficulty in achieving the desired sample size for truckers in the selected towns, we collected additional data from dry ports in Addis Ababa and Adama.

Sample size requirements: Since this is a multi-indicator survey, sample size computation was based on a conservative assumption so as to get an optimum sample size. The following parameters were used in the computation of sample size:

¹⁸ Save the children USA. Formative research for the TransACTION program in Ethiopia, June 2010

¹⁹ Council May 2002

¹⁹ A cluster is a small village containing a high concentration of the particular target group, e.g. sex workers, waitresses, etc. For the purpose of this study, a specific area/village to be considered as a cluster at least 25 individuals or establishments should be found in that village

²⁰ Behavioral Surveillance Survey (BSS) Guide: FHI

- Estimated population proportion (p) =0.5 (this is a conservative estimate in a multi-indicator survey that provide an optimum sample size).
- Desired level of significant=95%
- Desired level of power=80%
- Desired level of precision=6%
- Design Effect=1.5

Based on these parameters as inputs, the sample size per MARP was estimated at 390 individual respondents. we over sampled it to 400 per group for ease management. a 16 by 25 (*i.e. 16 clusters by 25 respondents per cluster*) cluster sampling approach was implemented for each target group.

2.4. The questionnaires

A separate questionnaire was used for each target group. The questionnaires collected information on common themes including socio-demographics, mobility, sexual behaviors, HIV/AIDS knowledge and risk perceptions, psychosocial issues, STDs knowledge, self-reported incidence of STDs, perception and utilization of health services, among others. The questionnaires were largely pre-coded with fixed-response categories and were administered in Amharic. The questionnaires were partly adapted from the Ethiopian Behavioral Surveillance Survey (BSS) and the Amhara MARP survey. It also benefited greatly from findings of the pervious formative research on the same target groups.

2.5. Training of data collectors and fieldwork

A total of 20 data collectors and 4 field supervisors were trained on the baseline survey. The data collectors and supervisors have extensive experience in data collection with most holding university Degrees in public health, Nursing, and social science fields. The training was guided by a tailor-made manual. The training encompassed orientation about the TransACTION program, the objectives of the baseline survey, survey indicators, and methods of data collection. Item by item review of the questions and role play and mock interview were the major parts of the training. Four data collection teams were formed; each team was given 3 assignment towns. The lead consultant and core research team members of Mela Research PLC supervised the process and progress of data collection. Data collection was conducted during the period March 22-April 12, 2010.

2.6. Data management and analysis:

The data from the questionnaire were computerized using EPI-INFO. Four highly experienced data entry clerks computerized the data. They were given orientation on the nature of the data and data entry techniques. Data cleaning and post coding were part of the quality assurance process. Data security and confidentiality was maintained throughout the study. The analysis mostly focused on descriptive and Univariate statistical methods. All associations/correlations between variables were tested for significance. A p-value <0.05 was considered statistical significant. Analyses were performed using a statistical package, STATA 10.

III. ANALYSIS AND PRESENTATION OF FINDINGS

3.1. Sex Workers

3.1.1. Background characteristics

Table 1 presents selected background characteristics of the sex workers included in this survey. The majority (53.8%) were sampled from large-sized towns, the remaining 31.2% and 15%, respectively, were sampled from medium-sized and small-sized towns. Three types of sex work venues were reported. The vast majority (74.8%) of the sex workers was working in bars/hotels, followed by local drink houses (14.2%) and red-light houses (11%).

Sex workers included in this survey had their average age 21 years. About a tenth was under age 18. The majority, about three-quarter, were in the age group 18-24 years. Sex workers age 25 years or older constitutes 15%.

About 28% of the sex workers cannot read/write. A little bit over a third (34.5%) of the sex workers had junior secondary education (7-9 grades) and 26.5% 1-6 grades. Of all the sex workers, 11.2% reported to have completed 10th grade or higher. As expected the vast majority of the sex workers (70.3%) were never married and a quarter were divorced. Few (2%) reported to be married and living with a man. Only 7% of the sex workers reported to be involved in other income generating activity on top of sex work.

Table 1. Selected background characteristic of respondents, commercial sex workers, TransACTION program baseline survey, March 2010

	%	N
Study town		
Large-sized	53.8	215
Medium-sized	31.2	125
Small-sized	15.0	60
Type of Venue:		
Bar/Hotel	74.8	299
Red light house	11.0	44
Local drink house	14.2	57
Age of respondent:		
<18	10.2	41
18-20	45.5	182
21-24	29.0	116
25+	15.3	61
Mean age (95% CI)	21 (20.6-21.4)	400
Educational Status:		
Cannot read/write	27.8	111
1-6 Grade	26.5	106
7-9 Grade	34.5	138
10+ grade	11.2	45
Marital Status:		
Never married	70.3	277
Currently Married	2.0	8
Divorced	25.9	102
Widowed	1.8	7
Participate in other income generating activities		
Yes	7.0	28
No	93.0	372

3.1.2. Entry into sex work

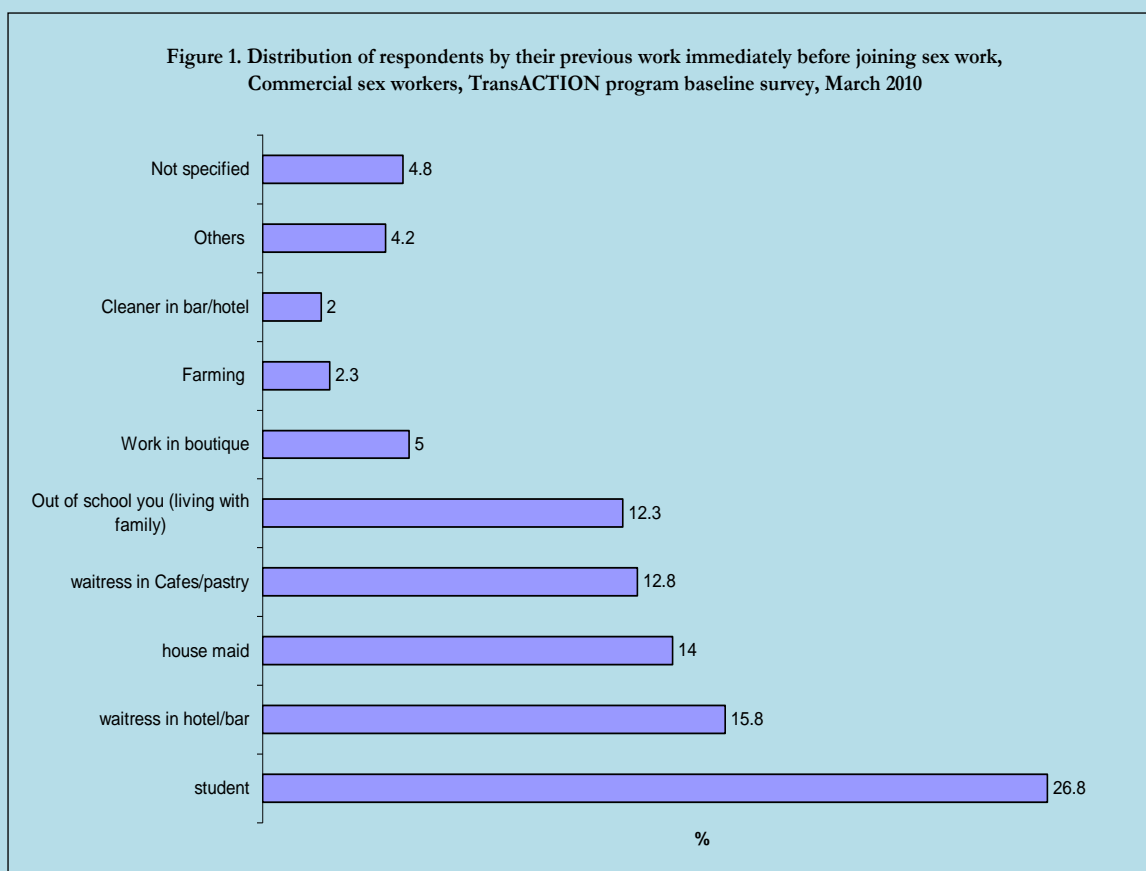
The average age at start of sex work was 18.5 years (Table 2). Most (45.5%) started sex work in the age range 18-25 years. About a third reported to start sex work between the ages 15 and 17 years. About 16% reported to have joined sex work last year. Of note, about 3.3% of the sex workers started sex work before the age of 15 years. Sex workers included in this study on average served as sex worker for 2.4 years.

Table 2. Age at entry into sex work and duration in sex work, commercial sex workers, TransACTION program baseline survey, March 2010

	%, n=400
Age at start of sex work	
<15	3.3
15-17	32.0
18-20	45.5
21+	19.3
Mean age (95% CI)	18.5 (18.3-18.9)
Duration in sex work (total)	
<1 year	15.8
1-2 years	54.0
3-4 years	15.2
5+ years	15.0
Mean duration (95% CI)	2.4 (2.1-2.7)

CI= confidence interval

Sex workers were asked to report their previous engagement/type of work immediately before joining sex work (Figure 1). About 27% reported that they were students just before joining sex work. This was followed by working as waitress in bar/hotel (15.8%), house maid (14%), waitress in cafe/pastry (12.8%), and out-of-school youth (OSY) who were living with family (12.3%). Other engagements reported include working in boutique (5%), farming (2.3%) and cleaner in bars/hotels (2%). About 5% did not mention any.



3.1.3. Sexual relationship – paying clients and non-paying partners

Sex workers were asked whether they had sex with any paying clients in the previous 7 days of interview and if so, they were further asked the number such clients (Table 3). Eighty-five percent reported having had sex with a paying client in the previous 7 days. The distribution of the number of paying clients show that 78% had at least 2 clients in the previous 7 days while 15.7% had 7 or more clients. The mean numbers of paying clients was 4.3.

Sex workers were also asked if they had any non-paying sexual partners in the three months preceding the interview (Table 3). Overall, 35.3% reported affirmatively to this question and 4.3% said they had 2 or more non-paying partners in the last three months.

Table 3. Percentage of respondents who had sex with paying clients in the 7 days preceding the interview and those who had sex with non-paying partners in the last 3 months, commercial sex workers, TransACTION program baseline survey, March 2010

	N=400
	%
<u>Paying clients (last 7 days)</u>	
% had sex with any paying client (last 7 days)	85.0
Number of paying clients (last 7 days):	
0	15.0
1	7.0
2	16.3
3	19.0
4	12.7
5	8.0
6	6.3
7+	15.7
Mean (95% CI) number of paying clients	4.3(3.8-4.8)
<u>Non-paying partners (last 3 months)</u>	
% had sex with a non-paying partner (last 3 months)	35.3
Number of non-paying clients (last 3 months):	
0	64.7
1	31.0
2+	4.3

3.1.4. Condom use

Condom use was assessed with paying clients (previous 7 days) and non-paying partners (last 3 months). As shown in Table 4, condom use with the most recent client the previous 7 days reported to be nearly universal at 96.5%. Consistent condom use with all paying clients in the previous 7 days also reported to be high at 92%.

On the other hand, the use of condom with a non-paying partner reported to be much lower. Of those sex workers who reported having had a non-paying partner last three months (n=141), 54.6% reported using condom in their most recent sex with their most recent non-paying partner. Consistent condom use with all non-paying partners (last 3 months) was reported even lower at 49.7%.

Table 4. Percentage distribution of respondents according to their condom use behaviors with paying clients and non-paying partners, commercial sex workers, TransACTION program baseline survey, March 2010

	%
<hr/>	
<u>Condom use with paying clients (last 7 days)</u>	n=340
% who used condom in their most recent sex with a paying client (last 7 days)	96.5
% who consistently use condom with <u>all paying clients</u> in the last 7 days	92.4
<hr/>	
<u>Condom use with non-paying partners (last three months)</u>	n=141
% who used condom in their most recent sex with non-paying partner (last 3 months)	54.6
% who consistently use condom with <u>all non-paying partners</u> in the last 3 months	49.7

We compared condom behavior of sex workers across the three types of towns. The reporting of consistent condom use with all paying clients in the previous 7 days was the highest in large-sized towns at 96.2%, followed by 89.6% and 83.3%, respectively, in medium- and small-sized towns (Figure 2). The noted difference was statistically significant at p=0.007. With non-paying partners, consistent condom use reported to vary by type of town though not significantly. The highest was reported in the medium-sized town at 56.1%, followed by 50% in the large-sized. The lowest condom use rate with non-paying partners was recorded in small-sized town (36.4%).

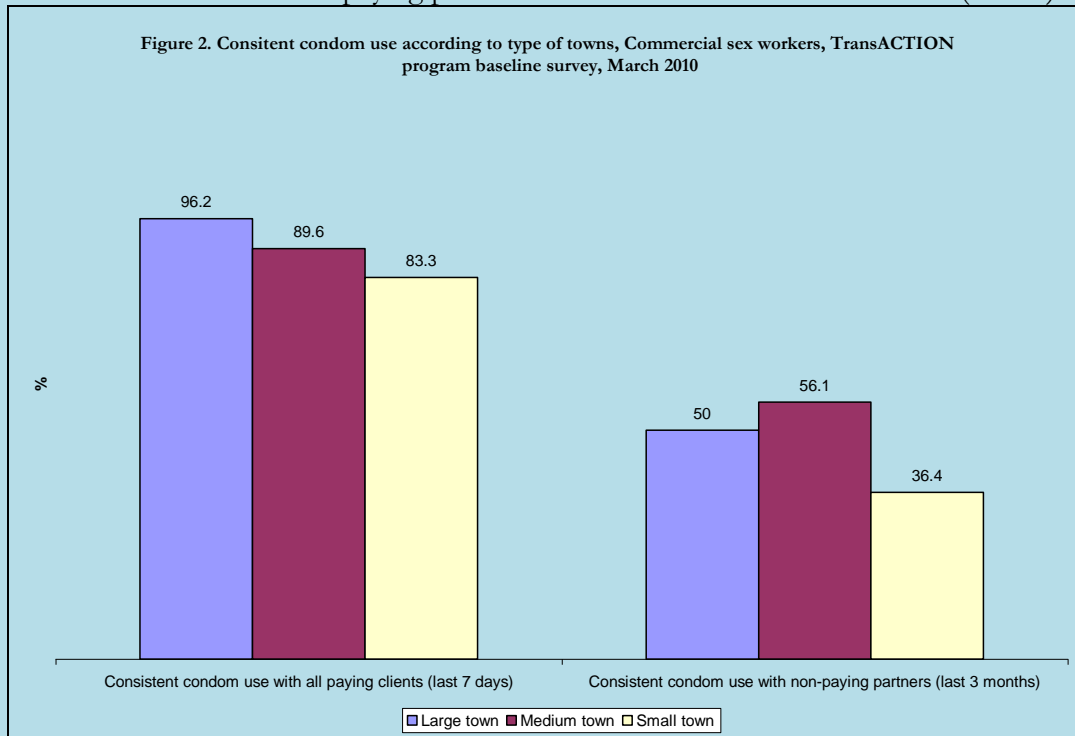
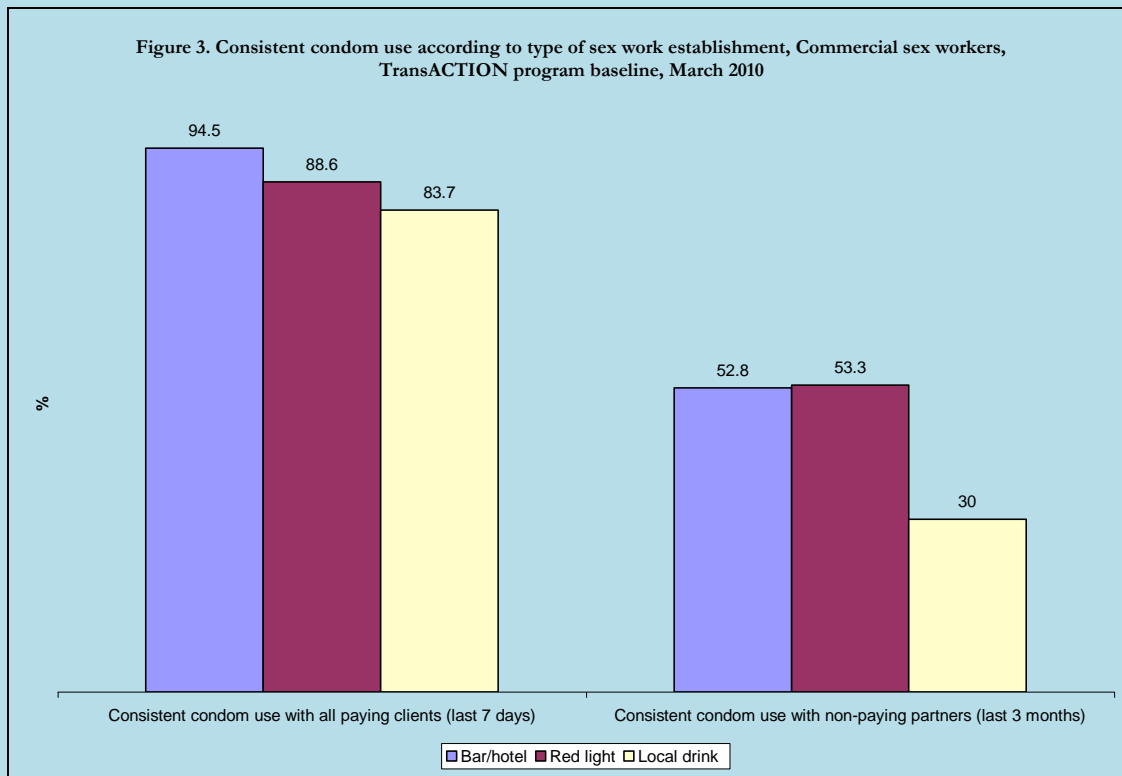


Figure 3 compares the reporting of condom use by type of sex work establishment. On the whole, data show significant variation in consistent condom use with paying clients by type of establishment ($p=0.022$). The highest use was reported among sex workers in bars/hotels at 94.5% followed by those in red light (88.6%) and local drink houses (83.7%).

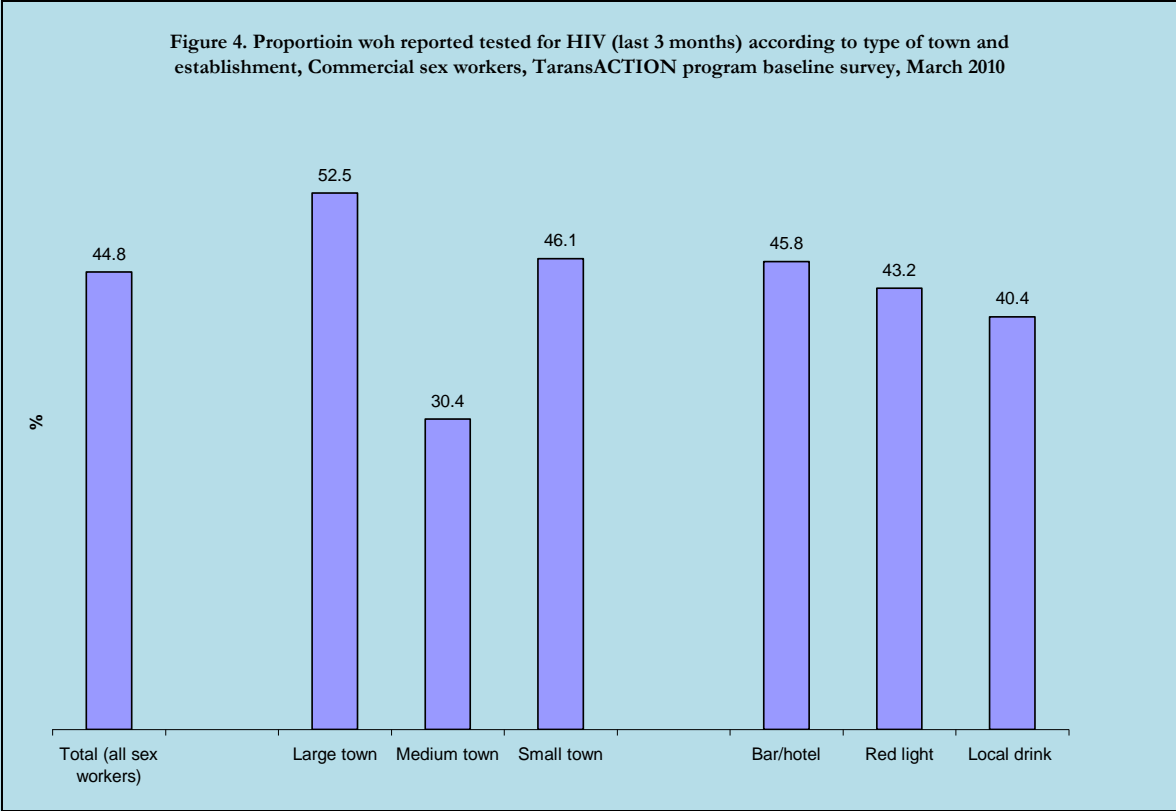
Condom use with non-paying partners appeared significantly low at 30% among sex workers in local drink houses. This was reported comparable among those in bars/hotels (52.8%) and red light houses (53.3%).



