Alliance for Public Health

PEPFAR

REPORT

ON THE FINDINGS OF THE STUDY

"INTEGRATED BIOLOGICAL AND BEHAVIORAL SURVEILLANCE AMONG SEX WORKERS IN UKRAINE, 2021"

KYIV – 2023

Authors:

O. Kovtun (1) (1) ICF "Alliance for Public Health"

R. Kulchynska (2) (2) US Centers for Disease Control and Prevention

Y. Sazonova (3) (3) PEPFAR Coordination Office

Editor: **V. Bozhok**

Layout: **I. Sukhomlynova**

Integrated biological and behavioral surveillance among sex workers in Ukraine, 2021: report on the findings of the study / O. Kovtun, R. Kulchynska, Y. Sazonova. – K.: ICF "Alliance for Public Health", 2023. – 219 p.

The research was made possible with the technical support of the program "Gain momentum in reducing TB/ HIV burden in Ukraine" implemented by the ICF "Alliance for Public Health" with funding from the Global Fund to Fight AIDS, Tuberculosis and Malaria.

This report has been supported by the President's Emergency Plan for AIDS Relief (PEPFAR) through the US Centers for Disease Control and Prevention (CDC) under the terms of NU2GGH002114 "Improving HIV Treatment Cascade for Key Populations through Differentiated Case Detection and Linkage to Care and Increased Capacity at the Center for Public Health and Strategic Information in Ukraine".

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the funding agencies.

© ICF "Alliance for Public Health", 2023

CONTENT

KEY FINDINGS

This report presents the results of a study conducted at the end of 2021 among sex workers (SWs) in eight cities of Ukraine, in particular, in Mariupol. At the time of the report drafting, a full-scale invasion of the russian federation is underway in the country, so the data presented in it have partially lost their relevance today. The results of the study are the last reliable data on SWs before the start of the war. The research team is convinced that they will allow to assess the progress of the non-governmental and public sectors in combating the spread of HIV infection among the target group, and during the next round of study they can be used to assess the impact of russian military aggression on the situation of SWs in Ukraine.

According to the Guidance for the Protection of Children by the Division of Global HIV & TB, US Centers for Disease Control and Prevention (CDC), anyone under the age of 18 (minors) who either self-reports (or is identified through other means as) engaging in the exchange of sex for money is considered a sexually exploited minor (SEM), and should be referred to as such, not as a SW. In addition, in 1991, Ukraine signed the United Nations Convention on the Rights of the Child[1]. The Convention defines a child as anyone under the age of 18, not qualified by any legislation regarding emancipated children, etc., and also includes Article 34 about sexual exploitation[2]. Based on Article 303 of the Criminal Code of Ukraine, engaging minors in prostitution or compulsion to engage in prostitution is an offense for which criminal liability is provided[3].

According to the study protocol, the minimum eligible age for participation in the Integrated Biological and Behavioral Survey IBBS was 14 years. Participants aged 14-15 were not included in the study sample; but 20 participants were aged 16-17 years (0.5%). The report uses the designation “SEM” where appropriate to refer to the participants under the age of 18.

The study "Integrated Biological and Behavioral Surveillance among Sex Workers in Ukraine, 2021" was implemented by the ICF "Alliance for Public Health" within the framework of the project "Improving HIV Treatment Cascade for Key Populations through Differentiated Case Detection and Linkage to Care and Increased Capacity at the Center for Public Health and Strategic Information in Ukraine" with the support of the CDC in accordance with the US President's Emergency Plan for AIDS Relief (PEPFAR)

1 *Government Portal. Ministry of Social Policy of Ukraine. Ukraine marks the 30th anniversary of the entry into force of the UN Convention on the Rights of the Child; 2021. (**https://www.kmu.gov.ua/en/news/ukrayina-vidznachaye-30-richchya-vvedennya-v-diyu-konvenciyi-oon-pro-prava-ditini**)*

2 *Office of the High Commissioner for Human Rights. Convention on the Rights of the Child; 1989. (**https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child**)*

3 *Verkhovna Rada of Ukraine. The Criminal Code of Ukraine; 2023. **https://zakon.rada.gov.ua/laws/show/en/2341-14***

The field stage of the study was carried out in cooperation with Alliance Consultancy LLC.

Method: The study had a cross-sectional design, which involves obtaining data at the time of the survey. TLS ***(time-location sampling)*** methodology was used for recruiting participants – sampling by place and time. The study involved the formation of a list of SWs venues – places where SWs provide sex services or look for clients – with subsequent visits to these venues according to the schedule. At the venues, the data were collected – behavioral *(during structured interviews)* and biological *(by taking a K3-EDTA capillary blood sample using microcontainer tubes for rapid mono-tests for HIV infection, hepatitis C and syphilis, the second and third rapid HIV tests, the rapid test for recent HIV infection and the completion of DBS cards to determine the viral load).*

Geography and location: The study was conducted in eight cities of Ukraine: Dnipro, Kyiv, Kropyvnytskyi, Lviv, Mariupol, Odesa, Kharkiv and Cherkasy. The total sample consisted of 4961 participants in seven cities and an additional 496 people in Cherkasy, the results of which are presented in the report, but not included in the generalized calculations. The target group of the study comprises persons aged 14 and over who provided sex services for remuneration during the six months preceding the study.

Data collection timeframe: July 29 – October 29, 2021.

Table 1. Key findings (in %)

Indicator	%
Social and demographic profile	
Age, mean (+standard deviation)	29 (±7 years)
Share of SW men and trans* people	4.8
Median monthly income (UAH), 25th-75th percentiles	25,000 *(15,000 – 35,000)*
Presence of a regular sexual partner	21.7
Experience of migration for the provision of sex services in the last year	8.9
Using condoms with clients	
Last sexual contact	92.4
Always within a month during oral sex	64.3
Always the past 30 days during vaginal sex	89.5
Always the past 30 days during anal sex	81.6
Incidents of incorrect condom use in the past 30 days	38.2
Use of alcohol and drugs during the last month	
Alcohol	80.3
Injecting drugs	1.9
Non-injecting drugs	9.0

Indicator	%
Depression and anxiety	
Moderate or severe depression	2.9
Moderate or high level of anxiety	6.6
Access to prevention services during the last month	
The share of SW and SEM that are clients of NGOs	40.9
Those who received at least one service from an NGO	49.8
Coverage with prevention services *(Global Fund approach)*	44.7
Coverage with prevention services *(UNAIDS Global AIDS Monitoring approach)*	47.0
HIV testing coverage	
Have been tested for HIV in the last 12 months and received a result	62.8
Have been tested for HIV in the last 12 months or are aware of their HIV-positive status	64.2
Were tested for HIV at the NGO in 2021	40.6
Self-tested for HIV in the last 12 months	11.7
Self-reported prevalence of tuberculosis (TB) and sexually transmitted infections (STIs)	
Herpes	20.3
Chlamydia	11.9
Human papillomavirus	5.7
Gonorrhea	4.1
Hepatitis B	1.4
Pulmonary tuberculosis	0.4
HIV, Hepatitis C and syphilis prevalence based on testing results	
HIV	3.1
Hepatitis C	7.9
Syphilis	3.9
Recent HIV infection	3.9
HIV treatment cascade (conditioned on the preceding variable)	
Know their status	83.1
Receive ART	93.8
Achieved an undetectable viral load	79.7

STUDY METHODOLOGY

STUDY DESIGN

The key goal of the integrated biological and behavioral survey (IBBS) among SWs is to obtain a comprehensive assessment of the epidemic process among SWs regarding HIV infection and to provide substantiated information for further planning and implementation of prevention and epidemic response measures.

The study encompassed the following tasks:

- to estimate the level of prevalence of HIV, hepatitis C, syphilis among SWs and SEMs;
- to assess the level of prevalence of risky behavioral practices regarding HIV among SWs and SEMs;
- to estimate the level of recent HIV infection among SWs and SEMs living with HIV;
- to assess the level of coverage of the SW and SEMs by HIV prevention, testing and treatment services;
- to calculate indicators of the 95-95-95 cascade for SWs and SEMs living with HIV: awareness of their HIV-positive status, receiving ART, and achieving an undetectable viral load.

TARGET GROUP OF THE STUDY

The study target group are women, men and trans*people, who:

- received money, goods or services in exchange for sex during the last six months *(self-reported)*;
- aged 14 years or older at the time of the study *(self-reported, visual control of the interviewer-administrator)*;
- lived, worked or studied in the study city for at least the last three months *(self-reported)*;
- consented to participate in the behavioral and biological components of the study *(verbal informed consent)*.

Study exclusion criteria:

- participation in the same round more than once *(self-reported, visual control of the interviewer-administrator, verification of the unique Case++ code within the same city)*,
- refusal to participate in one or more components of the study *(lack of oral informed consent)*,
- such a degree of alcohol or drug intoxication that prevents the respondent from understanding and answering the questions of the questionnaire, and where the behavior of the respondent threatens their own safety or the safety of others *(visual control of the interviewer-administrator)*.

DATA COLLECTION METHODS

The study had a cross-sectional design, which involves obtaining data at the time of the survey. The TLS *(time-location sampling)* methodology was used for recruiting participants – a place and time-based sampling, which was selected upon the results of a formative assessment.

The TLS methodology consisted in forming a geographical list of venues where representatives of the target group provide commercial sex services or search for clients *("venues")*. The venues that were included in the sample of each city were determined by the method of random numbers, taking into account their type *(for example, street, apartment, entertainment facilities, etc.)*. The sample included all venues that were identified, validated and confirmed at the formative assessment stage. For each city and team, a schedule of SW venue visits was developed. Mobile clinics were used for their visits, in which participants were interviewed and tested. If necessary, other transport was also used in some cities, which was specially equipped and met the technical requirements for conducting the study.

Each data collection team visited two main venues on the day of the field trip. For some cities, alternative venues were selected if the main venue was marked as “very dangerous” or “rather dangerous” to visit by the study team during the validation phase. If there were no SWs at main venues, the team moved to an alternative venue within an hour. The total number of productive venues that the study specialists visited and processed was 1,198 out of 2,118 identified and confirmed as active at the formative assessment stage.

STUDY GEOGRAPHY

According to the "The Strategic Plan for Ensuring Sustainability of Integrated Bio-behavioral Studies in Ukraine (2018-2021)"[4], it is envisaged to reduce the number of studied cities during one round to optimize the resources required for this. Therefore, unlike previous rounds, the 2021 study included only eight cities. The selection of cities was made taking into account participation in the FAST TRACK CITIES[5] initiative and analysis of the situation regarding HIV infection among SWs in cities for 2008–2017 *(trends in the HIV prevalence, HIV prevalence among SW-PWID, etc.)*. The final list of cities was agreed with the Working Group on the IBBS under the coordination of the Public Health Center of the Ministry of Health of Ukraine.

Eight cities of Ukraine: Dnipro, Kyiv, Kropyvnytskyi, Lviv, Mariupol, Odesa, Kharkiv, Cherkasy were included. Generalized calculations of the study are presented in the report for seven cities, excluding data for the city of Cherkasy, the results of which are presented separately in the "Regional indicators" section.

STUDY SAMPLE

The sample size for each city was individually determined based on HIV prevalence, the expected proportion of individuals achieving viral suppression, and the design effect calculated from the previous round of the 2017 IBBS. To ensure the validity of the sample size, a separate confidence interval was estimated for each city. The sample size was calculated using a calculator developed by the CDC *(CDC Sample Size Calculator for Survey-based Viral Load Suppression)*[6]. The obtained numbers are rounded for the convenience of sampling. The total volume of the implemented sample was 4,961 people in seven cities and an additional 496 people in the city of Cherkasy ***(Table 2)***.

4 *State Enterprise "Center for Public Health of the MOH Ukraine." The Strategic Plan for Ensuring Sustainability of Integrated Bio-behavioral Studies in Ukraine (2018-2021). Kyiv: State Enterprise "Center for Public Health of the MOH Ukraine"; 2018 (**https://www.phc.org.ua/sites/default/files/uploads/files/Strategichnyi_plan_IBPD_2018-2021.pdf**)*

5 *Fast-Track Cities. Global Web Portal (**http://www.fast-trackcities.org**)*

6 *WHO, CDC, UNAIDS, FHI 360. Biobehavioral survey guidelines for Populations at Risk for HIV. Geneva: World Health Organization; 2017. Licence: CC BY-NC-SA 3.0 IGO.*

Table 2. *Sample*

№	City	Planned sample	Actual sample	Included in the analysis	Number of productive venues
1	Dnipro	850	858	851	233
2	Kyiv	850	857	856	175
3	Kropyvnytskyy	500	500	500	105
4	Lviv	700	708	703	143
5	Mariupol	500	500	500	103
6	Odesa	850	870	850	152
7	Kharkiv	700	712	701	186
Total		***4,950***	***5,005***	***4,961***	***1,097***
8	Cherkasy	500	508	496	101
Total		***5,450***	***5,513***	***5,457***	***1,198***

DATA COLLECTION PROCEDURES

Behavioral data were collected during structured interviews conducted by experienced interviewers using a specially developed Syrexcloud[7] tablet and smartphone application. The survey was conducted using a questionnaire in Ukrainian or Russian at the participant's choice. Before data collection, the questionnaire was piloted and appropriate changes were made.

Biological data were collected by K3-EDTA capillary blood sampling using microcontainers for rapid monotests for HIV infection, hepatitis C and syphilis, second and third rapid HIV tests, rapid test for recent HIV infection and filling DBS cards to determine the viral load:

- Syphilis Rapid Diagnostic Test, Bioline 3.0. was used to detect antibodies of all isotypes (IgG, IgM, IgA) against Treponema pallidum, this Treponemal test does not differentiate lifetime syphilis from active. Here and after all the results should be interpreted as lifetime prevalence. All prevalence results calculated as % reactive result on rapid test to syphilis.

7 *ICF "Alliance for Public Health". SyrEx database (https://aph.org.ua/uk/resursy/syrex/)*

- HIV testing with rapid tests was carried out in accordance with the National HIV Testing Protocol *(Order of the Ministry of Health of Ukraine No. 794 dated 2019)*, according to which in groups with an HIV prevalence of less than 5%, in the case of a second confirmatory HIV test, a third confirmatory test is mandatory.
- The following rapid HIV tests were used within the scope of the study: HIV-1/2, Rapid Test for Antibody to HIV, Colloidal Gold Device *(the first screening test)*, HIV-1/2.0, First Response v.3.0 Cards Kit *(the second confirmatory test)*, HIV-1/2, Bioline 3.0 *(third confirmatory test)*.
- All HIV-positive participants were tested for recent HIV infection using the Asante Rapid HIV-1 Recency Assay.
- DBS samples were collected for all participants with HIV-positive results on three rapid HIV tests and those who informed a health worker that they were taking ART.
- All DBS samples were tested for viral load *(Abbott Real Time HIV-1 Test)* at the Reference Laboratory for HIV/AIDS Diagnostics of the Public Health Center of the Ministry of Health of Ukraine.

Within the biological component, pre-test and post-test counseling was carried out. Participants with positive test results were referred to health care facilities (HCFs) that provide medical care for HIV, hepatitis C, or syphilis:

- 84.3% of participants who received an HIV-positive HIV test result came to the HCFs to confirm their current ART intake, registration in the medical records or initiation of treatment. Verified data on such participants were used in the calculations of the 95-95-95 cascade, not limited to their answers during the survey.
- HIV-negative participants upon the results of the test were referred to health centers or NGOs for consultation on pre-exposure prevention (PrEP) and receiving it if necessary *(83.7% or 4,409 people reached)*.
- Among the participants with hepatitis C and syphilis, 81.5% and 77.1%, respectively, visited the HCFs for diagnosis and treatment, if necessary.
- All participants who visited a HCF or an NGO received expert advice on further diagnosis or initiation of treatment.

Counseling, testing and referral of the participants was carried out by qualified health workers from among the employees of HCFs that provide services related to HIV. Referrals for obtaining PrEP and additional counseling on this matter were provided by representatives of NGOs who have experience working with the target group.

DATA COLLECTION TEAMS

In each research city, two teams were formed consisting of an interviewer-administrator, interviewers, health workers, social workers, gatekeepers from among representatives of NGOs and the SW community. Study coordination in the regions was ensured by the regional research coordinator and the regional coordinator of the biological component. The total number of regional team members was 112 people, not including the gatekeepers.

All members of the regional teams were trained at the national and regional levels in the procedures and components of the study.

DATA QUALITY ASSURANCE

Data quality control and assurance procedures were implemented at all stages of the study.

At the protocol and toolkit development stage, the previous experience of conducting studies was taken into account in order to minimize violations in the current round. The development of the protocol, toolkit and standard operational procedures was carried out in partnership with researchers, specialists in HIV/AIDS issues, employees of HIV services and representatives of key populations.

At the national level, the study methodology and reporting on the progress of its implementation were approved within the framework of the Working Group on IBBS. At the regional level, regional working groups were created consisting of specialists from NGOs and HCFs that provide services to the target group, representatives of the SW community and researchers, who held meetings and discussed the current situation with study in the region during the entire period of its implementation.

Two sites *(two data collection teams)* worked in each study city. Before starting data collection, each of the 16 IBBS sites was activated using a checklist. The distribution of data collection locations between the two teams was carried out on the basis of the intersection of different types of SW venues revealed during the formative assessment, which made it possible to minimize cases of duplicate participation of respondents. During each site visit during the formative assessment phase, the focus group members present were asked about the other types of sites they work at to identify potential intersections between the sites. For example, if an intersection between the "apartment" and "virtual location *(Internet)*" venue types was detected in a city, such points were assigned to the same team. In the case of impossibility to allocate certain types of venues to one team, its members received additional instructions to conduct screening more carefully and exclude SWs and SEMs that had previously participated in this round of study.

Within the biological component, to ensure the quality of testing with rapid HIV tests, a joint round of the "Express HIV testing" program study quality control was held among health workers of regional teams. The overall degree of accuracy according to the results of the external quality assessment was 96.3%. During data collection, quality control of rapid HIV testing using dry control samples was performed monthly at each site. To validate the results of rapid tests, every tenth HIV-negative participant had DBS taken for further laboratory analysis.

At the stage of data collection, monitoring visits were made to study sites to confirm compliance of the methodology with the procedures specified in the protocol – at least three visits to each study site. There were 92 visits, which confirmed that data collection is taking place according to ethical and methodological procedures *(Table 3)*.

Table 3. *Number of venues visited within the framework of monitoring visits*

№	City	National team	Monitoring consultants	External monitoring	Total
1	Dnipro	8	5	4	17
2	Kyiv	4	8	2	14
3	Kropyvnytskyy	2	4	–	6
4	Lviv	8	6	1	15
5	Mariupol	2	4	–	6
6	Odesa	7	6	–	13
7	Kharkiv	4	7	–	11
Total		***35***	***40***	***7***	***82***
8	Cherkasy	5	5	–	10
Total		***40***	***45***	***7***	***92***

DATA ANALYSIS

Descriptive analysis. Descriptive statistics were used for data analysis – one- and two-dimensional distributions. The significance of differences in percentages between different groups was tested by the Chi-square statistical significance test or Fisher's test for distributions any of the expected cell frequencies are less than 5. For quantitative variables, the significance of differences was assessed in means by the Student's t-test *(normal distribution of the variable)* or in medians by Kruskal–Wallis test *(variable distribution differs from normal)*. To demonstrate the significance of the relation-

ship between variables, the tables show the p-value significance level calculated using the above tests *(p-value<0.05 means that the differences are statistically significant)*. The report presents percentages of the number of respondents who gave meaningful answers to the questions, unless otherwise indicated. If the question was not asked to all respondents *(in the case of a filter question according to a given criterion in the questionnaire)*, the analysis was carried out only among those persons who had to answer the question.

Data weighting. To obtain results representative of the entire population, data were weighted based on the TLS methodology. The weighting was carried out on the value of the venues and their representation in the sample, as well as the estimated probability of recruiting the SWs and SEMs during the team's visit. For this, the percentage among the total number of SWs and SEMs and the percentage among the interviewees at each sampling point was calculated. Next, the percentage among the total number of SWs and SEMs was divided by the percentage among the respondents, as a result of which the weighting coefficients for SWs and SEMs of a certain point were obtained. Data for each city were combined into one array, and further calculations for the entire study array took into account weighting factors.

Dynamics analysis. The report used data from the previous IBBS (*2008–2009, 2011, 2013, 2015 and 2017–2018)* to analyze socio-demographic changes in the population of SW, behavioral practices, HIV infection rate, etc. The toolkit of each round had differences in the number and content of questions, so the individual indicators were compared only in case of the same wording of questions during the rounds.

ETHICAL APPROVAL

The protocol and tools were examined and approved by the Institutional Review Board of the ICF "Alliance for Public Health" *(Kyiv, Ukraine)*. This project was reviewed in accordance with CDC human research protection procedures and was determined to be research, but CDC investigators did not interact with human subjects or have access to identifiable data or specimens for research purposes.

All members of the research team have received training on biomedical, social and behavioral studies and ethical aspects of their conduct – Collaborative Institutional Training Initiative *(CITI Program)*[8] *(national team)* and Protecting Human Research Participants[9] *(regional teams)*.

8 *The Collaborative Institutional Training Initiative (CITI Program) (**https://about.citiprogram.org**)*

9 *ICF "Alliance for Public Health." ProfiHealth. Protection of research participants (**https://profihealth.org.ua/uk/courses/11**)*

All study participants underwent a verbal informed consent procedure, during which the participation procedures, compliance with the principles of voluntariness and confidentiality, etc. were explained.

Participants received compensation for participation in the study in the amount of UAH 400 in cash. After completing the participation, the participants had the opportunity to receive free condoms, lubricants and other consumables. The female participants additionally received pregnancy tests.

DATA COLLECTION DURATION

The field phase of the study lasted from July 29 to October 29, 2021. The duration of the field stage in each city depended on the sample size, the number of working days of each team and the actual number of SWs at the study venues *(Table 4)*.

***Table 4.** Duration of field stage in the study cities*

№	City	Implemented sample	Field stage start	Field stage end	Number of field stage days	Number of productive venues
1	Dnipro	851	29.07.2021	08.10.2021	72	233
2	Kyiv	856	16.08.2021	29.10.2021	75	175
3	Kropyvnytskyy	500	02.08.2021	31.08.2021	30	105
4	Lviv	703	02.09.2021	08.10.2021	37	143
5	Mariupol	500	29.07.2021	28.08.2021	31	103
6	Odesa	850	03.08.2021	05.10.2021	64	152
7	Kharkiv	701	02.08.2021	08.10.2021	68	186
8	Cherkasy	496	03.08.2021	05.09.2021	34	101

STUDY LIMITATIONS

The results of the study are not representative of the population of SWs and SEMs in the whole country and reflect only the urban population of the sampled regions.

The cross-sectional design of the study makes it possible to learn about the main behavioral indicators and the prevalence of HIV, hepatitis C and syphilis among SWs and SEMs at a specific point in time but does not allow to determine causal relationships between them.

All data on HIV-risky or safe behavior were obtained through self-reporting by SWs and SEMs during the survey, which could potentially condition respondents' socially expected responses. Prevention work among the target group, participation of SWs in various preventive programs or previous participation in similar studies can increase the awareness of the participants regarding the answers to the questions of the questionnaire about the observance of safe behavioral practices.

COVID-19 PANDEMIC IMPACT

During the formative assessment *(mapping and validation of venues)*, quarantine restrictions were strengthened in connection with the worsening of the epidemic situation due to COVID-19, therefore the validation stage *(visiting the SW venues and confirming their relevance)* was postponed from April – May to June – July. During the validation, in addition to checking previously received information about the SW venues, the regional teams conducted an additional search for the SW venues that became active during this period.

During data collection, all team members and, if necessary, participants were provided with personal protective equipment *(masks, antiseptics)* to reduce the risk of infection with COVID-19.

ACCESS TO DATA

If you need to receive additional calculations not presented in the report, or the array of data of this study round, please contact the Alliance with a corresponding request by sending a letter to the name of the Executive Director at ***office@aph.org.ua.*** The research protocol and tools, as well as the request form for obtaining the study data array, will be posted on the online portal of the Alliance "Analysis of the situation with HIV in Ukraine" at the link: ***hivdata.org.ua***.

ACKNOWLEDGEMENTS

The authors express their acknowledgements for fruitful cooperation and important contribution to the study implementation to:

To the Alliance Consultancy LLC team: Maryna Halchenko and Oleksandr Neduzhko *(program activity coordinators)*, Yevgeniia Kulchytska *(data collection coordinator)*, Tetyana Klymenko *(formative assessment and population assessment coordinator)*, Nataliya Zemliana and Oleksiy Mohort (monitoring visit coordinators), Anna Strembitska *(operational coordinator)*, Iryna Shulyak *(assistant operational coordinator)*, Tetyana Kapronenko *(financial manager)*, Maksym Strelchuk *(legal support)*, Vlasta Brodska *(director)*.

To the team of HIV/AIDS Diagnostics Reference Laboratory of the Public Health Center of the Ministry of Health of Ukraine: Iryna Adrianova *(head of the Reference Laboratory for HIV/AIDS Diagnostics)*, Oleksandra Sheyko (*biologist of the Reference Laboratory for HIV/AIDS Diagnostics)*, Hanna Kolodiy *(doctor-virologist of the Reference Laboratory for HIV/AIDS Diagnostics)*.

Regional teams led by the coordinators: Serhii Stratulat *(Dnipro)*, Yulia Tsarevska *(Kyiv)*, Olena Zhuk *(Kropyvnytskyi)*, Lidiia Zvarych *(Lviv)*, Olena Duz *(Mariupol)*, Svitlana Sirenko *(Odesa)*, Natalia Chantseva *(Kharkiv)*, Petro Syvokin *(Cherkasy)*.

