CURATIO INTERNATIONAL FOUNDATION

30 Years for Better Health Systems

Integrated Bio-behavioral surveillance and population size estimation survey among Female Sex Workers in Tbilisi and Batumi, Georgia

Study Report
2024

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30 YEARS FOR BETTER HEALTH SYSTEMS

TANADGOMA

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
BBS	Bio-Behavioral Surveillance
BSS	Behavioral Surveillance Survey
CI	Confidence Interval
CIF	Curatio International Foundation
FSW	Female Sex Worker
GAM	Global AIDS Monitoring
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
GEL	Georgian Lari
HIV	Human Immunodeficiency Virus
IDUs	Injecting Drug Users
IBBS	Integrated Bio-Behavioral Surveillance Survey
PSE	Population Size Estimation
RPR	Rapid Plasma Reagin
SPSS	Statistical Package for the Social Sciences
STIs	Sexually Transmitted Infections
TG	Tanadgoma
TLS	Time-Location Sampling
TPHA	Treponema pallidum haemagglutination
USAID	United States Agency for International Development

Definitions[1]

Anonymous-linked testing – testing where no names are taken, but results are linked to a number that only the participant knows.

Commercial sex – prostitution.

Commercial Sex Worker – a person, who is working in commercial sex and establishes sexual contacts in exchange of material remuneration.

Commercial Sex Worker (for the survey purposes) - a person, who has been involved in commercial sex during the last 12 months and established sexual contacts in exchange of material remuneration.

Consistent Condom Use – use of condoms every time sexual relations occur, which includes vaginal, anal, or oral sex.

FSW client – a person with whom the FSW has established sexual relations in exchange for money or goods.

High-Risk Behavior – any behavior that puts an individual or individuals at increased risk of contracting STIs/HIV or transmitting STIs/HIV to another individual (e.g., having multiple sex partners without using condoms consistently; sharing used non-sterile needles among IDUs).

Regular client – a client who often uses sexual services of one particular FSW.

Regular sexual partner – a spouse/lover/boyfriend with whom the FSW cohabitates and has established regular sexual contacts without exchange of money.

Street-based female sex workers – women who seek to provide sex in exchange for money by walking or standing on the streets.

Time-Location Sampling – based on the tendency of some group members to gather at certain locations, different sites are enumerated and mapped through observation, then a list of sites is used as sampling frame from which to select a sample of sites.

Facility-based female sex workers–women, who is located in a specific type of facility (bar, sauna, hotel, brothel) in order to attract clients and/or establish with them sexual contact in exchange of material remuneration.

Mapping – an exercise of identifying on a map the numbers, sites and working hours of FSWs, for forming a sampling frame of the survey.

[1]Methodology of Behavioral Surveillance Studies of key populations, 2010 (Georgian version). www.curatiofoundation.org

Trafficking – in regards to sex workers this term implies only trafficking with the aim of sexual exploitation. Trafficking for sexual exploitation – when persons are taken for work, usually abroad, by force or through fraud, are deprived of passport and other documentation and are forced to engage in sex work.

Executive Summary

Introduction

Georgia is among the countries with low HIV/AIDS prevalence (0.4% among adult population 15-49 y.o.) but with a high potential for the development of a widespread epidemic. From the early years of epidemic injecting drug use was the main route of HIV transmission; however, for the last decade years heterosexual transmission is prevailing. During the last twelve years heterosexual transmission found among newly registered cases raised from 44.8% in 2012 to 52.7 % in 2024.[2]

This study represents the subsequent wave of BBS surveys undertaken among FSWs since 2002. The current study was conducted in 2024 using the Time-Location Sampling (TLS) technique and managed to recruit 350 FSWs in total – 200 in Tbilisi and 150 – in Batumi. The objective of the 2024 BBS was to measure the prevalence of HIV and syphilis among FSWs, to provide measurements of key HIV risk behaviours and to generate evidence for advocacy and policy-making.

The first ever FSWs population size estimation survey took place in 2014, in combination with the Bio-BSS survey. As sizes of at risk and hidden populations might fluctuate, it is recommended to repeat the size estimations periodically. So, in 2024, Bio-BSS was again conducted in conjunction with size estimation to make it possible to estimate the FSWs population size in Georgia by using different estimation methods and triangulating the findings to provide the most acceptable estimates.

The study was implemented within the GFATM-funded project “"Estimating HIV-related risk behaviors and HIV prevalence among Female Sex Workers and estimating size of this population”, implemented by Curatio International Foundation (CIF) and Center for Information and Counseling on Reproductive Health – Tanadgoma. Biomarker component for BBS was implemented by Tengiz Tsertsvadze Infectious Disease, AIDS and Clinical Immunology Research Center.

Methods

Study participants were recruited through TLS method at both study sites. TLS takes advantages of the fact that some hidden populations tend to gather or congregate in certain types of locations. To develop a survey sampling frame, in July 2024 (Batumi) and in August 2024 (Tbilisi) a preliminary mapping exercises were undertaken to identify the numbers, sites and working hours of FSWs (For a more detailed account see the Methodology section). In Batumi a total of 150 and in Tbilisi – a total of 200 FSWs agreed to participate and were interviewed.

[2] http://www.unaids.org/en/regionscountries/countries/georgia/

The interviews were conducted face-to-face, in the offices of Tanadgoma, by experienced interviewers. The FSWs were asked questions regarding high-risk behaviors, knowledge of STIs and HIV/AIDS, and their use of health services. After the interview, each respondent was asked if she would agree to an anonymous-linked rapid tests for HIV and syphilis.

In the absence of a gold standard for estimating the population size of a hidden and hard to reach population, estimates are empirically imprecise and prone to potential biases. The present PSE among FSW applied the following methods: Census, Capture-Recapture and Service Multiplier.

Results

Key findings from the 2024 survey and comparisons with the previous (2017) survey results are given below.

Socio-Demographic characteristics of FSWs

The median age of FSWs is 44 years in Tbilisi and 42 years in Batumi, their big majority is older than 25 years and represent the age group “40+”;

Mean age of the FSWs in both cities has been increasing steadily during the years;

Majority is Georgian, has the secondary / vocational education;

More than half is divorced, sex work is their only source of income and they have financial dependents.

Rates of daily alcohol use and injecting drug use are very low, however bigger proportions reported having used non-injecting drug during the last 12 months in both cities, compared to 2017 survey.

Main trend in socio-demographic characteristics of FSWs is aging tendency, which is observed starting from early 2000s. Also, one important change is increased use of non-injecting drugs.

Sexual Behavior

The vast majority of FSWs in both survey sites reported condom use with the last client (98% in Tbilisi and 92.7% in Batumi). In Tbilisi 80.5% of FSWs and in Batumi almost the same proportion – 78% of FSWs reported consistent condom use with their paying clients during the last 30 days. In Tbilisi consistent condom use with the clients decreased since 2017 in Tbilisi; in Batumi there was increase since 2017 (from 55.3% in 2017 to 78% in 2024), both of these changes prove to be statistically significant ($p<0.01$). In most of the cases, condom use with the last client is initiated by FSWs.

Majority of FSWs in Tbilisi and Batumi reported having regular client. The majority of Tbilisi respondents report use of a condom during their last sexual intercourse with regular clients. However, compared to the last BBS, condom use during the last intercourse with the regular client has decreased from 90.5% in 2017 to 82.9% in 2024 and this decrease is statistically significant ($p<0.01$). For Batumi this indicator is even lower – 77.2%, but

has increased from 57.8% in 2017, which is again a statistically significant ($p<0.01$). Condom use in about 80% of cases was initiated by FSWs themselves in both cities. As for the consistent condom use with regular clients over the last 12 months, in Tbilisi it was reported by 71.7% - less than in 2017 (87.2%). As for Batumi there is increase from 50.4% in 2017 to 72.4% in 2024. These changes also proved to be statistically significant ($p<0.01$).

In 2024, less FSWs in Tbilisi and Batumi report having regular partners; mean number of regular partners is the same as in 2017 and is about 1.5 in both cities. One third of FSWs in Tbilisi reported using condom during the last intercourse with their regular partners, which shows statistically significant increase ($p<0.01$), compared with the data of 2017. However, in Batumi this indicator did not change during the last 7 years. Use of a condom is mainly initiated by the respondents themselves, especially in Batumi (52.6% in Tbilisi and 60% in Batumi). As for consistent condom use with regular partners, very small proportion of the respondents reported doing so (21.7% in Tbilisi vs. 10.8% in Batumi).

Safe sexual practices, especially with the clients are widespread among FSWs. Condom use rates during the last sexual contact with the paying clients have not changed during the last 22 years and are usually around or, as in 2024, above 90% in both cities. The same indicator with regular clients has decreased significantly in Tbilisi, however, still remains high. As for Batumi, this indicator has significantly increased. Currently Tbilisi and Batumi rates of condom use with the last regular client are very close in values.

Consistent condom use over the last month with the clients, as well as with the regular clients has decreased in Tbilisi, and increased in Batumi, and are approximately at the same level in these two cities. Overall, behaviour patterns with regular clients seem worsening during the recent years in Tbilisi, and improving in Batumi, yet, the levels are quite high.

As usual, behaviour with the regular partners is far less safe than with other types of partners. However, in this round of BBS, condom use during the last intercourse with this type of partner has increased significantly in Tbilisi. Consistent condom use with the regular partners remains low in both cities. Overall, compared to the last BBS of 2017, some major behaviour trends have improved, and some – worsened, but not drastically.

Condoms

Condoms are quite accessible for FSWs at pharmacies and NGO Tanadgoma, reported in both cities by more than 80% of the respondents; the latter was indicated by FSWs in Tbilisi and in Batumi with statistically significant increase compared to 2017 ($p<0.01$ in Tbilisi, $p<0.05$ in Batumi).

There is increase in percentage of FSWs who report having received condoms from preventive programs during the last 12 months in both cities (91.5% of FSWs in Tbilisi in 2024 vs 85% in 2017; 90% in Batumi in 2024 vs 86% in 2017). This increase is statistically significant in Tbilisi ($p<0.05$).

Violence, stigma and discrimination

Overall, the survey found 13% of FSWs in Tbilisi and 4.7% in Batumi who experienced any kind of violence (expect economic) during the last year. There is statistically significant decrease of these data compared to 2017 ($p<0.01$). As for stigma and discrimination in various settings and situations during the last 12 months, 13.5% in Tbilisi and 27.3% in Batumi report being verbally assaulted because of their occupation. This is also less than in the previous survey.

STI Knowledge and Health Seeking Behavior

Almost all FSWs from both survey sites are aware about sexually transmitted Infections. Proportions of knowing symptoms in men and women in Batumi stay almost the same since 2009 BBS survey. However, compared to the last survey in 2017, proportion of Tbilisi FSWs that know at least one symptom in women and in men has increased and the change is statistically significant ($p<0.01$).

Number of FSWs who report having some STI symptom during the last year has decreased in both cities. In case of STI symptom manifestation, majority tend to refer to state clinics or hospitals. Data of behaviour patterns when having STI symptoms demonstrate decreased rates of applying self-treatment in both cities, compared to 2017. These changes are statistically significant ($p<0.01$).

The knowledge of STI symptoms among women and men has improved. Also, application of self-treatment in case of STI symptoms has decreased, even though less FSWs report having had STI symptoms during the last year. Overall, STI knowledge and practice among FSWs has demonstrated some positive changes.

Knowledge and testing on HIV

The vast majority of FSWs are aware of HIV/AIDS. Still quite a small proportion of FSWs could correctly answer 5 questions on ways of HIV transmission (24.5% in Tbilisi and 35.3% in Batumi), but, compared to the previous survey of 2017, there is a statistically significant increase of these proportions in both cities ($p<0.01$).

The majority of FSWs knows where they can receive HIV testing in their community. These proportions have increased since the last survey and the change is statistically significant ($p<0.01$). Both in Tbilisi and in Batumi more FSWs were tested during the last year and received their results, compared to the latter BBS ($p<0.01$).

Only 10.7% of FSWs in Tbilisi and about one fourth (25.5%) – in Batumi consider themselves to be at high risk of HIV infection. This proportion is lower compared to the survey of 2017 and the decrease is statistically significant ($p<0.01$).

HIV knowledge rates are still low, but there have been significant positive changes in terms of knowledge about ways of protection, MTCT, as well as about some major misconceptions. Such an improvement has not been observed among FSWs for more than a decade.

Along with the majority of FSWs knowing where they can receive HIV testing in their community, there is statistically significant increase of FSWs tested during the last year and knowing their test result. Personal risk assessment of FSWs in Tbilisi demonstrated again that the majority do not consider themselves to be at high risk for HIV infection. However, given the high rates of condom use, improving knowledge on HIV/AIDS and low prevalence of HIV maintained for more than 20 years, this perception of risks could be realistic.

Sources of information on STI/HIV

The most popular sources of information on STI/HIV, reported by FSWs in both cities, were social workers. As for other sources ranking, it varies depending on the city. The most reliable sources of information on HIV and STIs are representatives of NGOs, internet and booklets.

Preventive program coverage

Coverage of prevention programs is estimated by knowledge of the place where to take HIV test and reception of condoms from preventive programs during the last 12 months. In Tbilisi and Batumi 62% and 50.7% FSW, respectively, were covered by preventive programs.

Trafficking and Sex work Abroad

Awareness of trafficking is high; only 18 FSWs report having been victims of trafficking. Less than 10% of FSWs from Tbilisi but more than 20% - from Batumi goes abroad for sex work voluntarily. Minor risk factors, such as higher prices received for service or low use of testing services, indicate that FSWs may be exposed to some risks of infections while working abroad. Still, their majority report protecting themselves with condoms.

Biomarker

Only 1 out of Batumi FSWs appeared to be HIV infected. There is no significant change in HIV prevalence among FSWs during the last 22 years.

Positive syphilis was diagnosed among 3% of FSWs in Tbilisi and 1.3% of FSWs - in Batumi. In 2017, syphilis with TPHA was positive among 2.6% Tbilisi respondents, but the change is not statistically significant. However, in Batumi it was 12% and is currently 6%, with the statistically significant decrease ($p<0.05$).

Population Size Estimation

In order to arrive to single estimates per city, the researchers used data of 5 methods. Further, in order to arrive at size estimation for the country with Anchor multiplier calculator, these city estimations, as well as average of sizes from all these methods were used, together with NSU data of 2014 and data of general population 2024. The final average estimates of FSWs (street- and facility based) were:

- in the Tbilisi municipality - **3,494**
- in Batumi municipality - **1,205**.
- As for the population size for Georgia, it was estimated as **6,715 (6,439 - 6,993).**

Recommendations

- It is necessary to elaborate, test and apply new strategies to ensure that prevention programs reach other segments of the sex work scene – young sex workers, sex workers working through internet, etc;
- It is necessary to continue increasing coverage by prevention programs in main big cities of Georgia through provision of condoms, HIV testing and counseling, and though applying new strategies in this regard as well – in order to maintain low HIV prevalence among FSWs population;
- As use of non-injecting drugs has been increasing, it is necessary to address this issue though amplifying specific messages within the prevention programs;
- In order to estimate FSWs population size, applying other additional, maybe indirect methods, like NSU, shall be considered, since the research has demonstrated that due to the changes in the population structure, existing approaches do not provide potential for proper estimations;
- As NSU is a high-cost method and is conducted rarely, it is desirable that the questions on all key populations are included every time it is done. This will ensure that the data are collected and are available to be used in conjunction with other methods by any organization that aims at estimating sizes of the key populations in Georgia;
- Non-coercive, anonymous, ethical and systematic surveillance of FSWs (and other high risk groups), both behavioral and of selected biological markers, should be conducted throughout Georgia, in combination with the multiple population size estimation methods, and repeated on a regular basis to provide early warning of a possible dramatic increase in the prevalence rate. In addition, surveys can provide invaluable information for designing focused interventions as well as for monitoring whether STI/HIV prevention and risk reduction interventions are working.