3.1.5. HIV Counseling and Testing

Sex workers were asked whether they had undergone HIV testing and counseling in the 3 months prior to the interview. On the whole, only 44.8% of the sex workers interviewed reported having been tested for HIV in the previous 3 months (Figure 4). There was significant variation in the proportion tested by type of town. The proportion tested for HIV in the previous 3 months reported the highest among sex workers in large-sized towns at 52.5%, followed by those from small towns (46.1%) and medium-sized towns (30.4%). On the other hand, there was no significant difference in the proportion tested by type of establishment.

Sex workers who reported to have a non-paying partner in the past 3 months were asked whether a partner was tested for HIV in the previous 3 months. Partner testing for HIV was reported at about 40% (Data not shown).



3.1.6. Sexually transmitted diseases (STDs)

Knowledge of STDs

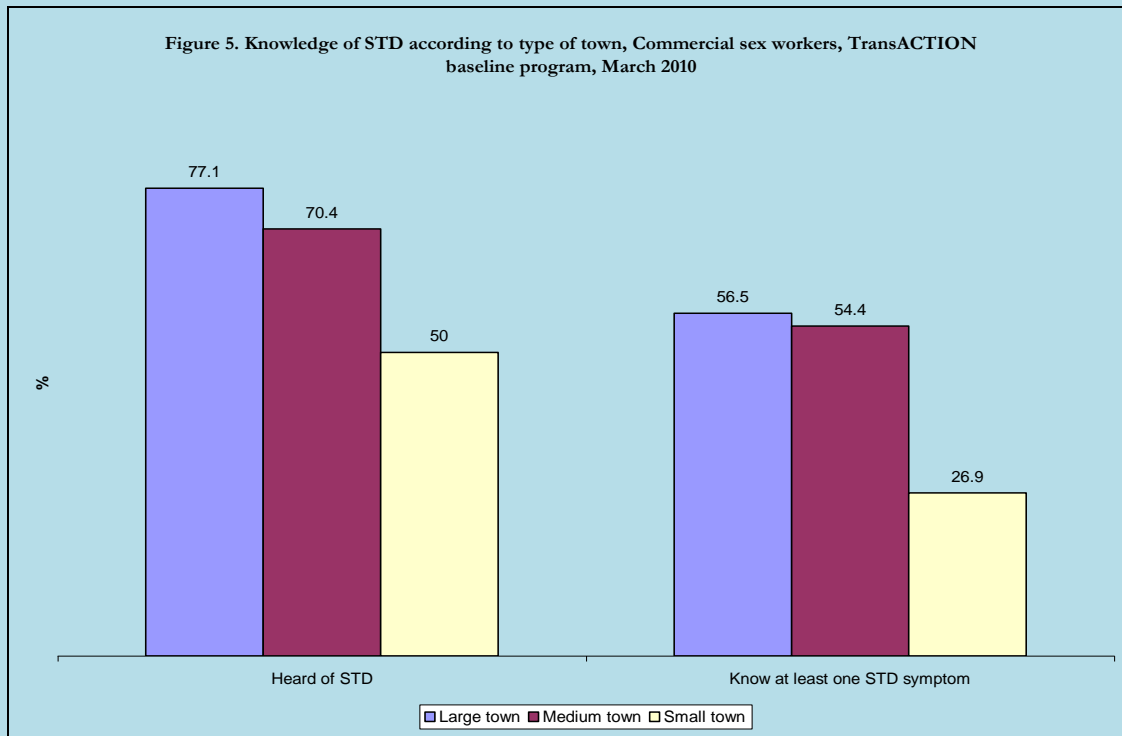
As shown in Table 5, respondents’ knowledge of the various symptoms of STDs was assessed. The proportion who heard of STDs was reported at 71.5%. When asked to spontaneously report the various symptoms of STDs, only 52.2% of the sex workers were able to correctly report at least one STD symptom.

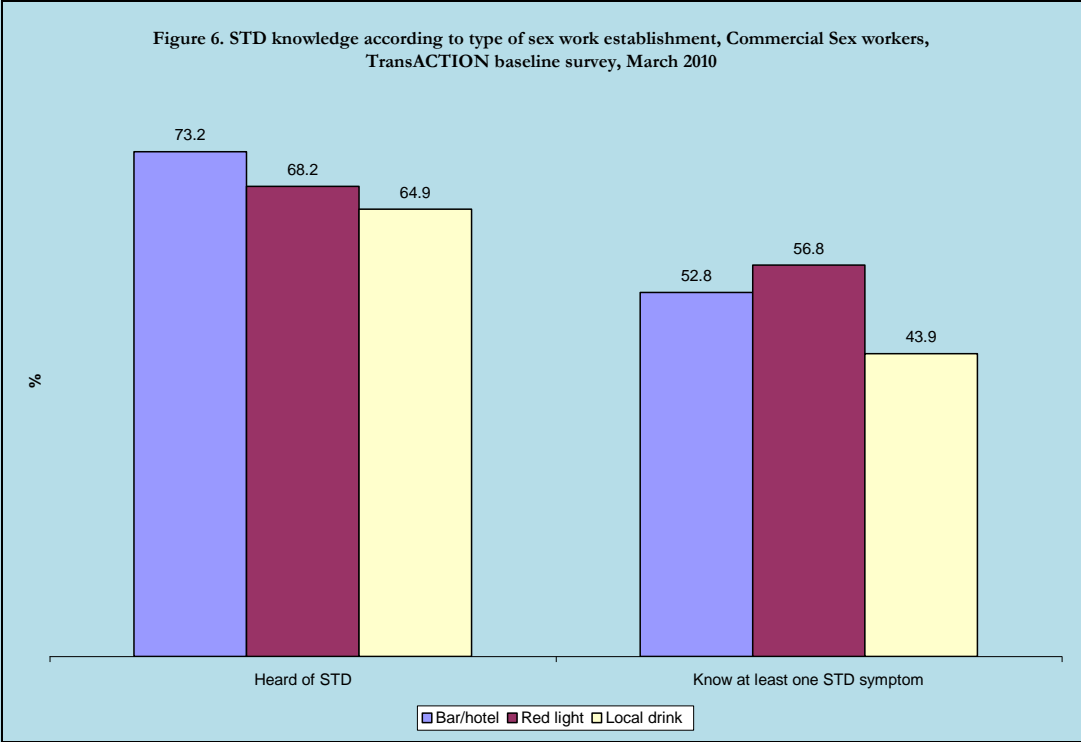
Data on knowledge of STD symptoms revealed that most sex workers failed to report the major symptoms of STDs. Genital ulcer appeared relatively best known by the sex workers interviewed at 29%. This was followed by genital discharge (24%), pain/burning during urination (21.8%), itching in genital area (21%), foul smelling discharge (18%) and swelling in groin (13%). Other symptoms are in general rarely reported (Table 5).

Table 5. Percentage of respondents who heard of STDs and those who spontaneously reported different STD symptoms, commercial sex workers, TransACTION program baseline survey, March 2010

	%, N=400
% Ever heard of STDs	71.5
Knowledge of STD symptoms:	
% who reported	
Genital discharge	24.0
Lower abdominal pain	3.5
Foul smelling discharge	18.0
Genital ulcer	29.0
Genital rash	11.0
Pain/burning during urination	21.8
Swelling in groin/genital area	13.0
Itching in genital area	21.0
% reported knowing at least one STD symptom	52.0

Sex worker's knowledge of STDs tended to significantly vary by type of town with those in large-sized towns exhibiting the highest knowledge level while those in small the lowest (Figure 5). The proportion of sex workers who heard of STD was 77.1% in large-sized towns; this was significantly higher than the 70.4% and 50% reported in the medium- and small-sized towns, respectively. Likewise, the proportion who knew of at least one STD symptom was recorded the highest among those in large-sized town at 56.5%, followed by 54.4% in medium-sized and the lowest, 26.9% in small-sized. STD knowledge of sex workers also varied by type of establishment although the noted differences did not pass the statistical significant test (Figure 6).





Self-reported incidence of STD symptoms

Sex workers were also asked if they had any STD symptom in the previous 1 month. The questions were asked directly and separately for each of the eight²¹ major STD symptoms. As shown in Table 6, about a fifth (20%) of the sex workers reported to have had one or more of the eight major symptoms of STDs in the previous 1 month. Genital discharge was reported to be the leading symptom as reported by a tenth of the sex workers. Other commonly reported symptoms include pain/burning during urination at 8.3%, genital rash (7.3%), lower abdominal pain (6.8%), and foul smelling discharge (5%). Few also reported genital ulcer, swelling in groin and itching in genital area.

Table 6. Percentage distribution of respondents by reported incidence of STD symptoms and treatment seeking in the last 1 month, commercial sex workers, TransACTION program baseline survey, March 2010

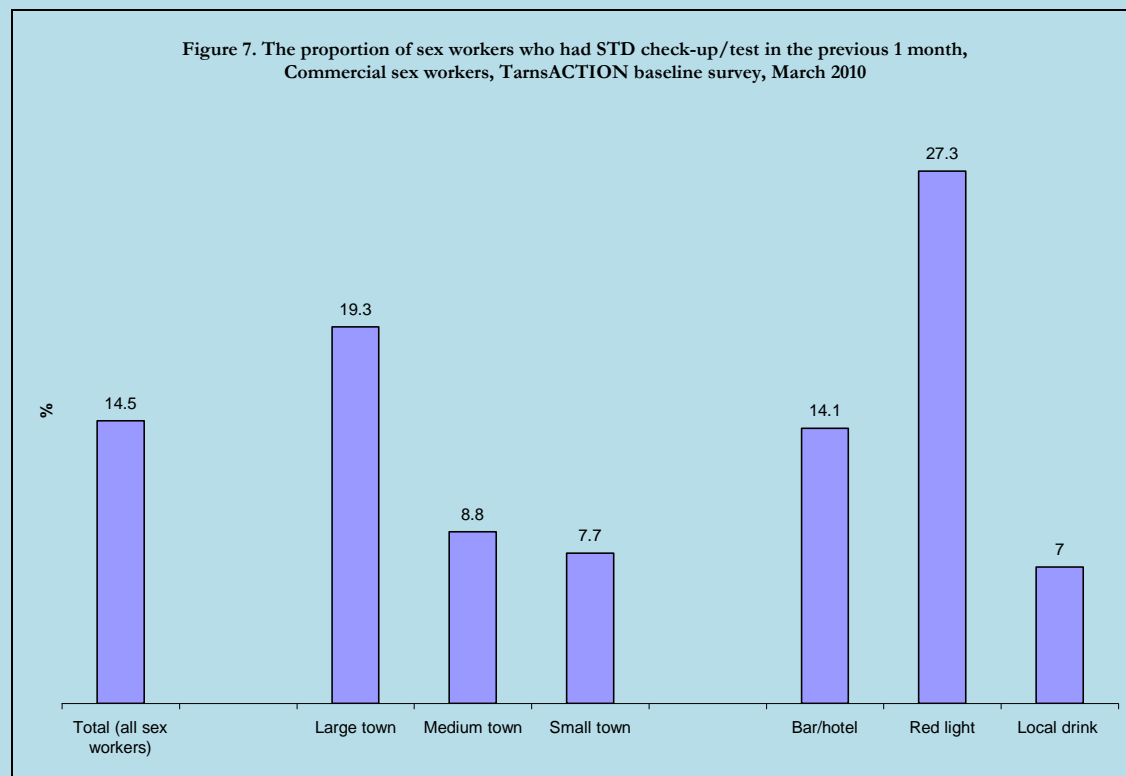
	%, N=400
STD Symptoms reported (last 1 month):	
Genital discharge	10.0
Lower abdominal pain	6.8
Foul smelling discharge	5.0
Genital ulcer	3.5
Genital rash	7.3
Pain/burning during urination	8.3
Swelling in groin/genital area	3.3
Itching in genital area	3.3
% who had at least one type of STD symptom (last 1 month)	20.0

²¹ The STD symptoms that were asked to sex workers include genital discharge, lower abdominal pain, foul smelling discharge, genital ulcer, genital rash, pain/burning during urination, swelling in groin/genital area, and itching in genital area.

STD check-up/testing:

We asked sex workers if they had STD check-up/test in health institution in the previous one month. Only 14.5% reported affirmatively to this question (Figure 7). We couldn't however tease out whether this was for an STD check-up or seeking treatment for active STD. In either case, care seeking for STD can be considered quite low among this population of sex workers in the light of the reported high incidence of self-reported STD by these women.

Seeking STD check-up/test by sex workers appeared to vary significantly by type of town and sex work establishment. Although seeking care/testing for STD is in general low in this population of sex workers, those in large-sized towns reported to have the highest STD check-up/testing rate at 19.3% (in the previous 1 month) compared to those in medium- and small-sized town at only 8.8% and 7.7%, respectively. The highest testing for STD was also recorded among sex workers operating in red light houses (27.3%), followed by in hotel/bar (14.1%) and local drink house (7%). This finding appeared to reconcile with the observed highest knowledge of STD symptoms, though not significantly, by the sex workers operating in red light houses. It is unknown as to why sex workers in red light houses have better STD knowledge and treatment seeking behavior than the other groups. It may well be that some confounding factors including the presence of programs targeting sex workers in red light houses may play their part.



3.2. Waitresses

3.2.1. Background characteristics

As shown in Table 7, the waitresses to be included in this study were sampled from towns of varying size with the vast majority (62.5%) from large-sized towns followed by medium-sized towns (31.3%). Since we employed a probability proportion to size sampling, the number of waitresses that were sampled from small-sized towns was so low (6.2%), which is due to the small concentration of bars or hotels or pastries in small-sized towns.

Waitresses can also be categorized by the type of workplace or venue. The workplaces were broadly categorized into two - (1) those selling coffee/tea, pastry, etc but non alcohol liquors (cafe/pastry) and (2) those selling alcohol liquors and food (bars/hotels). Most of the waitresses included in this study (54%) were working in bars or hotels at the time of interview. The remaining, 46% of the waitresses were sampled from cafes or pastries.

The mean age of waitresses was 21.8 years. About a tenth of the waitresses were 18 years or younger while a fifth 25 years or older. The majority of the waitresses (86.7%) had some education. In terms of their educational level, about a quarter had elementary education (grade 1-6), a third was 7-9 graders and 28.3% had 10 or higher years of schooling. The vast majority of the waitresses (72%) were never married while 13.2% reported to be currently married. The remaining 14.8% comprises widowed/divorced.

The average duration as waitress was reported at 22.5 months. Most (45%) worked as waitresses for 2 years or longer. About 19% reported working as waitresses for 6 months or shorter. When asked the number of places they lived in the past 12 months, the vast majority (83%) reported only one place.

Table 7. Selected background characteristic of respondents, waitresses, TransACTION program baseline survey, March 2010

	%	N
Study town		
Large-sized	62.5	250
Medium-sized	31.3	125
Small-sized	6.2	25
Type of Venue:		
Cafe/Pastry	46.0	184
Bar/hotel	54.0	216
Age of respondent:		
<18	10.3	41
18-20	36.8	147
21-24	32.0	128
25+	21.0	84
Mean age (95% CI)	21.8 (21.3-22.3)	400
Educational Status:		
Illiterate	13.3	53
1-6 Grade	25.3	101
7-9 Grade	33.1	132
10+ Grade	28.3	113
Marital Status:		
Never married	72.0	288
Widowed/Divorced	14.8	59
Currently Married	13.2	53
Duration of work (in months)		
<6 months	18.8	75
6-11 months	16.5	66
12-23 months	19.5	78
24 + months	45.2	181
Mean in months (95% CI)	22.5 (20.5-24.6)	400
Number of places lived in the last 12 months		
1	83.8	335
2+	16.2	65

3.2.2. Sexual behaviors

This section presents sexual experiences/behaviors of waitresses including type and number of sex partners, the prevalence of concurrent sex partners, cross-generational sex and transactional sex.

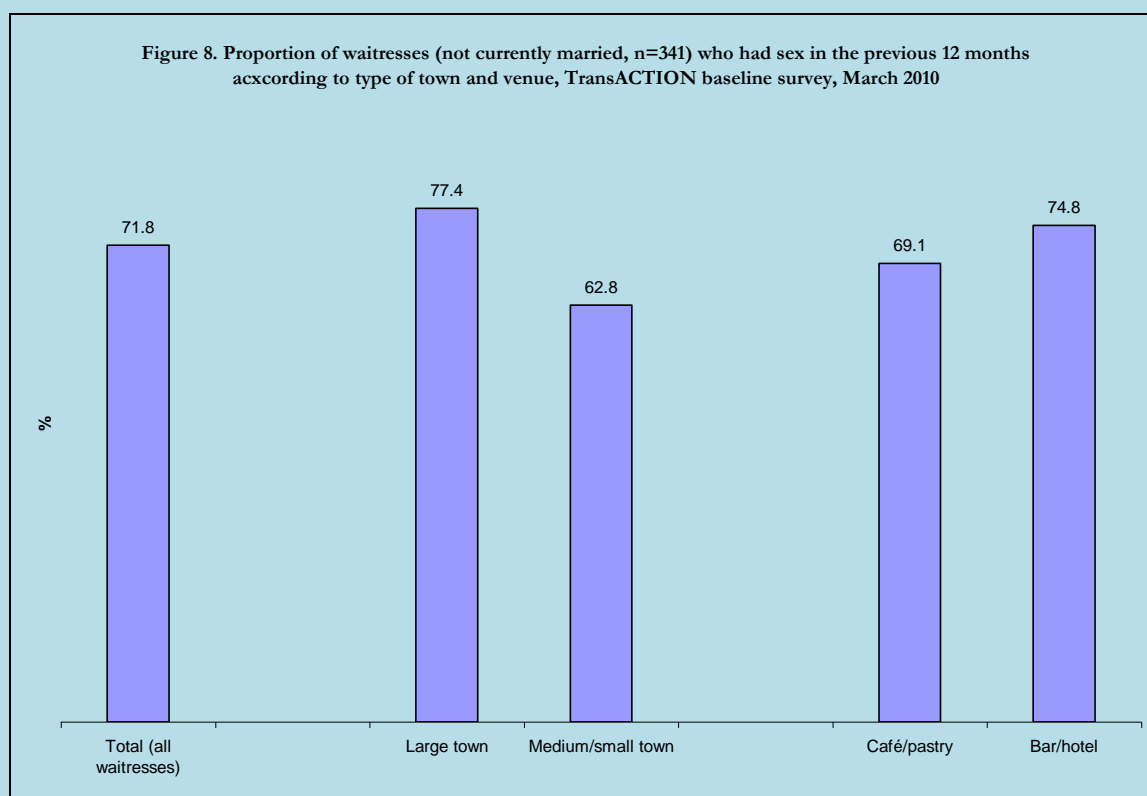
Sexual experience and partnership:

Waitresses were asked if they ever had sex in their lifetime, and 82% reported affirmatively to this question (Table 8). Of all the waitresses, 72% reported to have had sex in the previous 12 months. As an indicator of risky behavior, the proportion that had more than one sex partner in the previous 12 months was computed. Two or more sex partners in the previous 12 months were reported by 17% of the waitresses.

Table 8. Percentage of respondents who ever had sex, who had in the last 12 months, and the total number of sexual partners and types of partners (last year), waitresses, TransACTION program baseline survey, March 2010

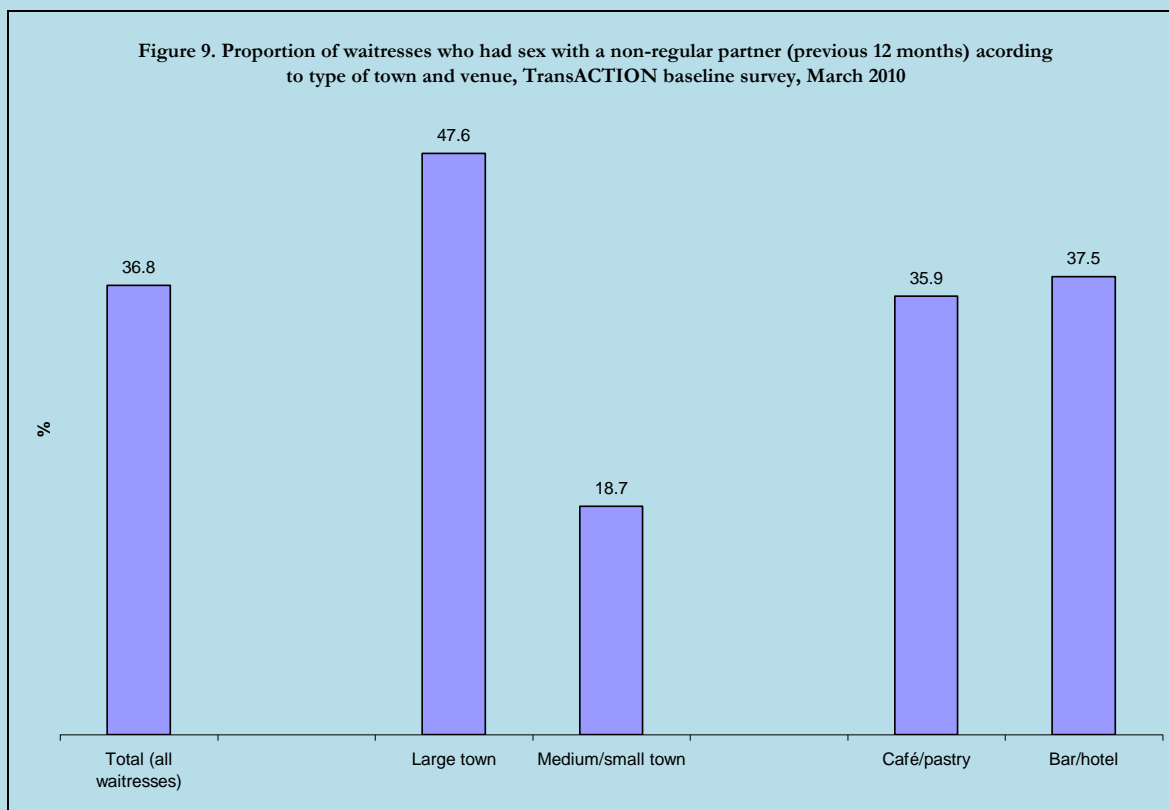
	% , n=400
Ever had sex	82.0
Had sex in the last 12 months	72.0
Total Number of sexual partners (last year)	
0	28.0
1	55.0
2+	17.0

Figure 8 compares sexual behaviors of unmarried waitresses by the size of town and type of venue. It appeared that waitresses in large-sized towns were significantly more likely than those in the medium/small towns to have had sex in the previous 12 months – 77.4% and 62.8%, respectively. Likewise, higher proportion of waitresses working in bars/hotels (74.8%) reported having had sex in the previous 12 months than those working in cafes/pastries (69.1%).



