



National Center for AIDS Prevention
Ministry of Health, Republic of Armenia

**INTEGRATED BIOLOGICAL-BEHAVIORAL
SURVEILLANCE SURVEY
AMONG PEOPLE WHO INJECT DRUGS,
FEMALE SEX WORKERS,
MEN WHO HAVE SEX WITH MEN
AND TRANSGENDER PERSONS**

2018



YEREVAN 2018

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ACRONYMS

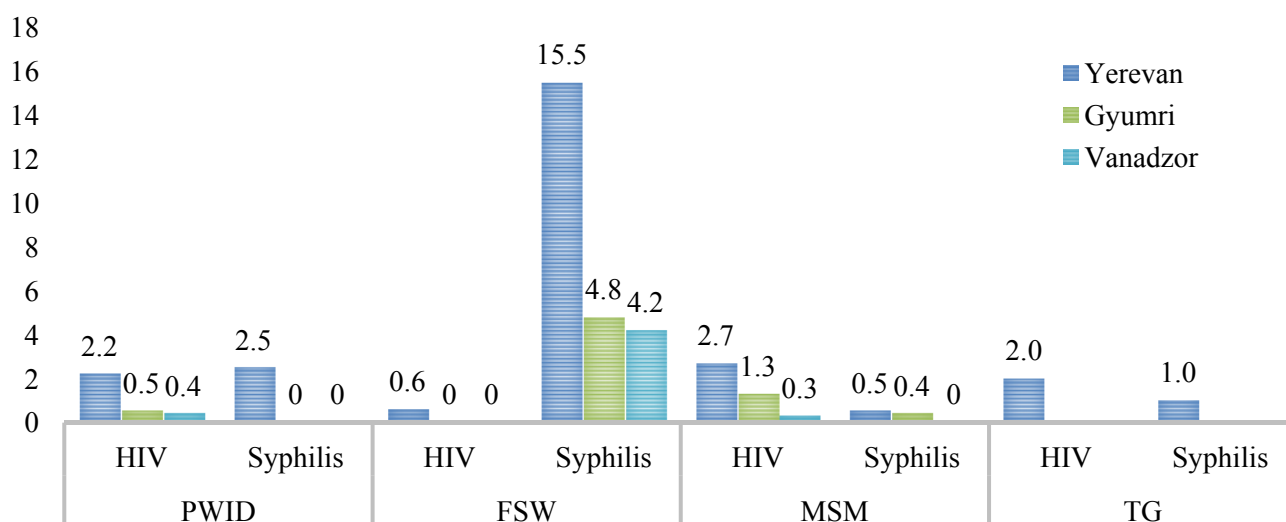
IBBS	Integrated Biological and Behavioral Surveillance surveys
CCM	Country Coordination Mechanism for HIV/AIDS, TB, and Malaria Programs
CT	Chlamydia trachomatis
GFATM	Global Fund to fight AIDS, TB and Malaria
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Human Immunodeficiency Virus
PWID	People who inject drugs
NCAP	National Center for AIDS Prevention
NG	Neisseria gonorrhoeae
NGO	Non-Governmental Organization
OST	Opiate Substitution Therapy
PLHIV	People living with HIV
RDS	Respondent Driven Sampling
SS-PSE	Successive sampling population size estimation
STI	Sexually Transmitted Infection
TG	Transgender persons

EXECUTIVE SUMMARY

This report provides the findings from the HIV Biological Behavioral Surveillance Surveys (IBBS) conducted in Yerevan, Gyumri and Vanadzor among people who inject drugs (PWID), female sex workers (FSW), men who have sex with men (MSM) and Transgender persons (TG) in 2018. In addition, this report presents new estimations of population sizes for all populations and a trend analysis of PWID, FSW and MSM data from 2012, 2014, 2016 and 2018 for several key indicators. In addition to measuring HIV prevalence in each of these populations, these surveys measured Hepatitis C virus (HCV) and syphilis among PWID, syphilis, Trichomoniasis, Neisseria gonorrhoeae (NG) and Chlamydia trachomatis (CT) among FSW and Hepatitis B virus (HBV) and syphilis among MSM and TG. In addition, participants completed questionnaires about their sexual risk behaviors, alcohol and drug use, HIV prevention program coverage, stigma discrimination and violence, HIV knowledge and testing, and STI signs and symptoms. These surveys used respondent driven sampling (RDS) to recruit 300 PWID, FSW and MSM in Yerevan and 150 PWID, FSW and MSM in Gyumri and Vanadzor. One hundred TG were recruited in Yerevan. All participants were screened for eligibility, completed informed consent, underwent an interview and provided a blood specimen for biological testing.

HIV prevalence was highest in Yerevan, compared to the other cities sampled, for PWID, FSW and MSM.

HIV and Syphilis prevalence among PWID, FSW, MSM and TG



No HIV was found among FSW in Gyumri and Vanadzor. However, FSW in all cities had the highest prevalence of Syphilis compared to all other populations. No Syphilis was found among PWID in Gyumri and Vanadzor and among MSM in Vanadzor. The majority of FSW (99.1%), MSM (78%) and TG (97.5%) reported using a condom at last sex (client for FSW and anal sex partner for MSM and TG). Only 40.9% of PWID reported using a condom at last sex with any partner. Findings found in this report provide useful data for program planning and resource allocation in Armenia.

BACKGROUND

HIV Epidemic in Armenia

In 2017, approximately 3400 people were living with HIV in Armenia(1). While HIV prevalence is low (0.2%) in the general population, prevalence is expected to be higher among the key populations at higher risk of HIV, including people who inject drugs (PWID), female sex workers (FSW), men who have sex with men (MSM) and transgender persons (TG). The primary mode of transmission is through heterosexual practices, with 79% of registered cases attributed to heterosexual contact in 2017, followed by injection drug use (11%), and male-to-male sex (4.8%)(1). While the HIV epidemic in Armenia is currently a low-level concentrated epidemic, there is still cause for concern due to the significant increases in the number of new HIV infections in recent years; 358 cases in 2017 from 228 cases in 2012(2).

Armenia has adopted a multi-sectoral programmatic approach to respond to the HIV epidemic in the country. The programmatic response is coordinated by the Country Coordination Mechanism for HIV/AIDS, TB, and Malaria Programs (CCM), which was established in 2002 and reformed in 2011. The CCM includes representation from the government, academic sector, local and international non-governmental organizations (NGOs), private sectors, faith-based organizations, UN agencies and bilateral development partners, and persons living with the diseases. Prevention efforts are focused on expanding programmatic coverage, and scaling up HIV prevention interventions among the key populations (1,2). HIV Biological and Behavioral Surveillance surveys (IBBS) were conducted among PWID, FSW, and MSM in 2010, 2012, 2014, 2016 and 2018. These surveys used respondent driven sampling (RDS), an effective method for recruiting hidden populations, to recruit these populations. The objectives of these surveys were to assess HIV prevalence, knowledge and testing, the prevalence of other infections, drug use and sexual risk behaviors, and program coverage.

In 2018, another IBBS was conducted in Yerevan (n=300), Gyumri (n=150) and Vanadzor (n=150) among PWID, FSW and MSM, also using RDS. Over the previous rounds of IBBS, the MSM surveys included Transgender persons (TG). Given that the risk behaviors of TG are different from MSM and that TG often form distinct social networks, Global Fund requested that a stand-alone TG survey be conducted using RDS and exclude them from MSM survey. Therefore, in addition to the surveys mentioned above, in 2018 an IBBS of TG (n=100) was conducted in Yerevan. This report provides the findings from the IBBS conducted in 2018. In addition, this report presents new estimations of population sizes for all populations and a trend analysis of PWID, FSW and MSM data from 2012, 2014, 2016 and 2018 for several key indicators.

RATIONALE AND OBJECTIVES

Specific objectives

The specific objectives of the IBBS were to measure HIV sero-prevalence and associated sexual and injecting risk behaviors among PWID, FSW, MSM in Yerevan, Gyumri, and Vanadzor and TG in Yerevan cities of Armenia. In addition, the IBBS estimated the sizes of these populations and measured:

- Program coverage, stigma, discrimination and violence; HIV knowledge and testing; and, STI signs and symptoms in all populations;
- Prevalence of Hepatitis C virus (HCV) and syphilis among PWID;
- Prevalence of syphilis, Trichomoniasis, Neisseria gonorrhoeae (NG) and Chlamydia trachomatis (CT) among FSW;
- Prevalence of Hepatitis B virus (HBV) and syphilis among MSM and TG.

Methods

Cross-sectional surveys of PWID, FSW, and MSM were conducted in Yerevan, Gyumri, and Vanadzor and of TG in Yerevan provinces of Armenia. Approximately 42.2% of the total population lives in these areas.

Respondent driven sampling (RDS)

This survey utilized standard methods of respondent driven sampling (RDS) to recruit PWID, FSW, MSM and TG (3). RDS is a variant of a chain referral sampling method, which was specifically designed to reach “hidden” populations(4,5). RDS recruitment starts with some purposefully selected members of the study population referred to as “seeds”. Emphasis is placed on selecting seeds with large social networks and who know people from diverse backgrounds. After enrolling and completing the survey process, each seed is given a specified number of uniquely coded coupons, with which to recruit their peers (i.e., eligible PWID, FSW, MSM, TG). Recruited peers who agree to enroll and complete the survey steps make up the first wave of participants and are also given uniquely coded coupons with which to recruit their peers. The use of this recruitment strategy produces successive waves of recruitment, ideally long recruitment chains of respondents, and continues until the desired sample size is reached.

Analysis of RDS data relies on each participant providing their social network size and active monitoring of who recruited whom using the information from the uniquely coded coupons. Use of the unique coupon codes eliminates the need to collect personal identifying information, such as names and addresses, maintaining the anonymity and confidentiality of survey respondents. When conducted and analyzed properly, RDS eliminates biases commonly associated with other chain referral sampling methods, which yields findings representative of the network from which the sample was taken.

Sample size calculation

The sample size was calculated with a 5% margin of error, 95% confidence, sample size of each group in Yerevan and a response distribution using average 60-70%. Using these inputs, the sample size n and margin of error E are given by:

$$\begin{aligned}x &= Z(c/100)2r(100-r) \\n &= N x / ((N-1)E^2 + x) \\E &= \text{Sqrt}[(N - n)x/n(N-1)]\end{aligned}$$

Where:

N is the population size;

r is the fraction of responses that you are interested in and

$Z(c/100)$ is the critical value for the confidence level c .

Based on these calculations the sample size for PWID, FSW and MSM in Yerevan is 300 each (Table 1). In Vanadzor and Gyumri, sample sizes were increased from 100 in 2016 to 150 in 2018. For TG, a sample size of 50 was originally selected based on some knowledge of the size of the TG population in Yerevan, however this was doubled in the hopes of obtaining at least 100.

Table 1. *The sample size of populations involved in the HIV biological and behavioural surveillance according to the cities*

SURVEYED POPULATIONS	YEREVAN CITY (N)	GYUMRI CITY (N)	VANADZOR CITY (N)
PWID	300	150	150
FSW	300	150	150
MSM	300	150	150
TG	100	--	--

Formative research

Formative research for the TG survey was conducted by the National Center for AIDS Prevention (NCAP) to assess the feasibility of sampling TG in Armenia. It was determined that the numbers of TG were too small to sample in Gyumri and Vanadzor. Meetings were held with different TG organizations in Yerevan including, Right Side, Colorful House, For Strong Future (3 TG community-based organizations) and New Generation (LGBT rights and human rights protection in healthcare), to explain the implementation of the survey and a mapping exercise and to discuss how each NGO representing the TG community could be involved. Members from the TG NGOs were hired as staff and encouraged to provide monitoring during data collection. One group (Right Side) which had irreconcilable differences with the other groups, decided not to be involved.

Mapping

A mapping exercise was conducted involving members of the TG community to identify and map hot spots and conduct enumeration of more visible TG in Yerevan. A meeting was held with

stakeholders to describe the methodology and to present the monitoring forms to be completed. Mapping was undertaken over the course of a week just prior to the start of the TG survey.

Data collection locations

PWID, FSW, and MSM were sampled from the three largest cities in Armenia: Yerevan (population: 1,077,600), Gyumri (population: 114, 000), and Vanadzor (population: 79, 000) (Figure 1). TG were only sampled from Yerevan.

Figure 1: Map of Armenia, identifying Yerevan, Gyumri, and Vanadzor



Yerevan, the capital city, is the largest city in Armenia. Yerevan is considered the country's cultural, administrative, and industrial center. Gyumri, situated north of the capital, is the second largest city in Armenia. Vanadzor is the third largest city in Armenia and the regional center of the Lori province located in the northern part of the country.

Recruitment process

Four seeds were selected to begin the recruitment process in Yerevan city and in Gyumri and Vanadzor cities, two seeds (initial recruits) were selected to begin RDS for all three key populations. For TG in Yerevan, two seeds were used. Seeds were given three uniquely coded coupons and encouraged to recruit diverse members of their social network. Upon arrival to a study site, respondents in possession of a valid recruitment coupon were screened for eligibility and underwent informed consent. All participants had to consent to both the biological and behavioral parts of the survey to enroll. Once someone was deemed eligible and enrolled, they were

interviewed by a trained interviewer, provided HIV pretest counseling, and underwent a venal blood draw for laboratory tests of HIV and other infections. Following the blood draw, each respondent was given a set number of coupons (no more than three) along with recruitment instructions on how to recruit eligible peers. To maintain respondents' confidentiality, unique identification codes were used to link behavioral and biological data and to track who recruited whom. Respondents received primary compensation of 4000 AMD for enrollment and completion of the survey and an additional secondary compensation (a maximum of three) (equivalent to about AMD 2000 for one recruited participant) for each recruit who enrolled and completed the survey.

Laboratory procedures

HIV, Syphilis, Hepatitis and other STI specimen collection

Samples for HIV surveillance were collected at the study sites. The samples were coded: all the data and completed forms were linked to coupons numbers.

Five (5) ml of venous blood was collected from each participant. Rapid HIV, HBV, HCV and syphilis tests were used at the surveillance site to detect presence of infections.

In case of primary HIV positive result given by rapid test on site, a positively tested participant was given referral card and escorted by the field work implementer to NCAP for second HIV test by ELISA 4th generation HIVAg-Ab test for validation of HIV rapid test result. In case of ELISA 4th generation HIVAg-Ab test positive result, confirmation test was made by NEW LAV-BLOT 1 will be used for diagnosis purposes. In case it was positive the patient was immediately linked to HIV care.

To control the quality of HIV laboratory testing National AIDS Center Laboratory conducted repeated testing of 10% of randomly selected negative tests.

In case of primary HBV positive result given by rapid test on site, second HBV testing was conducted with the use of ELISA HbsAg test-kits. In case of primary HCV positive result given by rapid test on site, second HCV testing was conducted with the use of Anti-HCV ELISA test-kits.

In case of primary Syphilis positive result given by rapid test on site, second Syphilis testing was conducted with the use of TPHA tests. Trichomoniasis, Gonorrhoea and Chlamydia testing was conducted with the use of PCR tests.

Storage and transportation

All blood specimens were stored on-site at 2-8°C and vaginal swabs were stored at 18-25 ° until transportation by NCAP. All specimens were transported to the NCAP laboratory within 24-48 hours according to methodological guidelines approved by the Ministry of Health of the Republic of Armenia and in compliance with the procedures for blood and fluid storage and transportation.

Test results procedures

Test results were linked using participants' unique RDS participant identification codes and a laboratory code number, and the sample collection date. Tests were processed daily to provide results as soon as possible. Participants received HIV rapid test results by a trained counselor on the

day of the survey. Those with positive test results were provided a referral card and escorted by a staff member to the NCAP for confirmatory HIV testing.

Data management and analysis

Data were double entered and then merged, cleaned, and coded. The NCAP was responsible for quality control and routinely monitored the data to identify incorrect coupon numbering, bottlenecks and convergence (seed dependency), and other biases. Any problems identified were reported to the appropriate site supervisor for immediate correction. Site specific population estimates and univariate analyses were conducted using the successive sampling estimator in RDS Analyst (www.hpmrg.org), a specialized software for network data. Recruitment graphics of each sample were created from NETDRAW in UCINET 2.15 for Windows (<http://analytictech.com/ucinet/download.htm>). A test of trends for key variables for surveys conducted in 2012, 2014, 2016 and 2018 (Appendix A). Significant differences were tested using the Cochran-Armitage trend test with a cut off a P value < 0.05.

Data presentation and interpretation

Data are displayed in either tables or figures (bar and pie charts). When possible, the category size (n), the adjusted estimates and 95% confidence intervals (CI) are provided. Statistically significant differences between or within the samples can be assessed by noting whether the confidence intervals overlap. Trend analyses of key variables are presented in Appendix A. Population size estimations are presented in Appendix B.

Ethical considerations

As per the protocol, respondents were informed that survey participation was confidential and voluntary and that they could withdraw at any time during the survey process. Following careful explanation of the survey, staff obtained consent from each eligible respondent. To receive compensation for participation, potential participants were informed that they had to agree to complete the behavioral interview as well as the biological testing. During consent, respondents were provided the name and telephone number of the local survey coordinator should they have any questions about the survey or if they believed they had been injured or mistreated as the result of their involvement in the survey. In addition, participants were informed of when and where they could receive their test results and that receiving test results was voluntary. Interviews, pre and post-test counselling, provision of test results and biological testing were conducted in private and confidential settings to maintain privacy and confidentiality. All survey data, including biological and behavioral information, were kept in a confidential manner. No names, addresses or other personal identifiers were collected from participants. Questionnaires and biological specimens and results were linked using each participant's unique coupon identification code and a laboratory code. The protocol and questionnaire were submitted for ethical review to and approved by the ethical committee of the National AIDS Centre of the Ministry of Health of the Republic of Armenia.

Limitations

Although the estimates presented here may be considered representative of the network of the population from which respondents were recruited, the network may be missing important sub-groups. For instance, few females were sampled in the survey of PWID. Females who inject drugs may not form strong network ties with other females who inject drugs and may have small, closed networks with males who inject drugs (i.e., boyfriends, husbands or close male partners who buy drugs for and use drugs with their female partners). Given that females make up such small proportions of the samples, the PWID survey should be interpreted as representing males only. In some cases, CIs are too wide for meaningful interpretation. Further, as analysis in RDS statistics depends on the integrity of recruitment chains to determine and adjust estimates for probability of recruitment, having many missing values may distort adjusted proportion estimates.

OVERVIEW OF STUDY FINDINGS

1. OVERVIEW: PEOPLE WHO INJECT DRUGS (PWID)

Three hundred (including four seeds) PWID in Yerevan, 150 (including two seeds) in Gyumri, and 150 (including two seeds) in Vanadzor were recruited into the IBBS. The maximum number of waves reached in the recruitment chains of Yerevan was 9 (Figure 1.1) and in Gyumri (Figure 1.2), and in Vanadzor was 11 (Figure 1.3). Seeds are at the top of each of the chains.

Figure 1.1. Recruitment graph of the PWID sample ($n=300$), with four recruitment chains, Yerevan, Armenia, 2018

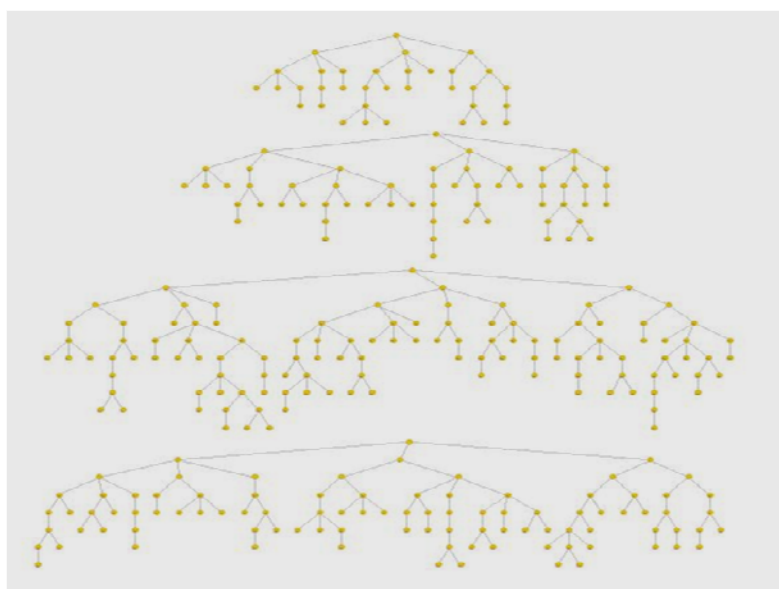


Figure 1.2. Recruitment graph of the PWID sample ($n=150$), with two recruitment chains, Gyumri, Armenia, 2018

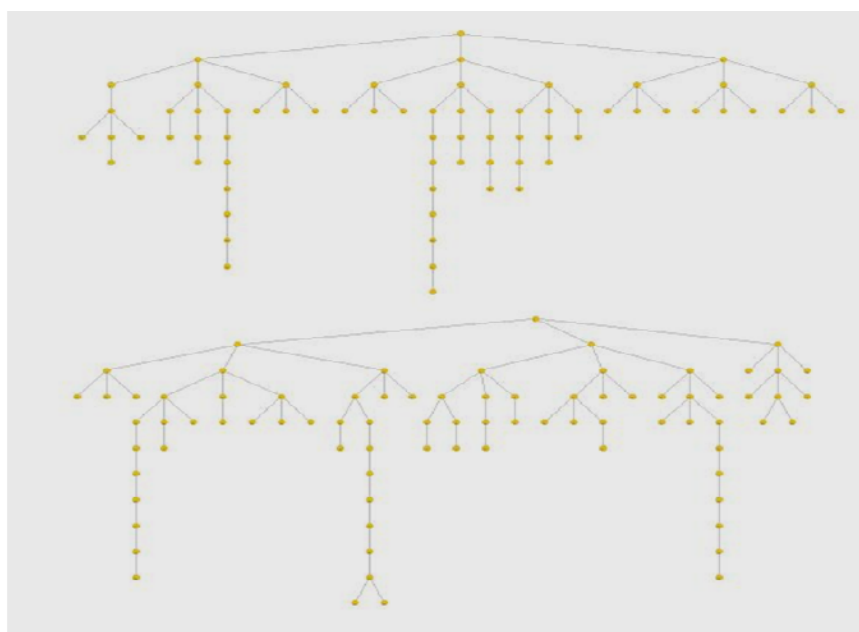
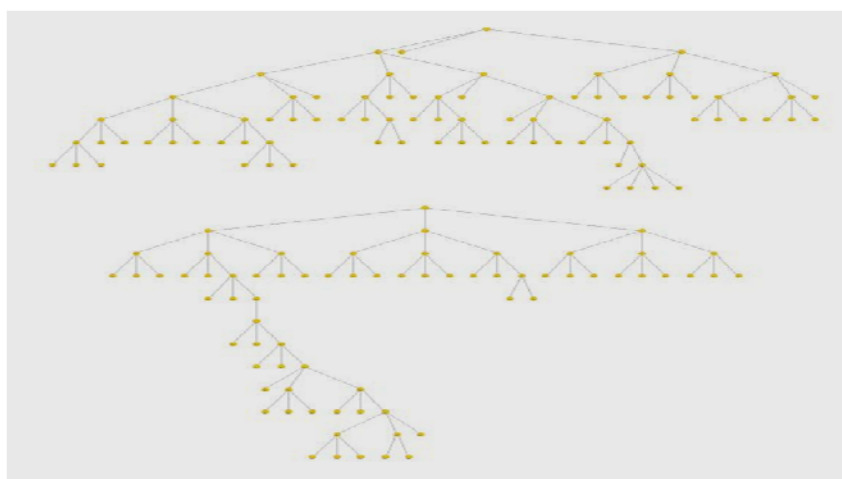


Figure 1.3. Recruitment graph of the PWID sample (n=150), with two recruitment chains, Vanadzor, Armenia, 2018



Socio demographic characteristics

Age, education and employment

The majority of PWID in all three cities were 25 years and above, male (98% or higher), and born in Armenia (95% and higher) (Table 1.1). Given that the proportion of the sample comprised so few females, these findings should be interpreted to represent only male PWID. Median ages were 44 (range: 18 to 68) in Yerevan, 47 (range: 19 to 68) in Gyumri, and 48.2 (range: 28 to 59) in Vanadzor. Almost all PWID had some education, among which the majority reported having only a primary education. Most in Gyumri had secondary education.

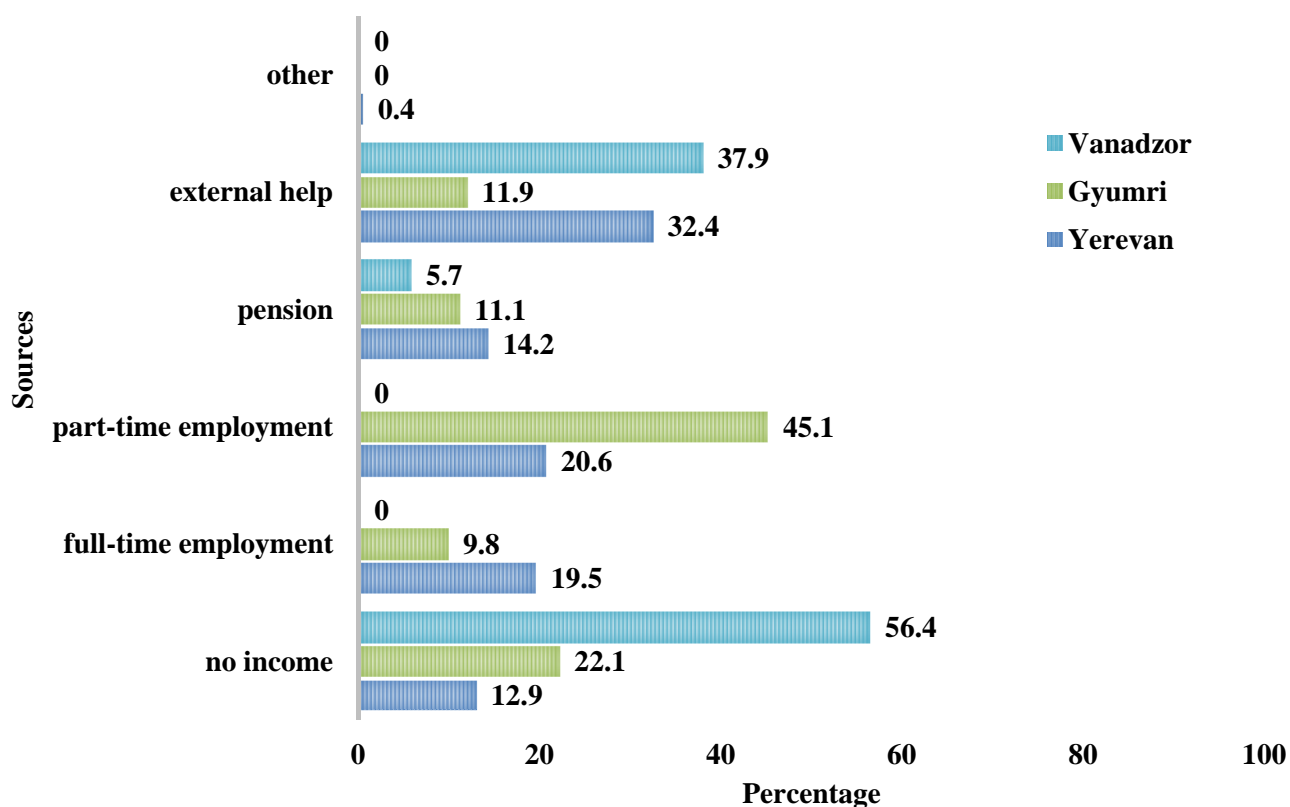
Table 1.1. Age, sex, country of birth and education among PWID, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AGE						
<24	6	1.8 (0.3, 3.3)	8	6.0 (26.5, 9.4)	0	--
25 TO 34	49	13.7 (9.2, 18.3)	45	34.5 (28.3, 40.7)	10	6.6 (3.7, 9.4)
35 TO 44	107	35.5 (28.8, 42.2)	16	10.7 (6.6, 14.7)	52	40.7 (32.4, 49.4)
45+	138	49.0 (41.5, 56.0)	81	48.8 (42.2, 55.4)	79	52.7 (44.1, 60.9)
AGE GROUP						
<25	6	1.8 (0.3, 3.3)	8	6.0 (2.5, 9.6)	0	--
≥25	294	98.2 (96.7, 99.8)	142	94.0 (90.4, 97.5)	141	100
SEX AT BIRTH						
MALE	291	97.8 (96.0, 99.5)	150	100	150	100
FEMALE	9	2.2 (0.4, 4.0)	0	--	0	--
COUNTRY/NATION OF BIRTH						
REPUBLIC OF ARMENIA	295	98.4 (97.2, 99.7)	143	95.0 (92.1, 97.9)	149	100
RUSSIAN FEDERATION	2	0.6 (0.0, 1.4)	2	1.2 (0.0, 2.7)	0	--
REPUBLIC OF GEORGIA	2	0.5 (0.0, 1.0)	4	3.1 (0.5, 5.6)	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
OTHER	1	0.4 (0.0, 1.3)	1	0.6 (0.0, 1.4)	0	--
ANY EDUCATION	299	99.5 (98.7, 100)	150	100	150	100
THE HIGHEST LEVEL OF SCHOOL COMPLETED						
PRIMARY	156	50.3 (43.0, 57.7)	1	0.6 (0.0, 1.6)	107	72.7 (65.6, 79.6)
SECONDARY	48	14.2 (9.3, 19.1)	88	60.0 (51.8, 68.2)	10	7.3 (2.9, 11.7)
TECHNICAL	55	20.4 (14.0, 26.8)	39	25.3 (18.8, 31.8)	13	7.6 (4.1, 11.1)
HIGHER	40	15.1 (9.2, 20.8)	22	14.1 (9.3, 18.8)	20	12.3 (7.7, 12.3)

Between 13% in Yerevan and 56% in Vanadzor reported not having any source of income, whereas in Gyumri, approximately 22% of PWID reported not having any income. Among those who reported having a source of income, the majority reported their income coming from employment, pension, or external help (Figure 1.4).

Figure 1.4. Sources of income among PWID, Armenia, 2018



Marital status and living situation

Most PWID in Yerevan (56%) and Vanadzor (63%) and only 46% in Gyumri reported being married and most reported living with their sexual partner (Table 1.2).

Table 1.2. *Marital status and living situation among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
CURRENT MARITAL STATUS						
SINGLE	50	15.8 (10.6, 20.9)	36	27.7 (21.6, 33.8)	11	10.3 (3.4, 17.3)
MARRIED	172	56.4 (48.8, 63.9)	71	45.9 (38.2, 53.6)	100	63.1 (54.4, 71.6)
DIVORCED	67	24.7 (17.7, 31.6)	31	19.0 (13.1, 24.9)	37	25.4 (17.7, 33.0)
CIVIL MARRIAGE	6	1.6 (0.2, 3.1)	9	58.1 (2.9, 8.7)	2	1.2 (0.0, 2.4)
WIDOWED	5	1.5 (0.1, 2.9)	3	1.6 (0.2, 2.9)	0	--
LIVES WITH SEXUAL PARTNER						
	226	76.2 (69.5, 82.8)	108	72.6 (65.0, 80.2)	112	73.8 (67.0, 80.3)

Mobility

The majority of PWID in all cities reported not being away from home for more than one month in the last year (Table 1.3). Among those few who reported having spent time away from home, the highest percentages reported spending their time in Russia. Among PWID who spent time away from home, 49% in Yerevan, 37% in Gyumri and 69% in Vanadzor reported having sexual intercourse without a condom and 59% in Yerevan, 67% in Gyumri and 61% in Vanadzor reported injecting drugs with used needles while away. In Yerevan 39%, in Gyumri 25% and in Vanadzor 23% of the respondents who reported spending time away from home between three months and one year, reported doing so for the purposes of labor.

Table 1.3. *Mobility of PWID in last year, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AWAY FROM HOME FOR MORE THAN ONE MONTH						
	64	22.3 (16.5, 28.1)	28	19.0 (13.8, 24.2)	9	7.7 (2.1, 13.2)
COUNTRY WHERE RESPONDENT WAS AWAY FROM HOME FOR MORE THAN ONE MONTH						
ARMENIA/OTHER REGION	9	12.0 (3.0, 20.7)	12	44.8^	3	18.7 (0.0, 54.3)
RUSSIA	43	66.0 (52.5, 79.3)	12	41.2^	6	81.3 (45.7, 100)
UKRAINE	0	--	3	13.3^	0	--
OTHER	12	22.1 (9.9, 34.5)	0	--	0	--
HAD SEX WITHOUT CONDOM WHILE AWAY FROM HOME FOR MORE THAN ONE MONTH						
	28	49.5 (34.6, 64.8)	10	37.0^	4	68.6 (33.9, 100)
INJECTED DRUGS WITH USED NEEDLE WHILE AWAY FROM HOME FOR MORE THAN ONE MONTH						
	36	58.8 (45.1, 72.6)	19	67.4 (54.3, 80.5)	5	60.7 (26.2, 98.5)
ABROAD FOR THREE MONTH OR LESS THAN ONE YEAR FOR LABOR						
	27	39.4 (26.5, 52.1)	8	24.6 (12.3, 35.2)	3	22.7 (3.0, 38.0)

^too few values to generate confidence bounds.

Sexual behavior

General sexual history and behavior

All PWID in the surveyed areas reported ever having sexual intercourse, with the majority reporting their first sexual intercourse occurring when they were between the ages of 16 to 19 years (Table 1.4). The median age at first sex was 16 (range: 12 to 25) in Yerevan, 19 (range: 16 to 23) in Gyumri, and 17 (range: 13 to 23) in Vanadzor. Most PWID reported having two to five sexual partners within the past year. More than half of PWID reported having sexual intercourse in the past month, among which 41% in Yerevan, 72% in Gyumri and 29% in Vanadzor used a condom during sex in the past month.

Table 1.4. *General sexual history and behavior among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AGE AT FIRST SEXUAL INTERCOURSE						
≤15	96	34.3 (27.1, 41.6)	0	--	8	4.7 (2.0, 7.4)
16 TO 19	163	53.8 (46.5, 61.0)	103	68.7 (62.6, 75.0)	130	84.5 (78.4, 90.7)
≥20	40	11.9 (7.8, 16.0)	47	31.3 (25.0, 37.4)	12	10.8 (5.3, 16.2)
NUMBER OF SEXUAL PARTNERS IN PAST YEAR						
1	82	32.4 (25.2, 39.5)	20	18.0 (6.9, 14.7)	47	28.6 (21.7, 35.4)
2 TO 5	154	53.9 (46.3, 61.4)	74	49.2 (42.0, 56.5)	92	60.9 (52.7, 69.5)
6+	50	13.7 (9.2, 18.1)	55	40.0 (32.5, 47.3)	10	10.5 (3.5, 17.2)
SEXUAL INTERCOURSE IN PAST MONTH						
	234	77.6 (71.4, 83.9)	139	93.5 (90.5, 96.5)	98	58.0 (48.9, 67.4)
USED CONDOMS HAVING SEX IN PAST MONTH						
	95	40.9 (32.5, 49.3)	95	72.3 (65.9, 78.9)	25	29.1 (16.8, 42.4)

Sexual behavior and types of partners

Regular partners

Most PWID reported having regular partners. Among those, PWID reported having a median number of one (a maximum of six in Yerevan and Gyumri and two in Vanadzor) regular sex partners¹, and a median of 94 sex acts with regular partners in Yerevan (maximum of 360), 55 in Gyumri (maximum of 150) and 25 in Vanadzor (maximum of 150) in the past year (Table 1.5). The highest percentage of PWID, who reported never using condoms with regular sexual partners, was among PWID living in Vanadzor (69%), followed by Yerevan (59%) and Gyumri (45%).

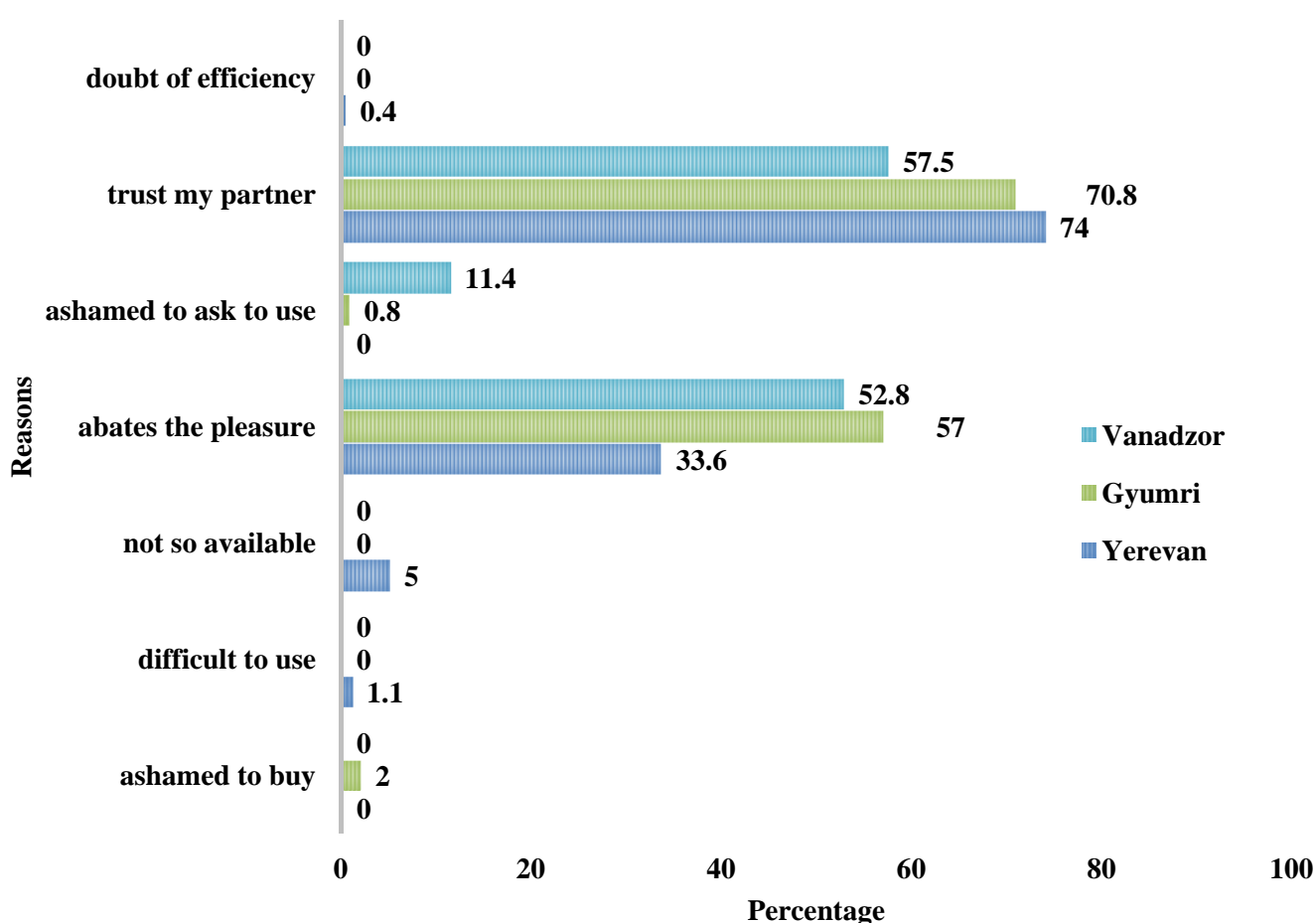
¹ Regular partners are defined as partners who are husbands or wives, whether from a civil or registered marriage, or someone who is considered a boyfriend or girlfriend with whom the participant has had regular sexual intercourse over a period of at least three months.

Table 1.5. *Sexual behavior with regular sex partners in past year among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
REGULAR SEX PARTNER						
	256	86.2 (81.3, 91.0)	129	77.0 (69.8, 84.2)	117	74.9 (67.5, 82.2)
FREQUENCY OF CONDOM USE WITH REGULAR PARTNERS						
ALWAYS	64	23.5 (17.1, 29.9)	21	19.3 (11.7, 27.0)	23	23.6 (15.8, 32.1)
SOMETIMES	47	17.0 (11.6, 22.4)	42	35.3 (27.0, 43.7)	5	7.5 (0.0, 16.1)
NEVER	145	59.5 (52.3, 66.7)	55	45.4 (37.5, 53.1)	52	68.8 (56.9, 79.3)

Among PWID using condoms inconsistently, the highest percentage in Yerevan, Gyumri and Vanadzor reported that it was because they “trust their partner” (Figure 1.5).

Figure 1.5. *Reasons for not always using condoms during sex with all regular partners among PWID, Armenia, 2018*



Non-regular partners

Just over half of PWID in Yerevan, 83% in Gyumri and 64% in Vanadzor reported having non-regular partners, among which the majority reported using a condom during their last sexual intercourse. PWID reported having a median number of 1 (Yerevan, Vanadzor) to 3 (a maximum of 19 in Yerevan, 17 in Gyumri and 9 in Vanadzor) non-regular sexual partner, and a median of 4 sex acts with non-regular partners in Yerevan (maximum of 110), 32 in Gyumri (maximum of 200) and 3 in Vanadzor (maximum of 20) in the past year (Table I.6). The highest percentage of PWID who reported never using condoms with regular sexual partners, was among PWID living in Vanadzor

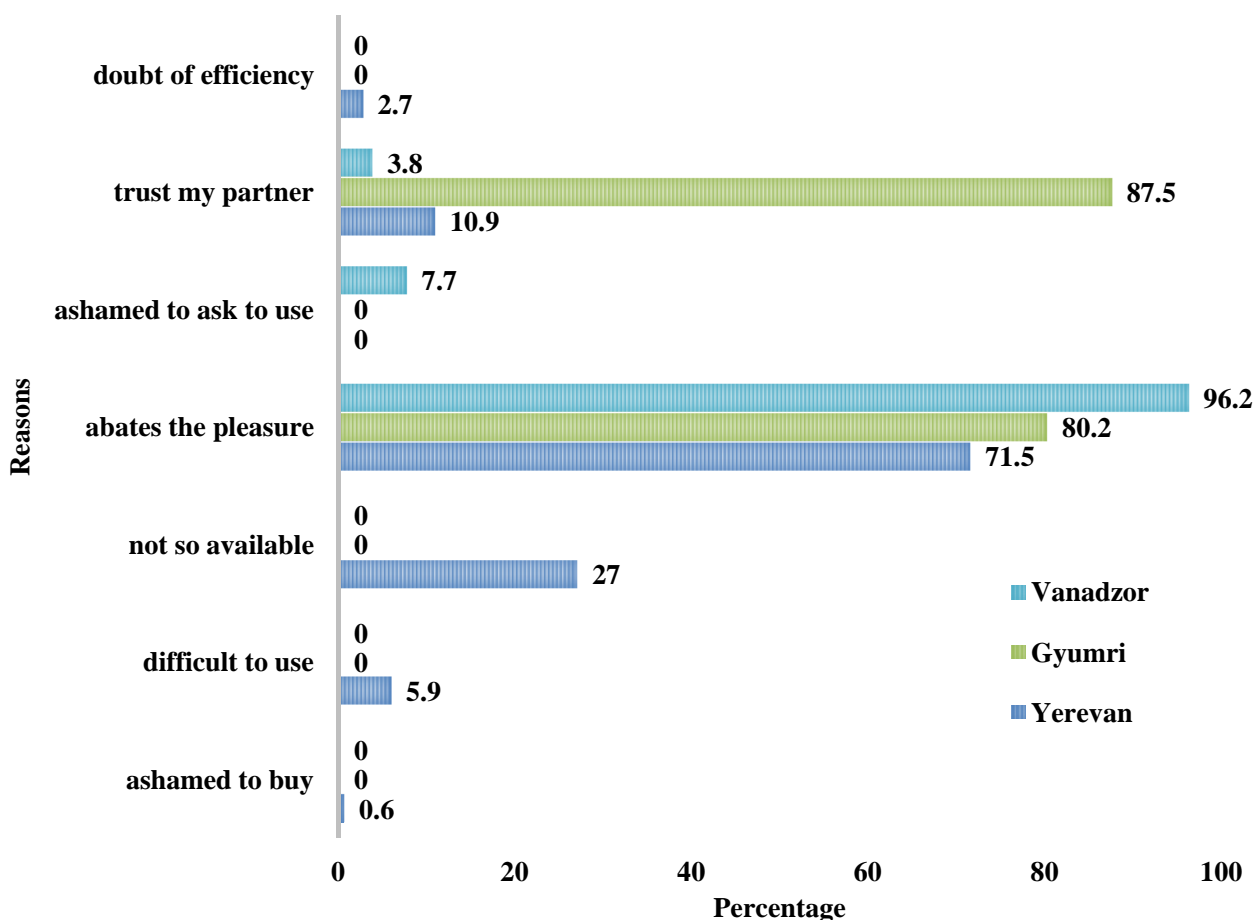
(34%), followed by Yerevan (22%) and Gyumri (0.8%). The majority of PWID in Yerevan (60%), Gyumri (85%) and Vanadzor (61%) reported always using condoms during sex with all non-regular partners in the past year (Table 1.6).

Table 1.6. *Sexual behaviors with non-regular partners in past year among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
NON-REGULAR SEX PARTNER						
	182	56.5 (49.4, 63.6)	120	83.2 (77.7, 88.8)	91	64.5 (57.6, 71.4)
USED CONDOM AT LAST SEX WITH NON-REGULAR PARTNER						
	126	65.5 (55.9, 74.8)	119	99.2 (97.9, 100)	55	62.5 (50.5, 75.0)
FREQUENCY OF CONDOM USE DURING SEXUAL INTERCOURSE WITH ALL NON-REGULAR PARTNERS						
ALWAYS	114	60.3 (52.1, 68.4)	103	85.1 (77.3, 92.9)		61.0 (51.2, 71.7)
SOMETIMES	32	17.3 (10.4, 24.2)	16	14.1 (6.9, 21.4)		4.9 (0.4, 9.8)
NEVER	36	22.4 (14.5, 30.5)	1	0.8 (0.0, 2.1)		34.1 (23.1, 43.8)

Among PWID not always using condom during sex with non-regular partners, the majority in Yerevan and Vanadzor reported their reason being that it abates pleasure (Figure 1.6), whereas in Gyumri it was trust to partner.

Figure 1.6. *Reasons for not always using condoms during sex with non-regular partners among PWID, Armenia, 2018*



Commercial sex

Forty nine percent of PWID in Yerevan, 39% in Gyumri and 65% in Vanadzor reported having ever paid for sex (Table 1.7). Among PWID who reported ever having paid for sex, more than 90% reported use of condoms during last paid sex experience. Sixty one percent (2/3) of female PWID in Yerevan reported having ever received money or goods in exchange for sex.

Table 1.7. *Sexual behaviors with commercial sex partners among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER PAID FOR SEX						
	143	48.6 (41.3, 55.9)	56	39.2 (32.0, 46.4)	112	65.5 (56.6, 74.4)
USED CONDOM DURING LAST PAID SEX						
	125	91.0 (86.8, 95.2)	53	94.3 (90.0, 98.5)	102	91.9 (88.3, 95.8)
RECEIVED MONEY OR GOODS FOR SEX, AMONG FEMALES						
	6	60.9 (34.1, 87.1)	-	--	0	--

Substance use

Alcohol use

Few PWID reported never consuming alcoholic drinks. The majority in Yerevan reported drinking alcohol monthly or less, whereas in Gyumri and Vanadzor most of PWID reported drinking 2-4 times a month (Table 1.8). Of those who reported drinking alcohol, PWID in Yerevan reported drinking a median of 5 (maximum of 30) drinks, in Gyumri a median of 4 (maximum of 6) and in Vanadzor a median of 5 (maximum of 20) in a typical day. The largest category percentage for those who drink six or more alcoholic drinks on one occasion was “less than monthly” in Yerevan and Vanadzor and “monthly” in Gyumri.

Table 1.8. *Alcohol use among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
FREQUENCY OF CONSUMING ALCOHOLIC DRINKS						
NEVER	55	18.7 (13.0, 24.3)	3	2.2 (0.0, 4.5)	6	5.7 (0.4, 11.0)
MONTHLY OR LESS	86	28.2 (21.3, 35.0)	34	23.1 (16.5, 29.7)	25	19.0 (12.5, 25.3)
2-4 TIMES/MONTH	57	19.6 (14.1, 25.2)	50	31.1 (24.7, 37.6)	75	46.4 (38.3, 54.5)
2-3 TIMES A WEEK	48	17.2 (11.9, 22.5)	43	29.3 (22.7, 36.0)	38	24.9 (18.5, 31.6)
4 AND MORE TIMES A WEEK	54	16.3 (11.0, 21.6)	20	14.3 (8.9, 19.6)	6	3.8 (1.7, 6.0)
FREQUENCY OF ALCOHOLIC DRINKS (SIX +) CONSUMED ON ONE OCCASION						
NEVER	26	11.4 (6.3, 16.5)	9	6.8 (0.0, 10.8)	2	1.9 (0, 4.4)
LESS THAN MONTHLY	91	35.5 (27.5, 43.0)	52	35.4 (28.9, 41.8)	47	40.0 (31.9, 48.7)
MONTHLY	32	13.4 (8.1, 18.8)	73	50.3 (43.7, 57.0)	45	27.8 (20.8, 34.5)
WEEKLY	33	14.1 (8.5, 19.8)	12	6.5 (3.2, 9.8)	28	16.6 (12.2, 20.8)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
DAILY OR ALMOST DAILY	63	25.7 (18.1, 33.4)	1	0.9 (0.0, 2.4)	21	13.7 (8.5, 18.7)

General drug use

The median age of first drug consumption among PWID was 20 years (range: 7 to 61) in Yerevan, 23 years (range: 17 to 46) in Gyumri, and 18 years (range: 14 to 29) in Vanadzor. Most of the PWID in all three cities reported using marijuana, 46% reported using Heroin in Yerevan and 19% used Chernyashka, an opiate, as the type of drug they first used (Table 1.9). 99% of PWID in Gyumri and 92% in Vanadzor reported marijuana being the first drug they used. In Gyumri, 91% reported using marijuana, 59% used analgesics and 97% used desomorphine (benzine) in the past year. Among PWID in Vanadzor, almost 90% reported using marijuana and desomorphine, 60% used chernyashka, and 21% used methadone in the past year. Most PWID reported first using drugs in Armenia.