Table 1 : GAM/main indicators of FSWs (IBBS)

Indicators	Tbilisi		Batumi	
	%	n/N	%	n/N
HIV prevalence among FSW				
Percentage of FSWs living with HIV[3]	0	0/200	0.7	1/150
≤ 24	0	0/2	0	0/3
≥ 25	0	0/198	0.7	1/147
HIV testing and status awareness among FSW				
FSWs who report having tested negative for HIV in the past 12 months, or who know that they are living with HIV [3]	78.9	146/185	73.0	108/148

[3] GAM indicator

Indicators	Tbilisi		Batumi	
	%	n/N	%	n/N
≤ 24	0	0/2	66.7	2/3
≥ 25	79.8	146/183	73.1	106/145
Condom use among FSW				
Percentage of sex workers reporting using a condom with their most recent client [3]	98.0	196/200	92.7	139/150
≤ 24	100.0	2/2	100.0	3/3
≥ 25	98.0	194/198	92.5	136/147
Coverage of HIV prevention programmes among FSW				
Percentage of people in a key population reporting having received a combined set of HIV prevention interventions [3]	62.0	124/200	50.7	76/150
≤ 24	0	0/2	100.0	3/3
≥ 25	62.6	124/198	49.7	73/147
Antiretroviral therapy coverage among FSW				
Percentage of FSW living with HIV receiving antiretroviral therapy in the past 12 months [3]	100	1/1	0	0/0
≤ 24	0	0/0	0	0/0
≥ 25	100	1/1	0	0/0
Experience of sexual and/or physical violence among FSW				
Percentage of FSW who report having experienced physical and/or sexual violence in the last 12 months [3]	13.0	26/200	4.7	7/150
≤ 24	0	0/2	0	0/3
≥ 25	13.1	26/198	4.8	7/147
Avoidance of health care by sex workers because of stigma and discrimination				
Avoidance of health care among sex workers because of stigma and discrimination [3]	0	0/200	0.7	1/150
≤ 24	0	0/2	0	0/3
≥ 25	0	0/198	0.7	1/147
Discriminatory attitudes towards FSW among police				
Percentage of sex workers, who report discriminatory attitudes from police towards sex workers	0.5	1/200	2.0	3/150
≤ 24	0	0/2	0	0/3
≥ 25	0.5	1/198	2.0	3/147
Syphilis prevalence among FSW				
Percentage of FSWs with Syphilis [3]	3.0	6/200	1.3	2/150
≤ 24	0	0/2	0	0/3
≥ 25	3.0	6/198	1.4	2/147

Indicators	Tbilisi		Batumi	
	%	n/N	%	n/N
HIV test during last year				
FSWs who had HIV test during last year and knows results	73.0	146/200	73.0	108/150
≤ 24	0	0/2	66.7	2/3
≥ 25	73.7	146/198	72.1	106/147
Knowledge about HIV prevention				
FSWs who correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	24.5	49/200	35.3	53/150
≤ 24	0	0/2	33.3	1/3
≥ 25	24.7	49/198	36.1	53/147
Condom use with clients				
FSWs who reported permanent (always) condom use with all clients during last 30 days	80.5	161/200	78.0	117/150
≤ 24	100.0	2/2	100.0	3/3
≥ 25	80.3	159/198	77.6	114/147
Condom use with regular partner last sex				
FSWs who had regular partners and reported condom use at last intercourse	31.7	19/60	13.5	5/37
≤ 24	0	--	0	--
≥ 25	31.7	19/60	13.5	5/37
Permanent condom use with regular partner during last 12 months				
FSWs who reported permanent condom use with regular partner during last 12 months	21.7	13/60	10.8	4/37
≤ 24	0	--	0	--
≥ 25	21.7	13/60	10.8	4/37
Drug injection				
Injected drugs use in the last 12 months	2.5	5/200	0	0/150
≤ 24	0	0/2	0	0/3
≥ 25	2.5	5/198	0	0/147

Introduction

Georgia is among the countries with low HIV/AIDS prevalence, but high potential for developing a widespread epidemic. The estimated prevalence of HIV among the adult population (15-49) is 0.4%[4]. As of December 1, 2024 in total 10950 HIV cases have been registered by the national HIV surveillance system. The annual number of new cases grew from around a hundred during early 2000s to about 558 in 2024. In the early years of the HIV epidemic in Georgia, as in most Eastern European countries, injecting drug use was the major transmission mode. Since 2010, transmission has shifted toward the heterosexual mode, which became dominant by 2011. The percentage of drug use, as a transmission mode among newly registered HIV cases has decreased from 43.2 % in 2012 to 31.1 % in 2024 while heterosexual transmission has increased from 44.8% in 2012 to 52.7 % in 2024.

In the years 2002-2007 Save the Children Georgia Country Office under the USAID-funded STI/HIV Prevention (SHIP) project introduced second generation surveillance studies in the country and conducted Biomarker-Behavioral Surveillance Studies (BBS) among various key populations. The first BBS among FSW was conducted in Tbilisi in 2002, followed by 2004 and 2006 studies in Tbilisi and Batumi.

In 2009, 2012, 2014 and 2017 under the GFATM-funded HIV/AIDS programs subsequent waves of behavioral surveillance among the FSW were conducted in Tbilisi and Batumi. The studies were implemented by Curatio International Foundation (CIF) in partnership with the Center for Information and Counseling on Reproductive Health – Tanadgoma and with the National Center for Disease Control and Prevention (2012) and the Infectious Disease, AIDS and Clinical Immunology Research Center (2009, 2014 and 2017).

The presented research is a subsequent wave of BBS among FSW in Tbilisi and Batumi, implemented by Curatio International Foundation (CIF), Center for Information and Counseling on Reproductive Health - Tanadgoma and Tengiz Tsertsvadze Infectious Disease, AIDS and Clinical Immunology Research Center under the GFATM-supported project "Estimating HIV-related risk behaviors and HIV prevalence among Female Sex Workers and estimating size of this population".

The objective of the integrated Bio-Behavioral surveillance and population size estimation survey in 2024 was to measure trends in risk behaviors and and HIV and syphilis prevalence among female sex workers, as well as estimating the size of FSWs population.

BBS was conducted in conjunction with population size estimation methods. The first ever FSWs population size estimation survey was implemented in 2014 and then repeated in 2017, in combination with the Bio-BSS survey. As sizes of at risk and hidden populations might fluctuate, it is recommended to repeat the size estimations periodically. So, in 2024, Bio-BSS was again conducted in conjunction with size estimation to make it possible to

[4]https://www.unaids.org/en/regionscountries/countries/georgia

estimate the FSWs population size in Georgia by using different estimation methods and triangulating the findings to provide the most acceptable estimates.

This report presents analysis of the data gathered through the survey. Special focus is made on some core indicators, including Global AIDS Monitoring or GAM. Analysis includes a breakdown by two age groups for each indicator, which is presented in the data tables in the Appendix 1. Also, analysis includes size estimations derived with different methods and some comparison with the previous size estimation survey. In the end, conclusions and recommendations are provided; some of them are derived from comparison with the previous BBSs.

Methods

Ethical Issues

The survey investigators were cognizant of the fact that the individuals participating in this study were at some risk for social harm should they be identified as part of the target group. These surveys were designed to provide maximum protection for the participants, yet at the same time provide individual and community benefits.

The ethical issues that have been taken into consideration are:

- Participation in these surveys was voluntary. Participants were free to withdraw at any time and were informed that refusal or withdrawal would not affect services they would normally receive.
- No names were recorded. All documentation is anonymous, linked only by a study number.
- Staff conducting the survey was trained in discussing sensitive issues and protecting participants' confidentiality and human rights.
- All individuals identified with HIV infection were offered counseling and referred to the designated facility for further testing and, if necessary, treatment.
- All individuals identified with syphilis were offered counseling and referred to the "Healthy Cabinet" (a friendly clinic) for treatment.

Protocols and instruments of the surveys were submitted to and approved by the Medical Ethics Commission for the Evaluation of Medical-Biological Research of the National Center for Disease Control and Public Health (certificate N 2024-063, of 15.07.2024).

Description of target group at each location

Tbilisi

There are several categories of FSWs in Tbilisi: a) street-based; b) facility-based (sauna, bathhouse, hotel, massage parlour); c) flat-based, d) "mobile-phone" based and e) working via internet. The latter category of FSWs is growing rapidly. However, Tanadgoma does not work with the latter and there is no information about

this segment. Generally, each category of FSWs is found in different locations and serves different types of clients. Thus, each category represents a type or "status" among FSWs. Tanadgoma is working with street-based, facility-based (sauna, bathhouse, hotels), as well as flat-based FSWs. For the BBS in Tbilisi both street-based and facility-based FSWs were selected since they are:

- Easier to locate;
- Less educated and less likely to be aware of the dangers associated with high-risk behaviors;
- Easier to access because there are no pimps – in case of the street-based;
- Likely to be at higher risk of STIs/HIV, due to having a greater number of clients; and
- Least likely to be able to afford testing and treatment.

During the last 5 years, especially during and after the COVID pandemic, changes in the sex work scene have been observed. Namely, there are much less street-based sex workers, most probably majority have moved into the mobile-based and internet-based segment. Also, a lot of sex workers reported having moved out of Georgia to support themselves and families back home. It is obvious that starting from May-June 2024 number of sex workers that Tanadgoma usually reached through outreach activities, as well as those who come to use Tanadgoma services at the offices, has reduced. At the same time, the number of the facilities in Tbilisi has reduced significantly, reportedly because of the infrastructural projects taking place in Tbilisi.

Batumi

In Batumi the categories of the FSWs are practically the same as in Tbilisi, but there are some differences as well. Since 2022 a lot of non-citizen sex workers entered the scene. This trend is increasing, especially during the summer season. Another increasing trend in Batumi is Asian massage parlors, who employ also non-Georgian sex workers. These parlors are mostly located in the old part of Batumi, and this eliminated the street-based locations.

It is clear that non-citizen sex workers are substituting Georgian sex workers. Tanadgoma does not work with non-citizens withing its prevention programs, but they are also not very much interested in the services that are provided.

These changes in the scene influence also the seasonal distribution of sex work. If earlier sex work was more active during the season, now it is going on more or less throughout the year.

Sampling

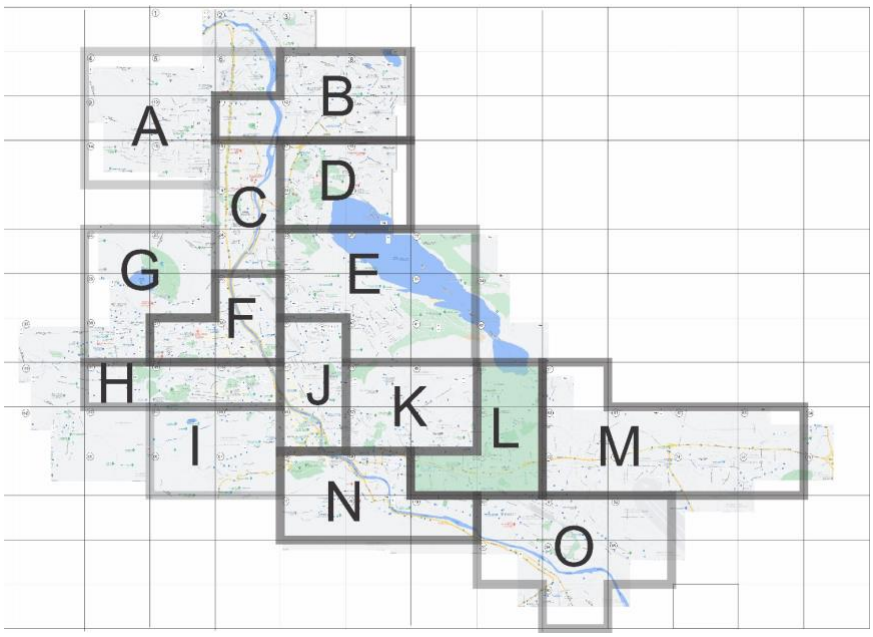
Over the past four decades several methods for recruiting hidden populations for surveillance and other survey research purposes have been developed. Time-Location Sampling (TLS), qualified as a probability sampling method, is one of the strongly recommended approaches for surveillance surveys among hidden population. This method takes advantage of the fact that some hidden populations tend to gather or congregate in certain types of locations. In TLS, through preliminary mapping exercises, potential survey sites are observed during a

pre-defined time interval. Because the locations where members of particular subgroups congregate change over time, it is necessary to repeat sampling frame development exercise before each round of surveillance data collection. Tanadgoma conducted the mapping exercise in Batumi - on 23-27 July, 2024 and in Tbilisi - on 13-17 August, 2024.

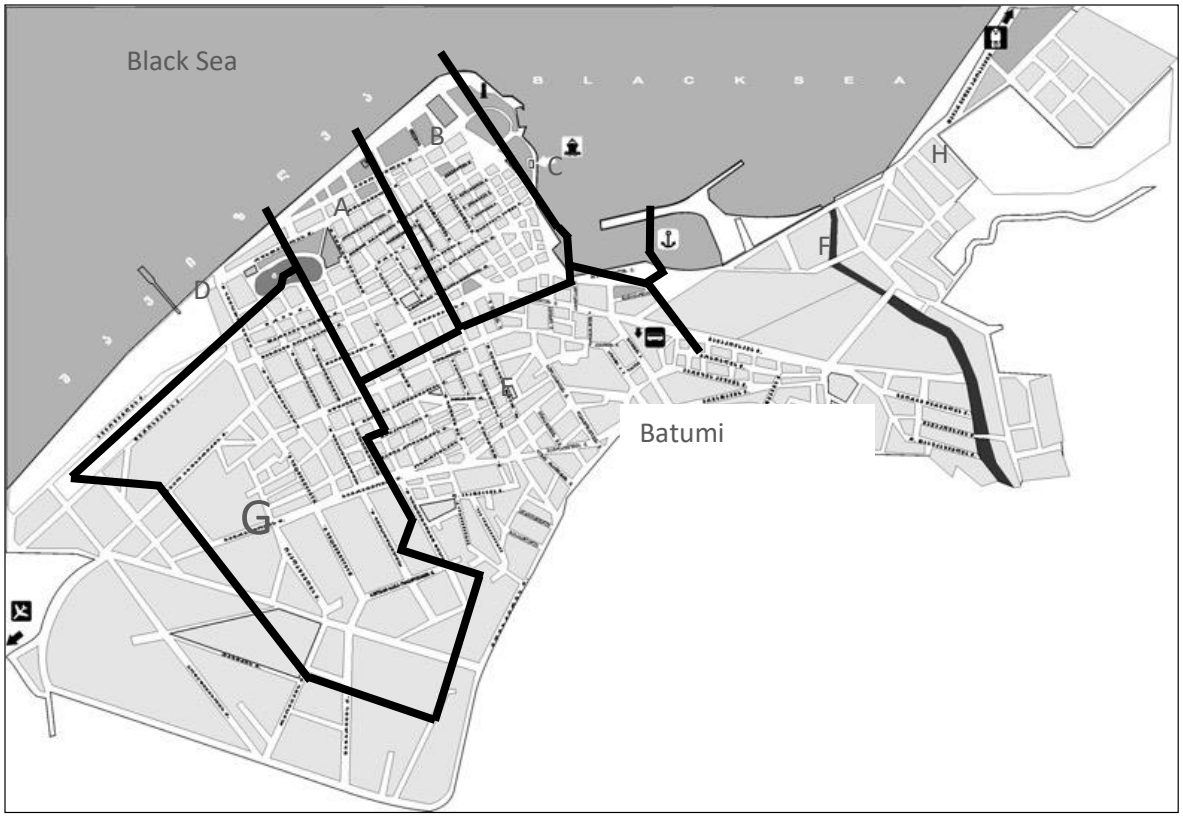
Mapping

The mapping exercise, designed to identify the sites, approximate numbers, and working hours of FSWs, was conducted prior to both surveys. The exercise involved the use of detailed street maps of Tbilisi and Batumi. TG divided Tbilisi into 15 sections and Batumi – into 8 sections. In Tbilisi the size of a section was determined by the number of streets that could be easily observed from a car within a short period of time. In Batumi the size of a section was determined by the number of streets and facilities that could be easily observed from a car and within a short period of time.

Picture 1: Sections of Tbilisi Used for Observation and Mapping of FSWs



Picture 2: Sections of Batumi Used for Observation and Mapping of FSWs



For each section an observation route map was made. In unmarked cars, four teams in Tbilisi and two teams in Batumi comprised of two TG observers toured each section twice: once during the daytime (14:00 – 18:00) and once at night (20:00 -24:00). Data of the mapping exercise are as follows:

Tbilisi: FSWs were found on 7 out of 15 sections; in total – 78 FSWs: 22 (including 3 in the closed facilities) – on day sites and 56 (including 11 in the closed facilities) – on night sites.

Batumi: FSWs were found on 5 out of 8 sections; in total – 178 FSWs: 51 (including 22 in the closed facilities) – during daytime and 127 (including 31 in the closed facilities) – during night hours.

The sample size was predefined by the donor organization. It was advised to recruit 200 FSWs in Tbilisi and 150 – in Batumi. The given sample sizes will allow the study to detect the change in condom use with the last client since the previous BBS in 2017 within 9% range, considering $p<0.05$, 80% power, 95% confidence level and 2.0 design effect.

Recruitment of Study Participants and interviewing

Recruitment process was conducted in Batumi August 15 – 16 September, 2024 and in Tbilisi - on September 3 – October 15, 2024.

Recruitment consisted of teams of a driver and two TG social workers going to each section identified through the mapping exercise and offering FSWs participation in the survey. As incentives for participation, FSWs received 30 GEL (Net) and condoms.

If the FSW agreed to take part in the survey, she was brought by car to TG's office for the interview. Interviews were conducted face-to-face by experienced TG interviewers in two private rooms. Immediately following the interview FSWs were asked to undergo rapid testing on HIV and syphilis. In case one or both of the tests provided positive result, the blood sample was taken by the professional nurses working in the mobile laboratories of TG and sent to the laboratory of the AIDS Center in Tbilisi. Each FSW who tested positive and whose blood was drawn, was given a card with their ID number. They were asked to come to Tanadgoma offices in two weeks to find out the results of their test. After the interview, FSWs were driven back to the site where they were recruited.

During the recruitment the staff of TG contacted 199 FSWs in Tbilisi and 205 FSWs - in Batumi. In total, in Tbilisi 182 sex workers and in Batumi – 121 sex workers agreed to take part in the survey. Some FSWs refused, and out of them some – postponed and took part in the survey later. It should be noted that in Tbilisi 18 FSWs (9%) and in Batumi – 29 FSWs (19.3%) came on their own as they heard about the survey.

Subject duplication was overcome by using a subject identification features such as FSW's age, ethnicity, and physical characteristics, such as height, weight, scars, tattoos, and some biometric measures.

In this survey the refusal rate during the recruitment was lower in Tbilisi and higher in Batumi compared to 2017: in Tbilisi it was 6.5% (17); in Batumi – 45.3% (84). This refusal rate is calculated for the flat refusals. Main reasons for flat refusals were: lack of motivation and interest to get tested for HIV and syphilis; low monetary incentives; lack of time. Several FSWs when first contacted by social workers postponed their participation (4 FSWs in Tbilisi, 16 - in Batumi) for several days due to being busy with the clients.