The type of sexual partner provides more insight into the risk behavior. Three types of partners were identified – spouse, live-in partner (non-spouse/consensual union) and non-regular partner. A non-regular partner is one that is neither a spouse nor a live-in partner. Figure 9 revealed that 36.8% of the waitresses reported to have had sex with at least one non-regular partner in the previous 12 months. Significant variation in the reporting of sex with a non-regular partner can be quite apparent

by size of town. While 47.6% of the waitresses in large-sized towns said they had sex with a non-regular partner (previous 12 months), this was reported at 18.7% among waitress in medium/small-sized towns. No such difference was noted by type of sex work venue.



Sex partners' concurrency

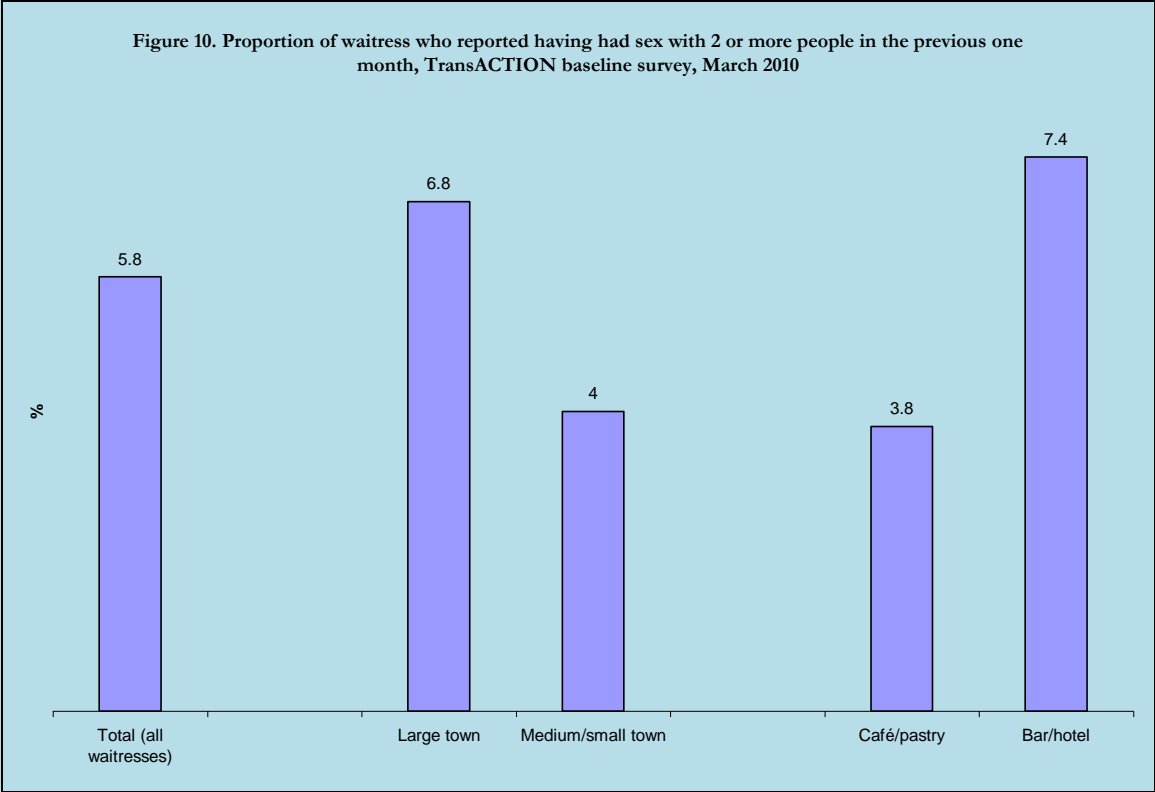
Sex partners' concurrency, defined as having two or more sexual partnerships that overlap in time, amplifies the spread of sexually transmitted infections. In this survey, as in other surveys elsewhere²², we defined sex partner concurrency as having sex with two or more people in a period of one month. Having concurrent sexual partners is well established in the scientific literature as an important factor underpinning rapid growth of HIV epidemics. Concurrency allows an individual to contract HIV from one partner and transmit it to others during the overlapping period²³.

About 6% of the waitresses reported to have had sex with 2 or more sexual partners in the previous one month, which can be considered as having concurrent sexual relationships (Figure 10).

Waitresses in large-sized town appeared more likely than those in medium/small town to have had concurrent sexual relationship (6.8% and 4%, respectively). Concurrency also found relatively more common among waitresses in bars/hotels (7.4%) than those in cafes/pastries (3.8%).

²² Warren P, Benjamin M, et al. Concurrent sexual partnerships amongst young adults in South Africa: challenges for HIV prevention communication. CADRE 2007

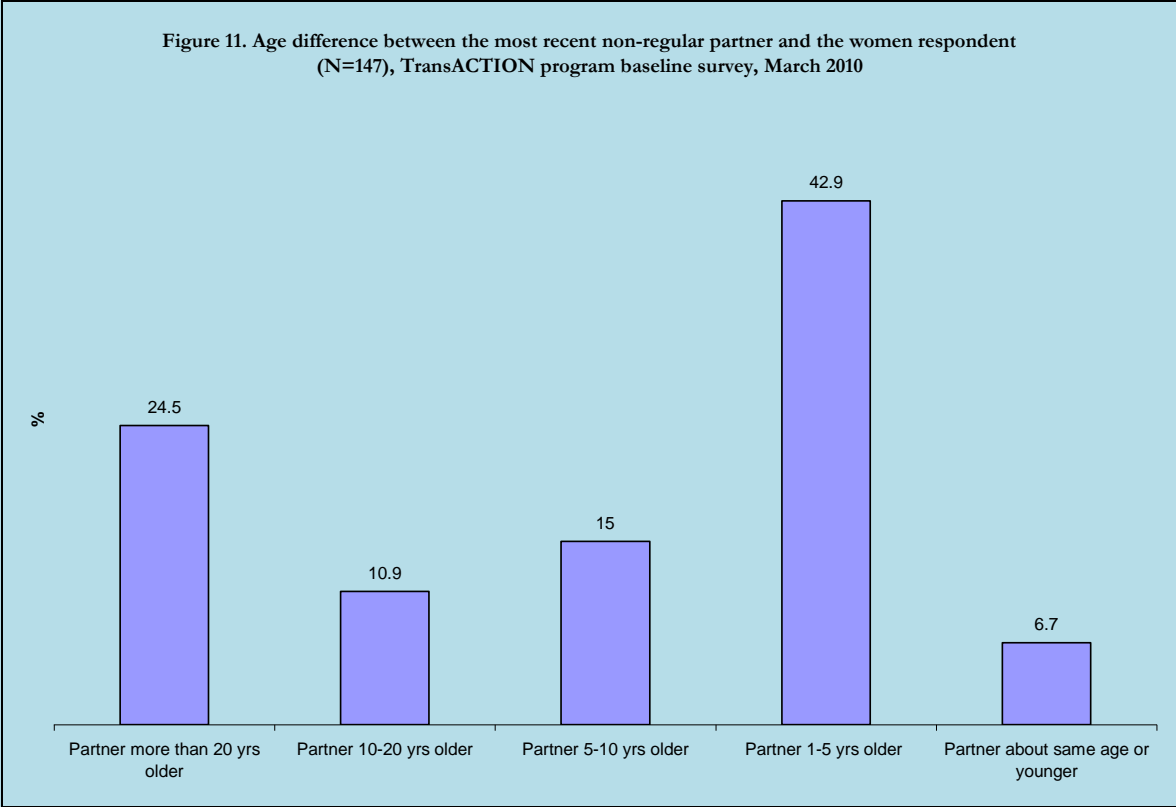
²³Nelson, S. J., et al. Measuring sex partner concurrency: it's what's missing that counts. *Sexually Transmitted Diseases* (2007), Vol. 34, pp. 801-807



Cross-generational sex:

Cross-generational sex generally refers to relationships between older men and younger women. Studies provide data on higher HIV prevalence in young women whose partner is five or more years older compared with young women whose partner is less than five years older.

Figure 11 revealed that cross-generational sex is quite apparent among waitresses in the study areas. Among those who had a non-regular partner last year, 24.5% said their partner was more than 20 years older. A little bit over a tenth reported a partner was 10-20 years older than them. Another 15% said they had sex partner who was 5-10 years older. Taking a conservative definition (age 10 or more years difference), in the whole 35.4% of the waitresses who had a non-regular partner last year can be considered as being involved in cross-generational relationships.



Transactional sex:

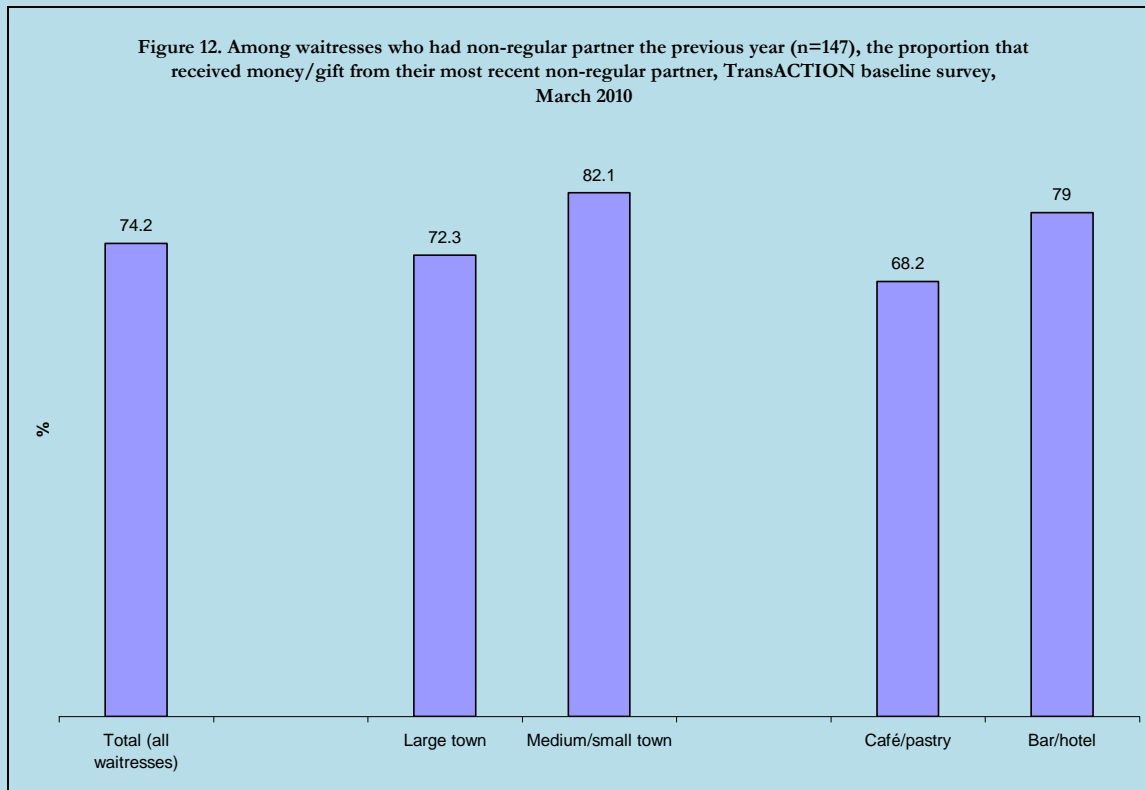
We use the term “transactional sex” to denote situations, including those in on-going relationships, where sex is exchanged for money/gift and where there is an understanding that if the money/gift are not forthcoming, the sex will stop. We assessed transactional sex with a non-regular sex partner. Of those waitresses who had sex with a non-regular partner in the pervious year, 74.2% reported to have received money/gift from such a partner (Table 9).

We asked the perception of waitresses regarding transactional relationship with their most recent non-regular partner in the previous year. For instance, 32.1% of the waitress who received money/gift from their most recent non-regular partner agreed to the question "do you agree that your most recent non-regular partner has expectations of you having sex with him in exchange for the gifts he gives you?". While 23.8% agreed to the question "Do you agree that you have expectations of your most recent non-regular partner providing you with gifts as you are giving him sex in exchange?", 10.1% were unsure about this question. Although such perceptions of respondents can be subjected to social desirability bias, they provide some clue into the high prevalence of transactional sex in this population of waitresses.

There also appears no significant difference in the receipt of money or gift from a non-regular partner by size of town and type of venue (Figure 12). Though not statistically significant, data suggest that waitress operating in bars/hotels are more likely than those in cafes/pastries to receive money/gift from a non-regular partner (79% vs. 68.2%, p=0.136).

Table 9. Percentage of respondents who reported receiving money or gift from a non-regular partner (last year) and their perception on transactional sex, waitresses, TransACTION program baseline survey, March 2010

	%
Ever received money/gift from a non-regular partner	74.2
<u>Perception on transactional sex:</u>	
n=109	
Do you agree that your most recent non-regular partner has expectations of you having sex with him in exchange for the gifts he gives you?	
Disagree	62.4
Unsure	5.5
Agree	32.1
Do you agree that you have expectations of your most recent non-regular partner providing you with gifts as you are giving him sex in exchange?	
Disagree	66.1
Unsure	10.1
Agree	23.8



3.2.3. Condom use

Waitress who reported having had non-spousal sex partner in the previous year was asked of their condom use behavior in two types of distinct relationships i.e. with a live-in regular partner and non-

regular partner. Two different condom use indicators were computed (1) condom use with most recent partner (2) consistent condom use – i.e. using condom every time they had sex with all non-spousal partners in the previous year. As shown in Table 10, waitresses' condom use with either a live-in or non-regular partner found to be notably low. Only 31% reported using condom with a live-in partner in the previous year. Consistent condom use (i.e. every time) with all live-in partners is even lower at 18.8%.

Although condom use with a non-regular partner appeared a bit higher than with that of a live-in partner, the reported figures of 63.3% (with most recent non-regular partner last year) and 53.2% (consistent condom use with all non-regular partners last year) can be considered strikingly low given the HIV and STD risks associated with such sexual relationships.

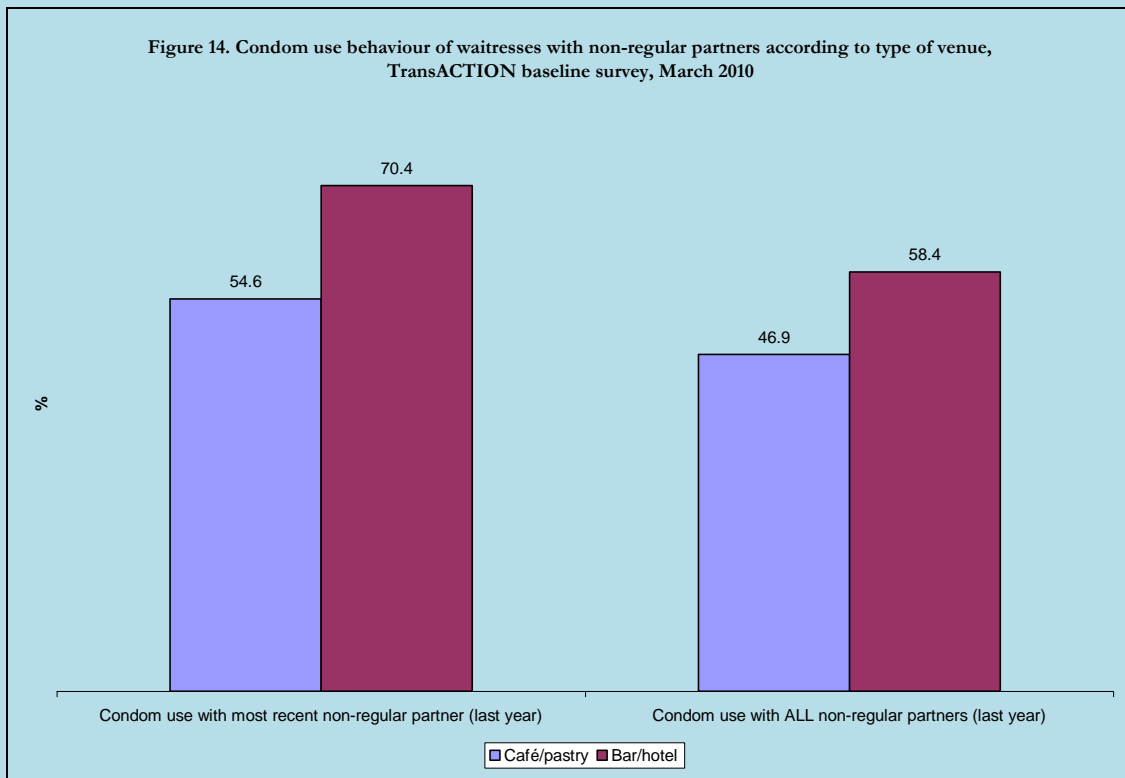
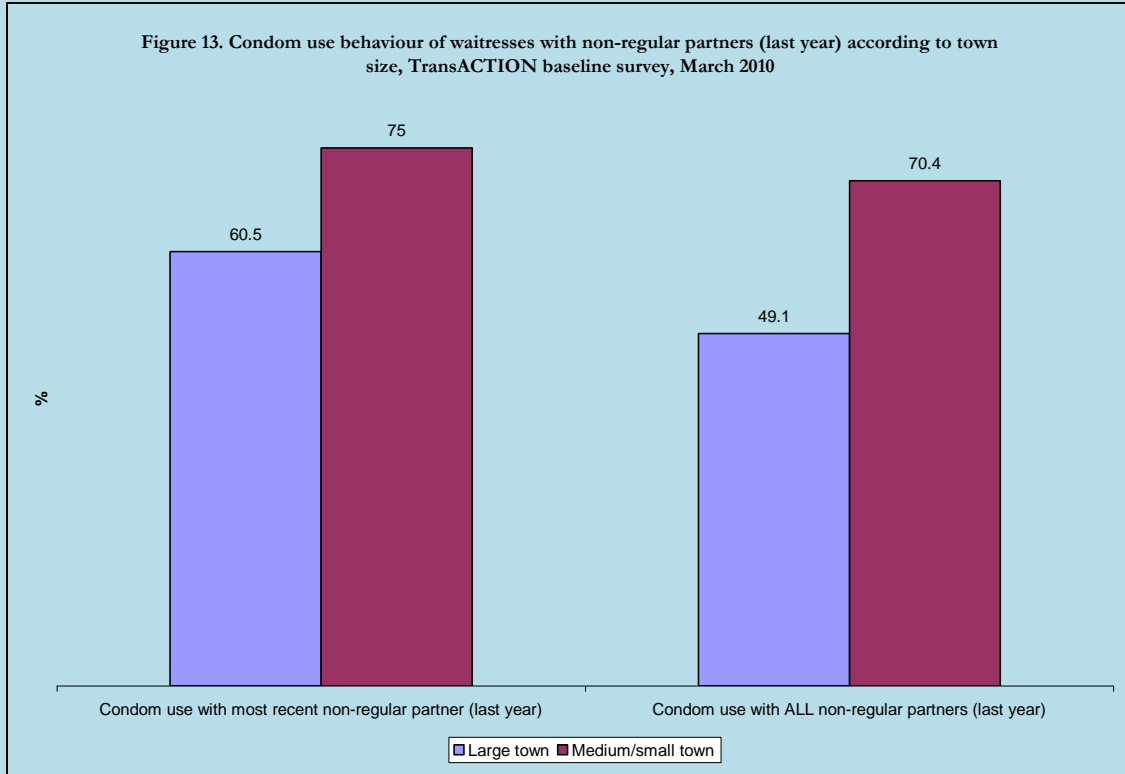
Table 10. Reported condom use with regular (non-spouse) and non-regular partners (last year), waitresses, TransACTION program baseline survey, March 2010

	%
<u>Condom use with a live-in (non-spouse) partner (last year)</u>	
	n=97
% who used condom in their most recent sex with a live-in partner (last year)	30.9
Frequency of condom use with all live-in partners (last year)	
Every time	18.8
Almost every time	3.1
Sometimes	13.5
Never	64.6
<u>Condom use with a non-regular partner (last year)</u>	
	n=147
% who used condom in their most recent sex with non-regular partner (last year)	63.3
Frequency of condom use with all non-regular partners (last year)	
Every time	53.2
Almost every time	6.4
Sometimes	18.4
Never	22.0

We compared waitresses' condom use behavior with non-regular partners by town size and type of venue, as shown in Figure 13 and 14. On the whole, waitresses in large sized-town were found significantly less likely than those in the medium/small-sized towns to use condom with their non-regular partners. Three-quarter of the waitresses in medium/small-sized towns reported using condom with the most recent non-regular partner the previous year vis-à-vis 60.5% in large-sized town (Figure 13). Likewise, consistent condom use with all non-regular partners in the previous year appeared significantly higher among waitresses in the medium/small-sized (70.4%) towns than in large-sized (49.1%).