To the workers of health care facilities involved in the study: Municipal Enterprise "Dnipropetrovsk Regional Center of Socially Important Diseases" of the Dnipropetrovsk Regional Council", Municipal Non-Commercial Enterprise "Kyiv City Clinical Hospital No. 5" of the Executive Body of the Kyiv City Council *(Kyiv City State Administration)*", Municipal Non-Commercial Enterprise "Kirovohrad Regional AIDS Center" of the Kirovohrad Regional Council", Municipal Non-Commercial Enterprise of the Lviv Regional Council "Lviv Regional Center of Public Health", Municipal Non-Commercial Enterprise of the Mariupol City Council "I.K. Matsuk Mariupol City Hospital No. 4", Municipal Non-Commercial Enterprise "Odesa Regional Center of Socially Important Diseases" of the Odesa Regional Council", Municipal Non-Commercial Enterprise of the Kharkiv Regional Council "Regional AIDS Clinical Center", Municipal Non-Commercial Enterprise "Cherkasy Regional Center of Public Health" of the Cherkasy Regional Council.

To the specialists of NGOs that were involved in the study: CO "Legalife-Ukraine", Virtus Foundation *(Dnipro)*, Convictus Ukraine *(Kyiv)*, Club Eney *(Kyiv)*, Kohorta NGO *(Kyiv)*, Return to Life Foundation *(Kropyvnytskyi)*, CF "Avante" *(Lviv)*, CF "Impulse" *(Lviv)*, CF "Volna" *(Mariupol)*, NGO "Istok" *(Mariupol)*, NGO "Faith. Hope. Love" *(Odesa)*, CF "Road to Home" *(Odesa)*, CF "Blaho" *(Kharkiv)*.

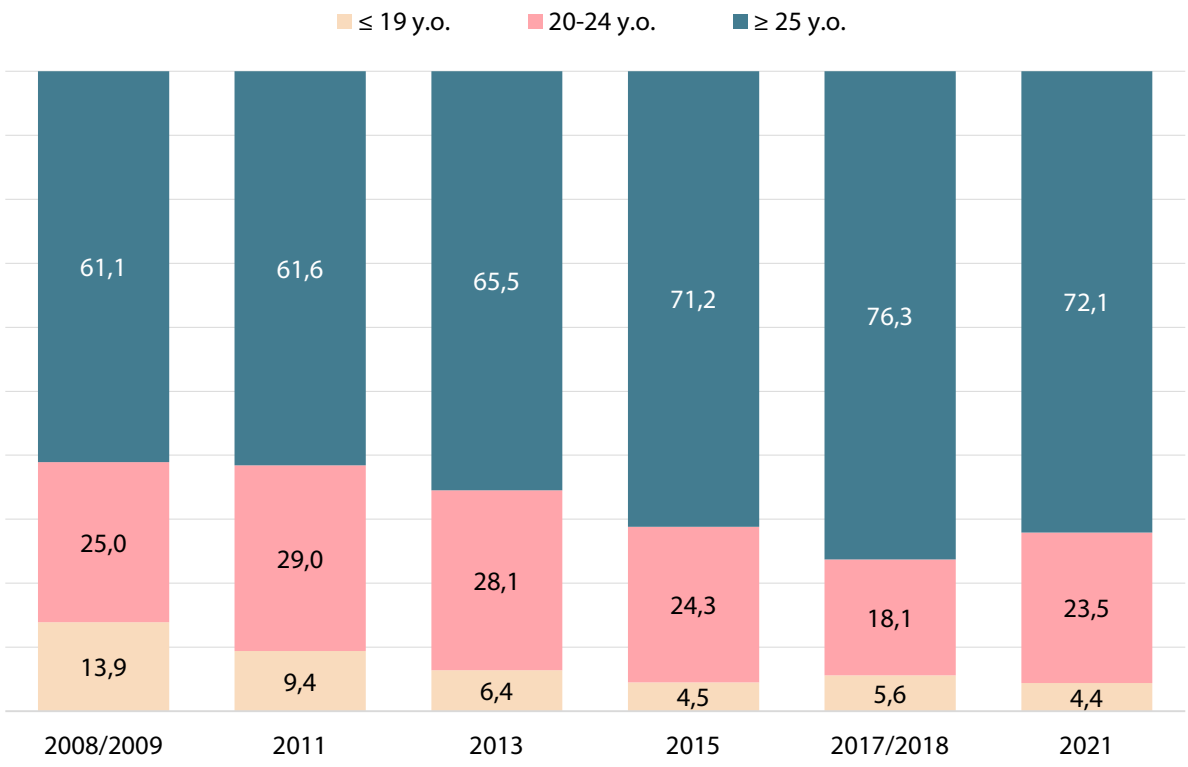
To CDC experts: Marianna Azarskova *(Laboratory Research Advisor of the US Centers for Disease Control and Prevention)*, Avi Hakim, Abu Abdul-Quader, Horacio Ruiseñor-Escudero, and Wolfgang Hladik from the Division of Global HIV/AIDS of the US Centers for Disease Control and Prevention.

STUDY FINDINGS

1. SOCIAL AND DEMOGRAPHIC PROFILE

The average age of SWs is 29 years *(standard deviation: ± 7 years)*, which remains at the same level as in previous studies. Compared to the 2017 study, in 2021 the proportion of SWs aged 20–24 years is higher, and the proportion of SWs and SEMs under the age of 19 is lower *(Figure 1)*.

***Figure 1.** Dynamics of age structure of SWs in 2008–2021 (% among those who answered)*



The vast majority of SWs and SEMs were women (95.2%); half of them had incomplete or complete higher education (53.5%) and lived in rented housing (52.2%). At the time of the study, more than half of the respondents had no other employment than sex work (64.5%). The median personal monthly income was UAH 25,000, which is twice as much as the indicators of the previous round of IBBS in 2017-2018 *(UAH 10,000)*. 86.6% of the study participants identified themselves as SWs *(Table 5)*.

Two-thirds of SWs and SEMs (66.6%) were not married and did not have a regular sexual partner. Despite fluctuations in the distribution of SWs and SEMs by family status, the share of the target group without a regular partner remains the largest since 2008 *(Figure 2)*. Among participants that had a regular partner, 42.5% concealed the nature of their employment from him. Compared to previous IBBS rounds, the percentage of SWs whose partners are aware of this has increased, from 46.5% in 2015 to 55.9% in 2021.

***Figure 2.** Dynamics of the family status of the SWs and SEMs and SEMs in 2008–2021 (% among those who answered)*

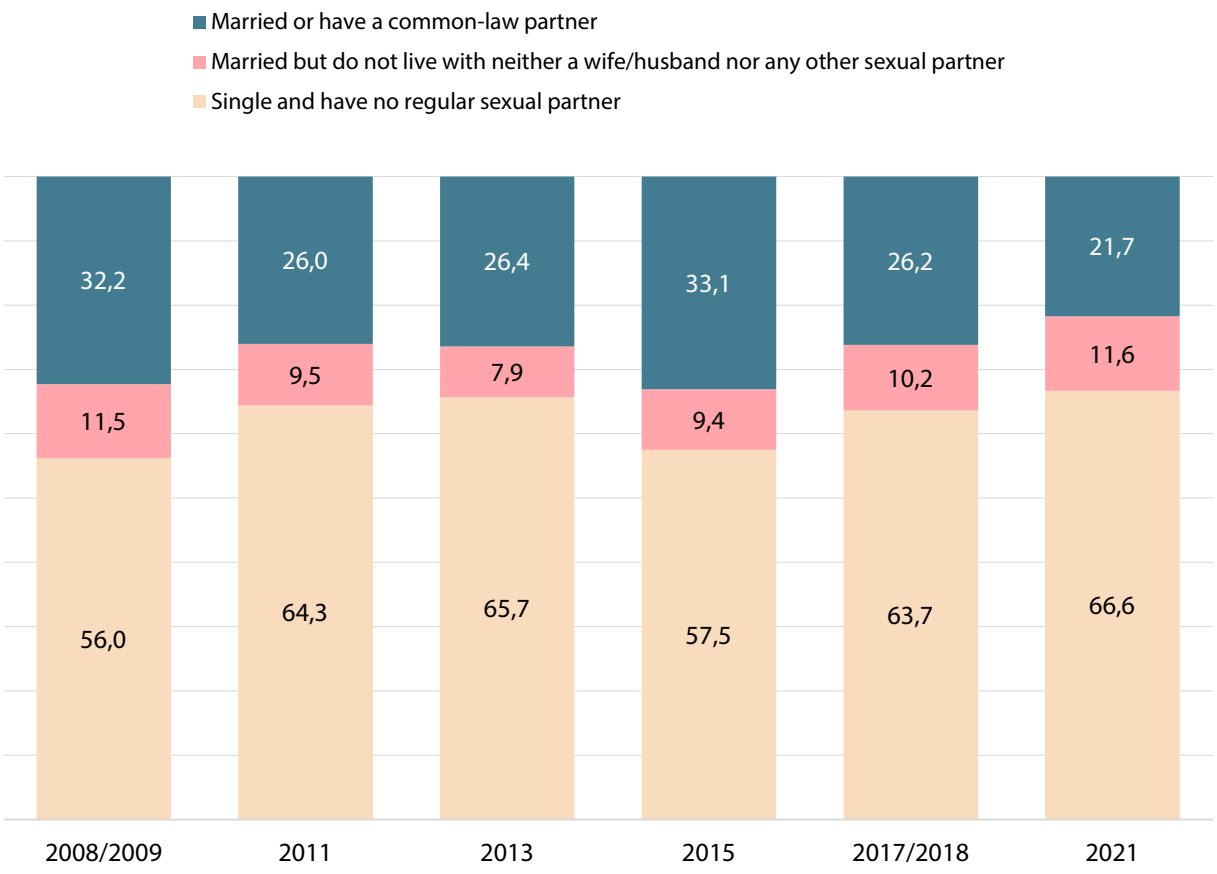


Table 5. *Social and demographic characteristics of the SWs and SEMs (N = 4,961, % among those who answered)*

Characteristics	n	%
Number of persons who consider themselves SWs	*4,166*	*86.6*
Average age (standard deviation, minimum – maximum)	*29 (7. 16–62)*	
Age intervals (4 categories)		
14–19	220	4.4
20–24	1,164	23.5
25–34	2,450	49.4
≥ 35	1,128	22.7
Age intervals (2 categories)		
≤ 24	1,384	27.9
≥ 25	3,577	72.1
Gender		
Men	213	4.3
Women	4,725	95.2
Trans* people. including non-binary	23	0.5
Gender (2 categories)		
Women	4,725	95.2
Men and trans* people	236	4.8
Education		
Primary *(incomplete 9th grade)*	122	2.5
Basic *(incomplete)* secondary *(full 9 years of studying)*	523	10.5
Full general average *(full 11 years of studying)*	1,651	33.3
Incomplete higher education *(less than 4 courses)*	710	14.3
Basic higher education institution *(university of I-II levels of accreditation. technical school)*	1,316	26.5
Complete higher education *(Bachelor. Master of higher education institution III-IV levels of accreditation. university. institute)*	629	12.7
Education (4 categories)		
Incomplete secondary or lower	645	13.0
Complete secondary	1,651	33.3
Secondary professional	1,316	26.6
Higher (Bachelor, Master)	1,339	27.0

Characteristics	n	%
Occupation		
Have no other occupation, except for sex work	3,200	64.5
Have a permanent job	375	7.6
Have occasional earnings	709	14.3
Unemployed	306	6.2
Engaged in household chores	149	3.0
Unable to work *(people with disabilities)*	5	0.1
School pupils	2	<0.1
Vocational education students	13	0.3
College students	36	0.7
University students	155	3.1
Occupation (3 categories)		
Sex work only	3,200	64.6
Full-time or odd jobs	1,084	21.9
Other (students, unemployed. etc.)	666	13.4
Cumulative personal income for the last 30 days in UAH, median (25-th – 75-th percentiles)	*25,000 (15,000 – 35,000)*	
Cumulative personal income for the last 30 days, intervals		
≤ 15,000	994	25.7
15,001–24,000	811	20.9
24,001–35,000	1,173	30.3
≥ 35,001	897	23.1
Permanent place of residence for the last 30 days		
Own accommodation	1,309	26.4
Accommodation of relatives, friends *(they do not pay rent)*	749	15.1
Rented accommodation *(rented on their own)*	2,590	52.2
Hostel	180	3.6
Center for social and psychological rehabilitation, shelter for children, orphanage, boarding school	2	<0.1
Any accommodation they could find *(frequent change of residence)*	123	2.5
Street, abandoned buildings, train stations *(homeless)*	5	0.1
Regular sexual partner	*1,078*	*21.7*
Including:		
regular partner knows that the respondent provides sex services for remuneration	603	55.9
regular partner does not know that the respondent provides sex services for remuneration	458	42.5
the respondent does not know if their regular partner is aware of their occupation	18	1.6

2. SW MIGRATION

Despite travel restrictions due to COVID-19, the share of SWs who traveled to other regions or countries to provide sex services remains unchanged over the period 2015–2021 *(Figure 3)*. Almost one in ten participants (8.9%) left the city for more than a month during the last year for the purpose of providing sex services. Among those who had experience of such trips, 74.1% went to other regions *(Figure 4)* or to another settlement in their region (7 participants from Dnipro and Lviv), and 25.9% – to other countries, mainly to Turkey *(Figure 6)*. One SW reported about the provision of sex services in the Autonomous Republic of Crimea, and one – in the city of Donetsk during the last year.

Figure 3. Dynamics of SW migration to provide sex services in 2015–2021, in %

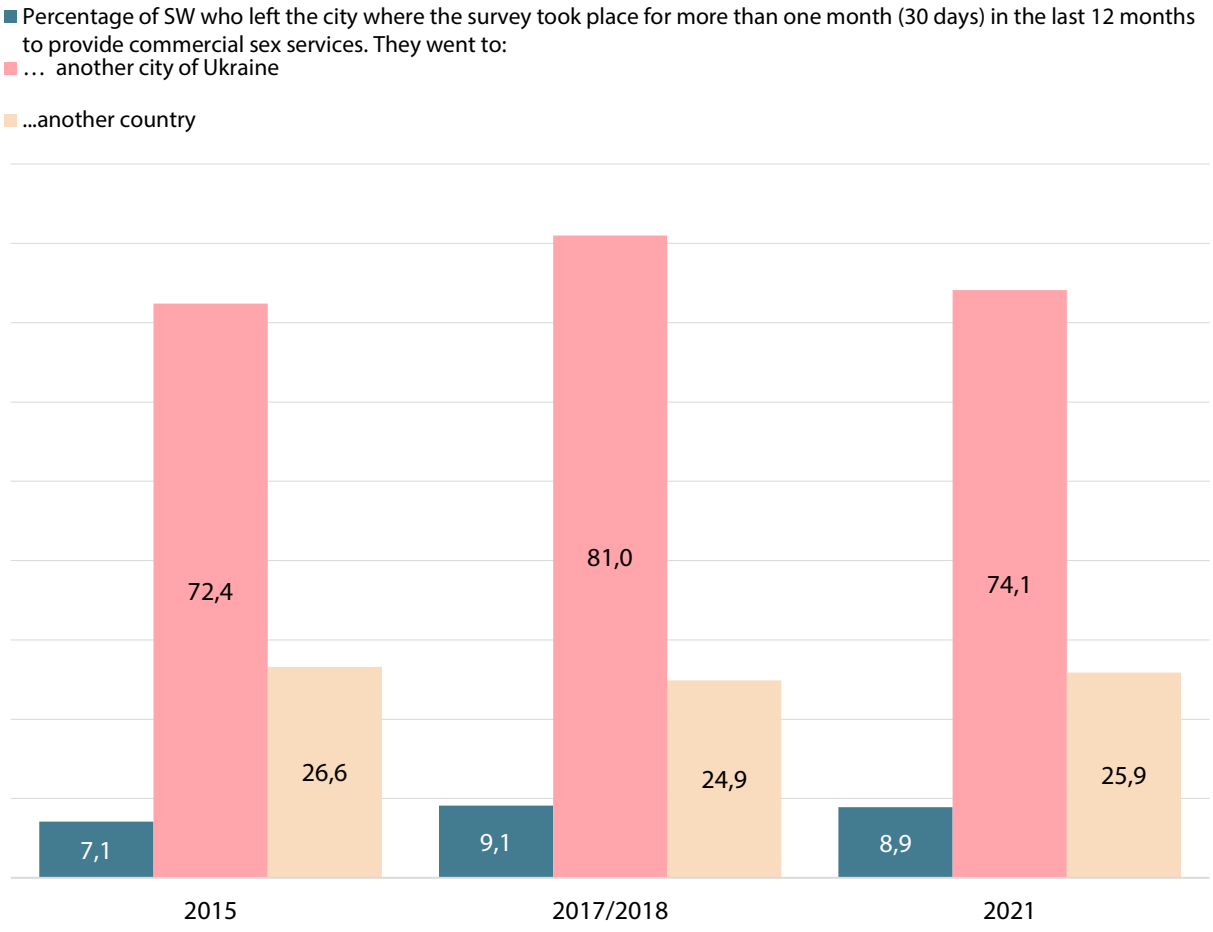


Figure 4. *Migration of SWs within the country: share of persons who came to this region (or another settlement within this region) from another region for more than a month during the last year for providing sex services (N = 323, among those who left, multiple choice response options, in %)*

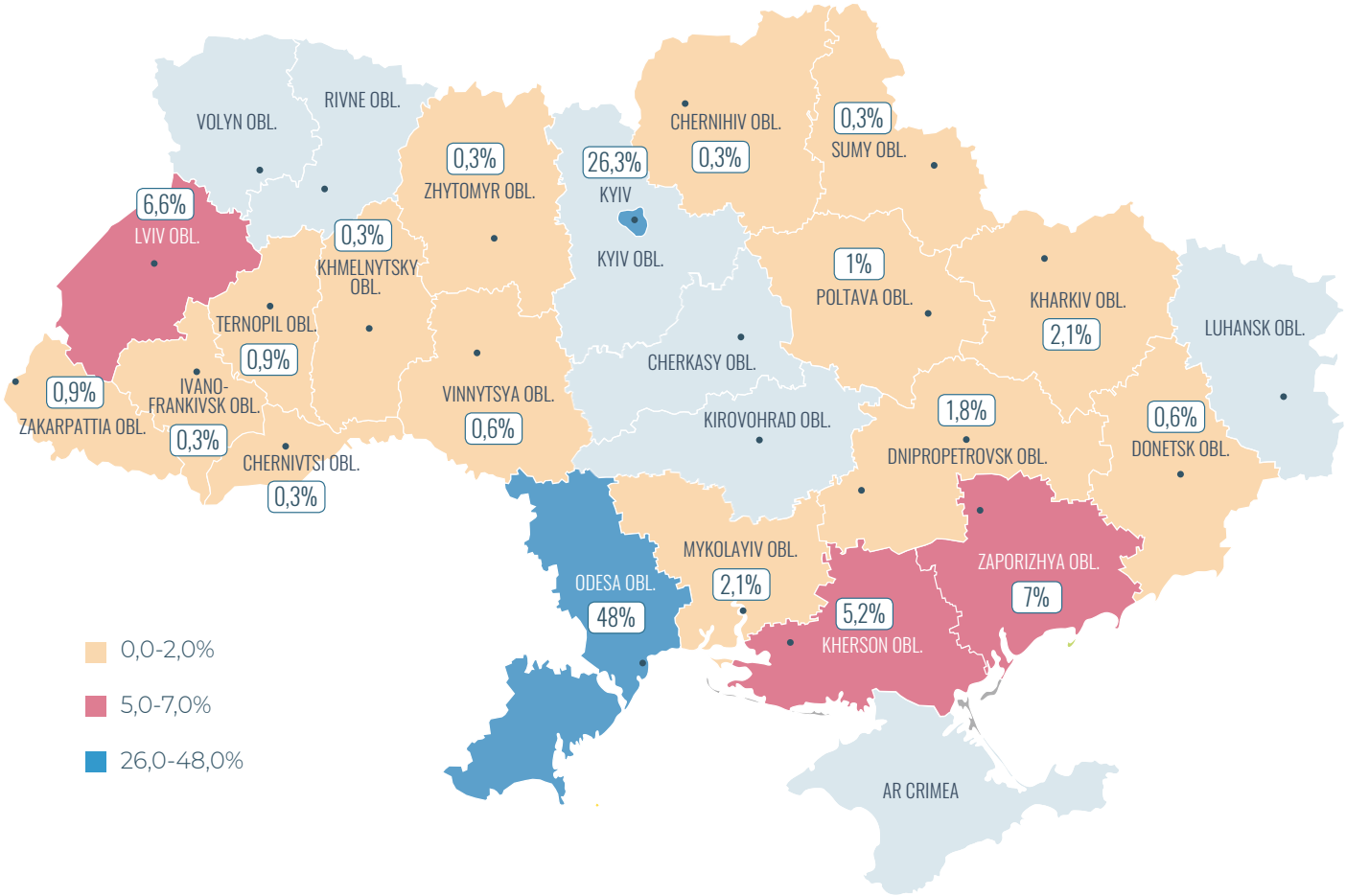
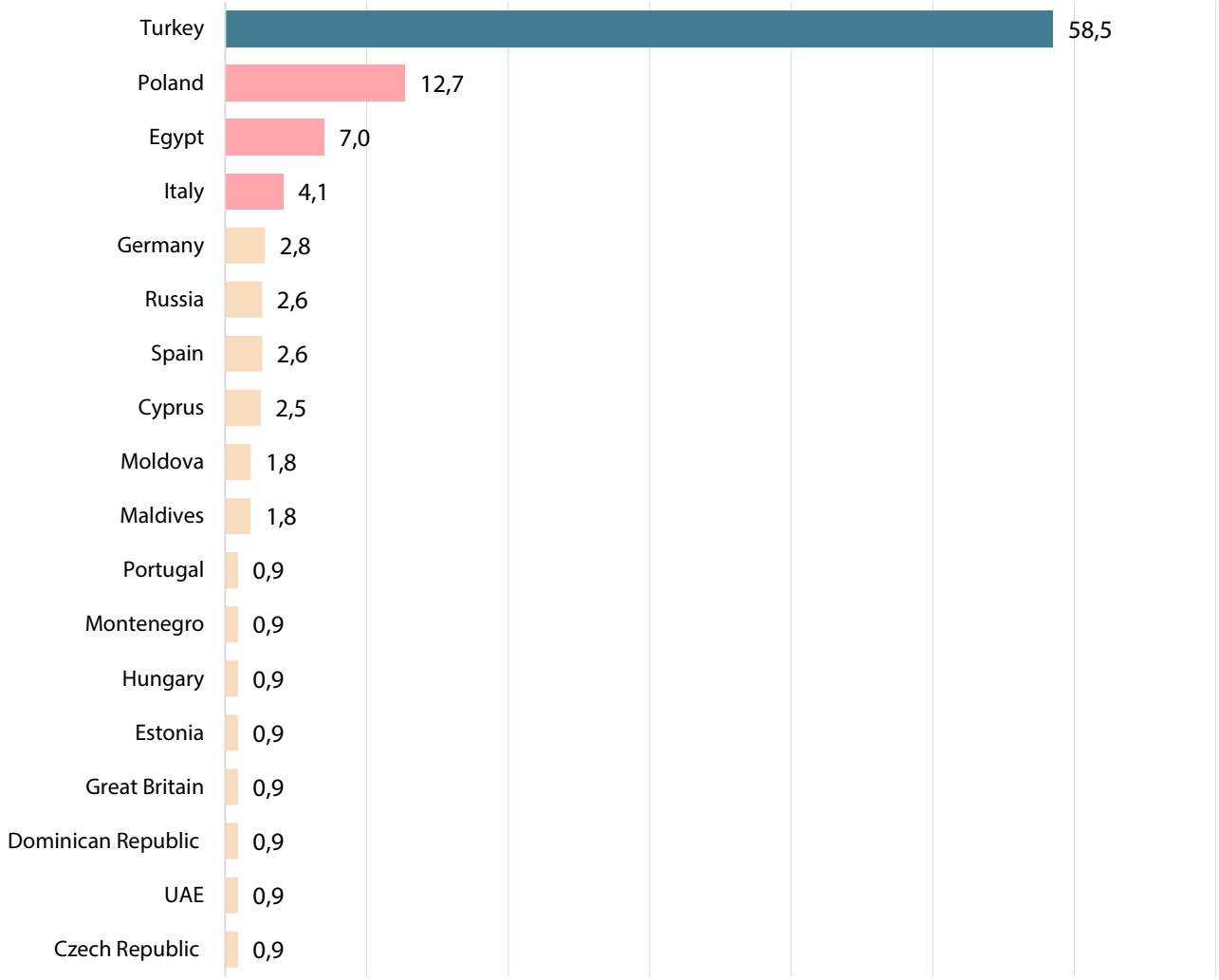


Figure 5. *Migration flows of SWs within the country to provide sex services*

Dnipro	Odesa region (24), Zaporizhzhia region (12), Kyiv City (8), Lviv region (8), Dnipro region (4), Kharkiv region (3), Kherson region (3), Donetsk region (2), Zakarpattia region (2), Mykolaiv region (2)
Kyiv	Odesa region (46), Lviv region (4), Vinnytsia region (1), Zhytomyr (1), Kharkiv (1)
Kropyvnytskyi	Odesa region (24), Kherson region (10), Kyiv City (8), Kharkiv region (2), Dnipro region (1), Zaporizhzhia region (2), Lviv region (1), Mykolaiv region (1), Ternopil region (1)
Lviv	Odesa region (38), Kyiv City (35), Lviv region (3), Kherson region (3), Ternopil region (2), Zakarpattia region (1), Ivano-Frankivsk region (1), Mykolaiv region (1), Khmelnytsky region (1), Chernivtsi region (1), Chernihiv region (1)
Mariupol	Kyiv City (7), Zaporizhzhia region (2), Lviv region (1)
Odesa	Kyiv City (2), Mykolayiv region (2), Vinnytsia region (1), Kharkiv region (1)
Kharkiv	Kyiv City (25), Odesa region (22), Zaporizhzhia region (6), Lviv region (4), Poltava region (3), Dnipropetrovsk region (1), Sumy region (1), Kherson region (1)
Cherkasy	Kyiv City (10), Cherkasy region (9), Odesa region (3), Kharkiv region (1)

Figure 6. *Migration of SWs outside the country: the share of persons who left for this country for more than a month during the last year for the purpose of providing sex services (N = 113, among those who left, multiple answer options, in %)*



3. SEXUAL BEHAVIOUR

3.1 Sexual debut and start of engagement in commercial sex

The mean age of participants' sexual debut was 16 years *(± 2 years)* *(Figure 7)*, and this figure has remained unchanged since 2008. They started to provide commercial sex services at an average age of 22 years *(± 4 years)*, which is also at the level observed in previous studies. An average of six years *(± 4 years)* passed between the first sexual experience and the start of providing sex services. One in ten participants (10.1%) started providing sex services before the age of 18 *(Table 6)*.