In Tbilisi a total of 200 sex workers underwent rapid testing on syphilis and HIV; in Batumi number of sex workers tested is 150.

In addition, Curatio carried out quality control and observed the interviewing process.

AIDS Center provided TG with a list containing the tests results by ID number. A FSW came to Tanadgoma office, gave her ID number and the results were given to her along with post-test counseling.

All FSWs both in Tbilisi and in Batumi who referred for their results were notified by Tanadgoma staff. In case of HIV positive response, Tanadgoma offered accompanying the FSW to the AIDS Center, but she refused because she was already registered at the AIDS Center as their patient.

Size estimation methods

In the absence of a gold standard for estimating the population size of a hidden and hard to reach population, estimates are empirically imprecise and prone to potential biases. The present PSE among FSW applied the following methods: Census, Capture-Recapture and Service Multiplier. The use of multiple methods strengthened confidence in estimates, provided upper and lower acceptability bounds, and reduced the likelihood that biases of any single method would have substantially alter results. The following describes the methods used in this study.

Method 1: Census

Mapping and census exercises were combined and done during the same days and time periods. Mapping was conducted in order to determine the working places, working hours and the number of female sex workers present at each place through observation. Detailed information on the mapping is given in the chapter "Mapping" of this report. The census method counted every individual from an at-risk population that usually worked at these designated places. Detailed maps of the city streets of Tbilisi and Batumi were used for the mapping exercise. Tbilisi was divided into 15 parts (sections, zones), while Batumi was divided into 8 parts. The size of each section was dependent on the number of the streets within the specified area. Each zone was observed and visited during the day and night at predetermined times. The working groups conducting the mapping consisted of two members who were moving around the study areas by cars. Observation times were:

Daytime – In both cities: 14:00 - 18:00.

Nighttime – In both cities: 20:00-24:00.

As per the WHO guidelines, the census should take place in a very short period of time.[5] Otherwise, sex workers moving between sites may lead to double counting. To avoid this, mapping/census lasted 5 days both in Tbilisi and in Batumi.

First, in both cities social workers counted female sex workers on the streets and then inside various facilities (cafes, bars, clubs etc). Afterwards, social workers approached FSWs by introducing themselves while explaining the study objective. During this time the social workers also asked how many of them were out with clients or not working for health reasons.

In the facilities such as cafes, bars, etc social workers counted the visible sex workers and approached them directly, or an informed person/manager. The social workers then asked about the total number of FSW in the facility.

Nighttime census was combined with the capture method as described in more detail in its respective section.

[5] UNAIDS/WHO Working Group on global HIV/AIDS and STI Survailance, Guidelines on Estimating the Size of Populations Most at Risk to HIV, 2010

Method 2: Capture-Recapture

Capture-recapture requires the following steps: map the sites where the study population congregates, go to the sites and mark all of the members of the population at the site, keep a count of marked persons, return to the sites some weeks later and remark all of the persons being at the same place, and then count all members present at “hotspots” and persons who were counted in the first sample.

The first phase, or the capture was carried out during the mapping, simultaneously with the night-time census. Staff members distributed unique objects directly to each FSW and asked them to keep the object during a one-month period. Key holders were used as unique objects. They were given out to each FSW individually. To turn objects into unique ones, Tanadgoma created specific drawing engraved on them. The number of FSWs to whom these unique objects were given was separately counted.

The second phase, or the recapture, was carried out two weeks after the capture, during the BBS field, when the social workers brought recruited FSWs to the survey site.

First, the total number of the FSWs was counted. Afterwards, they were asked whether they had received key holders and the number of such FSW was recorded:

- First the FSW was asked if she had been given the object by a social worker and was asked to show the object;
- If she was not able to show the object, then she was asked to describe the object;
- If the description was close to the real object, then the object was shown for confirmation.

Such FSWs were counted as recaptures.

Calculation of population size by the capture – recapture method: multiply the number of FSWs captured in the first phase sample by the number in the second phase sample and divide by the number of recaptures.

The formula is as follows:

$$N = \frac{C1 * C2}{R}$$

Where,

N - is total size of study population;

C1 - number of persons in first capture;

C2 - number of persons in second capture;

R - number of recaptures.

To give a range of error 95% confidence interval is calculated using the following formula:

95%CI=N±1.96√Var (N),

Where Var (N) is calculated as follows:

Var (N) = [(C1*C2) (C1-R) (C2-R)] / [R^3]

Method 3: Service Multiplier

In the BBS survey, we used the opportunity to integrate a related method to estimate the size of the FSWs population -the "multiplier method". In this method two sources of data are needed.

The first source - a count or listing of program data including only the population whose size is being estimated (number of FSWs who attended an STI clinic in the last six months).

The second source - a representative survey of the populations whose size is being estimated.

Clinics in Tbilisi and Batumi known as "Healthy Cabinets" maintain records of FSWs users by using a unique code during times of service. The number of beneficiaries who used the "Healthy Cabinet" services during the last six months was obtained from these clinics. The study participants were asked whether they received services at this clinic during the last six months. The question was formulated as follows:

Did you receive service in "Healthy Cabinet"during the last six months? (Specify: "Healthy Cabinet" located at … st Tbilisi or at … st Batumi).

Using these two data sources, the multiplier method provides a population size estimate by the formula:

$$N = \frac{n}{p}$$

Where N is the FSWs population size, given by *n* as the number of FSWs who were using the "Healthy Cabinet" service during the specified time period and *p* as the adjusted proportion of FSWs reporting using the "Healthy Cabinet" service during the time period collected in the BBS survey.

Survey Instrument

The survey instrument used in both study locations is a behavior study questionnaire for FSWs provided in the manual "Behavioral Surveillance Surveys: Guidelines for Repeated Behavioral Surveys in Populations at Risk for HIV by Family Health International (FHI)". The questionnaire adjusted for local context was used in previous BBSs conducted in 2002, 2004 and 2006 under the USAID-funded STI/HIV Prevention Project. In 2008-2009 the instrument was revised. The tool was included in the standardized BBS methodology[6] developed in 2010 by the group of national experts and was used for the current survey. In 2014, as well as in 2017 it was revised and modified by the researchers to make sure that it allows measurement of all necessary indicators. Besides, the questionnaire was enriched using "Integrated HIV Bio-behavioral Surveillance Toolbox" by UCSF Global Health

[6] http://www.curatiofoundation.org (Georgian version)

Sciences, in particular “FSW questionnaire”, a section on stigma and discrimination was added. For 2024 survey, again, the instrument was revised, based on the recommendations from the 2017 survey field implementors; questions for the indicators of the Global AIDS Monitoring were updated and some – added. Then, Tanadgoma pre-tested the questionnaire with 8 FSWs in Tbilisi and 7 – in Batumi. Based on the results of the pre-testing, it was finalized. The finalized instrument was digitalized, an electronic format was created and interviewers were filling the questionnaire using notebooks.

Biomarker Testing

Biomarker component involved testing the respondents with rapid tests on HIV and syphilis at the survey sites. For screening on HIV, ONE STEP Anti-HIV (1&2) Test, InTec products, INC has been used. And for rapid testing on syphilis, the survey used Syphilis Ab Rapid Test Cassette) T. pallidum to detect antibodies (IgG, IgM და IgA), Healgen Scientific LLC, was used. In case of positive results, the blood specimens were sent to the laboratory of the Infectious Disease, AIDS and Clinical Immunology Research Center in Tbilisi. The HIV-1 RNA Quantitative (Cobas4800) - Roche was used for HIV confirmation. For Syphilis the samples were tested using Syphilis RPR - LTA HPHA - BioRad.

Data Entry and Statistical Analysis

Data entry and analyses took place at the CIF office. Data were entered into SPSS software (version 26.0). Any discrepancies were resolved by examining frequencies and cross-tabs and checking logic of all variables in the datasets. Frequency analysis and bivariate analysis to find association between an exposure and outcome was performed. Comparison of selected indicators was done with the previous BBSs findings.

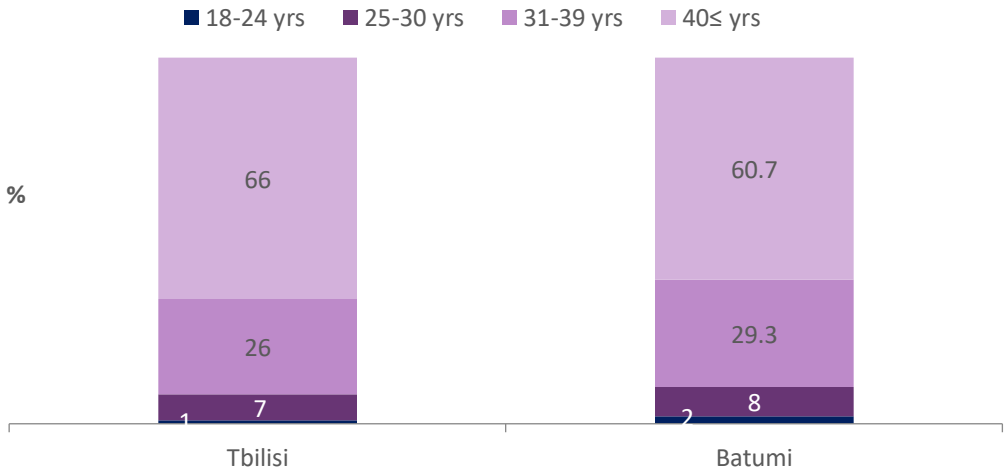
Hard copies of the completed questionnaires were kept at the CIF office. The final report was accomplished by Tanadgoma in collaboration with CIF.

Study findings

Demographic characteristics of FSWs

Median age of FSWs is 44 years in Tbilisi and 42 years in Batumi. Most of the FSWs are older than 25 years of age in both survey locations with the greatest proportion for “40+” age group (66% in Tbilisi and 60.7% in Batumi).

Figure 1: FSWs distribution by age groups



The vast majority of respondents in Tbilisi and almost all – in Batumi are ethnic Georgians (87% in Tbilisi and 99.3% in Batumi) and Georgian citizens.

The highest level of achieved education for the majority of FSWs is secondary (68% both in Tbilisi and in Batumi). It is worth mentioning that survey found 12.5% of FSWs in Tbilisi and 22% - in Batumi who reported having higher education.

At both survey sites less than 5% of interviewed FSWs are internally displaced (4% in Tbilisi and 2% in Batumi).

The majority of FSWs is from other cities of Georgia, different from their current place of work. Mean years the FSWs live in Tbilisi and Batumi is 30 and 12.5, respectively. One fifth of sex workers in Tbilisi and one third – in Batumi reported having commercial sex activity in other cities (20% in Tbilisi and 31.3% in Batumi).

It is noteworthy that in Tbilisi 61% of interviewed FSWs reported their participation in at least one previous BBSs; 53.3% reported their participation in BBS in 2017, 6.6% reported their participation in BBS in 2014; while 38.5% reported they did not remember the year when they took part in the survey. As for Batumi, 43.3% of respondents reported having participated at least one of the BBSs. 66.2% took part in BBS in 2017, however, none – in 2014; 30.8% reported they did not remember the year when they participated in the BBS.

Living Arrangements of FSWs

More than 60% of FSWs in both survey locations are divorced or live separately from their spouses. The survey found only 3.5% of FSWs in Tbilisi and none - in Batumi who is married at present. The mean age of the first marriage is 19.7 in Tbilisi and 17.8 – in Batumi.

More than 40% of FSWs in Tbilisi live with partners or spouses. The same arrangement was reported only by 20.7% of FSWs in Batumi.

Out of FSWs having spouses or partners 23% in Tbilisi and 22.6% in Batumi said their spouses/ partners have other partners/lovers.

Drug and Alcohol Use

The proportion of those who consumes alcohol beverages every day is 4% in Tbilisi and 12.7% - in Batumi. In Tbilisi, drinking alcohol once a month was reported by the highest percentage of FSWs – 22%. In Batumi though, the highest reported frequency of alcohol consumption was "at least, once a week" – by 34% of FSWs. It is noteworthy that 37% of respondents in Tbilisi and 25.3% - in Batumi reported that they did not drink during the last month.

The survey did not investigate lifetime injection practices among FSW. Percentage of FSWs who used non-injected drugs during the last 12 months is 22% in Tbilisi and 28.7% in Batumi. The most frequently used non-injected drugs are sedatives/sleeping pills in Tbilisi and marijuana – in Batumi. Use of ecstasy in Batumi is also quite high, especially compared to the same data in Tbilisi – (57.5% vs 6.8% - out of those who reported non-injecting drug use). As for injecting drugs, only 2.5% (5 respondents, all of them over 25 years of age) of FSWs in Tbilisi and none - in Batumi, reported having used them during the last 12 months. Vint/jeff/amphetamines, as well as heroin and methadone were listed as drugs that had been injected.

Aspects of Sex Work for FSWs

Median age at first sexual contact is 19 years in Tbilisi and 18 – in Batumi, while the median age when first received money in exchange for sex is significantly higher (28 years for Tbilisi and 30 years for Batumi FSWs). Mean years of working in commercial sex were 15 in Tbilisi and 11.5 – in Batumi. As for the working places, streets were reported by the highest proportions both in Tbilisi and in Batumi (57% and 36.7%, respectively). However, in Tbilisi the second higher proportion reported hotels (29.5%), and the third – on call (flat) work (11.5%). As for Batumi, the second mainly reported place of work was on call (flat) – 28.7%, and the third was online work – 26.7%. It is noteworthy that in Tbilisi working online was reported by very small percentage of the respondents – 7%.

For the vast majority of FSWs at both survey locations commercial sex represents the only source of income (83% in Tbilisi and 86.7% in Batumi). Those who reported having another source of income mainly work as cleaners and sellers at the shops. Besides, the vast majority of FSWs (84% in Tbilisi and 82.7% in Batumi) has financial dependents.

Sexual Behavior of FSWs with different types of clients/partners

Clients

The majority of FSWs (88% in Tbilisi and 99.3% in Batumi) reported having paying clients in the past seven days. Mean number of clients per week is 12.7 in Tbilisi and 9.7 in Batumi. Mean number of clients during the last business day is 2.8 in Tbilisi and 2 – in Batumi.

Only 10.5% of Tbilisi respondents and 29.3% of Batumi respondents confirmed that they use the web applications to contact clients. Applications "Escort" and "XGeorgia" were named as the leading in Tbilisi, and Whatsapp, Messenger, Telegram and "XGeorgia" – in Batumi. As for the reasons for not using the web applications, majority in both cities mentioned not having relevant skills. Also, in Tbilisi, 12.4% reported that they did not know whether these applications were available.

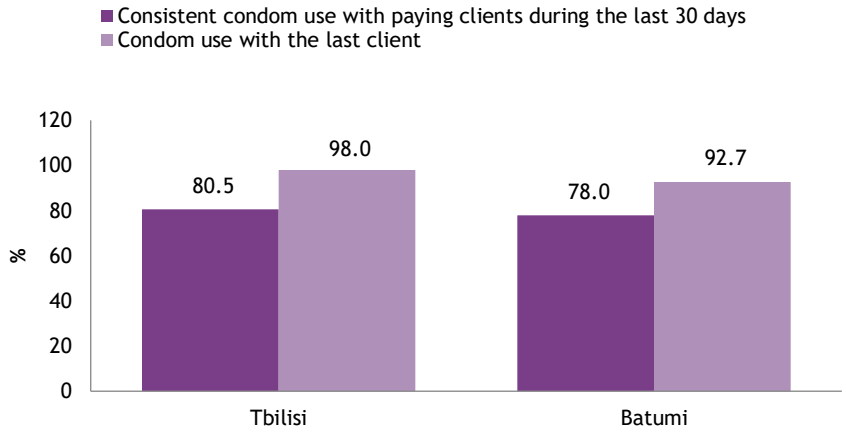
The mean amount of money (in local currency) FSWs received from their last paying client is 99.8 GEL (37$[7]) in Tbilisi, and much higher – 149.6 GEL (55$[8]) in Batumi.

The vast majority of FSWs in both survey sites reported condom use with the last client (98% in Tbilisi and 92.7% in Batumi). The proportion of those who did not use condoms is very small in both cities (1.5% in Tbilisi and 5.3% in Batumi). In the majority of cases FSWs use condom on their own initiative without being under pressure from their clients (87.2% in Tbilisi and 74.1% in Batumi). Mutual initiative in condom use was not high – 12.2% in Tbilisi and 23% - in Batumi. Client's initiative in condom use was reported by 1 respondent in Tbilisi and 1 – in Batumi. The leading reason for not using condoms during the last paid sexual intercourse is partners' refusal in Tbilisi and having not thought of it – in Batumi.

In Tbilisi 80.5% of FSWs and in Batumi almost the same proportion – 78% of FSWs reported consistent condom use with their paying clients during the last 30 days. The survey did not find any FSWs who reported no condom use with their paying clients.

Figure 2: Consistent condom use with clients during the last 30 days and condom use with the last client

[7] According to the average exchange rate of National Bank of Georgia for September-October, 2024.
[8] According to the average exchange rate of National Bank of Georgia for August-September, 2024.



Regular clients

The majority of FSWs at both survey sites (64.5% in Tbilisi and 68.7% in Batumi) reported having regular clients, with a quite high mean number of such clients (20.9 in Tbilisi and 7.9 in Batumi).