Data also show significantly higher condom use with non-regular partners among waitresses operating in bars/hotels than those in cafes/pastries (Figure 14). The last time they had sex with the most recent non-regular partner, 70% and 54.6% of the waitresses in bars/hotels and

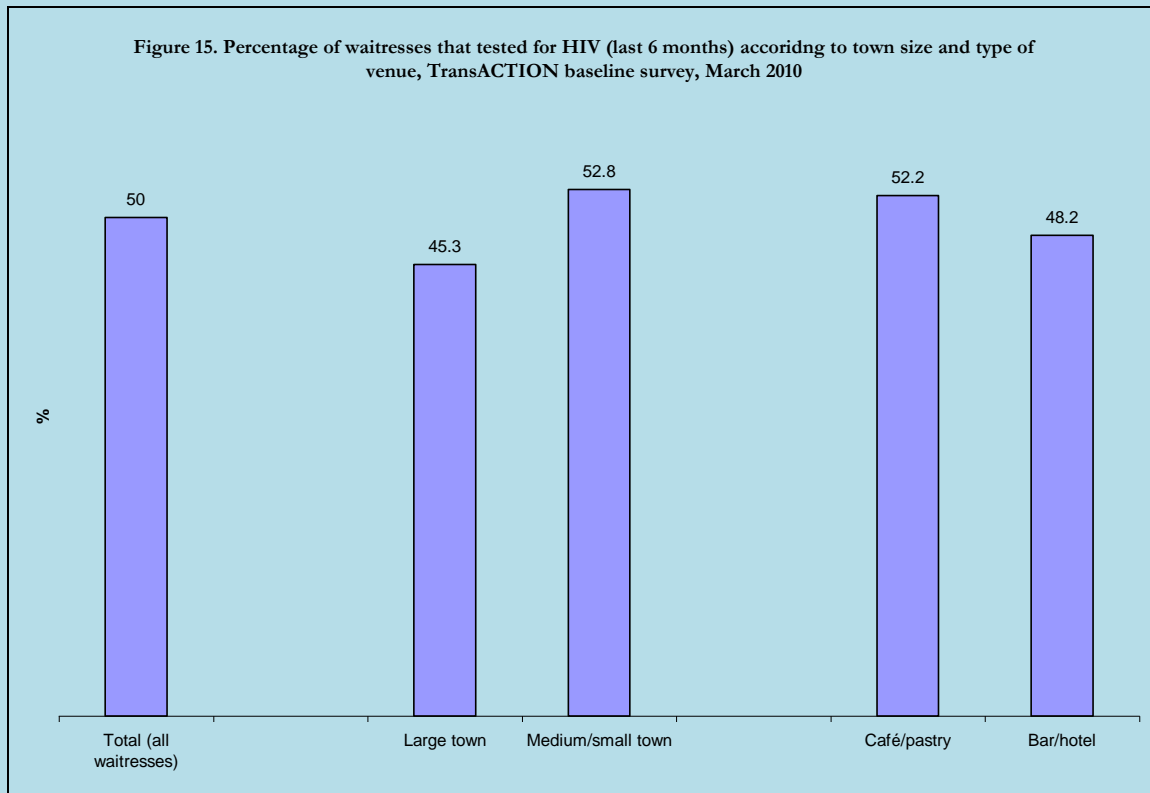
cafes/pastries, respectively, reported using condoms. Consistent condom use was reported at 58.4% and 46.9%, respectively.



3.2.4. HIV Counseling and Testing

Half of the waitresses reported being tested for HIV in the previous 6 months (Figure 15). There is a slightly higher HIV testing prevalence among waitress in medium/small-sized towns (52.8%) than in large-sized (52.8%) although the difference was not statistically significant. The noted slightly higher HIV testing rate among waitresses in cafes/waitress than in bars/hotels (52.2% vs. 48.2%) was not statically significant.

We asked partners' HIV testing status among those who have spouses/live-in partners. On the whole, about two-third (66.4%) of the waitresses reported their spouses/live-in partners were tested for HIV the previous 6 months (Data not shown).



3.2.5. Sexually transmitted diseases (STD)

Knowledge of STDs

Table 10 details waitresses' knowledge of the various symptoms of STDs. The proportion who heard of STDs can be considered low at 54%. The knowledge of the different STD symptoms is even lower with only 35.3% of the waitress were able to report at least one symptom spontaneously (Table 11).

The few who reported knowing STD symptoms mentioned genital ulcer (17.8%), itching in genital area (17.8%), pain/burning during urination (15.8%), genital discharge (15%), foul smelling discharge (8.8%), swelling in groin (7.3%) and genital rash (7%). Other symptoms were rarely reported by the waitresses.

Table 11. Percentage of respondents who spontaneously reported different symptoms of STDs and those who reported at least three correct symptoms, waitresses, TransACTION program baseline survey, March 2010

	n=400
% Ever heard of STDs	54.0
Knowledge of STD symptoms:	
% who know/reported STD symptoms	
Genital discharge	15.0
Lower abdominal pain	1.8
Foul smelling discharge	8.8
Genital ulcer	17.8
Genital rash	7.0
Pain/burning during urination	15.8
Swelling in groin/genital area	7.3
Itching in genital area	17.8
% reported knowing at least one STD symptom	35.3

Self-reported incidence of STD symptoms

Waitresses were also asked if they had any STD symptom in the previous 6 months. The questions were asked directly and separately for each of the eight²⁴ major STD symptoms. As shown in Table 12, 11% of the waitresses had at least one STD symptoms in the previous 6 months. Pain/burning during urination appeared the most common symptom as reported by 6% of the waitresses. This was followed by genital discharge (3.8%), genital rash (3.5%), itching in genital area (3.3%), foul smelling discharge (2.5%), among few others.

Table 12. Reported incidence of STD symptoms (last 6 months) and treatment seeking for STD symptom, waitresses, TransACTION program baseline survey, March 2010

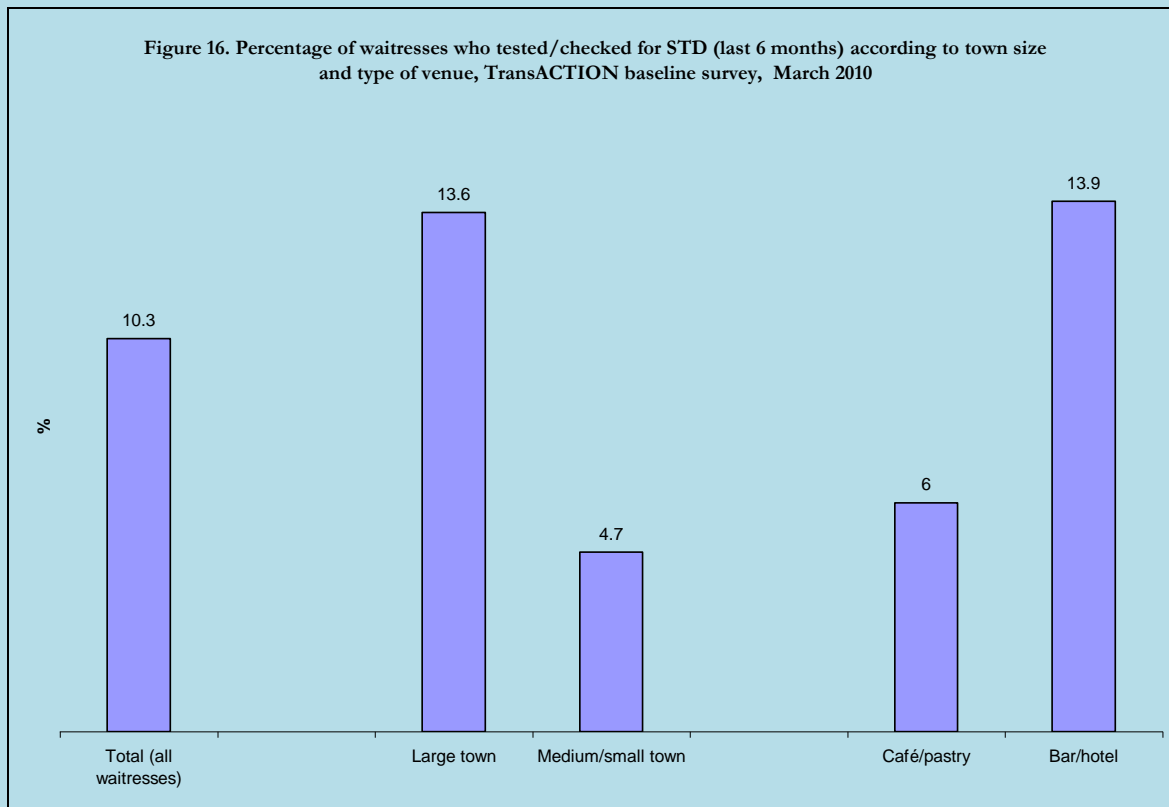
	%, N=400
Incidence of STD Symptoms reported (last 6 months):	
Genital discharge	3.8
Lower abdominal pain	2.0
Foul smelling discharge	2.5
Genital ulcer	2.0
Genital rash	3.5
Pain/burning during urination	6.0
Swelling in groin/genital area	1.0
Itching in genital area	3.3
At least one incidence of STD symptom (last 6 months)	11.0

STD check-up/testing

STD checkup by waitresses can be considered low. On the whole, only 10.3% of the waitresses had STD checkup the previous 6 months. There appear significant difference in the incidence of STD checkup between waitresses in large-sized and those in medium/small-sized towns. In large-sized

²⁴ The STD symptoms that were asked to waitresses include genital discharge, lower abdominal pain, foul smelling discharge, genital ulcer, genital rash, pain/burning during urination, swelling in groin/genital area, and itching in genital area.

towns, 13.6% of the waitresses reported having had STD checkup the previous 6 months, which is significantly higher than the only 4.7% reported in medium/small sized town. Significant variation in seeking STD check up was also noted by type of venue. Those waitresses in bars/hotels were found significantly more likely than those in cafes/pastries to have had STD checkup in the previous 6 months (13.9% vs. 6%).



3.3. Female daily laborers

3.3.1. Background characteristics

We interviewed 400 female daily laborers from towns of varying size. The majority (57.5%) were sampled from large-sized towns. A quarter was from small-sized and the remaining 17% from medium-sized. At the time of interview, the vast majority of the female daily laborers (72.3%) were working in building construction sites and the remaining 27.7% in road construction (Table 13).

Female daily laborers predominantly comprises the youth, averaged at 22.3 years. A little bit over a tenth (10.5%) had their age under 18 years. Nearly two-third (65.1%) of the female daily laborers was in the age group 18-24 years. About a quarter were 25 years or older.

Most daily laborers (70.2%) had some education while 30% can not read or write. Of all the female daily laborers included in this study, 25.3% had achieved 10 year or higher education.

The marital status of female daily laborers was also assessed. Most (58%) were never married while nearly 17% reported to be either divorced or widowed. A quarter of the female daily laborers reported to be currently married.

Duration of work as daily laborer was reported 15 months on average. A good proportion of the female daily laborers (37.3%) reported to have started working as a daily laborer in the previous 6 months. Nearly 30% have worked as a daily laborer for 24 or more months.

Table 13. Selected background characteristic of respondents, female daily laborers, TransACTION program baseline survey, March 2010

	%	N
Study town		
Large-sized	57.5	230
Medium-sized	17.0	68
Small-sized	25.5	102
Type of workplace :		
Building construction	72.3	289
Road construction	27.7	111
Age of respondent:		
<18	10.5	42
18-20	34.5	138
21-24	30.8	123
25+	24.3	97
Mean age (95% CI)	22.3(21.8-22.9)	400
Educational Status:		
Illiterate	29.8	119
1-6 Grade	23.0	92
7-9 Grade	22.0	88
10+ Grade	25.3	101
Marital Status:		
Never married	58.0	232
Widowed/Divorced	16.8	67
Currently Married	25.3	101
Duration of work (in months)		
<6 months	37.3	149
6-11 months	14.0	56
12-23 months	19.0	76
24 + months	29.7	119
Mean in months (95% CI)	15.1 (13.5-16.7)	400

3.3.2. Sexual behaviors

This section presents sexual experiences/behaviors of female daily laborers including type and number of sex partners, the prevalence of concurrent sex partners, cross-generational sex and transactional sex.

Sexual experience and partnership:

The female daily laborers were asked if they ever had sex in their lifetime, and 63.3% reported affirmatively to this question (Table 14). About 52% reported to have had sex in the previous 12 months. Two or more sexual partners were reported by only 3.8% of the female daily laborers.

Table 14. Percentage of respondents who ever had sex, who had in the last 12 months, and the total number of sexual partners and types of partners (last year), female daily laborers, TransACTION program baseline survey, March 2010

	N=400 %
Ever had sex	63.3
Had sex in the last 12 months	51.8
Total Number of sexual partners (last year)	
0	48.2
1	48.0
2+	3.8

Figure 14 compares sexual behaviors of unmarried female daily laborers by the size of town and type of workplace. The proportion of unmarried female daily laborers who had sex in the previous 12 months was 37.5%. Significantly high proportion of unmarried female daily laborers (50.6%) in small-sized towns reported to have had sex in the previous 12 months compared to the corresponding 35.3% and 23.7%, respectively, in large-sized and medium-sized towns. There is however no such significant difference by type of workplace.

Female daily laborers were asked whether they had sex with a non-regular partner in the previous 12 months. Figure 15 revealed that about 10% of the female daily laborers reported to have had sex with non-regular partners in the previous 12 months. The reporting of non-regular partner was by far the highest at 20.6% among the female daily laborers in small-sized towns. This was followed by those from large-sized town at 7% and the lowest was reported by those from the medium-sized towns (2.9%). Likewise, we also found significant variation in the reporting of non-regular partner by type of workplace. Female daily laborers in building construction site were more likely than those in road to report non-regular partner in the previous year (11.4% and 5.4%, respectively).

Figure 14. Proportion of female daily laborers (not currently married, n=299) who had sex in the previous 12 months according to type of town and workplace, TransACTION baseline survey, March 2010

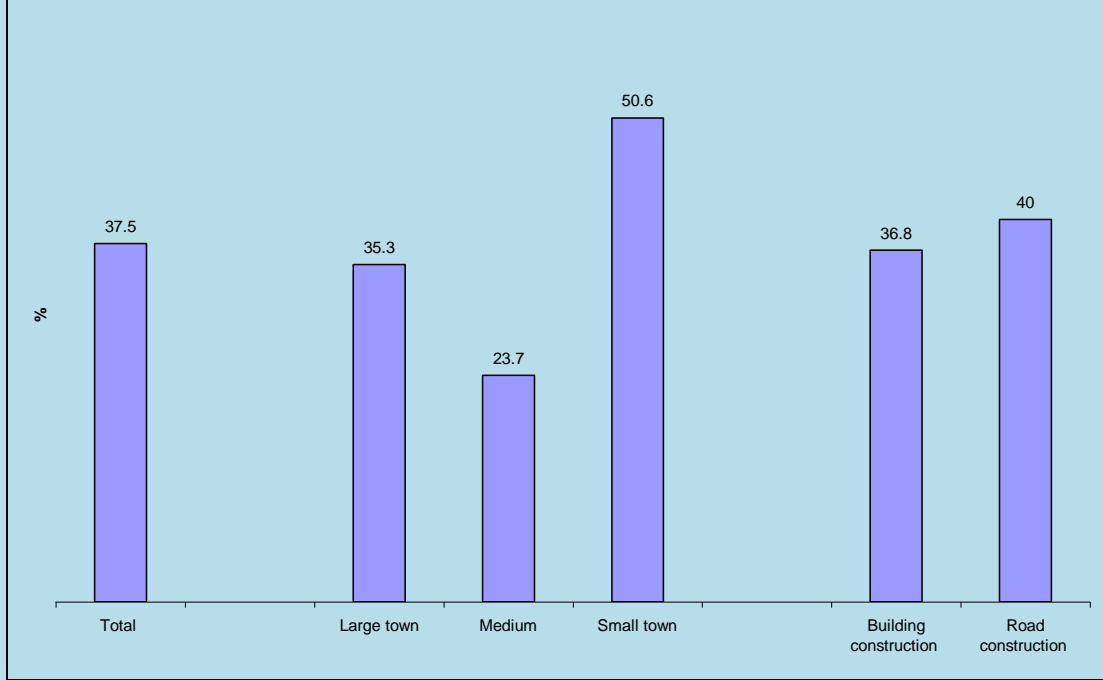
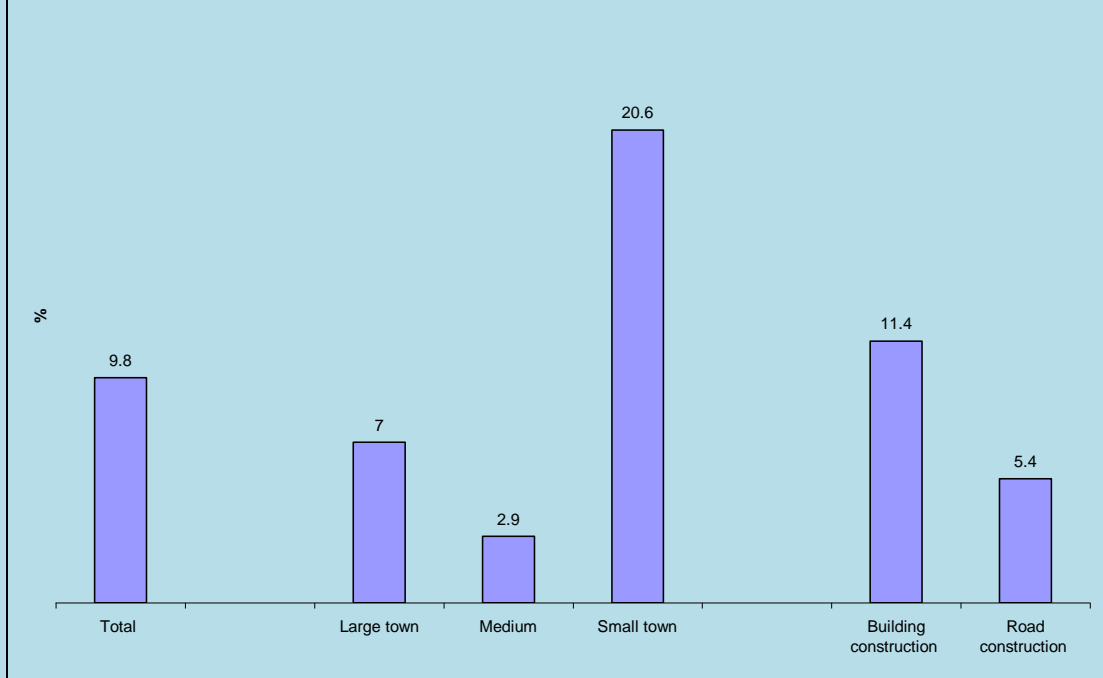
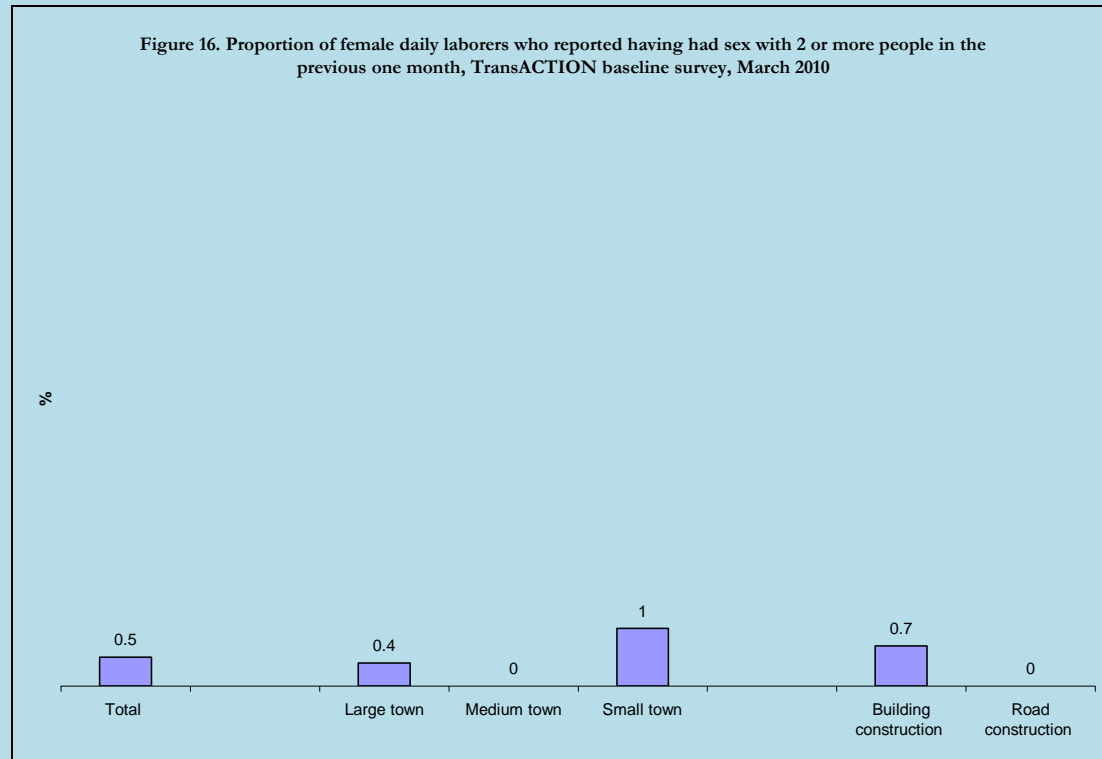