Table 1.9. *General drug use among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
TYPE OF FIRST DRUG USE						
MARIJUANA	171	63.3 (56.9, 69.7)	148	99.5 (98.8, 100)	147	92.2 (84.6, 100)
TRANQUILIZERS/ SEDATIVE ²	2	0.6 (0.0, 1.7)	1	0.5 (0.0, 1.2)	0	--
ECSTASY	0	--	0	--	0	--
VAPORIZING SUBSTANCES (GLUE, ACETONE)	0	--	0	--	0	--
AMPHETAMINE	2	1.6 (0.0, 3.9)	0	--	0	--
COAXIL	0	--	0	--	1	2.6 (0, 6.0)
HEROINE	21	46.3 (2.4, 6.8)	0	--	1	2.6 (0, 7.5)
METHADONE	1	0.3 (0.0, 0.8)	0	--	0	--
COCAINE	1	0.1 (0.0, 0.3)	0	--	0	--
CHERNYASHKA	64	18.7 (13.3, 24.0)	0	--	1	2.6 (0, 7.8)
DESOMORPHINE (BENZINE)	7	2.1 (0.5, 3.7)	0	--	0	--
ANALGESICS	1	0.4 (0.0, 1.4)	0	--	0	--
MORPHINE	12	3.4 (1.2, 5.6)	0	--	0	--
OPIUM	5	2.4 (0.3, 4.5)	0	--	0	--
PROMEDOLE	3	1.8 (0.0, 3.9)	0	--	0	--
SUBUTEX	3	0.5 (0.0, 1.1)	0	--	0	--
TYPE OF DRUGS USED IN PAST YEAR						
MARIJUANA	44	16.2 (10.8, 21.5)	136	90.6 (86.4, 94.8)	144	89.8 (82.7, 97.6)
TRANQUILIZERS/ SEDATIVE ²	15	4.4 (1.8, 7.1)	55	37.9 (31.1, 44.7)	0	--
ECSTASY	0	--	0	--	0	--
VAPORIZING SUBSTANCES (GLUE, ACETONE)	0	--	0	--	11	10.2 (3.8, 16.8)
AMPHETAMINES	6	1.3 (0.1, 2.5)	0	--	0	--
COAXIL	2	0.1 (0.0, 0.2)	3	2.0 (0.1, 4.0)	4	4.2 (0, 9.1)

² Including: diazepam, Valium, lorazepam, seduxen, temazepam, and oxazepam.

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HEROINE	46	15.3 (10.3, 20.3)	3	2.2 (0.1, 4.4)	2	1.5 (0, 3.1)
METHADONE	19	5.2 (2.5, 7.9)	0	--	26	20.9 (13.3, 28.3)
COCAINE	14	3.0 (1.2, 4.8)	1	0.9 (0.0, 2.2)	0	--
CHERNYASHKA	145	45.5 (38.7, 52.4)	21	14.6 (8.6, 20.6)	90	60.4 (53.2, 68.0)
DESOMORPHINE (BENZINE)	150	49.1 (41.8, 56.3)	146	96.6 (94.5, 98.8)	140	90.0 (83.3, 96.4)
ANALGESICS	8	2.8 (0.8, 4.8)	88	59.0 (50.7, 67.3)	20	10.9 (6.4, 15.5)
SUBUTEX	43	15.8 (9.8, 21.7)	0	--	0	--
COUNTRY WHERE RESPONDENT FIRST USED DRUGS						
ARMENIA/OTHER REGION	229	74.5 (68.2, 80.9)	113	76.9 (71.1, 82.8)	68	44.1 (36.3, 52.0)
RUSSIA	51	20.4 (14.4, 26.3)	25	16.0 (10.9, 21.2)	77	53.2 (45.3, 60.9)
UKRAINE	3	1.4 (0.0, 3.3)	7	4.3 (1.6, 7.0)	5	2.8 (1.2, 4.4)
OTHER	17	3.7 (1.8, 5.6)	4	2.7 (0.3, 5.2)		--

Injection drug use

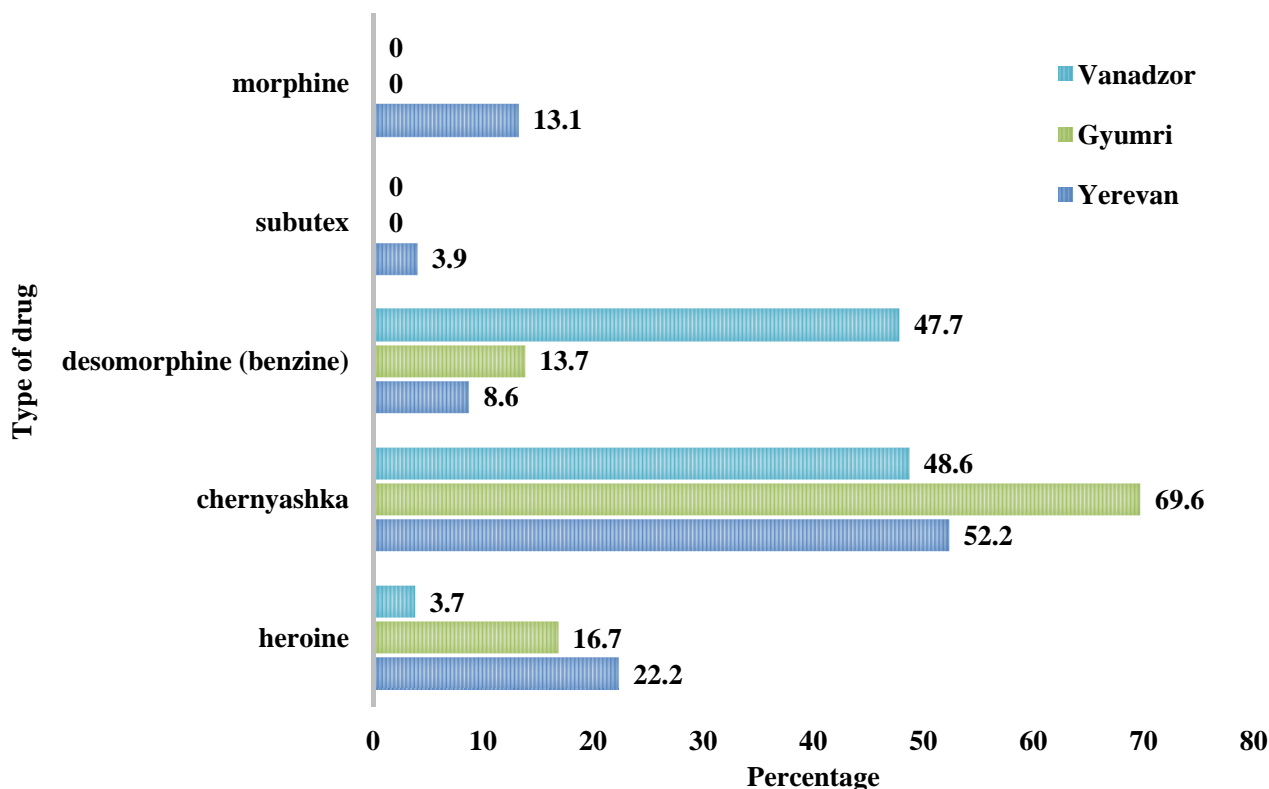
The median age of first injection drug use was 22.5 years (range: 14 to 61) in Yerevan, 35.5 years (range: 18 to 51) in Gyumri, and 18 years (range: 14 to 29) in Vanadzor. Most PWID in Yerevan and Gyumri reported being in Armenia the first time they injected drugs, whereas in Vanadzor most PWID mentioned being in Russia (Table 1.10). Compared to Heroin, Chernyashka and Methadone, Desomorphine (Benzine) was the drug most often used by PWID in all three cities in the past three months. 87% in Yerevan, all in Gyumri and 96% in Vanadzor reported injecting drugs in the past month, during which PWID injected a median of 10 times (maximum of 150) in Yerevan, 2 times (maximum of 4) in Gyumri and 7 times (maximum of 30) in Vanadzor.

Table 1.10. *Injection drug use among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
COUNTRY OF FIRST INJECTION DRUG USE						
ARMENIA	210	72.5 (66.3, 78.8)	97	66.1 (59.7, 72.6)	68	44.1 (36.6, 51.7)
RUSSIA	60	20.2 (14.4, 25.8)	40	25.8 (19.8, 31.7)	77	53.2 (45.6, 60.6)
UKRAINE	11	3.2 (1.1, 5.2)	13	8.1 (4.3, 11.8)	5	2.7 (1.0, 4.5)
OTHER	18	4.1 (1.9, 6.4)	0	--	0	--
TYPES OF DRUGS INJECTED IN PAST 3 MONTH						
HEROINE	22	7.9 (3.2, 12.6)	0	--	0	--
CHERNYASHKA	119	37.1 (30.0, 44.1)	15	11.0 (6.3, 15.7)	49	36.0 (28.1, 43.8)
DESOMORPHINE (BENZENE)	159	51.3 (44.4, 58.2)	149	99.1 (98.9, 99.3)	140	93.5 (88.2, 99.0)
SUBUTEX	37	13.7 (7.5, 20.0)	0	--	0	--
CRYSTAL	6	1.8 (0.3, 3.2)	0	--	0	--
INJECTED DRUGS IN PAST MONTH						
	266	87.5 (82.8, 92.2)	150	100	147	95.7 (91.0, 100)

The majority of PWID in all three survey cities reported using chernyashka the first time they injected (Figure I.7).

Figure 1.7. Type of first-time injected drug among PWID, Armenia, 2018



Injection drug use behavior

Among PWID who reported injecting drugs in the past month, 60% in Yerevan, 50% in Gyumri, and 7% in Vanadzor reported sharing injection paraphernalia (Table 1.11). The majority of PWID reported sharing injection paraphernalia with between two and five others in a typical month, representing a median number of 2 other people (maximum of 10) in Yerevan, 3 (maximum of 5) in Gyumri and 3 (maximum of 14) in Vanadzor. 44% in Yerevan, 89% in Vanadzor and 39% in Gyumri reported sharing injection paraphernalia between 2 and 5 times in a month. Eighty eight percent and higher reported always using new disposable syringes every time they injected drugs. Most respondents in Yerevan and all in Vanadzor reported using sterile injecting equipment during their last injection, whereas in Gyumri only 35% did so. Among those who sometimes used new disposable syringes every time injecting drugs in Yerevan, 76% used a sterile needle the last time they injected drugs and 48% “occasionally” sterilized their needle before using, among which about half reported only “sterilizing” their needles by boiling them.

Table 1.11. Injection Drug Use among PWID, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
SHARED INJECTION PARAPHERNALIA IN LAST MONTH						
	183	60.2 (52.3, 67.9)	70	49.8 (42.8, 56.8)	4	7.0 (0, 14.2)
FREQUENCY OF PEOPLE WITH WHOM SHARED INJECTION PARAPHERNALIA IN TYPICAL MONTH						
1	6	3.0 (0.01, 6.0)	7	5.1 (2.0, 8.1)	3	2.5 (0.1, 5.3)
2 TO 5	183	94.5 (90.8, 98.3)	140	94.9 (91.9, 98.0)	137	93.3 (89.1, 97.2)
6+	7	2.4 (0.1, 4.7)	0	--	6	4.2 (1.6, 6.9)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
FREQUENCY OF TIMES OF SHARING INJECTION PARAPHERNALIA IN A MONTH						
1	15	8.4 (4.2, 12.6)	33	25.6 (19.4, 31.9)	6	5.0 (1.5, 8.7)
2 TO 5	82	44.5 (35.5, 53.6)	55	39.4 (31.0, 47.7)	129	89.2 (85.2, 93.2)
6+	99	47.1 (37.8, 56.2)	45	35.0 (27.5, 42.5)	11	5.8 (3.4, 8.0)
FREQUENCY OF USING NEW DISPOSABLE SYRINGES EVERY TIME INJECTING DRUGS						
ALWAYS	231	88.0 (83.2, 92.8)	140	95.0 (92.5, 97.6)	147	100
SOMETIMES	38	12.0 (7.2, 16.8)	9	5.0 (2.4, 7.5)	0	--
NEVER	0	--	0	--	0	--
USED STERILE INJECTING EQUIPMENT DURING LAST INJECTION						
	232	89.5 (85.1, 93.9)	143	95.9 (93.3, 98.4)	147	100
USED STERILE NEEDLE LAST TIME INJECTING DRUGS						
	260	86.0 (81.0, 91.0)	148	99.4 (98.3, 100)	147	100
NUMBER OF TIMES STERILIZED NEEDLE BEFORE USAGE						
ALWAYS	15	28.6 (15.0, 42.6)	5	61.6 (41.0, 87.6)	-	--
OCCASIONALLY	36	48.0 (30.4, 64.8)	5	38.4 (12.4, 59.0)	-	--
NEVER	10	23.4 (8.5, 38.6)	0	--	-	--
HOW NEEDLES WERE STERILIZED						
WASHED WITH WATER	14	33.3 (0.0, 70.7)	0	--	-	--
BOILING	26	49.0 (32.0, 66.2)	9	100	-	--
ALCOHOL OR IODINE	9	15.8 (0.0, 51.9)	0	--	-	--
OTHER	1	1.9 (1.4, 2.3)	0	--	-	--

Treatment and problems associated with injection drug use

High percentages in Yerevan (79%) and Vanadzor (99%) of PWID reported ever wanting to be treated for injecting drug use (Table 1.12). Only 48% of PWID in Gyumri reported ever wanting to be treated. The highest percentage of PWID who reported seeking treatment from a doctor for drug addiction was in Vanadzor (94%). Few PWID in Yerevan (15%) and Gyumri (29%) reported seeking treatment from a doctor for drug addiction. Among PWID who sought treatment for drug addiction, more than 90% in both Yerevan and Vanadzor and all in Gyumri reported their main reason as wanting “to stop using”. Just over half of those who sought treatment in Yerevan, reported seeking anonymous (rather than registered) treatment. All in Gyumri and 71% in Vanadzor received registered treatment. Twenty two percent of PWID in Vanadzor sought methadone substitution therapy in the past year, of which 73% received it. Three percent in Gyumri and 7% (among which, all in Gyumri and 58% in Yerevan, received it) in Yerevan sought methadone substitution therapy in the past year. Among PWID who did not undergo methadone substitution therapy in the past year, majority in Yerevan (45%), Gyumri (62%) and Vanadzor (81%) reported their reason being that they did not believe that methadone substitution therapy was effective in treating drug addiction. Most PWID in all cities reported never having lost consciousness when using drugs and not having skin problems in area of drug injection in the past month.

Table 1.12. *Treatment and problems associated with injecting drugs among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER WANTED TREATMENT FOR INJECTING DRUG USE						
	235	78.8 (72.5-84.5)	73	47.6 (41.0-54.2)	149	98.6 (96.6, 100)
TURNED TO THE DOCTOR TO RECEIVE TREATMENT OF DRUG ADDICTION DURING LAST YEAR						
	41	15.2 (9.7-20.7)	20	28.9 (14.5-43.7)	145	93.6 (87.9, 99.3)
REASON OF SEEKING TREATMENT						
TO STOP USING	40	99.3 (98.6, 100)	20	100	144	99.6 (99.2, 100)
BECAUSE OF OVERDOSE	1	0.7 (0.0, 1.3)	0	--	5	3.5 (0.8, 6.4)
BECAUSE OF SKIN INFECTIONS	0	--	0	--	1	0.5 (0.0, 1.1)
BECAUSE OF OTHER INFECTIONS	0	--	0	--	3	1.6 (0.2, 2.9)
TYPE OF TREATMENT						
REGISTERED	20	46.2 (30.0, 61.6)	0	--	101	71.0 (62.7, 79.1)
ANONYMOUS	17	53.8 (38.4, 70.0)	20	100	44	29.0 (20.9, 37.2)
EVER SOUGHT METHADONE SUBSTITUTION THERAPY IN PAST YEAR						
	17	7.4 (2.9, 11.9)	2	2.6 (2.5-5.0)	27	21.7 (13.1, 30.1)
RECEIVED METHADONE SUBSTITUTION THERAPY IN PAST YEAR						
	8	58.1 (28, 88.4)	0	--	24	73.2 (44.2, 95.8)
REASON OF NOT TO HAVE METHADONE SUBSTITUTION THERAPY						
DON'T TRUST DOCTORS	24	10.4 (4.9, 16.0)	0		3	2.7 (0.3, 5.1)
TREATMENT IS NOT EFFECTIVE	99	45.2 (36.3, 54.1)	45	62.0 (50.5-73.0)	102	81.5 (72.6, 89.5)
CONFIDENTIALITY IS NOT MAINTAINED	36	16 (9.4, 22.5)	32	46.5 (32.8-60.6)	8	6.0 (2.6, 9.3)
CANNOT AFFORD IT	32	20.5 (12.9, 28.3)	0	--	1	3.3 (0.0, 8.5)
AM NOT ILL/DEPENDENT	6	2.6 (0.0, 5.5)	0	--	13	9.9 (5.0, 14.6)
EVER LOST CONSCIOUSNESS WHEN USING DRUGS						
	113	37.1 (30.5, 43.7)	14	8.7 (4.1-13.2)	15	10.7 (6.1, 15.1)
HAD SKIN PROBLEMS IN AREA OF DRUG INJECTION IN PAST MONTH						
	14	24.0 (14.6, 32.2)	1	7.4 (0.0-17.8)	0	--

Problems with police and incarceration

Almost forty percent of PWID in Yerevan, 55% in Gyumri and 92% in Vanadzor reported ever having any problems with the police because of drug use (Table 1.13). Among those, who had trouble with the police due to drug use, the majority in Yerevan and Vanadzor (57% and 74%, respectively) were arrested, whereas the majority in Gyumri (80%) received administrative penalty. Among those arrested, all in Gyumri, but 66% in Yerevan and 52% in Vanadzor, used drugs while incarcerated and 88% in Yerevan and 45% in Vanadzor injected drugs. Among those who injected while in prison, 80% in Yerevan and 27% in Vanadzor reported sharing syringes.

Table 1.13. *Problems with police and incarceration among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER HAD ANY PROBLEMS WITH POLICE BECAUSE OF DRUG USE						
	117	39.7 (32.8, 46.6)	84	54.7 (47.8-61.5)	139	91.8 (86.3, 97.3)
TYPE OF PROBLEMS HAD WITH THE POLICE						
ADMINISTRATIVE PENALTY	50	46.9 (35.3, 58.7)	67	79.7 (70.5-88.9)	35	29.5 (22.1, 37.3)
ARRESTED	59	56.6 (43.1,69.8)	22	25.5 (16.7-34.3)	108	74.0 (66.5,81.5)
USED DRUGS WHILE INCARCERATED						
	33	65.6 (57.7, 74.4)	22	100	58	51.8 (40.7, 62.3)
EVER INJECTED DRUGS IN PRISON						
	29	87.9 (79.8, 95.9)	1	4.9^	23	44.9 (31.9, 60.0)
SHARED SYRINGES IN PRISON						
	20	80.0	1	100	2	27.5 (26.0, 39.6)

^Too few values to produce confidence bounds.

Stigma and discrimination

Thirty-eight percent of PWID in Yerevan, 2.2% in Gyumri and Vanadzor reported ever avoiding healthcare because of stigma (Table 1.14). Although 88% of PWID in Yerevan reported being ashamed to be injecting drugs, only 34% in Gyumri and 7% in Vanadzor reported being ashamed. Just over half in Yerevan, 48% in Gyumri and 87% in Vanadzor reported not being ashamed to say that they inject drugs in the group of other injectors. Sixty two percent of PWID in Yerevan, 38% in Gyumri and 85% in Vanadzor reported that they were ashamed to say that they inject drugs to healthcare and social workers. Almost all PWID in all three cities reported that they had told someone that they inject drugs, among which the majority in Yerevan and Gyumri reported telling their friends and acquaintances who are injecting drugs and the majority in Vanadzor reported telling health care providers. Around half of PWID in Yerevan and Gyumri but only 4% in Vanadzor reported feeling excluded from family activities because they inject drugs. Forty percent of PWID in Yerevan, 75% in Gyumri and 24% in Vanadzor reported feeling that their family members made unfair comments about them because of injecting drugs. Thirty two percent in Yerevan and none in Gyumri and Vanadzor avoided HIV testing in the last 12 months. Among the reasons for PWID in Yerevan avoiding HIV testing, most reported fear or concern that someone may learn that they inject drugs. Half of PWID in Yerevan, 75% in Gyumri, and 74% in Vanadzor reported being scolded for injecting drugs and 5% in Yerevan, 15% in Gyumri and 8% in Vanadzor reported being blackmailed for injecting drugs. Eight percent in Yerevan, 3% in Gyumri and 60% in Vanadzor were ever physically harassed because of injecting drugs. Only in Yerevan did PWID report being forced to have sex (0.2%) among which none believed that they were forced because they inject drugs.

Table 1.14. *Stigma and discrimination among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AVOIDED HEALTH CARE BECAUSE OF STIGMA AND DISCRIMINATION						
	122	37.6 (31.1, 44.0)	4	2.2 (0.0, 4.4)	2	2.2 (0.0, 4.5)
ASHAMED TO INJECT DRUGS						
AGREE	262	87.7 (83.0, 92.2)	52	33.7 (27.0-40.5)	10	6.6 (2.6, 10.7)
NEUTRAL/ INDIFFERENT	3	0.8 (0.0, 1.7)	41	27.3 (21.1-33.5)	11	7.6 (3.6, 11.6)
DISAGREE	34	11.2 (6.7, 15.8)	57	39.0 (32.4-45.5)	126	83.5 (77.3, 89.6)
DON'T KNOW	0	--	0		3	2.2 (0.2, 4.3)
NOT ASHAMED TO ADMIT TO INJECTING DRUGS IN GROUP OF OTHER PWID						
AGREE	168	55.8 (48.4, 63.1)	73	48.5 (41.3-55.7)	132	87.5 (82.5, 92.7)
NEUTRAL/ INDIFFERENT	13	3.9 (1.7, 6.2)	62	41.4 (34.4-48.3)	8	5.6 (2.3, 8.9)
DISAGREE	119	40.2 (32.8, 47.7)	15	10.1 (6.4-13.9)	9	6.3 (2.1, 10.3)
DON'T KNOW	0	--	0	--	1	0.6 (0.0, 1.3)
NOT ASHAMED TO ADMIT TO INJECTING DRUGS IN MEETINGS WITH SOCIAL/HEALTH WORKER IN COMMUNITY						
AGREE	111	34.4 (27.8, 40.9)	56	37.8 (30.8, 44.7)	128	85.5 (80.3, 90.7)
NEUTRAL/ INDIFFERENT	6	1.8 (0.2, 3.5)	86	56.7 (49.5, 63.9)	5	36.1 (0.9, 6.3)
DISAGREE	177	62.6 (55.8, 69.4)	7	5.0 (1.5, 8.5)	17	10.9 (6.3, 15.4)
HAS TOLD ANYONE THAT HE/SHE INJECTS DRUGS						
	284	92.7 (88.3, 97.1)	148	98.7 (97.3, 100.0)	148	99.1 (98.4, 99.8)
PERSONS TOLD THAT HE/SHE INJECTS DRUGS						
PARTNER/SPOUSE	92	33.1 (26.1, 40.0)	19	12.8 (8.3, 17.2)	18	8.6 (6.0, 11.2)
FAMILY	161	57.9 (50.5, 65.3)	70	49.3 (42.3, 56.3)	13	10.0 (5.1, 15.0)
FRIENDS/ ACQUAINTANCES WHO INJECT DRUGS	254	85.1 (78.5, 91.5)	143	95.5 (92.8, 98.3)	110	75.8 (69.9, 81.8)
FRIENDS/ ACQUAINTANCES- NON-INJECTORS	37	11.1 (7.1, 15.1)	13	8.7 (4.8, 12.6)	29	17.3 (12.2, 22.2)
HEALTH CARE PROVIDERS	4	1.2 (0.03, 2.3)	74	52.3 (45.3, 59.4)	131	88.2 (83.8, 92.6)
EVER FELT EXCLUDED FROM FAMILY ACTIVITIES BECAUSE OF INJECTING DRUGS						
	165	49.2 (41.9, 56.3)	89	56.1 (48.9, 63.2)	8	4.3 (2.2, 6.5)
EVER FELT FAMILY MADE UNFAIR COMMENTS OR GOSSIPED BECAUSE OF INJECTING DRUGS						
	120	40.5 (32.7, 47.2)	115	75.3 (65.0, 81.1)	47	24.2 (18.6, 29.7)
AVOIDED SEEKING HIV TEST IN LAST 12 MONTHS						
	97	31.9 (24.8, 39.1)	4	2.2 (0.0, 4.5)	0	--
FEARS/CONCERNS FOR AVOIDING SEEKING HIV TEST IN LAST 12 MONTHS:						
ABOUT STIGMA	30	39.4 (26.8, 52.5)	0	--	0	--
SOMEONE MAY LEARN HE INJECTS DRUGS	70	60.9 (47.0, 74.5)	0	--	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
ABOUT OR EXPERIENCED VIOLENCE	0	--	0	--	0	--
ABOUT OR EXPERIENCED POLICE HARASSMENT	1	0.8 (0.0, 1.9)	0	--	0	--
NO RESPONSE	0	--	4	100	0	--
EVER SCOLDED FOR INJECTING DRUGS						
	158	48.8 (41.5, 56.1)	114	75.0 (69.0, 80.9)	119	73.8 (65.0, 82.4)
EVER BLACKMAILED FOR INJECTING DRUGS						
	15	5.2 (1.9, 8.6)	21	15.5 (9.0, 21.9)	17	8.1 (5.5, 10.8)
EVER PHYSICALLY HARASSED/HURT FOR INJECTING DRUGS						
	25	8.0 (3.6, 12.4)	4	2.9 (0.4, 5.3)	94	60.3 (50.3, 70.5)
EVER FORCED TO HAVE SEX						
	2	0.2 (0.0, 0.6)	0	--	0	--
FORCED TO HAVE SEX BECAUSE OF INJECTING DRUGS						
	0	--	0	--	0	--

Physical violence

Ten percent of PWID in Yerevan, 4% in Gyumri and 67% in Vanadzor reported ever experiencing physical violence (see Table 1.15). The median number of times physically being hurt was three (range: 1-100) in Yerevan and approximately one in Gyumri (range: 1-2) and five in Vanadzor (range: 1-20). The median age of first experiencing physical violence was 21 (range: 8-56) in Yerevan, 48 (range: 40-52) in Gyumri and 23 (range: 15-31) in Vanadzor. Most PWID in Yerevan and Vanadzor were physically harassed by a friend or acquaintance (74% and 88% respectively) and in Gyumri most PWID were harassed by a relative (65%). Among those who were hurt by a partner, most in Yerevan were hurt by boy or girlfriend, none in Gyumri and Vanadzor were hurt by a partner. Eleven percent in Yerevan and 15% in Gyumri tried to seek help for being physically hurt, in Vanadzor one of the respondents tried to seek help. Six percent of PWID Yerevan sought help from social workers and 85% in Gyumri sought help from healthcare specialists. Of those who sought help in Yerevan, 51% were refused help, mostly by legal professionals. Of those who sought help, 39% in Yerevan and 59% in Vanadzor did not feel they needed it, whereas in Gyumri 69% did not feel comfortable. Of those, most in Yerevan (83%) and Gyumri (59%) were afraid that police would do something to them because they inject drugs and 59% in Vanadzor were afraid that family members would find out that they inject drugs.

Table 1.15. *Physical violence among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER BEEN PHYSICALLY HURT						
	36	10.1 (5.7, 14.5)	6	4.1 (1.4, 6.9)	103	67.5 (59.4, 75.5)
RELATIONSHIP TO PERSON WHO PHYSICALLY HURT RESPONDENT FIRST TIME						
PAYING SEX PARTNER	0	--	0	--	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
NON-PAYING SEX PARTNER	2	4.0 (0.0, 9.8)	0	--	0	--
POLICE/ MILITARY/ AUTHORITY	28	73.6 (45.1, 100)	2	34.7 (0.0, 72.2)	91	87.6 (80.8, 93.9)
RELATIVE	2	3.2 (2.2, 4.2)	4	65.3 (27.8-100)	2	1.3 (0.0, 2.3)
FRIEND/ ACQUAINTANCE	4	19.1 (0.0, 44.1)	0	--	9	11.0 (5.0, 17.8)
TYPE OF PARTNER WHO PHYSICALLY HURT RESPONDENT FIRST TIME						
SPOUSE/LIVE IN PARTNER	1	34.4 (0.0, 93.9)	0	--	0	--
BOY/GIRLFRIEND	1	65.6 (6.1, 100.0)	0	--	0	--
CASUAL SEX PARTNER	0	--	0	--	0	--
EVER PHYSICALLY HURT BECAUSE HE/SHE INJECT DRUGS						
	15	32.5 (14.3, 49.8)	0	0	80	75.6 (64.7, 85.7)
EVER TRIED TO SEEK PROFESSIONAL HELP BECAUSE OF BEING PHYSICALLY HURT						
	5	11.3 (8.8, 13.5)	1	15.4 (0.0, 40.4)	1	0.6 (0.0, 1.4)
WHICH PROFESSIONAL HELP SOUGHT BECAUSE OF BEING PHYSICALLY HURT						
HEALTH CARE STAFF	3	6.2 (4.7, 7.3)	5	84.7 (57.4, 100)	1	1.0 (0.0, 2.2)
POLICE/SECURITY	0	--	1	15.3 (0.0, 41.8)	0	--
SOCIAL WORKER/ COUNSELOR/NGO	2	5.1 (3.5, 6.8)	0	--	0	--
RELIGIOUS LEADER	0	--	1	15.4 (0.0, 43.4)	0	--
EVER REFUSED HELP WHEN SEEKING HEALTH BECAUSE OF BEING PHYSICALLY HURT						
	2	51.3 (4.0, 100)	1	100	0	--
BY WHOM REFUSED HELP WHEN SEEKING HEALTH BECAUSE OF BEING PHYSICALLY HURT						
HEALTH CARE STAFF	1	24.4 (0.0, 64.2)	1	100	0	--
POLICE/SECURITY PERSONNEL	1	75.9 (35.0, 100)	0	--	0	--
LEGAL PROFESSIONAL	1	75.8 (33.7, 100)	0	--	0	--
SOCIAL WORKER/ COUNSELOR/NGO	0	--	1	100	0	--
RELIGIOUS LEADER	0	--	0	--	0	--
REASON FOR NOT SEEKING PROFESSIONAL HELP						
DID NOT KNOW OF SERVICES AVAILABLE	10	21.1 (0.0, 42.8)	1	15.3 (0.0, 42.1)	1	1.7 (0.0, 5.2)
SERVICES NEEDED, NOT AVAILABLE	0	--	0	--	0	--
TOO EXPENSIVE	1	1.6 (0.0, 13.7)	0	--	0	--
DID NOT FEEL COMFORTABLE	2	18.0 (10.5, 26.2)	4	69.4 (33.0, 100)	24	34.1 (21.1, 51.1)
DID NOT NEED	13	39.1 (14.1, 64.0)	1	15.3 (0.0, 42.1)	73	59.3 (42.3, 71.8)
OTHER (FEAR)	0	--	0	--	1	0.8 (0.0, 1.8)
DON'T KNOW	0	--	0	--	3	4.0 (0.03, 8.0)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
REASONS FOR BEING UNCOMFORTABLE						
POOR TREATMENT IF KNOW HE/SHE INJECTS DRUGS	0	--	0	--	11	39.2 (27.5, 97.4)
AFRAID FAMILY MEMBER WOULD FIND OUT HE/SHE INJECTS DRUGS	0	--	0	--	12	58.8 (35.5, 86.4)
AFRAID POLICE WOULD DO SOMETHING BECAUSE HE/SHE INJECTS DRUGS	1	83.3 (46.5, 100)	0	--	4	19.6 (8.0, 32.6)
WORRIED OTHERS WILL FIND OUT HE/SHE INJECTS DRUGS	0	--	0	--	4	14.5
DON'T KNOW	0	--	1	100	0	--
TOLD ABOUT EVER BEING PHYSICALLY HURT						
	32	93.3 (84.3, 100)	6	100	96	94.0 (89.4, 98.6)
PERSONS TOLD ABOUT EVER BEING PHYSICALLY HURT						
PAYING SEX PARTNER	0	--	1	100	0	--
NON-PAYING SEX PARTNER	0	--	0	--	0	--
POLICE/MILITARY/AUTHORITY	0	--	0	--	0	--
RELATIVE	18	47.6 (16.6, 77.8)	0	--	4	2.8 (0.9, 4.2)
FRIEND/ACQUAINTANCE	12	33.6 (0.0, 100)	0	--	92	97.2 (95.8, 99.1)
NO RESPONSE	3	6.7 (0.0, 12.9)	0	--	0	--

HIV/AIDS

HIV/AIDS risk, knowledge, and beliefs

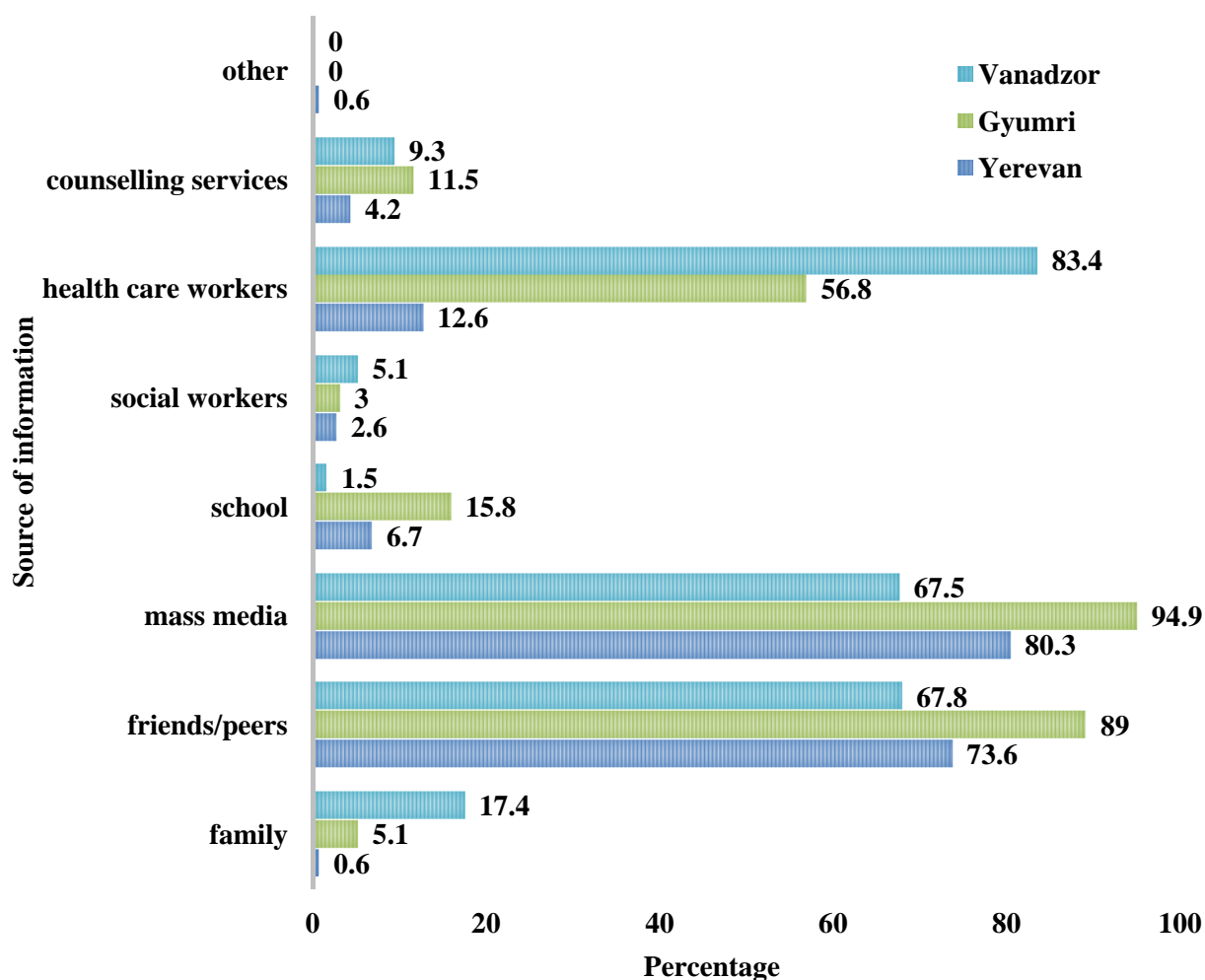
Nearly all PWID in Yerevan and all in Gyumri and Vanadzor reported having heard of HIV/AIDS. 43% in Yerevan, 99% in Gyumri and 46% in Vanadzor reported having low probability of being infected with HIV (Table 1.16), 49% in Yerevan perceived that there was no risk. Percentages for correct knowledge about HIV transmission were high among PWID of Gyumri and Vanadzor, including that HIV infection is reduced by having sex with one uninfected faithful partner, the risk of HIV is reduced by using condoms, that it is possible to avoid HIV infection by switching to non-injecting drugs and that someone can be infected with HIV by using a needle after someone else. Percentages for correct perceptions about HIV infection were also high, including that someone who appears to be healthy can still be HIV positive and that someone cannot be infected with HIV by sharing a meal or shaking hands with someone who is infected. However, the composite knowledge score of PWID in Yerevan was only 40%.

Table 1.16. *HIV/AIDS risk, knowledge, and perceptions among PWID, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAS EVER HEARD OF HIV/AIDS						
	299	99.6 (98.7, 100)	150	100	150	100
ESTIMATED PROBABILITY OF BEING INFECTED WITH HIV						
HIGH	32	8.5 (5.0, 12.0)	0	--	37	22.7 (15.5, 29.8)
LOW RISK	133	42.8 (36.0, 49.6)	145	99.1 (98.7, 99.3)	74	45.8 (37.4, 54.3)
NO RISK	131	48.7 (41.8, 55.5)	1	0.9 (0.7, 1.1)	39	31.5 (23.5, 39.5)
THE RISK OF HIV IS REDUCED BY HAVING SEX WITH ONE UNINFECTED FAITHFUL PARTNER						
YES	267	85.5 (79.5, 91.5)	150	100	150	100
NO	15	6.1 (2.2, 10.1)	0	--	0	--
DO NOT KNOW	15	8.3 (3.5, 13.2)	0	--	0	--
THE RISK OF HIV IS REDUCED BY USING CONDOMS						
YES	260	89.2 (85.1, 93.3)	148	100	150	100
NO	19	5.0 (2.5, 7.6)	0	--	0	--
DO NOT KNOW	20	5.8 (2.4, 9.1)	0	--	0	--
SOMEONE WHO APPEARS TO BE HEALTHY CAN STILL BE HIV POSITIVE						
YES	219	69.5 (61.9, 77.1)	148	98.7 (97.2, 100)	145	92.5 (87.8, 97.2)
NO	48	17.2 (11.5, 22.9)	2	1.3 (0.0, 2.8)	4	5.4 (0.7, 10.1)
DO NOT KNOW	33	13.3 (8.0, 18.6)	0	--	1	2.0 (1.6, 2.5)
SOMEONE CAN GET HIV FROM A MOSQUITO						
YES	112	34.9 (27.8, 42.0)	6	3.4 (1.0, 5.9)	8	6.6 (1.2, 12.4)
NO	148	51.5 (44.2, 58.8)	144	96.6 (94.1, 99.0)	141	92.9 (87.1, 98.3)
DO NOT KNOW	40	13.6 (9.0, 18.1)	0	--	1	0.4 (0.0, 0.9)
SOMEONE CAN BE INFECTED WITH HIV BY SHARING A MEAL WITH SOMEONE WHO IS INFECTED						
YES	19	7.0 (2.3, 11.6)	0	--	1	0.4 (0.0, 0.9)
NO	249	82.2 (75.6, 88.7)	150	100	148	99.1 (98.5, 99.7)
DO NOT KNOW	32	10.8 (6.3, 15.3)	0	--	1	0.4 (0.0, 0.9)
SOMEONE CAN BE INFECTED WITH HIV BY SHAKING HANDS WITH SOMEONE WHO IS INFECTED						
YES	18	6.0 (2.2, 9.6)	0	--	2	1.6 (0.0, 3.5)
NO	262	84.9 (79.2, 90.5)	150	100	148	98.4 (96.5, 100)
DO NOT KNOW	20	9.1 (4.4, 13.9)	0	--	0	--
IT IS POSSIBLE TO AVOID HIV INFECTION BY SWITCHING TO NON-INJECTING DRUGS						
YES	176	52.0 (44.4, 59.7)	148	98.7 (97.2, 100)	148	99.1 (98.5, 99.7)
NO	112	41.8 (33.9, 49.5)	2	1.3 (0.0, 2.8)	1	0.4 (0.0, 0.9)
DO NOT KNOW	12	6.2 (2.2, 10.2)	0	--	1	0.4 (0.0, 0.9)
SOMEONE CAN BE INFECTED WITH HIV BY USING NEEDLE AFTER SOMEONE ELSE						
YES	295	98.3 (95.6, 100)	149	100	148	100
NO	0	--	0	--	0	--
DO NOT KNOW	3	1.7 (0.0, 4.4)	0	--	0	--
CORRECT KNOWLEDGE INDICATOR						
YES	133	39.7 (32.4, 46.8)	143	95.7 (93.2, 98.1)	141	90.6 (83.3, 97.4)

PWID in Yerevan and Gyumri reported their most common source of HIV/AIDS information being from mass media, whereas PWID in Vanadzor reported their most common source of information being from healthcare workers (Figure 1.8). Few PWID in Gyumri and Vanadzor reported family or social workers as sources of HIV/AIDS information.

Figure 1.8. Sources of HIV/AIDS information among PWID, Armenia, 2018



HIV testing condoms and sterile needles

Except for Yerevan, almost all PWID reported knowing where to get an HIV test (Table 1.17). Twenty-eight percent in Yerevan, 69% in Gyumri and 97% in Vanadzor received condoms from an NGO or outreach worker and 36% in Yerevan, 70% in Gyumri and 94% in Vanadzor received sterile needles in the past 12 months, 71% in Yerevan, almost all in Gyumri and Vanadzor had access to HIV testing, 46% in Yerevan, 37% in Gyumri and almost all in Vanadzor ever had an HIV test. Only 14% in Yerevan, 4.3% in Gyumri and almost all in Vanadzor had an HIV test and received test results in the past 12 months or knew their status. Almost all in Yerevan, all in Vanadzor and 60% in Gyumri had an HIV test in last 12 months and received their result. Almost all in Yerevan and all in Gyumri received a negative result, in Vanadzor 5% received a positive result.

Table 1.17. HIV testing, condoms and sterile needles among PWID, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
KNOWS WHERE TO GET AN HIV TEST						
	219	72.6 (65.8, 79.3)	150	100	149	97.4 (94.0, 100)
RECEIVED A COMBINED SET OF HIV PREVENTION INTERVENTIONS						
	119	35.6 (29.1, 42.1)	105	69.7 (63.4, 79.1)	146	98.1 (96.8, 99.4)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
PROVIDED WITH CONDOMS DURING THE LAST 12 MONTHS BY OUTREACH WORKERS AND NGO						
	97	27.9 (22.0, 33.9)	103	68.9 (62.3, 75.5)	148	96.7 (93.4, 100)
PROVIDED WITH STERILE NEEDLES IN LAST 12 MONTH						
	123	36.2 (29.5, 42.9)	104	70.0 (63.9, 76.1)	147	94.3 (88.6, 99.8)
ACCESSIBILITY OF HIV TEST SERVICES						
	217	70.8 (63.3, 78.3)	149	99.6 (99.1, 100)	147	98.6 (97.6, 99.6)
EVER HAD AN HIV TEST						
	144	46.2 (38.7, 53.7)	59	36.9 (30.6, 43.3)	149	99.5 (99.0, 100)
HIV TEST IN PAST 12 MONTHS AND RECEIVED RESULTS (AMONG ALL PARTICIPANTS)						
	47	13.7 (9.4, 17.9)	3	1.6 (0.0, 3.1)	148	96.8 (93.1, 100)
PERCENTAGE OF PWID WHO TESTED FOR HIV IN THE PAST 12 MONTHS, OR WHO KNOW THEIR CURRENT HIV STATUS						
	47	29.6 (21.1, 38.3)	3	4.3 (0.0, 13.3)	148	99.3 (98.5, 100)
TEST RESULT FROM LAST HIV TEST						
POSITIVE	0	--	0	--	4	5.1 (0.0, 10.0)
NEGATIVE	133	98.9 (98.7, 99.2)	54	100	145	94.8 (89.9, 100)

HIV, Syphilis and HCV prevalence

HIV prevalence among PWID was 2% in Yerevan, 0.5% in Gyumri and 0.4% in Vanadzor (Table 1.16). Active Syphilis prevalence was 2% in Yerevan; there were no cases of Syphilis in Gyumri or Vanadzor. HCV prevalence was 67% in Yerevan, 8% in Gyumri and 80% in Vanadzor.

Table 1.18. HIV, Syphilis, HCV prevalence among PWID, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HIV						
	5	2.2 (0.2, 4.1)	1	0.5 (0.0, 1.0)	1	0.4 (0.1, 0.8)
SYPHILIS						
	10	2.5 (0.8, 4.1)	0	--	0	--
HEPATITIS C						
	188	66.7 (60.1, 73.3)	14	7.9 (5.1, 10.6)	120	80.3 (75.0, 85.6)

DISCUSSION AND RECOMMENDATIONS OF PWID FINDINGS

Few females captured in the survey

Only nine females were recruited in these surveys. Women who inject drugs are often more vulnerable to HIV infection due to many social factors, power differences between males and females, cultural gender roles, and sex work (6). More efforts are needed to gain a better understanding of injecting practices of females who inject drugs in Armenia. Given that females who inject drugs are less ‘visible’ than males, qualitative research methods should be used to measure injecting behaviors and risks among females.

PWID are older, have primary education, married, and unemployed

The majority of PWID are older than 25 years, have low education, married, and unemployed. These socio-demographic characteristics are important for developing effective and accessible HIV prevention interventions targeting PWID.

HCV prevalence is high

PWID have high HCV prevalence, especially in Yerevan and Vanadzor. Most of these HCV cases may be older cases given that most PWID report that they do not share needles and paraphernalia. It is necessary to prioritize prevention, diagnosis, and treatment of HCV among PWID, including routine screening of all persons who inject drugs.

Low HIV prevalence; low syphilis prevalence

HIV prevalence was around 2% among PWID in Yerevan and less than 1% in Gyumri and Vanadzor. Syphilis prevalence was 2.5% in Yerevan and there were no cases of syphilis in Gyumri and Vanadzor. However, this does not mean that syphilis does not exist in this population. PWID should be routinely screened and treated for syphilis and receive treatment for HIV, as well as other infections to reduce further transmission.

High risk behavior among mobile PWID

Most PWID reported not spending time away from home for more than one month in the last year. However, among those who reported having spent time away, a high percentage reported having sex without a condom and injecting drugs while they were away from home for more than one month in the last year. Tailored HIV prevention messages for both PWID and their partners should be implemented in cities with highly mobile PWID.

PWID engage in high risk sexual behaviors with partners

Age at first sexual intercourse among PWID in the study was young (median ages: 16 to 19 years). Despite most PWID reporting being married, the majority reported multiple sexual partners (range: 2 to 5) in the past year. PWID reported using condoms inconsistently with regular and non-regular partners. In addition a sizable proportion of PWID reported ever paying for sex. Having unprotected sex with multiple sex partners increases the risk of acquiring and transmitting STIs. Condom promotion programs in conjunction with PWID harm reduction services should continue to be made available and accessible to all PWID (7).

Alcohol consumption is common among PWID

Most PWID consume alcohol, among which many reported binge drinking (having more than six alcoholic drinks on one occasion) less than monthly in Yerevan and Gyumri and at least once a month in Vanadzor. The concurrent use of alcohol and drugs contributes to overdose mortality among PWID(8). The survey findings highlight the continued need for the integration of substance abuse services, including alcohol, into HIV prevention interventions, targeting PWID.

Desomorphine use is high

Between 49% and 97% of PWID reported using desomorphine in all three cities and between 16% and 91% of PWID in all cities reported use of marijuana within the past year with Gyumri having the highest rate of marijuana use. Incorporating effective substance abuse treatment programs in HIV prevention interventions is necessary.

Injecting drug use and sharing behaviors are low among PWID

Among PWID who reported injecting drugs in the last month, a small proportion in Yerevan and Gyumri reported sharing and using non-sterile injection paraphernalia and needles and syringes, whereas in Vanadzor none of the respondents reported doing so. The scale-up of harm-reduction programs, including the provision of sterile needles and injection equipment, is crucial in reducing HIV and HCV transmission in this population. Prevention interventions should educate PWID on how to properly sterilize needles and emphasize the risks associated with sharing needles and other injecting equipment. Effective treatment for drug addiction should be accessible to all PWID who want it.

PWID reported wanting to stop injecting

The majority of PWID in Yerevan and Vanadzor and around half of PWID in Gyumri reported a desire to stop injecting drugs, however, most reported not seeking a doctor to receive treatment in the last year with an exception of PWID in Vanadzor, where 94% sought help from a doctor. Few PWID reported using methadone in the past year, many of whom reported that they did not believe it was an effective treatment. Effective treatment modalities, including methadone substitution therapy, are essential to reducing drug addiction.

PWID are injecting drugs while incarcerated

A high percentage of PWID reported being targeted by law enforcement for their drug use, among which a significant proportion were arrested. Many PWID in Yerevan, Gyumri and Vanadzor reported injecting drugs while incarcerated, among which many (80% in Yerevan, 27% in Vanadzor) reported sharing syringes in prison. Correctional facilities should provide testing, treatment, and linkage to care programs, as well as harm reduction services, for PWID while they are in prison and before they are released into the general population.

Experience of overdose

A sizable proportion of PWID reported having lost consciousness when overdosing on narcotics. The results highlight the need for harm reduction programs that will help to reduce the risk of overdose, such as methadone substitution therapy and provision of naloxone to prevent fatal opioid overdose.

HIV knowledge was moderate and perceived risk was low

Forty percent of PWID in Yerevan were knowledgeable about HIV transmission and most reported low or no risk of HIV infection. HIV/AIDS education campaigns should be emphasized alongside harm reduction programs. Existing interventions should continue to emphasize the risks associated with injection drug use and dispel any myths about the cause, transmission, and treatment of HIV. Providing clean needles and syringes are essential to PWID having low risk to HIV.