The median experience in sex work was six years, the maximum was 34 years. Half of the participants (48.7%) provided sex services from 3 to 10 years. Among SEM, the median length of engagement in commercial sex was one year and increased with age *(Figure 8)*.

Figure 7. Age of the sexual debut and start of providing commercial sex services by age groups

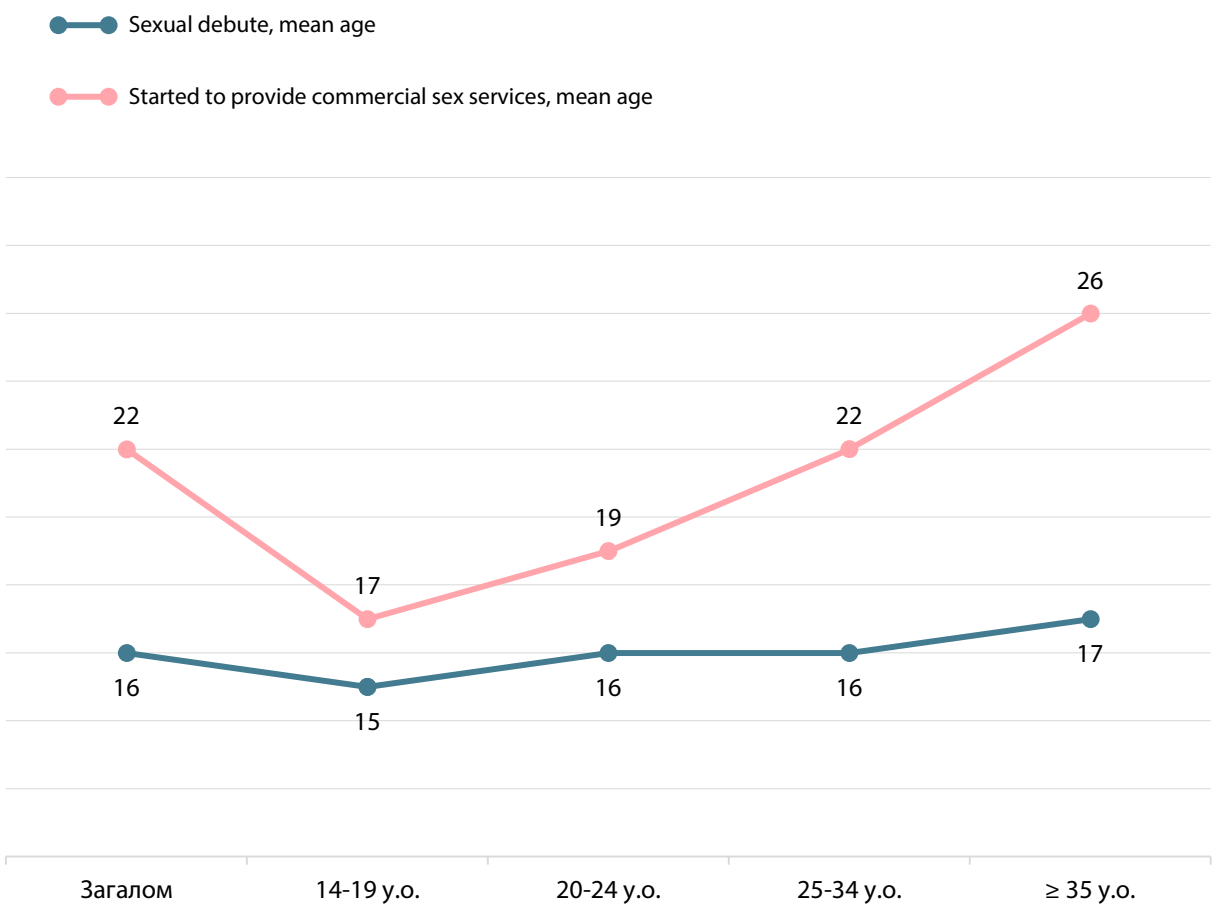


Figure 8. Median experience of providing commercial sex services by age group, years (p <0.001)

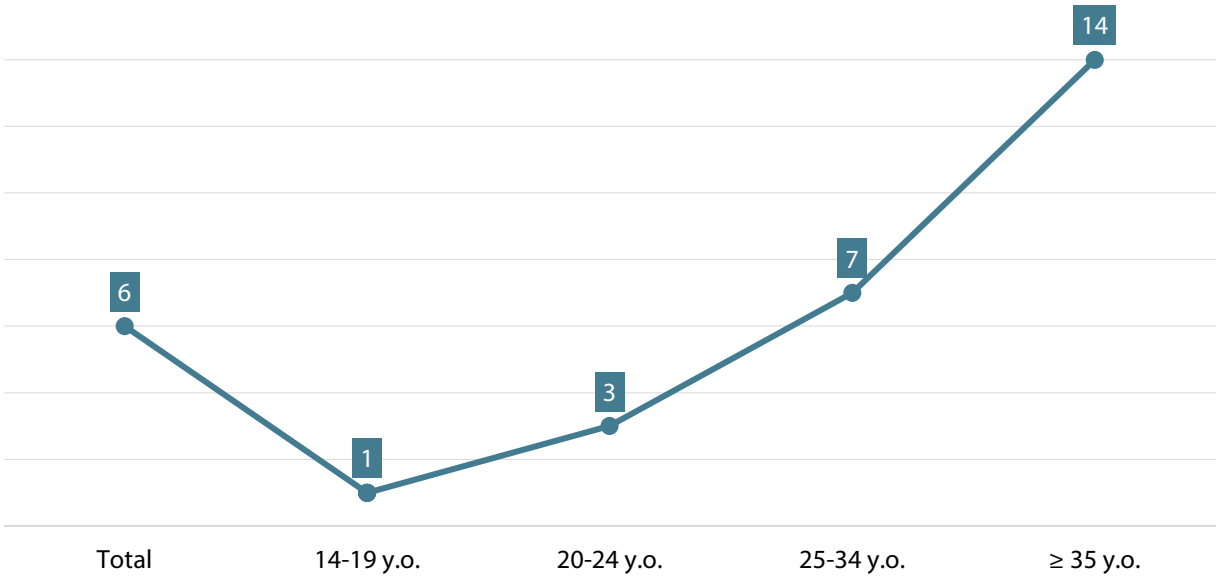


Table 6. *Share of SWs and SEMs who started providing commercial sex services under the age of 18, by socio-demographic characteristics (% among those who answered)*

Characteristics	Share of SWs and SEMs who started providing commercial sex services under 18	
	n	%
Total (N = 4,895)	***492***	***10.1***
Age (N = 4,895)	***p<0.001***	
14–19	129	60.3
20–24	139	12.1
25–34	172	7.1
≥ 35	52	4.7
Gender (N = 4,895)	***p=0.902***	
Women	470	10.1
Men and trans* people	22	9.4
Education (N = 4,885)	***p<0.001***	
Incomplete secondary or lower	149	23.2
Complete secondary	197	12.1
Secondary professional	75	5.8
Higher (Bachelor, Master)	69	5.2
Occupation (N = 4,885)	***p<0.001***	
Sex work only	351	11.1
Full-time or odd jobs	58	5.4
Other *(students, unemployed, etc.)*	82	12.8
Personal monthly income, UAH (N = 3,853)	***p=0.008***	
≤ 15,000	121	12.3
15,001–24,000	93	11.5
24,001–35,000	99	8.5
≥ 35,001	72	8.1
Family status (N = 4,895)	***p=0.617***	
Have a husband/wife or a long-term sexual partner	99	9.3
Have no husband/wife or a long-term sexual partner	394	10.3

Characteristics	Share of SWs and SEMs who started providing commercial sex services under 18	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,851)	***p=0.274***	
Yes	51	11.9
No	440	10.0
Length of working in sex business, years (N = 4,745)	***p<0.001***	
≤ 3	153	11.8
4–6	80	6.4
7–10	93	8.8
≥ 11	166	14.6
Experience of using injecting drugs during life (N = 4,839)	***p=0.926***	
Yes	23	9.8
No	464	10.1
NGO client (N = 4,812)	***p<0.001***	
Yes	145	7.3
No	339	12.1
HIV-status (N = 4,895)	***p=0.146***	
Positive	9	5.9
Negative	483	10.2
Principal method of finding clients (N = 4,895)	***p<0.001***	
Virtual points	227	9.4
Through intermediaries	87	8.4
Street, road, highways	74	12.4
Entertainment facilities/events	62	15.5
Sauna/massage salon	23	10.1
Other ways	20	9.0

3.2 Methods of finding clients

In recent years, the share of SWs and SEMs that look for clients mostly via the Internet or telephone *(virtual points)* has increased significantly – from 13.2% in 2013 to 49.4% in 2021 *(Figure 9)*. At the same time, the category of SWs and SEMs operating at street venues (streets, highways, tracks or roads) continues to decrease – from 40.7% to 12.1%, respectively.

In general, over the last month, 2/3 of SWs and SEMs (61.3%) used the Internet *(social media, their own or special websites)* to search for clients, and for 41.1% it was the main search method *(Table 7)*. In addition to the Internet, intermediaries were popular – other clients, venue administrators or colleagues. A third of SWs (31.1%) used one method of finding clients, and the average indicator is two methods.

Figure 9. *SW and SEMs structure by principal method of finding clients in 2013-2021 (% among those who answered)*

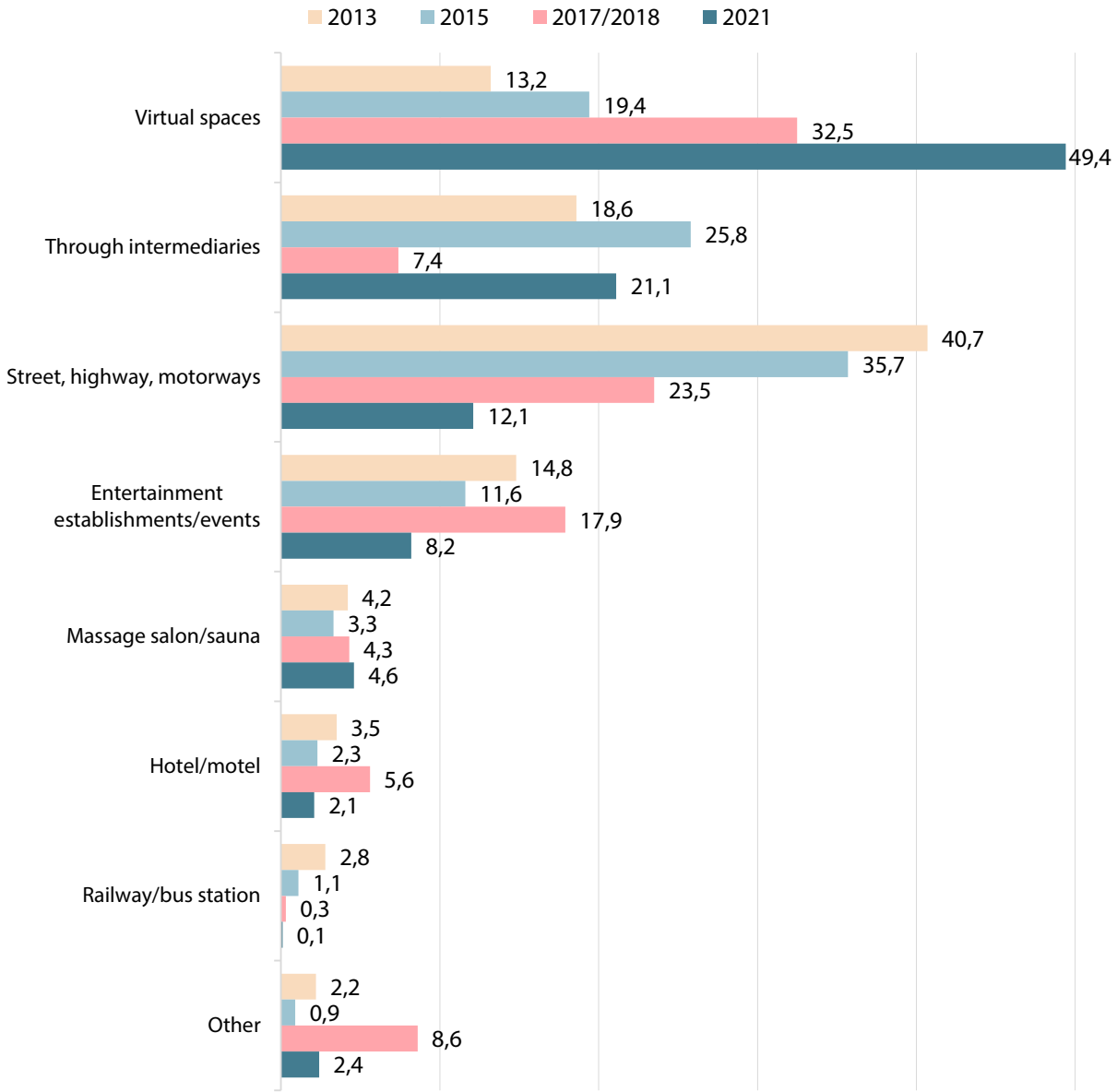


Table 7. *Websites used to search for clients in the last 30 days (N = 4,961, in %)*

	Method of finding clients in the last 30 days *(multiple choice response options)*		Principal method of finding clients in the last 30 days *(one option)*	
	n	%	n	%
Through the Internet *(Tinder, social media Vkontakte, Facebook, etc., own site or contacts on special sites)*	3,042	61.3	2,038	41.1
Through their clients	1,490	30.0	199	4.0
Through intermediaries *("pimp", "madam", etc.)*	1,403	28.3	795	16.0
By phone *(the phone number is printed in newspapers, magazines, business cards, etc.)*	1,201	24.2	397	8.0
In a bar, restaurant, cafe, etc.	1,078	21.7	231	4.7
Through other SWs *(friends, acquaintances, etc.)*	1,006	20.3	52	1.0
At a disco, in a night club, an art club, a strip club	853	17.2	173	3.5
In the sauna, bathhouse, massage salon, spa salon, beauty salon	811	16.3	229	4.6
On the street *(open area, park, square, etc.)*	691	13.9	291	5.9
In a hotel, motel	579	11.7	102	2.1
On highways, tracks, highways	518	10.4	302	6.1
I have only regular clients	214	4.3	100	2.0
At public transport stops	197	4.0	7	0.1
On the beach	134	2.7	14	0.3
At public events *(concerts, festivals, exhibitions, fairs)*	120	2.4	–	–
On TV advertising *(at night)*	86	1.7	18	0.4
In the fitness center	68	1.4	3	0.1
In the casino	61	1.2	1	<0.1
At railway stations, bus stations	41	0.8	4	0.1
In a modeling agency	38	0.8	2	<0.1
In bazaars, markets	34	0.7	2	<0.1
In the educational institution where they study	17	0.3	1	<0.1
Other *(shopping mall restroom)*	1	<0,1	–	–

3.3 SW and SEMs client profile

74.9% of SWs and SEMs were aware of the professional affiliation/employment of their clients. As in previous years, businessmen continue to predominate among them. According to the SWs and SEMs, 53.6% provided services to such persons in the last 30 days, another third – to military personnel (33.9%), taxi drivers (29.2%) and law enforcement officers (28.9%). Businessmen (44.0%), as well as military personnel and truck drivers *(9.2% and 8.0%, respectively)* were among the clients most often *(Table 8)*. Remote fighters were the main group of clients among "street" SWs and SEMs, military personnel – among those who work mostly in saunas and massage parlors *(Table 9)*.

Men aged 35 to 49 were found most often among clients in the last 30 days *(Figure 10)*, regardless of the main method of finding clients *(Table 10)*. For 17.8% of SWs from among men and trans* people, the most frequent category of clients is women over 25 years old *(Figure 11)*.

Table 8. Social and professional groups of SW and SEMs clients in the last 30 days (in %)

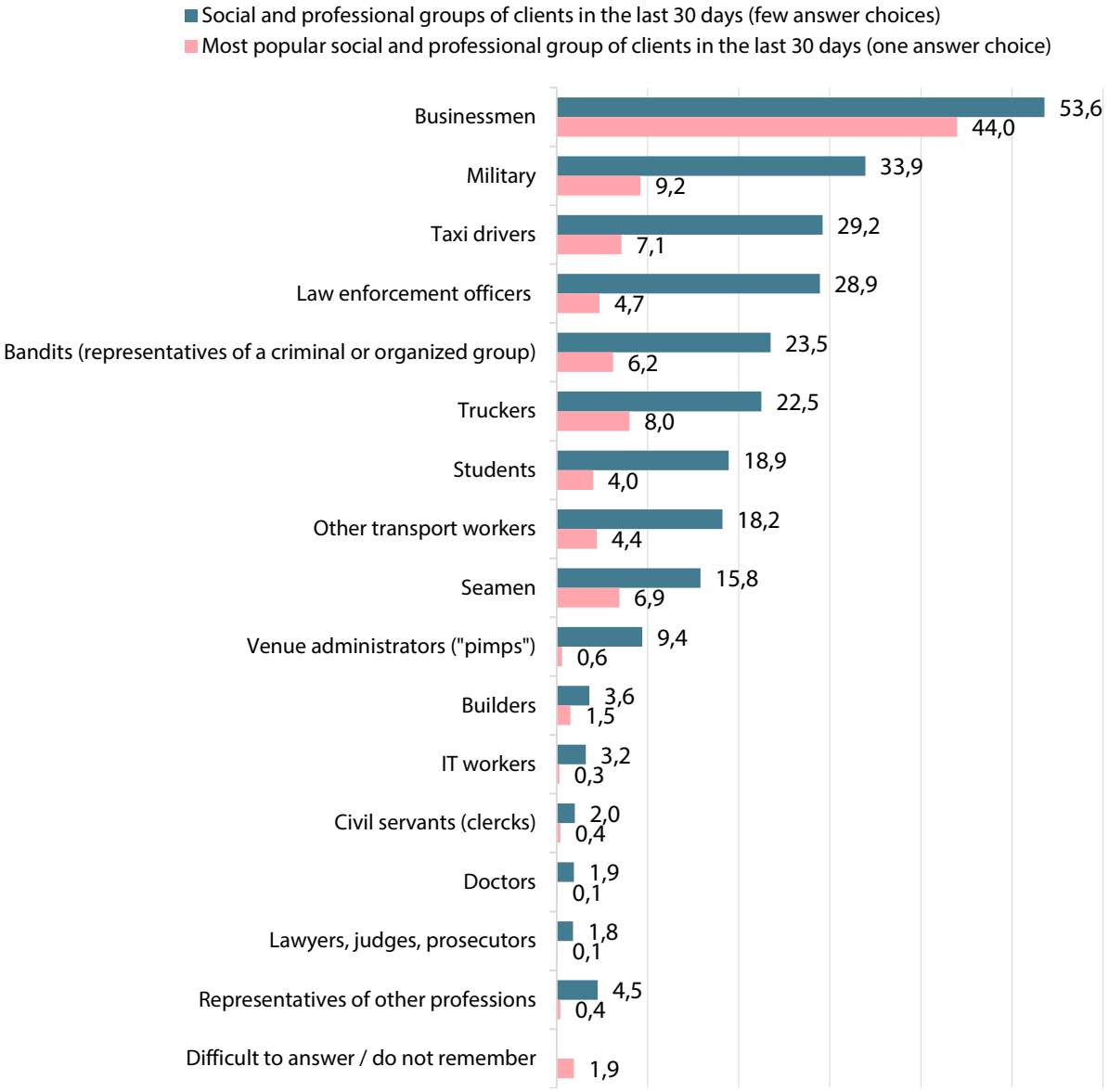


Table 9. *The most frequent socio-professional groups of SW and SEMs clients over the past 30 days by type of main method of finding clients (% among those who answered)*

Social and professional groups	Virtual venues *(N = 1,833)*		Through interme-diaries *(N = 747)*		Street, highway, motorways *(N = 446)*		Leisure facilities and events *(N = 281)*		Sauna/ massage parlor *(N = 172)*	
	n	%	n	%	n	%	n	%	n	%
Businessmen	991	54.1	326	43.6	43	9.6	119	42.3	42	24.4
Military	153	8.3	70	9.4	45	10.1	11	3.9	59	34.3
Taxi drivers	99	5.4	44	5.9	76	17.0	35	12.5	3	1.7
Employees of law enforcement agencies	88	4.8	69	9.2	7	1.6	2	0.7	2	1.2
Bandits *(representatives of a criminal group)*	90	4.9	79	10.6	15	3.4	28	10.0	11	6.4
Long-haul drivers	55	3.0	34	4.6	164	36.8	14	5.0	20	11.6
Students	62	3.4	44	5.9	6	1.3	24	8.5	11	6.4
Other transport workers	73	4.0	20	2.7	42	9.4	18	6.4	5	2.9
Sailors	142	7.7	34	4.6	33	7.4	27	9.6	18	10.5
Venue administrators *("pimps")*	10	0.5	10	1.3	1	0.2	1	0.4	1	0.6
Builders	38	2.1	7	0.9	11	2.5	–	–	–	–
IT workers	9	0.5	1	0.1	3	0.7	–	–	–	–
Civil servants *(officials)*	9	0.5	2	0.3	–	–	–	–	–	–
Doctors	4	0.2	1	0.1	–	–	–	–	–	–
Lawyers, attorneys, judges, prosecutors	1	0.1	1	0.1	–	–	1	0.4	–	–
Representatives of other professions	9	0.5	5	0.7	–	–	1	0.4	–	–

Figure 10. Age and gender groups of clients in the last 30 days (in %)

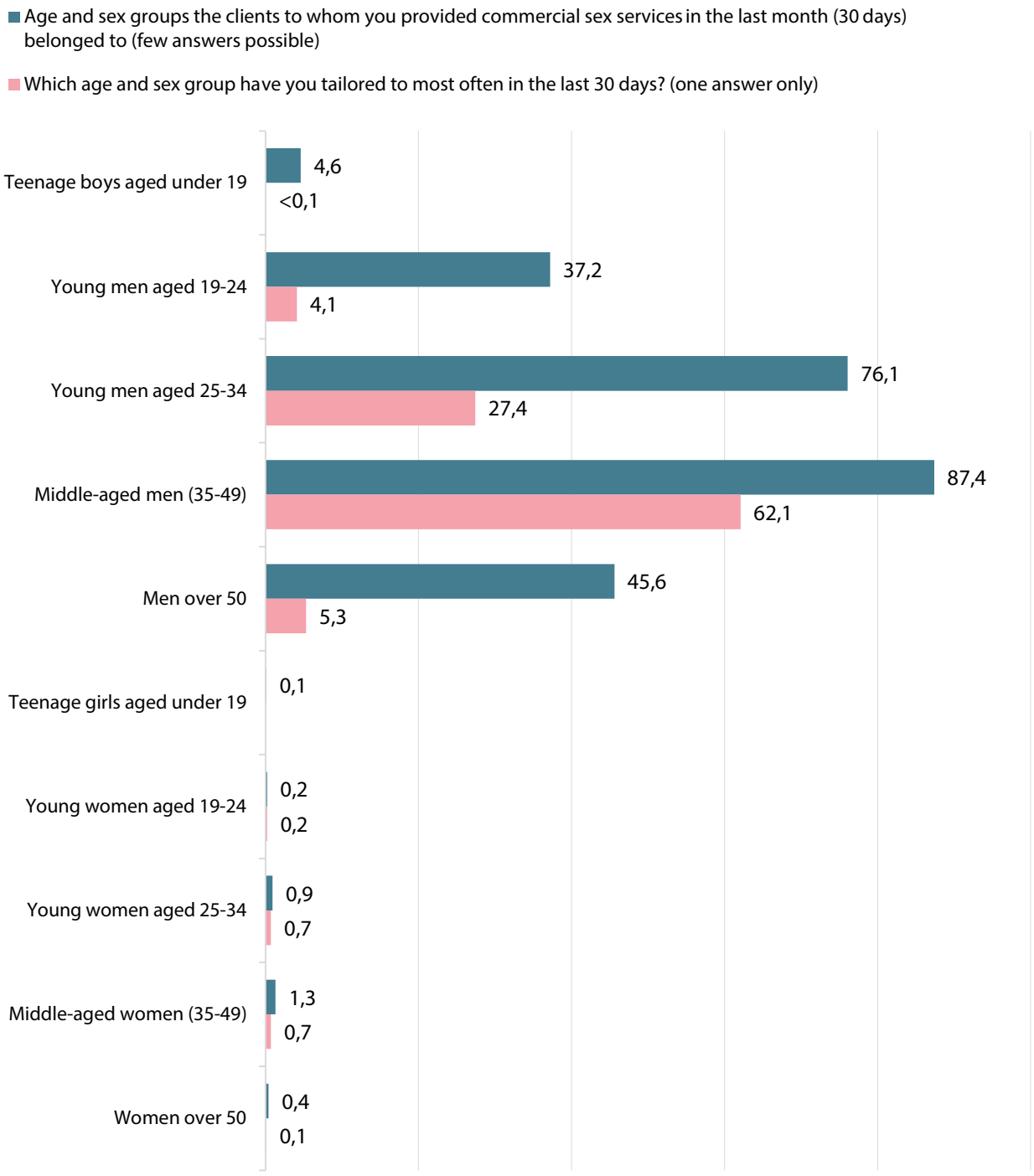
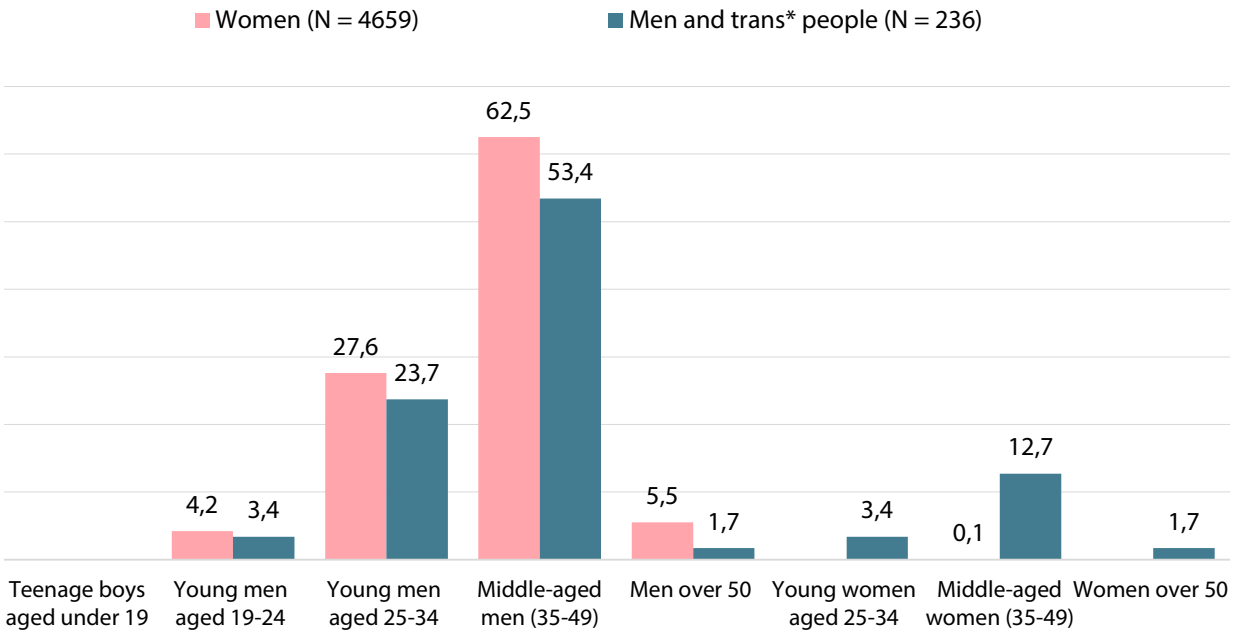