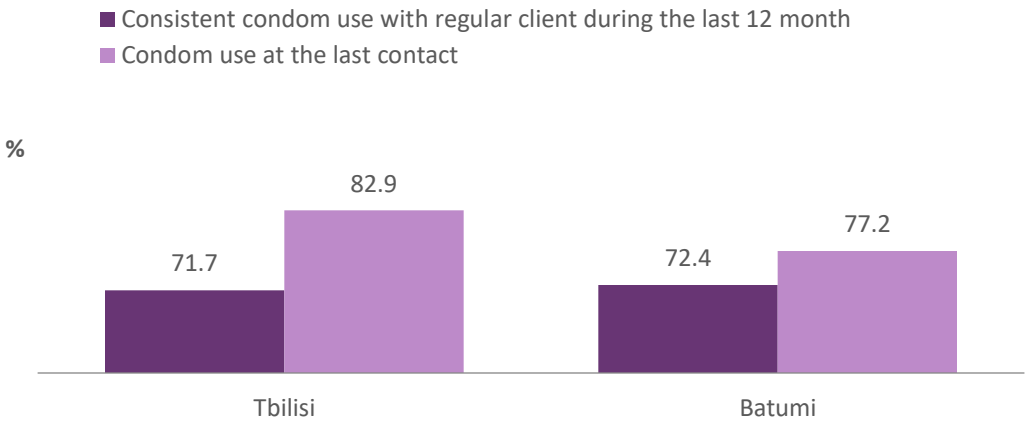
Most of the interviewed FSWs (76.5% in Tbilisi and 78.5% in Batumi) had up to 5 sexual contacts with their regular clients over the last 30 days.

Condom use during the last sexual intercourse with regular client was claimed by 82.9% of FSWs in Tbilisi and 77.2% - in Batumi. Condom use is mostly initiated by FSWs themselves (78.5% in Tbilisi and 81.3% in Batumi). However, 20% in Tbilisi and 17.2% in Batumi said the condom use was mutually initiated.

Most frequently mentioned reasons for not using condom during the last sexual contact with regular client were "offering more money", as well as trusting the client in Tbilisi and "partner's refusal" in Batumi.

Consistent condom use with their regular clients over the last 12 months was reported by 71.7% of Tbilisi FSWs and by 72.4% of Batumi respondents. The latter demonstrates an increase since 2017.

Figure 3: Consistent condom use with regular clients during the last 12 months and condom use at the last sexual contact



Regular Partners

One third of FSWs in Tbilisi and one fourth – in Batumi (30% and 24.7%, respectively) have regular partners (mean number – about 1.5 in both cities). Some (10% in Tbilisi and 2.7% - in Batumi) reported having had no sex with them during the last 30 days. Majority of Tbilisi respondents (38,3%) reported having sexual intercourse with regular partners 5-10 times during the last 30 days. As for Batumi, majority (48.6%) reported having up to 5 intercourses during the last month. When asked about number of sexual intercourses with regular partners over the last year, 78.3% in Tbilisi reported more than 11 times, and 64.9% in Batumi reported 5-10 times. It is notable that quite small proportion of FSWs at both survey sites reported using condom during the last intercourse with their regular partners (31.7% in Tbilisi and 13.5% in Batumi). Use of a condom is mainly initiated by the respondents themselves, especially in Batumi (52.6% in Tbilisi and 60% in Batumi). Condom use by mutual initiative shows also quite big proportions. Majority of Tbilisi FSWs, who reported not using condoms, mentioned they even did not think it was needed with a regular partner (14.6%), or they did not like it (12.2%). In Batumi, the leading reason, reported by 28.1% of Batumi FSWs, was "partners' refusal".

Also, quite small proportions in both cities indicated consistent condom use with regular partners during the last 12 months (21.7% in Tbilisi vs. 10.8% in Batumi).

Figure 4: Consistent condom use with regular partners during the last 12 months and condom use at the last sexual contact

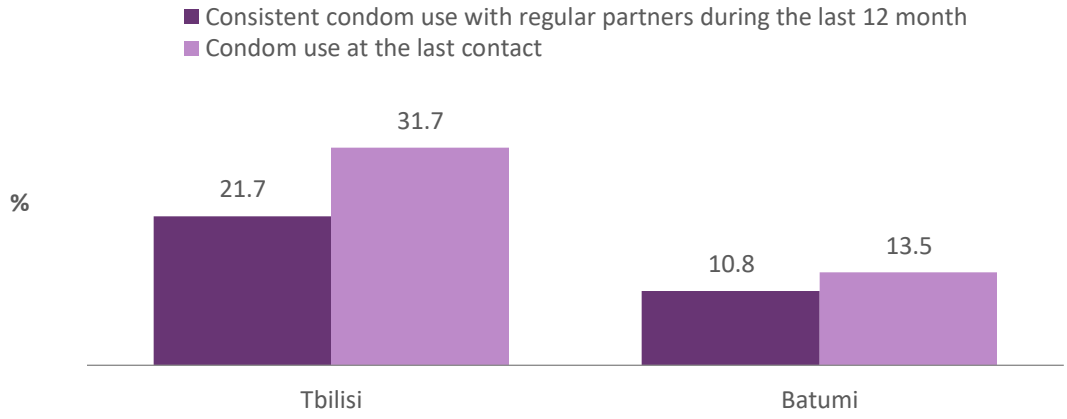
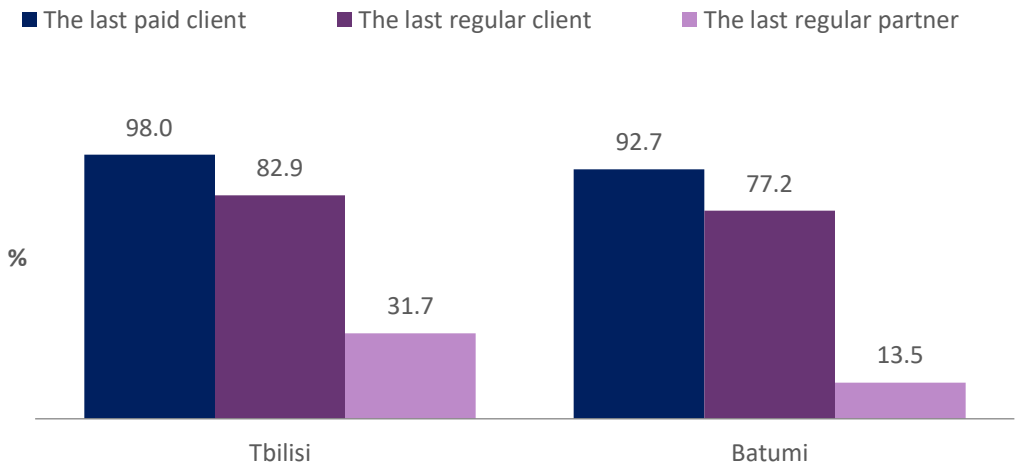


Figure 5 below summarizes FSWs' condom use behavior during the last sexual intercourse with different types of sex partners. Results suggest that significantly bigger proportion of FSWs used condoms with paid and regular clients. However, few reported the same with their regular partners in Tbilisi and even fewer – in Batumi.

Figure 5: Condom use with different types of sex partners



Access to Condoms for FSWs

More than 88% of FSWs in Tbilisi and 83.2% in Batumi reported they usually go to the drug-store to get condoms. Also, 89% FSWs in Tbilisi and 83.9% – in Batumi mentioned getting condoms from NGO "Tanadgoma". For majority of the respondents in Tbilisi estimated time needed to get condoms is 5-30 minutes and in Batumi – less than 5 minutes. The majority (86% in Tbilisi and 97.3% in Batumi) reported having the condoms with them or at a place of work (mean number of condoms was 36.5 in Tbilisi and 27.5 in Batumi, which is higher than in the previous survey).

91.5% of FSWs in Tbilisi and 90% in Batumi reported having received condoms; 39% in Tbilisi and 53.3% in Batumi reported having received lubricants; 77.5% in Tbilisi and 56% in Batumi reported having received information about condom use or safe sex – all these from preventive programs over the last 3 months.

Violence, stigma and discrimination among FSWs

The survey found a small proportion of FSWs who are victims of physical violence (beating, smothering, etc.) at both survey sites (10.5% in Tbilisi and 4.7% in Batumi). In majority of cases in Tbilisi (76.2%) and in Batumi (87.5%) the client was named as user of force during physical violence. A small number of FSWs in Tbilisi (5%) and none - in Batumi reported being victims of sexual violence, the majority of these cases are also associated with their clients. Even smaller proportion (1.5% in Tbilisi – 3 respondents) claimed they were forced for sexual intercourse/raped. Overall, the survey found 13% of FSWs in Tbilisi and 4.7% in Batumi who experienced any kind of violence during the last year. As for economic violence, 3% of FSWs in Tbilisi and 4% - in Batumi reported having experiences it, mostly from clients.

When asked about discrimination in various settings and situations during the last 12 months, only one sex worker in Batumi reported she faced discrimination in medical settings, also, single cases reported having been

denied employment (1.5% in Tbilisi and 2% in Batumi) and being denied help from police (0.5% in Tbilisi and 2% in Batumi). Much more FSWs in both cities report being verbally assaulted because of their occupation (13.5% in Tbilisi and 27.3% in Batumi). When asked about whether they informed police about the incidents, 37% of those who faced abuse in Tbilisi and 92.7% - in Batumi responded positive. Out of those, who did not notify the police, majority in Tbilisi reported they did not expect adequate reaction, and in Batumi – that they were ashamed because of the status of a sex worker.

STI Knowledge and Health Seeking Behavior among FSWs

Almost all FSWs from both survey sites are aware about sexually transmitted Infections. Big majority (93.9% in Tbilisi and 95.9% in Batumi) knows at least one symptom among women. A bit less FSWs at both survey sites know at least one STI symptom among men (89.3% in Tbilisi and 84.9% in Batumi). Small proportion (12.5%) of interviewed respondents in Tbilisi and more than one fifth (21.3%) - in Batumi reported having STI symptom during the last 12 months.

Only 7% of Tbilisi respondents and 4% - of Batumi FSWs reported they had been pregnant during the last 12 months, out of them only 2 women in Tbilisi had delivered the child. It is noteworthy that not all of the FSWs that reported being pregnant, report being tested on HIV during their pregnancy.

In Tbilisi 80% out of those FSWs who had STI symptom received treatment at state clinics/hospitals. In Batumi state hospitals/clinics were referred to in 65.6% of the STI cases. In the second place for treatment options in Batumi is application of self-treatment (37.5%). Also, only in Batumi 34.3% of FSWs mentioned drugstore as a place of getting doctor's advice or receiving the treatment.

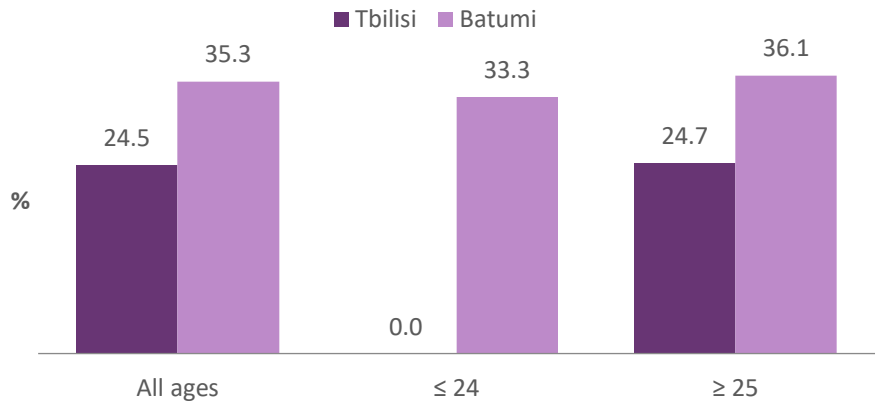
When asked about behavior during their symptomatic period, the majority of Tbilisi FSWs reported condom use (44%), in Batumi this was reported by 12.5% of respondents. It is noteworthy that in Batumi majority (78.1%) said they stopped having intercourse. In Tbilisi this was reported by one third of the respondents. In Tbilisi the third popular option during the symptomatic period was informing partners about the STI (16%), and in Batumi this was reported by one fourth of the FSWs (25%).

HIV/AIDS Knowledge and testing among FSWs

The vast majority of FSWs (93.5% in Tbilisi and 99.3% in Batumi) are aware of HIV/AIDS.

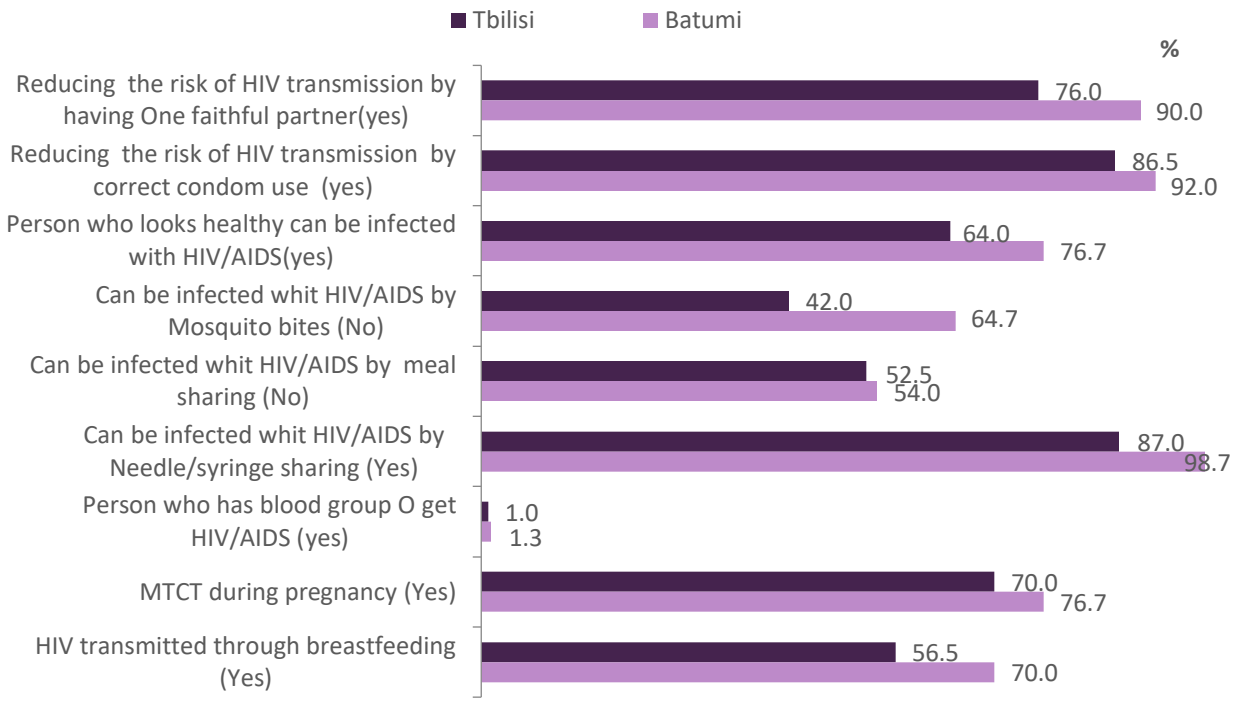
In Tbilisi 24.5% and in Batumi - 35.3% of FSWs correctly answer 5 questions on the ways of HIV transmission (Global AIDS Response Progress Report Indicator). It has to be noted that the majority of FSWs still doesn't have the correct information on major misconception such as blood group 0 being immune to HIV. Overall, Tbilisi respondents demonstrate lower knowledge on HIV, compared to Batumi FSWs.

Figure 6: Percentage of FSWs who correctly identify ways of HIV transmission and reject major misconceptions (GAM Indicator)



The best knowledge in terms of transmission routes among FSWs is about the possibility of transmission through sharing needles and syringes (87% in Tbilisi and 98.7% in Batumi). In the second place is correct condom use – 86.5% in Tbilisi and 92% in Batumi. "Reducing the risk of HIV transmission by having one faithful partner" is in the third place in both cities – 76% in Tbilisi and 90% in Batumi. High proportions in Tbilisi are aware of MTCT (70%), that a person who looks healthy can be infected with HIV/AIDS (64%) and that HIV can be transmitted through breastfeeding (56.5%). In Batumi, above 76.7% of the respondents know about MTCT and that a healthy-looking person can be infected with HIV, and 70% are aware that HIV can be transmitted through breastfeeding. It is noteworthy that knowledge about possibility of HIV transmission through mosquito bites and meal sharing is still not satisfactory. These questions were answered correctly by 42% and 52.5% respectively, in Tbilisi and by 64.7% and 54% respectively, in Batumi. Three fourths of Tbilisi respondents (74.3%) and a bit less in Batumi (67%) are able to list at least one action for reducing the risk of MTCT. These data are presented on the figure 7 below:

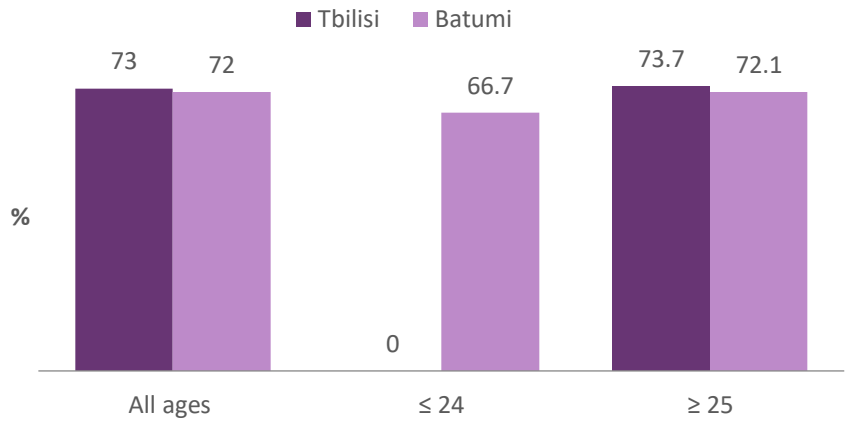
Figure 7: Percentage of FSWs who correctly identify ways of HIV transmission and reject major misconceptions



Three fourths of Tbilisi respondents (74.3%) and a bit less in Batumi (67%) are able to list at least one action for reducing the risk of MTCT.