Figure 15. Proportion of female daily laborers who had sex with a non-regular partner (last 12 months) according to town size and work place, TransACTION baseline survey, March 2010



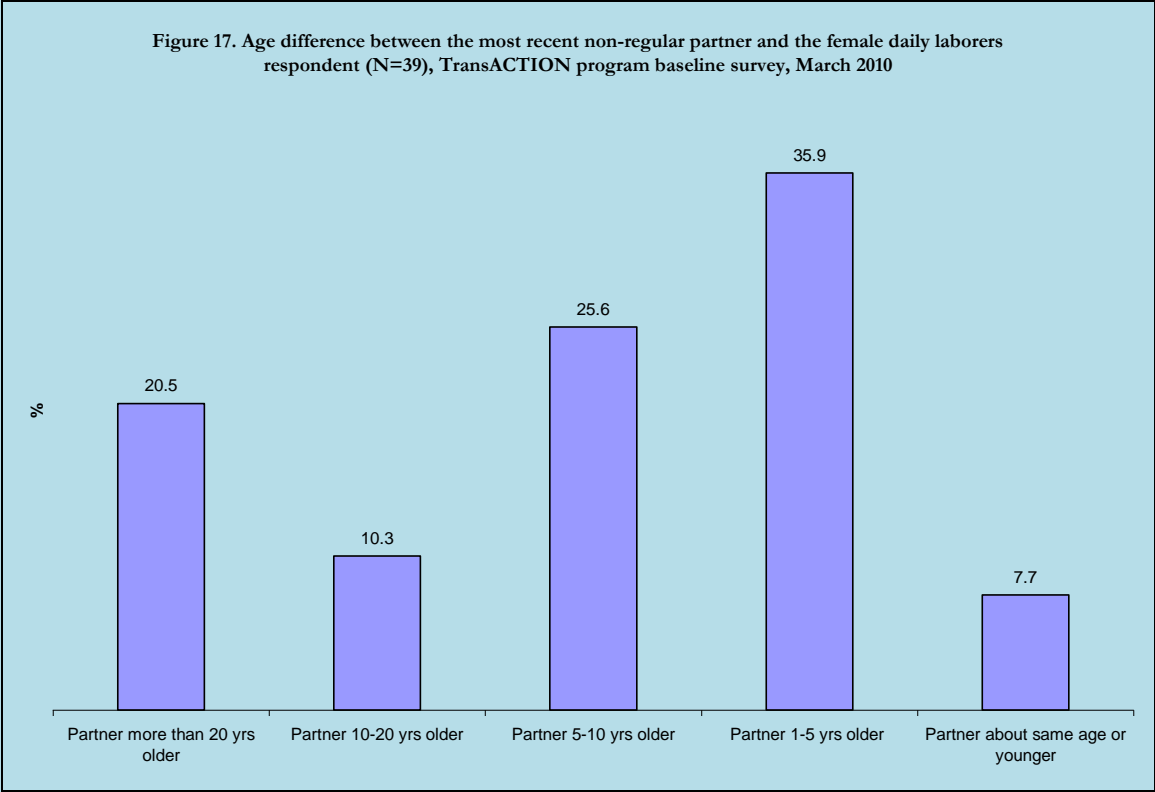
Sex partners' concurrency

Concurrent sexual relationship was rarely reported by the female daily laborers included in this study. In the previous one month, 28% reported to have had sex. However, only 0.5% reported to have had 2 or more sex partner last month (Figure 16). There is also no significant variation in the reporting of concurrency by size of town and workplace.



Cross-generational sex:

Figure 17 indicates that cross-generational sex is apparent among female daily laborers in the study areas. Cross-generational sex was assessed only among a tenth of the female daily laborers who had non-regular partners (n=39). It appears that within this small sample of respondents, 20.5% said their partner was more than 20 years older. A little bit over a tenth (10.3%) reported a partner was 10-20 years older than them. A quarter of them (25.6%) said they had sex partner who was 5-10 years older.



Transactional sex:

We assessed transactional sex with the most recent non-regular sex partner in the previous year. Only 39 female daily laborers reported non-regular partner the previous year; the small sample size significantly limits our assessment of transactional sex in this population of female daily laborers. With this caveat, 51.3% reported to have received money/gift from such a partner in the previous year (Table 15).

The few female daily laborers (n=20) who received money/gift from a non-regular partner were further asked their perception regarding transactional relationship. Table 15 shows that 35% of the female daily laborers agreed to the question "do you agree that your most recent non-regular partner has expectations of you having sex with him in exchange for the gifts he gives you?". While 45% agreed to the question "Do you agree that you have expectations of your most recent non-regular partner providing you with gifts as you are giving him sex in exchange?". We couldn't assess the prevalence of transactional sex by size of town or type of workplace since desegregation of the data by these attributes will result in small sample size for any meaningful comparison.

Table 15. Percentage of respondents who reported receiving money or gift from a non-regular partner (last year) and their perception on transactional sex, female daily laborers, TransACTION program baseline survey, March 2010

	%, n=39
Ever received money/gift from a non-regular partner	51.3
<u>Perception on transactional sex:</u>	
Do you agree that your most recent non-regular partner has expectations of you having sex with him in exchange for the gifts he gives you?	n=20
Disagree	60.0
Unsure	5.0
Agree	35.0
Do you agree that you have expectations of your most recent non-regular partner providing you with gifts as you are giving him sex in exchange?	n=20
Disagree	55.0
Unsure	0.0
Agree	45.0

3.3.3. Condom use

Female daily laborers who reported having had non-spousal sex partner in the previous year was asked of their condom use behavior in two types of distinct relationships i.e. with a live-in regular partner and non-regular partner. In general condom use by the female daily laborers can be considered low. As shown in Table 16, only 18.7% reported using condom with a live-in partner in the previous year. Consistent condom use (i.e. every time) with all live-in partners is also so low at 16.5%.

Condom use with the most recent non-regular partner was reported at 48.7%. This is far off what is expected in such risky sexual relationships. Consistent condom use with all non-regular partners (the previous year) was much lower at 35.9%, suggesting the limited condom use behavior among the female daily laborers in the study area. The small sample size prevents us from making meaningful comparison of condom use across towns and workplace.

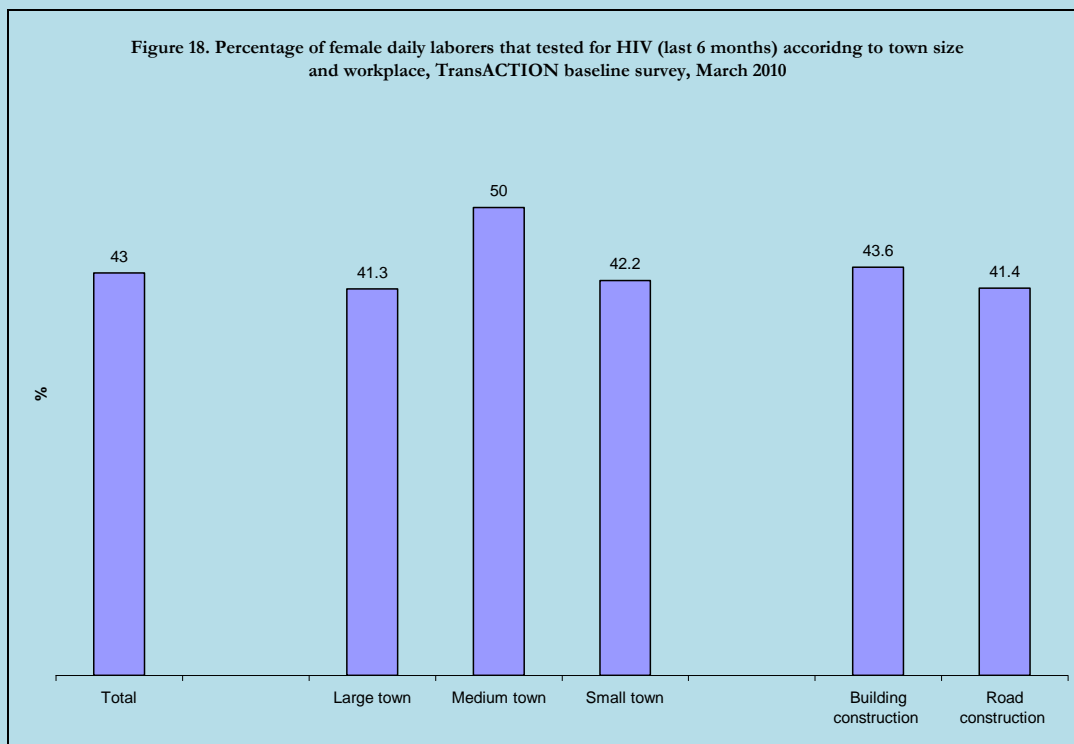
Table 16. Reported condom use with regular (non-spouse) and non-regular partners (last year), female daily laborers, TransACTION program baseline survey, March 2010

	%
<u>Condom use with a live-in (non-spouse) partner (last year)</u>	n=91
% who used condom in their most recent sex with a live-in partner (last year)	18.7
Frequency of condom use with all live-in partners (last year)	16.5
Every time	1.1
Almost every time	6.6
Sometimes	75.8
Never	
<u>Condom use with a non-regular partner (last year)</u>	n=39
% who used condom in their most recent sex with non-regular partner (last year)	48.7
Frequency of condom use with all non-regular partners (last year)	
Every time	35.9
Almost every time	2.6
Sometimes	7.7
Never	53.8

3.3.4. HIV Counseling and Testing

We asked female daily laborers whether they had tested for HIV in the previous 6 months and 43% reported so (Figure 18). The reporting of HIV testing appeared slightly higher among the female daily laborers in medium-sized towns at 50% compared to the reporting for the same at 41.3% and 42.2%, respectively, in large-sized and small-sized towns.

We asked partners' HIV testing status among those female daily laborers who had spouses/live-in partners in the previous year (n=177). Of these, 53% reported their spouses/live-in partners were tested for HIV in the previous 6 months (Data not shown).



3.3.5. Sexually transmitted diseases (STD)

Knowledge of STDs

Ever heard of STDs is strikingly low at 39.3% among these female daily laborers (Table 17). When asked to mention any of the STD symptoms, only 21% were able to mention at least one correct symptom. The few who reported knowing STD symptoms mentioned genital ulcer (9%), genital discharge (8.3%) and pain/burning during urination (6.3%). The other symptoms were reported by about 5% or fewer respondents.

Table 17. Percentage of respondents who heard of STDs and spontaneously reported the different symptoms of STDs and those who reported at least one correct symptom, female daily laborers, TransACTION program baseline survey, March 2010

	%, N=400
% Ever heard of STDs	39.3
% who know/reported STD symptoms (last 6 months)	
Genital discharge	8.3
Lower abdominal pain	0.5
Foul smelling discharge	3.5
Genital ulcer	9.0
Genital rash	4.8
Pain/burning during urination	6.3
Swelling in groin/genital area	5.5
Itching in genital area	5.3
% reported knowing at least one STD symptom	21.0

Self-reported incidence of STD symptoms

Female daily laborers were also asked if they had any STD symptom in the previous 6 months. The questions were asked directly and separately for each of the eight²⁵ major STD symptoms. About 9% reported to have at least one STD symptoms the previous 6 months (Table 18). Genital discharge was reported by 6% of the female daily laborers, lower abdominal pain by 4%, and pain during urination by 3.3%. Other symptoms were also reported but by the few.

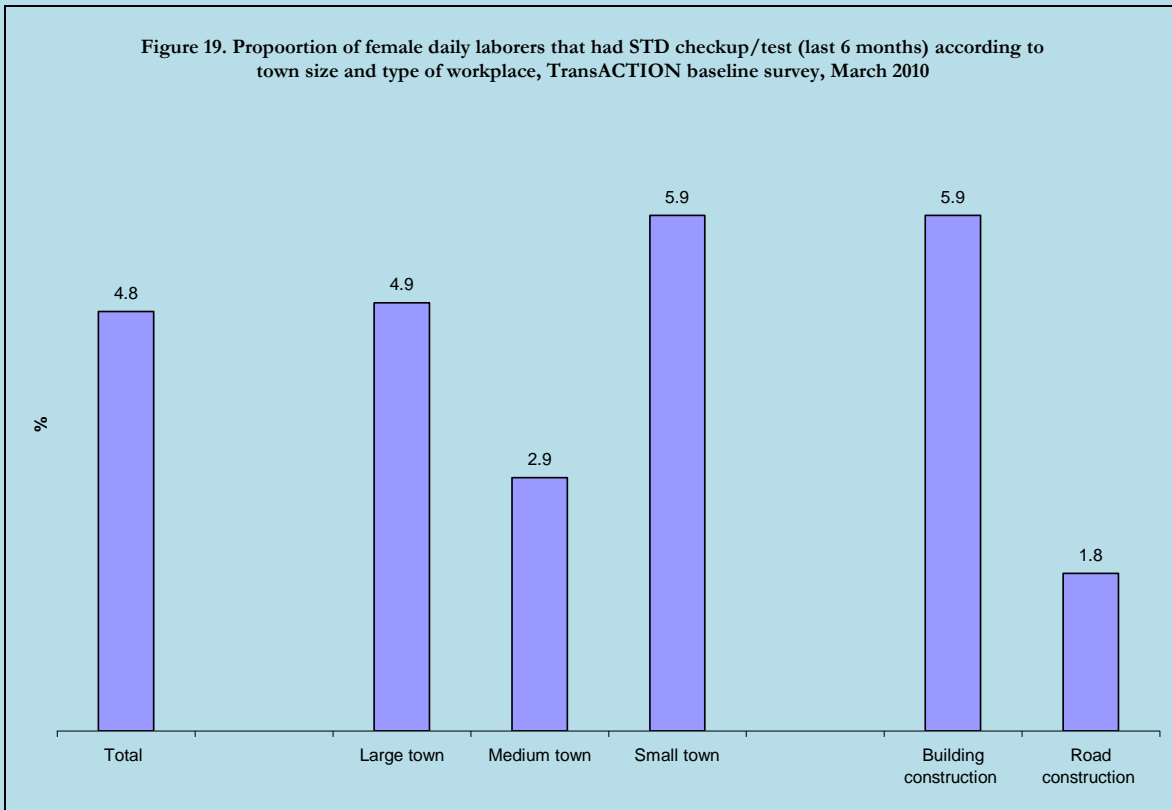
Table 18. Reported incidence of STD symptoms (last 6 months) and treatment seeking for STD symptom, female daily laborers, TransACTION program baseline survey, March 2010

	n=400 %
Incidence of STD Symptoms reported (last 6 months):	
Genital discharge	4.0
Lower abdominal pain	4.0
Foul smelling discharge	1.8
Genital ulcer	1.8
Genital rash	2.3
Pain/burning during urination	3.3
Swelling in groin/genital area	0.8
Itching in genital area	1.3
At least one incidence of STD symptom (last 6 months)	8.5

STD check-up/testing

STD checkup by the female daily laborers reported to be quite low. Only 4.8% of the female daily laborers had STD checkup the previous 6 months. There appears some variation, though not significantly, in the incidence of STD checkup by town size. In large-sized towns, 5.9% of the female daily laborers reported having had STD checkup the previous 6 months, which is significantly higher than the 4.9% and 2.9%, respectively, among those in medium-sized and small-sized town. Significant variation in seeking STD check up was also noted by type of workplace with those working in building construction sites more likely than those in road to have had STD checkup (5.9% vs. 1.8%).

²⁵ The STD symptoms that were asked to female daily laborers include genital discharge, lower abdominal pain, foul smelling discharge, genital ulcer, genital rash, pain/burning during urination, swelling in groin/genital area, and itching in genital area.



3.4. Male Daily laborers

3.4.1. Background characteristics

Four hundred male daily laborers were interviewed in towns representing varying population size. Most (56.3%) were in large-sized towns, a quarter in medium-sized and about 19% in small-sized (Table 19). Three distinct workplaces of the male daily laborers were identified – building construction (52.3%), road construction (18.8%) and marketplaces (29%).

The mean age of the male daily laborers was 26.2 years. About two-third (65.7%) were in the age group 20-29 years; 31% 30 years or older. A tenth were under 20 years. The male daily laborers have better education than their female counterparts. Of note, a quarter couldn't read or write. Elementary education (grade 1-6) was reported to be achieved by 28.4% of the respondents; junior secondary education (grade 7-8) by 16.5%. About 23% had 9-11 years of schooling and only 7.4% had 12 or more years of schooling. Most (69%) were never married at the time of interview while 26.3% were currently married.

On average respondents served as daily laborer for about 5 years. It appears that a fifth has been working in daily labor work for less than a year, another 43% for 2-4 years. Longer duration in daily labor work, i.e. 5 or longer years, was reported by 36% of the respondents.

Table 19. Selected background characteristic of respondents, male daily laborers, TransACTION baseline survey, March 2010

	%	N
Study town		
Large-sized	56.3	225
Medium-sized	18.8	75
Small-sized	25.0	100
Type of workplace :		
Building construction	52.3	209
Road construction	18.8	75
Others (market place)	29.0	116
Age of respondent:		
<20	10.5	42
20-24	37.2	149
25-29	28.5	114
30+	23.8	95
Mean age (95% CI)	26.2 (25.5-27.0)	400
Educational Status:		
Illiterate	25.1	99
1-6 Grade	28.4	112
7-8 Grade	16.5	65
9-11 Grade	22.6	89
12+ Grade	7.4	29
Marital Status:		
Never married	69.0	276
Currently Married	26.3	105
Widowed/Divorced	4.8	19
Duration of work (in Year)		
0-1 year	21.0	84
2-4 years	43.0	172
5-9 years	22.5	90
10 + years	13.5	54
Mean in Years (95% CI)	4.8 (4.4-5.2)	400

3.4.2. Sexual behaviors

This section presents sexual experiences/behaviors of the male daily laborers including type and number of sex partners, and the prevalence of concurrent sex partners.

Sexual experience and partnership:

About 74% of the male daily laborers reported to have ever had sex in their lifetime and 69.5% had sex in the previous year (Table 20). Partner change appears to be common among the daily laborers included in this study. Two or more sexual partners in the previous year were reported by 21.2% of the male daily laborers; 7.3% reported 5 or more sex partners during the same period.

Table 20. Percentage of respondents who ever had sex, who had in the last 12 months, and the total number of sexual partners, male daily laborers, TransACTION program baseline survey, March 2010.

	%, N=400
Ever had sex	73.8
Had sex in the last 12 months	69.5
Total Number of sexual partners (last year)	
0	30.5
1	48.3
2	6.5
3	4.2
4	3.2
5+	7.3

Three categories of sex partners of the male daily laborers were identified. These are (1) spouse or live-in partner, (2) commercial sex workers (paid sex) and (3) non-regular (non-sex worker) partner. As shown in Table 21, half of the male daily laborers (50.5%) reported to have had sex either with spouse or live-in partner. Only 1% reported two or more of such partners the previous year.

Paid sex with commercial sex workers in the previous year was reported by 14.8% of the male daily laborers. Paid sex with 2 or more sex workers was reported by 12.3% of the respondents the previous year, and 6.5% had sex with 4 or more sex workers.