Table 10. *The most frequent gender and age groups of SW and SEMs clients over the past 30 days by type of main method of finding clients (% among those who answered)*

Age and gender groups	Virtual venues *(N = 2,434)*		Through intermedi-aries *(N = 1,027)*		Street, highway, motorways *(N = 589)*		Leisure facilities and events *(N = 399)*		Sauna/ massage parlor *(N = 226)*	
	n	%	n	%	n	%	n	%	n	%
Teenage boys up to 19 years old	1	<0.1	–	–	1	0.2	–	–	–	–
Young men aged 19-24	75	3.1	68	6.6	14	2.4	31	7.8	11	4.9
Young men aged 25-34	706	29.0	268	26.1	138	23.4	106	26.6	74	32.7
Middle-aged men *(35-49 years old)*	1,539	63.2	624	60.8	389	66.0	239	59.9	119	52.7
Men over 50 years old	79	3.2	62	6.0	46	7.8	22	5.5	20	8.8
Teenage girls up to 19 years old	–	–	–	–	–	–	–	–	–	–
Young women 19-24 years old	–	–	–	–	–	–	–	–	–	–
Young women aged 25-34	9	0.4	–	–	–	–	–	–	–	–
Middle-aged women *(35-49 years old)*	24	1.0	5	0.5	1	0.2	1	0.3	2	0.9
Women over 50 years old	1	<0.1	–	–	–	–	–	–	–	–

Figure 11. *The most frequent gender and age groups of SW and SEMs clients in the last 30 days by gender (% among those who answered)*



3.4 SW and SEMs clients from among bridge groups

Among clients, there are so-called "bridge groups" in the spread of HIV infection. Since 2015, the share of SWs and SEMs that provided sex services to bisexual or homosexual people in the last month has doubled *(from 5.4% to 11.5% in 2021)* ***(Figure 12)***. This can be explained by the increase in the proportion of men and trans* people in the sample of each subsequent study – among them, 74.7% provided sex services to bisexual and/or homosexual people compared to 8.3% of women ***(Table 11)***.

The share of those who provided sex services to people who inject drugs (PWID) has remained stable over the past three rounds at 12%. There are more PWID clients among SWs who have had personal experience of injecting drug use – 41.6% compared to 10.7% of participants who have never used it.

Since 2015, the share of SWs and SEMs that provided services to foreigners has continued to increase (53.2%). Such clients were more common among SWs and SEMs aged under 24, with an income level over UAH 24,000, those who experienced migration, and those who mostly look for clients via the Internet or intermediaries.

Half of the SWs and SEMs are not aware of the HIV status of their clients. 3.2% of participants reported having sex with HIV-positive clients in the last month. SWs and SEMs with a low level of education, an income of less than UAH 15,000 and experience of using injection drugs more often provided services to such clients.

Figure 12. *Provision of commercial sex services to bridge groups in the last 30 days 2015-2021 (% among those who answered)*

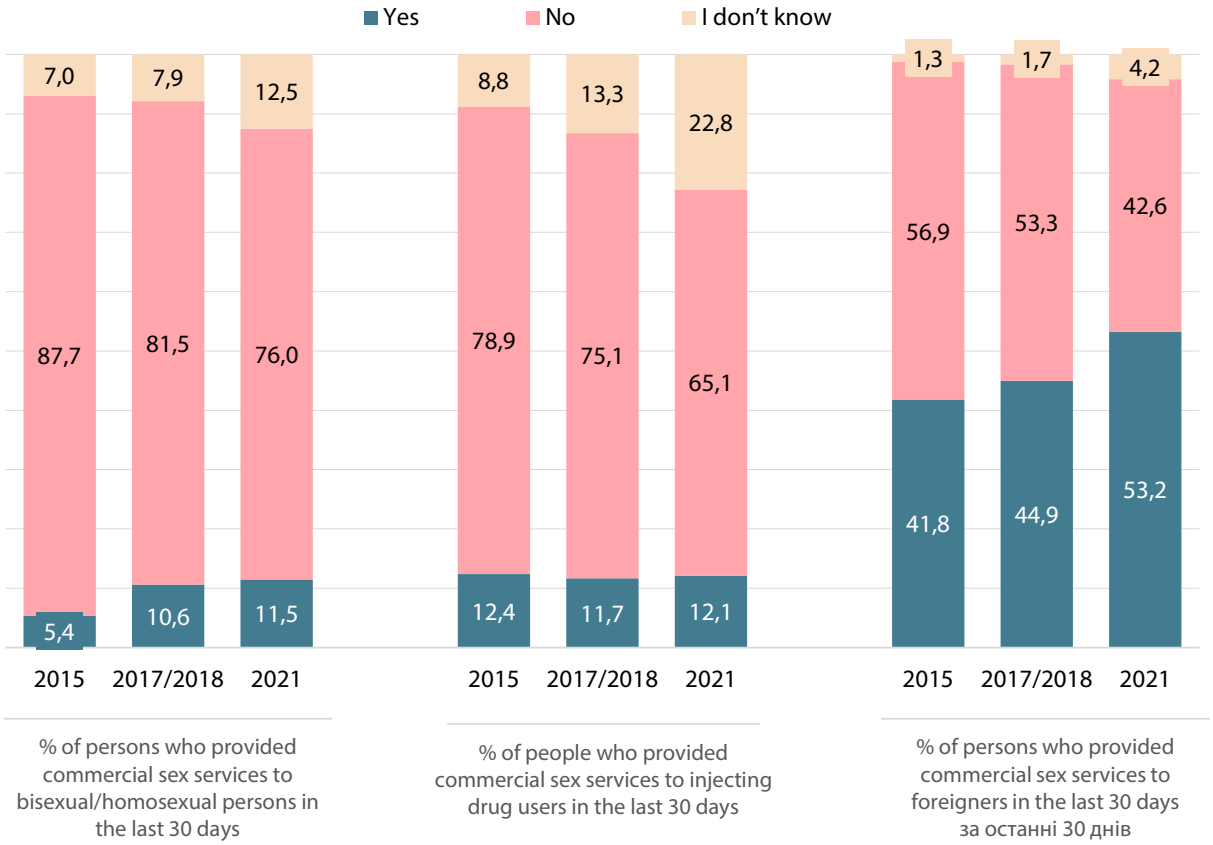


Table 11. *Provision of commercial sex services to certain groups of clients over the past 30 days, by socio-demographic characteristics (% among those who answered)*

Share of SWs and SEMs that provided services in the last 30 days to...	Bisexuals and/or homosexuals (N = 4,942)		People who inject drugs (N = 4,920)		Foreigners (N = 4,946)		HIV-positive people (N = 4,904)	
	n	%	n	%	n	%	n	%
Total	***566***	***11.5***	***597***	***12.1***	***2,634***	***53.2***	***156***	***3.2***
Age	***p<0.001***		***p<0.001***		***p<0.001***		***p=0.060***	
14–19	25	11.4	25	11.4	130	59.4	5	2.3
20–24	146	12.6	100	8.6	766	65.9	46	4.0
25–34	289	11.8	313	12.8	1,324	54.1	64	2.6
≥ 35	106	9.5	158	14.3	413	36.9	42	3.8
Gender	***p<0.001***		***p<0.001***		***p=0.017***		***p<0.001***	
Women	393	8.3	588	12.6	2,495	53.0	139	3.0
Men and trans* people	174	74.7	9	3.8	138	58.5	17	7.3
Education	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Incomplete secondary or lower	38	5.9	110	17.4	278	43.2	36	5.6
Complete secondary	138	8.4	185	11.4	854	52.1	45	2.8
Secondary professional	192	14.6	175	13.3	702	53.4	44	3.4
Higher *(Bachelor, Master)*	198	14.9	128	9.6	799	59.7	31	2.3
Occupation	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Sex work only	336	10.5	450	14.2	1,815	56.8	87	2.7
Full-time or odd jobs	174	16.1	111	10.3	510	47.1	48	4.5
Other *(students, unemployed, etc.)*	53	8.0	35	5.3	300	45.6	22	3.4
Personal monthly income, UAH	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
≤ 15,000	77	7.8	121	12.4	294	29.8	47	4.8
15,001–24,000	80	9.9	106	13.2	480	59.3	24	3.0
24,001–35,000	175	14.9	173	14.8	796	68.0	41	3.5
≥ 35,001	134	14.9	72	8.0	597	66.6	16	1.8
Family status	***p=0.003***		***p<0.001***		***p<0.001***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	92	8.6	181	16.9	517	48.0	37	3.5
Have no husband/wife or a long-term sexual partner	475	12.3	416	10.8	2117	54.7	120	3.1

Share of SWs and SEMs that provided services in the last 30 days to...	Bisexuals and/ or homosexuals *(N = 4,942)*		People who inject drugs *(N = 4,920)*		Foreigners *(N = 4,946)*		HIV-positive people *(N = 4,904)*	
	n	%	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p=0.288***		***p<0.001***		***p=0.289***	
Yes	75	17.2	53	12.2	290	66.5	23	5.3
No	491	11.0	543	12.2	2,335	52.2	132	3.0
Length of working in sex business, years	***p=0.276***		***p<0.001***		***p<0.001***		***p=0.072***	
≤ 3	146	11.3	122	9.4	809	62.4	41	3.2
4–6	149	11.9	154	12.4	729	58.4	41	3.3
7–10	126	11.9	142	13.5	522	49.3	23	2.2
≥ 11	126	11.1	161	14.3	457	40.4	46	4.1
Experience of using injecting drugs during life	***p=0.593***		***p<0.001***		***p<0.001***		***p<0.001***	
Yes	30	12.7	97	41.6	89	37.7	20	8.6
No	529	11.4	497	10.7	2,523	54.2	134	2.9
NGO client	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Yes	173	8.6	180	9.0	1,131	56.1	30	1.5
No	381	13.4	410	14.5	1,458	51.2	127	4.5
HIV status	***p=0.001***		***p=0.034***		***p<0.001***		***p=0.002***	
Positive	5	3.3	25	16.7	36	23.5	12	8.1
Negative	561	11.7	572	12.0	2,598	54.2	144	3.0
Principal method of finding clients	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Virtual venues	352	14.4	234	9.6	1,429	58.5	83	3.4
Through intermediaries	103	9.9	179	17.2	662	63.3	22	2.1
Street, road, highways	33	5.5	80	13.4	183	30.4	23	3.8
Entertainment facilities/events	46	11.4	40	9.9	223	55.3	11	2.7
Sauna/massage salon	20	8.7	37	16.4	62	27.1	13	5.7
Other ways	13	5.7	28	12.4	74	32.7	4	1.8

3.5 Regular and casual clients

A tenth of SWs and SEMs (10.0%) had no clients in the last day *(Figure 13)*. Compared to previous years, the share of SWs and SEMs that provided services to only one client decreased, and the rate of providing sex services to two or more clients during the day increased. The median number of clients in the last day was the same at all types of sex service venues *(2 clients)*.

The majority of SWs and SEMs (91.2%) had regular and occasional clients in the past month, and only 4.2% provided sex services exclusively to regular clients *(Table 12)*. In total, 93.7% of surveyed SWs and SEMs had regular clients in the last 30 days *(median number of clients – 5 people)*, and 95.8% of SWs *(median number – 15 people)* reported having non-regular clients during this time *(Figure 14)*.

Figure 13. *Dynamics of the number of clients during the last working 24 hours in 2008–2021 (% among those who answered)*

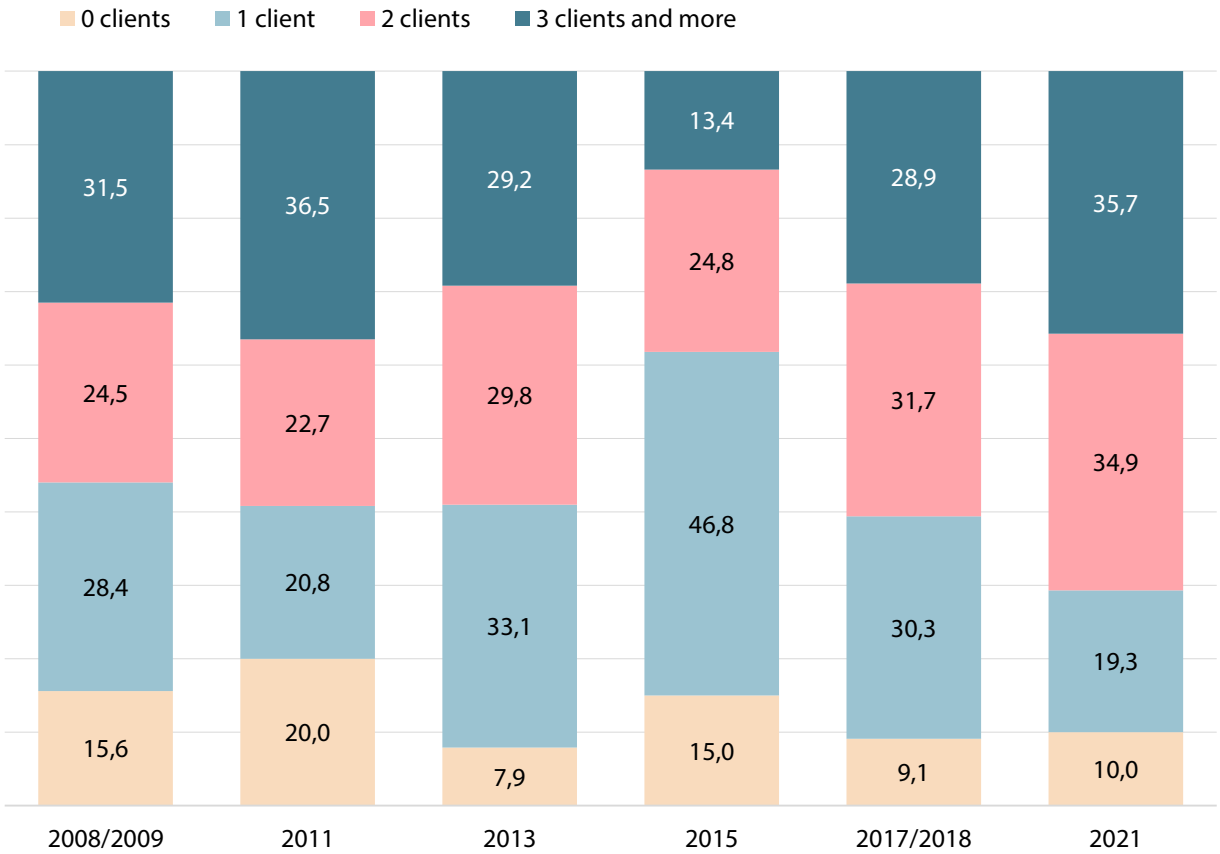
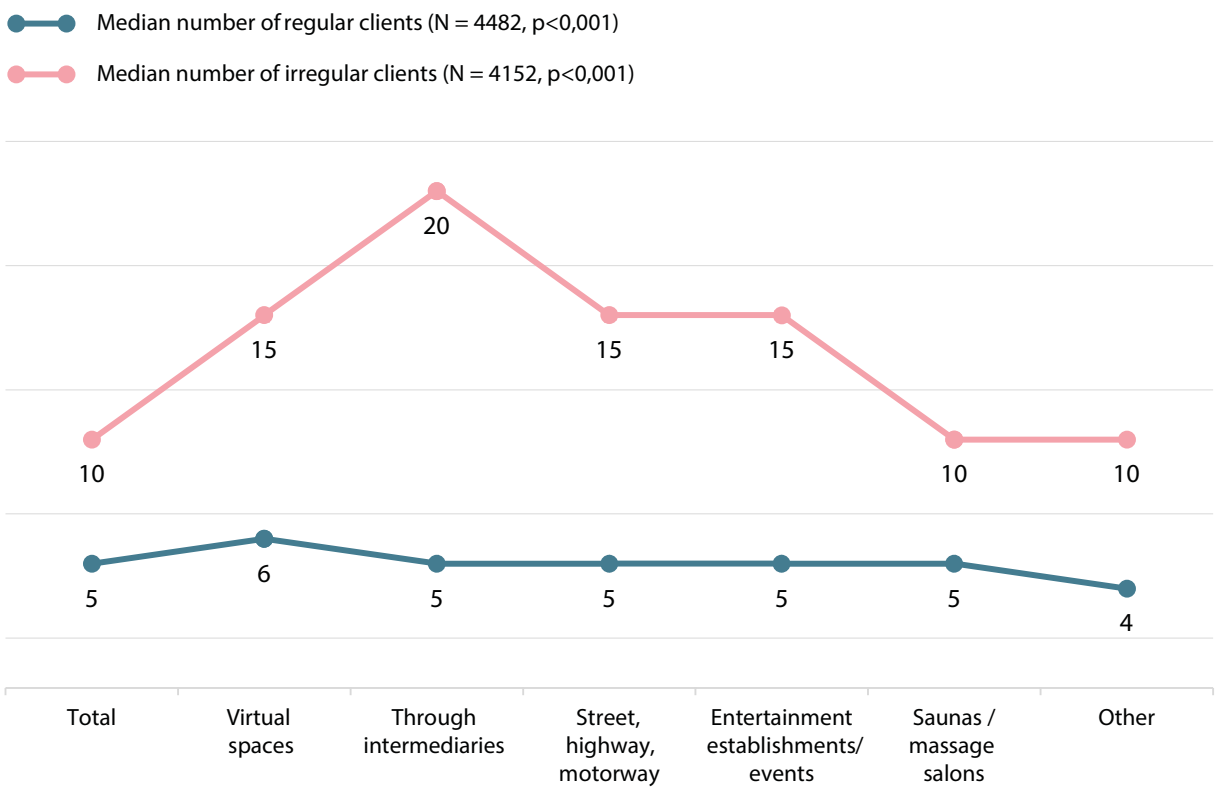


Table 12. *SWs and SEMs having regular and casual clients over the past 30 days, by socio-demographic characteristics (% among those who answered)*

Characteristics	Had regular and casual clients		Had only regular clients		Had only casual clients	
	n	%	n	%	n	%
Total (N = 4,321)	***3,939***	***91.2***	***180***	***4.2***	***201***	***4.7***
Age (N = 4,321)	***p<0.001***					
14–19	166	87.4	5	2.6	19	10.0
20–24	870	87.9	44	4.4	76	7.7
25–34	1,961	92.0	88	4.1	83	3.9
≥ 35	943	93.5	43	4.3	23	2.3
Gender (N = 4,321)	***p=0.057***					
Women	3,744	91.4	164	4.0	189	4.6
Men and trans* people	195	87.4	16	7.2	12	5.4
Education (N = 4,315)	***p<0.001***					
Incomplete secondary or lower	522	90.2	12	2.1	45	7.8
Complete secondary	1,243	90.5	56	4.1	74	5.4
Secondary professional	1,062	91.2	63	5.4	39	3.4
Higher *(Bachelor, Master)*	1,109	92.5	48	4.0	42	3.5
Occupation (N = 4,314)	***p=0.003***					
Sex work only	2,574	92.2	97	3.5	120	4.3
Full-time or odd jobs	884	90.0	54	5.5	44	4.5
Other *(students, unemployed, etc.)*	476	88.0	29	5.4	36	6.7
Personal monthly income, UAH (N = 3,604)	***p=0.035***					
≤ 15,000	871	92.2	33	3.5	41	4.3
15,001–24,000	684	91.0	23	3.1	45	6.0
24,001–35,000	976	91.2	35	3.3	59	5.5
≥ 35,001	782	93.4	33	3.9	22	2.6
Family status (N = 4,321)	***p<0.001***					
Have a husband/wife or a long-term sexual partner	886	92.3	49	5.1	25	2.6
Have no husband/wife or a long-term sexual partner	3,053	90.9	131	3.9	176	5.2

Characteristics	Had regular and casual clients		Had only regular clients		Had only casual clients	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,286)	***p=0.307***					
Yes	356	92.5	17	4.4	12	3.1
No	3,549	91.0	163	4.2	189	4.8
Length of working in sex business, years (N = 4,237)	***p<0.001***					
≤ 3	1,023	89.0	41	3.6	85	7.4
4–6	1,024	92.3	49	4.4	36	3.2
7–10	887	93.0	36	3.8	31	3.2
≥ 11	948	92.5	45	4.4	32	3.1
Experience of using injecting /drugs during life (N = 4,290)	***p=0.604***					
Yes	196	92.5	6	2.8	10	4.7
No	3,718	91.2	173	4.2	187	4.6
NGO client (N = 4,256)	***p=0.016***					
Yes	1,660	92.5	68	3.8	66	3.7
No	2,220	90.2	109	4.4	133	5.4
HIV status (N = 4,321)	***p=0.620***					
Positive	125	93.3	5	3.7	4	3.0
Negative	3,814	91.1	175	4.2	197	4.7
Principal method of finding clients (N = 4,321)	***p<0.001***					
Virtual venues	2,058	94.7	56	2.6	60	2.8
Through intermediaries	747	89.7	17	2.0	69	8.3
Street, road, highways	500	92.1	8	1.5	35	6.4
Entertainment facilities/events	308	88.5	8	2.3	32	9.2
Sauna/massage salon	209	97.7	4	1.9	1	0.5
Other ways	118	56.2	87	41.4	5	2.4

Figure 14. *The median number of regular and casual clients in the last month by the main method of finding clients*



3.6 Non-commercial partners

Compared to the previous study in 2017, the percentage of SWs and SEMs who had sexual partners during the last month from whom they did not receive remuneration increased: from 21.2% to 31.8%. 28.7% of SWs and SEMs had a casual sexual partner, which exceeds the corresponding indicator of previous rounds of the study *(Figure 15)*. The share of SWs and SEMs who had sex with only one regular or one casual non-commercial partner also decreased *(Figure 16)*.

Half of the SWs and SEMs (54.0%) had no sexual contact with non-commercial partners during the last 30 days *(Table 13)*. The absence of such sexual partners is more typical for women, SWs with high income and with less experience in providing sex services. Among SWs and SEMs who reported that they live with a husband/wife or a long-term sexual partner, 93.5% of respondents had sex without reward with a long-term partner.

Among SWs and SEMs that had regular non-commercial partners during the last month (31%), the majority reported one such partner (69.7%), which also corresponds to the median indicator. 30.3% of respondents had two or more such partners.

As for non-commercial casual partners, among the total, 28.7% of SWs reported having them, 19.8% of them had one such partner, and 80.2% had more than two. The median number of casual partners from whom SWs and SEMs did not receive remuneration was three.

A larger number of both regular and casual sexual partners had similar subgroups of SWs and SEMs, namely, younger than 19 years or older than 35 years, with an income of up to UAH 15,000, with experience of providing sex services for more than 11 years and HIV-positive status *(Table 14)*.