HIV testing is low among PWID

Although most PWID reported accessibility to HIV testing services, under half in Yerevan and Gyumri reported having ever received an HIV test. Among PWID who reported having ever been tested for HIV, few had the test in the last 12 months, except for Vanadzor. Routine HIV screening should be encouraged for all PWID.

Avoiding healthcare services due to stigma and discrimination is low

Although most PWID in all three cities did not report avoiding healthcare services due to stigma and discrimination, respondents may feel awkward to share about their experiences of stigma. Most PWID in Yerevan were ashamed to tell social and healthcare workers about injecting drugs. Further research is needed to understand the existence and impact of stigma and discrimination to the accessibility of health care services, especially in Vanadzor. Routine monitoring of stigma and discrimination in health care settings should be conducted(12).

PWID report low levels of physical violence

Although most PWID in Yerevan and Gyumri did not report ever experiencing physical violence, around 67% in Vanadzor reported so. Most PWID in Yerevan and Vanadzor were harassed by a friend or acquaintance, whereas in Gyumri most reported being harassed by a relative. Further research is needed to explore the cases of physical violence more in-depth, especially in Vanadzor.

SUMMARY OF KEY RECOMMENDATIONS

- Scale up non-clinical and clinical routine HIV, HCV and STI testing services.
- Harm reduction services should be made available and easily accessible to PWID.
- Integrate mental health services, to include substance abuse counseling and treatment, with HIV prevention programs targeting PWID.
- Scale up the coverage of methadone substitution therapy.
- Scale up HIV/AIDS education services, specifically focusing on risks associated with injection drug use.
- Formative research to better understand the injecting and sexual behaviors of females who inject drugs.
- Scale-up coverage of combination prevention services.
- Implement testing, treatment, and linkage to care programs in correctional facilities.
- Provide HIV/AIDS education and harm reduction services to PWID who are incarcerated.

2. OVERVIEW: FEMALE SEX WORKERS (FSW)

Three hundred (including four seeds) FSW in Yerevan, 150 (including two seeds) in Gyumri, and 150 (including two seeds) in Vanadzor were recruited into the IBBS. The maximum number of waves in the recruitment chains of Yerevan and (Figure 2.1), in Gyumri was 7 (Figure 2.2) and in Vanadzor was 10 (Figure 2.3). Seeds are at the top of each of the chains.

Figure 2.1. *Recruitment graph of the FSW sample (n=300), with four recruitment chains, Yerevan, Armenia, 2018*

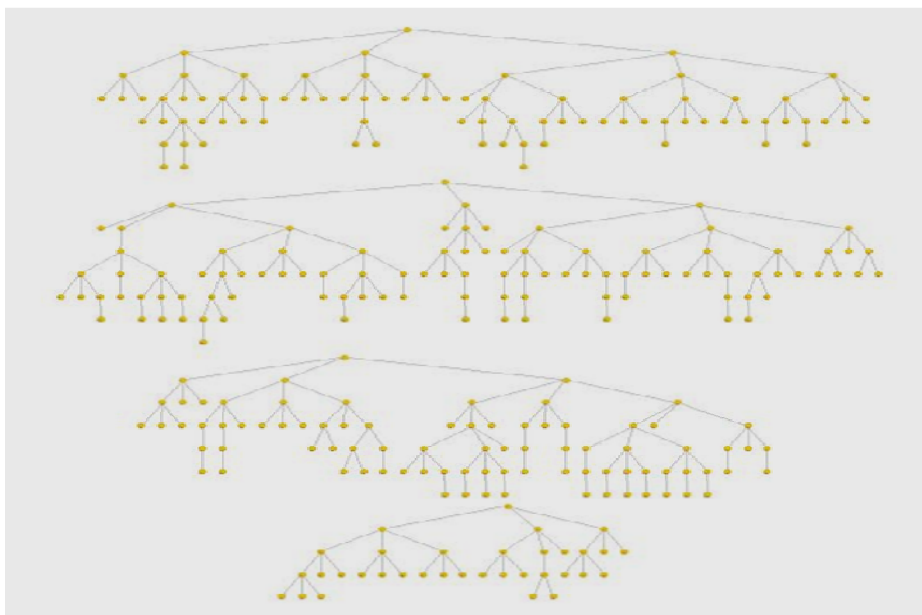


Figure 2.2. *Recruitment graph of the FSW sample (n=150), with two recruitment chains, Gyumri, Armenia, 2018.*

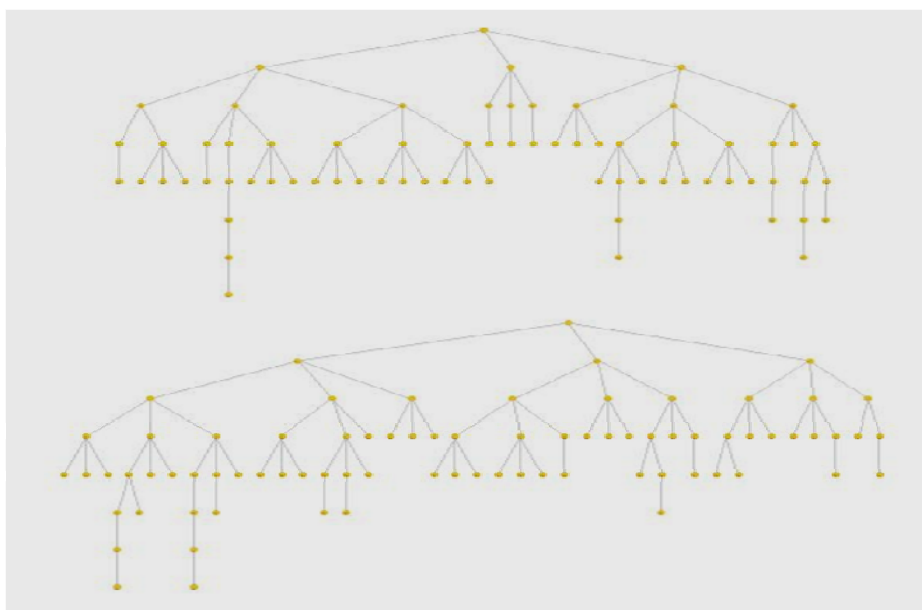
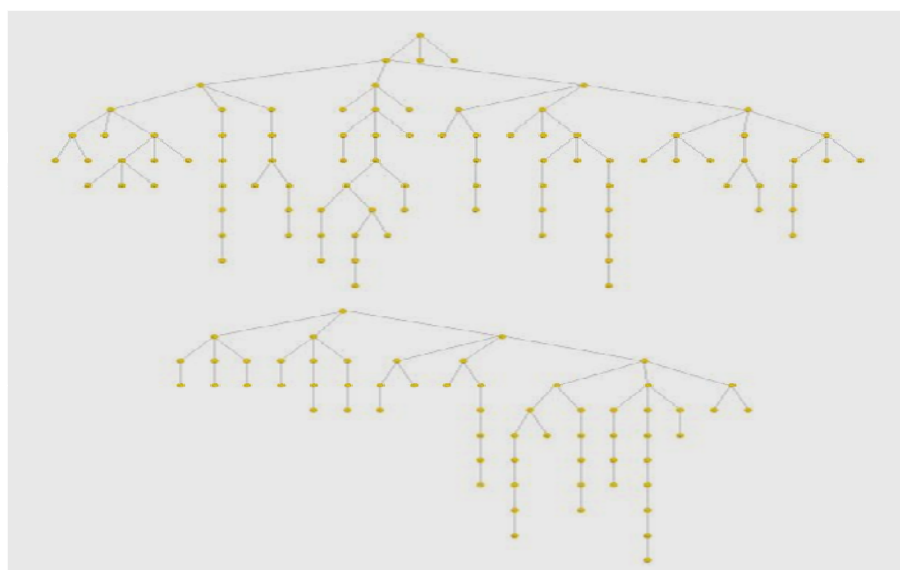


Figure 2.3. Recruitment graph of the FSW sample (n=150), with two recruitment chains, Vanadzor, Armenia, 2018



Socio demographic characteristics

Age, education and employment

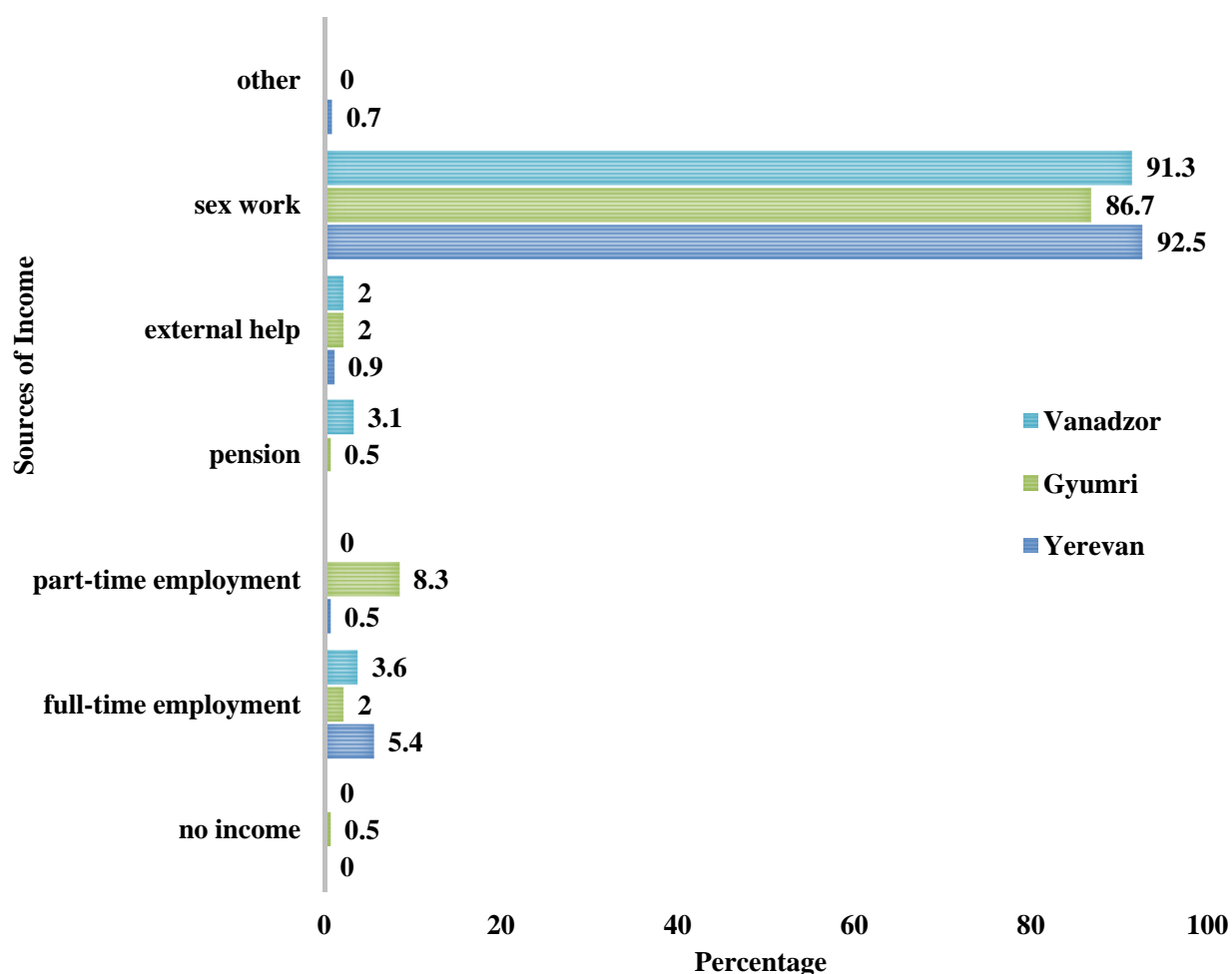
The majority of FSW in all three cities were 25 years or older and had Armenian nationality (Table 2.1). Most FSW in Yerevan and Gyumri reported having a secondary education or higher; 39% of FSW in Vanadzor reported having only a primary education.

Table 2.1. Age, education and employment of FSW, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZORN N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AGE						
<24	15	4.2 (1.5, 6.8)	15	11.5 (6.6, 16.4)	3	2.6 (0.0, 5.3)
25-34	116	36 (28.4, 43.7)	72	45.2 (38.4, 51.9)	50	32.9 (27.8, 37.9)
35-44	98	34.4 (27.5, 41.3)	63	43.3 (36.2, 50.5)	49	32.5 (27.8, 37.2)
45+	71	25.4 (18.6, 32.2)	0	--	48	32 (26.6, 37.5)
AGE GROUP						
<25	15	4.2 (1.4, 6.9)	15	11.5 (6.5, 16.5)	3	2.6 (0.0, 5.3)
≥25	282	95.8 (93, 98.6)	135	88.5 (83.5, 93.5)	147	97.4 (94.7, 100)
NATIONALITY OF BIRTH						
REPUBLIC OF ARMENIA	295	96.4 (92.8, 100)	144	97.6 (96.4, 98.8)	149	98.5 (96.1, 100)
RUSSIAN FEDERATION	1	0.8 (0, 1.9)	3	1.1 (0.4, 1.8)	--	--
REPUBLIC OF GEORGIA	1	0.5 (0, 1.5)	2	1.0 (0.08, 1.9)	--	--
OTHER	3	2.3 (0, 5.5)	1	0.3 (0.01, 0.6)	1	1.5 (0.0, 3.9)
HIGHEST LEVEL OF SCHOOL COMPLETED						
PRIMARY	37	15.5 (9.5, 21.5)	12	4.4 (3.0, 5.9)	57	38.8 (33.0, 44.4)
SECONDARY	129	36 (29.5, 42.7)	120	84.7 (80.4, 88.9)	45	29.1 (24.7, 33.6)
TECHNICAL	95	34.0 (27.1, 40.8)	16	9.8 (5.8, 13.7)	37	23.8 (19.2, 28.4)
HIGHER	39	14.5 (9.1, 19.9)	2	1.1 (0, 2.2)	11	8.3 (5.1, 11.5)

Eighty seven percent or higher reported that their main source of income was through sex work (Figure II.4). Few FSW had external help and 5% or less reported full-time employment.

Figure 2.4. *Main sources of income among FSW, Armenia, 2018*



Marital status and living situation

Most FSW surveyed in all three cities reported being divorced as their current marital status (Table 2.2). Around half of FSW in Yerevan and Gyumri and only 18% in Vanadzor reported living with their sexual partner.

Table 2.2. *Marital status and living situation among FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
CURRENT MARITAL STATUS						
SINGLE	11	4.7 (1.2, 8.1)	13	10.1 (5.7, 14.4)	2	2.8 (1.4, 4.1)
MARRIED	14	4.6 (1.1, 8.1)	22	15.7 (10.5, 20.8)	13	9.4 (6.0, 12.8)
DIVORCED	241	80.6 (74.2, 87.0)	96	65.9 (59.8, 71.9)	111	74.3 (69.5, 79.2)
CIVIL MARRIAGE	4	0.9 (0.03, 1.8)	0	--	5	3.0 (1.2, 4.8)
WIDOWED	20	9.2 (3.9, 14.5)	19	8.4 (6.1, 10.7)	15	10.4 (6.9, 13.9)
LIVES WITH SEXUAL PARTNER						
	121	41.9 (34.6, 49.1)	90	52.5 (44.6, 60.3)	25	18.1 (13.1, 22.9)

Mobility

Few (<10%) FSW reported being away from home for more than one month in the last year (Table 2.3). Among those reporting being away for more than one month in the last year, 60% in Yerevan and 46% in Gyumri reported being in Georgia. Between 25% in Gyumri and 49% in Vanadzor reported having sex without a condom while away from home for more than one month in the last year. FSW from Gyumri had the highest percentage reporting being abroad for labor (77%) and for selling sex (83%), compared to Yerevan (40%, 21%).

Table 2.3. *Mobility among FSW, Armenia, 2018*

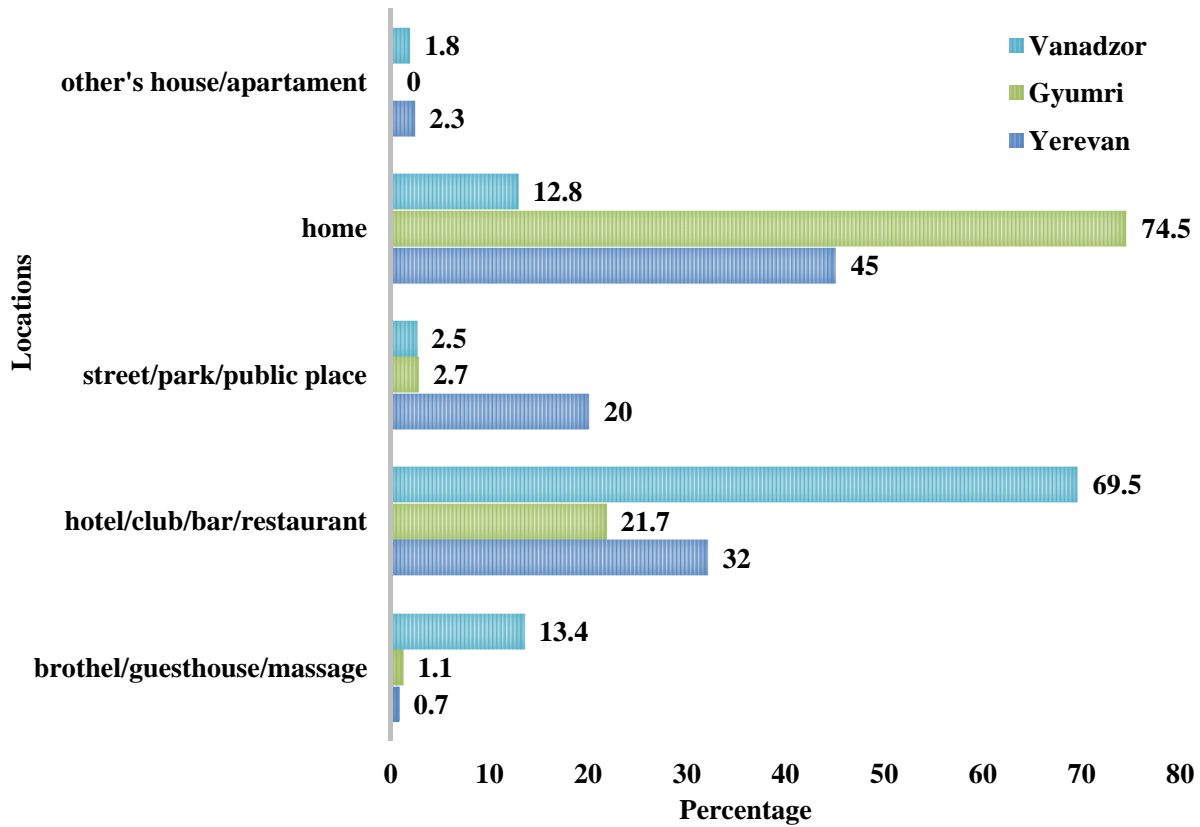
	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AWAY FROM HOME FOR MORE THAN 1 MONTH IN LAST YEAR						
	17	9.5 (4.7, 14.4)	14	7.6 (4.5, 10.7)	2	0.9 (0.5, 1.3)
COUNTRY WHERE RESPONDENT WAS AWAY FROM HOME FOR MORE THAN 1 MONTH IN LAST YEAR						
REPUBLIC OF ARMENIA	4	22.4 (1.2, 43.5)	5	21.3 (0.0, 44.6)	2	100
RUSSIAN FEDERATION	2	9.3 (0, 21.6)	3	18.2 (0.0, 49.4)	0	--
REPUBLIC OF GEORGIA	8	60.3 (36.2, 85.0)	5	46.0 (50.9, 57.0)	0	--
TURKEY	3	8.0 (0.7, 14.7)	1	14.5	0	--
HAD SEX WITHOUT CONDOM WHILE AWAY FROM HOME FOR MORE THAN 1 MONTH IN LAST YEAR						
	8	35.4 (11.9, 58.2)	6	25.2 (0.0, 34.3)	1	48.6 (0.0, 95.5)
ABROAD FOR THREE MONTHS OR MORE IN LAST YEAR FOR LABOR						
	8	40.4 (15.8, 64.9)	10	77.1 (53.9, 100)	0	--
ABROAD FOR THREE MONTHS OR MORE IN LAST YEAR FOR SELLING SEX						
	5	21.3 (3.6, 38.7)	10	82.9 (63.2, 100)	0	--

Sexual behavior

General sexual behavior and sex work

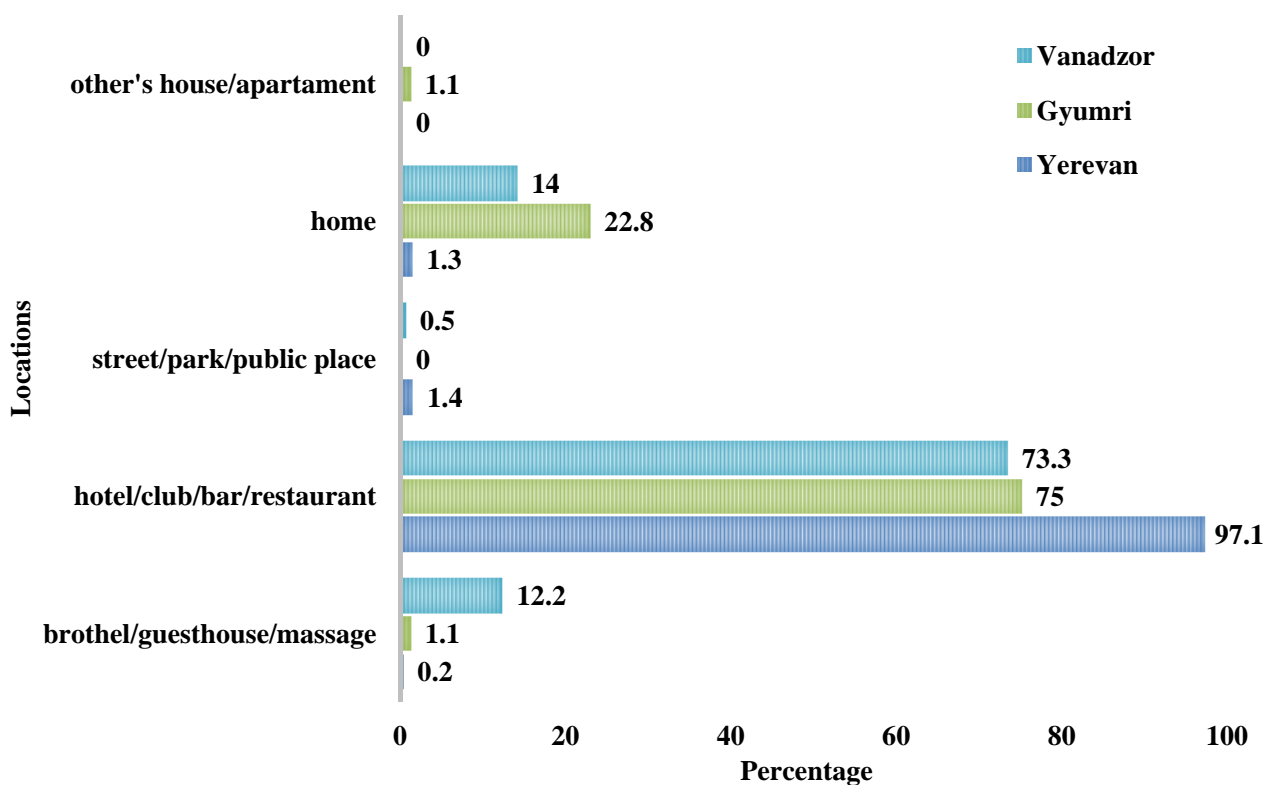
The median age at first sexual intercourse was 19 in Yerevan (range: 14 to 33), 18 in Gyumri (range: 14 to 25), and 19 in Vanadzor (range: 14 to 28). The median age at first sexual intercourse for money was 27 in Yerevan (range: 14 to 51) and 26 in Gyumri (range: 16 to 38), and 30 in Vanadzor (range: 16 to 50). The highest percentages of FSW in Yerevan and Gyumri reported meeting their clients at their home and 69% in Vanadzor reported meeting their clients at hotels, clubs, bars, or restaurants (Figure 2.5).

Figure 2.5. *Places to meet/find clients among FSW, Armenia, 2018*



Most FSW in all cities reported having sex with clients at hotels, clubs, bars, or restaurants (Figure 2.6).

Figure 2.6. *Places of having sex with clients among FSW, Armenia, 2018*



Sexual behaviors and partner types

Non-commercial sex partners

Thirty four percent of FSW in Yerevan, 37% in Gyumri and 22% in Vanadzor reported sex with non-commercial sex partners in the past 12 months (Table 2.4). Among those, all FSW in the three survey locations reported having a median number of 1 non-commercial sex partner (range: 1 to 2 in Yerevan, 1 to 3 in Gyumri and 1 to 2 in Vanadzor). The median number of times FSW in Yerevan had sex with a non-commercial partner was 15 times (range: 1 to 80), in Gyumri was 4 times (range: 1 to 25) and in Vanadzor was 10 times (range 2 to 30) in the past 12 months. The median number of times FSW used condoms during sexual intercourse with all non-commercial partners in the past month was 0 (range: 0 to 30) in Yerevan, 0 (range: 0 to 15) in Gyumri, and 10 (range: 1 to 30) in Vanadzor. FSW in all survey locations reported having a median of 1 non-commercial sex partner in the past week, a median of 4 in Yerevan, 3 in Vanadzor and Gyumri sex acts with all non-commercial sex partners in the past week. Between 29% of FSW in Gyumri and 72% in Vanadzor reported using a condom during their last sex with a non-commercial partner. Most FSW in Yerevan and Gyumri reported inconsistent condom use, whereas 72% of FSW in Vanadzor reported using condoms “every time” with non-commercial sex partners. Reasons for not always using condoms with a non-commercial partner included “reduces pleasure” (72% in Yerevan, 51% in Gyumri, 48% in Vanadzor) and “trust my partner” (72% in Yerevan and 76% in Gyumri).

Table 2.4. *Sexual behavior with non-commercial sex partners among FSW, Armenia 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
SEX WITH NON-COMMERCIAL SEX PARTNERS IN PAST 12 MONTH						
	103	33.7 (27.0, 40.5)	69	36.8 (30.2, 43.3)	31	22.4 (17.7,27.0)
USED CONDOM AT LAST SEX						
	23	32.2 (0.0, 66.2)	18	28.9 (12.7, 47.3)	24	72.1 (52.9, 85.9)
FREQUENCY OF CONDOM USE NON-COMMERCIAL SEX PARTNERS						
EVERY TIME	18	28.1 (0.0, 83.3)	16	26.6 (11.0, 44.7)	24	72.2 (52.8, 86.6)
ALMOST EVERY TIME	4	2.6 (0.3, 4.8)	7	7.1 (1.4, 9.7)	0	--
SOMETIMES	3	3.8 (0, 81.9)	16	30.2 (19.9, 46.9)	0	--
NEVER	78	65.5 (9.1, 100)	30	36.1 (20.3, 46.2)	7	27.8 (13.5, 47.3)
REASONS FOR NOT ALWAYS USING CONDOMS DURING SEX						
VERY EXPENSIVE	0	--	0	--	0	--
ASHAMED TO BUY	0	--	0	--	0	--
DIFFICULT TO USE	1	2,1	0	--	0	--
NOT SO AVAILABLE	0	--	4	10.3 (1.8, 18.0)	0	--
REDUCES PLEASURE	60	72.3 (60.8, 84.1)	33	50.8 (39.0, 59.0)	3	48.5 (7.6, 94.1)
ASHAMED TO USE	4	9.3 (0.0,22.6)	0	--	0	--
TRUST PARTNER	65	72.5 (59.6, 85.1)	39	76.6 (68.6, 87.7)	4	51.6 (7.6, 90.2)

Commercial sex partners

The median number of clients was 20 (range: 2 to 200) in Yerevan, 12 (range: 2 to 50) in Gyumri, and 10 in Vanadzor (range: 1 to 100) and the median number of sex acts was 20 in Yerevan (range: 2 to 250), 12 in Gyumri (range: 4 to 50) and 20 in Vanadzor (range: 2 to 100) in the past month.

The median number of times FSW reported using condoms with clients during sexual intercourse in the past month was highest in Yerevan (20, range: 2 to 250), was 12 in Gyumri (range: 4 to 50) and 20 in Vanadzor (range: 0 to 100). High percentages of FSW in Yerevan and Vanadzor and all in Gyumri reported using condoms the last time they had sexual intercourse with a client and “always” using condoms with clients. The majority of FSW in Yerevan not using condoms, reported their reason for not using condoms as “trust partner”. In Vanadzor, the most reported reason for not using condoms was “reduces pleasure”. (Table 2.5).

Table 2.5. *Sexual behaviors with commercial sex partners among FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
USED CONDOM DURING LAST SEX						
	296	99.1 (98.0, 100)	150	100	146	96.5 (93.5, 99.6)
FREQUENCY OF CONDOM USE WITH A CLIENT						
EVERY TIME	281	91.1 (86.6, 95.6)	150	100	139	93.1 (90.5, 95.8)
ALMOST EVERY TIME	13	6.5 (2.2, 10.9)	0	--	7	3.4 (2.3, 4.6)
SOMETIMES	6	2.4 (0.3, 4.3)	0	--	2	1.3 (0.06, 2.5)
NEVER	0	--	0	--	2	2.1 (0.0, 4.2)
REASONS FOR NOT ALWAYS USING CONDOMS						
ASHAMED TO BUY	0	--	0	--	1	6.7 (0.7, 8.0)
DIFFICULT TO USE	1	5.8 (0.0, 17.9)			3	21.0 (0.0, 49.7)
NOT ACCESSIBLE	0	--	0	--	1	6.6 (1.0, 6.9)
REDUCES PLEASURE	6	24.1 (4.4, 43.2)	0	--	9	68.8 (2.9, 100)
ASHAMED TO ASK PARTNER	1	17.0 (0, 48.7)	0	--	1	6.3 (0.0, 12.2)
TRUST PARTNER	10	48.2 (19.3, 77.1)	0	--	3	39.9 (0.0, 100)
CLIENT DOESN'T WANT	5	20.4 (3.2, 36.9)				

Anal and oral sex

When asked whether FSW had anal or oral sex within the last year, the majority (at least 78%) in all survey locations reported they “don’t have such kind of sex”. Among the few who had anal or oral sex within the last year, 75% in Yerevan and 27% in Gyumri reported using a condom during last anal sex and few in Yerevan and Gyumri (up to 13%) and 63% in Vanadzor reported using condoms the last time they had oral sex. (Table 2.6).

Table 2.6. *Anal and oral sex among FSW, Armenia, 2018*

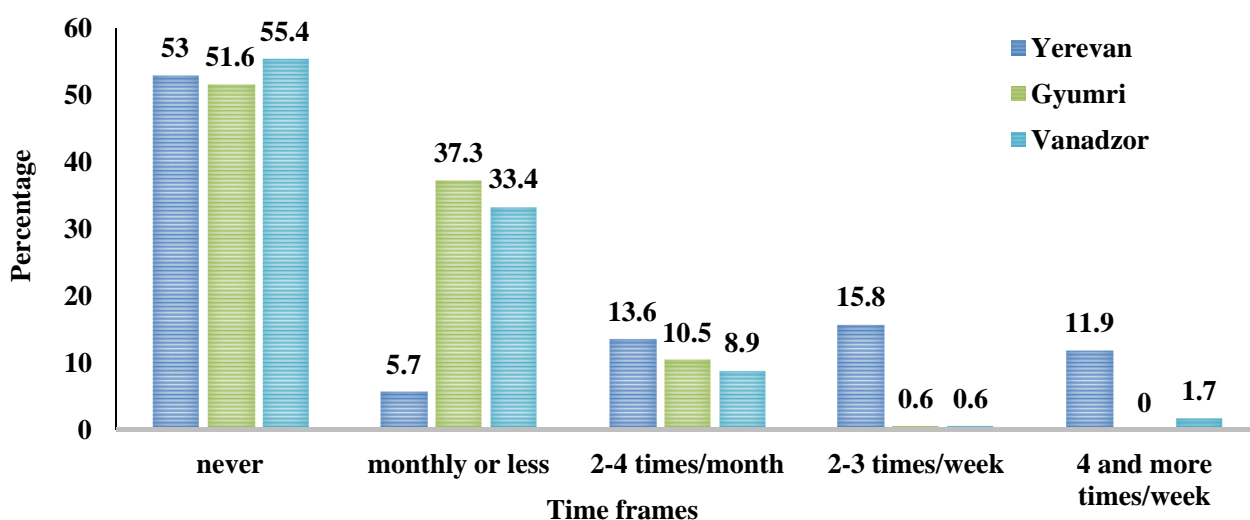
	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER HAD ANAL SEXUAL INTERCOURSE IN LAST YEAR						
YES	35	7.4 (4.6, 10.1)	10	4.9 (2.5, 7.2)	2	1.5 (0.02, 3.0)
NO	9	2.9 (0.7, 5.1)	3	1.8 (0.2, 3.3)	1	0.6 (0.0, 1.2)
DON'T HAVE SUCH KIND OF SEX	256	89.7 (86.3, 93.1)	137	93.3 (90.6, 96.1)	147	97.9 (96.3, 99.5)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
USED A CONDOM DURING LAST ANAL SEX IN LAST YEAR						
	28	74.7 (60.3, 88.2)	3	27.1 (0.0, 58.5)	0	--
EVER HAD ORAL SEX IN LAST YEAR						
YES	71	18.2 (12.2, 24.1)	10	8.9 (4.2, 13.5)	5	4.1 (1.6, 6.6)
NO	11	3.3 (1.1, 5.6)	2	0.6 (0.4, 0.8)	0	--
DON'T HAVE SUCH KIND OF SEX	218	78.5 (72.5, 84.5)	138	90.5 (85.9, 95.1)	145	95.9 (93.4, 98.4)
USED A CONDOM DURING LAST ORAL SEXING IN LAST YEAR						
	9	6.3 (0.4, 12.1)	1	12.7 (0.0, 38.1)	3	62.8 (24.6, 100)

Substance use

More than half of FSW reported never consuming alcoholic drinks (Figure 2.7). Of those, who consumed alcoholic drinks, frequency of consuming was generally low.

Figure 2.7 Frequency of consuming alcoholic drinks among FSW, Armenia, 2018



Among those who reported consuming alcohol, FSW in Yerevan (range: 1 to 30) and Vanadzor (range: 1 to 12) reported drinking 4 and in Gyumri (range: 1 to 8) reported drinking 3 alcoholic drinks on a typical day. In Yerevan, 92%, in Gyumri, 72% and in Vanadzor, 91% of FSW reported ever having sexual intercourse while under the influence of alcohol (Table 2.7). Few FSW reported ever using drugs, with the highest percentage among FSW in Gyumri (3.2%). Among the few who reported ever using drugs, none in Yerevan and Vanadzor and 88% in Gyumri reported having sexual intercourse under the influence of drugs. No one reported ever-injecting drugs.

Table 2.7. Substance use among FSW, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER HAD SEXUAL INTERCOURSE WHILE UNDER THE INFLUENCE OF ALCOHOL						
	166	91.5 (84.5, 98.2)	79	92.3 (85.7, 98.3)	48	72.3 (63.1, 83.4)
EVER USED DRUGS						
	1	0.2 (0.0, 0.3)	9	3.2 (2.1, 4.3)	1	1.5

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER HAD SEXUAL INTERCOURSE WHILE UNDER THE INFLUENCE OF DRUGS						
	0	--	8	88.1 (57.8, 100)	0	--

Sexually transmitted infections

Fifty seven percent of FSW in Yerevan, 12% in Gyumri, and 47% and in Vanadzor reported having had genital ulcers or sores in the past 12 months (Table 2.8). Most FSW reported receiving an STI test in the past 12 months, among which the majority in Yerevan received their test at the dermatovenerological dispensary and the majority in Gyumri and Vanadzor received their test at a primary clinic. From those, who received STI test, between 11% in Gyumri and Vanadzor and 48% in Yerevan reported being diagnosed with an STI in the past 12 months.

Table 2.8. *Sexually transmitted infections (STI) among FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAD GENITAL ULCERS/SORE IN PAST 12 MONTHS						
	164	57.3 (49.6, 64.9)	23	12.5 (8.5, 16.3)	70	46.6 (41.8, 51.7)
EVER RECEIVED STI TEST IN PAST 12 MONTHS						
	224	72.8 (65.3, 80.4)	127	88.1 (84.6, 91.5)	123	82.5 (77.0, 88.0)
PLACE WHERE RECEIVED STI TEST						
DERMATO-VENEROLOGICAL DISPENSARY	183	72.0 (64.2, 79.8)	7	5.9 (2.1, 9.7)	0	--
PRIVATE CLINIC	37	24.9 (17.2, 32.7)	25	23.7 (14.4, 33.4)	12	10.2 (6.0, 14.5)
PRIMARY CLINIC	4	3.0 (0.4, 5.7)	95	70.4 (59.2, 81.2)	111	89.8 (85.5, 93.9)
DIAGNOSED WITH AN STI IN PAST 12 MONTH						
	104	48.2 (39.4, 56.9)	17	11.0 (6.0, 15.6)	15	11.3 (6.7, 15.6)

HIV/AIDS risk, knowledge, beliefs and testing

HIV/AIDS risk, knowledge, and beliefs

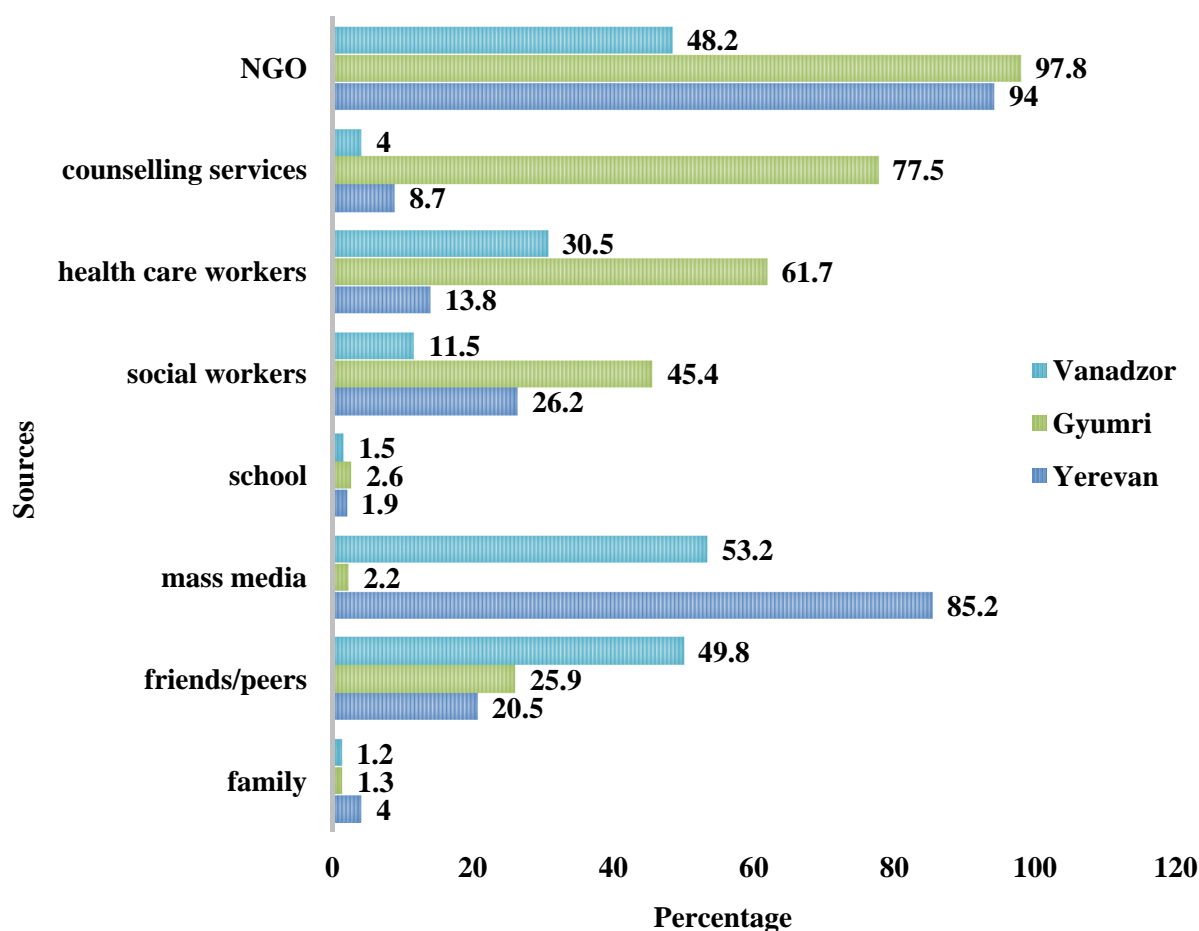
Few FSW in Yerevan and Vanadzor and none in Gyumri assessed themselves to be at high risk and no FSW in the three cities assessed themselves to be at no risk of HIV infection (Table 2.9). Whereas high percentages of FSW (more than 90%) in Gyumri and Vanadzor knew that the risk of HIV being reduced by having sex with one uninfected, faithful partner, only 67% in Yerevan knew this. The fact that HIV transmission can be reduced by using condoms was known by 89% in Yerevan, 100% in Gyumri and 70% in Vanadzor. Between 73% in Yerevan and Vanadzor and 98% in Gyumri knew that someone who appears to be healthy can still be HIV positive. Low percentages of FSW believe that HIV can be spread through mosquitos, and that someone can be infected with HIV by sharing a meal or shaking hands with someone who is infected. The overall composite knowledge score was 40% in Yerevan, 90% in Gyumri and 47% in Vanadzor.

Table 2.9. *HIV/AIDS risk, knowledge, and beliefs among FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
LEVEL OF ESTIMATED PROBABILITY OF BEING INFECTED WITH HIV						
HIGH	31	8.5 (5.2, 11.9)	0	--	10	4.6 (3.6, 5.6)
MEDIUM	169	58.2 (50.7, 65.6)	127	90.0 (87.3, 92.7)	41	26.5 (22.0, 30.9)
LOW RISK	100	33.3 (26.2, 40.3)	23	9.9 (7.3, 12.7)	99	68.8 (64.3, 73.5)
NO RISK	0	--	0	--	0	--
THE RISK OF HIV IS REDUCED BY HAVING SEX WITH ONE UNINFECTED, FAITHFUL PARTNER						
YES	200	67.1 (59.6, 74.6)	139	91.5 (87.4, 95.6)	148	97.8 (96.0, 99.7)
NO	84	25.8 (18.8, 32.8)	11	8.5 (4.4, 12.6)	2	2.2 (0.3, 4.0)
DO NOT KNOW	16	7.1 (3.2, 11.0)	0	--	0	--
THE RISK OF HIV IS REDUCED BY USING CONDOMS						
YES	268	89.3 (85.1, 93.5)	150	100	107	69.6 (64.5, 74.7)
NO	29	9.5 (5.4, 13.5)	0	--	37	26.0 (21.1, 30.9)
DO NOT KNOW	3	1.2 (0.1, 2.3)	0	--	6	4.4 (2.2, 6.6)
SOMEONE WHO APPEARS TO BE HEALTHY CAN STILL BE HIV POSITIVE						
YES	242	72.8 (65.2, 80.3)	148	98.5 (97.0, 100)	111	73.4 (68.5, 78.3)
NO	48	22.7 (15.7, 29.7)	1	(0.0, 1.7)	32	21.8 (17.1, 26.4)
DO NOT KNOW	10	4.5 (0.7, 8.3)	1	(0.0, 1.8)	7	4.8 (2.7, 7.0)
SOMEONE CAN GET HIV FROM A MOSQUITO						
YES	58	22.4 (15.8, 28.9)	0	--	34	23.6 (19.1, 28.1)
NO	216	69.2 (62.0, 76.4)	150	100	95	61.3 (56.1, 66.4)
DO NOT KNOW	26	8.4 (4.8, 12.0)	0	--	21	15.1 (11.2, 19.0)
SOMEONE CAN BE INFECTED WITH HIV BY SHARING A MEAL WITH SOMEONE WHO IS INFECTED						
YES	47	17.1 (11.0, 23.1)	0	--	1	0.4 (0.2, 0.7)
NO	243	78.3 (71.7, 84.9)	150	100	135	90.3 (87.4, 93.3)
DO NOT KNOW	10	4.6 (0.8, 8.3)	0	--	14	9.2 (6.3, 12.1)
SOMEONE CAN BE INFECTED WITH HIV BY SHAKING HANDS WITH SOMEONE WHO IS INFECTED						
YES	19	8.0 (4.2, 11.9)	0	--	17	11.8 (8.3, 15.3)
NO	272	88.1 (83.3, 92.8)	150	100	120	79.5 (75.2, 83.8)
DO NOT KNOW	9	3.8 (0.5, 7.2)	0	--	13	8.6 (6.1, 11.1)
KNOWLEDGE INDICATOR						
YES	129	39.9 (32.3, 47.4)	137	90.0 (85.5, 94.5)	73	46.6 (40.3, 52.7)

Most FSW in Yerevan and Gyumri reported NGOs as a source of HIV/AIDS information, whereas most FSW in Vanadzor- mass media as a source of HIV/AIDS information (Figure 2.8). Few reported family or school as being sources of HIV/AIDS information.

Figure 2.8. Sources of HIV/AIDS information among FSW, Armenia, 2018



HIV testing and services

High percentages of FSW in Yerevan, Gyumri and Vanadzor (more than 93%) reported being reached by HIV prevention programs (Table 2.10). Nearly all FSW in all survey locations reported knowing where to get an HIV test, having access to HIV test services and having ever had an HIV test. Among those who ever had an HIV test, almost all in Gyumri and Vanadzor and 48% in Yerevan reported having had an HIV test in the last 12 months, among which almost all received their test results. No one reported having positive test results.

Table 2.10. HIV testing and condoms access among FSW, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
REACHED BY HIV PREVENTION PROGRAMS						
	292	96.9 (94.6, 99.2)	147	98.5 (97.3, 99.6)	140	93.4 (90.1, 96.6)
KNOWS WHERE TO GET AN HIV TEST						
	292	96.3 (93.7, 98.9)	150	100	148	99.0 (98.3, 99.6)
ACCESSIBILITY OF HIV TEST SERVICES						
	291	95.5 (92.7, 98.5)	148	99.2 (98.5, 99.8)	148	98.8 (97.7, 99.8)
EVER HAD AN HIV TEST						
	279	89.0 (83.5, 94.6)	149	99.7 (99.3, 100)	148	98.8 (97.6, 99.8)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAD HIV TEST IN PAST 12 MONTHS OR KNOW CURRENT HIV STATUS						
	165	48.1 (39.1, 56.9)	146	98.3 (97.1, 99.5)	143	96.7 (94.9, 98.4)
TESTED IN LAST 12 MONTHS AND RECEIVED TEST RESULTS DURING LAST HIV TEST (AMONG ALL PARTICIPANTS)						
	165	42.9 (35.2, 50.6)	146	98.0 (96.7, 99.2)	143	95.5 (93.4, 97.5)
TEST RESULT FROM LAST HIV TEST						
POSITIVE	0	--	0	--	0	--
NEGATIVE	277	99.9 (99.7, 100)	149	100	143	100
INDETERMINANT	1	0.09 (0.0, 0.2)	0	--	0	--

Stigma and discrimination

Few FSW reported avoiding health care because of stigma and discrimination in the past 12 months, among which almost all in Yerevan and Vanadzor reported that they avoided health care because they feared that someone may learn that they sell sex (Table 2.11). Between 60% in Yerevan and 82% in Vanadzor reported being ashamed that they sell sex, however, between 42% in Gyumri and 64% in Yerevan reported that they were not ashamed to admit to selling sex to their peers who also sell sex. Between 7% in Gyumri and 58% in Yerevan reported that they agree that they are not ashamed to admit to selling sex in meetings with a social or health working in my community. Between 50% of FSW in Gyumri and 96% in Vanadzor reported that they have told others that they sold sex, among which the majority reported telling their friends and acquaintances that also sell sex. Few reported telling health care workers or family that they sell sex. Few reported seeking an HIV test in the past year, among which the majority reported that their reason being that they feared someone would find out they sell sex. Under one quarter of FSW reported ever being scolded, blackmailed, or physically harassed/hurt for selling sex. Five percent of FSW in Yerevan, 20% in Gyumri and no one in Vanadzor reported ever being forced to have sex; of those, the majority reported that they were forced because they sell sex.