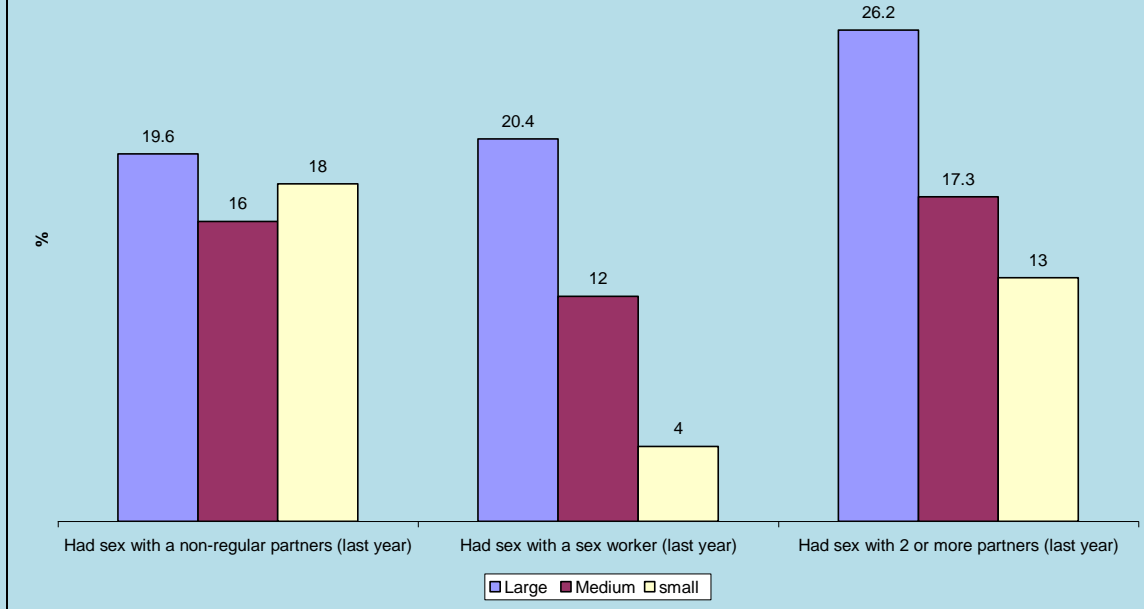
Non-regular (non-sex worker) partners were among the main sex partners of the male daily laborers of this study. As shown in Table 21, 18.5% reported to have had sex with a non-regular the previous year. Two or more of such partners was reported by 7.5% of the male daily laborers.

Table 21. Percentage of respondents according to the number of regular, paid (CSW) and non-regular (non-CSW) partners during last year, male daily laborers, TransACTION program baseline survey, March 2010

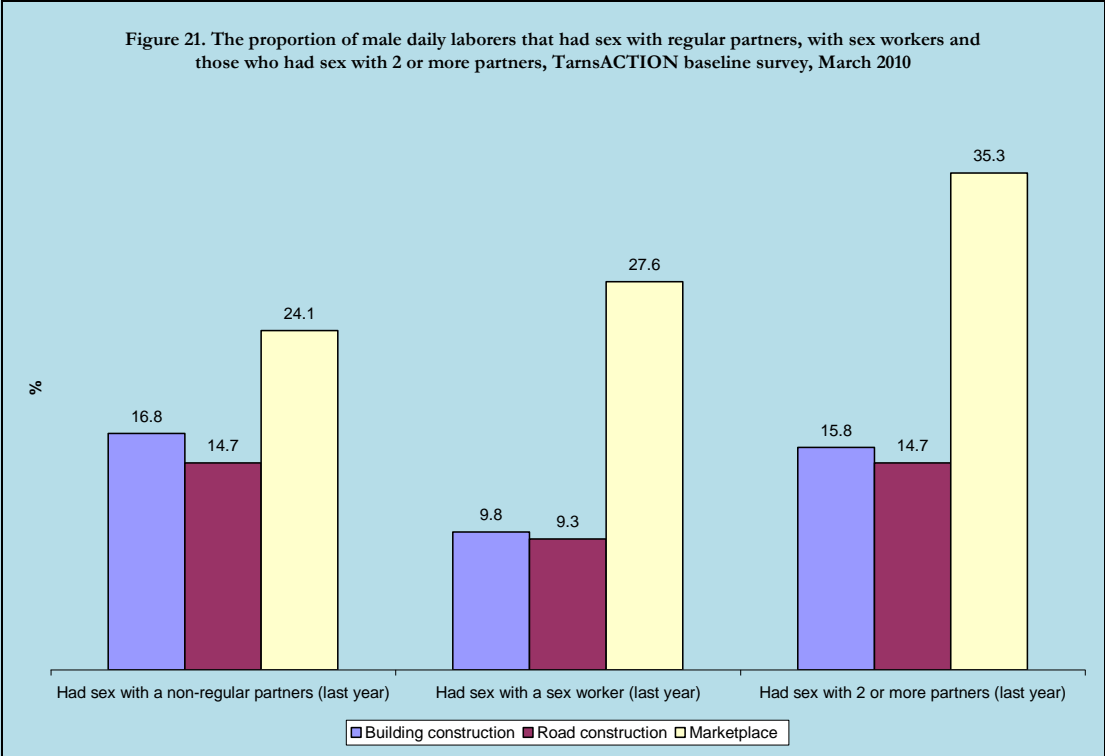
	%, n=400
<u>Regular (spouse/live-in) partner:</u>	
% who had sex with regular i.e. spouse/live-in partner (last year)	50.5
Number of regular partners (last year)	
0	49.5
1	49.5
2+	1.0
<u>Paid sex (with sex workers):</u>	
% who had sex with commercial sex workers (last year)	14.8
Number of sex workers with whom had sex with (last year)	
0	85.2
1	2.5
2	4.0
3	1.8
4+	6.5
<u>Non-regular (non-CSW) partner (s):</u>	
% who had sex with non-regular non-sex worker partner (s) (last year)	18.5
Number of sex workers with whom had sex with (last year)	
0	81.5
1	11.0
2	3.2
3+	4.3

Sexual behaviors of the male daily laborers appear to vary by town size and workplace, as shown in Figures 20 and 21. The prevalence of paid sex was the highest among the male daily laborers in large-sized towns at 20.4%. The corresponding figure for those in medium- and small-sized towns were 12% and 4%, respectively. Likewise, the reporting of two or more partners in the previous year also vary significantly by size of town with 26.2% of those in large-sized towns having had two or more partners compared to 17.3% and 13%, respectively, in medium-and small-sized towns. There was however no significant difference in the reporting of non-regular partner by town size (Figure 20).

Figure 20. The proportion of male daily laborers that had sex with non-regular partners, with sex workers and those who had sex with 2 or more partners according to town size, TransACTION baselien survey, March 2010

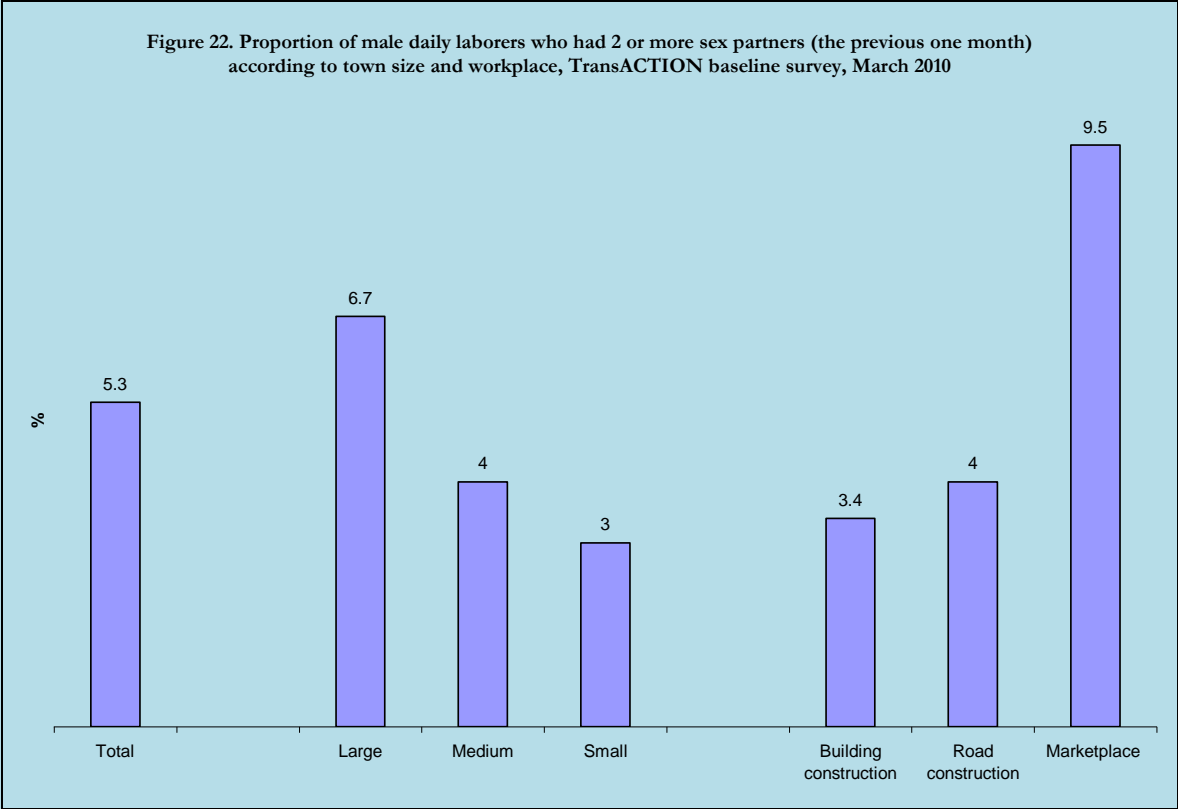


Notably, the male daily laborers in marketplaces exhibited the highest sexual risk behaviors than any of the other groups (Figure 21). For instance, 24.1% of the male daily laborers in marketplaces reported having had sex with a non-regular partner the previous year. This was reported significantly lower at 16.8% and 14.7%, respectively, among those working in building and road construction sites. Similarly, significantly high proportion of the male daily laborers (27.6%) working in marketplaces reported to have had paid sex the previous year compared to the reporting for the same at 9.8% and 9.3%, respectively, among those working in building and road construction sites. Two or more sex partner (the previous year) was reported by 35.3% of the male daily laborers in marketplaces, which is significantly higher than the 15.8% and 14.7% reported by those working in building and road construction sites, respectively.



Sex partners' concurrency

In total, 5.3% of the male daily laborers had sex with 2 or more partners the previous month, which are considered as having concurrent sexual relationships. There was a slight variation in the incidence of concurrent sexual relationship by town size – 6.7% in large-sized, 4% in medium-sized and 3% in small-sized. The highest sex partner concurrency was reported by the male daily laborers in marketplaces at 9.5%. On the other hand, only 3.4% and 4% of the daily laborers in building and road construction sites, respectively, reported to have 2 or more partners the previous month.



3.4.3. Condom use

Condom use with sex workers and non-regular partners was assessed. Condom use with sex workers reported high but still far off universal. Among those male daily laborers who had sex with sex workers in the previous year, 89.8% reported using condom during their most recent sex with a sex worker. Consistent (every time) condom use with all sex workers in the previous year was reported at 82.8%.

Male daily laborers' condom use behavior with non-regular partners was found to be notably low. Only about 60% of those male daily laborers who had sex with a non-regular partner the previous year reported using condom during their most recent sex with such a partner. Consistent condom use with all non-regular partners is even lower at 52.1%.

Table 22. Reported condom use with sex workers and non-regular (non-sex workers) partners (last year), male daily laborers, TransACTION program baseline survey, March 2010

	%
<hr/>	
<u>Condom use with sex worker (last year)</u>	n=59
% who used condom in their most recent sex with a sex worker	89.8
Frequency of condom use with all sex worker (last year)	
Every time	82.8
Almost every time	3.5
Sometimes	8.6
Never	5.2
<u>Condom use with a non-regular (non-CSW) partner (last year)</u>	n=73
% who used condom in their most recent sex with a non-regular partner	58.9
Frequency of condom use with all non-regular partners (last year)	
Every time	52.1
Almost every time	5.4
Sometimes	9.6
Never	32.9

Condom use with sex workers was found to significantly vary by town size, the highest use being recorded among the male daily laborers in large-sized towns. As shown in Figure 23, the proportion of the male daily laborers that reported using condom during their most recent sex with a sex worker was 93.5%, 77.8% and 75%, respectively, among those in large-, medium- and small-sized towns.

Unlike their condom use pattern with sex workers, the male daily laborers in medium-sized towns were found more likely than others to use condom with a non-regular partner. Figure 23 revealed that 81.8% of the male daily laborers reported using condom during their most recent sex with a non-regular partner. The corresponding figures among those in large- and small-sized towns were 59.1% and 44.4%, respectively.

Type of workplace appeared to be associated with the condom use behavior of the male daily laborers (Figure 24). Condom use in the most recent paid sex was reported the highest among those in road construction sites at 100%, followed by those in building construction (95%) and the lowest among those in marketplaces (84.4%). With the most recent non-regular partner those in building construction sites in particular exhibited the lowest condom use at 52.9%. Whereas the corresponding figures for those male daily laborers in road construction and marketplaces were 72.8% and 60.7%, respectively.

Figure 23. Proportion of male daily laborers who reported using condom during their most recent sex with a sex worker (n=59) and with a non-regular partner (n=73) according to town size, TransACTION baseline survey, March 2010

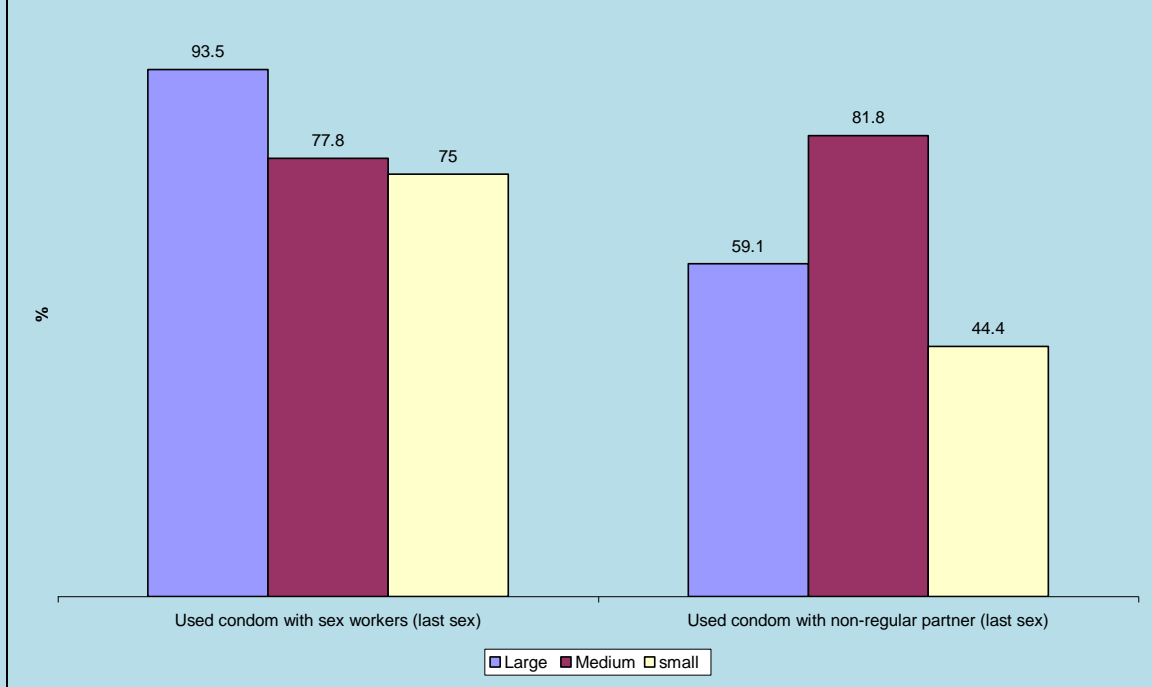
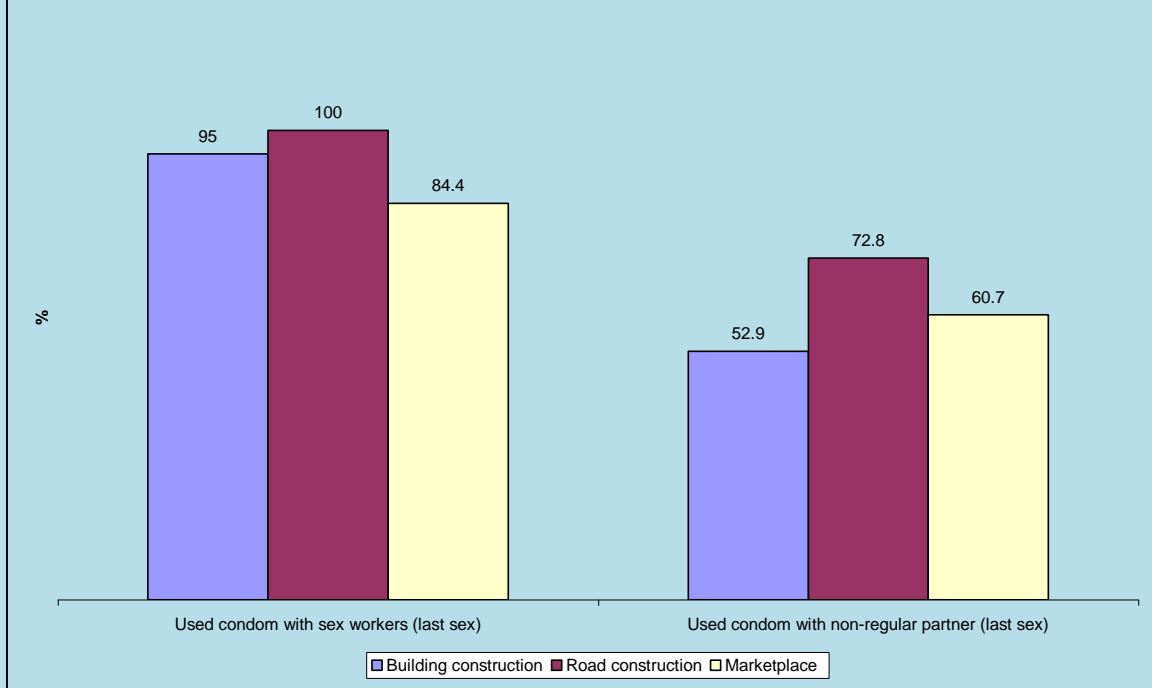


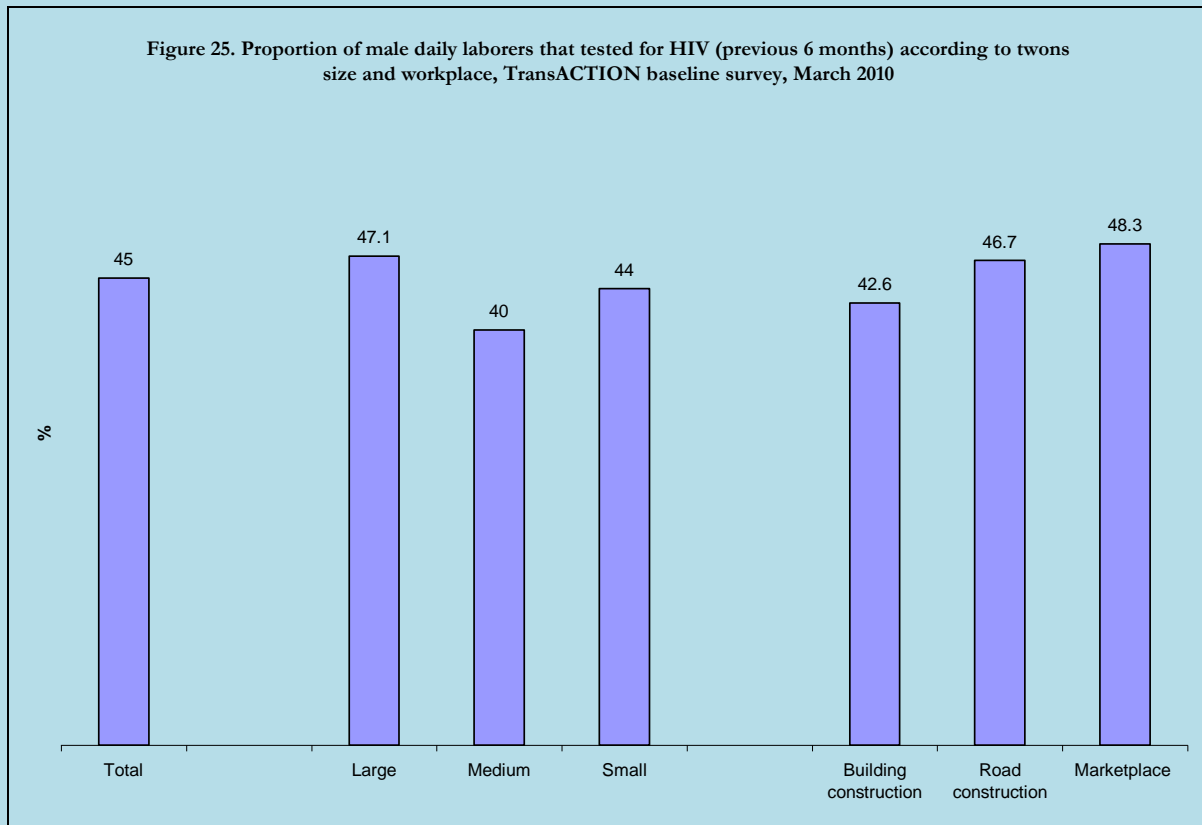
Figure 24. Proportion of male daily laborers who reported using condom in their most recent sex with a sex worker (n=59) and a non-regular partner (n=73) according to workplace, TransACTION baseline survey, March 2010



3.4.4. HIV Counseling and Testing

Forty-five percent of the male daily laborers reported to have had HIV testing in the previous 6 months (Figure 25). HIV testing rate does not vary significantly by town size or type of workplace.