Figure 15. *Dynamics of presence of regular and casual non-commercial partners during the last 30 days in 2011–2021 (% among those who answered)*

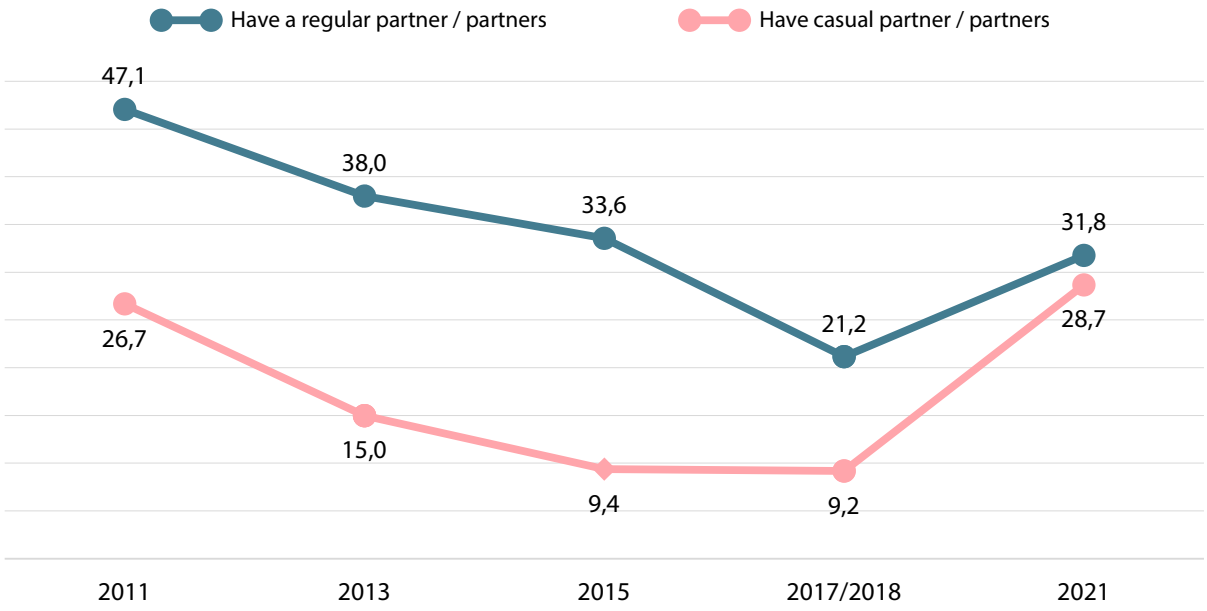


Figure 16. *Dynamics of the share of SWs and SEMs that had only one regular or casual partner from whom they did not receive remuneration, over the last 30 days in 2013-2021 (among those who had such partners, % among those who answered)*

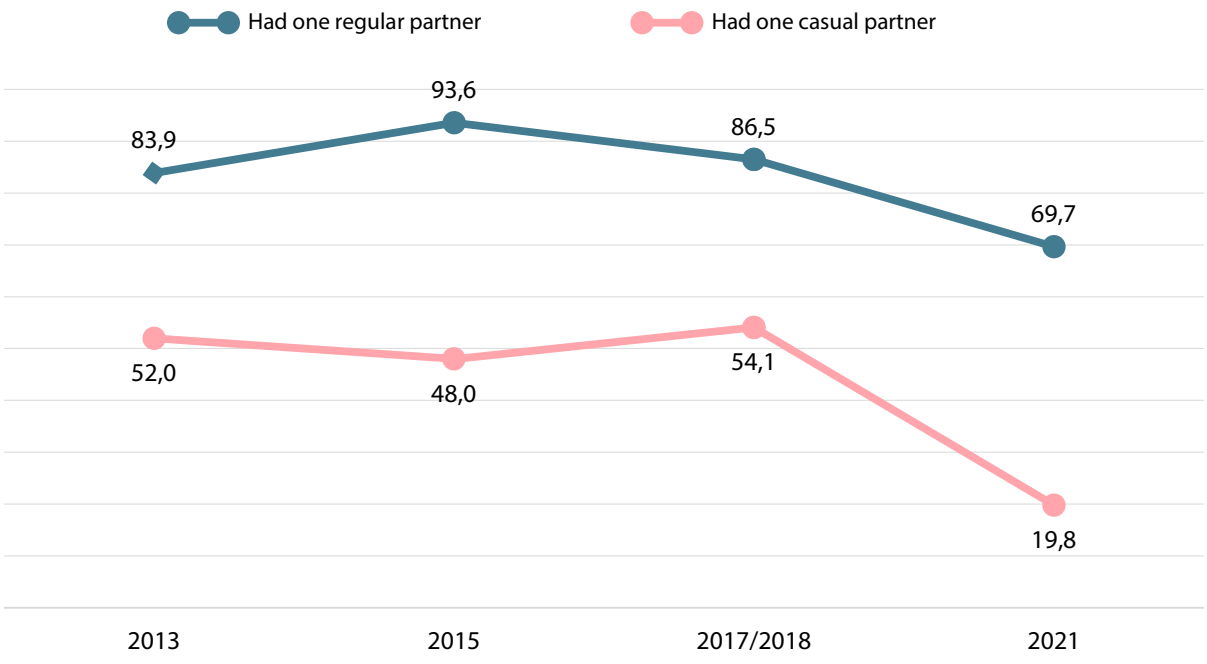


Table 13. *Presence of regular and casual non-commercial partners of the SWs and SEMs for the last 30 days, by socio-demographic characteristics (% among those who answered)*

Characteristics	Had regular and casual partners		Had only regular partners		Had only casual partners		Had no regular or casual partners	
	n	%	n	%	n	%	n	%
Total (N = 4,559)	***660***	***14.5***	***796***	***17.5***	***643***	***14.1***	***2,460***	***54.0***
Age (N = 4,559)	***p<0.001***							
14–19	28	13.7	12	5.9	51	25.0	113	55.4
20–24	157	14.8	139	13.1	176	16.5	592	55.6
25–34	301	13.3	456	20.1	286	12.6	1,222	54.0
≥ 35	174	17.0	189	18.4	130	12.7	533	51.9
Gender (N = 4,559)	***p<0.001***							
Women	611	14.1	776	17.9	600	13.8	2,350	54.2
Men and trans* people	49	22.1	20	9.0	43	19.4	110	49.5
Education (N = 4,553)	***p<0.001***							
Incomplete secondary or lower	79	13.4	84	14.2	104	17.6	324	54.8
Complete secondary	233	15.7	235	15.8	208	14.0	808	54.4
Secondary professional	139	11.2	233	18.8	176	14.2	690	55.7
Higher *(Bachelor, Master)*	207	16.7	244	19.7	153	12.3	636	51.3
Occupation (N = 4,554)	***p<0.001***							
Sex work only	348	11.6	518	17.2	453	15.0	1,693	56.2
Full-time or odd jobs	223	22.4	209	21.0	111	11.2	452	45.4
Other *(students, unemployed, etc.)*	89	16.3	69	12.6	78	14.3	311	56.9
Personal monthly income, UAH (N = 3,682)	***p<0.001***							
≤ 15,000	251	26.7	142	15.1	134	14.3	413	43.9
15,001–24,000	110	14.6	141	18.7	109	14.4	395	52.3
24,001–35,000	171	15.3	202	18.0	157	14.0	591	52.7
≥ 35,001	63	7.3	125	14.4	122	14.1	556	64.2
Family status (N = 4,559)	***p<0.001***							
Have a husband/wife or a long-term sexual partner	263	25.7	695	67.8	8	0.8	59	5.8
Have no husband/wife or a long-term sexual partner	397	11.2	101	2.9	635	18.0	2,401	67.9

Characteristics	Had regular and casual partners		Had only regular partners		Had only casual partners		Had no regular or casual partners	
	n	%	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,519)	***p=0.146***							
Yes	71	17.4	72	17.6	63	15.4	203	49.6
No	586	14.3	724	17.6	550	13.4	2,250	54.7
Length of working in sex business, years (N = 4,418)	***p<0.001***							
≤ 3	152	12.4	171	14.0	201	16.5	697	57.1
4–6	121	10.2	226	19.1	142	12.0	695	58.7
7–10	153	15.6	196	20.0	136	13.9	493	50.4
≥ 11	217	21.0	176	17.0	137	13.2	505	48.8
Experience of using injecting drugs during life (N = 4,518)	***p<0.001***							
Yes	50	22.4	43	19.3	36	16.1	94	42.2
No	591	13.8	750	17.5	599	13.9	2,355	54.8
NGO client (N = 4,491)	***p<0.001***							
Yes	165	8.7	370	19.5	187	9.9	1,175	61.9
No	484	18.7	416	16.0	449	17.3	1,245	48.0
HIV status (N = 4,557)	***p<0.001***							
Positive	41	30.4	22	16.3	20	14.8	52	38.5
Negative	618	14.0	774	17.5	622	14.1	2,408	54.5
Principal method of finding clients (N = 4,554)	***p<0.001***							
Virtual venues	359	16.1	336	15.1	325	14.6	1,212	54.3
Through intermediaries	77	7.7	232	23.1	123	12.3	572	57.0
Street, road, highways	81	15.1	100	18.7	66	12.3	288	53.8
Entertainment facilities/events	55	15.4	49	13.7	77	21.6	176	49.3
Sauna/massage salon	67	30.9	32	14.7	35	16.1	83	38.2
Other ways	19	9.1	47	22.5	15	7.2	128	61.2

Table 14. *The number of regular and casual non-commercial partners of the SWs and SEMs over the last 30 days, by socio-demographic characteristics (% among those who answered)*

Number of non-commercial partners during the last 30 days...	Regular *(N = 1,527)*				Casual *(N = 1,316)*			
	1		≥ 2		1		≥ 2	
	n	%	n	%	n	%	n	%
Total	***1,064***	***69.7***	***463***	***30.3***	***260***	***19.8***	***1,056***	***80.2***
Age	***p=0.005***				***p=0.015***			
14–19	27	64.3	15	35.7	13	16.5	66	83.5
20–24	223	70.8	92	29.2	77	23.1	257	76.9
25–34	572	72.9	213	27.1	127	21.4	467	78.6
≥ 35	242	62.9	143	37.1	43	13.9	266	86.1
Gender	***p=0.321***				***p=0.020***			
Women	1,018	69.9	439	30.1	27	29.0	66	71.0
Men and trans* people	45	64.3	25	35.7	233	19.1	990	80.9
Education	***p<0.001***				***p<0.001***			
Incomplete secondary or lower	109	63.4	63	36.6	28	15.3	155	84.7
Complete secondary	308	61.7	191	38.3	67	15.1	377	84.9
Secondary professional	310	80.7	74	19.3	71	22.3	248	77.7
Higher *(Bachelor, Master)*	337	71.5	134	28.5	94	25.7	272	74.3
Occupation	***p=0.037***				***p=0.207***			
Sex work only	646	71.6	256	28.4	151	18.7	656	81.3
Full-time or odd jobs	311	68.7	142	31.3	78	23.1	260	76.9
Other *(students, unemployed. etc.)*	106	62.0	65	38.0	31	18.2	139	81.8
Personal monthly income, UAH	***p<0.001***				***p<0.001***			
≤ 15,000	194	48.5	206	51.6	48	12.3	342	87.7
15,001–24,000	204	77.0	61	23.0	47	21.4	173	78.6
24,001–35,000	297	76.9	89	23.1	95	28.9	234	71.1
≥ 35,001	144	75.4	47	24.6	40	21.5	146	78.5
Family status	***p<0.001***				***p=0.847***			
Have a husband/wife or a long-term sexual partner	825	83.7	161	16.3	53	19.3	221	80.7
Have no husband/wife or a long-term sexual partner	239	44.2	302	55.8	207	19.9	835	80.1

Number of non-commercial partners during the last 30 days...	Regular *(N = 1,527)*				Casual *(N = 1,316)*			
	1		≥ 2		1		≥ 2	
	n	%	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.008***				***p<0.001***			
Yes	118	79.2	31	20.8	49	36.6	85	63.4
No	944	68.7	431	31.3	211	18.3	939	81.7
Length of working in sex business, years	***p<0.001***				***p<0.001***			
≤ 3	263	76.9	79	23.1	90	25.3	266	74.7
4–6	278	79.2	73	20.8	66	24.9	199	75.1
7–10	255	70.6	106	29.4	51	17.5	240	82.5
≥ 11	234	56.8	178	43.2	48	13.3	312	86.7
Experience of using injecting drugs during life	***p=0.400***				***p=0.012***			
Yes	64	66.7	32	33.3	8	9.3	78	90.7
No	995	70.7	412	29.3	247	20.5	956	79.5
NGO client	***p<0.001***				***p=0.105***			
Yes	433	76.0	137	24.0	61	17.0	297	83.0
No	616	66.0	317	34.0	198	21.1	742	78.9
HIV status	***p<0.001***				***p=0.008***			
Positive	31	45.6	37	54.5	4	6.6	57	93.4
Negative	1,032	70.8	426	29.2	256	20.4	998	79.6
Principal method of finding clients	***p<0.001***				***p<0.001***			
Virtual venues	502	68.9	227	31.1	151	21.9	540	78.1
Through intermediaries	275	86.2	44	13.8	62	30.7	140	69.3
Street, road, highways	121	62.7	72	37.3	13	8.6	138	91.4
Entertainment facilities/events	76	69.1	34	30.9	21	15.7	113	84.3
Sauna/massage salon	34	33.3	68	66.7	7	6.7	97	93.3
Other ways	55	75.3	18	24.7	7	20.0	28	80.0

3.7 Experience of providing sex services in the hostilities in Eastern Ukraine

In the 2021 IBBS, respondents were asked questions about their experience of providing sex services in the territory of hostilities in eastern Ukraine. 2.0% of SWs reported that they traveled to checkpoints or territories temporarily not controlled by the Government of Ukraine to provide sex services to Ukrainian military personnel since 2014. SWs with such experience traveled on average seven times *((±6 trips)*, the median figure was five trips. 72.9% of such participants traveled to these territories during the last year, and for 81.2% such a trip lasted less than a month.

The share of SWs with experience of providing sex services in the territory of hostilities is higher among participants with a low level of education, income up to UAN 15,000, sex work experience of 11 years or more, experience of injecting drug use, non-clients of NGOs, those who work in saunas/massage salons *(Table 15)*. To a greater extent, participants from Mariupol (12.4%) and Dnipro (3.4%) had the experience of such trips, the percentage of SWs from the rest of the cities was at the level of 0.2–1.2%.

The median number of clients from the Ukrainian military was 10 during the last trip. More than half of SWs (79.4%) indicated that they used a condom during the last sex with a client, and from 67.2% to 79.6% of SWs always used it during the trip depending on the type of sexual contact *(Figure 17)*.

Figure 17. *Condom use with clients from among Ukrainian military personnel during the last trip to the territory of hostilities in the east of Ukraine (% among those who answered)*

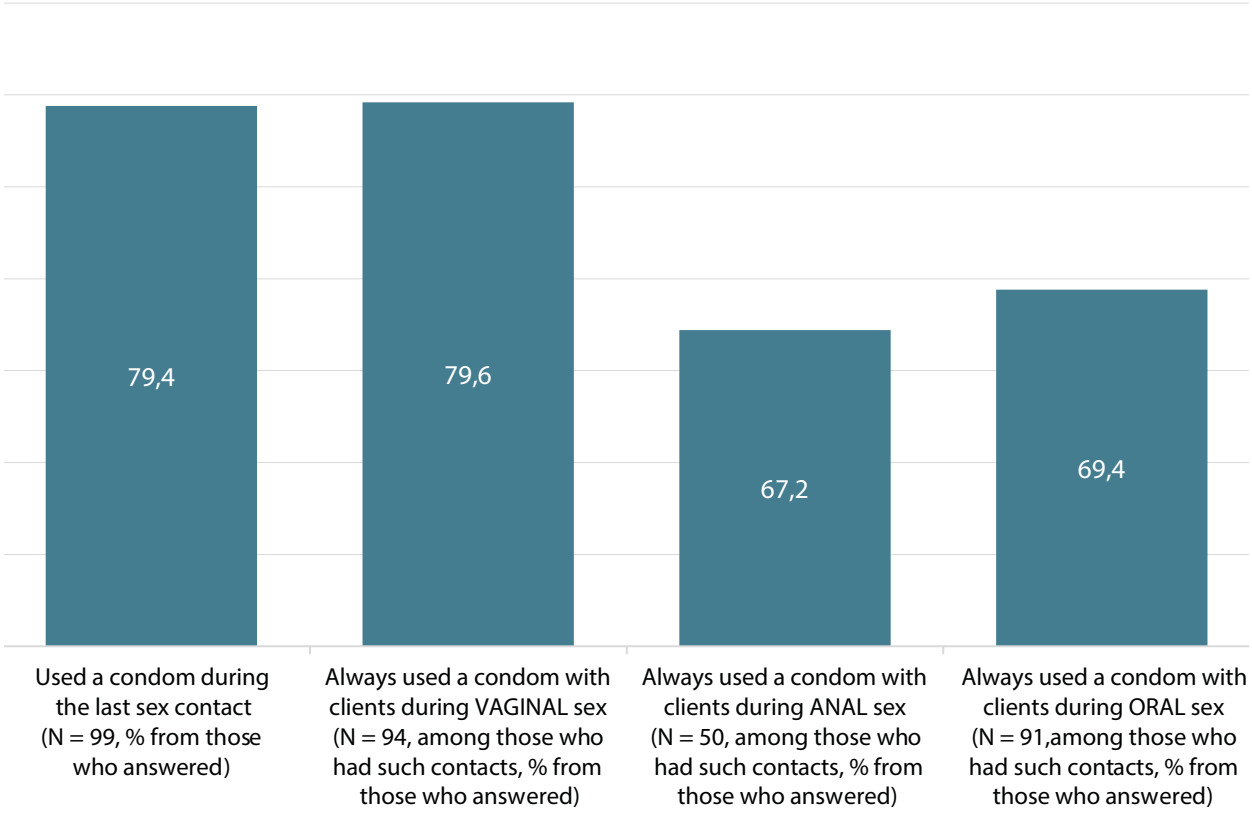


Table 15. *Experience of going to the territories of hostilities in the east of Ukraine to provide sex services to Ukrainian servicemen since 2014, by socio-demographic characteristics (% among those who answered)*

Characteristics	Traveled		Did not travel		Do not remember/ difficult to answer	
	n	%	n	%	n	%
Total (N = 4,917)	***100***	***2.0***	***4,754***	***96.7***	***62***	***1.3***
Age (N = 4917)	***p=0.247***					
14–19	2	0.9	214	98.2	2	0.9
20–24	17	1.5	1,123	97.4	13	1.1
25–34	51	2.1	2,352	96.7	30	1.2
≥ 35	31	2.8	1,064	95.6	18	1.6
Gender (N = 4,917)	***p=0.420***					
Women	98	2.1	4,523	96.6	60	1.3
Men and trans* people	2	0.9	230	97.9	3	1.3
Education (N = 4,908)	***p<0.001***					
Incomplete secondary or lower	31	4.9	594	93.7	9	1.4
Complete secondary	31	1.9	1,568	96.4	28	1.7
Secondary professional	19	1.4	1,280	97.4	15	1.1
Higher (Bachelor, Master)	17	1.3	1,305	97.9	11	0.8
Occupation (N = 4,904)	***p=0.140***					
Sex work only	73	2.3	3,059	96.6	36	1.1
Full-time or odd jobs	15	1.4	1,050	97.4	13	1.2
Other *(students, unemployed. etc.)*	11	1.7	634	96.4	13	2.0
Personal monthly income, UAH (N = 3,854)	***p<0.001***					
≤ 15,000	37	3.8	928	94.4	18	1.8
15,001–24,000	16	2.0	783	96.7	11	1.4
24,001–35,000	13	1.1	1,150	98.3	7	0.6
≥ 35,001	3	0.3	883	99.1	5	0.6
Family status (N = 4,917)	***p=0.687***					
Have a husband/wife or a long-term sexual partner	24	2.2	1,035	96.3	16	1.5
Have no husband/wife or a long-term sexual partner	76	2.0	3,719	96.8	47	1.2

Characteristics	Traveled		Did not travel		Do not remember/ difficult to answer	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,891)	***p<0.001***					
Yes	27	6.3	401	93.0	3	0.7
No	63	1.4	4,340	97.3	57	1.3
Length of working in sex business, years (N = 4,704)	***p<0.001***					
≤ 3	16	1.2	1,262	97.6	15	1.2
4–6	16	1.3	1,216	98.0	9	0.7
7–10	28	2.7	1,007	96.5	9	0.9
≥ 11	31	2.8	1,067	94.8	28	2.5
Experience of using injecting drugs during life (N = 4,866)	***p<0.001***					
Yes	14	5.9	219	92.8	3	1.3
No	85	1.8	4,489	97.0	56	1.2
NGO client (N = 4,832)	***p<0.001***					
Yes	18	0.9	1,969	97.9	25	1.2
No	77	2.7	2,708	96.0	35	1.2
HIV status (N = 4,917)	***p=0.071***					
Positive	7	4.6	142	94.0	2	1.3
Negative	93	2.0	4,612	96.8	61	1.3
Principal method of finding clients (N = 4,917)	***p<0.001***					
Virtual venues	40	1.6	2,365	97.0	32	1.3
Through intermediaries	24	2.3	1,006	97.0	7	0.7
Street, road, highways	10	1.7	579	96.8	9	1.5
Entertainment facilities/events	11	2.8	389	97.3	-	-
Sauna/massage salon	13	6.0	198	90.8	7	3.2
Other ways	2	0.9	217	96.0	7	3.1

4. CONDOM USE

4.1 Last sexual contact with a client

The vast majority of SWs and SEMs reported that they used a condom during the last sex with a client (92.4%), and the indicator is at the level of 2017 *(Figure 18)*.

The practice of using a condom depends on the type of sexual contact. Compared to 2017, the share of SWs and SEMs who used it during the last oral *(from 86.3% to 80.2%)* and anal sex *(from 93.1% to 90.4%)* decreased *(Figure 19)*. 2.0% of SWs and SEMs did not use a condom during the last vaginal sex, 9.4% – during anal sex, and 19.5% – during oral sex *(Figure 20)*.

Not using a condom with a client was common among SWs with migration experience (12.0%), experience of providing sex services for more than 11 years (8.9%), lifetime injection drug use experience (18.5%) and not receiving NGO services (9.5%) *(Table 16)*.

Among SWs and SEMs who did not use a condom during the last sex, the main reason for this was the insistence of clients (37.9%); 5.1% of SWs and SEMs did not consider it necessary to use a condom *(Figure 21)*.

As for SWs and SEMs who used a condom, almost all of them offered it to the client on their own initiative (91.3%). A third of SWs and SEMs received a condom from a social worker (37.2%) or bought it themselves at a pharmacy (32.7%) *(Figure 22)*.

Figure 18. *Dynamics of condom use during the last sexual contact with the client in 2011–2021 (% among those who answered)*

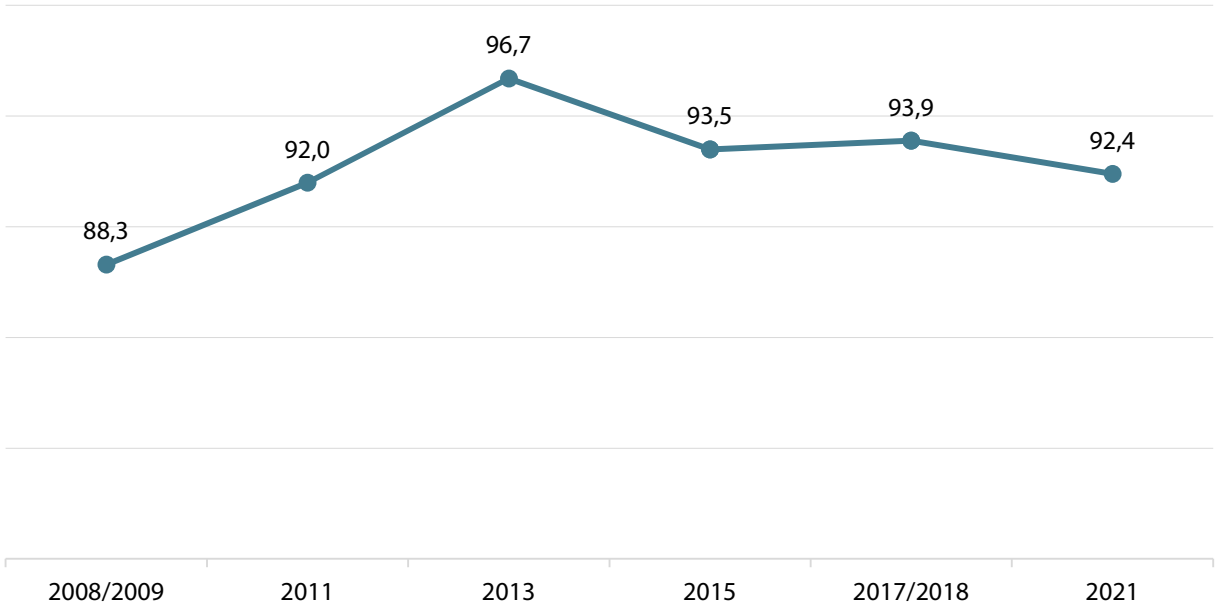


Figure 19. Dynamics of condom use during the last sex with the client depending on the type of contact in 2015–2021 (% among those who answered)

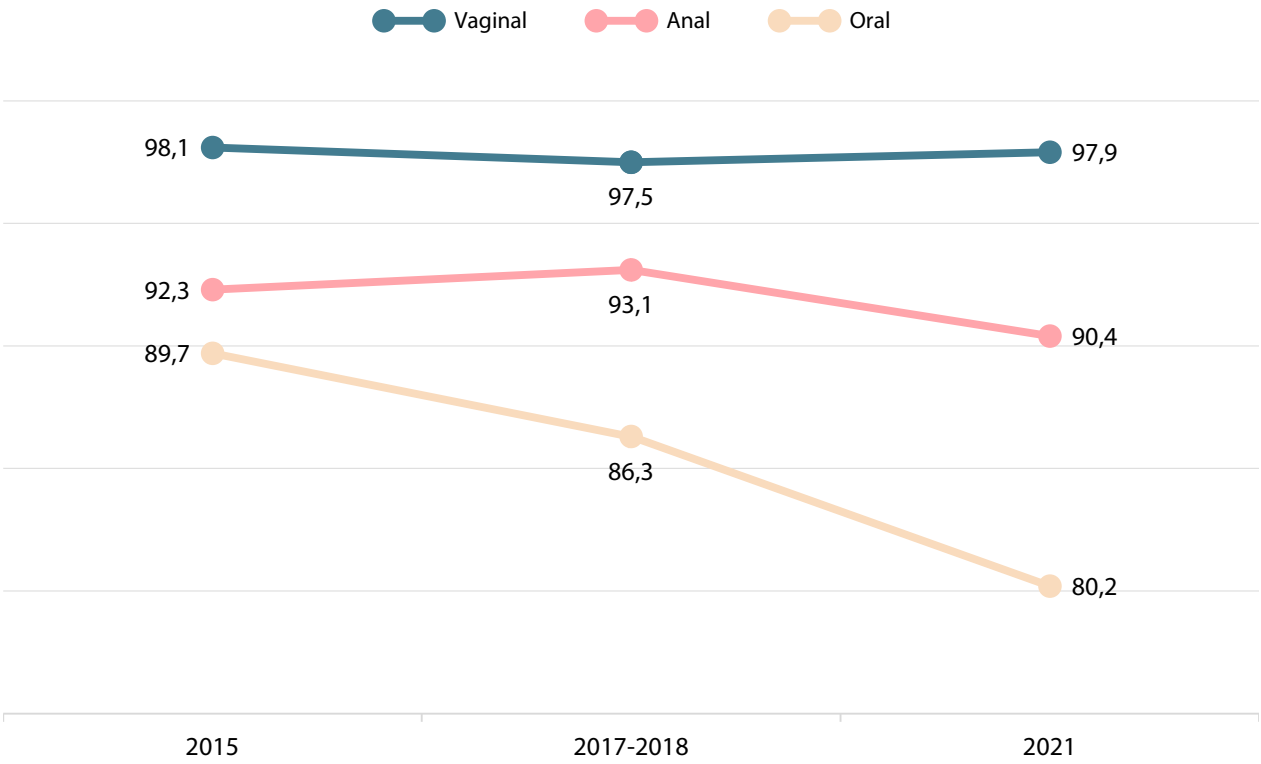


Figure 20. Condom use during the last sexual contact with the client depending on the type of contact (p<0.001, % among those who answered)