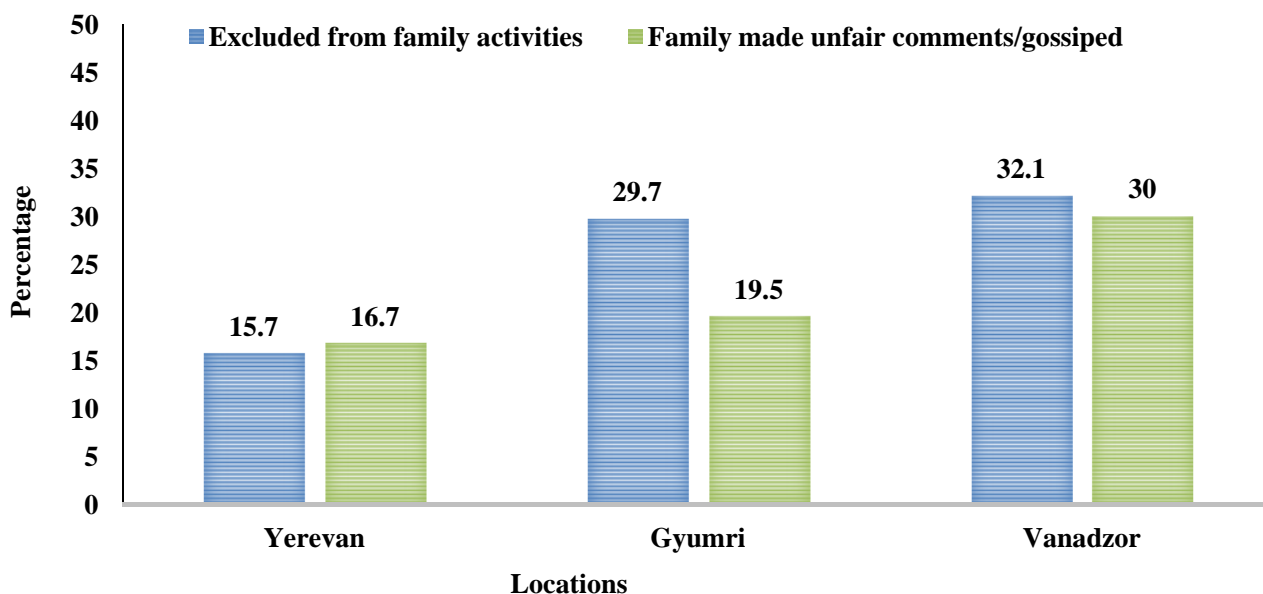
Table 2.11. *Stigma and discrimination among FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AVOIDED HEALTH CARE BECAUSE OF STIGMA AND DISCRIMINATION						
	29	9.4 (4.5, 14.4)	3	1.1 (0.4, 1.9)	2	1.1 (0.2, 2.0)
FEARS/CONCERNS FOR AVOIDING SEEKING HEALTH CARE IN LAST 12 MONTHS:						
ABOUT STIGMA	2	2.6 (0.0, 5.3)	1	100	0	--
SOMEONE MAY LEARN SHE SELLS SEX	27	97.3 (94.7, 100)	0	--	2	100
OF VIOLENCE OR EXPERIENCED VIOLENCE	0	--	0	--	0	--
ABOUT OR EXPERIENCED POLICE HARASSMENT	0	--	0	--	0	--
ASHAMED TO SELL SEX						
AGREE	184	59.7 (52.2, 67.1)	111	68.6 (61.2, 76.0)	122	82.2 (78.4, 86.1)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
NO OPINION	54	15.1 (11.0, 19.0)	35	29.4 (22.2, 36.6)	16	10.9 (7.2, 14.5)
DISAGREE	59	25.2 (17.8, 32.7)	4	2.0 (0.6, 3.4)	12	6.9 (4.7, 9.1)
NOT ASHAMED TO ADMIT SELLING SEX IN GROUP OF OTHER PEOPLE WHO SELL SEX						
AGREE	215	64.4 (56.1, 72.8)	71	41.9(35.6, 48.2)	76	47.9 (42.5, 53.4)
NO OPINION	13	3.7 (1.6, 5.8)	56	41.5 (35.1, 47.8)	8	5.4 (2.8, 8.0)
DISAGREE	70	31.8 (23.1, 40.1)	23	16.6 (11.0, 22.2)	66	46.7 (41.3, 52.1)
NOT ASHAMED TO ADMIT TO SELLING SEX IN MEETINGS WITH SOCIAL/HEALTH WORKING IN MY COMMUNITY						
AGREE	203	58.5 (51.0, 65.8)	11	7.0 (3.5, 10.5)	85	52.9 (46.8, 59.1)
NO OPINION	15	5.5 (2.0, 8.9)	41	29.5 (22.9, 36.0)	7	4.8 (2.2, 7.5)
DISAGREE	81	36.1 (28.5, 43.7)	98	63.5 (56.5, 70.5)	58	42.2 (36.4, 47.9)
HAS TOLD ANYONE THAT SHE SELLS SEX						
	228	67.3 (58.6, 76.1)	88	50.1 (41.5, 58.4)	143	95.8 (94.1, 97.5)
PERSONS TOLD THAT SHE SELLS SEX						
PARTNER/SPOUSE	63	22.6 (15.9, 29.0)	8	7.0 (1.9, 10.2)	82	59.1 (53.7, 64.8)
FAMILY	19	6.0 (1.9, 10.0)	1	0.9 (0.0, 2.0)	7	6.0 (2.3, 9.8)
FRIENDS/ ACQUAINTANCES WHO SELL SEX	218	94.9 (91.5, 98.3)	88	100	103	68.7 (62.4, 74.4)
FRIENDS/ ACQUAINTANCES WHO DO NOT SELL SEX	44	28.3 (19.7, 37.0)	1	0.9 (0.0, 2.1)	5	3.1 (1.3, 4.8)
HEALTH CARE PROVIDERS	10	5.5 (2.0, 9.0)	1	0.9 (0.0, 2.1)	13	9.1 (6.0, 12.3)
AVOIDED SEEKING HIV TEST IN LAST 12 MONTHS						
	18	6.7 (2.6, 10.8)	2	0.8 (0.1, 1.5)	2	1.1 (0.2, 2.1)
FEARS/CONCERNS FOR AVOIDING SEEKING HIV TEST IN LAST 12 MONTHS:						
ABOUT STIGMA	1	2.4	1	42.6 (0.0, 92.5)	0	--
SOMEONE MAY LEARN SHE SELLS SEX	17	97.5	1	57.3 (5.8, 100)	2	100
ABOUT VIOLENCE/ EXPERIENCED VIOLENCE	0	--	0	--	0	--
ABOUT/EXPERIEN CED POLICE HARASSMENT	0	--	0	--	0	--
EVER SCOLDED FOR SELLING SEX						
	42	10.1 (6.4, 13.8)	33	23.9 (17.7, 30.0)	28	18.7 (14.2, 23.3)
EVER BLACKMAILED FOR SELLING SEX						
	6	2.9 (0.4, 5.6)	28	16.7 (11.8, 21.5)	6	4.7 (1.5, 7.9)
EVER PHYSICALLY HARASSED/HURT FOR SELLING SEX						
	21	5.0 (2.2, 7.7)	26	20 (14.3, 25.4)	3	2.6 (0.08, 5.1)
EVER FORCED TO HAVE SEX						
	19	4.8 (2.0, 7.4)	26	19.7 (14.0, 25.4)	0	--
FORCED TO HAVE SEX BECAUSE SHE SELLS SEX						
	16	84.2 (55.8, 100)	20	77.0 (60.8, 91.0)	0	--

Between 16% in Yerevan and 32% in Vanadzor reported ever being excluded from family activities and between 17% in Yerevan and 30% in Vanadzor reported that their family made unfair comments or gossiped about them because they sell sex (Figure 2.9).

Figure 2.9. *Ever felt stigma because of selling sex among FSW, Armenia, 2018*



Violence

Only FSW in Yerevan (8%) and Gyumri (20%) reported ever being physically hurt (Table 2.12), among which FSW reported being physically hurt a median of nine times in Yerevan and two times in Gyumri. Median age of being physically hurt is 21 in Yerevan and 28 in Gyumri. Most FSW reported that the person who physically hurt them was a paying sex partner and that they were physically hurt because they sell sex. Twenty-one percent in Yerevan and only 4% in Gyumri ever tried to seek professional help because of being physically hurt, of which few were refused help. The most cited reasons for not seeking professional help was because of not feeling comfortable, especially due to fears about being poorly treated because they sell sex or being afraid that “others would find out she sells sex”. The majority of FSW told friends or acquaintances about being physically hurt.

Table 2.12. *Violence towards FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER BEEN PHYSICALLY HURT						
	32	7.8 (4.6, 11.1)	27	20.3 (14.7, 25.9)	0	--
RELATIONSHIP TO PERSON WHO PHYSICALLY HURT RESPONDENT FIRST TIME						
PAYING SEX PARTNER	18	51.1 (31.5, 69.6)	18	75.2 (69.2, 87.0)	0	--
NON-PAYING SEX PARTNER	1	5	1	2.3	0	--
POLICE/MILITARY /AUTHORITY	0	--	0	--	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
RELATIVE	10	36.8 (18.1, 56.2)	2	6.3	0	--
FRIEND/ ACQUAINTANCE	1	5	6	16.2 (5.1, 22.9)	0	--
TYPE OF PARTNER WHO PHYSICALLY HURT RESPONDENT FIRST TIME						
SPOUSE/LIVE IN PARTNER	9	38.0 (19.0, 57.7)	0	--	0	--
BOY/GIRLFRIEND	0	--	2	9.6	0	--
CASUAL SEX PARTNER	20	62.0 (42.3, 81.0)	12	90.4	0	--
EVER PHYSICALLY HURT BECAUSE SHE SELLS SEX						
	21	59.0 (39.9, 77.3)	17	63.3 (50.5, 75.6)	0	--
EVER TRIED TO SEEK PROFESSIONAL HELP BECAUSE OF BEING PHYSICALLY HURT						
	6	20.7 (6.6, 34.8)	2	3.8 (0.0, 5.9)	0	--
WHICH PROFESSIONAL HELP SOUGHT BECAUSE OF BEING PHYSICALLY HURT						
HEALTH CARE PROFESSIONAL	0	--	1	60.1 (41.4, 100)	0	--
POLICE/SECURITY PERSONNEL	5	53.3 (13.7, 89.5)	1	39.9 (0.0, 59.4)	0	--
SOCIAL WORKER/ COUNSELOR/NGO	0	--	0	--	0	--
RELATIVES	2	57.4 (17.7, 98.3)	0	--	0	--
EVER REFUSED HELP WHEN SEEKING HEALTH BECAUSE OF BEING PHYSICALLY HURT						
	1	3.8 (0.0, 6.6)	0	--	0	--
BY WHOM REFUSED HELP WHEN SEEKING HEALTH BECAUSE OF BEING PHYSICALLY HURT						
HEALTH CARE PROFESSIONAL	0	--	0	--	0	--
POLICE/SECURITY PERSONNEL	0	--	0	--	0	--
LEGAL PROFESSIONAL	0	--	0	--	0	--
SOCIAL WORKER/ COUNSELOR/NGO	0	--	0	--	0	--
RELIGIOUS LEADER	0	--	0	--	0	--
REASON FOR NOT SEEKING PROFESSIONAL HELP						
DID NOT KNOW OF SERVICES AVAILABLE	2	8.8 (0.0, 21.4)	0	--	0	--
SERVICES NEEDED, NOT AVAILABLE	1	1.4	0	--	0	--
TOO EXPENSIVE	0	--	0	--	0	--
DID NOT FEEL COMFORTABLE	10	45.6 (26.0, 66.1)	25	100	0	--
DID NOT NEED	13	44.2 (25.3, 62.3)	0	--	0	--
REASONS FOR BEING UNCOMFORTABLE						
POOR TREATMENT IF THEY KNOW SHE SELLS SEX	3	54.4 (15.1, 95.5)	18	74.1	0	--
AFRAID FAMILY MEMBER WOULD FIND OUT SHE SELLS SEX	0	--	3	11.7	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AFRAID POLICE WOULD DO SOMETHING BECAUSE SHE SELLS SEX	6	80.1 (39.1, 100)	4	18.2	0	--
AFRAID OTHERS WOULD FIND OUT SHE SELLS SEX	1	11.6 (0.0, 53.6)	5	15.7 (5.1, 24.3)	0	--
PERSONS TOLD ABOUT EVER BEING PHYSICALLY HURT						
PAYING SEX PARTNER	0	--	0	--	0	--
NON-PAYING SEX PARTNER	2	5.2	0	--	0	--
POLICE/MILITARY/AUTHORITY	1	2.8	0	--	0	--
RELATIVE	9	43.1 (24.6, 62.5)	4	18.2 (3.9, 23.5)	0	--
FRIEND/ACQUAINTANCE	15	54.0 (24.6, 62.5)	8	76 (69.8, 91.8)	0	--

HIV, Gonorrhea (NG), Trichomoniasis, Chlamydia (CT) and Syphilis prevalence

No HIV positive cases were found in Gyumri or Vanadzor and 0.6% was found in Yerevan (Table 2.11). NG prevalence was 5% in Yerevan, 6% in Gyumri, and 3% in Vanadzor. Twenty one percent of FSW in Yerevan, 15% in Gyumri, and 25% in Vanadzor were positive for Trichomoniasis. The highest prevalence of CT was among FSW in Gyumri (14%), followed by Vanadzor (8%) and Yerevan (6%). Syphilis prevalence was 15% in Yerevan, 5% in Gyumri and 4% in Vanadzor.

Table 2.13. *Prevalence of HIV, Gonorrhoea, Trichomoniasis, Chlamydia and Syphilis among FSW, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HIV						
	3	0.6 (0.0, 1.3)	0	--	0	--
GONORRHEA						
	19	5.3 (2.4, 8.3)	9	6.3 (3.1, 9.6)	4	2.9 (0.5, 5.3)
TRICHOMONIASIS						
	69	21.3 (15.6, 27.0)	24	14.8 (10.4, 19.0)	37	24.8 (20.0, 29.6)
CHLAMYDIA						
	20	5.9 (2.9, 8.9)	23	14.3 (9.7, 18.8)	12	8.0 (5.2, 10.8)
SYPHILIS						
	43	15.5 (9.8, 21.2)	9	4.8 (2.5, 7.1)	8	4.2 (2.8, 5.7)

DISCUSSION AND RECOMMENDATIONS OF FSW FINDINGS

FSW traveling abroad engage in high-risk behaviors

Twenty five percent of FSW in Gyumri and 35% in Yerevan, reported having sex without a condom while away from home for more than one month in the last year. Few in Vanadzor have been away from home. Out of those away from home for more than 1 month in the last year, many FSW (83% in Gyumri and 21% in Yerevan) reported being abroad for more than three months for selling sex. Short-term mobility has been found to facilitate partnership concurrency, enabling HIV to spread quickly within larger sexual networks(9,10). HIV prevention interventions targeting mobile FSW should include education and awareness campaigns.

Sex with non-commercial partners and inconsistent condom use

Less estimates ranging from 22% to 37% of FSW in all cities reported having sex with non-commercial partners in the past 12 months. Although most FSW in Vanadzor and around one quarter in Yerevan and Gyumri reported always using condoms during sex with non-commercial partners, a notable percentage in all cities reported never using condoms during sex with non-commercial partners. The most commonly reported reasons for not always using condoms was that they trusted their partner, condoms reduce pleasure. These findings highlight the need for HIV prevention interventions that engage both FSW and their sex partners (non-commercial and commercial). Improvement of condom negotiation skills, provision of HIV/AIDS risk and transmission education should be the focus of interventions targeting FSW. Other prevention options, such as pre-exposure prophylaxis (PREP), should be accessible to FSW. Additionally, health care and other service providers should encourage routine HIV testing and STI screening for FSW and their partners(11).

Substance use and risky sexual practices

Although alcohol use among FSW was moderate, sexual risk behaviors under the influence of alcohol was high. Drug use was low among FSW in all three cities: few FSW reported ever using drugs and even fewer reported ever injecting drugs. However, among the few who reported using drugs, most in Vanadzor reported having sexual intercourse while under the influence of drugs. FSW may resort to drugs or alcohol as a way to cope, but being under the influence of drugs or alcohol before or during sexual intercourse may make it difficult for FSW to negotiate safer sex practices(11,12).Future research of FSW in Armenia is needed to gain a better understanding of their alcohol and drug use behaviors. Targeted HIV prevention interventions should address both substance use and associated risky sexual behaviors among FSW. The implementation of HIV prevention interventions and alcohol reduction strategies delivered through alcohol serving venues may help expand HIV prevention information among FSW who consume alcohol. Substance abuse counseling and treatment programs should be considered as part of any comprehensive HIV prevention and intervention program.

Screening for STI among FSW

A notable percentage of FSW in the study reported having genital ulcers or sores within the past 12 months (between 13% and 57%) and most reported receiving an STI test in past 12 months: estimates range from 73% of FSW in Yerevan to 88% in Gyumri. Among FSW who were tested

within the last 12 months, 11% in Vanadzor and Gyumri, and 48% in Yerevan reported being diagnosed with an STI. Presence of STI increases risk for HIV infection(11). Early diagnosis and treatment of STI are important for improving health and reducing the risk of HIV transmission. Routine HIV and other STI testing should be offered in both clinical and non-clinical settings to ensure all FSW are being reached.

HIV testing among FSW is high

Even though risk perception of HIV infection was low to medium, HIV testing was high among FSW. At least 89% of FSW in all three cities reported ever having an HIV test, with a large percentage reporting having a test and receiving their results within the last 12 months. Ensuring access to FSW-friendly testing services is important. Sensitivity training should be required for all health care and service providers.

High Trichomoniasis and Chlamydia prevalence

Trichomoniasis prevalence was high among FSW: 21% in Yerevan, 15% in Gyumri, 25% in Vanadzor. Chlamydia prevalence was also high, ranging from 6% to 14% among all FSW in the study. FSW-friendly health centers are essential in diagnosing and treating STI among FSW. Screening for STI in non-clinical settings may help to increase the number of FSW who get tested. Provision of treatment for HIV and other infections for FSW should be the focus of HIV prevention programming.

Low HIV and Syphilis prevalence

HIV prevalence was less than 1% among FSW surveyed in Yerevan. No cases of HIV were detected in Gyumri and Vanadzor. Syphilis prevalence was high in Yerevan (15%) and low in Gyumri and Vanadzor (less than 5%). Gonorrhea prevalence was moderate in Yerevan and Gyumri, and low in Vanadzor. Despite the low prevalence of HIV, efforts to expand HIV/AIDS awareness, education, and screening programs must continue.

Avoiding healthcare services due to stigma and discrimination is low

Less than 10% of FSW in all surveyed cities reported avoiding healthcare services due to stigma and discrimination. Notable amount of FSW were ashamed to tell social and healthcare workers about selling sex (ranges 36% to 64%). Further research is needed to understand the extent of influence of stigma and discrimination to the accessibility of health care services.

FSW report low levels of physical violence

Most FSW in Yerevan and Gyumri did not report ever experiencing physical violence, no case of physical violence was reported in Vanadzor. Among those who reported being physically hurt, most in Yerevan and Gyumri reported being harassed by a paying partner, followed by a relative and a friend/acquaintance. Further research is needed to explore the cases of physical violence more in-depth.

SUMMARY OF KEY RECOMMENDATIONS

- Distribute condoms and deliver HIV/AIDS prevention messages to target mobile FSW.
- Scale up non-clinical and clinical routine HIV and STI testing services.
- Scale-up coverage of combination prevention services.
- Educate health care and other service providers on the specific needs of the FSW population.
- Scale up HIV/AIDS education services, which engage both FSW and their partners.
- Include local establishments (e.g. bars, hotels and restaurants) in the planning and implementation of HIV prevention interventions targeting FSW.

3. OVERVIEW: MEN WHO HAVE SEX WITH MEN (MSM)

The maximum number of waves reached in the recruitment chains of Yerevan was 11 (Figure 3.1), in Gyumri was 9 (Figure 3.2), and in Vanadzor was 10 (Figure 3.3). Seeds are at the top of each chain

Figure 3.1. *Recruitment graph of the MSM sample (n=300), with four recruitment chains, Yerevan, Armenia, 2018*

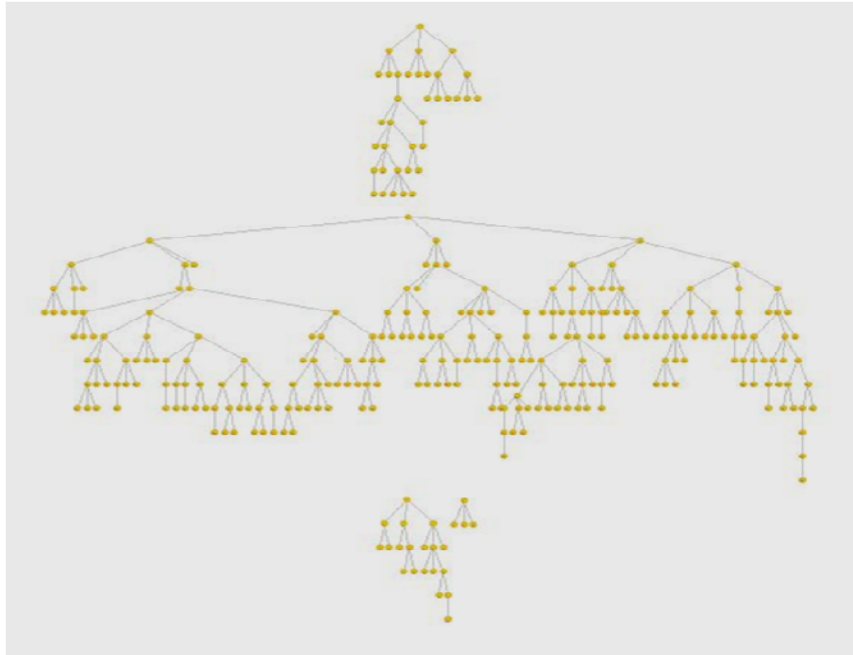


Figure 3.2. *Recruitment graph of the MSM sample (n=150), with two recruitment chains, Gyumri, Armenia, 2018*

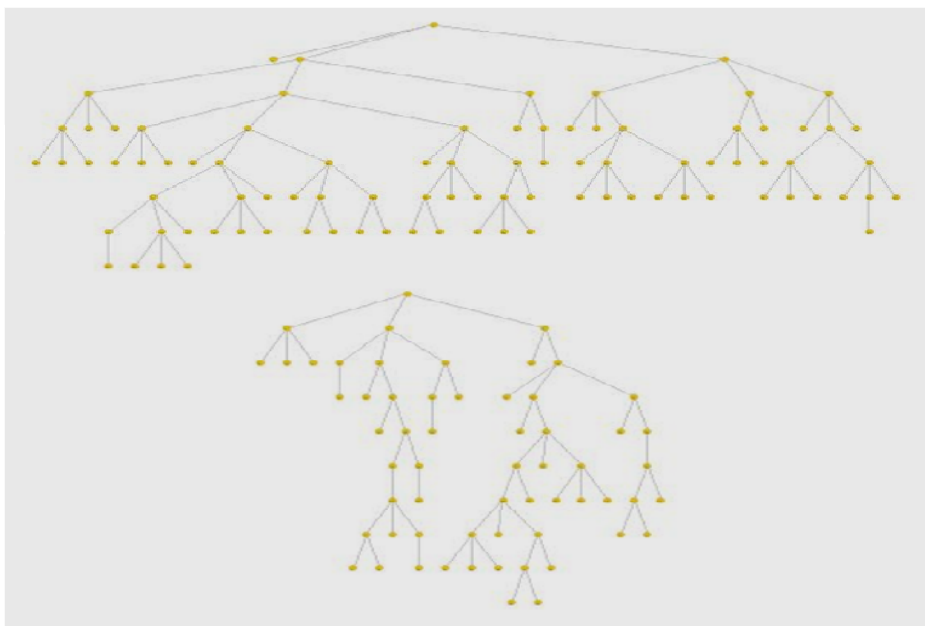
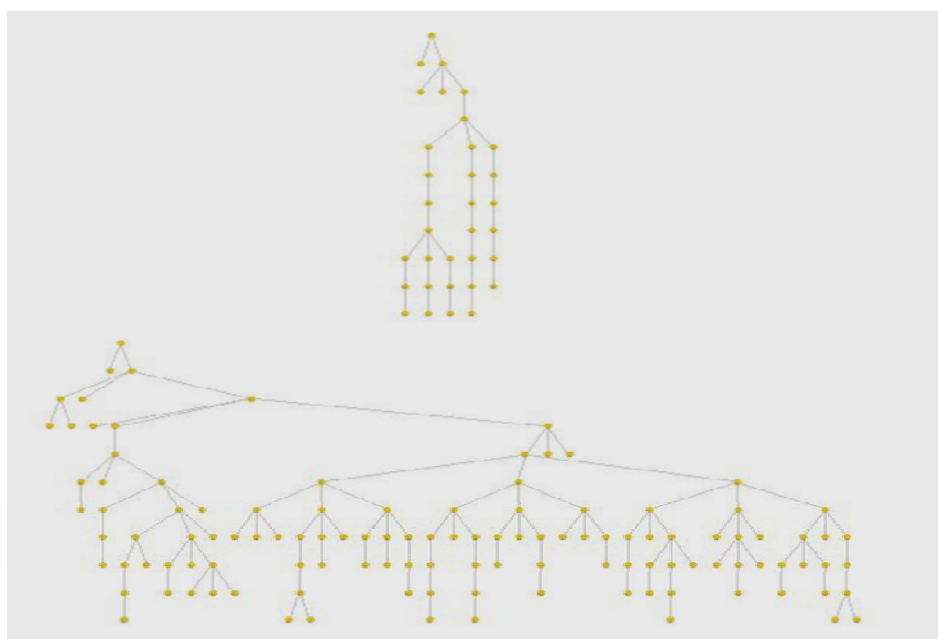


Figure 3.3. Recruitment graph of the MSM sample (n=150), with two recruitment chains, Vanadzor, Armenia, 2018



Socio-demographic characteristics

Age, education and employment

The majority of MSM in Yerevan were 24 years and younger, whereas in Gyumri and Vanadzor the majority were 25 years and older (Table 3.1) with median ages of 24 in Yerevan (range: 18 to 63), 32 in Gyumri (range: 18 to 69) and 26 in Vanadzor (range: 18 to 54). Nearly all MSM in Yerevan, Gyumri, and Vanadzor reported being born in Armenia and having any schooling, among which the majority reported having technical or higher education.

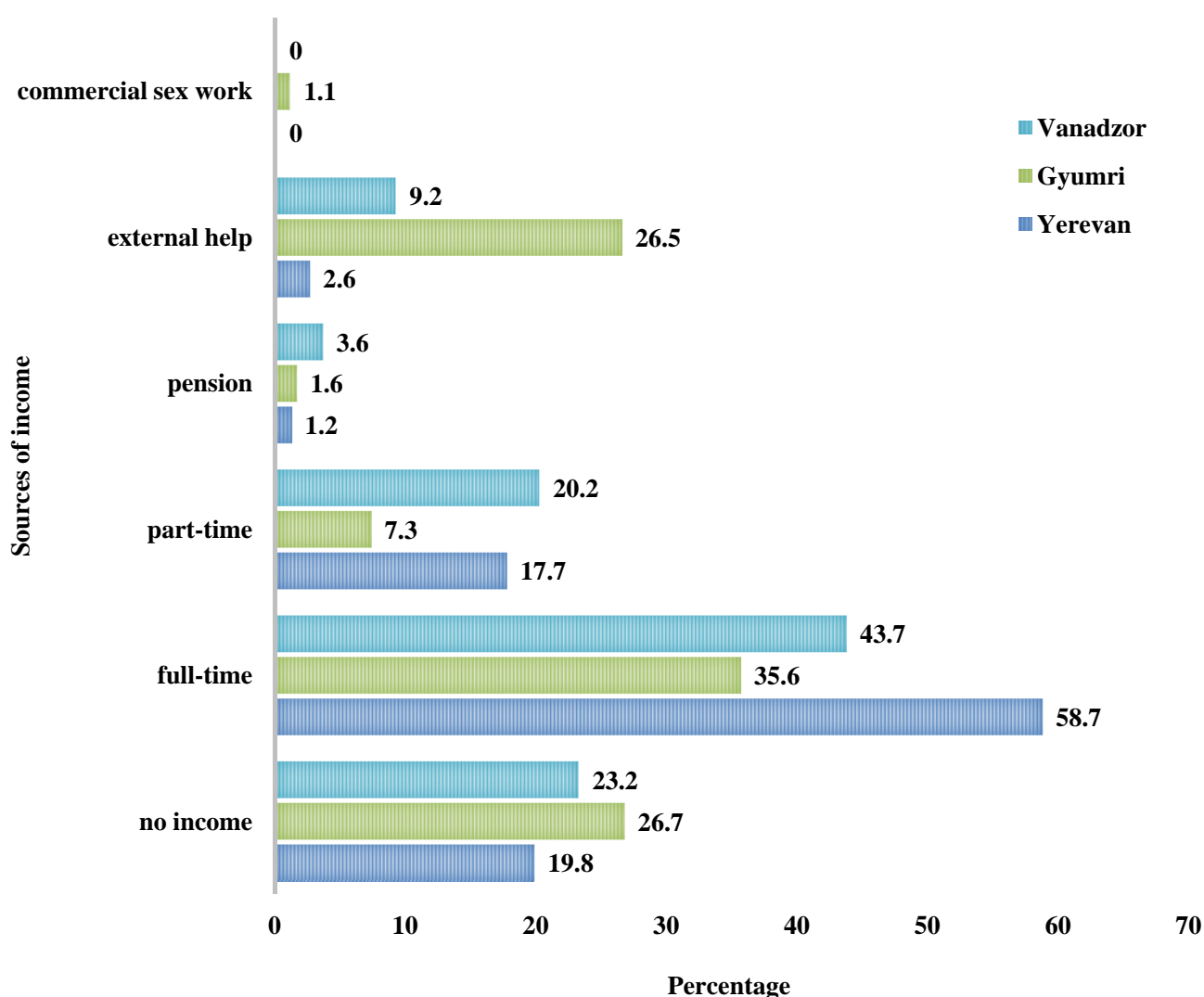
Table 3.1. Age, education and employment of MSM, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AGE GROUPS						
<24	150	52.3 (43.1, 61.5)	31	22.1 (15.7, 28.5)	60	40.8 (33.6, 48.0)
25-34	114	33.6 (25.7, 41.5)	53	36.9 (29.6, 44.0)	63	40.9 (33.8, 48.0)
35-44	28	10.1 (5.8, 14.4)	45	28.1 (22.5, 34.8)	20	13.5 (8.2, 18.7)
45+	8	4.0 (0.5, 7.5)	21	12.9 (8.2, 17.6)	7	4.8 (1.6, 7.9)
AGE GROUPS						
<25	148	52.1 (43.4, 60.8)	30	21.3 (15.1, 27.5)	60	40.8 (33.6, 48.1)
≥25	151	47.9 (39.2, 56.6)	119	78.7 (72.5, 84.7)	90	59.2 (51.9, 66.4)
NATIONALITY AT BIRTH						
REPUBLIC OF ARMENIA	286	95.9 (92.8, 99.0)	140	93.9 (90.6, 97.2)	144	95.1 (91.0, 99.3)
RUSSIAN FEDERATION	10	4.1 (1.0, 7.2)	7	5.0 (1.9, 8.2)	5	4.9 (0.7, 9.0)
REPUBLIC OF GEORGIA	0	--	1	0.6 (0.0, 1.4)	0	--
OTHER	0	--	1	0.4 (0.0, 1.0)	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
ANY SCHOOLING						
	298	98.5 (96.5, 100)	147	98.4 (96.7, 100)	150	100
THE HIGHEST LEVEL OF SCHOOL COMPLETED						
PRIMARY	54	19.9 (13.1, 26.7)	25	17.5 (11.6, 23.4)	0	--
SECONDARY	52	22.4 (15.5, 29.3)	50	32.3 (25.5, 39.1)	39	29.5 (22.7, 36.3)
TECHNICAL	55	21.0 (15.1, 26.9)	39	27.5 (20.9, 34.1)	18	11.0 (7.1, 15.0)
HIGHER	135	36.7 (29.1, 44.3)	33	22.7 (16.2, 29.2)	93	59.5 (52.6, 66.4)

Around 59% of MSM in Yerevan, 36% in Gyumri and 44% in Vanadzor reported having full-time employment as their source of income (Figure 3.4). Few MSM reported selling sex as a source of income.

Figure 3.4. Sources of income among MSM, Armenia, 2018



Marital status and living situation

Most MSM in all cities reported being single and between 14% in Yerevan and 32% in Vanadzor reported living with their sexual partner (Table 3.2).

Table 3.2. *Marital status and living situation of MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
CURRENT MARITAL STATUS						
SINGLE	255	82.1 (76.2, 88.1)	79	55.4 (48.0, 62.7)	89	61.0 (54.2, 67.8)
MARRIED	33	14.0 (8.4, 19.7)	36	22.9 (16.6, 29.1)	51	32.1 (25.8, 38.5)
DIVORCED	12	3.8 (1.5, 6.2)	33	20.8 (15.2, 26.6)	9	6.5 (3.0, 10.1)
CIVIL MARRIAGE	0	--	1	0.3 (0.0, 0.6)	1	0.3 (0.0, 0.7)
WIDOWER	0	--	1	0.6 (0.0, 1.4)	0	--
LIVES WITH MALE SEXUAL PARTNER						
	33	14.0 (7.9, 20.0)	43	25.8 (19.9, 31.8)	51	32.0 (25.9, 38.4)

MSM social characteristics

Sexual preferences and identities

The majority of MSM in all survey locations reported identifying as being bisexual and equally preferring male and female sexual partners (Table 3.3).

Table 3.3. *Sexual preferences and identities of MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
SEXUAL IDENTIFICATION						
HOMOSEXUAL	106	25.4 (18.7, 32.1)	34	21.3 (15.9, 26.9)	64	39.6 (32.7, 46.4)
BISEXUAL	189	71.8 (64.7, 78.8)	111	76.1 (70.1, 81.8)	84	59.5 (52.7, 66.4)
HETEROSEXUAL	4	2.8 (0.0, 6.1)	3	2.1 (0.0, 4.1)	1	0.6 (0.0, 1.4)
TRANSGENDER/ SEXUAL	0	--	1	0.2 (0.2, 0.2)	1	0.3 (0.3, 0.4)
OTHER	1	0.0 (0.0, 0.1)	1	0.2 (0.2, 0.2)	0	--
PREFERRED SEX OF SEXUAL PARTNERS						
ONLY OR MOSTLY MALE	123	32.3 (23.7, 40.8)	41	25.8 (19.2, 32.3)	65	40.1 (33.1, 47.2)
EQUALLY MALE/ FEMALE	160	57.1 (49.2, 64.9)	87	60.8 (53.4, 68.2)	84	58.5 (51.6, 65.4)
MOSTLY FEMALE	16	10.6 (4.6, 16.7)	22	13.4 (8.4, 18.4)	1	1.3 (0.0, 4.0)

Mobility

Between 24% in Yerevan and 51% in Gyumri being away from home for more than one month in the past year, among which the majority in Yerevan and Gyumri reported being in other areas of Armenia and the 56% in Vanadzor reported being in the Russian Federation (Table 3.4). Among MSM who were away from home, between 18% in Vanadzor and 46% in Gyumri reported engaging in sex without a condom while away from home and 16% in Yerevan and 49% in Vanadzor reported being abroad for three months or more in the last year for the purposes of labor.

Table 3.4. *Mobility among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AWAY FROM HOME FOR MORE THAN ONE MONTH IN LAST YEAR						
	68	23.7 (17.2, 30.2)	72	50.7 (42.6, 59.0)	52	34.4 (27.8, 41.1)
COUNTRY WHERE RESPONDENT WAS AWAY FROM HOME FOR MORE THAN 1 MONTH IN LAST YEAR						
ARMENIA	35	63.8 (52.1, 76.0)	35	49.6 (36.9, 62.4)	18	25.0 (7.1, 34.6)
RUSSIA	17	23.3 (12.7, 34.1)	24	33.6 (21.8, 45.8)	25	55.8 (40.8, 78.4)
UKRAINE	1	1.0 (0.6, 1.5)	3	4.2 (0.0, 9.2)	2	2.0 (0.0, 2.4)
OTHER	13	11.8 (4.3, 18.6)	9	12.5 (3.8, 20.8)	7	17.2 (6.0, 31.0)
HAD SEX WITHOUT CONDOM WHILE AWAY FROM HOME FOR MORE THAN 1 MONTH IN LAST YEAR						
	25	41.5 (26.9, 56.5)	32	45.7 (33.4, 58.1)	12	18.5 (2.7, 30.6)
ABROAD FOR THREE MONTHS OR MORE IN LAST YEAR FOR LABOR						
	11	15.6 (5.7, 25.6)	29	41.8 (30.0, 53.7)	23	49.4 (32.4, 71.8)

Substance use

The majority of MSM reported consuming alcohol, however few reported drinking alcohol four or more times a week and around 50% reported having six or more drinks on one occasion less than months (Table 3.5). Among MSM reporting alcohol consumption, most in all cities reported having sexual intercourse under the influence of alcohol. Between 21% of MSM in Yerevan and Gyumri, and 39% in Vanadzor reported ever using drugs, among which 43% in Vanadzor and 79% in Gyumri reported engaging in sexual intercourse while under the influence of drugs. Few MSM reported ever injecting drugs. MSM in Yerevan reported being 18 years of age (range: 13 to 35), in Gyumri reported being 19 years (range: 15 to 40) and in Vanadzor 20 years (range: 16 to 36) when they first consumed drugs.

Table 3.5. *Substance use among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
FREQUENCY OF CONSUMING ALCOHOLIC DRINKS						
NEVER	134	41.5 (33.8, 49.2)	9	5.1 (2.2, 8.1)	4	2.7 (0.4, 5.0)
MONTHLY OR LESS	64	23.7 (17.8, 29.6)	40	26.8 (20.4, 33.2)	76	51.8 (43.9, 59.8)
2-4 TIMES A MONTH	42	16.3 (9.9, 22.7)	48	32.8 (26.0, 39.5)	41	24.2 (18.8, 29.7)
2-3 TIMES A WEEK	34	9.8 (5.7, 13.8)	27	21.0 (14.4, 27.6)	23	17.0 (10.6, 23.3)
4 + TIMES A WEEK	26	8.6 (4.6, 12.6)	26	14.2 (9.7, 18.7)	6	4.2 (1.3, 7.2)
FREQUENCY OF ALCOHOLIC DRINKS (SIX OR MORE) CONSUMED ON ONE OCCASION						
NEVER	37	23.1 (13.4, 32.8)	23	20.3 (13.8, 26.8)	6	2.8 (1.4, 4.3)
LESS THAN MONTHLY	79	50.1 (38.3, 62.1)	65	46.6 (39.1, 54.0)	73	54.5 (47.7, 61.3)
MONTHLY	21	10.8 (4.2, 17.4)	13	9.1 (4.4, 13.8)	15	8.8 (5.6, 11.9)
WEEKLY	18	12.6 (4.1, 21.2)	21	13.6 (8.8, 18.4)	35	22.2 (16.6, 27.8)
DAILY, ALMOST DAILY	10	3.4 (0.4, 6.1)	19	10.4 (6.5, 14.3)	17	11.7 (7.2, 16.3)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER HAD SEXUAL INTERCOURSE WHILE UNDER THE INFLUENCE OF ALCOHOL						
YES	123	72.4 (63.1, 81.8)	109	77.1 (70.6, 83.5)	119	79.5 (73.0, 85.9)
NO	40	26.9 (17.5, 36.3)	26	18.2 (12.4, 24.1)	23	16.9 (11.3, 22.6)
DO NOT REMEMBER	1	0.7 (0.5, 0.9)	6	4.7 (1.4, 8.0)	4	3.6 (0.3, 6.9)
EVER USED DRUGS						
	63	22.6 (15.6, 29.7)	34	20.9 (15.2, 26.6)	55	35.0 (28.4, 41.6)
EVER HAD SEXUAL INTERCOURSE WHILE UNDER THE INFLUENCE OF DRUGS						
YES	30	56.7 (41.0, 73.1)	23	79.2 (68.9, 95.8)	21	42.8 (27.4, 62.8)
NO	31	40.6 (24.2, 56.3)	8	16.2 (1.0, 25.6)	23	40.5 (22.2, 56.3)
DO NOT REMEMBER	1	2.3 (1.8, 3.6)	2	4.6 (0.0, 10.2)	11	16.7 (4.2, 27.1)
EVER INJECTED DRUGS						
	9	5.7 (1.8, 9.6)	4	2.9 (0.0, 5.7)	1	0.3 (0.3, 0.4)

Sexual behavior

General sexual behavior

The median age at first sexual intercourse was 17 in Yerevan (range: 7 to 26), 16 in Gyumri (range: 8 to 26) and 16 in Vanadzor (range: 12 to 24) and the median age at first sexual intercourse with a male was 19 in Yerevan (range: 7 to 45), 20 in Gyumri (range: 8 to 50), and 18 in Vanadzor (range: 12 to 31). Sixty five percent of MSM in Yerevan, 47% in Gyumri and 45% in Vanadzor reported their most common role as being both active and passive during sexual relations with a male partner (Table 3.6). The median number of sex partners in the past month among MSM in Yerevan was 1 (range: 1 to 90), in Gyumri (range: 1 to 25) and Vanadzor was 2 (range: 1 to 15). Most MSM reported having their last sexual intercourse within the month and from them 71% in Yerevan, 25% in Gyumri and 58% in Vanadzor reported using a condom during last anal penetrative sex with a male. The median number of times MSM reported having anal penetrative sex with male partners within the past month was 2 in Yerevan (range: 0 to 100), 5 in Gyumri (range: 0 to 70), and 3 in Vanadzor (range: 0 to 20). Median number of times using a condom during sexual intercourse with a male in the past month was 2 in Yerevan (range: 0 to 100), 1 in Gyumri (range: 0 to 70), and 2 in Vanadzor (range: 0 to 20). Most MSM in all cities reported not using a condom during their last oral sex with a male partner.

Table 3.6. *General sexual behaviors with male partners among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
MOST COMMON ROLE/POSITION						
ACTIVE/TOP	159	65.3 (57.9, 72.5)	75	46.8 (39.3, 54.2)	68	45.5 (37.9, 53.1)
PASSIVE/BOTTOM	34	8.9 (4.9, 12.9)	18	12.9 (7.8, 18.0)	16	10.4 (5.5, 15.4)
ACTIVE AND PASSIVE	105	25.8 (19.9, 31.7)	54	40.3 (33.2, 47.4)	66	44.1 (36.3, 51.9)
LAST SEXUAL INTERCOURSE						
THIS WEEK	127	31.0 (24.9, 37.1)	63	45.8 (38.3, 53.1)	61	34.0 (27.6, 40.5)
THIS MONTH	116	47.2 (39.3, 55.0)	35	22.7 (16.6, 28.7)	55	40.7 (33.5, 47.9)
LAST 3 MONTHS	28	8.7 (4.8, 12.7)	25	15.2 (10.2, 20.3)	29	21.4 (14.7, 28.0)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
LAST 6 MONTH	13	7.7 (2.8, 12.5)	25	14.7 (9.9, 19.7)	3	2.1 (0.3, 4.4)
6 MONTHS TO 1 YEAR	15	5.4 (1.8, 8.9)	2	1.5 (0.0, 3.4)	2	1.8 (0.7, 4.3)
USED CONDOM DURING LAST ANAL PENETRATIVE SEX						
	237	70.8 (63.0, 78.7)	39	24.8 (11.1, 38.3)	89	58.5 (51.2, 65.7)
USED CONDOM DURING LAST ORAL SEX						
YES	93	31.1 (23.9, 38.1)	9	5.7 (2.1, 9.4)	19	12.7 (8.2, 17.3)
NO	192	65.1 (57.9, 72.3)	126	84.6 (79.3, 89.9)	122	82.6 (77.3, 87.9)
DON'T HAVE ORAL SEX	14	3.9 (1.5, 6.1)	14	9.6 (5.2, 14.1)	8	4.7 (1.9, 7.4)

Lubricant use

Fifty eight percent of MSM in Yerevan, 41% in Gyumri and 48% in Vanadzor reported ever using lubricants during anal sex with a male partner, among which the majority reported using water-based lubricant, KY Jelly or Vendome (Table 3.7).

Table 3.7. *Lubricant use with male partners among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER USED LUBRICANTS DURING ANAL SEX						
	210	57.8 (49.4, 66.0)	61	41.5 (34.5, 48.6)	78	48.1 (40.1, 56.2)
LUBRICANT PRODUCTS NORMALLY USED DURING ANAL SEX (OTHER THAN SALIVA)						
WATER-BASED LUBE, KY JELLY, VENDOME	198	90.3 (82.6, 97.8)	41	67.2 (53.4, 79.1)	74	94.6 (88.9, 100)
VASELINE, POMADE, OTHER PETROLEUM JELLY PRODUCT	13	9.6 (2.1, 17.3)	17	32.8 (20.9, 46.6)	4	5.4 (0.0, 11.1)

Sexual behavior with different types of partners

Regular male partners

Between 31% in Yerevan and roughly half in Gyumri and Vanadzor reported having a regular male partner in the past year (Table 3.8). Among those, between 17% in Gyumri and 65% in Yerevan reported using a condom during last penetrative anal sex with a regular male partner. Fifty four percent of MSM in Yerevan, 12% in Gyumri and 24% in Vanadzor reported “always” using condoms during anal sex with their regular male partner. The most common reasons for not always using condoms during penetrative anal sex with regular male partners included that it “reduces pleasure” and “trust their partner”.

Tale 3.8. *Penetrative anal sex behaviors with regular male partners, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAD A REGULAR MALE PARTNER IN PAST YEAR						
	99	31.3 (23.9, 38.7)	68	48.9 (41.2, 56.5)	65	50.5 (43.4, 57.4)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
USED A CONDOM DURING LAST SEX WITH REGULAR MALE PARTNER						
	72	65.5 (52.6, 77.9)	13	16.9 (7.8, 25.1)	21	31.8 (19.4, 43.5)
FREQUENCY OF USING A CONDOM DURING SEX WITH REGULAR MALE PARTNER IN PAST YEAR						
EVERY TIME	60	54.2 (42.6, 65.3)	10	11.7 (4.3, 17.9)	16	23.6 (12.4, 34.1)
SOMETIMES	27	29.4 (18.2, 40.6)	34	52.3 (40.3, 65.3)	23	36.0 (25.4, 47.3)
NEVER	11	16.4 (6.4, 26.8)	24	35.9 (24.0, 48.0)	26	40.4 (26.8, 54.0)
REASONS FOR NOT ALWAYS USING CONDOMS DURING SEX WITH REGULAR MALE PARTNERS						
TOO EXPENSIVE	0	--	0	--	0	--
ASHAMED TO BUY	0	--	3	6.8 (0.0, 14.6)	0	--
DIFFICULT TO USE	0	--	1	1.3 (0.0, 3.4)	0	--
NOT SO ACCESSIBLE	1	--	9	17.1 (6.8, 28.1)	0	--
REDUCES PLEASURE	20	54.5 (40.0, 69.2)	16	23.0 (11.5, 33.0)	27	56.0 (18.1, 94.4)
ASHAMED TO ASK	0	--	5	8.7 (1.0, 16.3)	3	3.9 (3.2, 3.9)
TRUST PARTNER	19	48.4 (32.5, 64.3)	39	66.2 (53.4, 78.8)	37	78.6 (51.8, 100)
DON'T KNOW ABOUT CONDOM USE EFFECTIVENESS	0	--	0	--	0	--

Non-regular sex partners

Seventy nine percent in Yerevan, 55% in Gyumri and 64% in Vanadzor reported having a non-regular male sex partner in the past year (Table 3.9). Around three quarters of MSM in Yerevan and Vanadzor and 48% in Gyumri reported using condoms during last anal penetrative sex and 54% in Yerevan, 48% in Vanadzor and only 29% in Gyumri reported “always” using condoms with non-regular sex partners in the past year. Among MSM who reported not using condoms, 61% in Yerevan and Gyumri reported that condoms “reduce pleasure” as their primary reason for not using condoms.

Table 3.9. Penetrative anal sex behaviors with non-regular male partners, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAD NON-REGULAR MALE PARTNERS IN PAST YEAR						
	241	79.3 (72.7, 85.8)	90	54.8 (47.7, 61.8)	107	64.2 (57.1, 71.3)
USED A CONDOM DURING LAST SEX WITH NON-REGULAR MALE PARTNERS						
	202	75.3 (67.3, 83.3)	43	48.4 (37.4, 59.1)	75	72.9 (64.7, 82.8)
FREQUENCY USING CONDOM DURING WITH NON-REGULAR MALE PARTNER IN PAST YEAR						
EVERY TIME	159	53.8 (45.0, 62.3)	28	28.7 (18.4, 37.7)	45	47.8 (39.1, 59.5)
SOMETIMES	60	33.1 (24.4, 42.0)	50	61.8 (52.8, 73.5)	56	47.0 (35.6, 55.8)
NEVER	22	13.1 (7.4, 18.8)	12	9.5 (3.3, 14.3)	6	5.2 (0.5, 9.5)
REASONS FOR NOT ALWAYS USING CONDOM WITH NON-REGULAR MALE PARTNERS						
TOO EXPENSIVE	0	--	0	--	0	--
ASHAMED TO BUY	3	6.7 (0.2, 13.4)	2	5.1 (0.0, 12.5)	6	14.8 (4.6- 29.3)
DIFFICULT TO USE	2	2.4 (0.0, 7.1)	2	3.3 (0.0, 8.4)	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
NOT SO ACCESSIBLE	8	9.4 (3.2, 15.7)	21	44.6 (33.4, 60.7)	1	1.5 (0.0, 3.9)
REDUCES PLEASURE	57	60.7 (48.6, 72.4)	43	61.1 (45.4, 72.9)	8	14.7 (4.2, 27.0)
ASHAMED TO ASK	0	--	2	4.1 (0.0, 9.7)	2	5.5 (0.0, 16.7)
TRUST PARTNER	23	33.6 (16.5, 51.1)	5	8.7 (1.5, 16.3)	14	21.3 (10.6, 31.2)
DON'T KNOW ABOUT CONDOM USE EFFECTIVENESS	0	--	1	1.4 (0.0, 3.9)	0	--

Commercial sex partners

Eight percent of MSM in Yerevan, 39% in Gyumri and 18% in Vanadzor reported buying sex from a man in the past year (Table 3.10). In Yerevan, 89%, in Gyumri, 64% and in Vanadzor, 98% reported using a condom the last time they bought anal sex from a male partner and in Yerevan, 74%, in Gyumri, 32% and in Vanadzor, 88% reported always using a condom when buying anal sex from male partners in past year. In Yerevan 43% and 56% reported reduction of pleasure and trust to the partner as the main reason for not always using condoms. Likewise, in Gyumri most MSM (70% and 69%) reported the same for not always using condoms, in Vanadzor all participants reported the reduction of pleasure as the main reason for not always using condoms. Eight percent of MSM in Yerevan, 11% in Gyumri and 4% in Vanadzor reported selling sex to a man in the past year (Table 3.10). In Yerevan, 83%, in Gyumri, 80% and in Vanadzor, 75% reported using a condom the last time they sold sex to a male partner and in Yerevan and Gyumri 71%, and in Vanadzor, 67% reported always using a condom when selling sex to male partners in the past year. In Yerevan and Vanadzor, most of MSM reported that condoms reduce pleasure and in Gyumri, most (39%) reported condoms not being ashamed to ask and trusting their partner as the main reason for not using condoms when selling anal sex to male partners.