Out of Tbilisi respondents 95.7% and out of Batumi FSWs - 98% know where they can receive HIV testing in their community, 88% and 95.3% from Tbilisi and Batumi respectively reported they had confidential HIV test ever in their lives, all of them - voluntarily. As for testing during the last 12 months, it was reported by 83.5% of FSWs in Tbilisi and by 75.5% in Batumi. Figure 8 below shows proportion of FSWs who received HIV test in the last 12 months and who know their results. In Tbilisi this percentage was 73% and in Batumi - 72%.

Figure 8: Proportion of FSWs who received HIV test in the last 12 months and who know their results



When asked about how they assess their personal risk of contracting HIV, 10.7% in Tbilisi and 25.5% in Batumi said that they are under high risk. Medium risk was reported by 46.5% and 24.8% at survey sites respectively, and low risk – by 27.3% in Tbilisi and 24.8% - in Batumi. Up to 10% of FSWs at both cities did not think they were at risk of HIV infection.

Sources of information on STI/HIV

Most frequently mentioned sources of information about STIs/HIV in the both cities are social workers (55% in Tbilisi and 74.7% in Batumi). In Tbilisi other sources ranked as follows: TV/Radio (43.5%), internet (36%), booklets (32%) and friends (22.5%). In Batumi the rating was: friends (53.3%), booklets (52.7%), internet (40.7%) and TV/Radio (17.3%).

When asked about the most reliable sources of information on STIs/HIV, both Tbilisi and Batumi FSWs listed in the first place NGO representatives (53% and 68%, respectively). Internet was mentioned as a second reliable source of information by 37.5% in Tbilisi. In Batumi the second reliable source reported was booklets (38%). Also, among Tbilisi FSWs high proportions were given to TV/Radio (29%) and booklets (27.5%). In Batumi, though, other sex workers (21.3%) and internet (16.7%) were listed in the third and fourth places.

Coverage of prevention programs is estimated by knowledge of the place where to take HIV test and reception of condoms from preventive programs during the last 12 months. In Tbilisi and Batumi 62% and 50.7% FSW respectively, were covered by preventive programs.

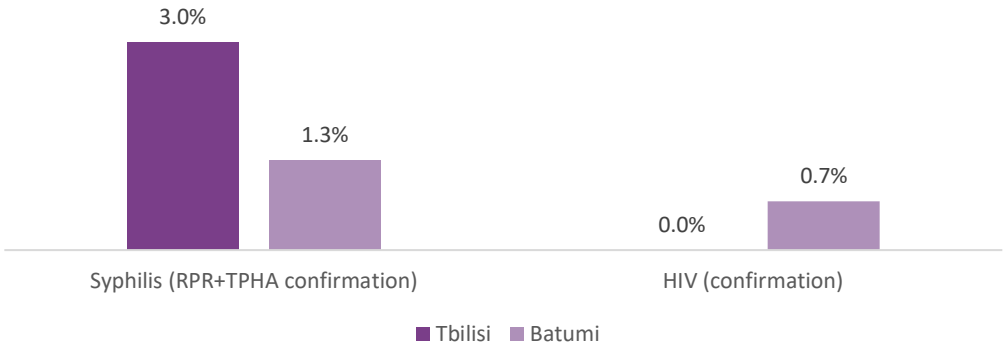
STI/HIV Prevalence among FSWs

All FSWs at both survey sites were tested for syphilis and HIV with the rapid tests.

Syphilis was positive with RPR method among 3% Tbilisi respondents and 1.3% among Batumi respondents. With the TPHA method, positive cases of syphilis were found in 5% in Tbilisi and 6% - in Batumi. Overall, positive syphilis cases with both methods were 3% in Tbilisi and 1.3% - in Batumi.

Only 1 out of 150 FSW in Batumi appeared to be HIV infected.

Figure 9: HIV and Syphilis prevalence among FSWs from Tbilisi and Batumi



Trafficking and Sex Work Abroad

In this round of the survey, like the last one of 2017, questions about trafficking and sex work aboard were asked to both Tbilisi and Batumi respondents.

The majority (86.5% in Tbilisi, 94% in Batumi) of FSWs is aware of the trafficking problem. Also, a majority reported they have never been a victim of trafficking. In Tbilisi overall 15 FSWs (7.5%) had been victims of trafficking: only 3% (6 out of 200) report they had been victims of trafficking in Georgia, and 4.5% - abroad. As for Batumi, overall only 3 FSWs (2%) reported being victims of trafficking, all of them abroad. It is worth mentioning that only 1 FSW in Batumi, who experienced trafficking abroad, experienced it 3 and more times.

Very few FSWs in Tbilisi (3%) reported they had worked voluntarily abroad during the last 12 months. In Batumi this was reported by much more respondents – 20.7%. FSWs who had been abroad for work reported they went mostly to Turkey. Also, all of them said they had their ID cards with them or at home. Mean number of visits abroad for sex work is 1.6 in Tbilisi and 1.3 in Batumi. Only one FSWs from Tbilisi and one – from Batumi said they had problems when crossing a border. The problems reported by these single cases were: free of charge sex service when crossing a boarder; money extortion and removing make-up by force. One Tbilisi FSWs reported facing a sexual violence problem (rape) when working abroad. Despite having sometimes problems while working abroad, half of Tbilisi FSWs and 60% of Batumi FSWs with this experience are still willing to go abroad to earn money. As for the type of place of sex work abroad, FSWs reported different places, such as hotels, clubs, bars, restaurants, streets, etc. Duration of the stay while working abroad was mostly reported as more than 1 month.

It is important to note that over 80% of respondents said they always used condoms with their clients while working abroad. About half of all FSWs reported they consumed alcohol at least once a week while working abroad and none reported having used injectable drugs. However, several reported having used non-injected drugs, such as marijuana and ecstasy.

About half of FSWs from Tbilisi and 71% of FSWs from Batumi reported more clients per day than in Georgia. Besides, the mean fee they are getting abroad is almost twice higher than in Georgia (181.7 GEL for Tbilisi – 67$ and 379.7 GEL for Batumi - 140$). Almost all of Tbilisi and Batumi respondents mentioned they are protecting themselves from getting STIs abroad with condoms. Only three Tbilisi FSWs reported having access to HIV/STI testing abroad and only one of them had used this service. In Batumi, 5 FSWs reported having access to HIV/STI testing abroad and all of them had used this service.

Population Size Estimation Results

Census data

Social workers visited every "hotspot" in both cities and collected information on the number of sex workers based on each hotspot.

The Census estimates for Tbilisi and Batumi are as follows:

Tbilisi: 150 (street-based and facility based FSW)
Batumi: 390 (street-based and facility based FSW)

Capture-recapture

For the capture phase 69 and 155 unique objects were distributed in Tbilisi and Batumi, respectively.

In Tbilisi in the recapture phase 199 FSWs were found at "hotspots," and among them 58 were recaptured. While in Batumi 205 FSWs were counted and among the 123 recaptured (see Table 2).

Table 2 – FSWs found at hotspots capture-recapture

	I Capture	II capture	Recapture
Tbilisi	69	199	58
Batumi	155	205	123

Capture-Recapture results are as follows:

	Tbilisi	Batumi
PSE Point estimate	**236**	**258**
PSE Lower Est.	220	245
PSE Upper Est.	247	271

Service Multiplier

The BBS was conducted using a TLS method with a sample of 200 FSW for Tbilisi and 150 for Batumi. In Tbilisi the sample was reached during 31 days, while in Batumi it required 23 days. Data analysis showed that 66 (33%) and 18 (12%) of study participants had received the service provided by the "Healthy Cabinet" during the last six months in Tbilisi and Batumi, respectively.

Data derived from the "Healthy Cabinet" showed that 66 FSWs had received the service during the last six months in Tbilisi and as for Batumi only 184 FSWs were registered at the "Healthy Cabinet" within the time period of focus.

FSW service multiplier results are as follows:

	Tbilisi	Batumi
PSE Point estimate	**200**	**1534**
PSE Lower Est.	152	1267
PSE Upper Est.	249	1802

Conclusions and Discussion

The findings of the surveys are briefly summarized in the conclusions below, which also include some comparison with previous BBSs conducted at the same survey sites:

Socio-demographic Characteristics:

FSWs in Tbilisi and Batumi have the following socio-demographic characteristics:

The mean age of FSWs is 44 years in Tbilisi and 42 years in Batumi; the majority of FSWs are older than 25 and represent the age group "40+" in both cities;

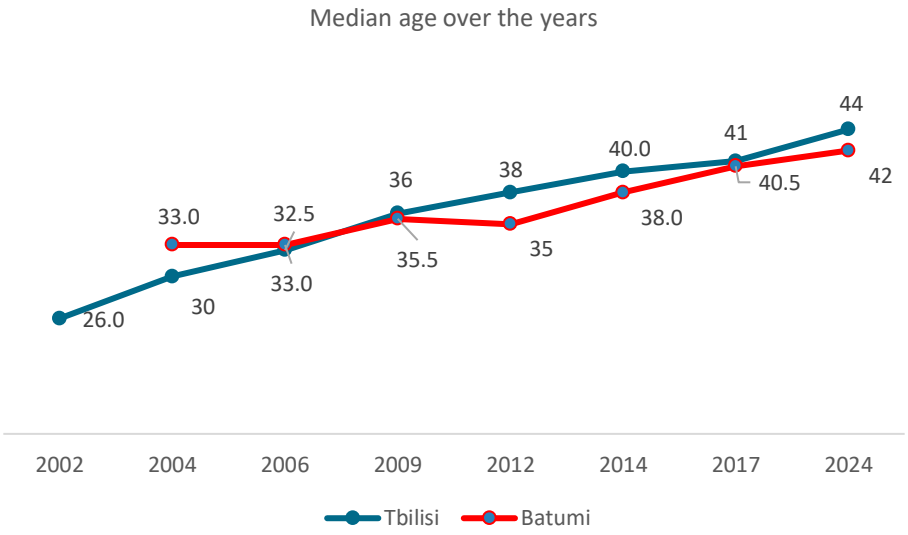
The majority of FSWs at both survey sites are Georgian;

The majority of FSWs has received secondary education;

More than 60% of FSWs are divorced or live separately from their spouses.

From 2002 the sex workers become more and more aged. Trends of the median age over years are presented in the figure below:

Figure 10 Median age of FSWs recruited in BBSs 2002-2024



Such aging trend is continuing in both cities studied.

Along with the aging trend, proportion of young (<25) sex workers in the samples is shrinking during the recent years (In Tbilisi and Batumi, respectively, there were 6.9% and 10.9% in 2009, 8.6% and 9.2% in 2012, 3.8% and 5% in 2014, 2% and 3.3% in 2017 and 1% and 2% in 2024). The study found only 2 FSWs in Tbilisi and only 3 – in Batumi in this age group.

As in the previous studies, the possible reason behind this trend could be that the younger women either rarely enter sex business at all or if they do, since they are more attractive, they get better paid opportunities and become higher class sex workers.

In terms of education level of FSWs, there had been slight fluctuation of the proportion of women with higher education in the survey samples throughout the years (In Tbilisi and Batumi, respectively: 13.3% and 8.3% in 2009, 18.1% and 7.5% in 2012, 13.1% and 8.3% in 2014,18.5% and 10.7% in 2017, 12.5% and 22% in 2024). However, compared with the previous survey of 2017, there is a statistically significant increase in the percentage of the FSWs with higher education in Batumi ($p<0.01$).

At both survey sites very small percentage of interviewed FSWs are internally displaced (4% in Tbilisi and 2% - in Batumi).

FSWs in both cities are aging since 2002. The majority of FSWs has received secondary education; most of them are Georgians, divorced/separated and have arrived in Tbilisi and Batumi from other places.

Background in Prostitution

In Tbilisi, 20% of Tbilisi survey participants reported having worked in the sex business in another city than Tbilisi before. This indicator has not changed compared to the last survey. It is noteworthy that in Batumi progressively more FSWs since 2004 reported being involved in commercial sex work at other locations, but this indicator started decreasing from 2012. The proportion of those who reported doing commercial sex work at locations other than Batumi increased gradually from 19% in 2004 to 55% in 2012, then dropped to 39.2% in 2014, dropped again in the 2017 survey to 24.7%. In the current round of the survey, it has increased slightly to 31.3% again. This could be explained by the fact that there was a low opportunity to be involved in the sex business in other smaller cities, and sex workers migrated more and more to Batumi, a border and port city with increasing tourist attraction over the years 2002-2012. In 2012, the migration of local sex workers to Batumi reached its peak and started decreasing. Also, the fact that women arrive to Batumi to first engage in commercial sex activities there might be connected to Adjara still being a very touristic place, which makes Batumi much more attractive for women, especially after 2022, when, following the was in Ukraine, there has been massive migration, mostly from Russia, to Georgia and especially to Batumi, Adjara.

The median age of first sexual encounter in exchange for money is 28 years for Tbilisi and 30 years for Batumi. Mean years of working in sex business is 15 in Tbilisi and 11.5 in Batumi. This value has increased from the last survey only in Tbilisi, demonstrating that most of the women that are engaged in sex business in these particular segments, stay in the field for very long periods. This is also demonstrated by aging of the sample, as well as by the participation of FSWs in the previous rounds of the BBS. More than half of FSWs reported participation in the last round of the BBS in both cities.

For the vast majority of FSWs at both survey locations commercial sex represents the only source of income. Besides, the majority of FSWs reported having financial dependents.

Majority of FSWs comes from different cities/villages, where up to one third of them has done sex work as well; their only income is sex business, and their majority has financial dependents.

Alcohol and Drug Use

FSWs both in Tbilisi and Batumi, as usual, do not report high percentages of alcohol use, especially everyday use.

As for drug use, bigger proportions reported having used non-injecting drug during the last 12 months in both cities, compared to 2017 survey (Tbilisi: $p<0.01$; Batumi: $p<0.05$). The most frequently used non-injected drugs are sedatives/sleeping pills in Tbilisi and marijuana – in Batumi. Use of ecstasy in Batumi is also quite high, especially compared to the same data in Tbilisi (57.5% vs 6.8% - out of those who reported non-injecting drug use). As for injecting drugs, it was reported by very small numbers and only in Tbilisi (2.5%, 5 respondents). Vint/jeff/amphetamines, as well as heroin and methadone were listed as drugs that had been injected.

The peculiarity of Georgian sex business, in contrast to other post-soviet countries, stays the same over 20 years - sex work, at least, the low-level sex work - does not overlap with injecting drug use. One interesting new trend is increased use of non-injecting drugs (sedatives/sleeping pills in Tbilisi and marijuana – in Batumi) among FSWs in both cities.

Sexual Risk Behavior

Paying Clients

Big majority of FSWs have had clients during the last week. However, both in Tbilisi and in Batumi overall more sex workers reported having a paying client during the last 7 days, compared to the previous BBS. These changes are statistically significant ($p<0.01$). Mean number of clients indicated by FSWs is about the same as in 2017 survey. The mean amount of money received from the last client, compared to the data of 2017, is more in Georgian Lari, as well as in US dollars.

The first time during the FSWs BBS surveys, the respondents were asked about web or mobile applications they use in their work. Only 10.5% in Tbilisi and about one third of the respondents in Batumi confirmed use of web applications.

The vast majority of FSWs at both sites reported condom use with the last client (over 92%). Consistent condom use with the clients during the last 30 days was reported by majority in Tbilisi (80.5%) and by almost the same (78%) – in Batumi. In Tbilisi consistent condom use with the clients decreased since 2017; in Batumi there was increase since 2017 (from 55.3% in 2017 to 78% in 2024), both of these changes prove to be statistically significant ($p<0.01$).

In most of the cases, condom use with the last client is initiated by FSWs. In Batumi condom use by mutual initiative with the clients stayed the same as in 2017 BBS, however, in Tbilisi it has decreased ($p<0.01$).

Since the very first BBS FSWs had been reporting very high condom use with the paying clients, especially condom use with the last client. Researchers assumed that these data are high due to so-called "social desirability bias". But stable proportions demonstrated by the surveys throughout 22 years (8 BBSs in Tbilisi, 7 – in Batumi) suggest that these data reflect the real situation. At the same time, the prevalence of HIV has not increased during all these years, which also provides for the same conclusion.

The survey data, such as lower numbers of sex workers identified through the mapping exercise, especially in Tbilisi, as well as reported use of online applications for work, indicate that even this, lower paid segment of the FSWs are increasingly being present and sell their services online.

Regular Clients

Majority (more than 60%) of FSWs in Tbilisi and Batumi reported having regular clients. Mean number of regular clients has slightly decreased in Tbilisi and is 20.9. As for Batumi, mean number of regular clients is almost the same as the previous survey - 7.9. As in previous BBS, contacts with regular clients are quite stable – majority report up to 5 sexual intercourses with regular clients during the last 30 days.

The majority of Tbilisi respondents report use of a condom during their last sexual intercourse with regular clients. However, compared to the last BBS, condom use during the last intercourse with the regular client has decreased from 90.5% in 2017 to 82.9% in 2024 and this decrease is statistically significant ($p<0.01$). For Batumi this indicator is even lower – 77.2%, but has increased from 57.8% in 2017, which is again a statistically significant ($p<0.01$). Condom use in about 80% of cases was initiated by FSWs themselves in both cities.