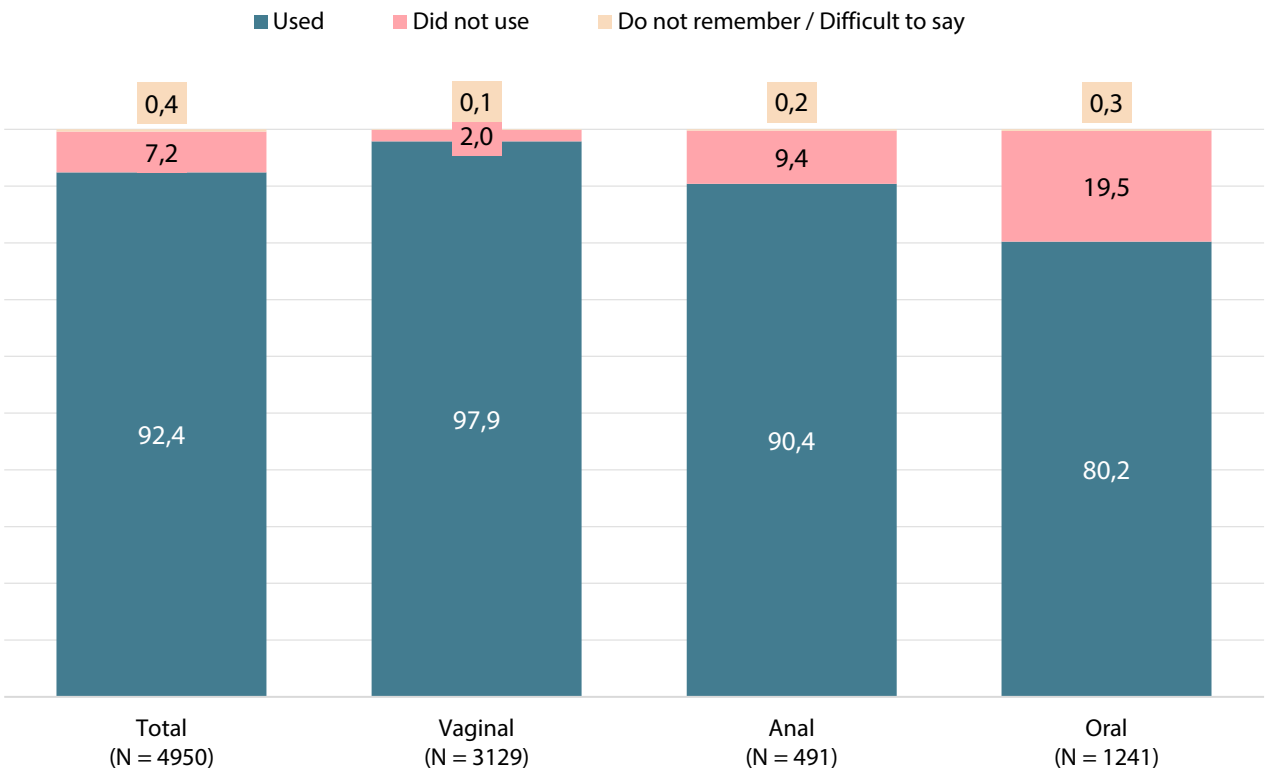


Table 16. *Condom use during the last sex with the client, by socio-demographic characteristics (% among those who answered)*

Characteristics	Used		Did not use		Do not remember/ Difficult to answer	
	n	%	n	%	n	%
Total (N = 4,950)	***4574***	***92.4***	***355***	***7.2***	***22***	***0.4***
Age (N = 4,950)	***p=0.541***					
14–19	198	89.6	22	10.0	1	0.5
20–24	1,077	92.6	79	6.8	7	0.6
25–34	2,267	92.8	166	6.8	9	0.4
≥ 35	1,032	91.7	88	7.8	5	0.4
Gender (N = 4,950)	***p<0.001***					
Women	4,396	93.2	298	6.3	22	0.5
Men and trans* people	178	75.7	57	24.3	–	–
Education (N = 4,942)	***p=0.187***					
Incomplete secondary or lower	581	90.1	58	9.0	6	0.9
Complete secondary	1,535	93.1	107	6.5	6	0.4
Secondary professional	1,212	92.5	94	7.2	4	0.3
Higher *(Bachelor, Master)*	1,238	92.5	95	7.1	6	0.4
Occupation (N = 4,940)	***p=0.537***					
Sex work only	2,964	92.7	220	6.9	13	0.4
Full-time or odd jobs	995	92.0	79	7.3	7	0.6
Other *(students, unemployed. etc.)*	605	91.4	55	8.3	2	0.3
Personal monthly income, UAH (N = 3,868)	***p=0.038***					
≤ 15,000	898	90.4	90	9.1	5	0.5
15,001–24,000	766	94.6	42	5.2	2	0.2
24,001–35,000	1,077	91.9	91	7.8	4	0.3
≥ 35,001	832	93.2	60	6.7	1	0.1
Family status (N = 4,950)	***p=0.054***					
Have a husband/wife or a long-term sexual partner	1,011	94.0	59	5.5	5	0.5
Have no husband/wife or a long-term sexual partner	3,563	91.9	296	7.6	17	0.4

Characteristics	Used		Did not use		Do not remember/ Difficult to answer	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,904)	***p<0.001***					
Yes	376	87.0	52	12.0	4	0.9
No	4,156	92.9	300	6.7	16	0.4
Length of working in sex business, years (N = 4,735)	***p=0.070***					
≤ 3	1,209	93.2	81	6.2	7	0.5
4–6	1,162	93.2	84	6.7	1	0.1
7–10	977	92.5	74	7.0	5	0.5
≥ 11	1,028	90.6	101	8.9	6	0.5
Experience of using injecting drugs during life (N = 4,890)	***p<0.001***					
Yes	193	81.1	44	18.5	1	0.4
No	4,334	93.0	307	6.6	17	0.4
NGO client (N = 4,866)	***p<0.001***					
Yes	1,944	96.5	68	3.4	2	0.1
No	2,564	89.9	271	9.5	17	0.6
HIV status (N = 4,950)	***p=0.179***					
Positive	137	90.1	13	8.6	2	1.3
Negative	4,437	92.5	342	7.1	19	0.4
Principal method of finding clients (N = 4,950)	***p<0.001***					
Virtual venues	2,259	92.4	181	7.4	4	0.2
Through intermediaries	988	94.5	49	4.7	8	0.8
Street, road, highways	546	90.7	51	8.5	5	0.8
Entertainment facilities/events	370	92.0	28	7.0	4	1.0
Sauna/massage salon	208	90.4	21	9.1	1	0.4
Other ways	202	89.0	25	11.0	–	–

Figure 21. Reasons for not using a condom during the last sex with the client (N = 355, among those who did not use a condom during the last sex with the client, multiple choice answers, in %)

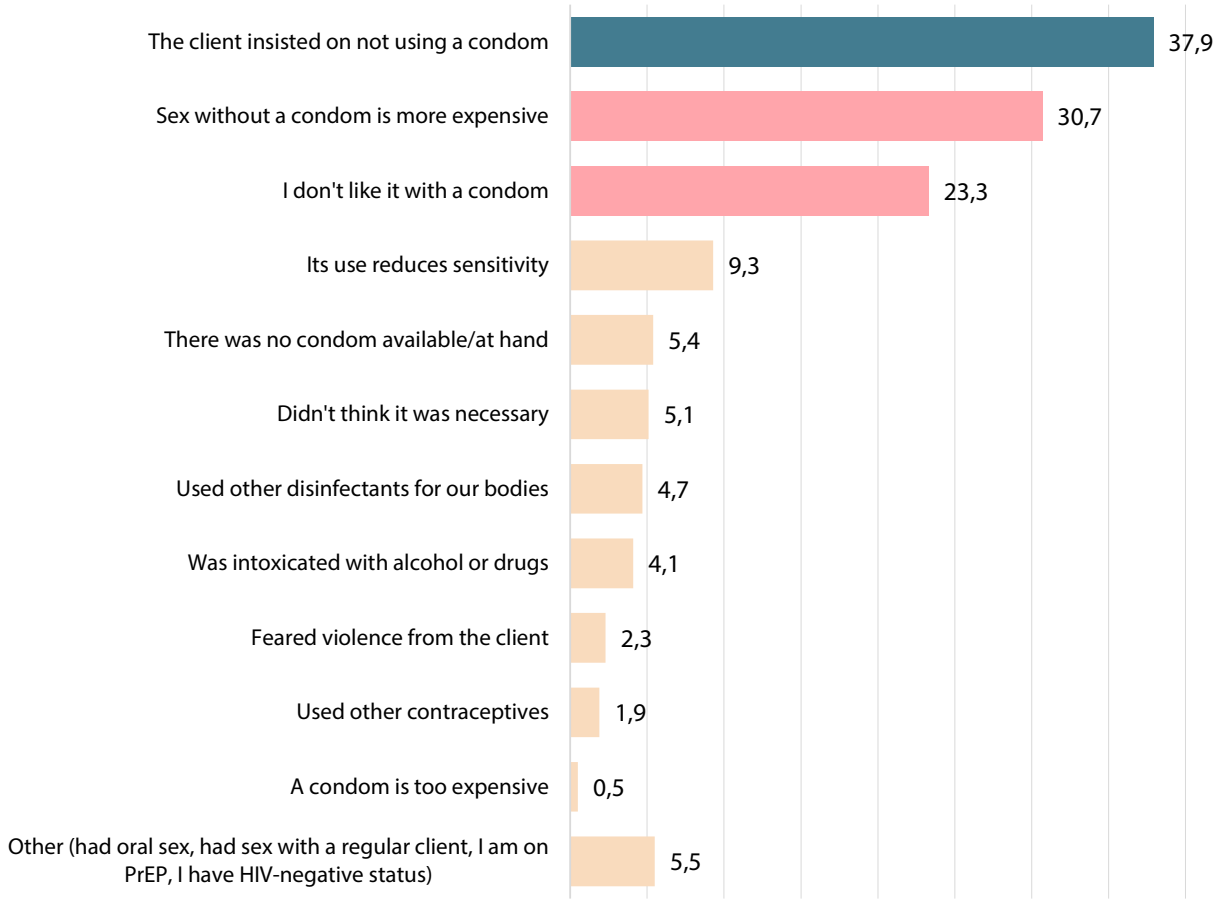
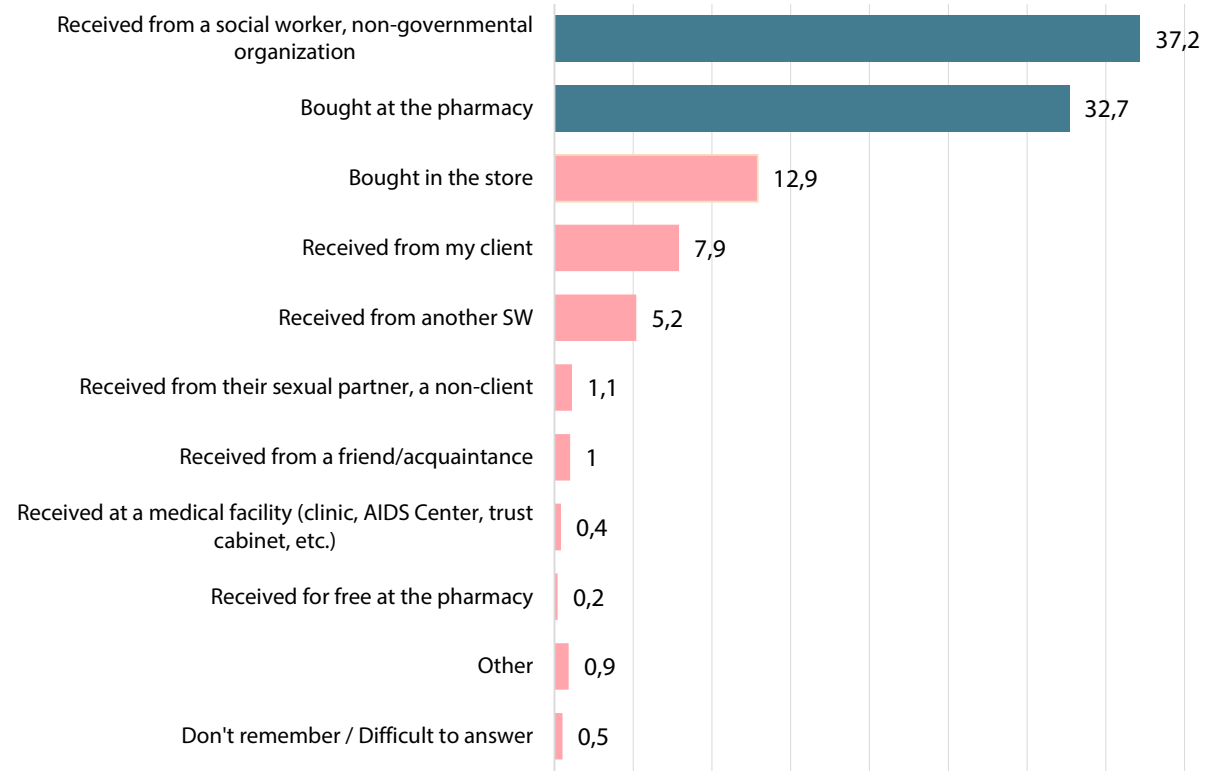


Figure 22. Method of obtaining condom used during last sex with client (N = 4,573, among those who used a condom during last sex with client, % among those who answered)



4.2 Last sexual contact with non-commercial partners

If 92.4% of SWs and SEMs used condoms during the last sex with clients, condom use was less common with non-commercial partners.

In general, during the last sex with a regular non-commercial partner, a condom was used by 62.2% of SWs and SEMs, the corresponding indicator increased by 20% compared to 2017 *(Figure 23)*. During the last sex with a casual non-commercial partner, 87.7% used a condom, which is also higher than in 2015-2017. Condom use with regular and casual partners differed depending on the type of sexual contact *(Figure 24)*.

Figure 23. Dynamics of condom use during last sexual contact with regular and casual partners in 2008–2021 (among those who had such partners, % among those who answered)

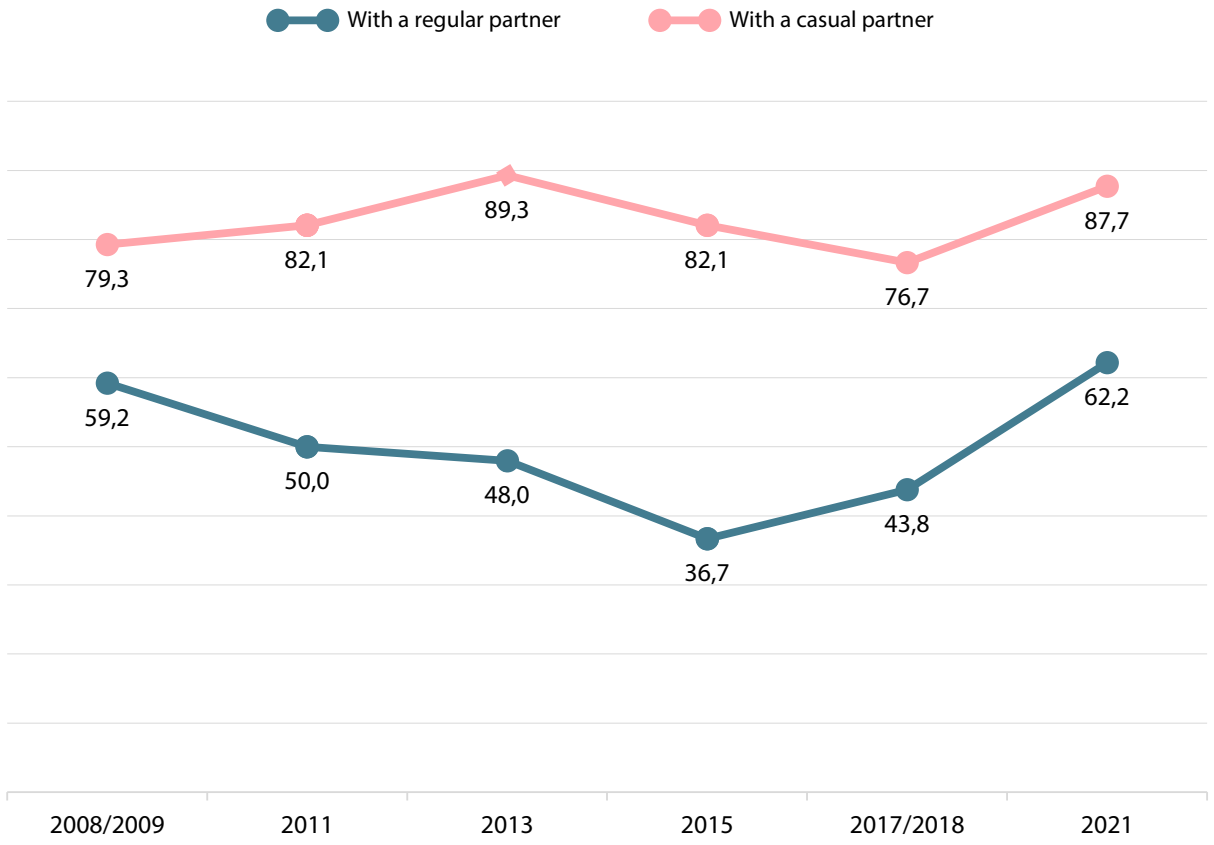
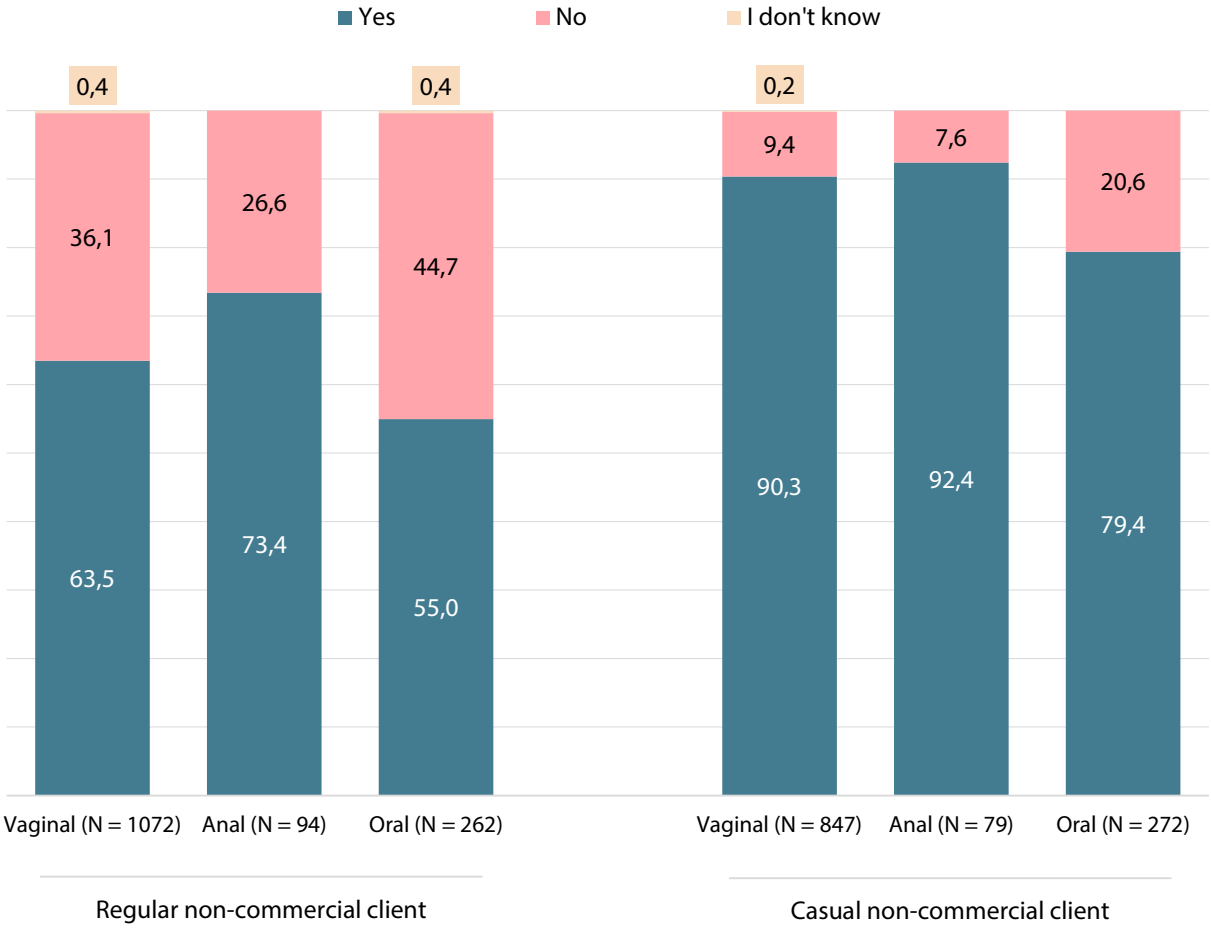


Figure 24. Condom use during last sexual contact with regular and casual non-commercial partners by type of contact (among those who had such partners, % among those who answered)



4.3 Condom use frequency in the last 30 days

Although nearly all SWs and SEMs reported using a condom during the last time they had sex with a client, a significantly lower proportion of individuals used one during the past month, especially during oral sex *(Figure 25)*. Always during oral sex in the last 30 days, 64.3% of SWs and SEMs used a condom, during anal sex – 81.6%, during vaginal sex – 89.5%. More regular condom use during sex with clients is characteristic of women who had a regular sexual partner, no experience of migration for sex services and injecting drug use *(Table 17)*. The rate of condom use during vaginal sex with clients decreases, and during oral sex, it increases with increasing length of engagement in sex work.

Among SWs and SEMs who had a regular non-commercial partner, 36.7% to 55.7% always used a condom during sex during the last month *(depending on the type of sexual contact)* *(Figure 26)*. Condoms were used more often by SWs and SEMs under the age of 19, with a monthly income of up to UAH 24,000, with more than 11 years of sex work experience and HIV-positive status, who work in saunas/massage salons or at virtual venues *(Table 18)*.

Regular condom use with a casual non-commercial partner is more common. Among SWs and SEMs who had such partners, 53.1% of participants indicated that they always used a condom during oral sex, 72.0% during anal sex, and 82.5% during vaginal sex. Higher level of condom use during vaginal and anal sex is observed among SWs and SEMs working in saunas/massage salons, entertainment facilities and virtual venues. During oral sex, condoms were used more regularly by women, participants with incomplete or complete secondary education, with an income of up to UAH 15,000, a regular partner, clients of NGOs and those who worked in saunas *(Table 19)*.