Table 3.10. *Penetrative anal sex behaviors with commercial male partners, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
BOUGHT ANAL SEX FROM A MAN IN PAST YEAR						
	19	8.2 (3.6, 12.8)	52	39.4 (32.5, 46.2)	31	17.8 (12.6, 22.9)
USED CONDOM DURING LAST BOUGHT ANAL SEX WITH MALE PARTNER						
	16	88.7 (76.4, 100)	34	64.2 (51.6, 76.6)	30	98.2 (98.0, 99.3)
FREQUENCY OF USING CONDOMS WHEN BUYING ANAL SEX FROM MALE PARTNERS IN PAST YEAR						
EVERY TIME	15	74.1 (51.9, 95.3)	18	32.5 (19.6, 44.9)	27	88.4 (77.5, 100)
SOMETIMES	2	22.2 (0.9, 44.3)	35	67.5 (55.1, 80.4)	4	11.6 (0.0, 22.5)
NEVER	1	3.8 (3.8, 3.8)	0	--		
REASONS FOR NOT ALWAYS USING CONDOMS WHEN BUYING SEX FROM MALE PARTNERS						
TOO EXPENSIVE	0	--	0	--	0	--
ASHAMED TO BUY	0	--	1	6.3 (0.0, 18.2)	0	--
DIFFICULT TO USE	0	--	1	6.2 (0.0, 18.6)	0	--
NOT SO ACCESSIBLE	0	--	20	69.6 (54.9, 85.8)	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
REDUCES PLEASURE	2	43.4 (0.0, 92.2)	18	69.1 (49.8, 87.9)	150	100
ASHAMED TO ASK	0	--	2	12.5 (0.0, 29.8)	0	--
TRUST PARTNER	1	56.2 (6.6, 100)	0	--	0	--
DON'T KNOW ABOUT CONDOM USAGE EFFECTIVENESS	0	--	0	--		
SOLD ANAL SEX TO A MAN IN PAST YEAR						
	24	8.5 (4.1, 13.0)	16	10.7 (6.3, 15.1)	8	3.8 (1.6, 6.0)
USED A CONDOM DURING LAST SOLD ANAL SEX TO A MALE PARTNER						
	21	83.2 (61.8, 100)	13	80.1 (58.5, 100)	6	75.4 (47.3, 100)
FREQUENCY OF USING CONDOMS WHEN SELLING ANAL SEX WITH MALE PARTNERS IN PAST YEAR						
EVERY TIME	19	71.3 (44.4, 97.4)	12	70.7 (44.4, 94.4)	5	66.6 (36.9, 100)
SOMETIMES	2	12.3 (0.0, 31.2)	3	19.9 (0.1, 39.9)	3	33.4 (0.0, 63.1)
NEVER	2	16.4 (0.0, 38.3)	1	9.3 (0.0, 28.0)	0	--
REASONS FOR NOT ALWAYS USING CONDOMS WHEN SELLING SEX						
TOO EXPENSIVE	0	--	0	--	0	--
ASHAMED TO BUY	0	--	0	--	0	--
DIFFICULT TO USE	1	18.2 (0.0, 51.2)	0	--	0	--
NOT SO ACCESSIBLE	0	--	2	36.2 (0.0, 81.3)	1	37.8 (0.0, 63.5)
REDUCES PLEASURE	3	71.5 (24.2, 100)	1	18.1 (0.0, 52.9)	2	72.1 (36.8, 100)
ASHAMED TO ASK	0	--	1	39.1 (0.0, 96.7)	0	--
PARTNER REFUSED TO USE	0	--	1	39.1 (0.0, 96.8)	0	--
TRUST PARTNER	0	--	0	--	0	--
DON'T KNOW ABOUT CONDOM USE EFFECTIVENESS			0	--	0	--

Female sex partners

The lowest percentage of MSM who reported ever having intercourse with a female was in Vanadzor (77%) and the highest percentages were in Gyumri (88%) and Yerevan (82%) (Table 3.11). Among those reporting ever having sexual intercourse with a female, 76% in Yerevan, 44% in Gyumri and 38% in Vanadzor reported using a condom during their last intercourse and 57% in Yerevan, 26% in Gyumri and 30% in Vanadzor reported always using a condom during sexual intercourse with a female.

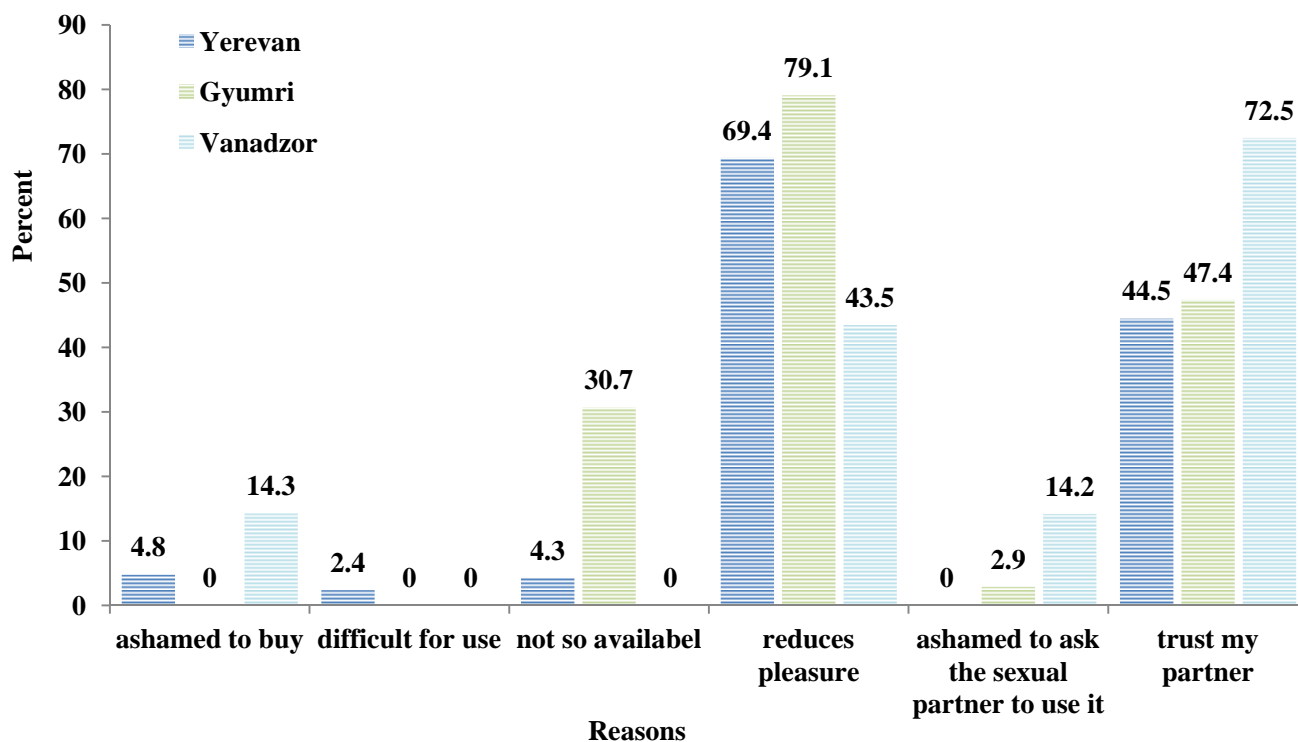
Table 3.11. *Sexual behaviors with female sex partners among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER HAD SEXUAL INTERCOURSE WITH A FEMALE						
	225	82.3 (76.7, 87.8)	131	88.1 (83.7, 92.5)	119	77.3 (70.1, 84.5)
USED CONDOM DURING LAST SEXUAL INTERCOURSE WITH A FEMALE						
	176	76.3 (68.6, 83.9)	55	43.8 (36.1, 51.6)	46	38.3 (30.0, 46.6)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
FREQUENCY OF USING CONDOMS DURING SEXUAL INTERCOURSE WITH A FEMALE						
EVERY TIME	142	56.8 (47.3, 66.4)	32	26.4 (19.3, 33.5)	34	30.2 (23.4, 37.4)
SOMETIMES	57	29.3 (20.9, 37.6)	60	48.1 (40.4, 55.8)	37	30.1 (22.2, 37.3)
NEVER	25	13.9 (7.9, 19.8)	39	25.6 (19.3, 31.7)	47	39.8 (32.0, 47.6)
REASONS FOR NOT ALWAYS USING CONDOMS DURING SEX WITH FEMALES						
TOO EXPENSIVE	0	--	0	--	0	--
ASHAMED TO BUY	0	--	0	--	3	14.3 (3.3, 33.1)
DIFFICULT TO USE	1	18.2 (0.0, 51.2)	0	--	0	--
NOT SO ACCESSIBLE	0	--	2	36.2 (0.0, 81.3)	0	--
REDUCES PLEASURE	3	71.5 (24.2, 18.6)	1	18.1 (0.0, 52.9)	22	4.3 (28.3, 57.5)
ASHAMED TO ASK	0	--	1	39.0 (0.0, 96.7)	4	14.2 (0.3, 32.8)
PARTNER REFUSED TO USE	0	--	0	--	0	--
TRUST PARTNER	0	--	1	38.9 (0.0, 96.8)	53	72.5 (60.8, 84.5)
DON'T KNOW ABOUT CONDOM USE EFFECTIVENESS	0	--	0	--	2	8.0

Among those not using condoms during sexual intercourse with a female, the majority of MSM in Yerevan reported that it was because it reduces pleasure (71%), the majority in Gyumri reported that it was because they were ashamed to ask and trusting their partner (39%). In Vanadzor most reported reducing pleasure as well (72%) (Figure 3.5).

Figure 3.5. *Reasons for not always using condoms during sexual intercourse with a female among MSM, Armenia, 2018*



Stigma and discrimination

Six percent of MSM in Yerevan, 13% in Gyumri and 25% in Vanadzor reported ever avoiding healthcare because of stigma, among which 89% in Yerevan, 57% in Gyumri and 95% in Vanadzor reported fear or concern that someone may learn that they have sex with men as the main reason for avoiding healthcare (Table 3.12). Most MSM in Yerevan (73%) and Vanadzor (96%) were not ashamed to be MSM, and most in Gyumri (53%) had no opinion. Consequently, most in Yerevan (61%) and Vanadzor (80%) were not ashamed to say that they are MSM in the group of other MSM (45% in Gyumri had no opinion). More than half of MSM in all three cities were ashamed to say that they are MSM to healthcare and social workers. Fifty six percent in Yerevan, 76% in Gyumri and nearly all in Vanadzor told anyone that they are MSM. Most of them (47% in Yerevan, 62% in Gyumri and almost all in Vanadzor) have told their friends and acquaintances, who are also MSM. Ten percent in Yerevan, 28% in Gyumri and 57% in Vanadzor felt excluded from family activities because of being MSM. Nine percent in Yerevan, 23% in Gyumri and 35% in Vanadzor felt that their family members made unfair comments because of being MSM. Seven percent in Yerevan, 12% in Gyumri and 5% in Vanadzor avoided HIV testing in last 12 months. Among the reasons for avoiding HIV testing most reported the fear or concern that someone may learn that they are MSM. Seven percent in Yerevan, 13% in Gyumri, 88% in Vanadzor were scolded for being MSM and 4% in Yerevan, 8% in Gyumri and 12% in Vanadzor were blackmailed for having sex with males. Around one percent in Yerevan, 7% in Gyumri and 14% in Vanadzor were ever physically harassed because of being MSM. 5% in Yerevan, 7% in Gyumri and 8% in Vanadzor were forced to have sex, of whom 23% in Yerevan, 68% in Gyumri and 81% in Vanadzor were forced because of having sex with males.

Table 3.12. *Stigma and discrimination among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
AVOIDED HEALTH CARE BECAUSE OF STIGMA AND DISCRIMINATION						
	12	5.6 (2.0, 9.1)	23	12.7 (8.4, 16.9)	34	25.2 (18.2, 32.1)
REASONS FOR AVOIDING HEALTH CARE BECAUSE OF STIGMA AND DISCRIMINATION						
FEAR OF/ CONCERN ABOUT STIGMA	1	10.6 (0.0, 34.3)	7	23.0 (3.3, 39.1)	28	79.8 (62.6, 94.7)
FEAR/CONCERN SOMEONE MAY LEARN YOU HAVE SEX WITH MEN	11	89.3 (66.2, 100)	15	57.4 (33.7, 81.7)	32	95.2 (88.0, 100)
FEAR OF/ CONCERN ABOUT/ EXPERIENCED VIOLENCE	0	--	1	7.3 (0.0, 24.6)	9	27.3 (12.1, 43.7)
FEAR OF/CONCERN ABOUT/ EXPERIENCED POLICE HARASSMENT/ ARREST	0	--	1	7.3 (0.0, 24.5)	0	--

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
ASHAMED TO BE A MALE WHO HAS SEX WITH MALES						
AGREE	44	19.3 (12.1, 26.3)	15	11.8 (6.7, 16.8)	2	1.8 (0.0, 4.1)
NO OPINION	17	7.4 (2.6, 12.2)	74	52.7 (45.6, 59.8)	4	1.7 (0.8, 2.5)
DISAGREE	234	72.7 (65.3, 80.2)	56	31.0 (24.3, 37.7)	143	96.1 (93.6, 98.7)
DON'T KNOW	1	0.5 (0.0, 1.5)	5	4.5 (1.1, 7.9)	1	0.3 (0.0, 0.7)
NOT ASHAMED TO ADMIT HAS SEX WITH MALES IN GROUP OF OTHER MALES WHO HAVE SEX WITH MALES						
AGREE	208	61.0 (53.0, 68.9)	28	17.3 (12.4, 22.2)	123	80.3 (71.7, 89.0)
NO OPINION	17	6.4 (3.2, 9.5)	65	45.1 (38.1, 52.2)	10	6.4 (27.1, 10.0)
DISAGREE	69	31.2 (23.8, 38.7)	56	36.6 (29.9, 43.2)	16	13.0 (5.9, 20.0)
DON'T KNOW	2	1.4 (0.0, 3.2)	1	1.0 (0.0, 2.7)	1	0.3 (0.0, 0.7)
NOT ASHAMED TO ADMIT HAVING SEX WITH MALES IN MEETINGS WITH SOCIAL/HEATH WORKING IN MY COMMUNITY						
AGREE	152	39.7 (32.7, 46.6)	15	5.6 (3.4, 7.7)	15	10.6 (5.9, 15.3)
NO OPINION	22	7.4 (4.1, 10.7)	58	40.3 (33.0, 47.5)	50	29.3 (23.6, 35.1)
DISAGREE	122	51.7 (44.3, 59.2)	74	52.5 (45.1, 59.8)	81	57.6 (51.0, 64.3)
DON'T KNOW	1	1.2 (0.0, 3.0)	3	1.7 (0.0, 3.3)	4	2.4 (0.6, 4.2)
HAS TOLD ANYONE HE HAS SEX WITH MALES						
	198	56.0 (48.0, 64.0)	114	76.4 (69.8, 83.0)	148	99.2 (98.6, 99.8)
PERSONS TOLD THAT HE HAS SEX WITH MALES						
PARTNER/SPOUSE	41	21.4 (13.4, 29.4)	42	38.4 (29.5, 47.6)	13	8.2 (4.5, 11.9)
FAMILY	49	22.5 (14.2, 30.7)	6	5.2 (1.1, 9.3)	8	5.9 (2.4, 9.4)
FRIENDS/ ACQUAINTANCES WHO HAVE ANAL SEX WITH MALES	90	47.0 (37.5, 56.5)	73	61.8 (52.8, 70.3)	147	99.6 (99.6, 99.7)
FRIENDS/ ACQUAINTANCES WHO DO NOT HAVE ANAL SEX WITH MALES	93	38.7 (29.5, 47.4)	6	5.0 (0.8, 8.9)	16	10.1 (5.7, 14.6)
HEALTH CARE PROVIDERS	8	2.8 (0.1, 5.5)	5	2.9 (0.1, 5.5)	9	3.8 (2.3, 5.3)
EVER FELT EXCLUDED FROM FAMILY ACTIVITIES BECAUSE OF HAVING SEX WITH MALES						
	34	10.4 (6.0, 14.7)	44	28.4 (21.9, 34.9)	87	57.1 (49.6, 64.5)
EVER FELT FAMILY MADE UNFAIR COMMENTS OR GOSSIPED BECAUSE OF HAVING SEX WITH MALES						
	34	8.6 (4.7, 12.5)	36	23.4 (17.0, 29.8)	55	35.1 (28.0, 42.1)
AVOIDED SEEKING HIV TEST IN LAST 12 MONTHS						
	13	6.7 (2.3, 11.2)	20	12.1 (7.7, 16.5)	7	5.3 (1.2, 9.5)
FEARS/CONCERNS FOR AVOIDING SEEKING HIV TEST IN LAST 12 MONTHS:						
ABOUT STIGMA	1	9.9 (0.0, 34.0)	4	16.3 (0.0, 32.2)	6	85.7 (80.5, 89.2)
SOMEONE MAY LEARN HAVE ANAL SEX WITH MALES	11	73.9 (15.8, 100)	15	71.3 (48.7, 94.6)	6	91.8 (80.6, 100)
ABOUT VIOLENCE/ EXPERIENCED VIOLENCE	1	17.2 (0.0, 38.3)	0	--	1	25.4 (68.6, 100)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
ABOUT/ EXPERIENCED POLICE HARASSMENT	0	--	1	7.9(0.0, 24.8)	0	--
EVER SCOLDED FOR HAVING SEX WITH MALES						
	21	6.7 (3.0, 10.4)	23	13.4 (8.7, 18.0)	16	11.5 (6.9, 16.1)
EVER BLACKMAILED FOR HAVING SEX WITH MALES						
	18	4.2 (1.7, 6.8)	14	7.7 (4.1, 11.2)	24	12.2 (8.6, 15.8)
EVER PHYSICALLY HARASSED/HURT FOR HAVING SEX WITH MALES						
	7	0.9 (0.2, 1.7)	10	7.4 (3.7, 11.2)	26	14.5 (10.2, 18.6)
EVER FORCED TO HAVE SEX						
	14	4.7 (1.2, 8.2)	11	6.9 (3.3, 10.5)	14	7.7 (4.5, 10.9)
FORCED TO HAVE SEX BECAUSE HE IS HAVING SEX WITH MALES						
	6	23.3 (19.6, 24.4)	7	67.8 (36.9, 100)	11	80.6 (59.1, 100)

Physical violence

Four percent of MSM in Yerevan, 7% in Gyumri and 14% in Vanadzor have ever experienced physical violence. The median time of physically being hurt was three (range: 1-30) in Yerevan and approximately two in Gyumri (range: 1-6) and one in Vanadzor (range: 1-10). The median age of first experiencing physical violence was 10 (range 5-38) in Yerevan, 17 (range: 2- 20) in Gyumri and 18 (range: 12-30) in Vanadzor. Most MSM in Yerevan and Gyumri were physically harassed by a friend or acquaintance (39% and 50%, respectively). In Vanadzor MSM were mostly harassed by a non-paying sex partner (31%). Among those who were hurt by a partner, most in Yerevan were hurt by a boy or girlfriend, 73% in Gyumri and all in Vanadzor were hurt by a casual partner. Almost one percent in Yerevan and 27% in Vanadzor tried to seek help for being physically hurt, and in Gyumri no one tried to seek help. Most MSM in Yerevan (52%) and all in Vanadzor sought help from a social worker. Of those, who did not apply for help, 37% in Yerevan, 33% in Gyumri and 68% in Vanadzor did not feel comfortable. Of those, most in Yerevan (72%) and Gyumri (59%) were afraid that family members would find out that they have sex with men. Also, 59% in Gyumri and all in Vanadzor were afraid of poor treatment if someone found out they have sex with men. Most of the MSM in all three cities (84% in Yerevan, 63% in Gyumri and 94% in Vanadzor) had told anyone about experiencing physical violence. Most of them in Yerevan (73%) and Gyumri (33%) and all in Vanadzor had told their friend or acquaintance about it. (Table 3.13).

Table 3.13. *Physical violence among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
EVER BEEN PHYSICALLY HURT						
	25	3.9 (2.0, 5.7)	12	7.3 (3.6, 100)	26	14.5 (10.2, 18.6)
RELATIONSHIP TO PERSON WHO PHYSICALLY HURT RESPONDENT FIRST TIME						
PAYING SEX PARTNER	0	--	4	28.7 (0.0, 53.3)	6	15.9 (0.0, 20.1)
NON-PAYING SEX PARTNER	1	0.5 (--)	0	--	6	31.5 (5.9, 70.3)
POLICE/MILITARY/ AUTHORITY	2	5.8 (0.5, 16.6)	1	7.7 (0.0, 22.3)	7	30.5 (0.0, 71.0)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
RELATIVE	6	13.3 (4.5, 29.5)	1	13.5 (0.0, 40.5)	5	16.4 (0.0, 28.6)
FRIEND/ ACQUAINTANCE	5	39.4 (10.4, 71.6)	6	50.1 (19.8, 82.7)	1	5.6 (0.0, 20.4)
OTHER	8	27.5 (0.4, 53.9)	0	--	0	--
DON'T KNOW	3	13.5 (0.0, 29.8)	0	--	0	--
TYPE OF PARTNER WHO PHYSICALLY HURT RESPONDENT FIRST TIME						
SPOUSE/LIVE IN PARTNER	0	--	0	--	0	--
BOY/GIRLFRIEND	1	53.7 (15.8, 99.3)	1	27.0 (0.0, 86.1)	0	--
CASUAL SEX PARTNER	2	28.7 (5.8, 56.2)	3	73.0 (13.8, 100)	12	100
DON'T KNOW	1	17.7 (9.2, 43.7)	0	--	0	--
HAS TOLD ANYONE THAT HE HAS SEX WITH MALES						
	198	56.0 (48.0, 64.0)	8	63.3 (28.4, 95.1)	148	99.2 (98.6, 99.8)
EVER PHYSICALLY HURT BECAUSE HE HAS SEX WITH MALES						
	11	39.9 (0.0, 100)	5	54.0 (24.8, 91.9)	21	88.1 (83.4, 98.1)
EVER TRIED TO SEEK PROFESSIONAL HELP BECAUSE OF BEING PHYSICALLY HURT						
	8	1.0 (0.0, 1.9)	0	--	6	26.8 (8.6, 49.4)
WHICH PROFESSIONAL HELP SOUGHT BECAUSE OF BEING PHYSICALLY HURT						
HEALTH CARE PROFESSIONAL	0	--	0	--	0	--
POLICE/SECURITY PERSONNEL	5	48.0 (10.1, 78.7)	0	--	0	--
SOCIAL WORKER/ COUNSELOR/NGO	2	52.2 (22.6, 88.5)	0	--	6	100
RELIGIOUS LEADER	0	--	0	--	0	--
EVER REFUSED HELP WHEN SEEKING HEALTH BECAUSE OF BEING PHYSICALLY HURT						
	3	25.1 (0.0, 70.5)	0	--	0	--
BY WHOM REFUSED HELP WHEN SEEKING HEALTH BECAUSE OF BEING PHYSICALLY HURT						
HEALTH CARE PROFESSIONAL	0	--	0	--	0	--
POLICE/SECURITY PERSONNEL	3	100	0	--	0	--
LEGAL PROFESSIONAL	0	--	0	--	0	--
SOCIAL WORKER/ COUNSELOR/NGO	0	--	0	--	0	--
RELIGIOUS LEADER	0	--	0	--	0	--
REASON FOR NOT SEEKING PROFESSIONAL HELP						
DID NOT KNOW OF SERVICES AVAILABLE	3	24.2 (0.0, 80.3)	4	21.5 (0.0, 39.9)	6	28.7 (1.4, 52.7)
SERVICES NEEDED, NOT AVAILABLE	0	--	2	16.8 (0.0, 42.9)	0	--
TOO EXPENSIVE	0	--	0	--	0	--
IS NOT COMFORTABLE	8	36.7 (13.5, 55.7)	3	32.8 (3.4, 66.8)	12	68.0 (46.3, 97.8)

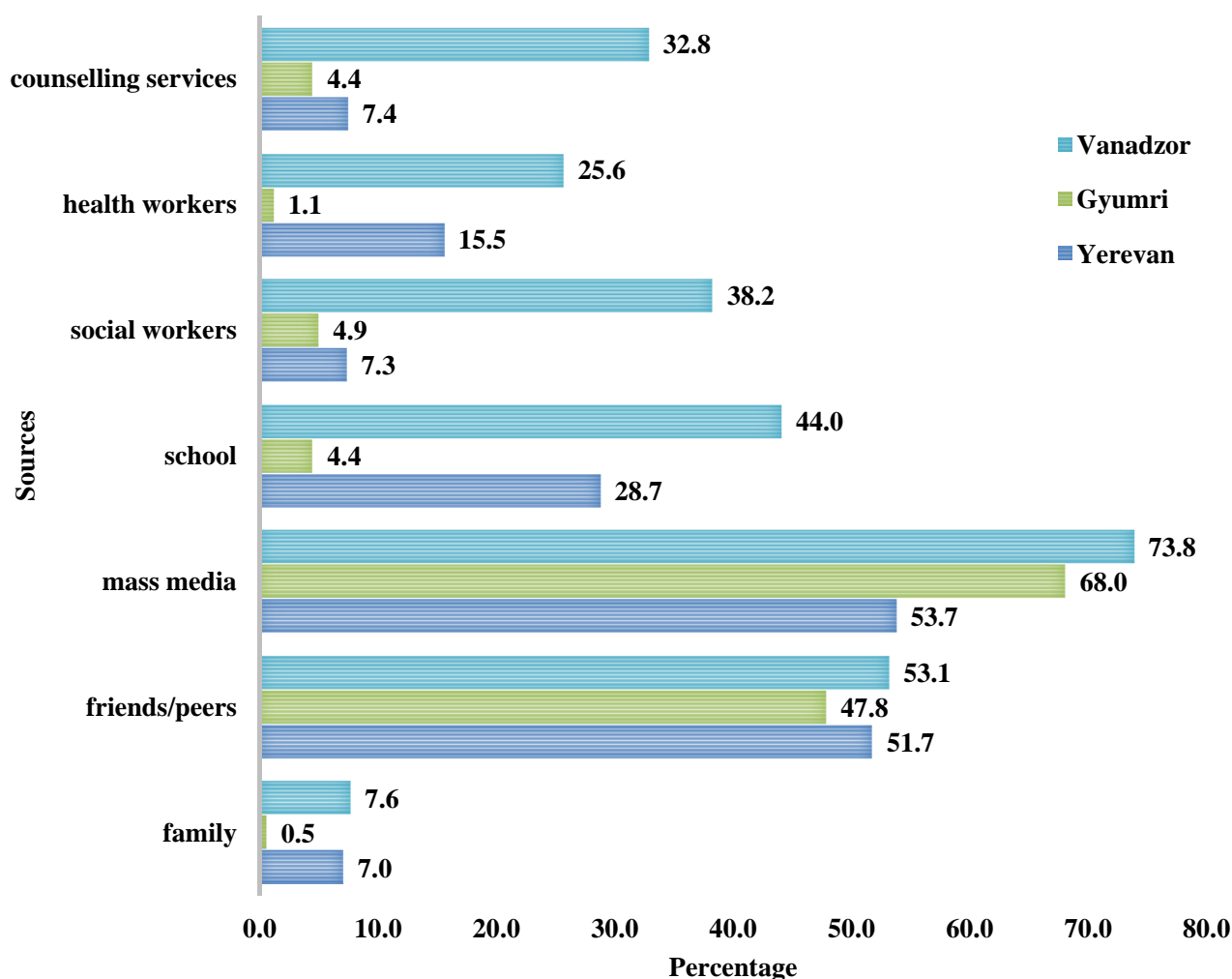
	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
DID NOT NEED	3	8.5 (0.0, 37.7)	3	28.9 (0.0, 61.3)	1	3.3 (0.0, 2.7)
DON'T KNOW	2	30.6 (0.0, 85.0)	0	--	0	--
REASONS FOR BEING UNCOMFORTABLE						
POOR TREATMENT IF THEY KNOW SHE SELLS SEX	2	12.8 (0.0, 23.1)	2	58.9(0.0, 100)	12	100
AFRAID FAMILY MEMBER WILL FIND OUT SHE SELLS SEX	6	72.5 (32.5, 100)	2	58.8 (0.0, 100)	9	67.9 (25.5, 100)
AFRAID POLICE WOULD DO SOMETHING BECAUSE SHE SELLS SEX	0	--	1	17.7 (0.0, 56.3)	11	88.6 (58.1, 100)
AFRAID OTHERS WOULD FIND OUT THAT HE MSM	0	--	1	17.8/(0.0, 56.3)	0	--
HAS TOLD ANYONE ABOUT EVER BEING PHYSICALLY HURT						
	0	--	8	63.3 (28.4, 95.1)	24	93.6 (84.3, 100)
PERSONS TOLD ABOUT EVER BEING PHYSICALLY HURT						
PAYING SEX PARTNER	1	3.4 (2.4, 4.4)	0	--	0	--
NON-PAYING SEX PARTNER	1	2.4 (1.4, 3.1)	2	16.8 (0.0, 41.6)	2	6.8 (0.0, 15.9)
POLICE/MILITARY/ AUTHORITY	2	2.9 (--)	0	--	0	--
RELATIVE	2	2.9 (--)	1	13.5 (0.0, 41.6)	2	6.8 (0.0, 15.3)
FRIEND/ ACQUAINTANCE	16	73.5 (43.1, 100)	5	32.9 (3.7, 57.9)	24	100

HIV/AIDS

HIV/AIDS risk, knowledge and beliefs

Nearly all MSM in Yerevan and all MSM in Gyumri and Vanadzor had ever heard of HIV/AIDS. The majority of MSM in all survey locations reported getting HIV/AIDS information from mass media (Figure 3.7).

Figure 3.7. Sources of HIV/AIDS information among MSM, Armenia, 2018



Most MSM in Yerevan and Gyumri believed their risk for HIV infection to be medium, whereas most MSM in Vanadzor believed their risk to be low (Table 3.14). 82% of MSM in Yerevan and 71% in Gyumri knew that HIV risk is reduced by having sex with one uninfected, faithful partner. In Vanadzor, this mode of HIV transmission was known by 97% of MSM. More than ninety percent of MSM in Yerevan and Vanadzor knew that HIV could be prevented by using condoms, whereas in Gyumri only 71% were aware. Forty six percent of MSM in Yerevan, and 17% in Vanadzor knew that HIV could not be spread through mosquitos. In Gyumri 62% of MSM were aware of that. The majority of MSM in all three survey locations knew that someone who appears healthy can still be infected with HIV, that someone cannot be infected with HIV by sharing a meal with someone who is infected and that someone cannot get HIV by shaking hands with someone who is infected. The composite knowledge score was moderate, ranging from 41% to 51%.

Table 3.14. HIV/AIDS risk, knowledge and beliefs among MSM, Armenia, 2018

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
LEVEL OF ESTIMATED PROBABILITY OF BEING INFECTED WITH HIV						
HIGH	24	10.7 (5.3, 16.1)	24	14.6 (9.8, 19.4)	0	--
MEDIUM	196	58.8 (51.6, 65.7)	90	64.6 (57.9, 71.3)	56	35.3 (28.0, 42.6)
LOW RISK	76	30.5 (23.6, 37.5)	35	20.8 (14.9, 26.6)	91	64.7 (57.4, 72.0)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
THE RISK OF HIV IS REDUCED BY HAVING SEX WITH ONE UNINFECTED FAITHFUL PARTNER						
YES	256	81.7 (75.1, 88.4)	107	71.3 (64.7, 77.9)	144	97.5 (96.3, 98.6)
NO	21	7.2 (2.8, 11.7)	13	9.0 (4.7, 13.2)	3	1.2 (0.5, 1.9)
DO NOT KNOW	23	11.0 (6.1, 16.0)	29	18.7 (13.4, 24.1)	2	0.9 (0.1, 1.8)
THE RISK OF HIV IS REDUCED BY USING CONDOMS						
YES	285	95.4 (92.3, 98.4)	120	77.9(71.8, 84.1)	143	96.1 (93.7, 98.5)
NO	8	2.5 (0.1, 4.9)	6	3.6 (1.3, 6.0)	6	3.5 (1.1, 5.9)
DO NOT KNOW	6	2.1 (0.1, 4.1)	21	15.4 (10.0, 20.9)	1	0.3 (0.1, 0.6)
SOMEONE WHO APPEARS TO BE HEALTHY CAN STILL BE HIV POSITIVE						
YES	254	81.1 (73.4, 88.7)	74	48.5 (41.6, 55.5)	90	58.4 (51.1, 65.8)
NO	19	5.9 (1.9, 9.9)	46	35.0 (28.5, 41.4)	5	2.0 (1.1, 3.0)
DO NOT KNOW	27	13.0 (7.0, 19.0)	25	14.9 (9.9, 20.0)	54	39.1 (31.8, 46.4)
SOMEONE CAN GET HIV FROM A MOSQUITO						
YES	88	30.8 (23.8, 37.8)	79	57.8 (50.7, 64.7)	9	7.8 (2.9, 12.7)
NO	166	46.5 (38.2, 54.7)	32	17.0 (11.8, 22.3)	97	62.0 (54.4, 69.6)
DO NOT KNOW	45	22.7 (15.4, 30.1)	37	23.6 (17.5, 29.8)	43	29.8 (23.0, 36.6)
SOMEONE CAN BE INFECTED WITH HIV BY SHARING A MEAL WITH SOMEONE WHO IS INFECTED						
YES	41	17.9 (11.2, 24.7)	7	3.9(1.3, 6.4)	3	2.7 (0.1, 5.5)
NO	229	66.1 (58.0, 74.0)	130	88.1 (83.7, 92.7)	140	91.2 (86.1, 96.5)
DO NOT KNOW	30	16.0 (9.7, 22.4)	11	6.4 (3.1, 9.7)	6	5.6 (1.3, 9.9)
SOMEONE CAN GET HIV BY SHAKING HANDS WITH SOMEONE WHO IS INFECTED						
YES	21	10.1 (5.1, 15.1)	3	2.3 (0.0, 4.6)	1	1.3 (1.1, 3.8)
NO	261	78.9 (71.5, 86.3)	133	89.8 (85.6, 94.0)	148	98.2 (95.8, 100)
DO NOT KNOW	18	11.0 (5.6, 16.4)	12	6.3 (3.4, 9.5)	1	0.3 (0.1, 0.6)
KNOWLEDGE INDICATOR						
YES	180	48.4 (40.9, 55.9)	60	41.5 (34.4, 48.5)	81	51.2 (43.6, 58.8)

HIV testing condoms and prevention programs

The highest percentage of MSM, who knew where to get an HIV test was in Vanadzor (78%), followed by Yerevan and Gyumri (Table 3.15). Most MSM reported neither having been reached by HIV prevention programs, with the lowest exposure to these programs being reported by men in Gyumri (23%). Forty six percent of MSM in Yerevan, 49% in Gyumri and 70% in Vanadzor ever had an HIV test and 90% in Yerevan, 40% in Gyumri and 57% in Vanadzor had an HIV test in the past 12 months or knew their HIV status. Among those who had test in past 12 months, almost all received their results. Among those all in Yerevan, Gyumri and Vanadzor had negative results.

Table 3.15. *HIV testing, condoms, and prevention programs among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
KNOWS WHERE TO GET AN HIV TEST						
	211	63.6 (54.9, 72.4)	81	54.2 (46.8, 61.7)	123	78.1 (72.0, 84.5)
RECEIVED CONDOMS IN PAST 12 MONTH FROM AN NGO OR OUTREACH WORKERS						
	149	39.3 (31.2, 47.2)	35	24.1 (17.9, 30.4)	61	36.5 (29.8, 43.2)
RECEIVED A COMBINED SET OF HIV PREVENTION INTERVENTIONS						
	146	39.0 (30.3, 47.6)	34	22.9 (10.4, 35.3)	49	29.7 (23.0, 36.4)
EVER HAD AN HIV TEST						
	174	46.4 (37.8, 55.1)	70	48.7 (41.5, 55.9)	109	70.4 (63.2, 77.7)

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAD AN HIV TEST IN PAST 12 MONTH OR KNOW HIV STATUS						
	159	90.5 (83.9, 97.0)	31	39.8 (26.6, 50.6)	64	54.9 (44.9, 63.0)
TESTED IN LAST 12 MONTHS AND RECEIVED TEST RESULTS DURING LAST HIV TEST (AMONG ALL PARTICIPANTS)						
	159	41.5 (34.0, 48.9)	31	19.4 (7.6, 31.1)	64	38.7 (31.8, 45.5)
TEST RESULT FROM LAST HIV TEST						
POSITIVE	0	--	0	--	0	--
NEGATIVE	169	98.8 (97.5, 100)	32	10.0 (18.9, 59.1)	102	97.3 (92.3, 100)
INDEFINABLE	0	--	38	59.8 (40.9, 81.1)	0	--
DON'T KNOW	1	0.7 (0.4, 1.7)	0	--	2	2.7 (0.0, 7.7)

Sexually transmitted infections (STI)

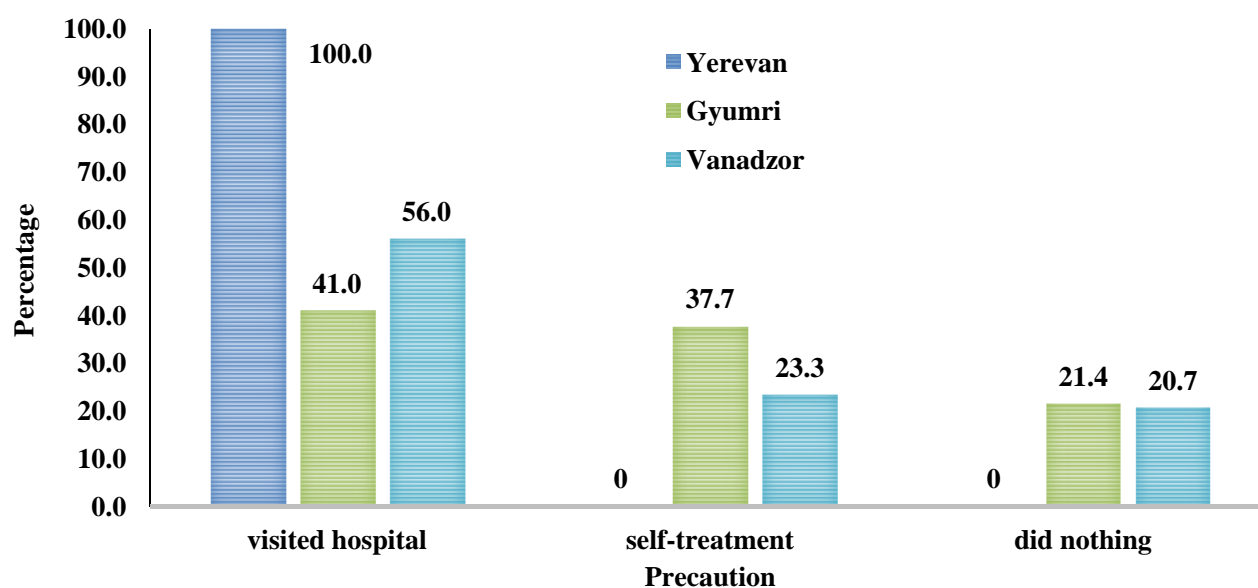
Eleven percent of MSM in Yerevan, 25% in Gyumri and 15% in Vanadzor reported having had genital/anal inflammation, unusual discharge, and/or warts in past twelve months. Only eleven percent in Yerevan, 23% in Gyumri and 15% in Vanadzor have been tested for STIs, of those 78% in Yerevan, 35% in Gyumri and 37% in Vanadzor was diagnosed with an STI in the past 12 months (Table 3.16).

Table 3.16. *Sexually transmitted infections among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HAD GENITAL/ANAL INFLAMMATION, UNUSUAL DISCHARGE, AND/OR WARTS, PAST 12 MONTHS						
YES	22	10.9 (5.4, 16.3)	40	25.5 (19.6, 31.5)	24	15.4 (10.7, 20.1)
NO	278	89.1 (83.7, 94.6)	109	73.5 (67.5, 79.4)	126	84.6 (79.8, 89.3)
DO NOT KNOW	0	--	1	1.0 (0.0, 2.6)	0	--
HAVE BEEN TESTED FOR A SEXUALLY TRANSMITTED DISEASE IN THE PAST ONE YEAR						
YES	22	10.9 (5.5, 16.4)	35	23.0 (14.1, 31.9)	23	15.1 (10.4, 19.7)
NO	278	89.0 (83.6, 94.5)	115	77.0 (68.1, 85.9)	127	84.9 (80.3, 89.6)
DIAGNOSED WITH AN STI IN PAST 12 MONTHS						
YES	17	78.3 (58.1, 98.7)	12	35.1 (17.8, 52.6)	10	36.9 (20.9, 47.0)
NO	5	21.7 (1.3, 41.9)	23	64.9 (47.3, 82.2)	13	63.1 (53.0, 79.1)

Among those reporting having a genital/anal inflammation, unusual discharge, and/or warts in past twelve months, all in Yerevan, 41% in Gyumri and 56% in Vanadzor reported visiting the hospital, poli-clinic, or other health care center as a precaution (Figure 3.8).

Figure 3.8. *Precaution taken during last genital/anal inflammation, unusual discharge, and/or warts in past 12 months among PWID, Armenia, 2018*



HIV, Syphilis and Hepatitis B prevalence

In Yerevan, HIV prevalence was 2.7%, Syphilis prevalence was 0.5% and HBV prevalence was 0.3% (Table 3.17). Among MSM in Gyumri, HIV prevalence was 1.3%, Syphilis prevalence was 0.4%, and HBV prevalence was 0.2%. There were no cases of syphilis or HBV reported in Vanadzor and HIV prevalence was 0.3.

Table 3.17. *HIV, Syphilis, and Hepatitis B prevalence among MSM, Armenia, 2018*

	YEREVAN N = 300		GYUMRI N = 150		VANADZOR N = 150	
	N	%, (95% CIS)	N	%, (95% CIS)	N	%, (95% CIS)
HIV						
	9	2.7 (0.3, 5.1)	2	1.3 (0.0, 3.0)	1	0.3 (0.3, 0.4)
SYPHILIS						
	2	0.5 (0.0, 1.2)	1	0.4 (0.0, 0.8)	0	--
HEPATITIS B						
	2	0.3 (0.0, 0.9)	1	0.2 (0.1, 0.3)	0	--

DISCUSSION AND RECOMMENDATIONS OF MSM FINDINGS

MSM are mature in age, educated and single

Most MSM were older than 25 years, reported having at least a secondary school education and were single. These socio-demographic characteristics of MSM are important for planning targeted HIV prevention programs.

High levels of risky sexual behaviors and inconsistent condom use

Most MSM reported having their sexual debut in their teens; MSM had their first sexual debut with a man at slightly older ages (median: 18 and 20). MSM reported having anal penetrative sex with multiple male partners several times in the previous month. Condom use was inconsistent, with 25% in Gyumri and 71% in Yerevan, reporting using a condom during their last anal penetrative sex with a male partner. Reasons for not using condoms with male sex partners (regular or non-regular) included, reduced pleasure, ashamed to ask, partner's trust, and lack of availability. Tailored HIV/AIDS prevention messages should emphasize the importance of consistent condom use with all partners, especially when concurrency is involved(7). These programs should provide training on condom negotiating skills. Pre-exposure prophylaxis (PREP) should be made available to MSM engaging in high-risk behavior.

MSM in Gyumri and Vanadzor report commercial and high-risk behavior

About 40% of MSM in Gyumri bought anal sex from a man in the past year, among which 64% reported using condoms at last sex. No more than eleven percent of MSM reported selling anal sex to male partners, with about 30% reporting only sometimes using condoms when selling anal sex. HIV prevention interventions targeting sexual risk behaviors related to commercial sex should engage both patrons and sex workers and encourage routine disease screening and consistent condom use, and increase accessibility of prevention services (17). Prevention messages should be tailored and delivered in venues where MSM meet clients for sexual encounters.

MSM prefer both male and female sex partners

The majority of MSM in all survey areas reported ever having sexual intercourse with a female and more than a quarter of MSM in all cities equally preferred both males and females as sex partners. Among MSM who reported having sex with females, many reported only sometimes using condoms during sexual intercourse with a female. Development of HIV prevention interventions targeting bisexual men, should focus on the risks associated with inconsistent condom use with both male and female sexual partners. Health care providers and related NGOs should encourage routine HIV testing. Future research should aim to gain a better understanding of the social context of homo and bi-sexuality among MSM in Armenia.

MSM have active and passive roles during sex with male partner

Most MSM reported having both active (top) and passive (bottom) roles during sexual intercourse with male partners. Being the receptive partner in anal sexual intercourse has higher risk of HIV transmission than being the insertive partner. Interventions targeting sexual risk behaviors among

MSM should include education about the risks associated with receptive and insertive anal sexual behavior(7). Widespread access to condoms and lubricants.

Access to condoms and lubricants

More than 60% of MSM in all cities reported not receiving condoms the past 12 months from an NGO or outreach worker. Among men in all cities who reported the use of lubricant during anal sex (more than 40%), most reported using water-based lubricant. Findings suggest the need for the expansion of sexual health education programs and improved access to condoms and lubricants for MSM.

Insufficient MSM coverage by HIV prevention programs

Most MSM surveyed reported not being reached by HIV prevention programs. This finding highlights the need to prioritize the development and implementation of effective interventions tailored to meet the needs of MSM. Government, NGOs and other stakeholders should conduct formative research to determine the best prevention strategies needed to reach MSM.

MSM engage in sex while under the influence of alcohol and drugs

Most MSM reported frequent consumption of alcohol and ever using drugs, many of whom reported engaging in sexual intercourse while under the influence of alcohol or drugs. Alcohol affects decision-making about safer sex, which can increase risk of HIV transmission(19,20). Provision of substance abuse assessments, counseling and treatment should be provided as a complete package of care to MSM.

MSM are aware of the signs and symptoms of STI

More than 10% of MSM reported experiencing signs and symptoms of STI in the last 12 months, with all in Yerevan reporting having visited the hospital, clinic, or other health care as a precaution, whereas in Gyumri and Vanadzor they treated themselves or did nothing. Moreover, more than 35% of MSM reported having been diagnosed with an STI. Health care and other service providers should encourage routine screening for common STI, in addition to HIV, in clinical and non-clinical settings(7).

Many MSM are not aware of the risks associated with HIV infection

Overall, HIV/AIDS knowledge was moderate among MSM, ranging from 41% to 51%-half of MSM were not aware of the risks associated with HIV infection. The reported sources of HIV/AIDS information varied, with many reporting friends and peers and mass media. The findings show a significant gap in the provision of HIV/AIDS education among MSM in Armenia. Despite inconsistent knowledge about HIV risk, high risk behaviors and multiple partners, a large proportion of MSM perceived themselves at low or medium risk of being infected with HIV. The expansion of HIV/AIDS education programs to ensure all men have access to accurate HIV/AIDS prevention information should be expanded.

MSM are accessing HIV testing

More than half of MSM knew where to get an HIV test and between 46% and 70% have ever been tested for HIV. Of those, about 90% of MSM in Yerevan reported having an HIV test within the last

12 months AND knowing their status, whereas in Gyumri and Vanadzor only had an HIV test in the past 12 months AND knew their status 40% and 57%. Stigma and discrimination may deter MSM from accessing testing services, even if they are accessible. Efforts to control the spread of HIV among MSM should include the scale up of routine, MSM-friendly HIV testing centers.

Low prevalence of HIV, Syphilis and HBV

Prevalence of HIV among MSM was 2.7% in Yerevan, 1% in Gyumri and 0.3% in Vanadzor. The syphilis prevalence was 0,5% and below. Prevalence of HBV was less than 1% in Yerevan and Gyumri with no cases in Vanadzor. MSM and other key populations should remain a top priority when addressing HIV/AIDS in Armenia.

Avoiding healthcare services due to stigma and discrimination is low

Although most MSM in all three cities did not report avoiding healthcare services due to stigma and discrimination, a sizable amount of MSM reported doing so. More than half of MSM in all three cities were ashamed to tell social and healthcare workers about having sex with males. Further research is needed to understand the extent of influence of stigma and discrimination to the accessibility of health care services.

MSM report low levels of physical violence

Most MSM in all survey sites did not report ever experiencing physical violence. Most MSM in Yerevan and Gyumri were harassed by a friend or acquaintance, whereas in Vanadzor most reported being harassed by a non-commercial sex partner. Further research is needed to explore the cases of physical violence more in-depth.

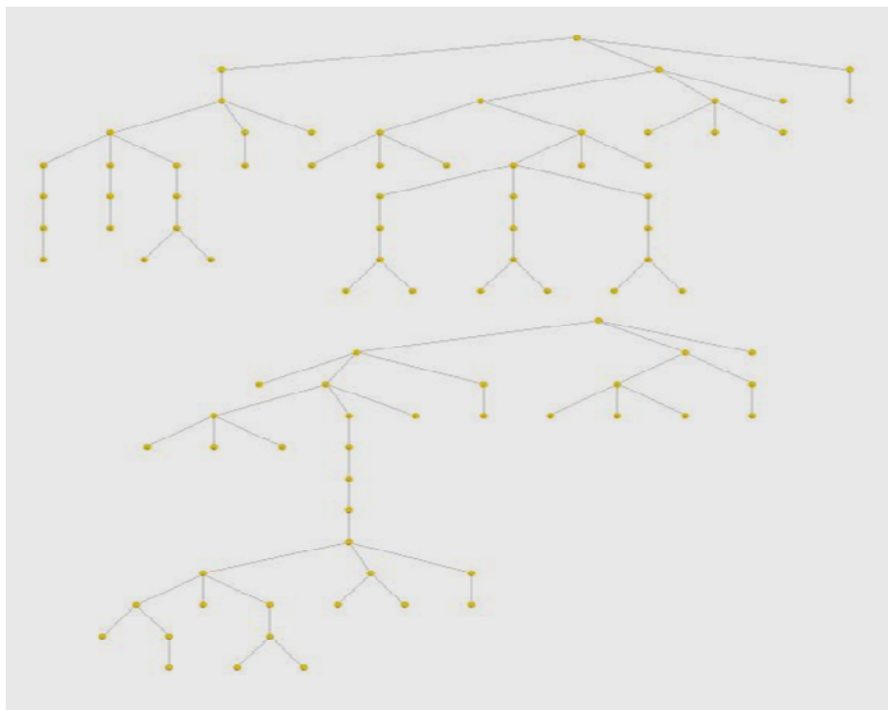
SUMMARY OF KEY RECOMMENDATIONS

- Scale up evidenced-based HIV prevention interventions targeting MSM.
- Scale-up coverage, routine screening for HIV and other STI, condom distribution, and implementation of combination prevention services.
- Integrate mental health services, to include substance abuse, into HIV and STI prevention programs targeting MSM.
- Scale-up peer educators and other outreach workers to distribute condoms and lubricants to MSM.
- Provide screening for syphilis, HBV, and other STI in HIV testing and counseling service centers.
- Integrate HIV testing and other disease screening services into HIV prevention programs for MSM in both clinical and non-clinical settings.
- Scale up HIV/AIDS education services.