We asked partners' HIV testing status among those male daily laborers who had spouses/live-in partners in the previous year (n=202) and 43.6% reported their spouses/live-in partners were tested for HIV in the previous 6 months (Data not shown).



3.4.5. Sexually transmitted diseases (STD)

Knowledge of STDs

Ever heard of any STD by the male daily laborers can be considered low. Only 62.5% reported said they heard of the disease STD (Table 23). The knowledge of STD symptoms is even much lower at 43.5%. Few symptoms were spontaneously reported by some including genital ulcer (22.3%), swelling in groin area (18.3%), and genital discharge (18%), and pain/burning urination (13.5%). Other symptoms are rarely reported.

Table 23. Percentage of respondents who spontaneously reported different symptoms of STDs and those who reported at least one correct symptom, male daily laborers, TransACTION program baseline survey, March 2010

	%, N=400
% Ever heard of STDs	62.5
% who know/reported STD symptoms (last 6 months)	
Genital discharge	18.0
Lower abdominal pain	3.0
Foul smelling discharge	9.5
Genital ulcer	22.3
Genital rash	7.5
Pain/burning during urination	13.5
Swelling in groin/genital area	18.3
Itching in genital area	9.3
% reported knowing at least one STD symptom	43.5

Self-reported incidence of STD symptoms

The male daily laborers were also asked if they had any STD symptom in the previous 6 months. The questions were asked directly and separately for each of the eight²⁶ major STD symptoms. Table 24 shows that 11.5% reported to have had at least one type of STD symptom in the previous 6 months. Genital rash was reported by 5.8% of the male daily laborers, followed by genital discharge (4%), lower abdominal pain (3.8%), and genital ulcer (2.8%) among few others.

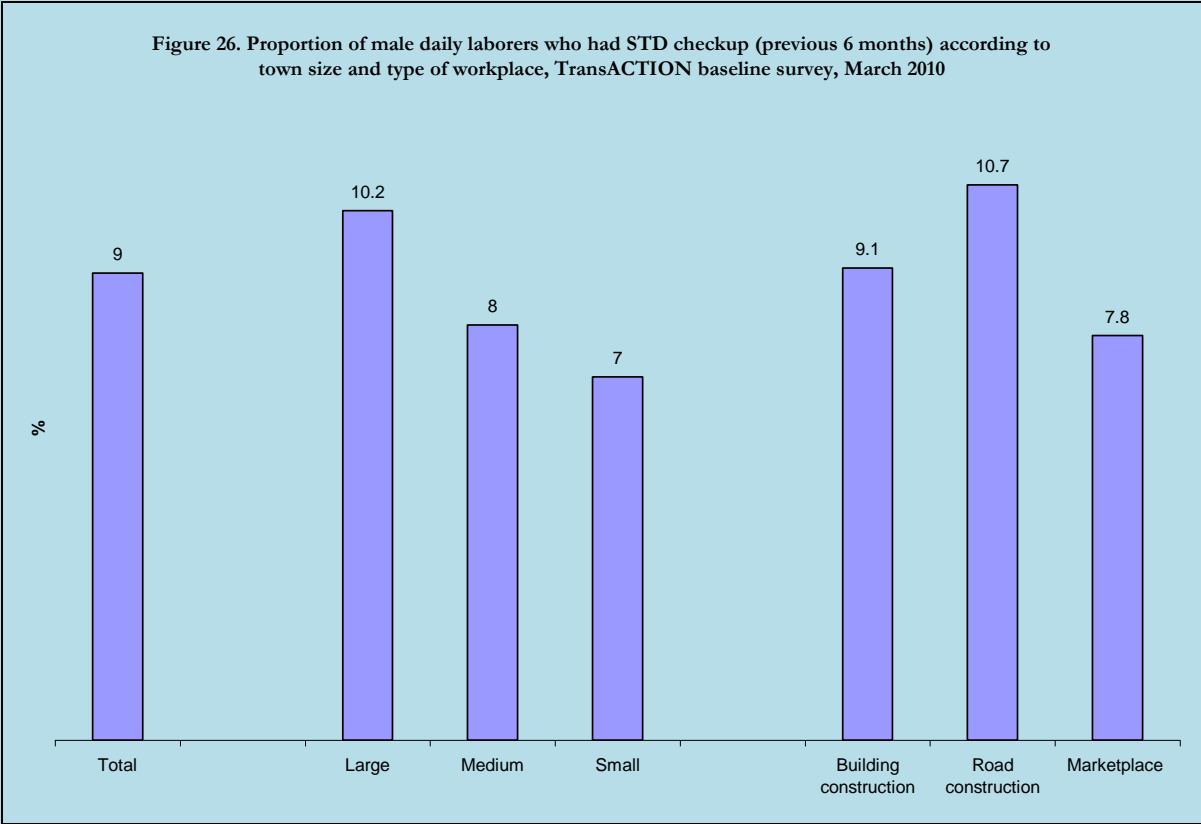
Table 24. Reported incidence of STD symptoms (last 6 months) and treatment seeking for STD symptom, male daily laborers, TransACTION program baseline survey, March 2010

	%
Incidence of STD Symptoms reported (last 6 months):	
Genital discharge	4.0
Lower abdominal pain	3.8
Foul smelling discharge	2.0
Genital ulcer	2.8
Genital rash	5.8
Pain/burning during urination	2.5
Swelling in groin/genital area	2.5
Itching in genital area	1.3
At least one incidence of STD symptom (last 6 months)	11.5

STD check-up/testing

STD checkup by the male daily laborers in the previous 6 months was reported at 9%. Though not statistically significant, the male daily laborers in large-sized towns appeared more likely than the others to have had STD checkup. The proportion that had STD checkup the previous 6 months were 10.2%, 8% and 7%, respectively, among those in large-, medium- and small-sized towns. There is also a slight but insignificant difference in STD checkup by workplace (Figure 26).

²⁶ The STD symptoms that were asked to female daily laborers include genital discharge, lower abdominal pain, foul smelling discharge, genital ulcer, genital rash, pain/burning during urination, swelling in groin/genital area, and itching in genital area.



3.5. Truckers

3.5.1. Background characteristics

We anticipated to interview 400 truckers but achieved 370. This represents a completeness rate of 92.5%. Truckers were interviewed in selected towns they pass by and in dry ports. The majority of truckers included in this study were working in the north route (39.5%) followed by east (34%) and other routes (26.5%).

Truckers represent the adult, middle-aged population whose mean age was nearly 40 years (Table 25). Most (73.2%) were in the age group 30-39 years. Only a tenth were in the age range 20-29 years. The vast majority of trucker (87.5%) can read or write. Of all truckers, 26.2% reported to have 12 or more years of schooling. The majority of the truckers were married (71.1%) while about a quarter were never married.

The respondents to this study served as truckers for an average of 12 years. A fifth of the truckers served for 20 or more years. Another 22% have served for less than 5 years.

Table 25. General characteristic of respondents, truckers, TransACTION baseline survey, March–April 2010

	%	N, N=370
Transport route		
North ²⁷	39.5	146
East ²⁸	34.0	126
Other routes	26.5	98
Age of respondent:		
20-29	10.3	38
30-39	46.2	171
40-49	27.0	100
50+	16.5	61
Mean age (95% CI)	39.5 (38.6-40.5)	370
Educational Status:		
Illiterate	12.5	46
1-6 Grade	18.5	68
7-8 Grade	19.1	70
9-11 Grade	23.7	87
12+ Grade	26.2	96
Marital Status:		
Never married	24.9	92
Currently Married	71.1	263
Widowed/Divorced	4.0	15
Duration of work (in years)		
<5 years	22.2	82
5-9 years	22.7	84
10-14 years	21.1	78
15-19 years	12.7	47
20 + years	21.3	79
Mean in years (95% CI)	12.0 (11.1-12.9)	370

3.5.2. Sexual behaviors

Sexual experience and partnership:

Virtually all truckers (98.7%) reported to have ever had sex in their lifetime and 95.1% had sex in the previous 12 months. Partner change by truckers appeared to be common. About 26% of the truckers reported to have two or more partners in the previous year; 9.5% 5 or more partners (Table 26). On average truckers reported to have 3 sex partners during the previous year.

²⁷ The main towns in the Northern route include Sheno, Debre Birhan, Debre Sina, Shoa Robit, Ataye, Kemissie, Kombolcha, Desse, Bati, Woldia, Alamata, Maichew, Sekota, Mekele, Adigrat, Zala Anbesa, Adwa, Aksum, Inda Selassie

²⁸ The main towns in the Eastern route include Akaki, Kaliti, Gelan, Dukem, Bisoftu, Modjo, Adama, Wonji, Asela, Dhera, Wolenchiti, Metabara, Meri, Bordede, Asebot, Miesso, Asebe Teferi, Bedessa, Gelemso, Hirna, Karamile, Kobo, Deder, Chelenko, Kulubbi, Kersa, Dire Dawa, Ayisha, Alem Maya, Aveday, Harar, Babile, Jijiga, Hartiskek

Table 26. Percentage of respondents who ever had sex, who had in the last 12 months, and the total number of sexual partners, truckers, TransACTION program baseline survey, March-April 2010

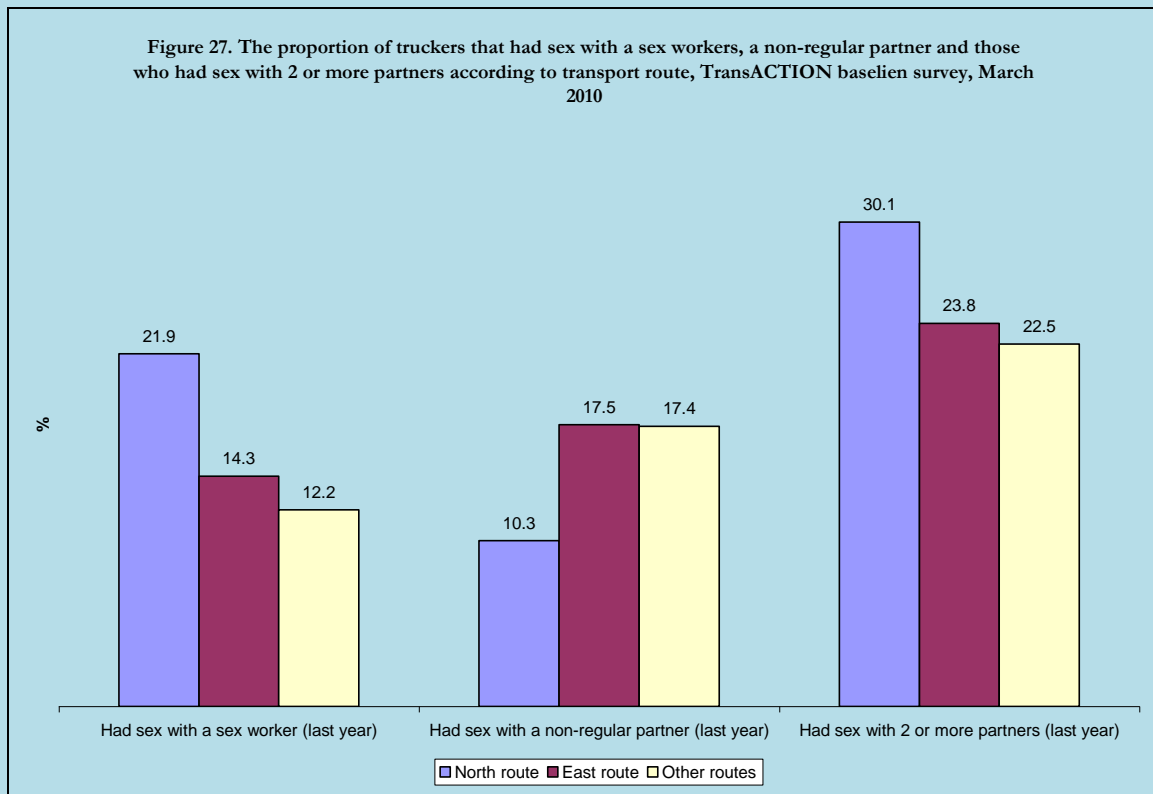
	n=370
	%
Ever had sex	98.7
Had sex in the last 12 months	95.1
Total Number of sexual partners (last year)	
0	4.9
1	86.2
2	5.4
3	5.9
4	5.1
5+	9.5
Mean numbers of sexual partners (last 12 months) & 95% CI	3.0 (2.1-4.0)

When asked the different types of sex partners the truckers had sex with the previous year, 88.4% reported a spouse/live-in partner, 16.8% a sex worker and 14.6% a non-regular (non-sex worker) partner (Table 27). Paid sex with 2 or more sex workers in the previous year was reported by 14.1% of the truckers. Four or more sex workers were reported by 7.1% of the respondents. Eight percent of the truckers reported having had 2 or more non-regular partners in the previous year.

We compared sexual behaviors of truckers by transport routes, as shown in Figure 27. On the whole, there appears variation in sexual behavior of truckers in accordance with the transport route. Truckers operating in the northern route were significantly more likely than the others to visit sex workers. The proportion that had sex with sex workers last year was 21.9%, 14.3% and 12.2%, respectively, among those truckers in the north, east and other transport routes. Unlike paid sex, having non-regular partners appear to be more prevalent in either east or other transport route than in the north. Only 10.3% of the truckers in the northern route reported to have had sex with a non-regular partner the previous year. This was 17.5% and 17.4%, respectively, in the east and other routes. On the whole, the prevalence of 2 or more sex partners in the previous year was found to be significantly higher among truckers in the northern routes (30.1%) than in the eastern (23.8%) or in the other routes (22.5%).

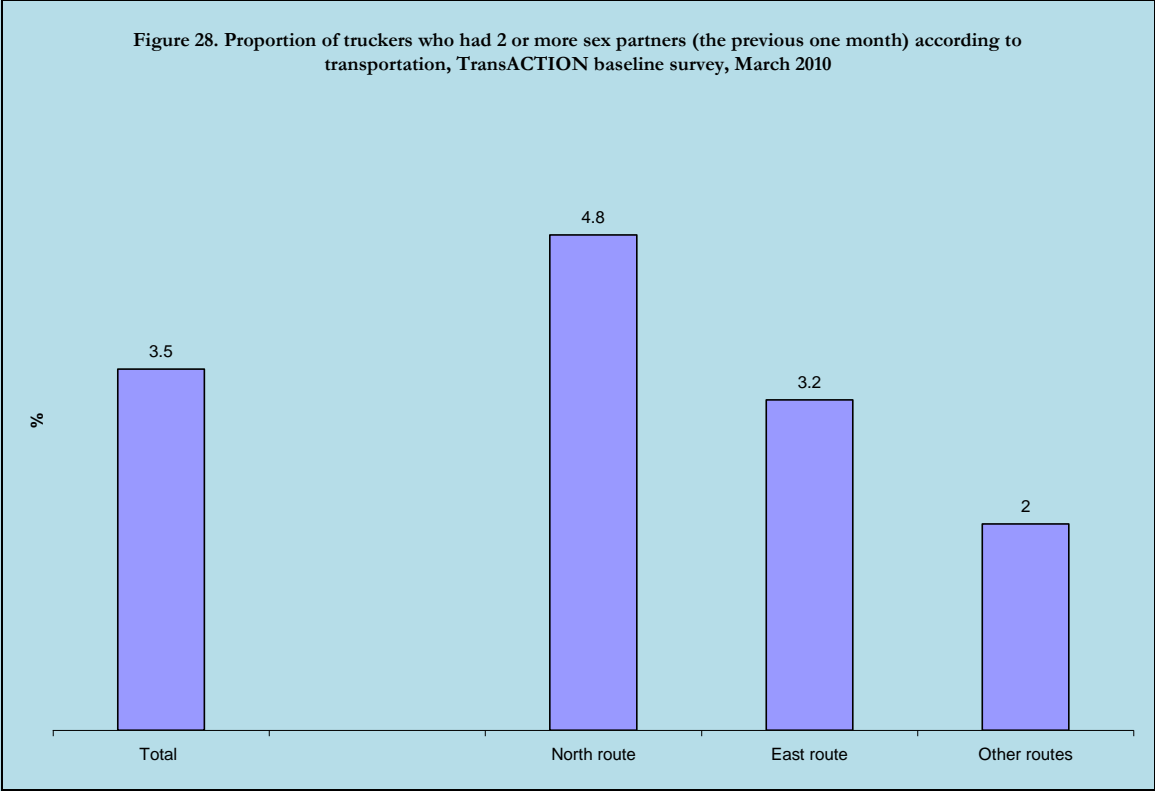
Table 27. Percentage of respondents according to the number of regular, paid (CSW) and non-regular (non-sex workers) partners during last year, truckers, TransACTION program baseline survey, March-April 2010

	%
	n=370
<u>Regular (spouse/live-in) partner:</u>	
% who had sex with regular i.e. spouse/live-in partner (last 12 months)	88.4
Number of regular partners (last 12 months)	
0	11.6
1	84.9
2+	3.5
<u>Paid sex (with sex workers):</u>	
% who had sex with commercial sex workers	16.8
Number of sex workers with whom had sex with (last 12 months)	
0	83.2
1	2.7
2	4.3
3	2.7
4+	7.1
<u>Non-regular (non-CSW) partner (s):</u>	
% who had sex with non-regular non-sex worker partner (s)	14.6
Number of sex workers with whom had sex with (last 12 months)	
0	85.4
1	6.8
2	3.9
3+	4.1



Sex partners' concurrency

Although 65% of the truckers reported to have had sex in the previous one month, only 3.5% had 2 or more sex partner during the period (Figure 28). The noted small incidence of concurrent sexual partnership appeared to vary significantly vary by transpiration route with those truckers operating in the north exhibiting the highest concurrency rate at 4.8%, followed by those in the east (3.2%) and other routes (2%).



3.5.3. Condom use

In general truckers condom use with sex workers found to be considerably high. As shown in Table 28, 96.5% of the truckers reported using condom during their most recent sex with a sex worker and 95% used condom every time they had sex with a sex worker the previous year.

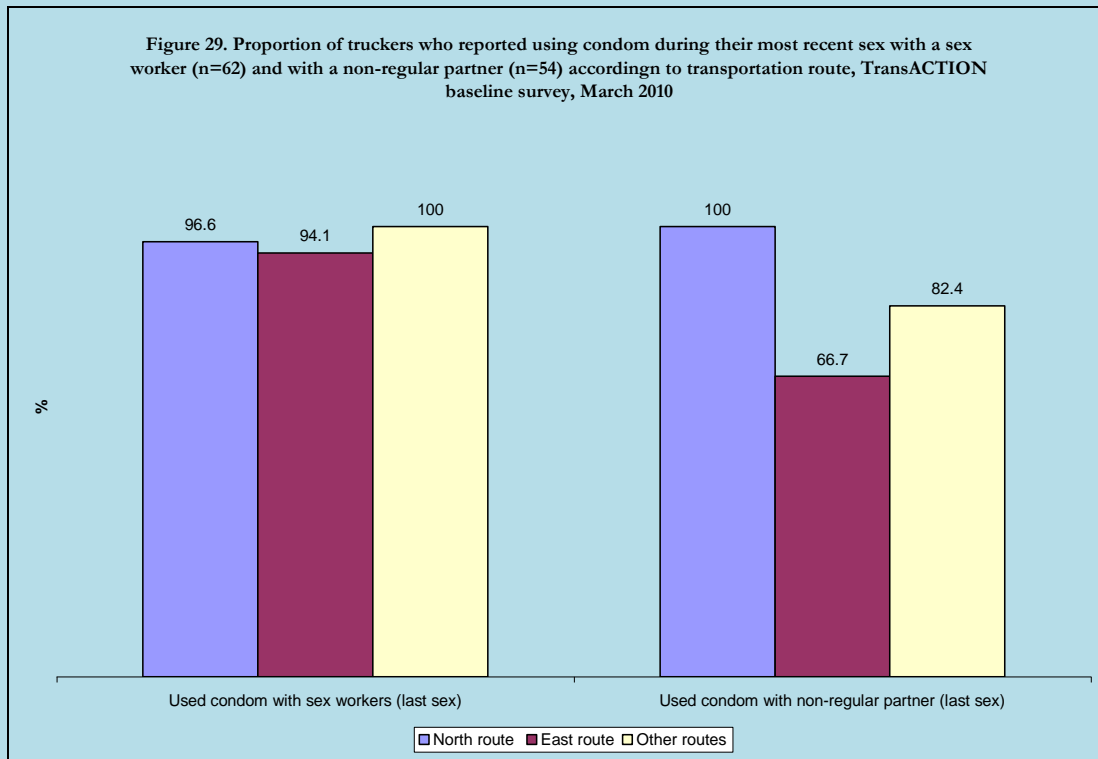
Condom use with a non-regular partner by truckers is high but still way off the desired rate of 100%. Eighty-two percent of the truckers reported using condom with their most recent non-regular partner the last time they had sex with. This means a substantial proportion (18%) did not use condom at all with such partners during their most recent sex. Similar rate of consistent condom use with such partners was also reported by the truckers.

Condom use with sex workers does not vary significantly by transportation route although those truckers operating in the other routes exhibited a 100% condom use while it was reported at 96.1% and 94.1%, respectively, among those in the north and east routes. On the other hand, truckers' condom use behaviors with non-regular partners appear to significantly vary in accordance with their transportation route. In particular, those in the east reported to have the lowest condom use at

66.7% with the most recent non-regular partner (Figure 29). This was reported at 100% and 82.4%, respectively, among those in the north and other routes.