***Figure 25.** Frequency of condom use with a client in the last 30 days depending on the type of contact (among those who had such contact, % among those who answered)*

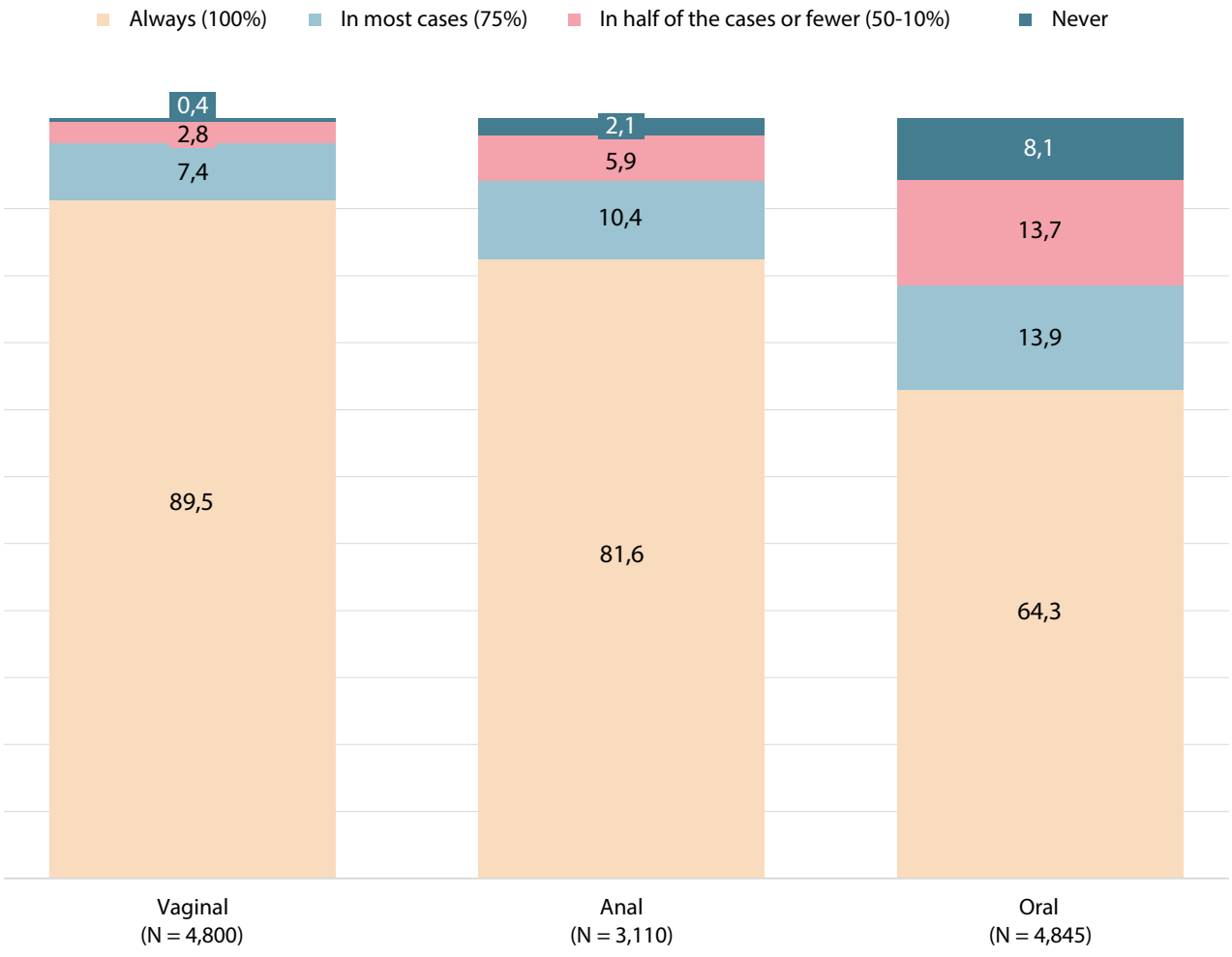


Table 17. *Share of SWs and SEMs who always used a condom with clients in the last 30 days depending on the type of sexual contact (among those who had such contacts, % among those who answered)*

Share of SWs and SEMs who ALWAYS used condom with clients in the last 30 days during...	Vaginal sex (N = 4,800)		Anal sex (N = 3,110)		Oral sex (N = 4,845)	
	n	%	n	%	n	%
Total	***4,294***	***86.5***	***2,537***	***81.6***	***3,315***	***64.3***
Age	***p=0.011***		***p=0.034***		***p=0.171***	
14–19	191	91.4	116	85.9	138	64.5
20–24	991	89.8	565	79.8	694	61.5
25–34	2,157	90.4	1,282	83.2	1,562	65.3
≥ 35	955	86.8	574	79.2	722	64.8
Gender	***p<0.001***		***p<0.001***		***p<0.001***	
Women	4,215	89.8	2,382	82.4	3,048	66.0
Men and trans* people	79	76.7	156	71.2	67	29.3
Education	p=0.702		p=0.627		p<0.001	
Incomplete secondary or lower	573	90.0	306	82.5	417	65.5
Complete secondary	1,440	89.3	849	82.0	1,095	68.2
Secondary professional	1,149	90.2	704	82.2	791	61.7
Higher *(Bachelor, Master)*	1,125	88.9	674	80.1	807	61.5
Occupation	***p=0.037***		***p=0.478***		***p=0.523***	
Sex work only	2,822	90.0	1,660	82.3	2,026	64.7
Full-time or odd jobs	898	87.4	590	80.4	668	62.8
Other *(students, unemployed, etc.)*	566	90.4	281	80.7	415	64.8
Personal monthly income, UAH	***p<0.001***		***p=0.116***		***p<0.001***	
≤ 15,000	833	85.5	504	79.0	684	70.0
15,001–24,000	719	92.2	419	84.5	549	69.5
24,001–35,000	1,006	88.9	589	80.2	693	60.6
≥ 35,001	784	91.8	427	81.5	477	53.5
Family status	***p=0.290***		***p=0.027***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	956	90.4	611	84.4	786	74.2
Have no husband/wife or a long-term sexual partner	3,338	89.2	1,927	80.8	2,329	61.5

Share of SWs and SEMs who ALWAYS used condom with clients in the last 30 days during...	Vaginal sex (N = 4,800)		Anal sex (N = 3,110)		Oral sex (N = 4,845)	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p<0.001***		***p<0.001***	
Yes	331	80.3	207	72.6	233	54.8
No	3,924	90.4	2,321	82.6	2,848	65.0
Length of working in sex business, years	***p<0.001***		***p=0.342***		***p=0.033***	
≤ 3	1,147	92.3	586	82.7	791	62.4
4–6	1,102	91.4	599	82.8	770	63.1
7–10	924	89.6	555	81.6	680	65.3
≥ 11	942	84.8	683	79.7	760	67.7
Experience of using injecting drugs during life	***p<0.001***		***p<0.001***		***p=0.309***	
Yes	179	77.5	122	71.8	142	61.2
No	4,074	90.3	2,383	82.3	2,940	64.5
NGO client	***p<0.001***		***p<0.001***		***p<0.001***	
Yes	1,885	95.5	947	88.9	1,431	73.0
No	2,348	85.4	1,554	78.1	1,658	59.1
HIV status	***p=0.012***		***p=0.606***		***p=0.232***	
Positive	124	83.2	91	83.5	102	68.9
Negative	4,170	89.7	2,447	81.5	3,013	64.1
Principal method of finding clients	***p=0.001***		***p=0.689***		***p<0.001***	
Virtual venues	2,109	89.4	1,309	82.5	1,462	60.4
Through intermediaries	943	92.4	472	81.2	717	71.6
Street, road, highways	499	85.6	284	79.3	388	65.3
Entertainment facilities/events	347	89.0	209	80.1	257	67.5
Sauna/massage salon	206	89.6	132	83.5	170	74.9
Other ways	191	87.2	131	80.4	121	54.3

Figure 26. Frequency of condom use with a regular and casual partner in the last 30 days, depending on the type of contact (among those who had such contacts, % among those who answered)

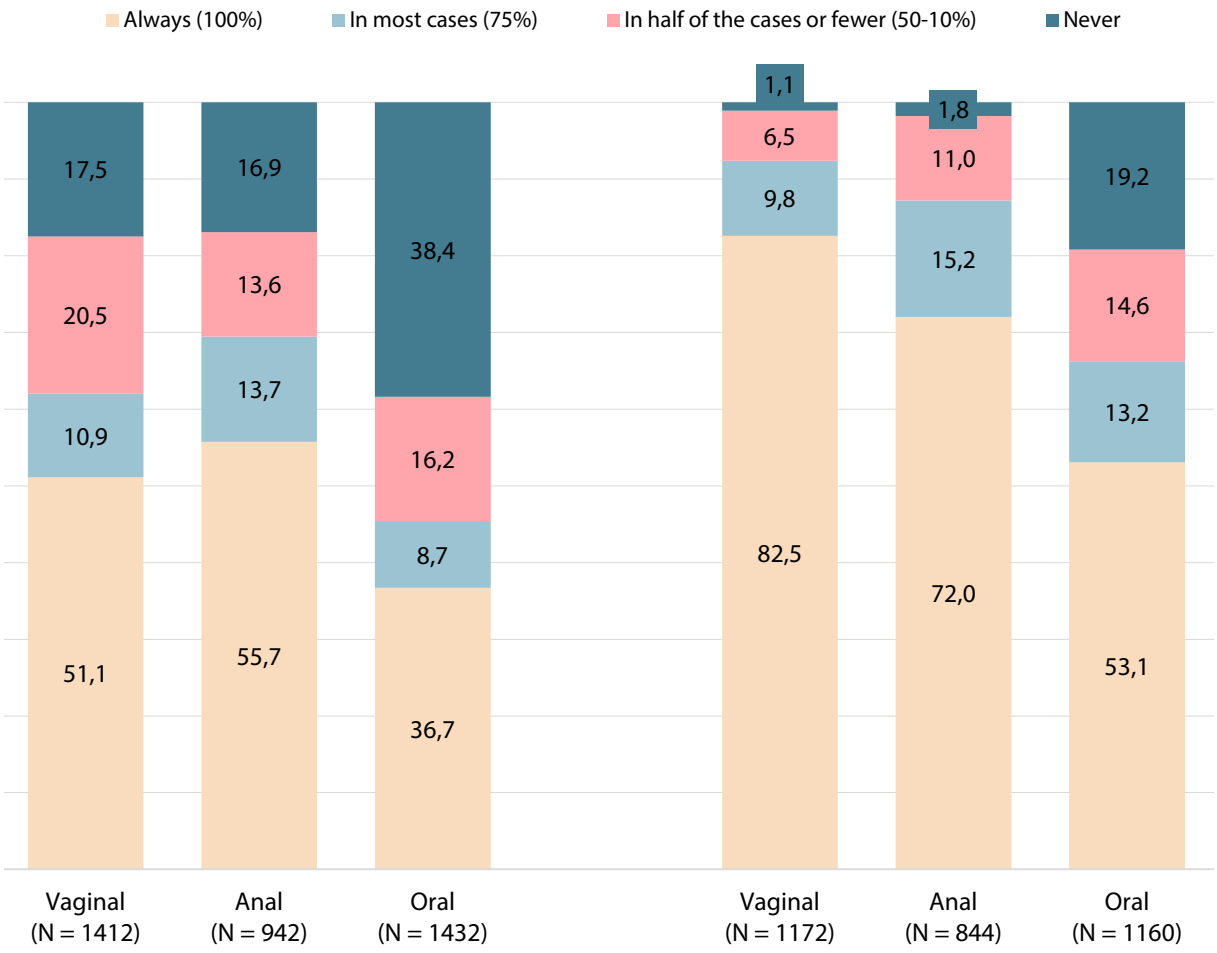


Table 18. *Share of SWs and SEMs who always used a condom with regular partners in the last 30 days, depending on the type of sexual contact (among those who had such contacts, % among those who answered)*

Share of SWs and SEMs who ALWAYS used a condom with regular partners in the last 30 days during...	Vaginal sex (N = 1,412)		Anal sex (N = 942)		Oral sex (N = 1,432)	
	n	%	n	%	n	%
Total	***721***	***51.1***	***525***	***55.7***	***526***	***36.7***
Age	***p<0.001***		***p=0.001***		***p<0.001***	
14–19	30	73.2	26	78.8	22	52.4
20–24	152	54.3	112	53.6	103	34.9
25–34	341	46.4	244	51.5	237	32.1
≥ 35	198	55.6	142	63.1	164	45.9
Gender	***p=0.392***		***p=0.339***		***p=0.060***	
Women	705	50.9	493	56.2	508	37.2
Men and trans* people	16	59.3	32	50.0	17	25.8
Education	***p=0.011***		***p=0.025***		***p<0.001***	
Incomplete secondary or lower	80	50.0	49	51.0	64	39.8
Complete secondary	265	56.6	186	61.6	211	45.2
Secondary professional	159	45.0	118	49.2	96	27.3
Higher *(Bachelor, Master)*	216	50.2	172	56.6	154	34.1
Occupation	***p=0.903***		***p=0.243***		***p=0.542***	
Sex work only	429	51.2	298	57.5	311	37.3
Full-time or odd jobs	211	50.5	163	51.9	152	34.8
Other *(students, unemployed, etc.)*	81	52.6	63	58.3	63	39.1
Personal monthly income, UAH	***p<0.001***		***p=0.055***		***p<0.001***	
≤ 15,000	233	61.5	165	59.8	201	52.2
15,001–24,000	153	63.5	108	63.9	118	47.8
24,001–35,000	164	46.1	120	51.3	97	26.7
≥ 35,001	68	40.0	54	54.0	44	24.4
Family status	***p<0.001***		***p=0.005***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	419	43.9	313	52.3	316	33.2
Have no husband/wife or a long-term sexual partner	303	66.3	212	61.8	209	43.5

Share of SWs and SEMs who ALWAYS used a condom with regular partners in the last 30 days during...	Vaginal sex (N = 1,412)		Anal sex (N = 942)		Oral sex (N = 1,432)	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.006***		***p=0.044***		***p=0.203***	
Yes	55	39.9	38	45.2	45	31.7
No	663	52.2	484	56.7	478	37.1
Length of working in sex business, years	***p<0.001***		***p=0.016***		***p<0.001***	
≤ 3	158	49.2	116	54.0	103	31.0
4–6	129	40.3	86	47.0	91	27.6
7–10	172	50.3	118	54.6	122	35.6
≥ 11	231	61.8	180	61.9	192	51.2
Experience of using injecting drugs during life	***p=0.214***		***p=0.019***		***p=0.739***	
Yes	41	44.6	27	41.5	34	37.8
No	667	51.3	487	56.5	476	36.0
NGO client	***p=0.610***		***p=0.181***		***p=0.028***	
Yes	277	51.9	177	58.8	216	40.1
No	433	50.5	340	54.1	301	34.4
HIV status	***p=0.037***		***p=0.706***		***p<0.001***	
Positive	42	63.6	32	58.2	36	56.3
Negative	680	50.5	493	55.6	489	35.7
Principal method of finding clients	***p<0.001***		***p<0.001***		***p<0.001***	
Virtual venues	385	57.2	278	58.2	289	41.6
Through intermediaries	88	29.7	61	39.6	52	17.6
Street, road, highways	85	48.0	66	55.0	65	36.5
Entertainment facilities/events	57	56.4	37	52.1	36	36.0
Sauna/massage salon	70	72.9	52	75.4	63	66.3
Other ways	36	52.9	32	61.5	20	28.6

Table 19. *Share of SWs and SEMs who always used a condom with random partners in the last 30 days, depending on the type of sexual contact (among those who had such contacts, % among those who answered)*

Share of SWs and SEMs who ALWAYS used a condom with casual partners in the last 30 days during ...	Vaginal sex (N = 1,172)		Anal sex (N = 844)		Oral sex (N = 1,160)	
	n	%	n	%	n	%
Total	***967***	***82.5***	***608***	***72.0***	***616***	***53.1***
Age	***p=0.081***		***p=0.778***		***p=0.027***	
14–19	65	90.3	41	77.4	39	52.7
20–24	243	84.7	152	70.4	145	48.8
25–34	440	82.4	267	71.8	266	51.6
≥ 35	218	78.7	149	72.7	166	60.8
Gender	***p=0.372***		***p=0.655***		***p=0.001***	
Women	937	82.3	548	71.7	586	54.5
Men and trans* people	30	88.2	60	74.1	31	36.5
Education	***p=0.905***		***p=0.400***		***p<0.001***	
Incomplete secondary or lower	145	84.3	77	72.0	102	60.0
Complete secondary	329	82.3	196	76.0	256	66.1
Secondary professional	242	82.6	153	69.5	124	45.1
Higher *(Bachelor, Master)*	249	81.6	182	70.5	131	40.4
Occupation	***p=0.644***		***p=0.788***		***p=0.178***	
Sex work only	603	83.3	344	72.3	364	52.0
Full-time or odd jobs	245	81.9	181	70.7	175	57.4
Other *(students, unemployed, etc.)*	118	80.3	83	74.1	76	49.4
Personal monthly income, UAH	***p=0.056***		***p=0.238***		***p<0.001***	
≤ 15,000	293	80.7	183	70.7	247	69.0
15,001–24,000	167	86.1	116	79.5	106	53.5
24,001–35,000	226	79.9	159	71.6	122	43.1
≥ 35,001	142	88.2	78	75.0	47	29.9
Family status	***p=0.694***		***p=0.004***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	216	83.4	174	79.5	170	66.1
Have no husband/wife or a long-term sexual partner	751	82.3	434	69.4	446	49.4

Share of SWs and SEMs who ALWAYS used a condom with casual partners in the last 30 days during ...	Vaginal sex (N = 1,172)		Anal sex (N = 844)		Oral sex (N = 1,160)	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.243***		***p=0.005***		***p=0.010***	
Yes	94	78.3	39	57.4	50	41.0
No	843	82.6	567	73.4	536	53.3
Length of working in sex business, years	***p=0.012***		***p=0.871***		***p=0.009***	
≤ 3	270	85.4	176	74.3	156	48.3
4–6	207	86.6	119	71.7	124	52.1
7–10	213	80.7	124	70.9	131	50.4
≥ 11	243	77.4	175	71.7	189	61.0
Experience of using injecting drugs during life	***p=0.004***		***p=0.122***		***p=0.331***	
Yes	56	70.9	36	63.2	37	47.4
No	894	83.6	559	72.7	561	53.1
NGO client	***p=0.010***		***p<0.001***		***p<0.001***	
Yes	274	87.3	166	83.8	185	62.5
No	681	80.8	434	68.6	424	49.9
HIV status	***p=0.022***		***p=0.711***		***p=0.272***	
Positive	43	71.7	32	69.6	36	60.0
Negative	924	83.2	576	72.1	580	52.7
Principal method of finding clients	***p<0.001***		***p=0.001***		***p<0.001***	
Virtual venues	505	83.2	330	73.2	305	49.1
Through intermediaries	148	82.7	69	61.1	80	47.3
Street, road, highways	92	68.1	63	62.4	70	51.1
Entertainment facilities/events	100	82.6	62	78.5	66	61.1
Sauna/massage salon	91	93.8	59	84.3	80	86.0
Other ways	31	93.9	24	82.8	16	50.0

4.4 Prevalence of incorrect condom use practices

From 10.2% to 27.2% of SWs and SEMs reported that they had some practice of incorrect condom use with clients in the past month *(Figure 27)*. This practice is more common among men and trans*people, participants with a low level of education, those with no employment other than sex work, with experience of migration for providing sex services and injecting drug use, non-clients of NGOs and those who work in saunas/massage salons *(Table 20)*.

Among SWs and SEMs who had regular non-commercial partners in the past 30 days, 12.6% of participants reported a condom having torn or slipped, 20.3% continued sex after the condom was removed, and 25.2% put it on during sexual intercourse. Cases of incorrect condom use were common among SWs and SEMs under 19 years of age, participants with up to six years of sex business experience, and among those looking for clients through intermediaries.

Regarding incorrect condom use with casual partners, 10.2% continued having sex after removing it, 14.3% put it on in the process, and 17.2% had incidents when the condom broke or slipped. More incidents of incorrect condom use with casual partners were reported by SW and SEMs with injection drug use experience at some moments during their life and those who worked through intermediaries.

In general, about a third of SWs and SEMs (38.2%) had cases of incorrect condom use with clients, 40.5% – with regular non-commercial partners, 27.7% – with casual non-commercial partners.

Figure 27. *Incorrect condom use practices in the last 30 days with different types of sexual partners (among those who had such partners, % among those who answered)*

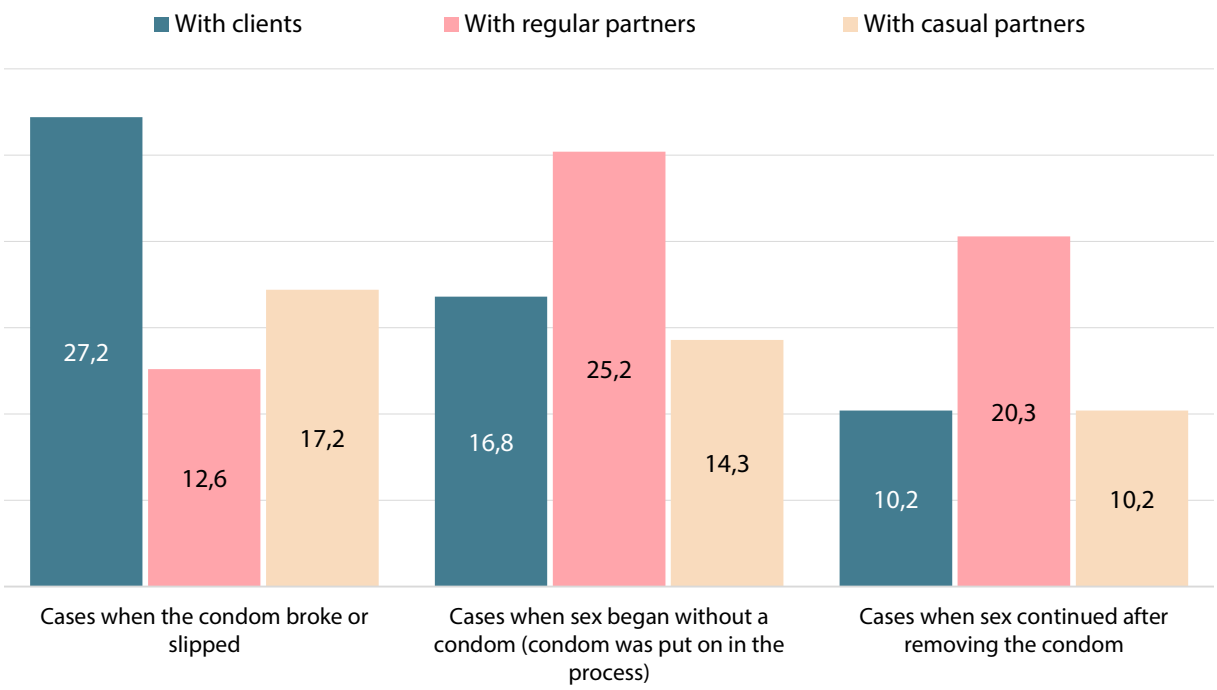


Table 20. *Prevalence of incorrect condom use practices in the last 30 days with different types of partners, by socio-demographic characteristics (among those who had such contacts, % among those who answered)*

Number of SWs and SEMs who had incidents of incorrect condom use in the last 30 days with...	Clients (N = 4,801)		Regular partners (N = 1,279)		Casual partners (N = 1,184)	
	n	%	n	%	n	%
Total	***1,835***	***38.2***	***517***	***40.5***	***328***	***27.7***
Age	***p=0.922***		***p<0.001***		***p=0.254***	
14–19	80	37.6	19	47.5	25	32.9
20–24	442	39.0	113	42.5	95	31.0
25–34	900	37.9	296	45.1	140	26.1
≥ 35	413	38.3	89	28.3	68	25.5
Gender	***p<0.001***		***p=0.071***		***p=0.101***	
Women	1,724	37.7	499	29.7	297	27.1
Men and trans* people	111	48.7	19	41.0	31	35.2
Education	***p<0.001***		***p=0.486***		***p=0.170***	
Incomplete secondary or lower	281	45.4	59	42.1	58	34.5
Complete secondary	643	40.3	158	37.4	108	27.2
Secondary professional	458	35.8	130	42.2	79	27.5
Higher *(Bachelor, Master)*	451	34.8	170	41.8	83	25.2
Occupation	***p<0.001***		***p=0.728***		***p=0.516***	
Sex work only	1,234	39.8	301	40.7	204	28.8
Full-time or odd jobs	398	38.1	161	41.3	79	25.3
Other *(students, unemployed, etc.)*	200	30.9	56	37.6	46	28.0
Personal monthly income, UAH	***p=0.011***		***p=0.103***		***p=0.056***	
≤ 15,000	366	37.8	121	34.9	96	26.7
15,001–24,000	263	33.5	80	34.8	55	27.9
24,001–35,000	450	39.1	132	40.2	92	31.0
≥ 35,001	360	41.2	69	44.8	31	19.1
Family status	***p=0.026***		***p<0.001***		***p=0.219***	
Have a husband/wife or a long-term sexual partner	371	35.3	371	44.6	79	30.7
Have no husband/wife or a long-term sexual partner	1,464	39.1	147	32.8	249	26.9

Number of SWs and SEMs who had incidents of incorrect condom use in the last 30 days with...	Clients (N = 4,801)		Regular partners (N = 1,279)		Casual partners (N = 1,184)	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p=0.223***		***p=0.518***	
Yes	192	46.3	42	35.3	33	26.0
No	1,638	37.7	475	41.1	295	28.7
Length of working in sex business, years	***p=0.057***		***p<0.001***		***p=0.657***	
≤ 3	484	38.2	142	46.7	98	29.5
4–6	507	41.5	143	48.0	68	27.6
7–10	376	36.6	120	40.0	75	28.7
≥ 11	404	36.8	90	27.1	78	25.2
Experience of using injecting drugs during life	***p<0.001***		***p=0.418***		***p=0.005***	
Yes	138	60.5	34	45.3	31	41.9
No	1,688	37.3	481	40.6	291	26.8
NGO client	***p<0.001***		***p=0.870***		***p=0.455***	
Yes	674	34.1	197	40.6	85	26.1
No	1,111	40.4	312	40.2	239	28.3
HIV status	***p=0.333***		***p=0.262***		***p=0.013***	
Positive	61	42.1	19	33.3	24	42.1
Negative	1,774	38.1	498	40.8	304	27.0
Principal method of finding clients	***p<0.001***		***p<0.001***		***p=0.005***	
Virtual venues	851	35.6	222	35.6	157	25.0
Through intermediaries	390	38.8	133	52.4	67	37.4
Street, road, highways	231	40.2	60	36.4	41	30.8
Entertainment facilities/events	151	39.3	38	42.2	31	25.6
Sauna/massage salon	121	53.3	35	39.3	19	20.4
Other ways	91	41.6	30	51.7	13	40.6

4.5 Acceptability of sex with clients without a condom

57.0% of SWs and SEMs would not agree to sex without a condom with a client under any circumstances *(Figure 28)*, which is almost at the level of 2017 (58.9%). Since 2015, there has been an increase in the share of SWs and SEMs who consider the option of refusing a condom under the condition of additional payment (18.2%), sex with a trusted client (16.2%), or during oral sex (21.4%) *(Figure 29)*.

The proportion of SWs and SEMs who would never consent to sex without a condom is lower among men and trans* people, participants with higher income, experience of migration for providing sex services and those who inject drugs, non-clients of NGOs and those who worked at virtual and street venues *(Table 21)*.