As for the consistent condom use with regular clients over the last 12 months, in Tbilisi it was reported by 71.7% - less than in 2017 (87.2%). As for Batumi there is increase from 50.4% in 2017 to 72.4% in 2024. These changes also proved to be statistically significant ($p<0.01$).

Overall, the condom use rates with the regular clients, both during the last intercourse, as well as consistent use during the last year, have worsened in Tbilisi, but improved in Batumi. It is noteworthy that in Tbilisi the most frequent answers for not using the condom were partner offering more money and trust towards the partners. Yet, the reasons behind these changes are to be studied through more in-depth methods.

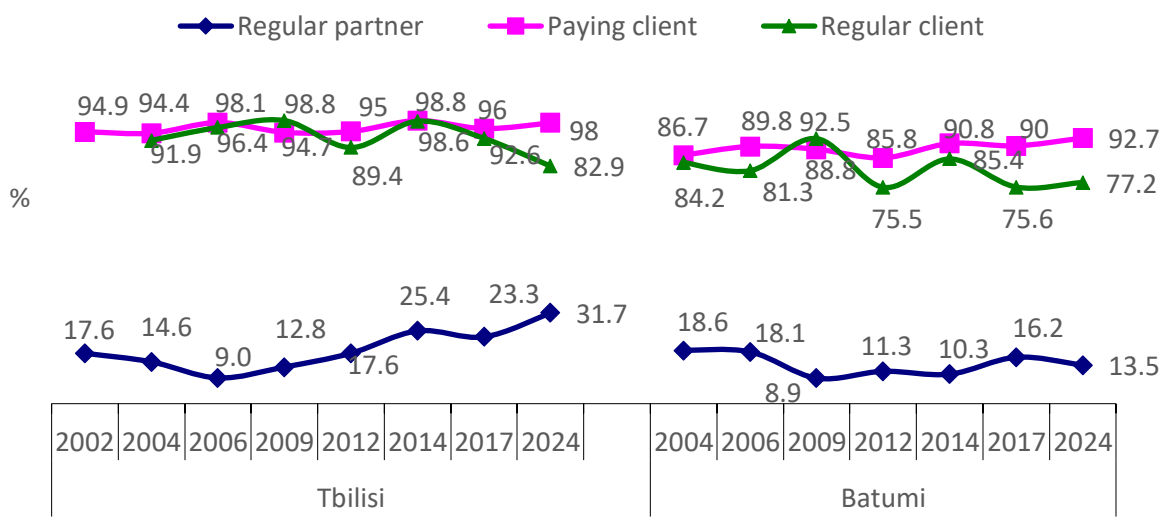
Regular Partners

In 2024, less FSWs in Tbilisi and Batumi report having regular partners; mean number of regular partners is the same as in 2017 and is about 1.5 in both cities. One third of FSWs in Tbilisi reported using condom during the last intercourse with their regular partners, which shows statistically significant increase ($p<0.01$), compared with the data of 2017. However, in Batumi this indicator did not change during the last 7 years. Use of a condom is mainly initiated by the respondents themselves, especially in Batumi (52.6% in Tbilisi and 60% in Batumi). Condom use by mutual initiative was reported also by quite big proportions. Majority of Tbilisi FSWs, who reported no condom use, mentioned they either did not think it was needed or they did not like it. In Batumi, the leading reason for not using condoms was partners' refusal.

As for consistent condom use with regular partners, very small proportion of the respondents reported doing so (21.7% in Tbilisi vs. 10.8% in Batumi). In both cities this indicator has slightly increased compared to 2017, but due to low number of the respondents, statistical significance of the changes was not checked.

The Figure 11 below represents one of the major indicators for FSWs risky sexual behaviour – condom use during the last sexual intercourse with different kinds of partners throughout all BBS surveys at both survey locations.

Figure 11: Condom use during last sexual intercourse with different partners



Safe sexual practices, especially with the clients are widespread among FSWs. Condom use rates during the last sexual contact with the paying clients have not changed during the last 22 years and are usually around or, as in 2024, above 90% in both cities. The same indicator with regular clients has decreased significantly in Tbilisi, however, still remains high. As for Batumi, this indicator has significantly increased. Currently Tbilisi and Batumi rates of condom use with the last regular client are very close in values.

Consistent condom use over the last month with the clients, as well as with the regular clients has decreased in Tbilisi, and increased in Batumi, and are approximately at the same level in these two cities. Overall, behaviour patterns with regular clients seem worsening during the recent years in Tbilisi, and improving in Batumi, yet, the levels are quite high.

As usual, behaviour with the regular partners is far less safe than with other types of partners. However, in this round of BBS, condom use during the last intercourse with this type of partner has increased significantly in Tbilisi. Consistent condom use with the regular partners remains low in both cities. Overall, compared to the last BBS of 2017, some major behaviour trends have improved, and some – worsened, but not drastically.

Condoms

Condoms are quite accessible for FSWs at pharmacies and NGO Tanadgoma, reported in both cities by more than 80% of the respondents; the latter was indicated by FSWs in Tbilisi and in Batumi with statistically significant increase compared to 2017 ($p<0.01$ in Tbilisi, $p<0.05$ in Batumi); they can get or buy them in not more than 30 minutes in Tbilisi and in about 5 minutes – in Batumi.

There is increase in percentage of FSWs who report having received condoms from preventive programs during the last 12 months in both cities (91.5% of FSWs in Tbilisi in 2024 vs 85% in 2017; 90% in Batumi in 2024 vs 86% in 2017). This increase is statistically significant in Tbilisi ($p<0.05$).

Violence, stigma and discrimination

Overall, the survey found 13% of FSWs in Tbilisi and 4.7% in Batumi who experienced any kind of violence (expect economic) during the last year. There is statistically significant decrease of these data compared to 2017 ($p<0.01$).

As for stigma and discrimination in various settings and situations during the last 12 months, 13.5% in Tbilisi and 27.3% in Batumi report being verbally assaulted because of their occupation. This is also less than in the previous survey.

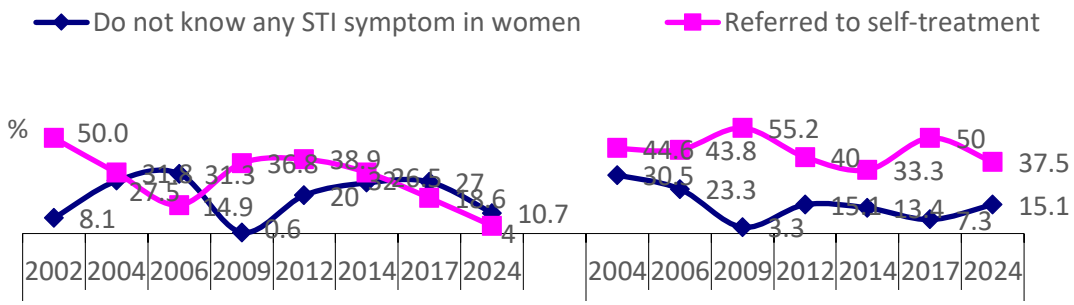
STI Knowledge and Health Seeking Behavior

Almost all FSWs from both survey sites are aware about sexually transmitted Infections. Out of surveyed FSWs big majority (>90%) knows at least one symptom among women. A bit less FSWs at both survey sites know at least one STI symptom among men. Proportions of knowing symptoms in men and women in Batumi stay almost the same since 2009 BBS survey. However, compared to the last survey in 2017, proportion of Tbilisi FSWs that know at least one symptom in women and in men has increased and the change is statistically significant ($p<0.01$).

Number of FSWs who report having some STI symptom during the last year has decreased in both cities. In case of STI symptom manifestation, majority of FSWs, especially in Tbilisi, tend to refer to state clinics or hospitals. It is noteworthy that data of behaviour patterns when having STI symptoms demonstrate decreased rates of applying self-treatment in both cities, compared to 2017. These changes prove to be statistically significant ($p<0.01$). Also, in Batumi majority said they stopped having intercourse.

Figure 12 below shows the changes in terms of both major indicators of STI knowledge and practices during the 22 years of the surveillance.

Figure 12 : STI knowledge and practice



The knowledge of STI symptoms among women and men has improved. Also, application of self-treatment in case of STI symptoms has decreased, even though less FSWs report having had STI symptoms during the last year. Overall, STI knowledge and practice among FSWs has demonstrated some positive changes.

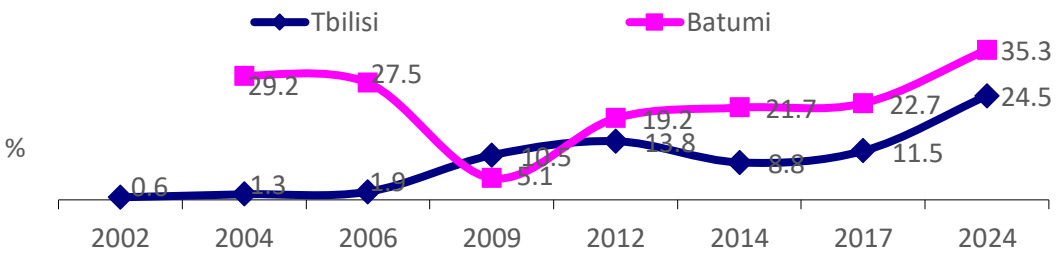
HIV Knowledge, attitudes and practices

The vast majority of FSWs are aware of HIV/AIDS. It is interesting that there are still several FSWs (14 in total) that are not aware of this disease, but overall during the last 7 years the proportion of FSWs that had heard of HIV/AIDS has increased slightly. Still quite a small proportion of FSWs could correctly answer 5 questions on ways of HIV transmission (24.5% in Tbilisi and 35.3% in Batumi), but, compared to the previous survey of 2017, there is a statistically significant increase of these proportions in both cities ($p<0.01$).

The majority of FSWs at both survey sites name transmission through sharing needles and syringes as one of the ways of transmission of HIV. Correct condom use and having one faithful partner are the ways of protection known to also big proportions of the respondents in both cities. High proportions of FSWs in Tbilisi and in Batumi are aware of MTCT and possibility of infection through breastfeeding. In the current survey proportion of FSWs that could name at least one action to reduce risk of MTCT has increased significantly ($p<0.01$). It is noteworthy that knowledge about possibility of HIV transmission through mosquito bites and meal sharing is still not satisfactory. However, almost all FSWs reject misconception that a Person who has blood group A cannot get HIV/AIDS.

Figure 13 below demonstrates changes in the HIV knowledge indicator over the last 24 years.

Figure 13: Key HIV/AIDS knowledge (all items correct: a) needle/syringe sharing abstinence (yes); b)correct condom use (yes);c) one faithful partner (yes); d) mosquito bites (no); e) meal sharing (no))



HIV knowledge rates are still low, but there have been significant positive changes in terms of knowledge about ways of protection, MTCT, as well as about some major misconceptions. Such an improvement has not been observed among FSWs for more than a decade.

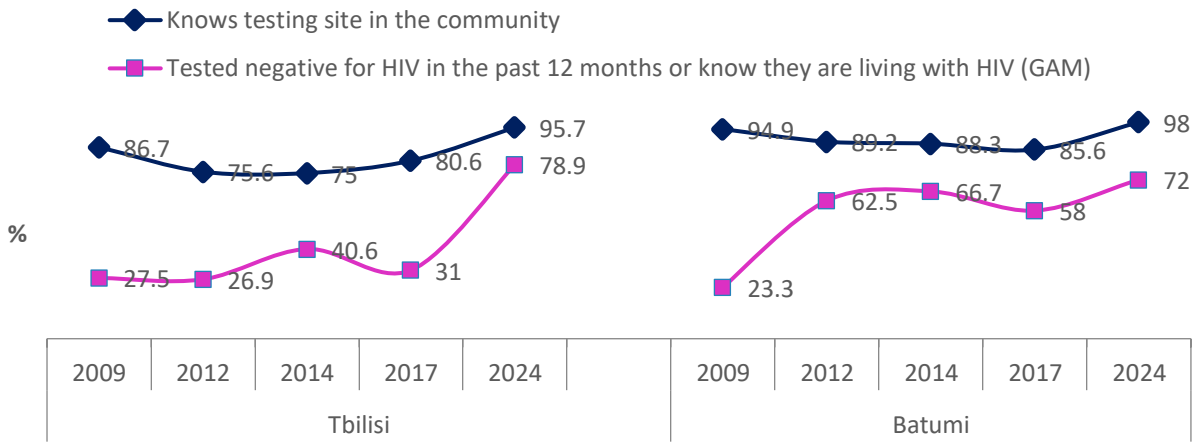
HIV Testing and Counselling

The majority of FSWs knows where they can receive HIV testing in their community. These proportions have increased since the last survey and the change is statistically significant ($p<0.01$). A bit lower proportion of respondents in both cities report that they had been tested for HIV during the last year compared to the previous BBS. Also, both in Tbilisi and in Batumi more FSWs were tested during the last year and received their results, compared to the latter BBS ($p<0.01$).

Only 10.7% of FSWs in Tbilisi and about one fourth (25.5%) – in Batumi consider themselves to be at high risk of HIV infection. This proportion is lower compared to the survey of 2017 and the decrease is statistically significant ($p<0.01$). About 8% of FSWs in Tbilisi and 14% - in Batumi did not think they were at risk of HIV infection.

The Figure 14 below demonstrates trends in knowledge of HIV testing for the community and testing and knowing test results during the recent years.

Figure 14: Voluntary HIV Testing and Counselling



Along with the majority of FSWs knowing where they can receive HIV testing in their community, there is statistically significant increase of FSWs tested during the last year and knowing their test result. Personal risk assessment of FSWs in Tbilisi demonstrated again that the majority do not consider themselves to be at high risk for HIV infection. However, given the high rates of condom use, improving knowledge on HIV/AIDS and low prevalence of HIV maintained for more than 20 years, this perception of risks could be realistic.

Sources of information on STI/HIV

The most popular sources of information on STI/HIV, reported by FSWs in both cities, were social workers. As for other sources ranking, it varies depending on the city. The most reliable sources of information on HIV and STIs are representatives of NGOs, internet and booklets.

Preventive program coverage

Coverage of prevention programs is estimated by knowledge of the place where to take HIV test and reception of condoms from preventive programs during the last 12 months. In Tbilisi and Batumi 62% and 50.7% FSW, respectively, were covered by preventive programs.

It is impossible to compare coverage data of 2017 and 2024 surveys since the measurement of this indicator has changed.

Trafficking and Sex work Abroad

In this round of the survey, questions about trafficking and sex work aboard were asked to both Tbilisi and Batumi respondents. The majority of respondents are aware of trafficking. Only 7.5% in Tbilisi and 2% in Batumi (18 cases in total) have ever experienced it. There has been increase in the percentage of FSWs from Tbilisi who reported being trafficked, but it proved not to be statistically significant.

Going for sex work abroad has become much less popular among sex workers from Tbilisi and vice versa – for FSWs in Batumi. Very few FSWs in Tbilisi (3%) reported they had worked voluntarily abroad during the last 12 months, compared to the last survey ($p<0.05$). In Batumi this was reported by much more respondents – 20.7%. This change is also statistically significant ($p<0.01$). The destination country listed was mostly Turkey. Very few FSWs report encountering problems when crossing a border or while working abroad.

Due to low number of FSWs that report going abroad for work, it is not very informative to compare risk behaviors while abroad with the data from the latest surveys. However, it is important to note that over 80% of respondents said they always used condoms with their clients while working abroad.

Awareness of trafficking is high; only 18 FSWs report having been victims of trafficking. Less than 10% of FSWs from Tbilisi but more than 20% - from Batumi goes abroad for sex work voluntarily. Minor risk factors, such as higher prices received for service or low use of testing services, indicate that FSWs may be exposed to some risks of infections while working abroad. Still, their majority report protecting themselves with condoms.

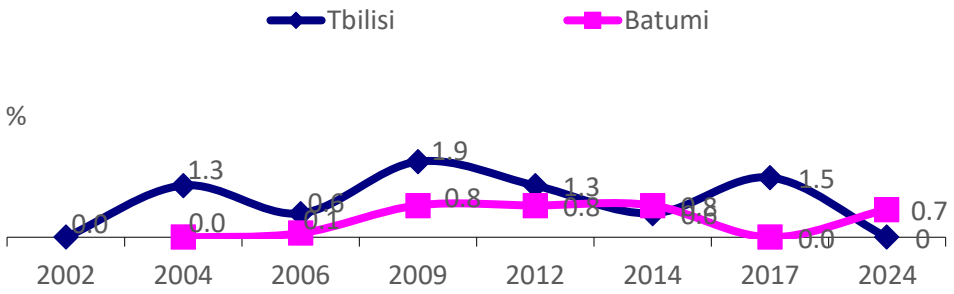
Biomarker

Syphilis was positive with RPR method among 3% Tbilisi respondents and 1.3% among Batumi respondents. With the TPHA method, positive cases of syphilis were found in 5% in Tbilisi and 6% - in Batumi. Overall, the positive syphilis was diagnosed among 3% of FSWs in Tbilisi and 1.3% of FSWs - in Batumi.

In 2017, syphilis with TPHA was positive among 2.6% Tbilisi respondents, but the change is not statistically significant. However, in Batumi it was 12% and is currently 6%, with the statistically significant decrease ($p<0.05$).

Only 1 out of 150 FSW in Batumi appeared to be HIV infected.

Figure 15: HIV prevalence



Rates of HIV infection among FSWs remain low during the last 22 years. Also, rates of syphilis, as compared to 2017, have not changed among this population in Tbilisi and have decreased in Batumi.