4. OVERVIEW: MALE TO FEMALE TRANSGENDER PEOPLE (TG)

100 Transgender persons (including two seeds) were included into IBBS. Out of them, 10 were recruited from criminally executive institutions, among whom a biological surveillance was conducted. Among them one case of syphilis and three cases of HIV were found. The main RDS was conducted among 90 TG, and the results below are presented among them. The maximum number of waves reached in the recruitment chains of Yerevan was 11 (Figure 4.1). Seeds are on the top of the chains.

Figure 4.1. Recruitment graph of the TG sample (n=90), with two recruitment chains, Yerevan, Armenia, 2018.



Age, education and employment

The majority of TG in were 24 years and younger (Table 4.1) with median age of 23 (range: 18 to 55). Nearly all TG reported being born in Armenia and all had any schooling, among which the majority reported having primary or higher education.

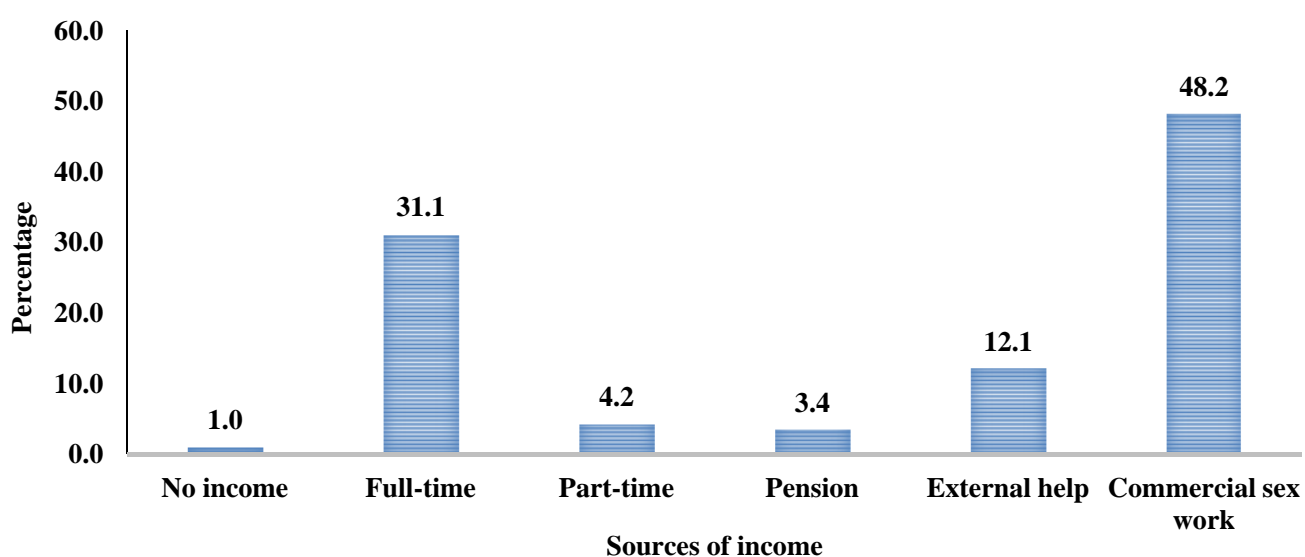
Table 4.1. Age, education and employment of TG, Armenia, 2018

	YEREVAN N = 90	
	N	%, (95% CIS)
AGE GROUP		
<25	57	63.4 (59.3, 67.5)
≥25	33	36.6 (32.5, 40.7)
AGE GROUP		
<24	57	63.4 (59.3, 67.5)
25-34	27	30.4 (26.3, 34.5)
35-44	2	2.1 (1.3, 2.8)
45+	4	4.1 (3.1, 5.1)

	YEREVAN N = 90	
	N	%, (95% CIS)
NATIONALITY OF BIRTH		
REPUBLIC OF ARMENIA	88	98.0 (97.9, 98.1)
RUSSIAN FEDERATION	1	1.0 (1.0, 1.0)
REPUBLIC OF GEORGIA	1	1.0 (1.0, 1.0)
THE HIGHEST LEVEL OF SCHOOL COMPLETED		
PRIMARY	40	44.8 (40.1, 49.5)
SECONDARY	12	14.3 (10.2, 18.5)
TECHNICAL	12	12.4 (11.1, 13.5)
HIGHER	24	28.4 (23.7, 33.4)

Most TG in Yerevan reported commercial sex work as their main source of income (Figure 4.2).

Figure 4.2. Sources of income among TG, Armenia, 2018



Marital status and living situation

Most TG reported being single and 19% reported living with their sexual partner (Table 4.2)

Table 4.2. Marital status and living situation of TG, Armenia, 2018

	YEREVAN N = 90	
	N	%, (95% CIS)
CURRENT MARITAL STATUS		
MARRIED	1	1.1 (0.6, 1.5)
NOT MARRIED	89	98.9 (98.4, 99.4)
LIVES WITH MALE SEXUAL PARTNER		
	17	19.5 (15.8, 23.3)

TG Social Characteristics

Sexual preferences and identities

Most TG identified themselves as heterosexual and preferred only or mostly male partners (Table 4.3).

Table 4.3. *Sexual preferences and identities of TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
SEXUAL IDENTIFICATION		
HOMOSEXUAL	4	4.3 (2.9, 5.8)
BISEXUAL	15	18.6 (14.3, 23.0)
HETEROSEXUAL	71	77.1 (72.7, 81.4)
TRANSGENDER/SEXUAL	0	--
PREFERRED SEX OF SEXUAL PARTNERS		
ONLY OR MOSTLY MALE	75	83.2 (77.9, 87.8)
EQUALLY MALE/FEMALE	13	16.8 (12.2, 22.1)
MOSTLY FEMALE	0	--

Mobility

Seventeen percent of TG reported being away from home for more than one month in the past year, among which the majority reported being in other areas of Armenia and 24% in the Russian Federation (Table 4.4). Among TG who were away from home, 12% reported engaging in sex without a condom while away from home and 19% reported being abroad for three months or more in the last year for the purposes of labor.

Table 4.4. *Mobility among TG in last year, Yerevan, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
AWAY FROM HOME FOR MORE THAN ONE MONTH		
	15	17.1 (13.6, 20.6)
COUNTRY WHERE RESPONDENT WAS AWAY FROM HOME FOR MORE THAN ONE MONTH		
ARMENIA	5	38.5 (11.6, 81.4)
RUSSIA	4	24.3 (0.0, 42.4)
UKRAINE	0	--
OTHER	6	37.1 (5.2, 60.8)
HAD SEX WITHOUT CONDOM WHILE AWAY FROM HOME FOR MORE THAN ONE MONTH		
	2	11.7 (0.0, --)
ABROAD FOR THREE MONTHS OR MORE FOR LABOR		
	3	19.4 (0.0, 46.0)

Feminization with hormones and surgery

Sixteen percent of TG reported taking hormones to enhance female sex characteristics, 54% of whom had a prescription from medical professional (Table 4.5). All of them obtained hormones from pharmacy over the counter. Most of the side effects from hormones were mild and they were taken in form of pills.

Table 4.5. *Feminization with hormones and surgery among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
EVER TAKEN HORMONES FOR ENHANCING FEMALE SEX CHARACTERISTICS		
	15	15.7 (13.5, 17.9)
HORMONES PRESCRIBED BY A MEDICAL PROFESSIONAL		
	8	53.8 (36.2, 87.8)
HOW HORMONES WERE OBTAINED		
PRIVATE MEDICAL PRACTICE	0	--
PHARMACY OVER THE COUNTER	15	100
FROM A FRIEND	0	--
EVER HAD HEALTH COMPLICATIONS		
	7	46.7 (17.6, 75.2)
CHARACTERIZATION OF SIDE EFFECTS TO HORMONES		
MILD	5	72.0 (40.2, 100)
SEVERE	2	28.0 (0.0, 59.8)
METHODS OF TAKING HORMONES		
INJECTIONS	2	12.7 (0.0, --)
PILLS	14	93.7 (94.1, 100)

Surgical operations

Twelve percent of TG ever had an operation to change body parts and appear more feminine, 70% did not feel the need for it and 21% could not afford it (Table 4.6). Those who had surgery, most reported having facial surgery. Forty four percent of TG planned to have surgery, the majority of which wanted to have facial surgery (74%).

Table 4.6. *Surgical operations among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
EVER HAD AN OPERATION TO CHANGE ANY BODY PART TO APPEAR MORE FEMININE		
	12	12.4 (10.7, 14.2)
REASONS FOR NOT HAVING HAD AN OPERATION		
DO NOT FEEL THE NEED FOR IT	57	69.9 (61.6, 75.5)
DO NOT HAVE ENOUGH INFORMATION	1	1.2 (0.1, 2.3)
NOT AVAILABLE IN ARMENIA	1	2.6 (0.0, 8.4)
CANNOT AFFORD	16	20.8 (15.2, 27.4)
FAMILY WILL NOT ACCEPT	2	2.6 (0.5, 4.9)
PARTNER WILL NOT ACCEPT	0	--
AFRAID OF STIGMA	1	1.2 (0.1, 2.3)
REDUCED JOB/EDUCATIONAL OPTIONS	2	2.3 (1.1, 3.2)
PROBLEMS WITH LEGAL IDENTIFICATION	0	--
AFRAID OF SURGERY	2	2.8 (0.2, 5.6)
RELIGIOUS BELIEFS	0	--
TOO YOUNG	0	--

	YEREVAN N = 90	
	N	%, (95% CIS)
TYPES OF OPERATIONS HAD		
PHALLECTOMY (REMOVING THE PENIS)	1	8.0 (0.0, 19.7)
ORCHIECTOMY (REMOVING TESTICLES)	1	8.1 (0.0, 19.8)
VAGINOPLASTY (CREATE A VAGINA)	1	8.1 (0.0, 20.4)
BREAST IMPLANTS	3	24.2 (0.0, 37.3)
REMOVE ADAM'S APPLE	1	8.1 (0.0, 19.8)
VOCAL CORD SURGERY	0	--
FACIAL PLASTIC SURGERY	11	91.9 (79.7, 100)
BUTT IMPLANTS	0	--
BONE REMOVAL OR MODIFICATION	0	--
PLANS TO HAVE AN OPERATION TO CHANGE ANY BODY PART TO APPEAR MORE FEMININE		
TYPES OF OPERATIONS PLANNING TO HAVE	38	43.6 (38.8, 48.4)
PHALLECTOMY (REMOVING THE PENIS)	13	31.9 (12.5, 39.7)
ORCHIECTOMY (REMOVING THE TESTICLES)	11	27.0 (9.3, 35.7)
VAGINOPLASTY (CREATE A VAGINA)	14	34.2 (14.5, 41.7)
BREAST IMPLANTS	18	46.7 (22.5, 62.3)
REMOVE ADAM'S APPLE	10	24.7 (9.8, 32.8)
VOCAL CORD SURGERY	10	27.7 (11.1, 50.5)
FACIAL PLASTIC SURGERY	27	73.7 (71.5, 90.7)
BUTT IMPLANTS	7	16.8 (4.4, 19.4)
BONE REMOVAL OR MODIFICATION	7	17.4 (50.4, 25.1)

Sexual behavior with different types of partners

The median age at first sexual intercourse was 17 (range: 6 to 24), and the median age at first sexual intercourse with a male was 18 (range: 6 to 35). Fifty five percent of TG reported their most common role as being both active and passive during sexual relations with a male partner (Table 4.7). The median number of sex partners in the past month among TG was 15 (range: 0 to 90). Most TG reported having their last sexual intercourse within the week and 97% reported condom use during last anal penetrative sex with a male. The median number of times TG reported having anal penetrative sex with male partners within the past month was 6.5 (range: 0 to 90). Median number of times using a condom during sexual intercourse with a male in the past month was 7 (range: 1 to 90). The median number of times TG reported having anal penetrative sex with male partners within the past week was 2.8 (range: 0 to 30). Median number of times using a condom during sexual intercourse with a male in the past week was 3 (range: 1 to 30). Most TG reported using a condom during their last oral sex with a male partner.

Table 4.7. *General sexual behavior with male partners among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
MOST COMMON ROLE/POSITION		
ACTIVE/TOP	3	3.5 (1.7, 5.4)
PASSIVE/BOTTOM	37	41.3 (36.9, 45.7)
BOTH ACTIVE/PASSIVE	49	55.1 (50.7, 59.6)
LAST SEXUAL INTERCOURSE		
WITHIN THIS WEEK	58	64.7 (60.2, 69.1)
WITHIN THIS MONTH	22	25.7 (21.5, 30.0)
WITHIN LAST 3 MONTHS	4	4.1 (3.3, 4.8)
WITHIN LAST 6 MONTH	5	5.5 (3.6, 7.4)
6 MONTHS TO 1 YEAR	0	--
USED CONDOM DURING LAST ANAL PENETRATIVE SEX		
	88	97.5 (96.3, 98.8)
USED CONDOM DURING LAST ORAL SEX		
YES	71	77.6 (72.6, 82.3)
NO	14	15.3 (12.5, 18.0)
DOES NOT HAVE ORAL SEX	4	7.2 (2.3, 12.2)

Regular male partners

Thirty three percent reported having a regular male partner in the past year (Table 4.8). Among those, 71% reported using a condom during last penetrative anal sex with a regular male partner. Sixty five percent of TG reported “always” using condoms during anal sex with their regular male partner. The most common reasons for not always using condoms during penetrative anal sex with regular male partners included that it “reduces pleasure” and “trust their partner”.

Table 4.8. *Sexual behavior with regular male sex partners among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
HAD A REGULAR MALE PARTNER IN PAST YEAR		
	29	33.4 (29.1, 37.7)
USED A CONDOM DURING LAST ANAL SEX WITH REGULAR MALE PARTNER		
	21	71.0 (46.2, 90.8)
FREQUENCY OF USING A CONDOM DURING ANAL SEX WITH REGULAR MALE PARTNER IN PAST YEAR		
EVERY TIME	19	65.1 (43.9, 87.9)
SOMETIMES	4	12.1 (0.5, 14.4)
NEVER	6	22.8 (4.4, 48.8)
REASONS FOR NOT ALWAYS USING CONDOMS DURING ANAL SEX WITH REGULAR MALE PARTNERS		
ASHAMED TO BUY	0	--
DIFFICULT TO USE	0	--
NOT SO ACCESSIBLE	0	--
REDUCES PLEASURE	3	37.8 (10.8, 100)
ASHAMED TO ASK	0	--
TRUST PARTNER	7	63.4 (0.0, 99.2)
PARTNER REFUSED TO USE IT	0	--

Non-regular sex partners

Ninety seven percent reported having a non-regular male sex partner in the past year (Table 4.9). Almost all TG reported using condoms during last anal penetrative sex and 97% reported “always” using condoms with non-regular sex partners in the past year. Among TG who reported not using condoms, 38% reported that they are ashamed to buy, difficult to use and that they reduce pleasure as their primary reason for not using condoms.

Table 4.9. *Sexual behavior with non-regular male sex partners among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
HAD NON-REGULAR MALE PARTNERS IN PAST YEAR		
	87	96.9 (96.4, 97.5)
USED A CONDOM DURING LAST ANAL SEX WITH NON-REGULAR MALE PARTNERS		
	86	98.7 (97.7, 99.7)
FREQUENCY USING CONDOM DURING ANAL SEX WITH NON-REGULAR MALE PARTNER IN PAST YEAR		
EVERY TIME	84	96.7 (95.7, 97.8)
SOMETIMES	3	3.3 (2.2, 4.3)
NEVER	0	--
REASONS FOR NOT ALWAYS USING CONDOMS DURING ANAL SEX WITH NON-REGULAR MALE PARTNERS		
VERY EXPENSIVE	0	--
ASHAMED TO BUY	1	37.9 (3.0, 100)
DIFFICULT TO USE	1	38.0 (3.8, 100)
NOT SO ACCESSIBLE	1	31.0 (0.0, 56.4)
REDUCES PLEASURE	1	37.8 (6.6, 51.0)
ASHAMED TO ASK	0	--
TRUST TO THE PARTNER	1	31.0 (0.0, 62.7)
DON'T KNOW ABOUT CONDOM USAGE EFFECTIVENESS	0	--

Commercial sex partners

Three percent reported having a commercial male sex partner in the past year (Table 4.10). 33% of TG reported using condoms during last anal penetrative sex and 50% reported “sometimes” using condoms with commercial sex partners in the past year. Sixty eight percent reported selling sex to male partner in the past year (Table IV.10). All of them reported using condoms during last anal penetrative sex and 96% reported “always” using condoms with commercial sex partners in the past year. Among those who reported not using condoms, mentioned that they trust their partner and that it increases the price as the primary reason for not using condoms.

Table 4.10. *Sexual behavior with commercial male sex partners among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
BOUGHT ANAL SEX FROM A MAN IN PAST YEAR		
	3	3.0 (2.8, 3.2)
USED CONDOM DURING LAST BOUGHT ANAL SEX WITH MALE PARTNER		
	1	33.3 (0.0, 58.5)

	YEREVAN N = 90	
	N	%, (95% CIS)
FREQUENCY OF CONDOM USE WHEN BUYING ANAL SEX FROM MALE PARTNERS IN PAST YEAR		
EVERY TIME	1	49.9 (0.0, 92.9)
SOMETIMES	1	50.1 (7.1, 100)
NEVER	0	--
REASONS FOR NOT ALWAYS USING CONDOMS DURING SEX WHEN BUYING SEX FROM MALE PARTNERS		
ASHAMED TO BUY	0	--
NOT SO ACCESSIBLE	0	--
REDUCES PLEASURE	1	--
ASHAMED TO ASK	0	--
PARTNER REFUSED TO USE IT	0	--
SOLD ANAL SEX TO A MAN IN PAST YEAR		
	63	68.3 (63.9, 72.7)
USED A CONDOM DURING LAST SOLD ANAL SEX WITH A MALE PARTNER		
	63	100
FREQUENCY OF USING CONDOMS WHEN SELLING ANAL SEX WITH MALE PARTNERS IN PAST YEAR		
EVERY TIME	60	95.6 (96.4, 97.6)
SOMETIMES	3	4.4 (2.4, 3.6)
NEVER	0	--
REASONS FOR NOT ALWAYS USING CONDOMS DURING PENETRATIVE ANAL SEX WHEN SELLING SEX		
ASHAMED TO BUY	0	--
DIFFICULT TO USE	0	--
NOT SO ACCESSIBLE	0	--
REDUCES PLEASURE	0	--
ASHAMED TO ASK	0	--
TRUST PARTNER	1	33.3 (--)
PARTNER REFUSED TO USE IT	0	--
INCREASES THE PRICE	2	66.7 (--)

Female sex partners

Twenty eight percent of TG reported having sex with female partner in the past year (Table 4.11). Eighty four percent reported using condoms during last sex and 88% reported “always” using condoms with female sex partners in the past year. Among those who reported not using condoms, mentioned that they trust their partner and that it reduces pleasure as the primary reason for not using condoms.

Table 4.11. *Sexual behavior with female sex partners among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
EVER HAD SEXUAL INTERCOURSE WITH A FEMALE		
	24	27.7 (23.5, 32.0)
USED CONDOM DURING LAST SEXUAL INTERCOURSE WITH A FEMALE		
	21	84.5 (50.0, 100)
FREQUENCY OF USING CONDOMS DURING SEXUAL INTERCOURSE WITH A FEMALE		
EVERY TIME	20	87.9 (79.2, 100)

	YEREVAN N = 90	
	N	%, (95% CIS)
SOMETIMES	3	12.1 (0.0, 20.8)
NEVER	0	--
REASONS FOR NOT ALWAYS USING CONDOMS DURING SEX WITH A FEMALE		
ASHAMED TO BUY	0	--
DIFFICULT TO USE	0	--
NOT SO ACCESSIBLE	0	--
REDUCES PLEASURE	1	32.7 (0.0, 83.1)
ASHAMED TO ASK	0	--
TRUST PARTNER	1	34.6 (--)
PARTNER REFUSED TO USE IT	0	--

Lubricant use

Eighty nine percent of TG reported ever using lubricants during anal sex with a male partner (Table 4.12). The majority of TG reported using a water-based lubricant during anal sex with a male partner.

Table 4.12. *Lubricant use with male partners among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
NORMALLY USE LUBRICANTS DURING ANAL SEX WITH MALE PARTNER		
	79	88.7 (87.5, 90.0)
LUBRICANT PRODUCTS NORMALLY USED DURING ANAL SEX (OTHER THAN SALIVA)		
WATER-BASED LUBE, KY JELLY, VENDOME	67	80.2 (70.2, 86.6)
VASELINE, POMADE OR OTHER PETROLEUM JELLY PRODUCT	4	6.0 (1.3, 11.9)
DO NOT KNOW DIFFERENCE RESPONSE	9	13.7 (7.7, 22.3)

Substance use

The majority of TG reported consuming alcohol, however few reported drinking alcohol four or more times a week and around 37% reported having six or more drinks on one occasion less than months (Table 4.13). Among TG reporting alcohol consumption, most reported having sexual intercourse under the influence of alcohol. 23% reported ever using drugs, among which 58% reported engaging in sexual intercourse while under the influence of drugs. No TG injected drugs. Median age of first using drugs among TG was 20 years of age (range: 15 to 22).

Table 4.13. *Substance use among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
FREQUENCY OF CONSUMING ALCOHOLIC DRINKS		
NEVER	31	33.1 (29.2, 36.9)
MONTHLY OR LESS	20	22.6 (18.3, 26.9)
2-4 TIMES A MONTH	15	17.3 (13.4, 21.2)
2-3 TIMES A WEEK	11	13.0 (9.3, 16.7)
4 AND MORE TIMES A WEEK	13	14.0 (11.4, 16.6)
MEAN, MEDIAN NUMBER (RANGE) OF DRINKS ON TYPICAL DAY		
		4.2, 3 (1, 40)
FREQUENCY OF ALCOHOLIC DRINKS (SIX OR MORE) CONSUMED ON ONE OCCASION		
NEVER	22	36.9 (25.1, 46.0)
LESS THAN MONTHLY	20	35.0 (24.4, 47.4)
MONTHLY	6	9.4 (4.4, 12.4)
WEEKLY	5	10.4 (2.6, 22.3)
DAILY OR ALMOST DAILY	5	8.2 (2.7, 12.6)
EVER HAD SEXUAL INTERCOURSE WHILE UNDER THE INFLUENCE OF ALCOHOL		
YES	44	76.0 (69.7, 84.9)
NO	15	24.0 (15.1, 30.3)
DO NOT REMEMBER	0	--
EVER USED DRUGS		
	21	22.6 (19.7, 25.6)
EVER HAD SEXUAL INTERCOURSE WHILE UNDER THE INFLUENCE OF DRUGS		
	12	58.2 (40.0, 83.0)
EVER INJECTED DRUGS		
	0	--

Stigma and discrimination

One percent of TG reported ever avoiding healthcare because of stigma, all of whom reported fear or concern that someone may learn that they are transgender as the main reason for avoiding healthcare (Table 4.14). Most TG (95%) were not ashamed to be transgender. Consequently, most (94%) were not ashamed to say that they are TG to other TG. Eighty seven percent of TG were not ashamed to say that they are TG to healthcare and social workers. Eighty three percent of TG told anyone that they are TG. Most of them have told their friends and acquaintances, who are also TG. Sixty seven percent felt excluded from family activities because of being TG. Sixty nine percent of TG felt that their family members made unfair comments because of being TG. Few TG reported avoiding HIV testing in last 12 months. Among the reasons for avoiding HIV testing most reported the fear or concern that someone may learn that they are TG. Thirty two percent were scolded for being TG and 12% were blackmailed for being TG. About nineteen percent were ever physically harassed because of being TG and 18% were forced to have sex.

Table 4.14. *Stigma and discrimination among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
ASHAMED TO BE TRANSGENDER		
AGREE	4	4.7 (2.7, 6.6)
NEUTRAL	0	--
DISAGREE	86	95.3 (93.4, 97.2)
NOT ASHAMED TO SAY IS TRANSGENDER WITH OTHER TRANSGENDER		
AGREE	85	94.5 (92.7, 96.2)
NEUTRAL	2	2.1 (1.2, 3.0)
DISAGREE	3	3.4 (1.8, 4.9)
NOT ASHAMED TO SAY IS TRANSGENDER WHEN MEETING WITH SOCIAL/HEALTH WORKER WHO WORKS IN COMMUNITY		
AGREE	78	86.8 (84.5, 89.3)
NEUTRAL	4	4.1 (3.3, 4.9)
DISAGREE	8	9.0 (6.7, 11.3)
HAS TOLD SOMEONE THEY ARE TRANSGENDER		
	74	82.8 (80.1, 85.3)
PERSON(S) TOLD THEY ARE TRANSGENDER		
PARTNER/SPOUSE	58	64.7 (60.6, 68.7)
FAMILY	46	51.6 (47.3, 56.1)
FRIENDS/ACQUAINTANCES-ARE TG	69	77.5 (74.6, 80.5)
FRIENDS/ACQUAINTANCES-NOT TG	63	71.0 (67.8, 74.3)
HEALTH CARE PROVIDERS	44	49.7 (45.5, 53.9)
EVERYONE	24	30.0 (21.4, 33.0)
EVER FELT EXCLUDED FROM FAMILY ACTIVITIES BECAUSE OF BEING TRANSGENDER		
	63	67.4 (62.8, 71.9)
EVER FELT FAMILY MEMBERS MADE UNFAIR COMMENTS/GOSSIPED FOR BEING TRANSGENDER		
	63	69.4 (64.4, 74.1)
AVOIDED HEALTH CARE BECAUSE OF STIGMA AND DISCRIMINATION		
	1	1.1 (0.5, 1.6)
REASONS FOR AVOIDING HEALTH CARE IN LAST 12 MONTHS		
STIGMA	0	--
SOMEONE MAY LEARN THEY ARE TRANSGENDER	1	100
ABOUT/EXPERIENCED VIOLENCE	0	--
ABOUT/EXPERIENCED POLICE HARASSMENT/ARREST	0	--
AVOIDED HIV TESTING IN PAST 12 MONTHS BECAUSE OF STIGMA AND DISCRIMINATION		
	2	2.3 (0.9- 3.7)
REASONS FOR FEELING FEAR OF OR CONCERN FOR AVOIDING HIV TEST		
STIGMA	0	--
SOMEONE MAY LEARN THEY ARE TG	1	100
ABOUT/EXPERIENCED VIOLENCE	0	--
ABOUT/EXPERIENCED POLICE HARASSMENT/ARREST	0	--
EVER SCOLDED FOR BEING TRANSGENDER		
	26	31.7 (26.8, 36.5)

	YEREVAN N = 90	
	N	%, (95% CIS)
EVER BLACKMAILED FOR BEING TRANSGENDER		
	11	11.6 (9.7, 13.5)
EVER PHYSICALLY HARASSED/HURT FOR BEING TRANSGENDER		
	16	18.6 (14.4, 22.8)
EVER FORCED TO HAVE SEXUAL INTERCOURSE WITH A MALE PARTNER		
	16	18.5 (14.5, 22.4)
FIRST ANAL SEXUAL INTERCOURSE WITH A MALE PARTNER WAS FORCED		
	7	51.2 (38.5, 98.2)

Physical violence

Almost one quarter of TG have ever experienced physical violence (Table 4.15). The median number of times of being physically hurt was six (range: 1-100) and the median age of first experiencing physical violence was 17 (range: 3-25). Thirty percent of TG reported being physically harassed by a friend or acquaintance. Among those who have been hurt by a partner, most in Yerevan were hurt by a casual partner. Thirty two percent of TG tried to seek help for being physically hurt. Most TG sought help from police and authorities. Of those who sought help, 51% were refused by the police and 31% by healthcare and legal entities. Of those who did not apply for help, around half did not know where to go and 30% did not feel comfortable, among which all were concerned of what police and authorities would do if they found out they were TG. Around 37% of TG told someone of their experiences of physical harassment, all of which told their friends or acquaintances, 18% told their partners and the police.

Table 4.15. *Physical violence among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
EVER PHYSICALLY HURT		
YES	21	23.2 (19.7, 26.6)
FIRST PERSON PHYSICALLY HURTING PARTICIPATE		
PAYING SEX PARTNER	5	22.8 (2.1, 34.0)
NON-PAYING SEX PARTNER	2	9.1 (0.0, 18.7)
POLICE/MILITARY/AUTHORITY	6	28.1 (5.4, 46.7)
RELATIVE	2	9.7 (0.0, 27.6)
FRIEND/ACQUAINTANCE	6	30.1 (12.4, 60.2)
TYPE OF PARTNER WHEN PHYSICAL HURT FIRST HAPPENED		
SPOUSE/LIVE IN PARTNER	0	--
BOY/GIRLFRIEND	0	--
CASUAL SEX PARTNER	5	81.1 (16.4, 15.5)
THINKS THAT PHYSICAL HURT WAS DUE TO BEING TRANSGENDER		
	11	52.0 (23.8, 73.3)
SOUGHT PROFESSIONAL HELP/SERVICES AS RESULT OF PHYSICAL HURT		
	7	32.5 (13.9, 42.2)
PROFESSIONAL HELP SOUGHT		
HEALTHCARE PROFESSIONAL	2	26.6 (0.0, 23.4)
POLICE/AUTHORITY	6	83.7 (22.2, 100)
SOCIAL WORKER/COUNSELOR/NGO	4	57.1 (16.3, 100)
RELIGIOUS LEADER	0	--

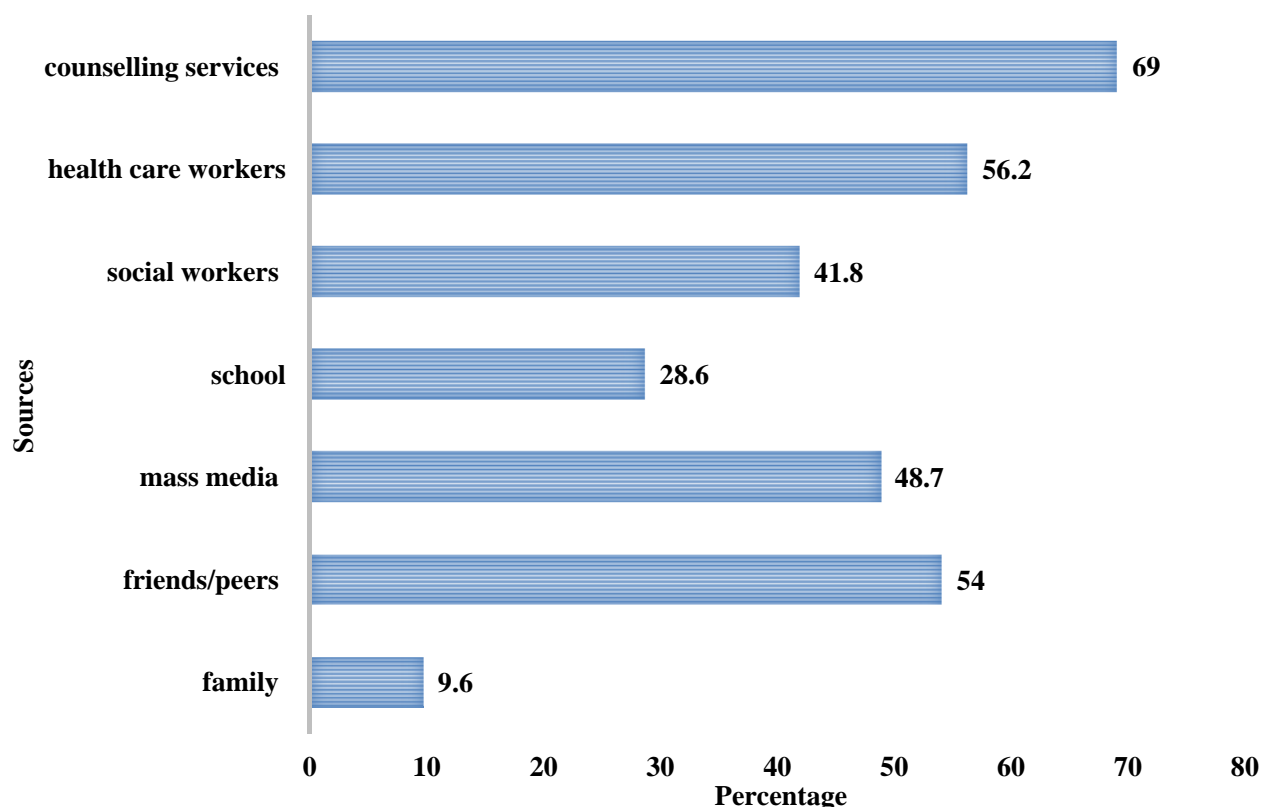
	YEREVAN N = 90	
	N	%, (95% CIS)
EVER REFUSED SERVICES		
	3	51.2 (6.6, 100)
BY WHOM REFUSED SERVICES		
HEALTHCARE PROFESSIONAL	1	31.0 (0.0, 74.4)
POLICE/AUTHORITY	3	100
LEGAL PROFESSIONAL	1	31.0 (0.0, 74.3)
SOCIAL WORKER/COUNSELOR/NGO	0	--
MAIN REASON FOR NOT SEEKING PROFESSIONAL HELP		
DID NOT KNOW WHERE TO GO	7	49.7 (14.3, 77.2)
SERVICES WERE NOT AVAILABLE	1	6.5 (0.0, 13.6)
TOO EXPENSIVE	1	6.6 (0.0, 15.0)
UNCOMFORTABLE ACCESSING	4	30.1 (2.3, 67.4)
DID NOT NEED	1	7.2 (0.0, 26.7)
REASONS FOR BEING UNCOMFORTABLE		
AFRAID OF HOW WOULD BE TREATED IF KNEW THEY WERE TRANSGENDER	0	--
AFRAID FAMILY MEMBER WOULD FIND OUT	0	--
AFRAID OF WHAT POLICE/AUTHORITIES WOULD DO	4	100
WORRIED OTHERS WOULD FIND OUT THEY WERE TRANSGENDER	0	--
TOLD OTHER PERSONS ABOUT BEING PHYSICALLY HURT		
	8	36.6 (13.6, 67.0)
OTHER PERSONS TOLD ABOUT BEING PHYSICALLY HURT		
PAYING SEX PARTNER	3	18.1 (0.0, 18.5)
NON-PAYING SEX PARTNER	3	18.0 (0.0, 19.1)
POLICE/MILITARY/AUTHORITY	3	18.4 (0.0, 24.0)
RELATIVE	1	6.0 (0.0, 4.8)
FRIEND/ACQUAINTANCE	8	100

HIV/AIDS

HIV/AIDS risk, knowledge and beliefs

All TG had ever heard of HIV/AIDS. The majority of which reported getting HIV/AIDS information from counseling services (Figure 4.7).

Figure 4.7. Sources of HIV/AIDS information among TG, Armenia, 2018



Most TG believed their risk for HIV infection to be low (Table 4.16). Eighty percent of TG knew that HIV risk is reduced by having sex with one uninfected, faithful partner. Ninety eight percent of TG knew that HIV could be prevented by using condoms. Eighty percent of TG knew that HIV could not be spread through mosquito's. The majority of TG knew that someone who appears healthy can still be infected with HIV, that someone cannot be infected with HIV by sharing a meal with someone who is infected and that someone cannot get HIV by shaking hands with someone who is infected. Overall composite knowledge score was 70%.

Table 4.16. HIV/AIDS risk, knowledge and beliefs among TG, Armenia, 2018

	YEREVAN N = 90	
	N	%, (95% CIS)
HEARD OF HIV/AIDS		
	100	100
LEVEL OF ESTIMATED PROBABILITY OF BEING INFECTED WITH HIV		
HIGH	6	8.9 (4.4, 13.2)
MEDIUM	40	42.7 (39.1, 46.4)
LOW RISK	44	48.4 (44.2, 52.7)
THE RISK OF HIV IS REDUCED BY HAVING SEX WITH ONE UNINFECTED FAITHFUL PARTNER		
YES	72	80.4 (76.4, 84.2)
NO	14	16.6 (12.8, 20.6)
DO NOT KNOW	3	3.0 (2.9, 3.1)
THE RISK OF HIV IS REDUCED BY USING CONDOMS		
YES	88	97.7 (96.4, 99.0)
NO	2	2.3 (0.9, 3.6)
DO NOT KNOW	0	--

	YEREVAN N = 90	
	N	%, (95% CIS)
SOMEONE WHO APPEARS TO BE HEALTHY CAN STILL BE HIV POSITIVE		
YES	82	90.0 (86.7, 93.3)
NO	7	9.0 (5.7, 12.3)
DO NOT KNOW	1	1.0 (0.8, 1.2)
SOMEONE CAN GET HIV FROM A MOSQUITO		
YES	14	15.7 (12.3, 19.1)
NO	72	80.2 (76.7, 83.7)
DO NOT KNOW	4	4.1 (3.2, 5.0)
SOMEONE CAN BE INFECTED WITH HIV BY SHARING A MEAL WITH SOMEONE WHO IS INFECTED		
YES	3	3.0 (2.8, 3.2)
NO	86	96.0 (95.8, 96.2)
DO NOT KNOW	1	1.0 (1.0, 1.0)
SOMEONE CAN GET HIV BY SHAKING HANDS WITH SOMEONE WHO IS INFECTED		
YES	1	1.0 (1.0, 1.0)
NO	89	99.0 (99.0, 99.0)
DO NOT KNOW		
KNOWLEDGE INDICATOR		
YES	62	70.3 (64.3, 75.3)

HIV testing, condoms and prevention programs

Almost all TG knew where to get an HIV test (Table 4.17). Ninety percent of TG were reached by HIV prevention programs nor receiving condoms in past 12 month from an NGO or outreach worker. Almost all TG reported having had an HIV test and 97% had an HIV test in the past 12 months or knew their HIV status. Among those who had test in past 12 months, almost all received their results. No one had positive test results.

Table 4.17. *HIV testing, condoms, and prevention programs among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
KNOWS WHERE TO GET AN HIV TEST		
	84	93.4 (89.7, 96.8)
RECEIVED CONDOMS IN PAST 12 MONTH FROM AN NGO OR OUTREACH WORKERS		
	82	89.9 (86.1, 93.5)
RECEIVED A COMBINED SET OF HIV PREVENTION INTERVENTIONS		
	75	82.3 (78.5, 86.3)
EVER HAD AN HIV TEST		
	85	92.9 (89.4, 96.4)
HAD AN HIV TEST IN PAST 12 MONTH OR KNOW HIV STATUS		
	82	96.8 (96.6, 97.4)
TESTED IN LAST 12 MONTHS AND RECEIVED TEST RESULTS DURING LAST HIV TEST (AMONG ALL PARTICIPANTS)		
	82	89.9 (86.2, 93.7)
TEST RESULT FROM LAST HIV TEST		
POSITIVE	0	--
NEGATIVE	1	100

Sexually transmitted infections (STI)

One percent of TG reported having had genital/anal inflammation, unusual discharge, and/or warts in past twelve months and was diagnosed with an STI in the past 12 months (Table 4.18).

Table 4.18. *Sexually transmitted infections (STI) among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
HAD GENITAL/ANAL INFLAMMATION, UNUSUAL DISCHARGE, AND/OR WARTS IN PAST 12 MONTHS		
YES	1	1.1 (0.5, 1.6)
NO	88	98.9 (98.4, 99.5)
DO NOT KNOW	0	--
TESTED FOR AN STI IN PAST 12 MONTHS		
	6	7.4 (4.2, 10.6)
DIAGNOSED WITH AN STI IN PAST 12 MONTHS		
	1	1.1 (0.8, 1.3)
MEASURES TAKEN WHEN LAST INFECTED		
VISITED HOSPITAL	1	100
POLICLINIC, OTHER HEALTH CARE INSTITUTION	0	--
SELF-TREATMENT	0	--
DID NOTHING	0	--

HIV, Syphilis and Hepatitis B prevalence

HIV prevalence among TG was 2% and syphilis was 1% (Table 4.19). No cases of hepatitis B were detected.

Table 4.19. *HIV, Syphilis, and Hepatitis B prevalence among TG, Armenia, 2018*

	YEREVAN N = 90	
	N	%, (95% CIS)
HIV		
	2	2.0 (1.8, 2.2)
SYPHILIS		
	1	1.0 (1.0, 1.0)
HEPATITIS B		
	0	--

DISCUSSION AND RECOMMENDATIONS OF TG FINDINGS

TG are younger in age, with primary education and single

The majority of TG were 24 years and younger, had at least a primary school education and were single. These socio-demographic characteristics of TG are important for planning targeted HIV prevention programs.

Risky sexual behaviors and condom use

Most TG reported having their sexual debut in their teens (median: 17) with male partners who were slightly older (median: 18). TG reported having anal penetrative sex with multiple male partners several times in the previous month, however as much as 97% reported using a condom at last anal sex and 78% reported using a condom at last oral sex with a male partner. Around 68% of TG reported providing commercial sex, most of whom reported always using condom. Reasons for not using condoms with male sex partners (regular, non-regular and clients) included: reduced pleasure and trusting their partner. Tailored HIV/AIDS prevention messages should emphasize the importance of consistent condom use with all partners, especially when concurrency is involved (7). These programs should provide training on condom negotiating skills.

TG prefer only or mostly male sex partners

About 28% of TG reported ever having sexual intercourse with a female and 17% equally preferred males and females as sex partners. Among TG who reported having sex with females, 12% reported only sometimes using condoms during sexual intercourse. Development of HIV prevention interventions targeting TG, should focus on the risks associated with inconsistent condom use with both male and female sexual partners. Health care providers and related NGOs should encourage routine HIV testing.

TG have active and passive roles during sex with male partner

Most TG reported having both active (top) and passive (bottom) roles during sexual intercourse with male partners. Being the receptive partner in anal sexual intercourse has higher risk of HIV transmission than being the insertive partner. Interventions targeting sexual risk behaviors among TG should include education about the risks associated with receptive and insertive anal sexual behavior(7). Widespread access to condoms, lubricants and prevention services is needed.

Access to condoms and lubricant is high

Most TG reported using lubricants during anal sex. Among TG who reported the use of lubricant during anal sex, most reported using water-based lubricant. Findings suggest the need for the expansion of sexual health education programs and improved access to condoms and lubricants for TG.

TG are reached by HIV prevention programs

Most TG were reached by HIV prevention programs and 82% were reached by current HIV/AIDS prevention interventions. This finding highlights the need to prioritize the development and implementation of effective interventions tailored to meet the needs of TG. Government, NGOs and

other stakeholders should conduct formative research to determine the best prevention strategies needed to reach TG.

TG engage in sex while under the influence of alcohol and drugs

More than half of TG reported frequent consumption of alcohol and 23% reported ever using drugs, many of whom reported engaging in sexual intercourse while under the influence of alcohol and drugs. Alcohol affects decision-making about safer sex, which can increase risk of HIV transmission(19,20). Provision of substance abuse assessments, counseling and treatment should be provided as a complete package of care to TG.

Sizable proportion of TG are not aware of the risks associated with HIV infection

Overall, about 30% of TG were unaware about HIV/AIDS prevention. The reported sources of HIV/AIDS information varied, with many reporting counseling services, healthcare workers and friends and peers. The findings show a moderate gap in the provision of HIV/AIDS education among TG in Armenia. Despite inconsistent knowledge about HIV risk, high risk behaviors and multiple partners, a large proportion of TG perceived themselves at low or medium risk of being infected with HIV. The expansion of HIV/AIDS education programs to ensure all transgenders have access to accurate HIV/AIDS prevention information should be expanded.

TG are routinely testing for HIV

More than 93% of TG knew where to get an HIV test about the same proportion have ever been tested for HIV. Almost all TG reported having an HIV test within the last 12 months or knowing their status. Stigma and discrimination may deter TG from accessing testing services, even if they are accessible. Efforts to control the spread of HIV among TG should include the scale up of routine HIV testing centers.

Low prevalence of HIV, Syphilis and HBV

Prevalence of HIV among TG was 2% and the prevalence of syphilis was 1%. No cases of HBV were registered. Although disease prevalence was low, efforts to prevent the continued spread is needed.

Avoiding healthcare services due to stigma and discrimination is low

Although most TG did not report avoiding healthcare services due to stigma and discrimination, further exploratory surveys are needed to understand the level of stigma and discrimination. About nine percent of TG were ashamed to tell social and healthcare workers about being transgender. Further research is needed to understand the extent of influence of stigma and discrimination to the accessibility of health care services.

TG report low levels of physical violence

Most TG did not report ever experiencing physical violence. Of those being hurt most TG mentioned being harassed by a friend or acquaintance, followed by police and a non-paying sex partner. Further research is needed to explore the cases of physical violence more in-depth.

SUMMARY OF KEY RECOMMENDATIONS

- Scale up evidenced-based HIV prevention interventions targeting TG.
- Scale-up coverage, routine screening for HIV and other STI, condom distribution, and implementation of combination prevention services.
- Integrate mental health services, to include substance abuse, into HIV and STI prevention programs targeting TG.
- Scale-up peer educators and other outreach workers to distribute condoms and lubricants to TG.
- Provide screening for syphilis, HBV, and other STI in HIV testing and counseling service centers.
- Integrate HIV testing and other disease screening services into HIV prevention programs for TG in both clinical and non-clinical settings.
- Scale up HIV/AIDS education services.

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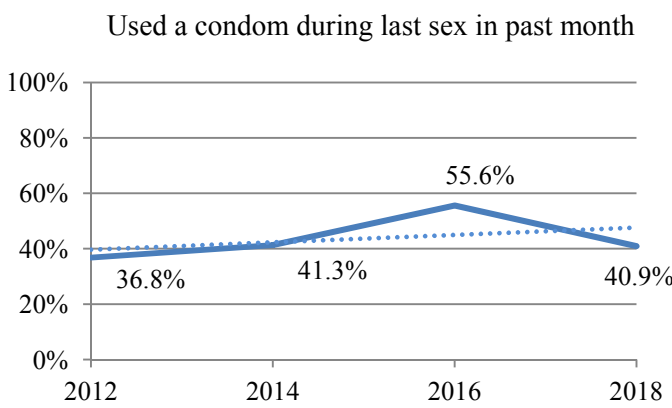
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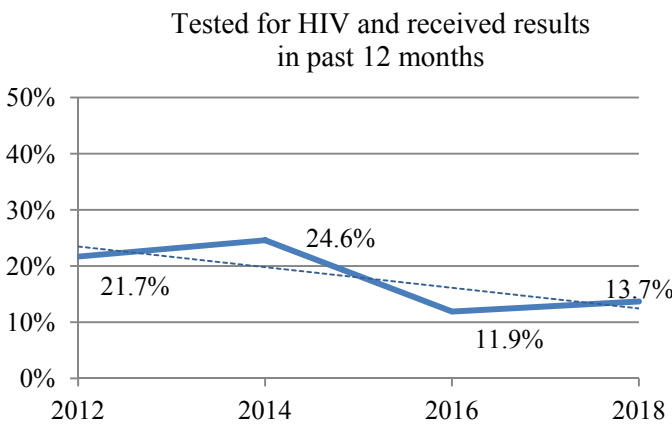
TRENDS OF KEY VARIABLES FOR SURVEYS CONDUCTED AMONG PWID, FSW AND MSM IN 2012, 2014, 2016 AND 2018

Below are trend analyses of key variables for three data points (2012, 2014, 2016 and 2018) for PWID, FSW and MSM in Yerevan, Armenia. Each survey year used RDS to sample these populations. Population estimates for each year are analyzed using the successive sampling estimator in RDS Analyst (www.hpmsg.org). Significant differences were tested using the Cochran-Armitage trend test with a cut off a P value < 0.05.

People who inject drugs

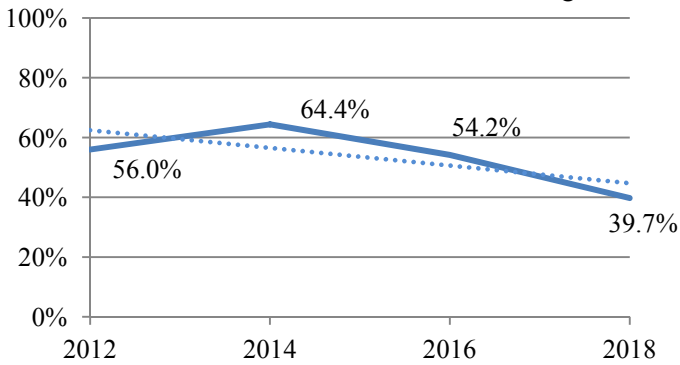


There was a significant increase in condom use during last sex in the past month, from 36.8% in 2012 to 40.9% in 2018 ($X^2 = 11.43$, $p=0.001$) among PWID in Yerevan. The average annual increase was 0.7%.



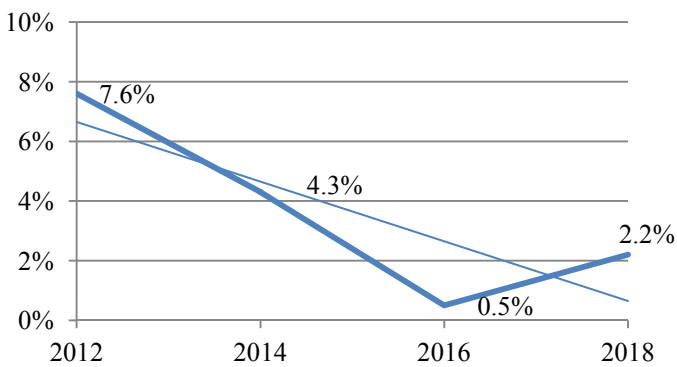
The percentage of PWID who reported testing for HIV and receiving test results in the past 12 months decreased significantly between 2012 (21.7%) and 2018 (13.7%) ($X^2 = 14.658$, $p=0.004$). The average annual decrease was 1.3%.