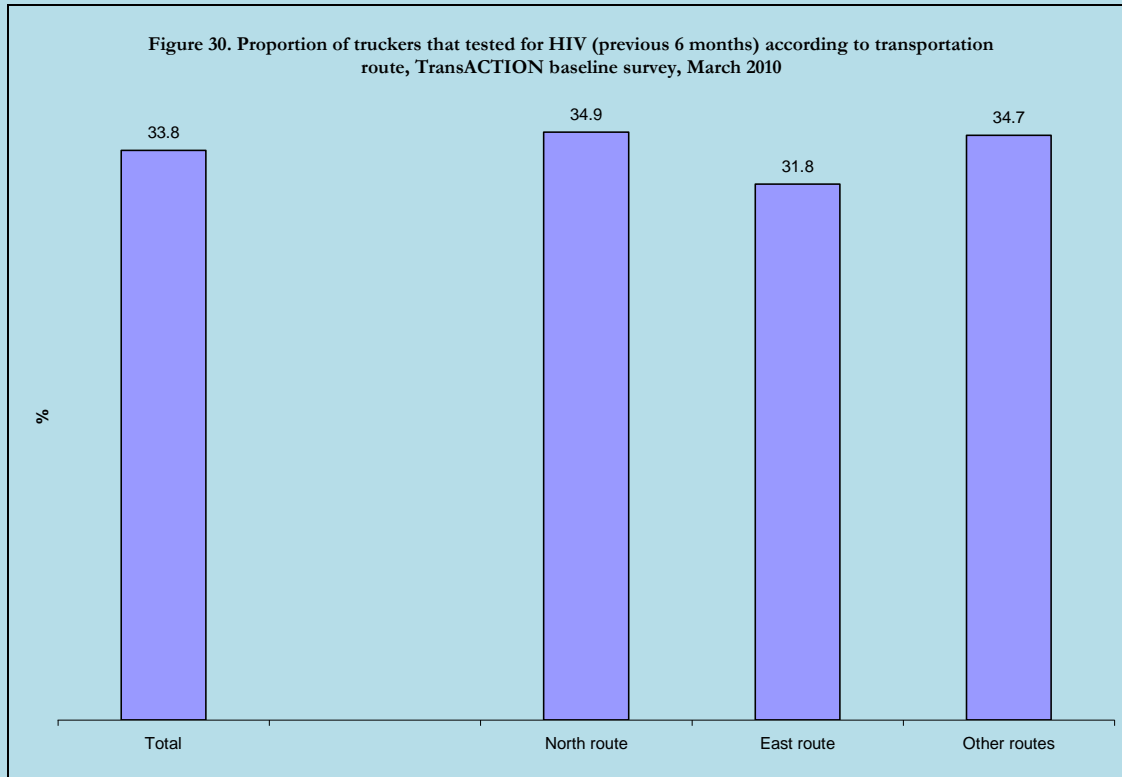
Table 28. Reported condom use with CSW and non-regular (non-CSW) partners (last year), truckers, TransACTION program baseline survey, March-April 2010

	%
<u>Condom use with sex worker (last year)</u> n=62	
% who used condom in their most recent sex with a sex worker	96.5
Frequency of condom use with all sex worker (last year)	
Every time	95.0
Almost every time	0.0
Sometimes	1.7
Never	3.3
<u>Condom use with a non-regular (non-sex worker) partner (last year)</u> n=54	
% who used condom in their most recent sex with a non-regular partner	82.0
Frequency of condom use with all non-regular partners (last year)	
Every time	81.6
Almost every time	2.0
Sometimes	4.1
Never	12.2



3.5.4. HIV Counseling and Testing

Only about 34% of the truckers reported to have tested for HIV in the previous 6 months. The proportion of the truckers that tested compares well across the different routes of transportation (Figure 30). Amongst the truckers who have spouse or live-in partners (n=327), about 46% reported their partners had an HIV test in the previous 6 months (Data not shown).



3.5.5. Sexually transmitted diseases (STD)

Knowledge of STDs

About 87% of the trucker ever heard of STD but only two-third (66.5%) knew at least one correct symptom of STDs (Table 29). Knowledge of specific STDs symptoms is quite incomplete. Genital discharge (38.7%) and ulcer (30.5%) appeared better known symptoms by these truckers. Other symptoms that were spontaneously reported include pain/burning urination (24.6%), swelling in groin area (20.8%), foul smelling discharge (18.1%), itching in genital area (12.7%) among few others.

Table 29. Percentage of respondents who spontaneously reported different symptoms of STDs and those who reported at least three correct symptoms, truckers, TransACTION program baseline survey, March-April 2010

	n=370 %
% Ever heard of STDs	86.8
% who know/reported STD symptoms (last 6 months)	
Genital discharge	38.7
Lower abdominal pain	3.2
Foul smelling discharge	18.1
Genital ulcer	30.5
Genital rash	6.5
Pain/burning during urination	24.6
Swelling in groin/genital area	20.8
Itching in genital area	12.7
% reported knowing at least one STD symptom	66.5

Self-reported incidence of STD symptoms

Truckers were also asked if they had any STD symptom in the previous 6 months. The questions were asked directly and separately for each of the eight²⁹ major STD symptoms. Only 3.5% of the truckers reported to have had at least one type of STD symptom in the previous 6 months (Table 30). Pain/burning during urination was reported by 1.9%, and genital discharge by 1.6%. Other symptoms were reported by 0.5% or less truckers.

Table 30. Reported incidence of STD symptoms (last 6 months) and treatment seeking for STD symptom, truckers, TransACTION program baseline survey, March-April 2010

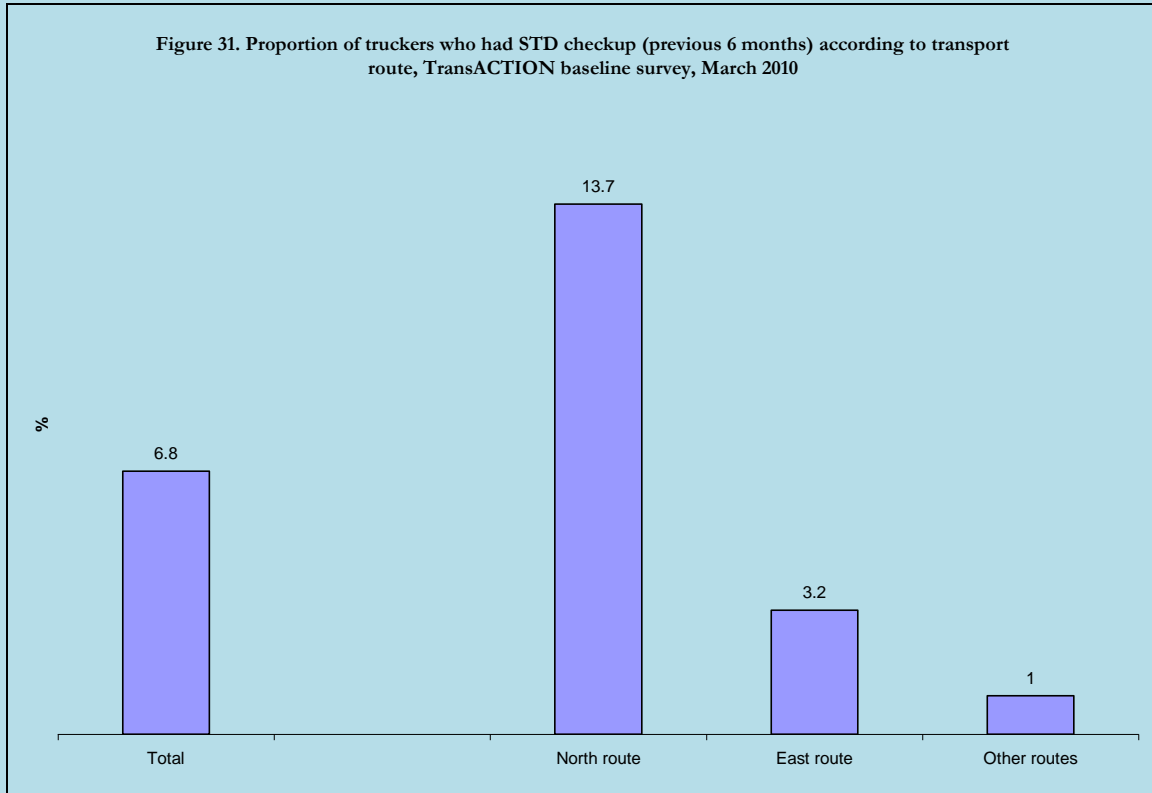
	n=370 %
Incidence of STD Symptoms reported (last 6 months):	
Genital discharge	1.6
Lower abdominal pain	0.3
Foul smelling discharge	0.0
Genital ulcer	0.5
Genital rash	0.3
Pain/burning during urination	1.9
Swelling in groin/genital area	0.0
Itching in genital area	0.5
At least one incidence of STD symptom (last 6 months)	3.5

STD check-up/testing

STD checkup by the truckers in the previous 6 months was reported at 6.8%. There was significant variation in the proportion that had STD checkup by transport route, as shown in Figure 31. Truckers in the northern route reported to have the highest STD checkup rate at 13.7% followed by

²⁹ The STD symptoms that were asked to female daily laborers include genital discharge, lower abdominal pain, foul smelling discharge, genital ulcer, genital rash, pain/burning during urination, swelling in groin/genital area, and itching in genital area.

those in the east at 3.2% and the lowest was recorded at 1% among those operating in the other transport routes.



IV. CONCLUSION AND RECOMMENDATIONS

This baseline survey sets benchmark and provides useful information for the future evaluation of the TransACTION program intervention. The survey focused on sex workers, waitresses, female and male daily laborers, and truckers. Taken together, the findings of this baseline survey are consistent with the findings of the previous formative research in these same populations as well as the BSS surveys conducted in 2002 and 2005 in the country. The groups studied are characterized by risky sexual behaviors, including high partner change, casual sex, transactional sex, inconsistent condom use, suboptimal utilization of key preventive services such as HCT and STD services, as well as a lack of knowledge and awareness of STDs. These findings thus necessitate targeted intervention in these population groups.

Our previous formative research provides detail programmatic recommendations for each of the target groups included in this baseline survey. Here we only provide broader and cross-cutting recommendations to guide intervention efforts. Most of the recommendations listed below may be familiar to programmers; few may be less obvious. In either case, program managers may want to embrace as many of these recommendations as possible.

Sex workers

- Reinforce messages on consistent condom use of sex workers for sex with all paying and non-paying partners. The low condom use with non-paying partners has always been a challenge to programmers in Ethiopia and elsewhere. Sex workers need to be encouraged and be educated to negotiate safer sex with non-paying partners (boyfriends). Involving boyfriends of sex workers in programs proved to reinforce condom use behavior in such relationships. Some programs in Ethiopia attempted to involve boyfriends in their intervention activities and recorded some success³⁰.
- Program needs to give greater emphasis towards increasing condom use behaviors of sex workers operating in small- and medium-sized towns as well as those in local drink and red-light houses.
- The low HCT documented by this present study necessitates intervention targeting at intensifying regular HCT among sex workers by dispelling the misconceptions and addressing the different barriers to using service that were identified by the formative research. While sex workers across towns of varying size and establishments should be targeted in this endeavor, more effort is due to reach out to sex workers in small-sized towns who in particular have the lowest HCT uptake.
- Program needs to work towards increasing sex workers' demand for STD diagnosis and treatment by improving their sexual health knowledge, the major symptoms as well as the link between untreated STD and HIV. Innovative services need to be put in place that takes account of the preferences of sex workers and provide user-friendly STD diagnosis and treatment services. This baseline study and the formative research are in agreement concerning the need to place more emphasis to sex workers operating in small-sized towns and local drink houses who in particular lack the knowledge and awareness of STDs.

³⁰ Health Communication Partnership/AED. Findings from the outcome evaluation of the Smart Journey Program. June 2010

Other women (Waitresses and female daily laborers):

- Program needs to emphasize messages on sex partner reduction and avoidance of casual sex in these women population.
- There is evidence that engagement in transactional sex increases risk of HIV-infection due to limited capacity to negotiate safe sex and increased levels of partner coercion and violence. The reported high level of transactional sex in both groups of women suggests the need to educate these women on the risk associated with transactional sex and improve their negotiation skills.
- These women's sexual behaviors are also characterized by cross-generational relationship, which is highly intertwined with transactional sex. Addressing cross-generational sex requires interventions that address power imbalances in gender relationship, inequity and poverty. Advocacy effort to raise public awareness and create public dialogue about cross-generational sex should constitute among the intervention activities.
- Reinforce messages on condom use and condom negotiation skills of these women with non-regular and casual partners as well as in transactional sex.
- Waitresses in bars/hotels are in general more exposed to high partners change than those working in cafes/pastries. Likewise, risky sexual behaviors appeared more apparent among those waitresses in large-sized towns. Program may need to give proper emphasis to address the sexual behaviors of such waitresses.
- The very low condom use documented among waitress in cafes/pastries is an area of great concern and should constitute among the priority intervention targets.
- The reporting of non-regular partners was by far the highest among the female daily laborers in small-sized towns and those in building construction site. These findings should be used in targeting intervention efforts.
- Promoting HCT is highly recommended for this population of women by addressing the barriers to service uptake, as documented by the formative research.
- Program should increase the demand for STD diagnosis and treatment among these women by improving their sexual health knowledge, the major symptoms of STDs as well as the link between untreated STD and HIV.
- Perhaps this is the first study that systematically collected quantitative information on sexual behaviors and related issues of waitresses in the country. Both this baseline survey and the previous formative research suggest that waitresses are characterized by high risk behaviors including high partners change, transactional and cross-generational sex as well as low and inconsistent condom use. Previous intervention efforts have not included these young women among the MARP groups in the country. It is therefore imperative that national and regional HIV/AIDS prevention efforts include waitresses among the target MARP.

Men (male daily laborers and truckers)

- High partner change, including having sex with commercial sex workers and non-regular partners characterize the sexual behaviors of these men. Program thus need to address risky sexual behaviors of the male daily laborers and truckers with emphasis to reduction of the number of partners and avoidance of high-risk sex with sex workers and non-regular partners.
- Encourage and promote correct and consistent condom use with commercial sex workers and with non-regular partners.

- Sexual behaviors of the male daily laborers reported to vary by town size and workplace. The prevalence of paid sex and partner change was the highest among the male daily laborers in large-sized towns compared to those in others. The male daily laborers in marketplaces exhibited the highest sexual risk behaviors than any of the other groups. Such male daily laborers may need to be given due emphasis in priority intervention.
- The lowest condom use with non-regular partners was noted among the male daily laborers in building construction sites. The formative research also revealed the lack of condom use among these particular laborers. Program needs to further reinforce messages on condom use in building constructions sites.
- There appears variation in sexual behavior of truckers in accordance with the transport route. Truckers operating in the northern route were significantly more likely than the others to visit sex workers. Unlike paid sex, having non-regular partners appear to be more common in either east or other transport route than in the north. These important findings can be used as important inputs in targeting intervention efforts among truckers operating in different transportation routes in the country.
- Truckers' condom use with non-regular partners appears to significantly vary in accordance with their transportation route. Those operating in the east route reported to have the lowest condom use rate with non-regular sex partners. This necessitates more emphasis to improve condom use among truckers operating in the east.
- Promote HCT for this population groups by addressing the barriers to service uptake, as documented by the formative research.
- Program should increase the demand for STD diagnosis and treatment among these men by improving their sexual health knowledge, the major symptoms of STDs as well as the link between untreated STD and HIV.

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ANNEX 1. SELECTED BASELINE INDICATORS

Sex workers	%	N
% sex workers who were engaged in other income generating activities on top of sex work	7.0	400
% sex workers who had sex with a paying client in the previous 7 days	85.0	400
% sex workers who had sex with a non-paying partner in the previous 3 months	35.3	400
% sex workers who used condom with the most recent paying partner in the previous 7 days	96.5	340
% sex workers who used condom with all paying partners in the previous 7 days	92.0	340
% sex workers who used condom with the most recent non-paying partner in the previous 3 months	54.6	141
% sex workers who used condom with all non-paying partners in the previous 3 months	49.7	141
% sex workers had HIV test in the previous 3 months	44.8	400
% sex workers who reported their non-paying partner had HIV test in the past 3 months	40.0	141
% sex workers who heard of STD	71.5	400
% sex workers who know one or more correct STD symptoms	52.2	400
% sex workers who had one or more symptoms of STD in the previous one month	20.0	400
% sex workers who had an STD checkup in health institution in the previous one month	14.5	400
Waitresses	%	N
% waitresses who ever had sex	82.0	400
% waitresses who had sex in the previous 12 months	72.0	400
% waitresses who had sex with non-regular partners in the previous 12 months	36.8	400
% waitresses who had two or more sex partners (any partner) in the previous 12 months	17.0	400
% waitresses who had two or more sex partners in the previous one month (concurrent relationship)	5.8	400
% waitresses who received money/gift from the most recent non-regular sex partner the previous 12 months	74.2	147
% waitresses who used condom with the most recent non-regular partner in the previous 12 months	63.3	147
% waitresses who used condom with all non-regular partners in the previous 12 months	53.2	147
% waitresses who had HIV test in the previous 6 months	50.0	400
% waitresses who reported their regular partner had HIV test in the past 6 months	66.4	128
% waitresses who heard of STD	54.0	400
% waitresses who know one or more correct STD symptoms	35.3	400
% waitresses who had one or more symptoms of STD in the previous 6 months	11.0	400
% waitresses who had an STD checkup in health institution in the previous 6 months	10.3	400
Female Daily Laborers	%	N
% female daily laborers who ever had sex	63.3	400
% female daily laborers who had sex in the previous 12 months	51.8	400
% female daily laborers who had sex with non-regular partners in the previous 12 months	9.8	400
% female daily laborers who had two or more sex partners (any partner) in the previous 12 months	3.8	400
% female daily laborers who had two or more sex partners in the previous one month (concurrent relationship)	0.5	400
% female daily laborers who received money/gift from the most recent non-regular sex partner the previous 12 months	51.3	39
% female daily laborers who used condom with the most recent non-regular partner in the previous 12 months	48.7	39
% female daily laborers who used condom with all non-regular partners in the previous 12 months	35.9	39
% female daily laborers who had HIV test in the previous 6 months	43.0	400
% female daily laborers who reported their regular partner had HIV test in the past 6 months	53.0	177
% female daily laborers who heard of STD	39.3	400
% female daily laborers who know one or more correct STD symptoms	21.0	400
% female daily laborers who had one or more symptoms of STD in the previous 6 months	8.5	400
% female daily laborers who had an STD checkup in health institution in the previous 6 months	4.8	400

Male Daily Laborers	%	N
% male daily laborers who ever had sex	73.8	400
% male daily laborers who had sex in the previous 12 months	69.5	400
% male daily laborers who had sex with a commercial sex workers in the previous 12 months	14.8	400
% male daily laborers who had sex with non-regular partners in the previous 12 months	18.5	400
% male daily laborers who had two or more sex partners (any partner) in the previous 12 months	21.2	400
% male daily laborers who had two or more sex partners in the previous one month (concurrent relationship)	5.3	400
% male daily laborers who used condom with the most recent commercial sex worker in the previous 12 months	89.8	59
% male daily laborers who used condom with all commercial sex workers in the previous 12 months	82.8	59
% male daily laborers who used condom with the most recent non-regular partner in the previous 12 months	58.9	73
% male daily laborers who used condom with all non-regular partners in the previous 12 months	52.1	73
% male daily laborers who had HIV test in the previous 6 months	45.0	400
% male daily laborers who reported their regular partner had HIV test in the past 6 months	43.6	202
% male daily laborers who heard of STD	62.5	400
% male daily laborers who know one or more correct STD symptoms	43.5	400
% male daily laborers who had one or more symptoms of STD in the previous 6 months	11.5	400
% male daily laborers who had an STD checkup in health institution in the previous 6 months	9.0	400
Truckers	%	N
% truckers who ever had sex	98.7	400
% truckers who had sex in the previous 12 months	95.1	400
% truckers who had sex with a commercial sex workers in the previous 12 months	16.8	400
% truckers who had sex with non-regular partners in the previous 12 months	14.6	400
% truckers who had two or more sex partners (any partner) in the previous 12 months	26.0	400
% truckers who had two or more sex partners in the previous one month (concurrent relationship)	3.5	400
% truckers who used condom with the most recent commercial sex worker in the previous 12 months	96.5	62
% truckers who used condom with all commercial sex workers in the previous 12 months	95.0	62
% truckers who used condom with the most recent non-regular partner in the previous 12 months	82.0	54
% truckers who used condom with all non-regular partners in the previous 12 months	81.6	54
% truckers who had HIV test in the previous 6 months	34.0	400
% truckers who reported their regular partner had HIV test in the past 6 months	46.0	327
% truckers who heard of STD	86.5	400
% truckers who know one or more correct STD symptoms	66.5	400
% truckers who had one or more symptoms of STD in the previous 6 months	3.5	400
% truckers who had an STD checkup in health institution in the previous 6 months	6.8	400