Population Size Estimation

While choosing the size estimation methodology, our overall approach was to implement several methods simultaneously to minimize potential bias resulting from a single method. The goal was to produce the most well supported estimate of population sizes using available survey data and service statistics. However, in this round of BBS/PSE surveys it was not possible to use Network Scale Up method, and only three different methods were used for FSW size estimation. Each method had its limitations while used.

The **main limitation of the Census method** was that both in Tbilisi and in Batumi high-end facilities could not be entered. That's why the final results do not include FSWs working in higher-paid upper-class segments.

If compared with the previous census conducted in 2017, there were much less numbers of FSWs counted both in Tbilisi (150 in 2024 vs 253 in 2017), and in Batumi (390 in 2024 vs 622 in 2017).

Capture-recapture results in 2017, compared to 2014, were lower both in Tbilisi and in Batumi (2024: 236 in Tbilisi and 258 in Batumi vs 2017: 322 in Tbilisi and 405 in Batumi). An overlap between capture and recapture in both cities ultimately shall have led to underestimation of population sizes.

One of the **limitations of the service multiplier method** is non-independence of the two data sources that is common for Multiplier methods. When comparing data of the current service multiplier with the 2017 data, decrease in the estimations for Tbilisi and increase - for Batumi are obvious (2024: 200 in Tbilisi and 1534 in Batumi vs 2017: 1307 in Tbilisi and 984 in Batumi). Similarly to the previous PSE survey, it is plausible that the subgroups of this key population, relatively lower-class FSWs, are more likely to use the free HIV/STI testing service and are also more likely to participate in BioBBS surveys. This positive correlation will result in an

underestimation of the total population size (i.e., the overlap between service use and BBS survey participation is exaggerated).

To summarize, table below presents findings from all methods used in this round of the survey:

FSW size estimations from all three methods

	Census	Capture-Recapture	Service Multiplier
Tbilisi	150	236	200
Batumi	390	258	1534

Overall, this decrease in FSWs numbers, especially in Tbilisi, aligned with the age groups that were identified during the BBS survey, might be result of two factors: sex workers that are younger, do not enter lower-paid segments of sex work; due to big infrastructure rehabilitation projects in Tbilisi, street sex work, as well as sex work sites that were located along the rehabilitation projects, have been eliminated or minimized.

When analyzing the data, researchers also took into consideration two other sources:

- Wisdom of crowd: answers of FSWs to the question, how many sex workers there are, in their opinion, in their city: Tbilisi average - 471, Batumi average - 232;
- Program data from HIV-prevention programs implemented by Tanadgoma: Program coverage for 11 months of 2024 in Tbilisi - 818, and in Batumi - 1675.

In order to arrive to single estimates per city, we decided to calculate averages based on: a) the three methods used and b) the 5 methods (including the Wisdom of Crowd and Program data). These calculations are provided in the tables below:

Average PSE 2024 (3 methods)	**Tbilisi**	**Batumi**
average PSE Point estimate	**200**	**700**
average PSE Lower Limit	**100**	**600**
average PSE Upper Limit	**200**	**800**

Average PSE 2024 (5 methods)	**Tbilisi**	**Batumi**
average PSE Point estimate	**400**	**800**
average PSE Lower Limit	**300**	**700**
average PSE Upper Limit	**2300**	**900**

Further, since the Network Scale Up method has not been used since 2014, it was decided to apply the proportion of the FSWs in Tbilisi and Batumi, based on the current (2024) general population data, specifically, female population of 18-59 y.o. to other major municipalities in Georgia, and arrive at the estimation of FSWs population.

The estimations in Tbilisi and Batumi were calculated for each of the 5 used methods separately, as well as additionally an average of these 5 methods was computed.

Then the researchers have used anchor multiplier calculator to synthesize multiple estimates. Program uses current general population size data, new population size estimations as well as previous prevalence of target population. If there is a problem with the data synthesis, the program identifies which estimate is causing the error and the method should be removed from the model.

As mentioned above, the researchers applied NSU data of 2014 for cities – Tbilisi and Batumi, new population size estimations for these two municipalities and general population data of 2024 for other big cities of Georgia (y.o. 18-59). Final estimates for Tbilisi and Batumi were received. Using these estimates proportions of the FSW population in relation to the general female population 18-59 y.o. was calculated. These proportions were applied to other big municipalities of Georgia: Tbilisi proportion was applied to Telavi, Zugdidi, Rustavi, Gori and Poti municipalities. Batumi municipality proportion was applied to Kutaisi municipality, since based on existing data of prevention programs targeting FSWs, approximate numbers and structure of FSWs in these two cities are close to each other.

The results of the calculations described above were presented at the consensus building meeting, conducted with participation of major stakeholders in the field of HIV/AIDS, representatives of communities and CSOs. As a result of the consensus reached, the final estimated sizes of street- and facility-based FSWs in 8 major Georgian municipalities, as well as overall country estimation are provided in the table below:

Table 3 FSW population size estimation

City municipalities	All female 18-59	Prevalence	95% CI		FSW size		
		Point - estimate	Lower bound	Upper bound	Point - estimate	Lower bound	Upper bound
C. Tbilisi Municipality	329,514	**1.06%**	**1.02%**	**1.10%**	**3,494**	**3,356**	**3,632**
C. Batumi Municipality	47,961	**2.51%**	**2.40%**	**2.63%**	**1,205**	**1,151**	**1,260**
C. Kutaisi Municipality	32,882	2.51%	2.40%	2.63%	826	789	864
C. Telavi Municipality	13,713	1.06%	1.02%	1.10%	145	140	151
C. Zugdidi Municipality	24,328	1.06%	1.02%	1.10%	258	248	268
C. Rustavi Municipality	33,292	1.06%	1.02%	1.10%	353	339	367
C. Gori Municipality	30,089	1.06%	1.02%	1.10%	319	306	332
C. Poti municipality	10,779	1.06%	1.02%	1.10%	114	110	119
Total all city municipalities	522,559	**1.28%**	**1.23%**	**1.34%**	**6,715**	**6,439**	**6,993**

Comparing these data with the previous survey results, it is clear that overall size of street and facility-based sex workers has not changed much.

Since Network Scale Up was not conducted in 2024, we have no estimates for all types of FSWs. The methods that were used count mainly street and facility based FSW and those who benefit from free HIV testing offered by the preventive programs. Sub-groups of FSWs belonging to higher socioeconomic layer are not reachable by current standardized preventive package (condom, lubricant, informational material, counselling/testing on HIV/AIDS as well as free STI testing and treatment) due to their very hidden behaviour and lack of interest to refer to free health services. The FSWs standing in the streets or working in the low/middle class facilities belong to the most vulnerable groups for HIV spread and they shall be the main target of prevention programs. So, it is important to combine cost-effective size estimation methods with the regular Bio-BSS surveys in order to keep track of the size fluctuations of exactly this sub-group of sex workers population in main cities of Georgia.

Recommendations

- It is necessary to elaborate, test and apply new strategies to ensure that prevention programs reach other segments of the sex work scene – young sex workers, sex workers working through internet, etc;
- It is necessary to continue increasing coverage by prevention programs in main big cities of Georgia through provision of condoms, HIV testing and counseling, and though applying new strategies in this regard as well – in order to maintain low HIV prevalence among FSWs population;
- As use of non-injecting drugs has been increasing, it is necessary to address this issue though amplifying specific messages within the prevention programs;
- In order to estimate FSWs population size, applying other additional, maybe indirect methods, like NSU, shall be considered, since the research has demonstrated that due to the changes in the population structure, existing approaches do not provide potential for proper estimations.
- As NSU is a high-cost method and is conducted rarely, it is desirable that the questions on all key populations are included every time it is done. This will ensure that the data are collected and are available to be used in conjunction with other methods by any organization that aims at estimating sizes of the key populations in Georgia.
- Non-coercive, anonymous, ethical and systematic surveillance of FSWs (and other high risk groups), both behavioral and of selected biological markers, should be conducted throughout Georgia, in combination with the multiple population size estimation methods, and repeated on a regular basis to provide early warning of a possible dramatic increase in the prevalence rate. In addition, surveys can provide invaluable information for designing focused interventions as well as for monitoring whether STI/HIV prevention and reduction interventions are working.

Appendix 1 – Female Sex workers data tables

Table 4: Area Coverage of the Tbilisi and Batumi Behavioral Surveillance surveys

	Tbilisi		Batumi	
Year, Date of interviews	2024 3 Sept -15 Oct		2024 15 Aug-16 Sept	
Location of interview	%(n)		%(n)	
At organizations office	100 (200)		100 (150)	
Participation rate				
Total contacted	199		205	
Total refused	13		68	
Total agree	182		121	
Total completed	200		150	
Participation in previous BSS	%	n/N	%	n/N
Yes	61.0	122/200	43.3	65/150
2014	6.6	8/122	0	0/150
2017	53.3	65/122	66.2	43/65
Don't remember year	38.5	47/122	30.8	20/65

Table 5: Demographic Characteristics of FSWs

	Tbilisi		Batumi	
Demographic Characteristics	%	n/N	%	n/N
Age				
18-24	1.0	2/200	2	3/150
25-30	7.0	14/200	8	12/150
31-39	26.0	52/200	29.3	44/150
≥ 40	66.0	132/200	60.7	91/150
Mean (Min-Max)	44.02(21-69)		43.19(21-67)	
Median		44		42
Education				
None	1.0	2/200	0	0/150
Primary	9.0	18/200	4.0	6/150
Secondary	68.0	136/200	68.0	102/150
Incomplete higher	9.5	19/200	6.0	9/150
Higher	12.5	25/200	22.0	33/150
No response	0	0/200	0	0/150
Ethnicity				
Georgian	87.0	174/200	99.3	149/150
Other	13.0	26/200	0.7	1/150
Period being in Georgia				
6-12 months	3.5	7/200	0.7	1/150
>1 year	96.0	192/200	43.3	65/150
<6 months	0.5	1/200	1.3	2/150
Don't know	0	0/200	0.7	1/150

	Tbilisi		Batumi	
Demographic Characteristics	%	n/N	%	n/N
No response	0	0/200	54.0	81/150
Period for future stay in Georgia				
about 6 months	0.5	1/200	0	0/150
about 1 year	4.5	9/200	0	0/150
> 1 year	91.0	182/200	26.7	40/150
Don't know	4.0	8/200	19.3	29/150
No response	0	0/200	54.0	81/150
Years of living in a given city				
Mean (Min-Max)	30.05(1-63)	(200)	17.27(0-57)	(150)
Median	30.0		12.5	
Number of sex workers in a given city				
Mean (Min-Max)	471(20-10000)	(127)	232(90-250)	(115)
Median	200		250	
Internally displaced persons				
Yes	4.0	8/200	2.0	3/150
Engagement in commercial sex in other city				
Yes	20.0	40/200	31.3	47/150
Marital Status				
Married	3.5	7/200	0	0/150
Divorced / living separately	61.5	123/200	68.7	103/150
Widower	12.0	24/200	25.3	38/150
Never been married	23.0	46/200	6.0	9/150
Mean age of first marriage	19.75	(154)	17.83	(141)
Living Arrangements				
With spouse or partner	42.0	48/200	20.7	31/150
Partner has other spouse or partner	23.0	11/48	22.6	7/31
Current working place				
Street	57.0	114/200	36.7	55/150
Sauna	5.5	11/200	0.0	0/150
Hotel	29.5	59/200	12.0	18/150
online	7.0	14/200	26.7	40/150
on call (flat)	11.5	23/200	28.7	43/150
Bar/cafe/club	0	0/200	14.0	21/150
Engagement in sex business				
Median age at 1st sexual contact	19	(200)	18	(150)
Median age 1st received money in exchange for sex	28.0	(199)	30.0	(148)
Mean years working as sex worker	15	(199)	11.5	(148)
Have other sources of income	17.0	34/200	13.3	20/150
The most frequently mentioned sources of income (cleaner)	32.4	11/34	30.0	6/20

Demographic Characteristics	Tbilisi		Batumi	
	%	n/N	%	n/N
The most frequently mentioned sources of income (seller)	29.4	10/34	20.0	4/20
Financial dependents				
Have Financial dependents	84	168/200	82.7	124/150

Table 6: Drug and Alcohol Use by FSWs

Alcohol and Drug Use	Tbilisi		Batumi	
	%	n/N	%	n/N
Alcohol Use				
did not drink	37.0	74/200	25.3	38/150
Every day	4.0	8/200	12.7	19/150
At least, once a week	19.5	39/200	34.0	51/150
At least, once in two weeks	17.5	35/200	15.3	23/150
Once a month	22.0	44/200	9.3	14/150
Don't know	0	0/200	2.0	3/150
No response	0	0/200	1.3	2/150
Drug Use				
Non-injected drug use in past 12 months	20.0	44/200	28.7	43/150
The most frequently used non-injected drugs				
Sedatives/ Sleeping pills	52.3	23/44	20.9	9/43
Marijuana	52.3	23/44	93.0	40/43
Ecstasy	6.8	3/44	57.5	23/40
Injected drugs use in the last 12 months	2.5	5/200	0	0/150
≤ 24	0	0/2	0	0/3
≥ 25	2.5	5/198	0	0/147
The most frequently used injected drugs				
Vint/jef/amphetamine/methamphetamine	80.0	4/5	0	0/0
Heroin	40.0	2/5	0	0/0
Methadone	20.0	1/5	0	0/0

Table 7: Sexual Behavior of FSWs with Clients

Sexual behaviour with clients	Tbilisi		Batumi	
	%	n/N	%	n/N
Clients and partners in the past 7 days				
Had paying client in the past 7 days	88.0	176/200	99.3	149/150
Mean number of clients		12.69 (176)		9.86 (149)
Median		10.00 (176)		8.00 (149)
Had regular client in the past 7 days	64.5	129/200	68.7	103/150
Mean number of clients		10.05 (129)		3.76 (103)
Median		7.00 (129)		3.00 (103)
Had regular partners client in the past 7 days	22.5	45/200	20.7	31/150

Sexual behaviour with clients	Tbilisi		Batumi	
	%	n/N	%	n/N
Mean number of partners		1.00 (45)		1.00 (31)
Median		1.00 (45)		1.00 (31)
Use of web applications for the clients				
Yes	10.5	21/200	29.3	44/150
No	89.0	178/200	70.7	106/150
No response	0.5	1/200	0	0/150
The most frequently used web applications				
Whatsapp	4.8	1/21	63.6	28/44
Messenger	4.8	1/21	45.5	20/44
Telegram	4.8	1/21	25.0	11/44
XGeorgia	19.0	4/21	22.7	10/44
Escort	33.3	7/21	6.8	3/44
Reason not using web applications				
Has no relevant skills	24.7	44/178	43.4	46/106
Don’t know whether its available	12.4	22/178	2.8	3/106
Other (there is no need)	11.2	20/178	14.2	15/106
Clients during your last business day				
Mean number of clients	98.0	2.83 (196)	95.3	2.08 (143)
Median		2.00 (196)		2.00 (143)
Amount last client paid (Georgian Lari)				
Mean		99.81(195)		149.59(148)
Median		120(195)		120(148)
Condom use with the last client				
Condom used	98.0	196/200	92.7	139/150
≤ 24	100.0	2/2	100.0	3/3
≥ 25	98.0	194/198	92.5	136/147
Condom *not* used	1.5	3/200	5.3	8/150
Who offered the use of condom				
Sex-worker	87.2	171/196	74.1	103/139
Client	0.5	1/196	0.7	1/139
Mutual initiative	12.2	23/196	23.0	32/139
No response/DK	0	0/196	2.2	3/139
Reasons for not using condoms with the last paid client				
Didn’t have it	0	0/4	9.1	1/11
Partner refused	75.0	3/4	18.2	2/11
Didn't think needed	0	0/4	9.1	1/11
Didn’t think of it	0	0/4	45.5	5/11
I trust him	0	0/4	9.1	1/11
No response	25.0	1/4	9.1	1/11
Consistent condom use with clients over the last 30 days				
Condom was always used with clients during the last month	80.5	161/200	78.0	117/150
≤ 24	100	2/2	100.0	3/3

Sexual behaviour with clients	Tbilisi		Batumi	
	%	n/N	%	n/N
≥ 25	80.3	159/198	77.6	114/147
Condom was *never* used with clients during the last month	0	0/200	0	0/150

Table 8: Sexual Behavior of FSWs with Permanent Clients

Behaviour with Regular Clients	Tbilisi		Batumi	
	%	n/N	%	n/N
Regular clients				
Have Regular clients	74.0	148/200	84.0	126/150
Mean number		20.88 (148)		7.9 (126)
Number of sexual contacts with regular clients over the last 30 days				
Didn't have sexual intercourse	6.6	10/152	13.4	17/127
Up to 5 times	68.4	104/152	65.4	83/127
5 – 10 times	17.1	26/152	8.7	11/127
More than 11	3.9	6/152	2.4	3/127
Don't know	3.9	6/152	10.2	13/127
Condom use during the last sexual contact with regular client				
Condom used	82.9	126/152	77.2	98/127
Condom *not* used	17.1	26/152	19.7	25/127
No response	0	0/152	3.1	4/127
Who offered to use a condom				
Sex-worker	78.5	51/65	81.3	52/64
Client	1.5	1/65	1.6	1/64
Mutual initiative	20.0	13/65	17.2	11/64
Reasons for not using condoms during the last regular paid sexual contact				
Partner refused	0	0/5	28.6	2/7
Didn't think it was needed	20.0	1/5	14.3	1/7
Offered more money	40.0	2/5	14.3	1/7
I trust him	40.0	2/5	14.3	1/7
Don't know	0	0/5	28.6	2/7
Consistent condom use with regular clients over the last 12 months				
Condoms used always with regular clients over the last 12 months	71.7	109/152	72.4	92/127
≤ 24	0	--	0	--
≥ 25	71.7	109/152	72.4	92/127