Correct HIV transmission knowledge



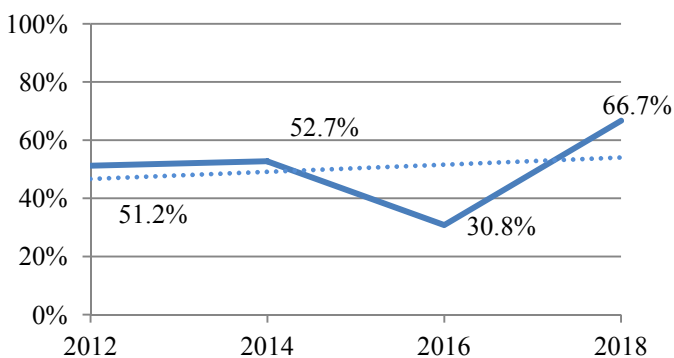
There were significant changes between 2012 (56.0%) and 2018 (39.7%) for PWID having correct HIV transmission knowledge ($X^2 = 10.78$, $p=0.001$). The significant average annual decrease was 2.7%.

HIV Prevalence



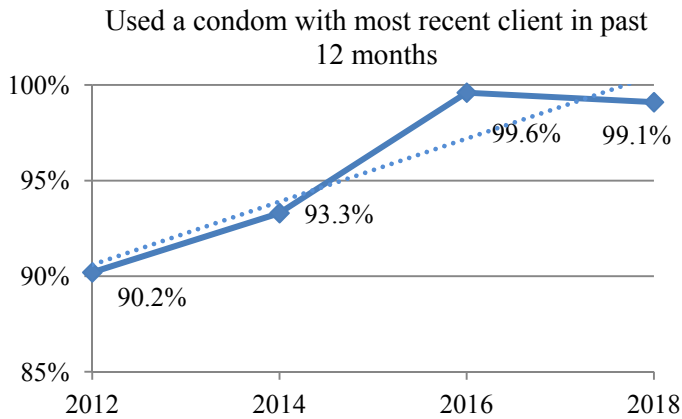
The percentage of PWID who were HIV seropositive decreased significantly from 7.6% in 2012 to 2.2% in 2018 ($X^2 = 22.68$, $p=0.000$). The average annual percentage decrease was 0.9%.

Hepatitis C Virus Prevalence

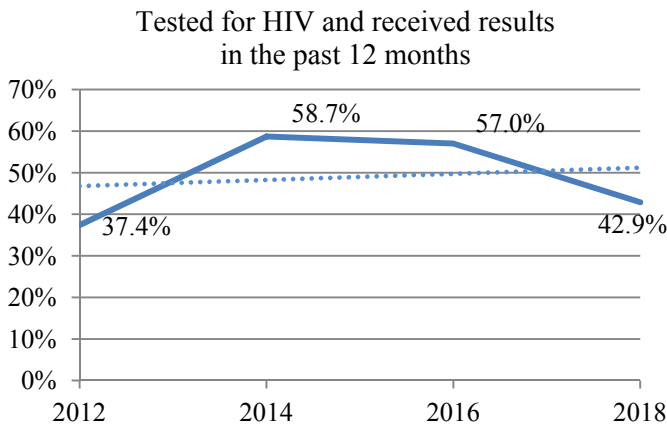


The percentage of PWID who were seropositive for HCV increased (not significant) from 51.2% in 2012 to 66.7% in 2018 ($X^2 = 0.72$, $p=0.398$). This represents a 2.6% average annual increase.

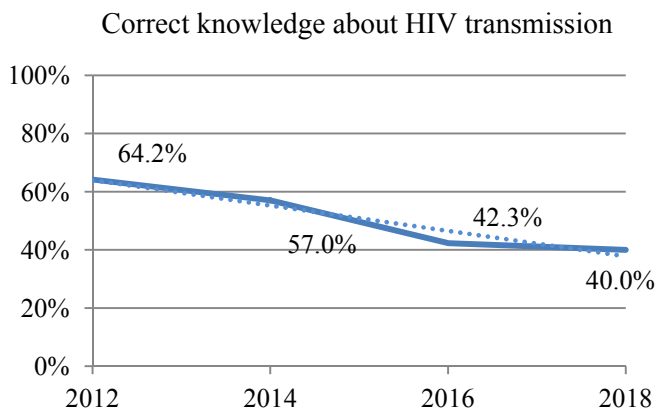
Female sex workers



There was a significant increase in the use of condoms with the most recent client in the past 12 months among FSW. Condom use increased significantly from 90.2% in 2012 to 99.1% in 2018 ($X^2 = 43.03$, $p=0.000$). The annual average increase was 1.5%.

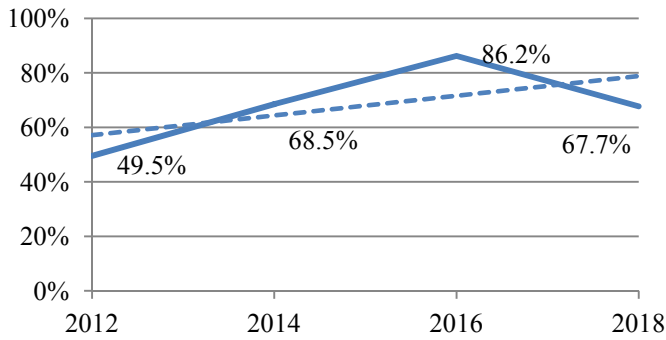


The percentage of FSW who reported testing for HIV and receiving test results in the past 12 months increased significantly from 2012 (37.4%) to 2018 (42.9%) ($X^2 = 7.956$, $p=0.000$). The average annual increase was 0.9%.



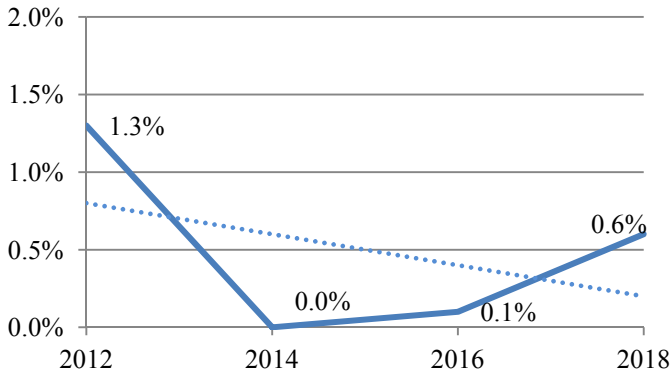
There were significant decreases from 2012 (64.2%) to 2018 (40.0%) for FSW having correct HIV transmission knowledge ($X^2 = 46.89$, $p=0.000$). The average annual decrease was 4.0%.

Received condoms from NGO or outreach worker in last 12 months



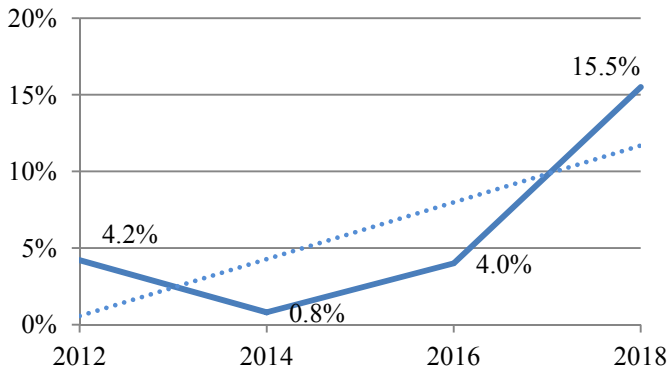
There was a significant increase, from 49.5% in 2012 to 67.7% in 2018, in the percentage of FSW reporting receiving condoms from an NGO or outreach worker in the past 12 months ($X^2 = 66.49$, $p=0.000$). This represents an average annual increase of 3.0%.

HIV Prevalence



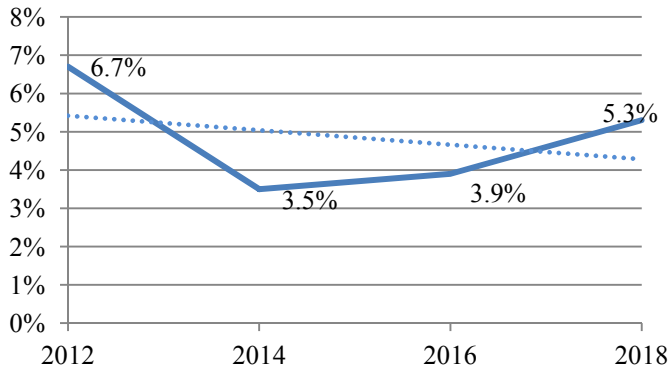
The percentage of FSW who were HIV seropositive decreased (not significant) from 1.3% in 2012 to 0.6% in 2018 ($X^2 = 2.653$, $p=0.103$). The average annual percentage decrease was 0.2%.

Syphilis Prevalence



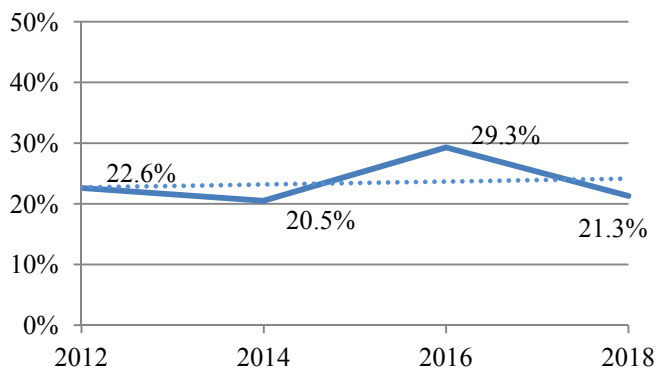
There was a significant increase in syphilis prevalence among FSW between, from 4.2% in 2012 to 15.5% in 2018 ($X^2 = 15.97$, $p=0.000$). This represents an average annual increase of 1.9%.

Gonorrhea Prevalence



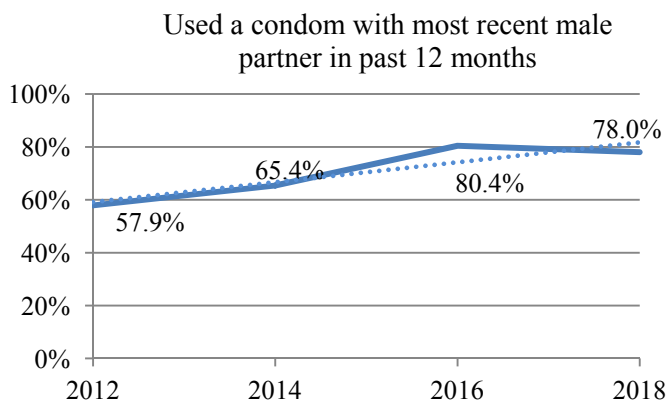
There was no overall change in Gonorrhea prevalence between 6.7% in 2012 to 5.3% in 2018 ($X^2 = 1.31$, $p=0.253$). The average annual percentage decrease was 0.2%.

Trichomoniasis FSW

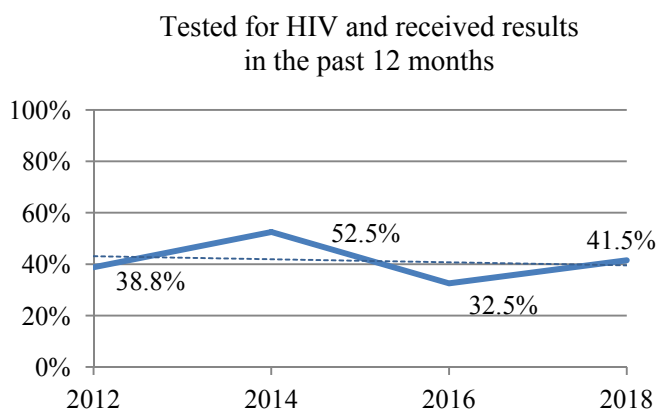


There was no overall change in Trichomoniasis prevalence between 22.6% in 2012 to 21.3% in 2018 ($X^2 = 1.27$, $p=0.259$). The average annual percentage decrease was 0.2%.

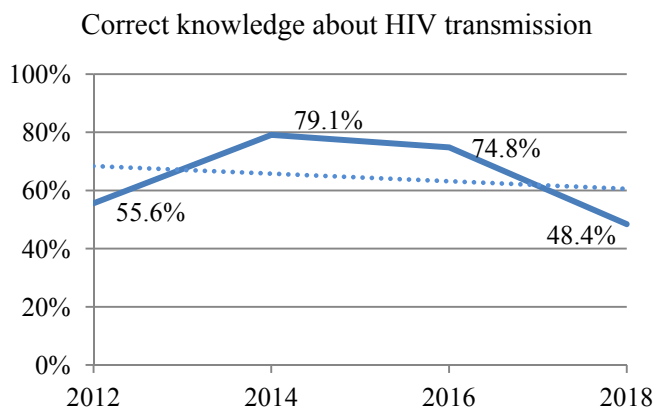
Men who have sex with men



There was a significant increase in the use of condoms with the most recent male partner in the past 12 months among MSM. Condom use increased from 57.9% in 2012 to 78.0% in 2018 ($X^2 = 47.38$, $p=0.000$). The annual average increase was 3.4%.

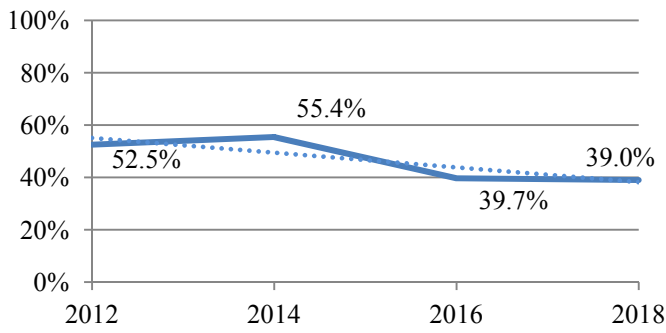


The percentage of MSM who reported testing for HIV and receiving test results in the past 12 months had significant change between 38.8% in 2012 and 41.5% in 2018 ($X^2 = 1.688$, $p=0.000$). This represents an average annual increase of 0.4%.



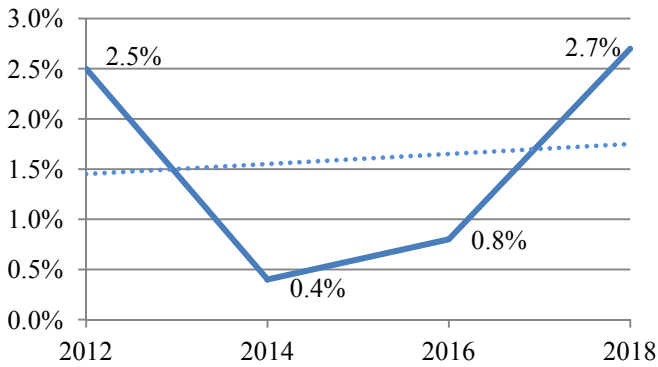
There were no significant change between 2012 (55.6%) and 2018 (48.4%) for MSM having correct HIV transmission knowledge ($X^2 = 0.47$, $p=0.495$). The average annual decrease was 1.2%.

Received condoms from NGO or outreach worker in last 12 months



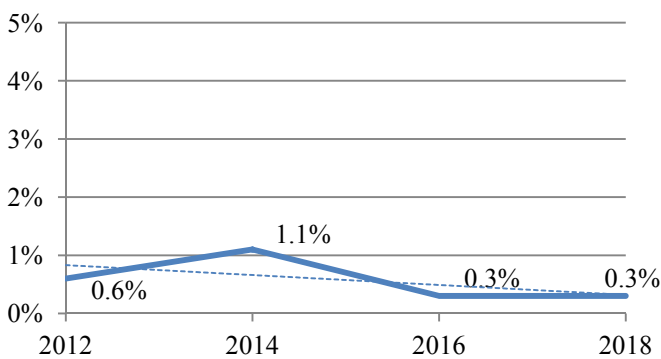
There was a significant decrease, from 52.5% in 2012 to 39.0% in 2018, in the percentage of MSM reporting receiving condoms from an NGO or outreach worker in the past 12 months ($X^2 = 18.33$, $p=0.000$). This represents an average annual decrease of 2.3%.

HIV Prevalence



The percentage of MSM who were HIV seropositive had no change between 2.5% in 2012 and 2.7% in 2018 ($X^2 = 0.25$, $p=0.617$).

Hepatitis B Prevalence



There was no overall change in HBV prevalence among MSM between 0.6% in 2012 and 0.3% in 2018 ($X^2 = 0.63$, $p=0.427$). This represents an average annual decrease of 0.1%.

POPULATION SIZE ESTIMATION

The population sizes of MSM, FSW, PWID were estimated using three different methods: 1) the multiplier methods (service multiplier and unique object multiplier), 2) Wisdom of the Crowds, and 3) successive sampling populations size estimation (SS-PSE). As for the population size estimation of TG wisdom of the crowds, SS-PSE and geographical mapping were utilized.

Multiplier methods

The service and unique multiplier methods involve overlapping independent population counts to extrapolate the overall population size.

Service multiplier

The service multiplier used programmatic data from a health center, consisting of population members who received a service in each survey city over the **three months prior to the survey**. This information was cross-referenced during the RDS survey by asking each respondent whether they had exposure to the service at least once during the same specified time period. To measure how many participants received services, they were asked during the survey: “Did you receive a service [service may be specified] from [specific name/address of NGO] in the past three months?” (See questionnaires in Appendix D for specific questions).

Unique object multiplier

The unique object multiplier involved distributing leather bracelets (unique objects) to eligible populations by outreach workers directly prior to the RDS survey. The number of objects distributed are counted (first multiplier) and used in a calculation with proportion of those who reported receiving the object (second multiplier) to derive the population estimation. The unique objects were distributed in each of the survey cities one week prior to the start of the survey. To measure how many participants received a unique object multiplier, they were asked during the survey: “Did you receive a leather bracelet in the week of [dates of distribution of unique object] that was given to you by outreach workers?”

Multiplier Calculation

The number of population members who received a unique object (leather bracelet) one week prior to the start of the survey or visited a service between the specified dates was used as a numerator (M) and the proportion who reported receiving an object prior to the start of the survey or visited a service between the specified dates was used as the denominator (P). The mathematical formula to calculate the population size was: $N = M/P$, Where:

N = Estimated Size

P = Proportion of population members in survey who reported receiving the object/service.

M = Number of population members to whom the object was distributed or service provided.

Wisdom of the crowds

Participants in the RDS survey were asked for their best guesstimate on the number and range of the population size of populations in Yerevan (other sites of surveillance), as an application of the Wisdom of the Crowds. This method is based on the assumption that, in aggregate, the responses of sufficient number of key populations on their numbers will provide a good estimate of the actual number of their population. During the survey, participants were asked their own estimates of the size and range of their respective populations in their respective survey sites. The median for the point, minimum and maximum number of MSM, FSW, PWID and TG reported by the study participants were calculated.

SS PSE

The SS-PSE method uses data collected during the RDS survey: each participant's social network size, time of enrollment, number of people recruited by each participant. First, these data are used to impute a new degree for each participant. Prior knowledge about the population size, the imputed degree and other sampling data are used in a Bayesian framework (i.e., quantifies uncertainty about unknown quantities by relating them to known quantities) to quantify a population estimate with probability bounds.

Mapping

For population size estimation of TG geographic mapping method has also been used. Geographic mapping is based on identifying the places where the specific group can be found and collecting data on the population size at those locations. In the first stage the places of the specific group are identified through key informants (representatives of the specific group, those who have information about the group), a list and characteristics of those places are made. This stage includes the implementation of preliminary activities for the mapping of hotspots. The main steps, which should be implemented in this stage, are:

- Inclusion of stakeholders,
- Making a list of hotspots of the group representatives,
- Preparing for fieldwork.

In the second stage the fieldwork implementing team visits those places during which the team gathers data for population size estimation. In this stage the main steps to be implemented are:

- Visiting hotspots,
- Selecting key informants and contacting them,
- Collecting data from key informants,
- Double visit to the same places,
- Writing-up the collected data, completing tables of data,
- Monitoring fieldwork.

Results

Assessing bias

Once the population size estimates were calculated, they were assessed for biases by NCAP and the international consultant and seemingly unrealistic values were discarded.

Survey, regional and national level calculated estimates

The plausible results obtained from the different PSE methods were presented to stakeholders at a workshop in Armenia in October 2018. During the workshop, a consensus procedure was conducted whereby participants were assigned to population groups (FSW, MSM and PWID, TG) to determine the most realistic PSE for each survey township. All calculated PSEs were triangulated and vetted at the workshop by taking into account the strengths and weaknesses of each approach. Workshop participants worked in four diverse groups guided by facilitators knowledgeable about PSE methods to determine the most accurate and realistic PSE.

Each of the working groups was asked to focus on a selected number of sites to:

- Assess which estimates made the most sense based on knowledge of the strengths and weaknesses of each PSE method, possible difficulties encountered in data collection, and local context realities;
- Map areas of high (blue), medium (red) and low density (white) areas for FSW, MSM, PWID and TG in Armenia based on economic, social and political factors of specific geographical areas;
- Come up with a final estimate or narrow range of estimates (i.e., number of MSM and their percentage of the adult male population) for their respective survey area and region (Table B1);
- Present back to all workshop participants in a plenary session on decisions made and why the working group came up with those decisions.

Table B.1. *Final proportions of populations*

Proportion levels	FSW	MSM	PWID Males
High	.0055	.0200	.0120
Medium	.0020	.0152	.0070
Low	.0010	.0100	.0030

Proportions were multiplied by population sizes of the corresponding general population (i.e., adult males for MSM and PWID males, adult females for FSW) for all areas in Armenia and then multiplied by the proportions shown in Table B.1. For PWID females, the population size was estimated to be low given that so few females were sampled in the survey. It could be that the survey simply missed females or that there are a small number of females who are injecting. To account for the female population, the proportion of females who inject drugs based on the findings in the IBBS was multiplied by the estimated population size of the males. These numbers were added up resulting in a final total national number of 4600 FSW (0.20% of the adult female population), 16,100 MSM (1.52% of the adult male population), and 8900 PWID males (0.7% of the adult male population) and 105 PWID females (0.01%). Overall size estimation of TG resulted in 150 transgender persons in Armenia.

AGGREGATE DATA

Estimates for Yerevan, Gyumri and Vanadzor were weighted by population sizes corresponding to each specific survey population in each of the sampled cities to attain final aggregated estimates for all biological data and for the Global AIDS Response Progress Reporting (GARPR) indicators.

Aggregated data for PWID, FSW and MSM in Yerevan, Gyumri and Vanadzor, 2018

	PWID	FSW	MSM
	%	%	%
Used a condom at last sexual intercourse [^]	41.4	99.1	69.7
Received condoms in the last 12 months from an NGO or outreach worker	36.5	96.9	38.8
Received HIV test and results in the past 12 months	14.9	49.1	89.9
Correct HIV transmission knowledge ^{^^}	40.6	40.6	48.0
HIV	1.9	0.6	1.9
HCV	66.1	--	--
HBV	--	--	0.3
Syphilis	2.4	15.3	0.5
Gonorrhoea	--	5.4	--
Trichomoniasis	--	21.3	--
Chlamydia	--	6.0	--

[^] FSW: with a client; MSM: with a male.

^{^^} Composite score of knowledge variables

QUESTIONNAIRES

QUESTIONNAIRE FOR PEOPLE WHO INJECT DRUGS
COUPON NUMBER**Section 1. Questions related to social network**

No.	Question	Answer
101	How many people do you know who know you, who are 18 years and above, live in Yerevan (Gyumri, Vanadzor) and have injected drugs in the past three months?	_____
102	How many of them have you seen in the past one month?	_____

Section 2. Participant-recruiter relationships

No.	Question	Answer
201	How would you characterize your relationships with your recruiter? Multiple answers are possible	a person implementing study/seed 1 a friend 2 a colleague 3 you live together 4 a neighbor 5 a close relative 6 a relative 7 acquaintance 8 a stranger 9 no response 99
202	Why have you taken the coupon and given your consent to participate in the study? Multiple answers are possible	to receive incentive 1 to get results from HIV testing 2 to get results of other testing 3 at the request of a friend 4 due to the interest to the study 5 due to availability of free time 6 other 7

Section 3. Demographic characteristics

No.	Question	Answer	Skip
301	Age	_____	
		no response 99	
302	What was your sex at birth?	male 1	
		female 2	
		no response 99	
304	In what country /nation were you born?	Republic of Armenia 1	
		Russian Federation 2	
		Republic of Georgia 3	
		Other 4	
		No response 99	

No.	Question	Answer	Skip
305	What is the highest level/grade/year of school you completed:	no school 1 incomplete primary 2 primary 3 incomplete secondary 1 secondary 2 secondary technical 3 incomplete higher 4 higher 5 no response 99	
306	What is your current marital status?	single 1 married 2 divorced 3 civil marriage 4 widowed 5 no response 99	
307	Are you currently living with a sexual partner?	yes 1 no 2 no response 99	
308	In the last 1 year, have you been away from home for more than one month at a time?	yes 1 no 2 no response 99	→ 401 → 401
309	Where was the last place you were when you went away for more than one month	Armenia-other region 1 Russia 2 Ukraine 3 Other 4 no response 99	
310	The last time you were away from home for more than one month, did you have sexual intercourse WITHOUT a condom?	yes 1 no 2 no response 99	
311	The last time you were away from home for more than one month, did you inject drugs with a needle that had already been used by someone else?	Yes 1 No 2 no response 99	
312	Have you been abroad for 3 or more months for purposes of labor, but not more than one year, in the past year	yes 1 no 2 no response 99	

Section 4. Questions related to sexual life and condom use

No.	Question	Answer	Skip
<i>We would like to ask you some questions regarding your sexual behaviour. We understand how personal those questions are, but at the same time we would like to note once again that the study confidentiality is fully maintained, and the same questions are asked to all the study participants. When we speak about sexual intercourse we mean vaginal and anal sex.</i>			
401	Have you ever had sexual intercourse? If “no”, skip to Question 501	yes 1 no 2 no response 99	→501

No.	Question	Answer	Skip
402	At what age did you first have sexual intercourse?	____ no response 99	
403	How many sexual partners did you have in the past year?	____ no response 99	
404	Have you had sexual intercourse in the past 30 days? If “no”, skip to Question 406	yes 1 no 2 no response 99	→ 406
405	Did you (or your sexual partner) use a condom the last time you had sex in the past 30 days?	yes 1 no 2 no response 99	
406	How many regular sex partners did you have in the past one year? (by regular we mean: partners who are your husband or wife (whether in a civil marriage or registered marriage) or a boyfriend/girlfriend (someone with whom you have been having regular sex with for at least three months))	____ no response 99	
407	In the past year how many sexual acts on average did you have with one regular partner?	____ no response 99	
408	In the past year how many times did you use condoms when having sexual intercourse with a regular partner?	____ no response 99	
409	With what frequency have you used a condom having sex with a regular partner during the past year? If “always”, skip to Question 411	Always 1 Sometimes 2 Never 3 no response 99	
410	Why don't you use condom every time having sex with a regular partner (multiple answers are possible)?	very expensive 1 ashamed to buy 2 difficult to use 3 not so available 4 abates the pleasure 5 ashamed to ask the sexual partner to use it 6 trust my partner 7 don't know about the efficiency of condom use 8 use for pregnancy prevention 9 other 10 no response 99	
411	How many non-regular sexual partners have you had in the last year? (by non-regular we mean partners who are NOT your husband or wife (whether in a civil marriage or registered marriage) or a boyfriend/girlfriend)	____ no response 99	
412	The last time you had sexual intercourse with a non-regular partner, did you or your partner use a condom?	yes 1 no 2 no response 99	

No.	Question	Answer	Skip
413	In the past year how many sexual acts on average did you have with one non-regular partner?	____ no response	99
414	In the past year how many times did you use condoms when having sexual intercourse with a non-regular partner?	____ no response	99
415	With what frequency have you used a condom during sexual intercourse with a non-regular partner during the past year? If “every time”, skip to Question 416	every time sometimes never no response	1 2 3 99
416	Why don't you use condom every time (multiple answers are possible) when having sexual relations with a non-regular partner?	very expensive ashamed to buy difficult to use not so available abates the pleasure ashamed to ask the sexual partner to use it trust the sexual partner don't know about the efficiency of condom use no response	1 2 3 4 5 6 7 8 99
417	Have you ever paid for sexual intercourse? If “no”, skip to Question 419	yes no no response	1 2 99
418	The last time you paid for sexual intercourse, did you use a condom?	yes no response	1 2 99
419	Have you ever received money or goods for sexual intercourse (only for female PWID) If “no”, skip to Question 501	yes no no response	1 2 99
420	The last time you received money or goods for sexual intercourse, did you use a condom?	yes no no response	1 2 99

Section 5. Questions related to alcohol and drug use

No.	Question	Answer	
<i>We would like to ask you some questions on drug use. We are assuring you that the study confidentiality is fully maintained. Do not forget that the same questions are asked to all the study participants.</i>			
501	In the past one year how often did you have a drink containing alcohol?	Never Monthly or less 2-4times a month 2-3 times a week 4 or more times a week no response	0 1 2 3 4 99
502	How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2 3 or 4 5 or 6 7-9 10 or more	0 1 2 3 4

No.	Question	Answer
503	On one occasion, how often do you have six or more drinks?	Never 0 Less than monthly 1 monthly 2 weekly 3 daily or almost daily 4 no response 99
504	How old were you when you first used drugs?	_____ no response 99
505	Which drug did you use the first time you used drugs? (one response)	marijuana 1 tranquilizers or sedative (diazepam, valium, tranqwin, lorazepam, seduxen, tazepam, oxazepam) 2 ecstasy 3 vaporizing substances (glue, acetone) 4 amphetamines 5 coaxil 6 heroin 7 methadone 8 cocaine 9 chernyashka 10 desomorphine (benzine) 11 analgetics 12 other _____ 13 no response 99
506	Which drugs have you used in the past one year? (multiple responses)	marijuana 1 tranquilizers or sedative (diazepam, valium, tranqwin, lorazepam, seduxen, tazepam, oxazepam) 2 ecstasy 3 vaporizing substances (glue, acetone) 4 amphetamines 5 coaxil 6 heroin 7 methadone 8 cocaine 9 chernyashka 10 desomorphine (benzine) 11 analgetics 12 other _____ 13 no response 99
507	In what country did you use drugs for the first time?	Armenia 1 Russia 2 Ukraine 3 other (specify) _____ 4 no response 99
508	How old were you when you first injected drugs?	_____ no response 99
509	Which drugs did you use when you first injected drugs? (one response)	Heroin 1 Chernyashka 2 Desomorphine (benzine) 3 Other _____ 4 no response 99

No.	Question	Answer
510	Where did you inject drugs for the first time?	Armenia 1 Russia 2 Ukraine 3 Other (specify) _____ 4 no response 99
511	Which of the following types of drugs have you injected in the past 3 months (multiple answers are possible)?	Heroin 1 Chernyashka 2 Desomorphine (benzine) 3 Other _____ 4 no response 99
512	Have you injected drugs in the past one month? If “no”, skip to Question 521	yes 1 no 2 no response 99
513	How many times did you inject drugs in the past month?	_____ 1 no response 99
<p><i>The following questions refer to injection paraphernalia and their usage. Injection paraphernalia include needles, syringes, cookers, drug containers, filters. Sharing injection paraphernalia is defined as using paraphernalia (needles and syringes), when you know or suspect that they have already been used by another person (including your sexual partner).</i></p>		
514	Have you shared injection paraphernalia in the last one month?	yes 1 no 2 no response 99
515	On average how many people did you share injection paraphernalia with in the past month?	_____ 1 no response 99
516	On average how many cases of sharing injection paraphernalia did you have in the past month?	_____ 1 no response 99
517	How often did you use new disposable syringes every time injecting drugs in the past one month? If “every time”, skip to question 524	Every time 1 sometimes 2 never 3 no response 99
518	Did you use a used non-sterile paraphernalia for injecting drug use in the past one month?	yes 1 no 2 no response 99
519	Did you use sterile needle and syringe the last time you injected in the past one month? (GAM)	yes 1 no 2 no response 99
520	Have you had any skin problems (skin reddening, pain, infection) from drug injection in the past 1 month?	yes 1 no 2 no response 99
521	Have you <u>ever</u> used drugs prepared by others?	yes 1 no 2 no response 99
522	Do you sterilize needles and syringes before usage? If “never”, skip to question 524	yes, always 1 occasionally 2 never 3 no response 99

No.	Question	Answer	
523	How do you sterilize needles and syringes?	washing with water	1
		boiling	2
		with alcohol or iodine	
		Bleach	3
		other _____	4
		no response	99
Treatment			
524	Have you ever wanted to be cured from injecting drug use? If “no”, pass on to Question 529	yes	1
		no	2
		no response	99
525	Have you turned to a doctor for receiving treatment of drug addiction (excluding the methadone) during the last 1 year? If “no”, skip to Question 528	yes	1
		no	2
		no response	99
526	If “yes”, explain why (multiple answers are possible).	to stop using	1
		because of overdose	2
		because of skin infections	3
		because of other infections	4
		other	5
		no response	99
527	How was the treatment?	Registered	1
		anonymous	2
		no response	99
528	In the past one year did you turn to methadone substitution therapy? If “no”, pass on to Question 531	yes	1
		no	2
		no response	99
529	In the past one year did you receive methadone substitution therapy?	yes	1
		no	2
		no response	99
530	Explain why did not seek out a doctor to receive methadone substitution therapy (multiple answers are possible).	don't trust doctors	
		don't believe in the treatment efficiency	
		don't believe that confidentiality will be maintained	
		have financial problems	
		don't consider myself to be ill	
		no response	
Arrest and Incarceration			
531	Have you ever had any problems with the police because of drug use? If “no”, pass on to Question 534	yes	1
		no	2
		no response	99
532	If yes, what kind of problems have you had?	administrative penalty	1
		arrested	2
		other _____	3
		no response	99
533	Have you used drugs in prison?	yes	1
		no	2
		no response	99

No.	Question	Answer
534	Have you injected drugs in prison?	yes 1
		no 2
		no response 99
535	Have you shared injection paraphernalia in prison?	yes 1
		no 2
		no response 99
536	Have you ever overdosed on narcotics to the point where you lost consciousness?	yes 1
		no 2
		don't remember 3
		no response 99

Section 6. Questions related to HIV/AIDS and STIs

No.	Question	Answer
601	Have you heard of HIV/AIDS?	yes 1
		no 2
		no response 99
602	Where from have you heard of HIV/AIDS (multiple answers are possible)?	family 1
		friends/peers 2
		mass media 3
		school 4
		social workers 5
		health care workers 6
		counselling services 7
		other _____ 8
		no response 99
603	How would you estimate the probability for you to become infected with HIV?	high 1
		medium 2
		no risk 3
		no response 99
604	Do you know where you can undergo HIV testing, if you wish to?	yes 1
		no 2
		no response 99
605	Have you been provided with condoms during the past 12 months (for example by outreach workers or at an NGO)?	yes 1
		no 2
		no response 99
606	Have you received counselling on using condoms and safe sex during the past 12 months (for example by outreach workers or at an NGO)?	yes 1
		no 2
		no response 99
607	Have you been provided with sterile needles and syringes in the last 12 months (e.g. via outreach workers, peer educators, or through needle-exchange programmes)?	yes 1
		no 2
		no response 99
608	Are the services providing counselling and testing on HIV accessible/available for you?	yes 1
		no 2
		do not know 3
		no response 99

609	Have you been tested for HIV during the past 12 months? If you marked “no” or “no response” pass on to Question 701	yes no no response	1 2 99
610	When were you last tested	6 months 6–12 months More than 12 months no response	1 2 3 99
611	Have you been provided with the test results?	yes no no response	1 2 99
612	What was your test result?	positive negative Indeterminate Do not know no response	1 2 3 4 99
613	Have you been tested for a sexually transmitted disease in the past one year?	yes no no response	1 2 99
614	Have you been diagnosed with a sexually transmitted disease in the past one year?	yes no no response	1 2 99

Section 7. Questions for assessing the level of knowledge on HIV prevention

No.	Question	Answer	
701	Is it possible to reduce the risk of HIV infection by having sexual relations with one uninfected faithful sexual partner?	yes no do not know no response	1 2 3 99
702	Is it possible to reduce the risk of HIV infection by using condoms?	yes no do not know no response	1 2 3 99
703	Can a healthy-looking person be HIV infected?	yes no do not know no response	1 2 3 99
704	Can a person get HIV from mosquito bites?	yes no do not know no response	1 2 3 99
705	Is it possible to become HIV infected by sharing a meal with a person infected with HIV?	yes no do not know no response	1 2 3 99
706	Is it possible to become HIV infected by shaking hands with a person infected with HIV?	yes no do not know no response	1 2 3 99

No.	Question	Answer	
707	Is it possible to avoid becoming infected with HIV by switching to non-injecting drugs?	yes	1
		no	2
		do not know	3
		no response	99
708	Is it possible to become infected with HIV by using an injection needle that was already used by someone else?	yes	1
		no	2
		do not know	3
		no response	99

Section 8. Stigma and discrimination questions

No.	Question	Answer		Skip
801.	I am ashamed to be an injection drug user.	agree	1	
		neutral/indifferent	2	
		disagree	3	
		don't know	4	
		no response	99	
802.	I am not ashamed to say I am a man who has sex with men in a gathering with other people who are men who have sex with men	agree	1	
		neutral/indifferent	2	
		disagree	3	
		don't know	4	
		no response	99	
803.	I am not ashamed to say I am a man who has sex with men when I meet with a social or health worker who works in my community.	agree	1	
		neutral/indifferent	2	
		disagree	3	
		don't know	4	
		no response	99	
804.	Who have you told that you inject drugs? CHECK ALL THAT APPLY	no one	1	
		partner/spouse	2	
		family	3	
		friends/acquaintances who inject drugs	4	
		friends/acquaintances-non injectors	5	
		healthcare providers	6	
		other _____	7	
		don't know	8	
		no response	99	
805.	Have you ever felt excluded from family activities because you inject drugs?	no	1	
		yes	2	
		don't know	3	
		no response	99	
806.	Have you ever felt that family members have made unfair comments or gossiped about you because you inject drugs?	no	1	
		yes	2	
		don't know	3	
		no response	99	
807.	Have you ever avoided seeking health-care services in the last 12 months due to	Fear of or concern about stigma	1	
		Fear or concern someone may learn you inject drugs	2	

		Fear of or concern about or experienced violence	3	
		Fear of or concern about or experienced police harassment or arrest	4	
		haven't avoided	5	
		no response	99	
808.	Have you ever avoided seeking HIV testing in the last 12 months due to	Fear of or concern about stigma	1	
		Fear/concern someone may learn you inject drugs	2	
		Fear/concern about/experienced violence	3	
		Fear/concern about/experienced police harassment or arrest	4	
		haven't avoided	5	
		no response	99	
809.	Has someone ever scolded you because you inject drugs?	no	1	
		yes	2	
		don't know	3	
		no response	99	
810.	Has someone ever blackmailed you because you inject drugs?	no	1	
		yes	2	
		don't know	3	
		no response	99	
811.	Has someone ever physically harassed or hurt you because you inject drugs?	no	1	
		yes	2	
		don't know	3	
		no response	99	
812.	Has someone ever forced you to have any type of sex when you did not want to? <i>By "forced", I mean physically forced or coerced to have any type of sex, including penetration with an object, when you did not want to.</i>	no	1	→ 901
		yes	2	→ 813
		don't know	3	→ 901
		no response	99	→ 901
813.	Do you believe any of your experiences of forced sex were related to the fact that you inject drugs?	yes	1	
		no	2	
		don't know	3	
		no response	99	

Section 9. Physical violence questions

No.	Question	Answer	Skip
901.	In your lifetime, how many times has anyone ever physically hurt you?	never	1 →1001
		_____ times	
		don't know	98 →1001
		no response	99 →1001
902.	The first time someone physically hurt you, how old were you?	_____	
		don't know	6
		no response	99

No.	Question	Answer	Skip
903.	The first time this happened, what was your relationship to the person who did this to you?	paying sex partner 1 non-paying sex partner 2 police/military/authority figure 3 relative 4 friend/ acquaintance 5 other _____ 6 don't know 7 no response 99	→ 904 → 904 → 905 → 905 → 905 → 905 → 905
904.	The first time this happened, what type of partner was this person?	spouse or live-in partner 1 boyfriend/girlfriend 2 someone that I have sex with but do not call boyfriend/girlfriend 3 other _____ 4 don't know 5 no response 99	
905.	Any of these times this happened, do you think it was because you inject drugs?	yes 1 no 2 don't know 3 no response 99	
906.	As a result of someone doing any of those things to you, did you ever try to seek professional help or services from any of the following? CHECK ALL THAT APPLY	I did not try to seek help 1 healthcare professional 2 police or other security personnel 3 social worker, counselor or NGO 4 religious leader 5 other _____ 6 don't know 7 no response 99	
907.	When trying to seek help for what someone had done to you, were you ever refused services by any of the following? CHECK ALL THAT APPLY.	healthcare professional 1 police or other security personnel 2 lawyer, judge or other legal professional 3 social worker, counselor 4 an NGO or other local organization 5 other _____ 6 don't know 7 no response 99	
908.	What was the main reason that you did not try to seek professional help or services?	did not know what services were available/where to go 1 Services I wanted/needed not available 2 I could not afford services 3 I was uncomfortable accessing services 4 I did not feel that I needed services 5 other _____ 6 don't know 7 no response 99	→ 910 → 910 → 910 → 919 → 910 → 910 → 910
909.	Why were you uncomfortable? CHECK ALL THAT APPLY	Worried service provider would treat me differently/poorly if found out I am PWID	1

No.	Question	Answer	Skip
		Afraid that my family/partner/ husband/wife would find out I am PWID 2	
		Afraid of what the authorities/police would do to me if they found out I am PWID 3	
		Worried others would find out I am PWID 4	
		other _____ 5	
		don't know 6	
		no response 99	
910.	Who else did you tell about any of these experiences? CHECK ALL THAT APPLY	paying sex partner 1	
		non-paying sex partner 2	
		police/military/authority figure 3	
		relative 4	
		friend/acquaintance 5	
		other _____ 6	
		don't know 7	
		no response 99	

Section 10. Population size estimation questions

No.	Question	Answer	Skip
1001	Between January 1 2018 to March 31 2018 did you receive methadone substitution therapy?	yes 1	
		no 2	
		do not know 3	
		no response 99	
1002	Between January 1 2018 to March 31 2018 did you receive treatment of drug addiction (excluding the methadone)	yes 1	
		no 2	
		do not know 3	
		no response 99	
1003	How was the treatment?	Registered 1	
		anonymous 2	
		no response 99	
1004	Between January 1 2018 to March 31 2018 did you receive sterile needles and syringes from APEC NGO -in Yerevan, Gyumri and Vanadzor)	yes 1	
		no 2	
		do not know 3	
		no response 99	
1005	Between January 1 2018 to March 31 2018 have you received condoms from APEC NGO-in Yerevan, Gyumri and Vanadzor)	yes 1	
		no 2	
		do not know 3	
		no response 99	
1006	Between January 1 2018 to March 31 2018 have you received an HIV test from APEC NGO - in Yerevan, Gyumri and Vanadzor)	yes 1	
		no 2	
		do not know 3	
		no response 99	
1007	Between January 1 2017 to December 31 2017 have you been charged with civil penalty in the specific city	yes 1	
		no 2	
		do not know 3	
		no response 99	

No.	Question	Answer								
1008	Did you receive a bracelet in the week of [dates of distribution of unique object] that was given to you by outreach workers of APEC NGO?	<table border="0"> <tr> <td>yes</td> <td>1</td> </tr> <tr> <td>no</td> <td>2</td> </tr> <tr> <td>do not know</td> <td>3</td> </tr> <tr> <td>no response</td> <td>99</td> </tr> </table>	yes	1	no	2	do not know	3	no response	99
yes	1									
no	2									
do not know	3									
no response	99									
1009	What is your best guess of the highest number of persons who inject drugs, who are over the ages of 18 and live in this city?	_____								
1010	What is your best guess of the lowest number of persons who inject drugs, who are over the ages of 18 and live in this city?	_____								
1011	What is your best guess of the most accurate number of persons who inject drugs, who are over the ages of 18 and live in this city?	_____								
1012	Did you participate in a similar survey as this survey (received a coupon, had a blood test, responded to questions) in 201_ in this same city?	<table border="0"> <tr> <td>yes</td> <td>1</td> </tr> <tr> <td>no</td> <td>2</td> </tr> <tr> <td>do not know</td> <td>3</td> </tr> <tr> <td>no response</td> <td>99</td> </tr> </table>	yes	1	no	2	do not know	3	no response	99
yes	1									
no	2									
do not know	3									
no response	99									

**QUESTIONNAIRE FOR COMMERCIAL SEX WORKERS
COUPON NUMBER**

Section 1. Questions related to social network

No.	Question	Answer
101	How many women do you know and they know you, they are 18 years and above, living in Yerevan (Gymani or Vanadzor– depending on survey area) have exchanged vaginal or anal sex for for money or goods in the past 3 months?	_____
102	How many of them have you seen in the past one month?	_____ no response 99

Section 2. Participant-recruiter relationships

No.	Question	Answer
201	How would you characterize your relationships with your recruiter? Multiple answers are possible.	a person implementing study/seed 1 a friend 2 a colleague 3 you live together 4 a neighbor 5 a close relative 6 a relative 7 a stranger 8 no response 99
202	Why have you taken the coupon and given your consent to participate in the study? Multiple answers are possible.	to receive incentive 1 to get results from HIV testing 2 to get results of other testing 3 at the request of a friend 4 due to the interest to the study 5 due to availability of free time 6 other 7

Section 3. Demographic characteristics

No.	Question	Answer	Skip
301	Age	_____ no response 99	
302	In what country/nation were you born?	Republic of Armenia 1 Russian Federation 2 Republic of Georgia 3 other 4 no response 99	
303	What is the highest level of schooling you completed:	no school 1 incomplete primary 2 primary 3 incomplete secondary 4 secondary 5	

No.	Question	Answer	Skip
		secondary technical incomplete higher higher no response	6 7 8 99
304	What is your current marital status?	single married divorced civil marriage widowed no response	1 2 3 4 5 99
305	Are you currently living with a sexual partner?	yes no no response	1 2 99
306	What is your main source of income?	no income full-time employment part-time employment pension external help sex work other no response	1 2 3 4 5 6 97 99
307	In the last 1 year, have you been away from home for more than one month at a time? If “no”, pass on to Question 312	yes no no response	1 2 99
			→310 →310
308	Where was the last place you were when you went away for more than one month	Armenia-other region Russia other no response	1 2 97 99
309	The last time you were away from home for more than one month, did you have sexual intercourse WITHOUT a condom?	yes no no response	1 2 99
310	Have you been abroad for 3 or more months for purposes of labor, but not more than one year, in the past year	yes no no response	1 2 99
311	Have you been abroad for 3 or more months for purposes of selling sex, but not more than one year, in the past year	yes no no response	1 2 99

Section 4. Questions related to sexual life and condom use

No.	Question	Answer	Skip
<p><i>We would like to ask you some questions regarding your sexual behaviour. We understand how personal those questions are, but at the same time we would like to note once again that the study confidentiality is fully maintained, and the same questions are asked to all the study participants. When we speak about sexual intercourse we mean penetrative vaginal and anal sex.</i></p>			
401	At what age did you first have sexual intercourse?	_____ no response	99

No.	Question	Answer
402	At what age did you first sell sex in exchange for money?	____ no response 99
403	Where do you usually meet or <i>find</i> clients, someone who pays you for sexual intercourse?	brothel, guesthouse, or massage parlor 1 hotel, club, bar, restaurant 2 street or park or other public places 3 internet, phone 4 broker or escort agency 5 other _____ 97 no response 99
404	Where do you usually <i>have sex</i> with clients, someone who pays you for sexual intercourse?	brothel, guesthouse, or massage parlor 1 hotel, club, bar, restaurant 2 street or park or other public places 3 at home 4 at someone else's house/apartment 5 other _____ 97 no response 99
405	Have you had sexual intercourse with a non-commercial sexual partner in the past 1 year? (By saying non-commercial sexual partner we mean a partner, who doesn't give you money in exchange for sex). If "no", go to Question 410	yes 1 no 2 no response 99
406	How many non-commercial sex partners did you have in the past one month?	In one month _____ no response 99
407	In the past one month, how many times did you have a sexual intercourse with one non-commercial partner?	In one month _____ no response 99
408	In the past one month, how many times did you use condoms when having a sexual intercourse with one non-commercial partner?	In one month _____ no response 99
409	How many non-commercial sex partners did you have in the past one week?	In one week _____ no response 99
410	In the past one week, how many times did you have a sexual intercourse with one non-commercial partner?	In one week _____ no response 99
411	In the past one week, how many times did you use condoms when having a sexual intercourse with one non-commercial partner?	In one week _____ no response 99
412	The last time you had sexual intercourse with a non-commercial sexual partner, did you or your sexual partner use a condom?	yes 1 no 2 no response 99
413	In the last 30 days during sexual intercourse with a non-commercial partner with what frequency did you (or your partner) use condom? If "every time", pass on to question 415	every time 1 almost every time 2 sometimes 3 never 4 no response 99

No.	Question	Answer
414	Why don't you use condoms every time, when having a sexual intercourse with one non-commercial partner? (multiple answers are possible)	very expensive 1 ashamed to buy 2 difficult to use 3 not so available 4 abates the pleasure 5 ashamed to ask the sexual partner to use it 6 trust my partner 7 don't know about efficiency of condom use 8 use for pregnancy prevention 9 other _____ 10 no response 99
415	How many clients did you have in the past one month?	In one month _____ no response 99
416	In the past one month how many times did you have a sexual intercourse with one client?	In one month _____ no response 99
417	In the past one month how many times did you use condoms during sexual intercourse with one client?	In one month _____ no response 99
418	How many clients did you have in the past one week?	In one week _____ no response 99
419	In the past one week how many times did you have a sexual intercourse with one client?	In one week _____ no response 99
420	In the past one week how many times did you use condoms during sexual intercourse with one client?	In one week _____ no response 99
421	The last time you had sex with a client, did you or your client use a condom?	yes 1 no 2 no response 99
422	With what frequency did you (or your client) use condom during sexual intercourses over the last 30 days?	every time 1 almost every time 2 sometimes 3 never 4 no response 99
423	Why don't you use condom every time (multiple answers are possible)?	very expensive 1 ashamed to buy 2 difficult to use 3 not so available 4 abates the pleasure 5 ashamed to ask sex partner to use it 6 trust the sexual partner 7 don't know about the efficiency of condom use 8 no response 99

No.	Question	Answer
424	Have you had anal sexual intercourse in the past one year?	yes 1 no 2 don't have such kind of sex 3 no response 99
425	Did you use a condom the last time you had anal sex in the last year?	yes 1 no 2 no response 99
426	Have you had oral sex in the past one year?	yes 1 no 2 don't have such kind of sex 3 no response 99
427	Did you use a condom the last time you had oral sex?	yes 1 no 2 don't have such kind of sex 3 no response 99

Section 5. Questions related to alcohol and drug use

No.	Question	Answer
<i>We would like to ask you some questions on drug use. We are assuring you that the study confidentiality is fully maintained. Do not forget that the same questions are asked to all the study participants.</i>		
501	In the past one year how often did you have a drink containing alcohol?	never 1 monthly or less 2 2-4 times a month 3 2-3 times a week 4 4 or more times a week 5 no response 99
502	How many drinks containing alcohol do you have on a typical day when you are drinking?	
503	On one occasion, how often do you have six or more drinks?	never 1 less than monthly 2 monthly 3 weekly 4 daily or almost daily 5 no response 99
504	Have you ever had sexual intercourse under the influence of alcohol?	yes 1 no 2 do not remember 3 no response 99
505	Have you ever used drugs? If "no", pass on to Question 601	yes 1 no 2 no response 99
506	How old were you when you first used drugs?	_____ 99 no response
507	Have you ever had sexual intercourse under the influence of any drug?	yes 1 no 2 do not remember 3 no response 99

No.	Question	Answer
508	Have you ever injected drugs? If “no”, pass on to Question 601	yes 1
		no 2
		no response 99
509	How old were you when you first injected drugs?	_____ no response 99

Section 6. Questions related to HIV/AIDS and STIs

No.	Question	Answer
601	Have you heard of HIV/AIDS?	yes 1
		no 2
		no response 99
<i>Gonorrhea, chlamidia, syphilis, genital herpes, genital warts, trichomoniasis, hepatitis B and C are STIs</i>		
602	Where from have you heard of HIV/AIDS, STIs (multiple answers are possible)?	family 1
		friends/peers 2
		mass media 3
		school 4
		social workers 5
		health care workers 6
		counselling services 7
		NGO 8
		no response 99
603	How would you estimate the probability for you to become infected with HIV?	high 1
		medium 2
		no risk 3
		no response 99
604	Do you know where you can undergo HIV testing, if you wish to?	yes 1
		no 2
		no response 99
605	Have you been provided with condoms during the past 12 months (for example by outreach workers or at an NGO)?	yes 1
		no 2
		no response 99
606	Have you received counselling on using condoms and safe sex during the past 12 months (for example by outreach workers or at an NGO)?	yes 1
		no 2
		no response 99
607	Are the services providing counselling and testing on HIV accessible/available for you?	yes 1
		no 2
		do not know 3
		no response 99
608	Have you ever had an HIV test?	yes 1
		no 2
		no response 99
609	When were you last tested	6 months 1
		6–12 months 2
		More than 12 months 3
		no response 99

No.	Question	Answer
610	Have you been provided with the test results?	yes 1 no 2 no response 99
611	Have you been provided with the test results?	yes 1 no 2 no response 99
612	Have you ever had any genital ulcer/sore during the past 12 months?	yes 1 no 2 no response 99
613	Have you been tested for an infection that is spread through sexual intercourse in the past 12 months? If you marked “no” or “no response” go to Question 701	yes 1 no 2 no response 99
614	If you underwent testing for an infection that is spread through sexual intercourse, where it was done?	dermatovenerological dispensary 1 private clinic 2 primary clinic 3 other _____ 4 no response 99
615	Have you been diagnosed with a sexually transmitted disease in the past one year?	yes 1 no 2 no response 99

Section 7. Questions for assessing the level of knowledge on HIV prevention

No.	Question	Answer
701	Is it possible to reduce the risk of HIV infection by having sexual relations with one uninfected faithful sexual partner?	yes 1 no 2 do not know 3 no response 99
702	Is it possible to reduce the risk of HIV infection by using condoms?	yes 1 no 2 do not know 3 no response 99
703	Can a healthy-looking person be HIV infected?	yes 1 no 2 do not know 3 no response 99
704	Can a person get HIV from mosquito bites?	yes 1 no 2 do not know 3 no response 99
705	Is it possible to become HIV infected by sharing a meal with a person infected with HIV?	yes 1 no 2 do not know 3 no response 99
706	Is it possible to become HIV infected by shaking hands with a person infected with HIV?	yes 1 no 2 do not know 3 no response 99

Section 8. Stigma and discrimination questions

No.	Question	Answer	Skip
801.	I am ashamed to sell sex?	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
802.	I am not ashamed to say I sell sex in a gathering with other people who sell sex.	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
803.	I am not ashamed to say I sell sex when I meet with a social or health worker who works in my community.	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
804.	Who have you told that you sell sex? CHECK ALL THAT APPLY.	no one partner/spouse family friends/acquaintances-sell sex friends/acquaintances who- do not sell sex healthcare providers other _____ don't know no response	1 2 3 4 5 6 7 8 99
805.	Have you ever felt excluded from family activities because you sell sex?	no yes don't know no response	1 2 3 99
806.	Have you ever felt that family members have made unfair comments or gossiped about you because you sell sex?	no yes don't know no response	1 2 3 99
807.	Have you ever avoided seeking health-care services in the last 12 months due to	Fear of or concern about stigma Fear/concern someone may learn you sell sex Fear/ concern about/experienced violence Fear/concern about/experienced police harassment or arrest haven't avoided no response	1 2 3 4 5 99
808.	Have you ever avoided seeking HIV testing in the last 12 months due to	Fear of or concern about stigma Fear/concern someone may learn sell sex Fear/concern about experienced violence Fear/concern about/experienced police harassment or arrest haven't avoided no response	1 2 3 4 5 99

No.	Question	Answer	Skip
809.	Has someone ever scolded you because you are sell sex?	no yes don't know no response	1 2 3 99
810.	Has someone ever blackmailed you because you sell sex?	no yes don't know no response	1 2 3 99
811.	Has someone ever physically harassed or hurt you because you sell sex?	no yes don't know no response	1 2 3 99
812.	Has someone ever forced you to have any type of sex when you did not want to? <i>By "forced", I mean physically forced or coerced to have any type of sex, including penetration with an object, when you did not want to.</i>	no yes don't know no response	1 → 901 2 → 813 3 → 901 99 → 901
813.	Do you believe any of your experiences of forced sex were related to the fact that you sell sex?	yes no don't know no response	1 2 3 99

Section 9. Physical violence questions

No.	Question	Answer	Skip
901.	In your lifetime, how many times has anyone ever physically hurt you?	Never _____times don't know no response	1 →1001 98 →1001 99 →1001
902.	The first time someone physically hurt you, how old were you?	_____ don't know no response	6 99
903.	The first time this happened, what was your relationship to the person who did this to you?	paying sex partner non-paying sex partner police/military/authority figure relative friend/ acquaintance other _____ don't know no response	1 →904 2 →904 3 → 905 4 → 905 5 → 905 6 → 905 7 → 905 99 → 905
904.	The first time this happened, what type of partner was this person?	spouse or live-in partner boyfriend/girlfriend someone that I have sex (not boyfriend/girlfriend) other _____ don't know no response	1 2 3 4 5 99

No.	Question	Answer	Skip
905.	Any of these times this happened, do you think it was because you sell sex?	yes no don't know no response	1 2 3 99
906.	As a result of someone doing any of those things to you, did you ever try to seek professional help or services from any of the following? CHECK ALL THAT APPLY	I did not try to seek help healthcare professional police or other security personnel social worker, counselor or NGO religious leader other _____ don't know no response	1 2 3 4 5 6 7 99
907.	When trying to seek help for what someone had done to you, were you ever refused services by any of the following? CHECK ALL THAT APPLY.	healthcare professional police or other security personnel lawyer, judge or other Legal professional social worker, counselor an NGO or other Local organization other _____ don't know no response	1 2 3 4 5 6 7 99
908.	What was the main reason that you did not try to seek professional help or services?	did not know what services were available/ where to go the services I wanted/needed were not available I could not afford services I was uncomfortable accessing services I did not feel that I needed services other _____ don't know no response	→ 910 1 → 910 2 → 910 3 → 909 4 → 910 5 → 910 6 → 910 7 → 910 99
909.	Why were you uncomfortable? CHECK ALL THAT APPLY	I was worried service provider would treat me differently/poorly if they found out I am FSW I was afraid that my family/partner/husband/wife would find out I am FSW I was afraid of what authorities/police would do if they found out I am FSW I was worried others would find out I am FSW other _____ don't know no response	1 2 3 4 5 6 99
910.	Who else did you tell about any of these experiences? CHECK ALL THAT APPLY	paying sex partner non-paying sex partner police/military/authority figure relative	1 2 3 4

No.	Question	Answer	Skip
		friend/acquaintance	5
		other _____	6
		don't know	7
		no response	99

Section 10. Population size estimation questions

No.	Question	Answer	Skip
1001	Between January 1 2018 to March 31 2018 have you received condoms from APU NGO-in Yerevan, Gyumri and Vanadzor)	yes no do not know no response	1 2 3 99
1002	Between January 1 2018 to March 31 2018 have you received an HIV test from APU NGO - in Yerevan, Gyumri and Vanadzor)	yes no do not know no response	1 2 3 99
1003	Between January 1 2018 to March 31 2018 have you received an STI test from APU NGO - in Yerevan, Gyumri and Vanadzor)	yes no do not know no response	1 2 3 99
1004	Between January 1 2017 to December 31 2017 have you been charged with civil penalty?	yes no do not know no response	1 2 3 99
1005	Did you receive a bracelet in the week of [dates of distribution of unique object] that was given to you by outreach workers of APU NGO?	yes no do not know no response	1 2 3 99
1006	What is your best guess of the highest number of females who exchange sex for money, who are over the ages of 18 and live in this city?	_____	
1007	What is your best guess of the lowest number of females who exchange sex for money, who are over the ages of 18 and live in this city?	_____	
1008	What is your best guess of the most accurate number of females who exchange sex for money, who are over the ages of 18 and live in this city?	_____	
1009	Did you participate in a similar survey as this survey (received a coupon, had a blood test, responded to questions) in 201_ in this same city?	yes no do not know no response	1 2 3 99

**QUESTIONNAIRE FOR MSM
COUPON NUMBER**

Section 1. Questions related to social network

No.	Question	Answer
101	How many men do you know and they know you, who are 18 years and above, living in Yerevan (Gymani, Vanadzor - depending on the survey area), who had anal sex with male partner in the last 12 months	_____
102	How many of them have you seen in the past one month? (cannot be 0)	_____

Section 2. Participant-recruiter relationships

No.	Question	Answer	
201	How would you characterize your relationships with your recruiter? Multiple answers are possible	a person implementing study/seeds	1
		a friend	2
		a colleague	3
		you live together	4
		a neighbour	5
		a close relative	6
		a relative	7
		acquaintance	8
		a stranger	9
		no response	99
202	Why have you taken the coupon and given your consent to participate in the study? Multiple answers are possible	to receive incentive	1
		to get results from HIV testing	2
		to get results of other testing	3
		at the request of a friend	4
		due to the interest to the study	5
		due to availability of free time	6
		other	7
		no response	99

Section 3. Demographic characteristics

No.	Question	Answer	Skip
301	Age	_____ no response	99
302	In what country/nation were you born?	Republic of Armenia Russian Federation Republic of Georgia other no response	1 2 3 4 99
303	What is the highest level/grade/year of school you completed:	no school incomplete primary primary	1 2 3

No.	Question	Answer	Skip	
		incomplete secondary secondary secondary technical incomplete higher higher no response	4 5 6 7 8 99	
304	What is your current marital status?	single married divorced civil marriage widowed no response	1 2 3 4 5 99	
305	Are you currently living with a sexual partner?	yes no no response	1 2 99	
306	What is your main source of income?	no income full-time employment part-time employment pension external help sex work other no response	1 2 3 4 5 6 7 99	
307	In the last 1 year, have you been away from home for more than one month at a time? If “no”, pass on to Question 312	yes no no response	1 2 99	→ 310 → 310
308	Where was the last place you were when you went away for more than one month	Armenia-other region Russia Ukraine other no response	1 2 3 4 99	
309	The last time you were away from home for more than one month, did you have sexual intercourse WITHOUT a condom?	yes no no response	1 2 99	
310	Have you been abroad for 3 or more months for purposes of labor, but not more than one year, in the past year	yes no no response	1 2 99	
311	How would you identify your sexuality? /gender	homosexual bisexual heterosexual transgender/sexual other	1 2 3 4 5	
312	What sex would you say you are most sexually attracted to?	only or mostly male equally male and female mostly female none do not know no response	1 2 3 4 5 99	

Section 4. Questions related to sexual life and condom use

No.	Question	Answer
<i>We would like to ask you some questions regarding your sexual behaviour. We understand how personal these questions are, but at the same time we would like to note once again that your responses are confidential, and the same questions are asked to all the study participants. When we speak about sexual intercourse we mean penetrative anal sex (vaginal or anal sex if with a female).</i>		
401	At what age did you first have sex?	_____ no response 99
402	At what age did you first have anal sex with male partners?	_____ no response 99
403	Your role during sexual intercourse is:	active 1 passive 2 both active and passive 3 no response 99
404	How many male sexual partners on average do you have anal sex with during a month?	_____ no response 99
405	When was the last time you had anal sex with a male partner? READ RESPONSES ALOUD	Within this week 1 Within this month 2 Within the last 3 months 3 Within the last 6 months 4 Between 6 months and 1 year 5
406	Did you (or your male sexual partner) use a condom the last time you had anal sex?	yes 1 no 2 no response 99
407	In the past month on average how many times did you have anal sex with a male partner?	During a month _____ no response 99
408	In the past month on average how many times did you use a condom with a male sexual partner during anal sex?	During a month _____ no response 99
409	In the past week on average how many times did you have anal sex with a male partner?	During a week _____ no response 99
410	In the past week on average how many times did you use a condom with a male sexual partner during anal sex?	During a week _____ no response 99
411	Did you use a condom the last time you had oral sex with a male partner?	yes 1 no 2 don't have such kind of sex 3 no response 99
412	Have you had a regular male partner in the past 1 year? <u>These are partners you know well and with whom you have been having sex for at least three months</u>	yes 1 no 2 no response 99
413	The last time you had anal sex with a regular male partner, did you or your partner use a condom?	yes 1 no 2 no response 99

No.	Question	Answer
414	With what frequency have you used a condom with a regular male partner during the past 1 year during anal sex?	every time 1 sometimes 2 never 3 no response 99
415	Why DO NOT you always use condoms with a regular male partner during anal sex? MULTIPLE ANSWERS ARE POSSIBLE ANSWER CANNOT BE "DON'T LIKE IT"..WE KNOW THEY DO NOT LIKE IT, BUT WHY DO THEY NOT LIKE IT PROBE: ANYTHING ELSE?	Too expensive 1 Ashamed to buy 2 Difficult to use 3 Not so available 4 Reduces pleasure 5 Ashamed to ask partner to use it 6 Other 97 no response 99
416	Have you had any non-regular male sexual partner in the past 1 year?	yes 1 no 2 no response 99
417	The last time you had anal sex with a non-regular male partner, did you or your partner use a condom?	yes 1 no 2 no response 99
418	With what frequency have you used a condom with a non-regular partner during the past 1 year during anal sex?	every time 1 sometimes 2 never 3 no response 99
419	Why don't you always use condom with a non-regular partner (multiple answers are possible) during anal sex?	very expensive 1 ashamed to buy 2 difficult to use 3 not so available 4 abates the pleasure 5 ashamed to ask partner to use it 6 trust the sexual partner 7 don't know about the efficiency of condom use 8 no response 99
Buying Sex		
420	Have you ever BOUGHT anal sex for money, drugs, work? If "no", pass on to Question 424	yes 1 no 2 no response 99
421	The last time you bought anal sex from a man for money, drugs, work, did you or your partner use a condom?	yes 1 no 2 no response 99
422	How often do you use a condom when you bought anal sex (i.e., sell sex) for money, drugs, work in the past year?	always 1 sometimes 2 never 3 no response 99
423	Why don't you always use a condom with a male partner from whom you bought anal sex for for money, drugs, work in the past	Too expensive 1 Ashamed to buy 2 Difficult to use 3

No.	Question	Answer	
	year?	Not so available	4
	MULTIPLE ANSWERS ARE POSSIBLE	Reduces pleasure	5
	ANSWER CANNOT BE “DON’T LIKE IT”. WE KNOW THEY DO NOT LIKE IT,	Ashamed to ask partner to use it	6
	BUT WHY DO THEY NOT LIKE IT	Other	97
	PROBE: ANYTHING ELSE?	no response	99
Selling sex			
424	Have you ever sold anal sex for money, drugs, work?	yes	1
	If “no”, pass on to Question 428	no	2
		no response	99
425	The last time you <u>sold</u> anal sex to a man for money, drugs, work, did you or your partner use a condom?	yes	1
		no	2
		no response	99
426	How often do you use a condom when selling anal sex to men in exchange for money, drugs, work?	always	1
		often	2
		sometimes	3
		other _____	4
		no response	
427	Why don’t you always use a condom with a male partner to whom you sell anal sex in exchange for money, drugs, work?	Too expensive	1
		Ashamed to buy	2
		Difficult to use	3
		Not so available	4
	MULTIPLE ANSWERS ARE POSSIBLE-	Reduces pleasure	5
	ANSWER CANNOT BE “DON’T LIKE IT”. WE KNOW THEY DO NOT LIKE IT,	Ashamed to ask partner to use it	6
	BUT WHY DO THEY NOT LIKE IT	Other	97
	PROBE: ANYTHING ELSE?	no response	99
428	Have you ever had sexual intercourse with a female partner?	yes	1
	<u>Questions related to sexual behaviour with female partners</u> If “no”, pass on to Question 501	no	2
		no response	99
429	The last time you had sexual intercourse with a female partner did you or your partner use a condom?	yes	1
		no	2
		no response	99
430	With what frequency have you used a condom when having sexual intercourse with a female partner?	every time	1
		sometimes	2
		never	3
		no response	99
431	Why don’t you always use a condom with a female partner?	Too expensive	1
		Ashamed to buy	2
		Difficult to use	3
	MULTIPLE ANSWERS ARE POSSIBLE	Not so available	4
	ANSWER CANNOT BE “DON’T LIKE IT”. WE KNOW THEY DO NOT LIKE IT,	Reduces pleasure	5
	BUT WHY DO THEY NOT LIKE IT	Ashamed to ask partner to use it	6
		Other	97
	PROBE: ANYTHING ELSE?	no response	99

Section 5. Lubricants and condoms

No.	Question	Answer	Skip
501	Do you normally use lubricants during anal sex with a male partner?	yes no no response	1 2 99
502	Other than saliva, what kind of lubricant do you use most often during anal sex with a male partner?	Water-based Oil-based Other no response	1 2 97 99
503	Have you ever had sexual intercourse with a male partner against your will or by force?	yes no no response	1 2 99
			→ 601
504	Did you have your first anal sexual intercourse with a male partner against your will or by force?	yes no no response	1 2 99

Section 6. Questions related to alcohol and drug use

No.	Question	Answer
<i>We would like to ask you some questions on drug use. We are assuring you that the study confidentiality is fully maintained, because we do not know your name. Do not forget that the same questions are asked to all the study participants and we are not going to mark you out.</i>		
601	In the past one year how often did you have a drink containing alcohol?	never monthly or less 2-4 times a month 2-3 times a week 4 or more times a week no response
		1 2 3 4 5 99
602	How many drinks containing alcohol do you have on a typical day when you are drinking?	
603	On one occasion, how often do you have six or more drinks?	never less than monthly monthly weekly daily or almost daily no response
		0 1 2 3 4 99
604	Have you ever had sexual intercourse under the influence of alcohol?	yes no do not remember no response
		1 2 3 99
605	Have you ever used drugs? If “no”, pass on to Question 701	yes no no response
		1 2 99
606	How old were you when you first used drugs?	_____ no response
		99
607	Have you ever had sexual intercourse under the influence of any drug?	yes no do not remember no response
		1 2 3 99

No.	Question	Answer
608	Have you ever injected drugs? If “no”, pass on to Question 701	yes 1 no 2 no response 99
609	How old were you when you first injected drugs?	_____ no response 99
610	Have you been injecting drugs in the past one month?	yes 1 no 2 no response 99
611	Did you use sterile needle and syringe the last time you were injecting drug?	yes 1 no 2 no response 99

Section 7. Questions related to HIV/AIDS and STIs

No.	Question	Answer
701	Have you heard of HIV/AIDS?	yes 1 no 2 no response 99
<i>Ghonorrhea, chlamidiosis, syphilis, genital herpes, genital warts, trichomoniasis, hepatitis B and C are STIs</i>		
702	Where from have you heard of HIV/AIDS (multiple answers are possible)?	family 1 friends/peers 2 mass media 3 school 4 social workers 5 health care workers 6 counselling services 7 other _____ 8 no response 99
703	How would you estimate the probability for you to become infected with HIV or STIs?	high 1 medium 2 no risk 3 no response 99
704	Do you know where you can undergo HIV testing, if you wish to?	yes 1 no 2 no response 99
705	Have you been provided with condoms during the past 12 months (for example by outreach workers or at an NGO)?	yes 1 no 2 no response 99
706	Have you received counselling on using condoms and safe sex during the past 12 months (for example by outreach workers or at an NGO)?	yes 1 no 2 no response 99
707	Have you ever had an HIV test?	yes 1 no 2 no response 99
708	When were you last tested	6 months 1 6–12 months 2 More than 12 months 3 no response 99

No.	Question	Answer
709	Have you been provided with the test results?	yes 1 no 2 no response 99
710	Have you been provided with the test results?	yes 1 no 2 no response 99
711	Have you ever had any genital ulcer/sore during the past 12 months?	yes 1 no 2 do not know 3 no response 99
712	Have you been tested for a sexually transmitted disease in the past one year?	yes 1 no 2 no response 99
713	Have you been diagnosed with a sexually transmitted disease in the past one year?	yes 1 no 2 no response 99
714	What measures did you take when you became infected?	Visited hospital (policlinic, other health care institution) 1 self-treatment 2 did nothing 3 other 4 no response 99

Section 8. Questions for assessing the level of knowledge on HIV prevention

No.	Question	Answer
801	Is it possible to reduce the risk of HIV infection by having sexual relations with one uninfected faithful sexual partner?	yes 1 no 2 do not know 3 no response 99
802	Is it possible to reduce the risk of HIV infection by using condoms?	yes 1 no 2 do not know 3 no response 99
803	Can a healthy-looking person be HIV infected?	yes 1 no 2 do not know 3 no response 99
804	Can a person get HIV from mosquito bites?	yes 1 no 2 do not know 3 no response 99
805	Is it possible to become HIV infected by sharing a meal with a person infected with HIV?	yes 1 no 2 do not know 3 no response 99
806	Is it possible to become HIV infected by shaking hands with a person infected with HIV?	yes 1 no 2 do not know 3 no response 99

Section 9. Stigma and discrimination questions

No.	Question	Answer	Skip
901.	I am ashamed to be a man who has sex with men.	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
902.	I am not ashamed to say I am a man who has sex with men in a gathering with other people who are men who have sex with men	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
903.	I am not ashamed to say I am a man who has sex with men when I meet with a social or health worker who works in my community.	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
904.	Who have you told that you have sex with men? CHECK ALL THAT APPLY	no one partner/spouse family friends/acquaintances-MSM friends/acquaintances-Not MSM healthcare providers other _____ don't know no response	1 2 3 4 5 6 7 8 99
905.	Have you ever felt excluded from family activities because you have sex with men?	no yes don't know no response	1 2 3 99
906.	Have you ever felt that family members have made unfair comments or gossiped about you because you have sex with men?	no yes don't know no response	1 2 3 99
907.	Have you ever avoided seeking health-care services in the last 12 months due to	Fear of or concern about stigma Fear or concern someone may learn you have sex with men Fear of or concern about or experienced violence Fear of/concern about /experienced police harassment or arrest haven't avoided no response	1 2 3 4 5 99
908	Have you ever avoided seeking HIV testing in the last 12 months due to	Fear of or concern about stigma Fear/concern someone may learn you have sex with men Fear of/concern about or experienced violence	1 2 3

No.	Question	Answer	Skip
		Fear of/concern about/experienced police harassment or arrest 4 haven't avoided 5 no response 99	
909.	Has someone ever scolded you because you have sex with men?	no 1 yes 2 don't know 3 no response 99	
910.	Has someone ever blackmailed you because you have sex with men?	no 1 yes 2 don't know 3 no response 99	
911.	Has someone ever physically harassed or hurt you have sex with men?	no 1 yes 2 don't know 3 no response 99	
912.	Has someone ever forced you to have any type of sex when you did not want to? <i>By "forced", I mean physically forced or coerced to have any type of sex, including penetration with an object, when you did not want to.</i>	no 1 yes 2 don't know 3 no response 99	→ 1001 → 913 → 1001 → 1001
913.	Do you believe any of your experiences of forced sex were related to the fact that you have sex with men?	yes 1 no 2 don't know 3 no response 99	

Section 10. Physical violence questions

No.	Question	Answer	Skip
1001.	In your lifetime, how many times has anyone ever physically hurt you?	Never 1 _____ times don't know 98 no response 99	→ 1101 → 1101 → 1101
1002.	The first time someone physically hurt you, how old were you?	_____ don't know 98 no response 99	
1003.	The first time this happened, what was your relationship to the person who did this to you?	paying sex partner 1 non-paying sex partner 2 police/military/authority figure 3 relative 4 friend/ acquaintance 5 other _____ 6 don't know 7 no response 99	→ 1004 → 1004 → 1005 → 1005 → 1005 → 1005 → 1005
1004.	The first time this happened, what type of partner was this person?	spouse or live-in partner 1 boyfriend/girlfriend 2	

No.	Question	Answer	Skip
		someone that I have sex with but do not call a boyfriend/girlfriend 3 other _____ 4 don't know 5 no response 99	
1005.	Any of these times this happened, do you think it was because you have sex with men?		
1006.	As a result of someone doing any of those things to you, did you ever try to seek professional help or services from any of the following? CHECK ALL THAT APPLY	I did not try to seek help 1 healthcare professional 2 police or other security personnel 3 social worker, counselor or NGO 4 religious leader 5 other _____ 6 don't know 7 no response 99	
1007.	When trying to seek help for what someone had done to you, were you ever refused services by any of the following? CHECK ALL THAT APPLY.	healthcare professional 1 police or other security personnel 2 lawyer, judge/other Legal professional 3 social worker, counselor 4 an NGO or other Local organization 5 other _____ 6 don't know 7 no response 99	
1008.	What was the main reason that you did not try to seek professional help or services?	did not know what services were available/where to go 1 Services I wanted/needed not available 2 I could not afford services 3 I was uncomfortable accessing services 4 I did not feel that I needed services 5 other _____ 6 don't know 7 no response 99	→ 1010 → 1010 → 1010 → 1009 → 1010 → 1010 → 1010 → 1010
1009.	Why were you uncomfortable? CHECK ALL THAT APPLY	I was worried service provider would treat me differently/poorly if they found out I am MSM 1 I was afraid family/partner/husband/wife would find out I am MSM 2 I was afraid of what authorities/police would do to me if they found out I am MSM 3 Worried others would find out I am MSM 4 other _____ 5 don't know 6 no response 99	

No.	Question	Answer	Skip
1010.	Who else did you tell about any of these experiences? CHECK ALL THAT APPLY	paying sex partner	1
		non-paying sex partner	2
		police/military/authority figure	3
		relative	4
		friend/acquaintance	5
		other _____	6
		don't know	7
	no response	99	

Section 11. Population Size Estimations

No.	Question	Answer	Skip
1101	Between January 1 2018 to March 31 2018 have you received condoms from New Generation NGO -in Yerevan, Gyumri and Vanadzor)	yes	1
		no	2
		do not know	3
		no response	99
1102	Between January 1 2018 to March 31 2018 have you received an HIV test from New Generation NGO - in Yerevan, Gyumri and Vanadzor)	yes	1
		no	2
		do not know	3
		no response	99
1103	“Did you receive a bracelet in the week of [dates of distribution of unique object] that was given to you by outreach workers of New Generation NGO?”	yes	1
		no	2
		do not know	3
		no response	99
1104	What is your best guess of highest number of males who have sex with males, over the ages of 18, live in this city?	_____	
1105	What is your best guess of lowest number of males who have sex with males, over the ages of 18, live in this city?	_____	
1106	What is your best guess of most accurate males who have sex with males, over the ages of 18 and live in this city?	_____	
1107	Did you participate in a similar survey as this survey (received a coupon, had a blood test, responded to questions) in 201_ in this same city?	yes	1
		no	2
		do not know	3
		no response	99

**QUESTIONNAIRE FOR TG
COUPON NUMBER**

Section 1. Questions related to social network

No.	Question	Answer
101	How many people do you know and they know you, they were born male, identify as female and who are 18 years and above, living in Yerevan who had anal sex with male partner in the last 12 months	_____
102	How many of them have you seen in the past one month? (cannot be 0)	_____

Section 2. Participant-recruiter relationships

No.	Question	Answer	
201	How would you characterize your relationships with your recruiter? Multiple answers are possible	a person implementing study/seeds	1
		a friend	2
		a colleague	3
		you live together	4
		a neighbour	5
		a close relative	6
		a relative	7
		acquaintance	8
		a stranger	9
		no response	99
202	Why have you taken the coupon and given your consent to participate in the study? Multiple answers are possible	to receive incentive	1
		to get results from HIV testing	2
		to get results of other testing	3
		at the request of a friend	4
		due to the interest to the study	5
		due to availability of free time	6
		other	7
		no response	99

Section 3. Demographic characteristics

No.	Question	Answer	Skip
301	Age	_____ no response 99	
302	In what country/nation were you born?	Republic of Armenia	1
		Russian Federation	2
		Republic of Georgia	3
		other	4
		no response	99
303	What is the highest level/grade/year of school you completed:	no school	1
		incomplete primary	2
		primary	3
		incomplete secondary	4

No.	Question	Answer	Skip
		secondary 5 secondary technical 6 incomplete higher 7 higher 8 no response 99	
304	What is your current marital status?	single 1 married to a woman 2 married to a man divorced 3 civil marriage 4 widowed 5 no response 99	
305	Are you currently living with a sexual partner? Skip if no	yes 1 no 2 no response 99	
306	What is the biological sex of the sexual partner you are currently living with?	Male Female	
307	What is your main source of income?	no income 1 full-time employment 2 part-time employment 3 pension 4 external help 5 other 6 no response 99	
308	In the last 1 year, have you been away from home for more than one month at a time? If “no”, pass on to Question 312	yes 1 no 2 no response 99	→ 312 → 312
309	Where was the last place you were when you went away for more than one month	Armenia-other region 1 Russia 2 Ukraine 3 other 4 no response 99	
310	The last time you were away from home for more than one month, did you have sexual intercourse WITHOUT a condom?	yes 1 no 2 no response 99	
311	Have you been abroad for 3 or more months for purposes of labor, but not more than one year, in the past year	yes 1 no 2 no response 99	
312	What is your gender identity? Համարում ե՞ք Ձեզ տրանսսեքսուալ կին	yes 1 no 2 do not know 99	
313	How would you identify your sexuality?	homosexual 1 bisexual 2 other 97	
314	What sex would you say you are most sexually attracted to?	only or mostly male 1 equally male and female 2 mostly female 3 none 4 do not know 5 no response 99	

Section 4: Transgender identity and experiences

No.	Question	Answer	Skip	
401	Other than identifying your gender as female, how do you identify yourself?	No other way Male Uncertain Other _____ No response	1 2 3 4 99	
402	Have you ever taken hormones for enhancing female sex characteristics?	yes no no response	1 2 99	→ 408 → 408
403	Were you prescribed the hormones by a medical professional the last time?	yes no no response	1 2 99	
404	From where did you procure those hormones the last time?	Private medical practice Pharmacy-over the counter From a friend From someone I do not know From the family planning centre Laboratory Internet Other _____ No response	1 2 3 4 5 6 7 8 99	
405	Have you had any health complications linked to the use of hormones to enhance female sex characteristics?	yes no don't know no response	1 2 3 99	
406	How would you characterize your past side effects of hormones to enhance female sex characteristics?	Mild side effects Severe side effects Don't know	1 2 3	
407	What are the methods you have used to take hormones to enhance female sex characteristics? (Multiple answers possible)	Injections Pills Other _____ no response	1 2 3 99	
408	Have you ever had any operation to change any parts of your body to appear more like a woman?	yes no no response	1 2 99	→ 410 → 411
409	Why have you not done any operation to change any parts of your body to appear more like a woman?	Do not feel the need for it Do not have enough information Not available Cannot afford Family will not accept Partner will not accept Afraid of stigma Reduced job/educational opportunities Problems with legal identification Afraid of surgery Religious beliefs Other _____ no response	1 2 3 4 5 6 7 8 9 10 11 12 99	

No.	Question	Answer	Skip
410	What operation (s) have you had to change any parts of your body to appear more like a woman? Multiple responses possible.	Phallectomy (removing the penis) 1 Orchiectomy (removing testicles) 2 Vaginoplasty (surgeon creates a vagina) 3 Breast implants 4 Remove Adam's apple 5 Vocal cord surgery 6 Facial plastic surgery 7 Butt implants 8 Bone removal or modification 9 Other _____ 10 no response 99	
411	Are you planning to have an operation to change any parts of your body to appear more like a woman?	yes 1 no 2 no response 99	→ 412 → 501 → 501
412	What operation (s) are you planning to have to change any parts of your body to appear more like a woman? Multiple responses possible.	Phallectomy (removing the penis) 1 Orchiectomy (removing testicles) 2 Vaginoplasty (surgeon creates a vagina) 3 Breast implants 4 Remove Adam's apple 5 Vocal cord surgery 6 Facial plastic surgery 7 Butt implants 8 Bone removal or modification 9 Other _____ 10 no response 99	

Section 5. Questions related to sexual life and condom use

No.	Question	Answer
<i>We would like to ask you some questions regarding your sexual behaviour. We understand how personal those questions are, but at the same time we would like to note once again that the study confidentiality is fully maintained, and the same questions are asked to all the study participants. When we speak about sexual intercourse we mean penetrative anal sex (vaginal or anal sex if with a female).</i>		
501	At what age did you first have sex?	_____ no response 99
502	At what age did you first have anal sex with male partners?	_____ no response 99
503	Your role during sexual intercourse is:	active 1 passive 2 both active and passive 3 no response 99
504	How many male sexual partners in average do you have anal sex with during a month?	_____ no response 99
505	When was the last time you had anal sex with a male partner? READ RESPONSES ALOUD	Within this week 1 Within this month 2 Within the last 3 months 3

No.	Question	Answer	
		Within the last 6 months	4
		Between 6 months and 1 year	5
506	Did you use a condom with your most recent sexual intercourse or anal sex?	yes	1
		no	2
		no response	99
507	In the past month on average how many times did you have anal sex with a male partner?	During a month _____	
		no response	99
408	In the past month in average how many times did you use a condom with a male sexual partner during anal sex?	During a month _____	
		no response	99
509	In the past week in average how many times did you have anal sex with a male partner?	During a week _____	
		no response	99
510	In the past week in average how many times did you use a condom with a male sexual partner during anal sex?	During a week _____	
		no response	99
511	Did you use a condom the last time you had oral sex with a male partner?	yes	1
		no	2
		don't have such kind of sex	3
		no response	99
512	Have you had a regular male partner in the past 1 year? <u>Regular partners- partners you know well and with whom you have been having sex for at least three months</u>	yes	1
		no	2
		no response	99
513	The last time you had anal sex with a regular male partner, did you or your partner use a condom?	yes	1
		no	2
		no response	99
514	With what frequency have you used a condom with a regular male partner during the past 1 year during anal sex?	every time	1
		sometimes	2
		never	3
		no response	99
515	Why don't you always use condom with a regular male partner during anal sex? MULTIPLE ANSWERS ARE POSSIBLE ANSWER CANNOT BE "DON'T LIKE IT" .WE KNOW THEY DO NOT LIKE IT, BUT WHY DO THEY NOT LIKE IT PROBE: ANYTHING ELSE?	Too expensive	1
		Ashamed to buy	2
		Difficult to use	3
		Not so available	4
		Reduces pleasure	5
		Ashamed to ask partner to use it	6
		Other	97
		no response	99
516	Have you had any non-regular male sexual partner in the past 1 year? If "no", pass on to Question 520	yes	1
		no	2
		no response	99
517	The last time you had anal sex with a non-regular male partner, did you or your partner use a condom?	yes	1
		no	2
		no response	99

No.	Question	Answer	
518	With what frequency have you used a condom with a non-regular partner during the past 1 year during anal sex?	every time	1
		sometimes	2
		never	3
		no response	99
519	Why don't you always use condom with a non-regular partner (multiple answers are possible) during anal sex?	very expensive	1
		ashamed to buy	2
		difficult to use	3
		not so available	4
		abates the pleasure	5
		ashamed to ask sex partner to use it	6
		trust the sexual partner	7
		don't know about the efficiency of condom use	8
		no response	99
Buying Sex			
520	Have you ever BOUGHT anal sex for money, drugs, work? If "no", pass on to Question 524	yes	1
		no	2
		no response	99
521	The last time you bought anal sex from a man for money, drugs, work, did you or your partner use a condom?	yes	1
		no	2
		no response	99
522	How often do you use a condom when you bought anal sex (i.e., sell sex) for money, drugs, work in the past year?	always	1
		sometimes	2
		never	3
		no response	99
523	Why don't you always use a condom with a male partner from whom you bought anal sex for for money, drugs, work in the past year? MULTIPLE ANSWERS ARE POSSIBLE ANSWER CANNOT BE "DON'T LIKE IT". WE KNOW THEY DO NOT LIKE IT, BUT WHY DO THEY NOT LIKE IT PROBE: ANYTHING ELSE?	Too expensive	1
		Ashamed to buy	2
		Difficult to use	3
		Not so available	4
		Reduces pleasure	5
		Ashamed to ask partner to use it	6
		Other	97
		no response	99
Selling sex			
524	Have you ever sold anal sex for money, drugs, work? If "no", pass on to Question 528	yes	1
		no	2
		no response	99
525	The last time you <u>sold</u> anal sex to a man for money, drugs, work, did you or your partner use a condom?	yes	1
		no	2
		no response	99
526	How often do you use a condom when selling anal sex to men in exchange for money, drugs, work?	always	1
		often	2
		sometimes	3
		other _____	4
		no response	99
527	Why don't you always use a condom with a male partner to whom you sell anal sex in exchange for for money, drugs, work?	Too expensive	1
		Ashamed to buy	2
		Difficult to use	3

No.	Question	Answer
	MULTIPLE ANSWERS ARE POSSIBLE ANSWER CANNOT BE "DON'T LIKE IT". WE KNOW THEY DO NOT LIKE IT, BUT WHY DO THEY NOT LIKE IT PROBE: ANYTHING ELSE?	Not so available 4 Reduces pleasure 5 Ashamed to ask partner to use it 6 Other 97 no response 99
528	Have you ever had sexual intercourse with a biological female partner? Questions related to sexual behaviour with female partners	yes 1 no 2 no response 99
529	The last time you had sexual intercourse with a female partner did you or your partner use a condom?	yes 1 no 2 no response 99
530	With what frequency have you used a condom when having sexual intercourse with a female partner?	every time 1 sometimes 2 never 3 no response 99
531	Why don't you always use a condom with a female partner? MULTIPLE ANSWERS ARE POSSIBLE ANSWER CANNOT BE "DON'T LIKE IT".. WE KNOW THEY DO NOT LIKE IT, BUT WHY DO THEY NOT LIKE IT PROBE: ANYTHING ELSE?	Too expensive 1 Ashamed to buy 2 Difficult to use 3 Not so available 4 Reduces pleasure 5 Ashamed to ask partner to use it 6 Other 97 no response 99

Section 6. Lubricants and condoms

No.	Question	Answer	Skip
601	Do you normally use lubricants during anal sex with a male partner?	yes 1 no 2 no response 99	
602	Other than saliva, what kind of lubricant do you use most often during anal sex with a male partner?	Water-based 1 Oil-based 2 Other 97 no response 99	
603	Have you ever had sexual intercourse with a male partner against your will or by force?	yes 1 no 2 no response 99	→ 701
604	Did you have your first anal sexual intercourse with a male partner against your will or by force?	yes 1 no 2 no response 99	

Section 7. Questions related to alcohol and drug use

No.	Question	Answer
<i>We would like to ask you some questions on drug use. We are assuring you that the study confidentiality is fully maintained, because we do not know your name. Do not forget that the same questions are asked to all the study participants and we are not going to mark you out.</i>		
701	In the past one year how often did you have a drink containing alcohol?	never 1 monthly or less 2 2-4 times a month 3 2-3 times a week 4 4 or more times a week 5 no response 99
702	How many drinks containing alcohol do you have on a typical day when you are drinking?	
703	On one occasion, how often do you have six or more drinks?	never 0 less than monthly 1 monthly 2 weekly 3 daily or almost daily 4 no response 99
704	Have you ever had sexual intercourse under the influence of alcohol?	yes 1 no 2 do not remember 3 no response 99
705	Have you ever used drugs? If “no”, pass on to Question 801	yes 1 no 2 no response 99
706	How old were you when you first used drugs?	_____ no response 99
707	Have you ever had sexual intercourse under the influence of any drug?	yes 1 no 2 do not remember 3 no response 99
708	Have you ever injected drugs? If “no”, pass on to Question 801	yes 1 no 2 no response 99
709	How old were you when you first injected drugs?	_____ no response 99
710	Have you been injecting drugs in the past one month?	yes 1 no 2 no response 99
711	Did you use sterile needle and syringe the last time you were injecting drug?	yes 1 no 2 no response 99

Section 8. Questions related to HIV/AIDS and STIs

No.	Question	Answer	
801	Have you heard of HIV/AIDS?	yes	1
		no	2
		no response	99
<i>Ghonorrea, chlamidiosis, syphilis, genital herpes, genital warts, trichomoniasis, hepatitis B and C are STIs</i>			
802	Where from have you heard of HIV/AIDS (multiple answers are possible)?	family	1
		friends/peers	2
		mass media	3
		school	4
		social workers	5
		health care workers	6
		counselling services	7
		other _____	8
		no response	99
803	How would you estimate the probability for you to become infected with HIV or STIs?	high	1
		medium	2
		no risk	3
		no response	99
804	Do you know where you can undergo HIV testing, if you wish to?	yes	1
		no	2
		no response	99
805	Have you been provided with condoms during the past 12 months (for example by outreach workers or at an NGO)?	yes	1
		no	2
		no response	99
806	Have you received counselling on using condoms and safe sex during the past 12 months (for example by outreach workers or at an NGO)?	yes	1
		no	2
		no response	99
807	Have you ever had an HIV test?	yes	1
		no	2
		no response	99
808	When were you last tested	≤5 months	1
		6–12 months	2
		More than 12 months	3
		no response	99
809	Have you been provided with the test results?	yes	1
		no	2
		no response	99
810	Have you been provided with the test results?	yes	1
		no	2
		no response	99
811	Have you ever had any genital ulcer/sore during the past 12 months?	yes	1
		no	2
		do not know	3
		no response	99

No.	Question	Answer
812	Have you been tested for a sexually transmitted disease in the past one year?	yes 1 no 2 no response 99
813	Have you been diagnosed with a sexually transmitted disease in the past one year?	yes 1 no 2 no response 99
814	What measures did you take when you became infected?	visited hospital (policlinic, other health care institution) 1 self-treatment 2 did nothing 3 other 4 no response 99

Section 9. Questions for assessing the level of knowledge on HIV prevention

No.	Question	Answer
901	Is it possible to reduce the risk of HIV infection by having sexual relations with one uninfected faithful sexual partner?	yes 1 no 2 do not know 3 no response 99
902	Is it possible to reduce the risk of HIV infection by using condoms?	yes 1 no 2 do not know 3 no response 99
903	Can a healthy-looking person be HIV infected?	yes 1 no 2 do not know 3 no response 99
904	Can a person get HIV from mosquito bites?	yes 1 no 2 do not know 3 no response 99
905	Is it possible to become HIV infected by sharing a meal with a person infected with HIV?	yes 1 no 2 do not know 3 no response 99
906	Is it possible to become HIV infected by shaking hands with a person infected with HIV?	yes 1 no 2 do not know 3 no response 99

Section 10. Stigma and discrimination questions

No.	Question	Answer	Skip
1001.	I am ashamed to be a transgender	agree 1 neutral/indifferent 2 disagree 3 don't know 4 no response 99	

No.	Question	Answer	Skip
1002.	I am not ashamed to say I am a transgender in a gathering with other people who are transgender	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
1003.	I am not ashamed to say I am a transgender when I meet with a social or health worker who works in my community.	agree neutral/indifferent disagree don't know no response	1 2 3 4 99
1004.	Who have you told that you are a transgender? CHECK ALL THAT APPLY	no one partner/spouse family friends/acquaintances-are TG friends/acquaintances-not TG healthcare providers other _____ don't know no response	1 2 3 4 5 6 7 8 99
1005.	Have you ever felt excluded from family activities because you are a transgender?	no yes don't know no response	1 2 3 99
1006.	Have you ever felt that family members have made unfair comments or gossiped about you because you are a transgender?	no yes don't know no response	1 2 3 99
1007.	Have you ever avoided seeking health-care services in the last 12 months due to	Fear of or concern about stigma Fear or concern someone may learn you are a transgender Fear of or concern about or experienced violence Fear of or concern about or experienced police harassment or arrest haven't avoided no response	1 2 3 4 5 99
1008.	Have you ever avoided seeking HIV testing in the last 12 months due to	Fear of or concern about stigma Fear or concern someone may learn you are a transgender Fear of or concern about or experienced violence Fear of or concern about or experienced police harassment or arrest haven't avoided no response	1 2 3 4 5 99
1009.	Has someone ever scolded you because you are a transgender?	no yes don't know no response	1 2 3 99

No.	Question	Answer	Skip
1010.	Has someone ever blackmailed you because you are a transgender?	no yes don't know no response	1 2 3 99
1011.	Has someone ever physically harassed or hurt you are a transgender?	no yes don't know no response	1 2 3 99
1012.	Has someone ever forced you to have any type of sex when you did not want to? <i>By "forced", I mean physically forced or coerced to have any type of sex, including penetration with an object, when you did not want to.</i>	no yes don't know no response	1 → 1101 2 → 1013 3 → 1101 99 → 1101
1013.	Do you believe any of your experiences of forced sex were related to the fact that you are a transgender?	yes no don't know no response	1 2 3 99

Section 11. Physical violence questions

No.	Question	Answer	Skip
1101.	In your lifetime, how many times has anyone ever physically hurt you?	never _____ times don't know 98 no response	1 → 1201 → 1101 99 → 1101
1102.	The first time someone physically hurt you, how old were you?	_____ don't know no response	6 99
1103.	The first time this happened, what was your relationship to the person who did this to you?	paying sex partner non-paying sex partner police/military/authority figure relative friend/ acquaintance other _____ don't know no response	1 → 1104 2 → 1104 3 → 1105 4 → 1105 5 → 1105 6 → 1105 7 → 1105 99 → 1105
1104.	The first time this happened, what type of partner was this person?	spouse or live-in partner boyfriend/girlfriend someone that I have sex with but do not call a boyfriend/girlfriend other _____ don't know no response	1 2 3 4 5 99
1105.	Any of these times this happened, do you think it was because you are a transgender?	yes no don't know no response	1 2 3 99

No.	Question	Answer	Skip
1106.	As a result of someone doing any of those things to you, did you ever try to seek professional help or services from any of the following? CHECK ALL THAT APPLY	I did not try to seek help healthcare professional police or other security personnel social worker, counselor or NGO religious leader other _____ don't know no response	1 2 3 4 5 6 7 99
1107.	When trying to seek help for what someone had done to you, were you ever refused services by any of the following? CHECK ALL THAT APPLY.	healthcare professional police or other security personnel lawyer, judge/other Legal professional social worker, counselor an NGO or other Local organization other _____ don't know no response	1 2 3 4 5 6 7 99
1108.	What was the main reason I that you did not try to seek professional help or services?	did not know what services were available/where to go the services I wanted/needed were not available I could not afford services I was uncomfortable accessing services I did not feel that I needed services other _____ don't know no response	1 → 1010 2 → 1010 3 → 1010 4 → 1009 5 6 → 1010 7 → 1010 99
1109.	Why were you uncomfortable? CHECK ALL THAT APPLY	I was worried that service provider would Treat me differently/poorly if they found out I am TG I was afraid that family/partner/husband/Wife would find out I am TG Afraid of what authorities/police would do if they found out I am TG I was worried that others would find out I am TG other _____ don't know no response	1 2 3 4 5 6 99
1110.	Who else did you tell about any of these experiences? CHECK ALL THAT APPLY	paying sex partner non-paying sex partner police/military/authority figure relative friend/acquaintance other _____ don't know no response	1 2 3 4 5 6 7 99

Section 12. Population Size Estimations

No.	Question	Answer
1201	Between January 1 2018 to March 31 2018 have you received condoms from New Generation NGO -in Yerevan	yes 1 no 2 do not know 3 no response 99
1202	Between January 1 2018 to March 31 2018 have you received an HIV test from New Generation NGO - in Yerevan	yes 1 no 2 do not know 3 no response 99
1203	“Did you receive a bracelet in the week of [dates of distribution of unique object] that was given to you by outreach workers of New Generation NGO?”	yes 1 no 2 do not know 3 no response 99
1204	What is your best guess of the highest, lowest and most accurate number of people were born male, identify as female who have sex with males, who are over the ages of 18 and live in this city?	Highest _____ Lowest _____ Most accurate _____
1205	What is your best guess of the highest number of people were born male, identify as female who have sex with males, who are over the ages of 18 and live in this city?	_____
1206	What is your best guess of the lowest number of people were born male, identify as female who have sex with males, who are over the ages of 18 and live in this city?	_____
1207	What is your best guess of the most accurate number people were born male, identify as female, have sex with males, who are over the ages of 18 and live in this city?	_____
1208	Did you participate in a similar survey as this survey (received a coupon, had a blood test, responded to questions) in 201_ in this same city?	yes 1 no 2 do not know 3 no response 99