Table 9: Sexual Behavior of FSWs with Regular Partners

Sexual Behavior of FSWs with Regular Partners	Tbilisi		Batumi	
	%	n/N	%	n/N
Regular partner				
Has regular partner	30.0	60/200	24.7	74/200
Mean number		1.63 (60)		1.49 (74)
Number of sexual intercourses with regular partner over the last 30 days				
Didn't have sexual intercourse	10.0	6/60	2.7	1/37
Up to 5 times	33.3	20/60	48.6	18/37
5 – 10 times	38.3	23/60	29.7	11/37
More than 11	18.3	11/60	16.2	6/37
Don't know	0	0/60	2.7	1/37
Number of sexual intercourses with regular partner over the last year				
Didn't have sexual intercourse	3.3	2/60	0	0/37
Up to 5 times	1.7	1/60	5.4	2/37
5 – 10 times	3.3	2/60	64.9	24/37
More than 11	78.3	47/60	0	0/37
Don't know	13.3	8/60	29.7	11/37
Condom use during the last sexual contacts with regular partner				
Condom used	31.7	19/60	13.5	5/37
Condom *not* used	68.3	41/60	78.4	29/37
No response/Don't know	0	0/60	8.1	3/37
Who offered to use a condom				
Sex-worker	52.6	10/19	60.0	3/5
Mutual initiative	47.4	9/19	40.0	2/5
Reasons for not using condom with regular partner				
Partner refused	7.3	3/41	28.1	9/32
Don't like it	12.2	5/41	0	0/32
use contraceptives	7.3	3/41	0	0/32
Didn't think it was needed	14.6	6/41	25.0	8/32
he looked healthy	2.4	1/41	0	0/32
Didn't think of it	2.4	1/41	18.8	6/32
other	48.8	20/41	21.9	7/32
Don't know	2.4	1/41	0	0/32
No response	2.4	1/41	6.3	2/32
Consistent condom use with regular partner over the last 12 months				
Condoms used always with regular partner over the last 12 months	21.7	13/60	10.8	4/37

Table 10: Access to Condoms for FSWs

Access to Condoms	Tbilisi		Batumi	
	%	n/N	%	n/N
Where do you go to get condoms				
Drugstore	88.5	177/200	83.2	124/149
"Tanadgoma"	89.0	178/200	83.9	125/149
Time necessary for buying/getting a condom				
Less than 5 minutes	23.0	46/200	68.7	103/150
5 – 15 minutes	34.0	68/200	28.0	42/150
15 – 30 minutes	36.0	72/200	0.7	1/150
30 minutes or more	6.0	12/200	0.7	1/150
Don't know	1.0	2/200	1.3	2/150
No response	0	0/200	0.7	1/150
Number of condoms FSWs have with them or at place of work				
Have condoms with them or at place of work	86.0	172/200	97.3	146/150
Condom mean number		36.5 (172)		27.5 (149)
Received condoms from preventive programs over the last 3 months				
Yes	91.5	183/200	90.0	135/150
Received lubricants from preventive programs over the last 3 months				
Yes	39.0	78/200	53.3	80/150
Received information about condom use or safe sex over the last 3 months				
Yes	77.5	155/200	56.0	84/150

Table 11: Violence among FSWs

Violence	Tbilisi		Batumi	
	%	n/N	%	n/N
Physical violence				
Was a victim of physical violence	10.5	21/200	4.7	7/150
Person who made physical violence to FSW (Client)	76.2	16/21	87.5	7/8
Sexual violence				
Was a victim of sexual violence	5.0	10/200	0	0/150
Person who made sexual violence to FSW (Client)	70.0	7/10	0	0/0
Rape				
Was a victim of rape	1.5	3/200	0	0/150
Person who raped her (boyfriend)	66.7	2/3	0	0/0
Person who raped her (client)	33.3	1/3	0	0/0
Economic violence				
Was a victim of economic violence	3.0	6/200	4.0	6/150

Violence	Tbilisi		Batumi	
	%	n/N	%	n/N
Client	50.0	3/6	16.7	1/6
Boyfriend	33.3	2/6	0	0/6
Stranger	16.7	1/6	0	0/6
No response	0	0/6	83.3	5/6
Victim of at least one type of violence				
Was a victim of physical, sexual violence or rape	13.0	26/200	4.7	7/150

Table 12: Stigma and discrimination

Stigma and discrimination	Tbilisi		Batumi	
	%	n/N	%	n/N
Stigma and discrimination				
Refused providing medical service because of being sex worker	0	0/200	0.7	1/150
Refused taking at work because of being sex worker	1.5	3/200	2.0	3/150
Police refused to help because of being sex worker	0.5	1/200	2.0	3/150
Verbally abused because of being sex worker	13.5	27/200	27.3	41/150
Notified police about the accident	37.0	10/27	92.7	38/41
Reason not informing police				
will not have an adequate reaction	47.1	8/17	18.4	7/38
Because of shame	35.3	6/17	28.9	11/38
I am solving such problems myself	11.8	2/17	7.9	3/38
DK	5.9	1/17	39.5	15/38
No response	0	0/17	5.3	2/38

Table 13: STI Knowledge and Health Seeking Behavior among FSWs

STI	Tbilisi		Batumi	
	%	n/N	%	n/N
STI Knowledge				
Aware of STIs	98.5	197/200	97.3	146/150
Not aware of STIs	1.5	3/200	0	0/150
No response	0	0/200	2.7	4/150
Knowledge of STI symptoms observed among women				
Vaginal (genital) release	89.3	176/197	85.6	125/146
Genital, skin, or mucous membrane ulcer	67.5	133/197	39.0	57/146
Genital redness	35.5	70/197	32.9	48/146
Burning while urinating	28.9	57/197	44.5	65/146
Itching	37.1	73/197	59.6	87/146
Lower abdomen ache	9.1	18/197	48.6	71/146
Know at least one symptom	93.9	185/197	95.9	140/146
Do not know any	6.1	12/197	4.1	6/146

STI	Tbilisi		Batumi	
	%	n/N	%	n/N
Knowledge of STI symptoms observed among men				
Vaginal (genital) release	86.3	170/197	73.3	107/146
Genital, skin or mucous membrane ulcer	65.0	128/197	31.5	46/146
Genital redness	45.2	89/197	20.5	30/146
Burning while urinating	30.5	60/197	41.1	60/146
Itching	24.9	49/197	32.2	47/146
Lower abdomen ache	7.1	14/197	7.5	11/146
Know at least one symptom	89.3	176/197	84.9	124/146
Do not know any	10.7	21/197	15.1	22/146
STI testing during the last 3 month				
Yes	50.0	100/200	26.7	40/150
Had STI symptoms in the last 12 months				
Had STI symptoms	12.5	25/200	21.3	32/150
Received treatment at:				
Self-treatment	4.0	1/25	37.5	12/32
Traditional healer	0	0/25	0	0/32
State clinic/hospital	80.0	20/25	65.6	11/32
Drugstore	0	0/25	34.4	11/32
Sexual behaviour during symptomatic period				
Told sexual partner about STI	16.0	4/25	25.0	8/32
Stopped intercourse	36.0	9/25	78.1	25/32
Used condom	44.0	11/25	12.5	4/32

Table 14: Pregnancy during last 12 months among FSWs

Pregnancy	Tbilisi		Batumi	
	%	n/N	%	n/N
Was pregnant during the last 12 months				
Yes	7.0	14/200	4.0	6/150
Delivered child during the last 12 months				
Yes	14.3	2/14	0	0/6
Testing during the last pregnancy				
HIV	57.1	8/14	16.7	1/6
Positive result on HIV	12.5	1/8	0	0/1
ARV treatment (no response)	100.0	1/1	0	0/0
Infant testing on HIV (no response)	100.0	1/1	0	0/0
Syphilis	50.0	7/14	16.7	1/6
Positive result on syphilis	0	0/8	0	0/1
Hepatitis B	21.4	3/14	16.7	1/6
Positive result on Hepatitis B	0	0/3	0	0/1
Hepatitis C	21.4	3/14	33.3	2/6
Positive result on Hepatitis C	0	0/3	0	0/1

Table 15: HIV/AIDS Knowledge and Testing among FSWs`

HIV/AIDS Knowledge	Tbilisi		Batumi	
	%	n/N	%	n/N
Aware of HIV/AIDS				
Knows about HIV/AIDS	93.5	187/200	99.3	149/150
Knows person with HIV/AIDS	29.9	56/187	6.0	9/149
Reducing the risk of HIV transmission by having One faithful partner(yes)	76.0	152/200	90.0	135/150
Reducing the risk of HIV transmission by correct condom use (yes)	86.5	173/200	92.0	138/150
Person who looks healthy can be infected with HIV/AIDS(yes)	64.0	128/200	76.7	115/150
Can be infected whit HIV/AIDS by Mosquito bites (No)	42.0	84/200	64.7	97/150
Can be infected whit HIV/AIDS by meal sharing (No)	52.5	105/200	54.0	81/150
Can be infected whit HIV/AIDS by Needle/syringe sharing (Yes)	87.0	174/200	98.7	148/150
Person who has blood group A can get HIV/AIDS (yes)	1.0	2/200	1.3	2/150
MTCT during pregnancy (Yes)	70.0	140/200	76.7	115/150
HIV transmitted (Yes) through breastfeeding	56.5	113/200	70.0	105/150
Correctly answered all five questions about HIV transmission routes and prevention (GAM Indicator)	24.5	49/200	35.3	53/150
≤ 24	0	0/2	33.3	1/3
≥ 25	24.7	49/198	36.1	53/147
Actions for reducing risk of MTCT				
Take ARVs	58.6	82/140	46.1	53/115
Caesarean section	47.1	66/140	27.8	32/115
Artificial nutrition	31.4	44/140	46.1	53/115
At least one action	74.3	104/140	67.0	77/115
Knows HIV testing site in a community				
Yes	95.7	179/187	98.0	146/149
No	4.3	8/187	2.0	3/149
HIV test				
Not Tested	5.5	11/200	3.3	5/150
Ever tested	88.0	176/200	95.3	143/150
Tested voluntarily	100	176/176	100	143/143
Tested during last 6 months	43.8	77/176	55.9	80/143

HIV/AIDS Knowledge	Tbilisi		Batumi	
	%	n/N	%	n/N
Tested from 6 to 12 months period	39.8	70/176	19.6	28/143
Tested 1 year ago	14.8	26/176	13.3	19/143
Don't know	1.7	3/176	11.2	16/143
Knows test result	98.9	174/176	100	143/143
HIV test during last year				
Had HIV test during last year and knows results	73.0	146/200	72.0	108/150
≤ 24	0	0/2	66.7	2/3
≥ 25	73.7	146/198	72.1	106/147
Tell someone about test results				
Positive test results	0.6	1/174	0	0/143
Told about test results	100	1/1	0	0/0
Client/clients	100	1/1	0	0/0
Friends	100	1/1	0	0/0
Did not tell test results	0	0/1	0	0/0
Assessment of HIV risk				
High risk	10.7	20/187	25.5	38/149
Middle risk	46.5	87/187	24.8	37/149
Low risk	27.3	51/187	24.8	37/149
No risk	8.6	16/187	14.1	21/149
Don't know	7.0	13/187	10.7	16/149

Table 16: Sources of Information on STI/HIV

Interventions / media	Tbilisi		Batumi	
	%	n/N	%	n/N
Source of information about STI/HIV				
TV/Radio	43.5	87/200	17.3	26/150
Newspapers	6.5	13/200	6.7	10/150
Friends	22.5	45/200	53.3	80/150
Clients	3.5	7/200	4.0	6/150
Social workers	55.0	110/200	74.7	112/150
Booklets	32.0	64/200	52.7	79/150
Internet	36.0	72/200	40.7	61/150
No response	6.5	13/200	1.3	2/150
The most reliable sources of information				
TV/Radio	29.0	58/200	6.0	9/150
Newspapers/magazines	3.0	6/200	0.7	1/150

Interventions / media	Tbilisi		Batumi	
	%	n/N	%	n/N
Booklets	27.5	55/200	38.0	57/150
Friends/relatives	1.5	3/200	9.3	14/150
Other FSWs	8.0	16/200	21.3	32/150
NGO representatives	53.0	106/200	68.0	102/150
Internet	37.5	75/200	16.7	25/150
No response	7.5	15/200	4.7	7/150

Table 17: STI/HIV Prevalence among FSWs

Biomarker	Tbilisi		Batumi	
	%	n/N	%	n/N
HIV prevalence among FSW				
Percentage of FSWs living with HIV	0	0/200	0.7	1/150
≤ 24	0	0/2	0	0/3
≥ 25	0	0/198	0.7	1/147
Syphilis prevalence among FSW				
Percentage of FSWs with Syphilis	3.0	6/200	1.3	2/150
≤ 24	0	0/2	0	0/3
≥ 25	3.0	6/198	1.4	2/147
At least two infections				
Prevalence	0	0/200	6.0	1/150
≤ 24	0	0/2	0	0/3
≥ 25	0	0/198	6.1	1/147

Table 18: Trafficking and Sex Work Abroad

Trafficking and Sex Work Abroad	Tbilisi		Batumi	
	%	n/N	%	n/N
Awareness on Trafficking				
Heard about trafficking	86.5	173/200	94.0	141/150
Have been a victim of trafficking				
Yes, In Georgia	3.0	6/200	0	0/150
Yes, abroad	4.5	9/200	2.0	3/150
When				
Yes, earlier than 1 year	93.3	14/15	100	3/3
Don't remember when	6.7	1/15	0	0/3
How many times have been trafficked abroad for sex work				
Once	100	15/15	66.7	2/3
Three or more times	0	0/9	33.3	1/3
Never been a victim of trafficking	91.5	183/200	96.0	144/150
Working abroad for sex work last 12 months				
Working abroad for sex work voluntary (Yes)	3.0	6/200	20.7	31/150
Have their ID cards with them or at home	100.0	6/6	100	31/31
Number of visits abroad for sex work				
During the last year (Mean)	1.17 (6)		1.39 (31)	

Trafficking and Sex Work Abroad	Tbilisi		Batumi	
	%	n/N	%	n/N
Country				
Turkey	66.7	4/6	87.1	27/31
Other (Emirates)	33.3	2/6	6.5	2/31
Other (Shrilanka)	0	0/6	3.2	1/31
Other (Qatar)	0	0/6	3.2	1/31
Having problem when crossing a border				
Yes	16.7	1/6	9.7	1/31
Sex service (free of charge)	100.0	1/1	33.3	1/3
Money extortion	0	0/1	33.3	1/3
Other (someone removed make-up)	0	0/1	33.3	1/3
Having problem when working abroad				
Yes	16.7	1/6	0	0/31
Rape	100	1/1	--	0/0
Who created problems during sex work abroad				
Hotel/bar owner	100	1/1	--	0/0
Willingly go abroad for next time				
Yes	50.0	3/6	61.3	19/31
Type of a place of sex work abroad the last time				
Street	16.7	1/6	3.2	1/31
Bar	16.7	1/6	22.6	7/31
Restaurant	16.7	1/6	3.2	1/31
Hotel	0	0/6	48.4	15/31
Other	16.7	1/6	22.6	9/31
Club	0	0/1	77.8	7/9
Online	0	0/1	11.1	1/9
At pimps' house	100.0	1/1	11.1	1/9
No response	66.7	4/6	0	0/31
Condom use with clients while working last time abroad				
Always	83.3	5/6	87.1	27/31
Never	0	0/6	3.2	1/31
Alcohol Use				
Every day	0	0/6	12.9	4/31
At least, once a week	50.0	3/6	51.6	16/31
At least, once in two weeks	16.7	1/6	0	0/31
Once a month	16.7	1/6	16.1	5/31
Don't know	0	0/6	12.9	4/31
No response	16.7	1/6	6.5	2/31
Taking drugs while working abroad				
Non-injected drug use	16.7	1/6	22.6	7/31

Trafficking and Sex Work Abroad	Tbilisi		Batumi	
	%	n/N	%	n/N
Injected drug use	0	0/6	0	0/31
The most frequently used non-injected drugs				
Marijuana	16.7	1/6	19.4	6/31
Ecstasy	16.7	1/6	16.1	5/31
How long stayed abroad for last visit				
2 weeks	0	0/6	35.5	11/31
1 month	0	0/6	25.8	8/31
More than 1 month	100	6/6	35.5	11/31
No response	0	0/6	3.2	1/31
Number of partners per day during the last visit abroad				
Up to 5	33.3	2/6	71.0	22/31
5-10	66.7	4/6	16.1	5/31
10 and more	0	0/6	12.9	4/31
Had more clients per day abroad than in Georgia	50.0	3/6	71.0	22/31
Fee per client abroad (Georgian Lari)				
Mean		181.67 (6)		379.68 (31)
Median		175 (6)		300.0 (31)
Means of protection used abroad for HIV/STIs				
Condom	100	6/6	96.8	30/31
Contraceptives	0	0/6	9.7	3/31
No response	0	0/6	3.2	1/31
Access to HIV/STI testing services abroad				
Yes	50.0	3/6	16.1	5/31
Ever using HIV/STI testing services abroad	33.3	1/3	100	5/5
Access to ARV treatment service abroad	33.3	2/6	9.7	3/31

Appendix 2 - Questionnaire

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