Figure 28. *Share of SWs and SEMs who will not agree to have sex with a client without a condom under any circumstances in 2008–2021 (% among those who answered)*

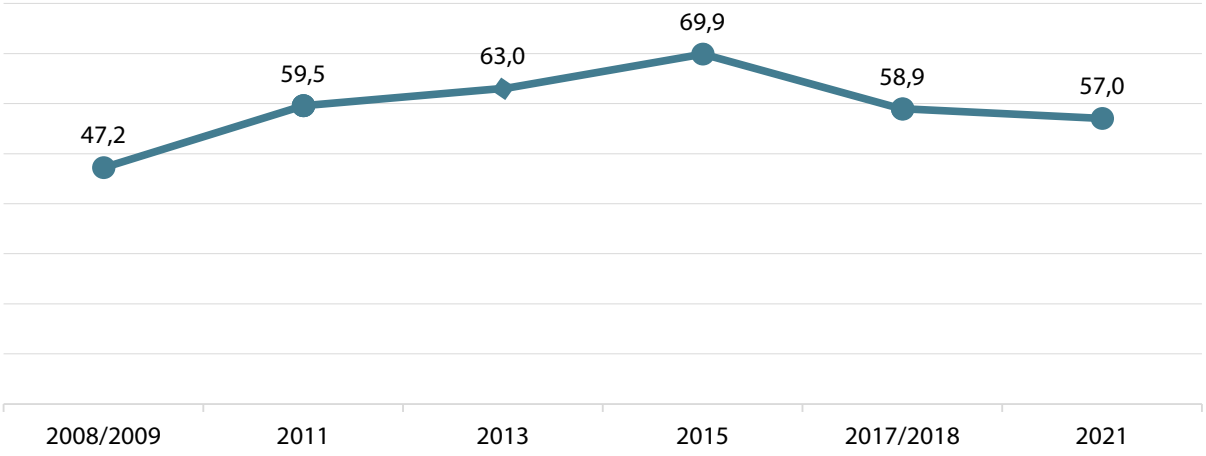


Figure 29. *Acceptability of having sex without a condom with a client under different conditions in 2008-2021 (% among those who answered)*

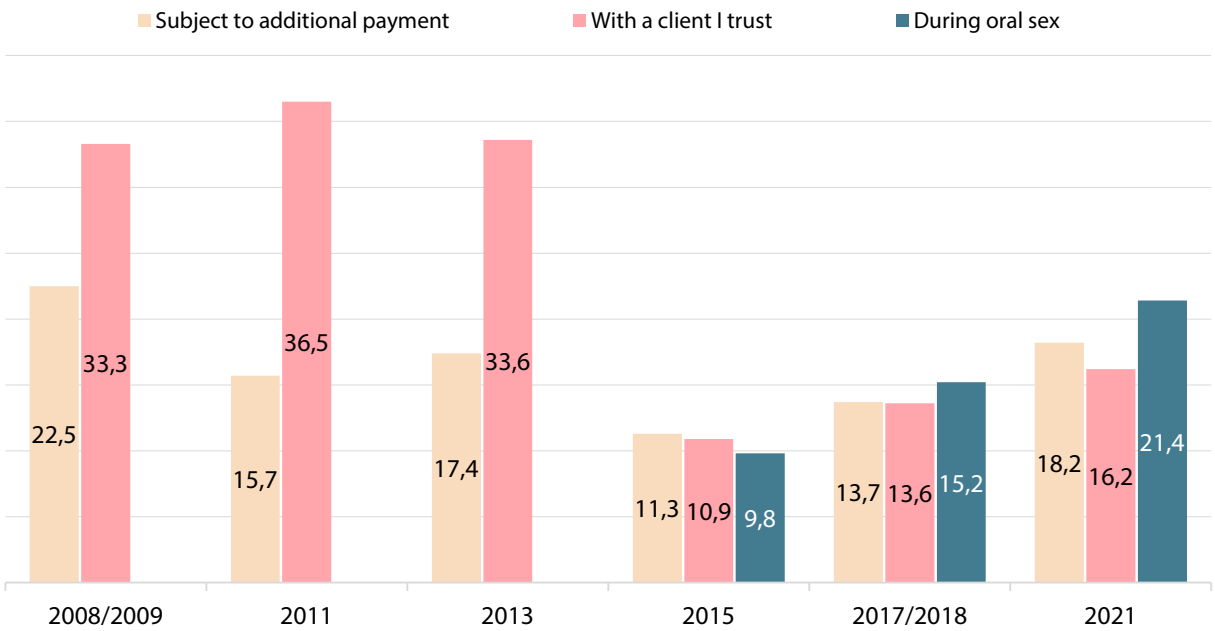


Table 21. *Share of SWs and SEMs who would not agree to sex without a condom with a client under any circumstances, by socio-demographic characteristics (% among those who answered)*

Characteristics	Share of SWs and SEMs who will not agree to have sex without a condom under any circumstances	
	n	%
Total (N = 4,961)	***2,828***	***57.0***
Age (N = 4,961)	***p=0.107***	
14–19	115	52.3
20–24	644	55.3
25–34	1,399	57.1
≥ 35	670	59.4
Gender (N = 4,961)	***p<0.001***	
Women	2,765	58.5
Men and trans* people	63	26.7
Education (N = 4,952)	***p=0.724***	
Incomplete secondary or lower	365	56.6
Complete secondary	953	57.7
Secondary professional	757	57.5
Higher *(Bachelor, Master)*	747	55.8
Occupation (N = 4,950)	***p=0.479***	
Sex work only	1,844	57.6
Full-time or odd jobs	602	55.5
Other *(students, unemployed, etc.)*	378	56.8
Personal monthly income, UAH (N = 3,874)	***p<0.001***	
≤ 15,000	607	61.1
15,001–24,000	507	62.5
24,001–35,000	648	55.2
≥ 35,001	446	49.8
Family status (N = 4,961)	***p=0.003***	
Have a husband/wife or a long-term sexual partner	656	60.9
Have no husband/wife or a long-term sexual partner	2,172	55.9

Characteristics	Share of SWs and SEMs who will not agree to have sex without a condom under any circumstances	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)	***p<0.001***	
Yes	203	46.6
No	2,596	58.0
Length of working in sex business, years (N = 4,745)	***p=0.376***	
≤ 3	759	58.5
4–6	707	56.5
7–10	591	55.8
≥ 11	669	58.8
Experience of using injecting drugs during life (N = 4,902)	***p<0.001***	
Yes	109	45.8
No	2,706	58.0
NGO client (N = 4,875)	***p<0.001***	
Yes	1,381	68.4
No	1,424	49.8
HIV status (N = 4,961)	***p=0.225***	
Positive	81	52.3
Negative	2,747	57.2
Principal method of finding clients (N = 4,961)	***p<0.001***	
Virtual venues	1,349	55.0
Through intermediaries	647	61.9
Street, road, highways	339	56.3
Entertainment facilities/events	246	60.9
Sauna/massage salon	146	63.8
Other ways	99	43.8

4.6 Group sex

A fifth of the SWs and SEMs (20.2%) practiced group sex during the last month. These are mainly participants aged under 24, men and trans* people who have no other employment than sex work, with experience of migration for providing sex services and injecting drug use, non-clients of NGOs and those who work in entertainment facilities or through intermediaries *(Table 22)*.

Among SWs and SEMs who had group sex in the last month, 82.7% always used a condom, and 75.3% used a condom when changing each sexual partner *(Figure 30)*. With regard to incorrect condom use, 19.6% of SWs and SEMs reported that the condom broke or slipped during group sex, 19.5% of participants continued having sex after removing the condom, and 11.1% put it on during sexual contact.

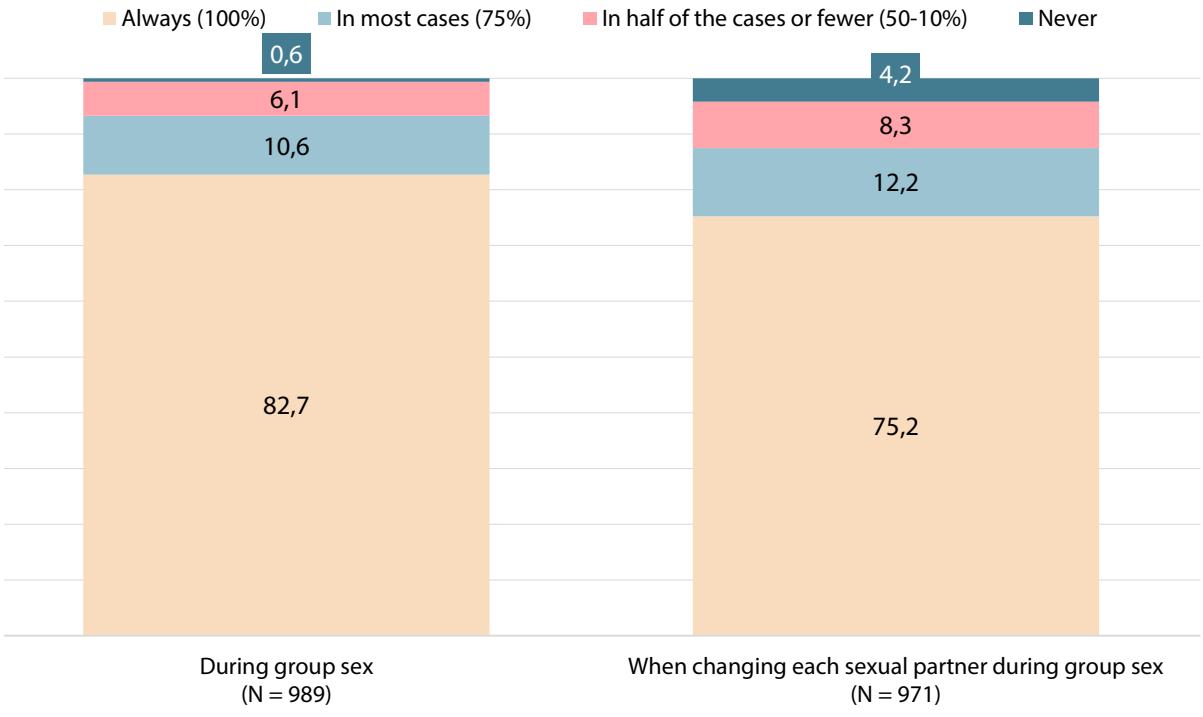
***Table 22.** Condom use during group sex in the last 30 days, by socio-demographic characteristics (% among those who answered)*

Number of SWs and SEMs, who...	Had group sex during the last 30 days (N = 4,914)		Always used condom during the group sex (N = 989)		Always used condom when changing each sexual partner during the group sex (N = 971)	
	n	%	n	%	n	%
Total	***992***	***20.2***	***817***	***82.7***	***730***	***75.2***
Age	***p<0.001***		***p=0.719***		***p=0.895***	
14–19	53	24.3	45	84.9	41	78.8
20–24	276	23.9	222	80.4	202	74.3
25–34	487	20.1	405	83.3	362	75.7
≥ 35	176	15.7	145	83.3	126	74.6
Gender	***p<0.001***		***p<0.001***		***p=0.003***	
Women	916	19.6	772	84.5	685	76.4
Men and trans* people	75	32.1	45	60.8	45	60.8
Education	***p=0.006***		***p=0.010***		***p=0.015***	
Incomplete secondary or lower	163	25.4	148	90.2	135	84.4
Complete secondary	303	18.5	253	83.5	223	74.8
Secondary professional	257	19.6	209	81.6	187	74.5
Higher *(Bachelor, Master)*	266	20.1	206	77.7	183	70.4

Number of SWs and SEMs, who...	Had group sex during the last 30 days *(N = 4,914)*		Always used condom during the group sex *(N = 989)*		Always used condom when changing each sexual partner during the group sex *(N = 971)*	
	n	%	n	%	n	%
Occupation	***p<0.001***		***p=0.053***		***p=0.253***	
Sex work only	711	22.4	597	84.2	531	76.5
Full-time or odd jobs	182	16.9	149	82.3	133	74.3
Other *(students, unemployed, etc.)*	93	14.3	69	74.2	64	68.8
Personal monthly income, UAH	***p=0.004***		***p=0.572***		***p=0.307***	
≤ 15,000	170	17.2	141	82.9	127	75.1
15,001–24,000	181	22.4	154	85.1	145	80.1
24,001–35,000	287	24.6	229	80.1	205	72.4
≥ 35,001	185	20.7	152	82.6	131	74.0
Family status	***p=0.042***		***p=0.777***		***p=0.358***	
Have a husband/wife or a long-term sexual partner	189	17.5	155	82.0	132	72.5
Have no husband/wife or a long-term sexual partner	803	20.9	663	82.9	598	75.8
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p<0.001***		***p<0.001***	
Yes	148	34.4	102	69.9	87	60.4
No	843	19.0	716	84.9	643	77.8
Length of working in sex business, years	***p=0.410***		***p=0.053***		***p=0.123***	
≤ 3	286	22.1	229	80.4	205	73.2
4–6	259	20.8	229	88.4	206	80.5
7–10	200	19.0	161	80.9	140	71.8
≥ 11	224	19.8	183	81.7	169	76.5
Experience of using injecting drugs during life	***p<0.001***		***p<0.001***		***p=0.005***	
Yes	64	27.0	42	66.7	38	60.3
No	917	19.8	766	83.7	685	76.3

Number of SWs and SEMs, who...	Had group sex during the last 30 days (N = 4,914)		Always used condom during the group sex (N = 989)		Always used condom when changing each sexual partner during the group sex (N = 971)	
	n	%	n	%	n	%
NGO client	***p<0.001***		***p=0.005***		***p=0.172***	
Yes	351	17.5	305	87.6	271	78.3
No	619	21.9	498	80.6	450	74.4
HIV status	***p=0.213***		***p=0.935***		***p=0.145***	
Positive	25	16.4	20	83.3	15	62.5
Negative	967	20.3	798	82.7	715	75.5
Principal method of finding clients	***p<0.001***		***p=0.392***		***p=0.710***	
Virtual venues	505	20.8	404	80.3	363	73.0
Through intermediaries	238	22.9	204	85.7	176	76.2
Street, road, highways	85	14.2	69	81.2	64	77.1
Entertainment facilities/events	96	24.0	84	87.5	75	78.9
Sauna/massage salon	30	13.1	26	83.9	23	79.3
Other ways	36	16.0	30	83.3	28	80.0

Figure 30. *Frequency of condom use during group sex in the last 30 days (among those who had such contacts, % among those who answered)*



5. USE OF ALCOHOL AND DRUGS

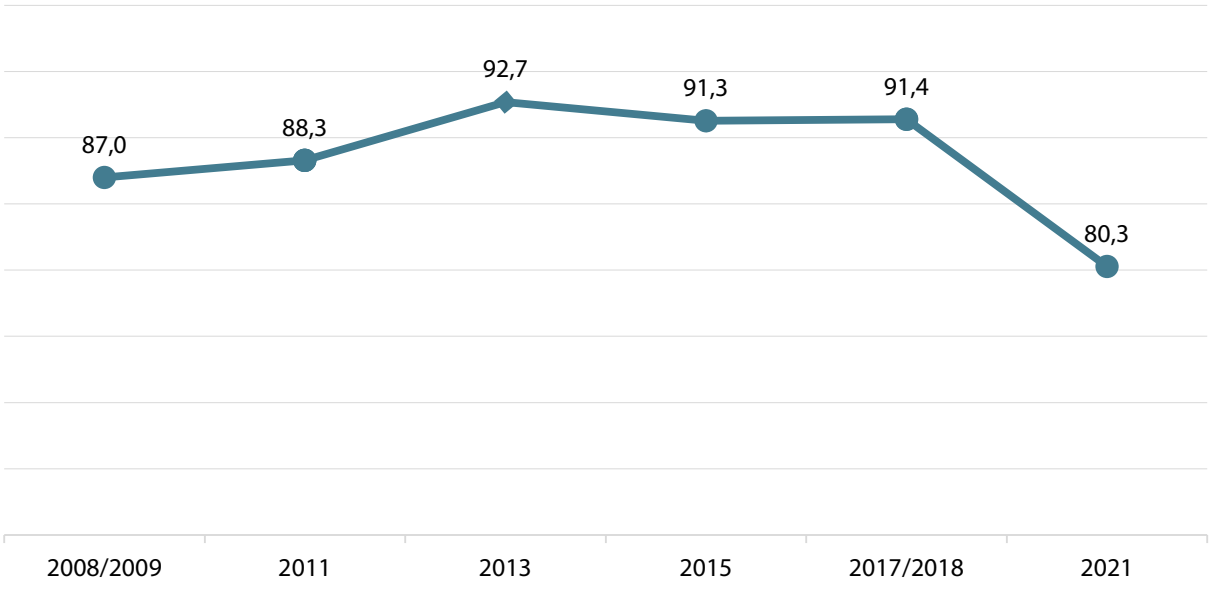
5.1 Alcohol

Compared to the previous study waves, the level of alcohol use has decreased – the share of SWs and SEMs who drank alcoholic beverages in the last 30 days is 80.3% *(Figure 31)*. Among such SWs and SEMs, 58.6% were able to recall the frequency of use, for whom the median number of times of use was six times *(minimum – 1, maximum – 200)*.

A 2021 study was the first to assess the risk of alcohol abuse among SWs and SEMs using the AUDIT-C scale, a shortened version of the Alcohol Use Disorders Identification Test *(AUDIT)*[10]. The scale contains three questions about the frequency of alcohol consumption and the number of servings. Each question is evaluated on a scale from 0 to 4 points, respectively, the total score ranges from 0 to 12. Participants who received more than six points have a high, and more than eight points – a serious level of alcohol abuse.

From the total sample, a high level of alcohol abuse was observed in 13.6% of SWs and SEMs, a serious level – in 7.8% of participants. Higher risks were common among men and trans* people, participants with a low level of education and those who have no other employment than sex work, with a low monthly income *(up to UAH 15,000)*, experience of providing sex services for seven years or more, experiences of injecting drug use, non-clients of NGOs and those working at street venues *(Table 23)*.

***Figure 31.** Share of SWs and SEMs who drank alcoholic beverages during the last 30 days, in 2008–2021 (% among those who answered)*



10 Bush K, Kivlahan DR, McDonnel MB, et al. The AUDIT alcohol consumption questions (AUDIT-C). Arch Intern Med. 1998;158:1789-1795 (https://auditscreen.org/cmsb/uploads/1998-the-audit-alcohol-consumption-questions-(audit-c)an-effective-brief-screening-test-for-problem-drinking.pdf)

Table 23. *Risks of alcohol abuse according to AUDIT-C, by socio-demographic characteristics (% among those who answered)*

Characteristics	Low risk		Medium risk		High risk		Serious risk	
	n	%	n	%	n	%	n	%
Total (N = 4,713)	***1,888***	***40.1***	***1,819***	***38.6***	***641***	***13.6***	***365***	***7.8***
Age (N = 4,713)	***p=0.019***							
14–19	95	45.7	74	35.6	24	11.5	15	7.2
20–24	477	43.2	425	38.5	130	11.8	72	6.5
25–34	909	39.1	918	39.5	313	13.5	183	7.9
≥ 35	407	37.8	402	37.3	173	16.1	95	8.8
Gender (N = 4,713)	***p<0.001***							
Women	1,791	40.0	1,756	39.2	603	13.5	333	7.4
Men and trans* people	97	42.0	63	27.3	38	16.5	33	14.3
Education (N = 4,705)	***p<0.001***							
Incomplete secondary or lower	202	33.4	212	35.1	105	17.4	85	14.1
Complete secondary	620	39.7	603	38.6	218	14.0	121	7.7
Secondary professional	463	37.3	522	42.1	179	14.4	77	6.2
Higher *(Bachelor, Master)*	596	45.9	481	37.1	140	10.8	81	6.2
Occupation (N = 4,702)	***p<0.001***							
Sex work only	1,096	36.1	1,202	39.6	455	15.0	279	9.2
Full-time or odd jobs	460	44.4	396	38.2	119	11.5	61	5.9
Other *(students, unemployed, etc.)*	327	51.6	217	34.2	65	10.3	25	3.9
Personal monthly income, UAH (N = 3,714)	***p<0.001***							
≤ 15,000	406	43.3	309	32.9	144	15.4	79	8.4
15,001–24,000	283	36.3	332	42.6	112	14.4	53	6.8
24,001–35,000	427	38.2	462	41.3	147	13.1	83	7.4
≥ 35,001	389	44.4	328	37.4	96	10.9	64	7.3
Family status (N = 4,713)	***p=0.142***							
Have a husband/wife or a long-term sexual partner	438	42.6	389	37.8	136	13.2	66	6.4
Have no husband/wife or a long-term sexual partner	1,449	39.4	1,430	38.8	504	13.7	299	8.1

Characteristics	Low risk		Medium risk		High risk		Serious risk	
	n	%	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,671)	***p=0.577***							
Yes	171	40.5	162	38.4	51	12.1	38	9.0
No	1,705	40.1	1,651	38.9	578	13.6	315	7.4
Length of working in sex business, years (N = 4,526)	***p<0.001***							
≤ 3	575	46.4	474	38.2	120	9.7	71	5.7
4–6	462	38.6	501	41.9	154	12.9	80	6.7
7–10	378	37.4	365	36.1	174	17.2	93	9.2
≥ 11	404	37.4	409	37.9	161	14.9	105	9.7
Experience of using injecting drugs during life (N = 4,676)	***p<0.001***							
Yes	79	34.3	55	23.9	43	18.7	53	23.0
No	1,793	40.3	1,757	39.5	595	13.4	307	6.9
NGO client (N = 4,636)	***p<0.001***							
Yes	815	42.0	822	42.4	203	10.5	100	5.2
No	1,050	38.9	969	35.9	423	15.7	254	9.4
HIV status (N = 4,713)	***p=0.008***							
Positive	67	45.3	42	28.4	19	12.8	20	13.5
Negative	1,820	39.9	1,778	38.9	622	13.6	346	7.6
Principal method of finding clients (N = 4,713)	***p<0.001***							
Virtual venues	1,028	44.0	930	39.8	272	11.6	108	4.6
Through intermediaries	343	34.5	401	40.4	150	15.1	99	10.0
Street, road, highways	159	28.0	213	37.6	112	19.8	83	14.6
Entertainment facilities/events	157	41.1	147	38.5	48	12.6	30	7.9
Sauna/massage salon	112	50.7	54	24.4	30	13.6	25	11.3
Other ways	87	41.4	73	34.8	29	13.8	21	10.0

5.2 Drug use

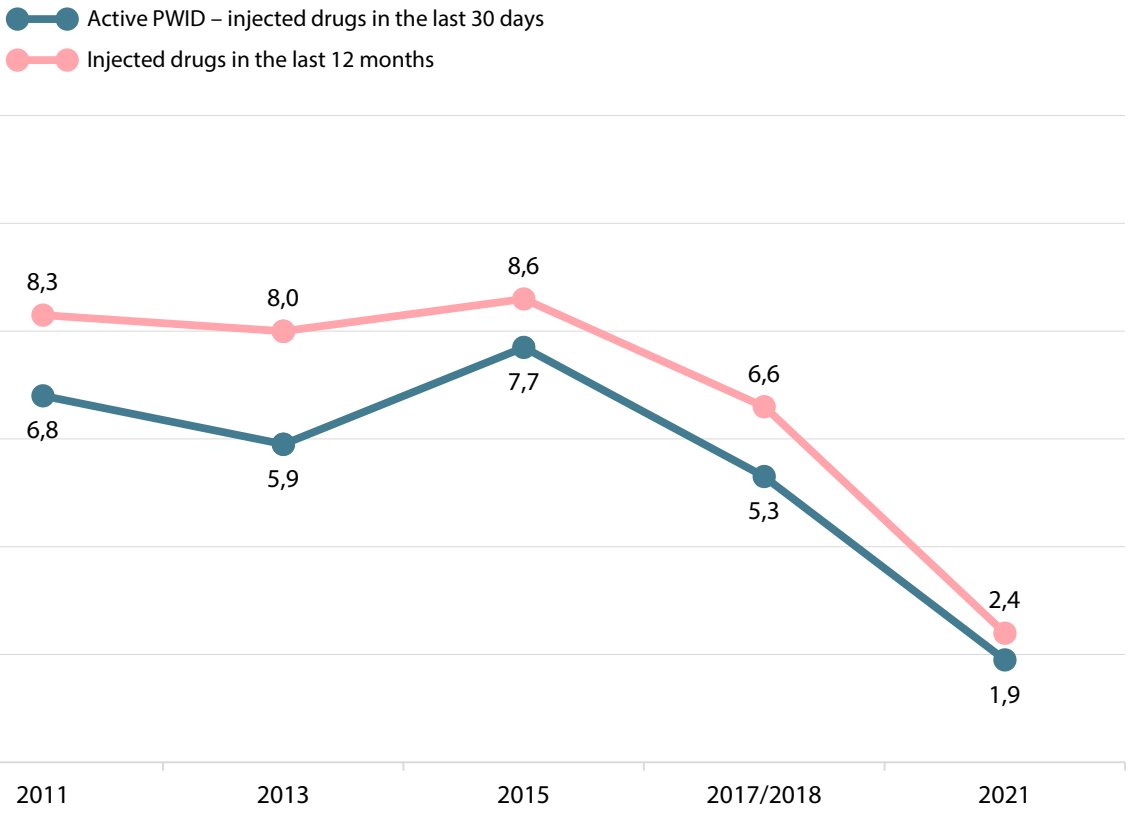
Compared to previous rounds, the share of SWs and SEMs with experience of injecting drug use decreased *(Figure 32)*. 4.9% of SWs and SEMs used drugs in this way during their lifetime, 2.4% – in the last year, and the share of active SW-PWID is 1.9%

Non-injecting drug use was more common, with 24.3% of SWs and SEMs having experienced this in their lifetime, 14.1% in the past 12 months, and 9.0% in the past month *(Figure 33)*. In total, 14.9% of SWs and SEMs used drugs in one way or another in the last year, mostly only non-injecting substances *(Figure 34)*.

Injecting and non-injecting drug use was reported by slightly different categories of SWs and SEMs. The share of SW-PWID increases in each subsequent age group and is greater among participants with a low level of education, an income of up to UAH 15,000 and those who work at street venues *(Table 24)*. Non-injecting use is more common among men and trans* people, participants with a low level of education and lack of other employment than sex work, an income of more than UAH 35,000, experience of migration for the provision of sex services, as well as among non-clients of NGOs. Both injecting and non-injecting use increases with the length of time in the sex business and is more characteristic of HIV-positive SWs.

Almost all SWs and SEMs who injected drugs during the year used a sterile needle and syringe during the last injection (96.5%), preferring methadone (48.2%). Regarding non-injection use, marijuana (47.2%) and amphetamine (41.5%) were popular *(Table 25)*.

Figure 32. *Share of SW-PWID in 2008–2021 (% among those who answered)*



SW and SEMs drug use began with a non-injection method – the average age of the first attempt was 20 years *(±4 years)*, first injection – 22 years *(±5 years)*. Marijuana (60.5%) and amphetamine (22.6%) were the first non-injection drugs for the majority of respondents, and half of the SW-PWID (53.1%) tried opium extract for the first time.

Figure 33. *Experience of non-injecting and injecting drug use (% among those who answered)*

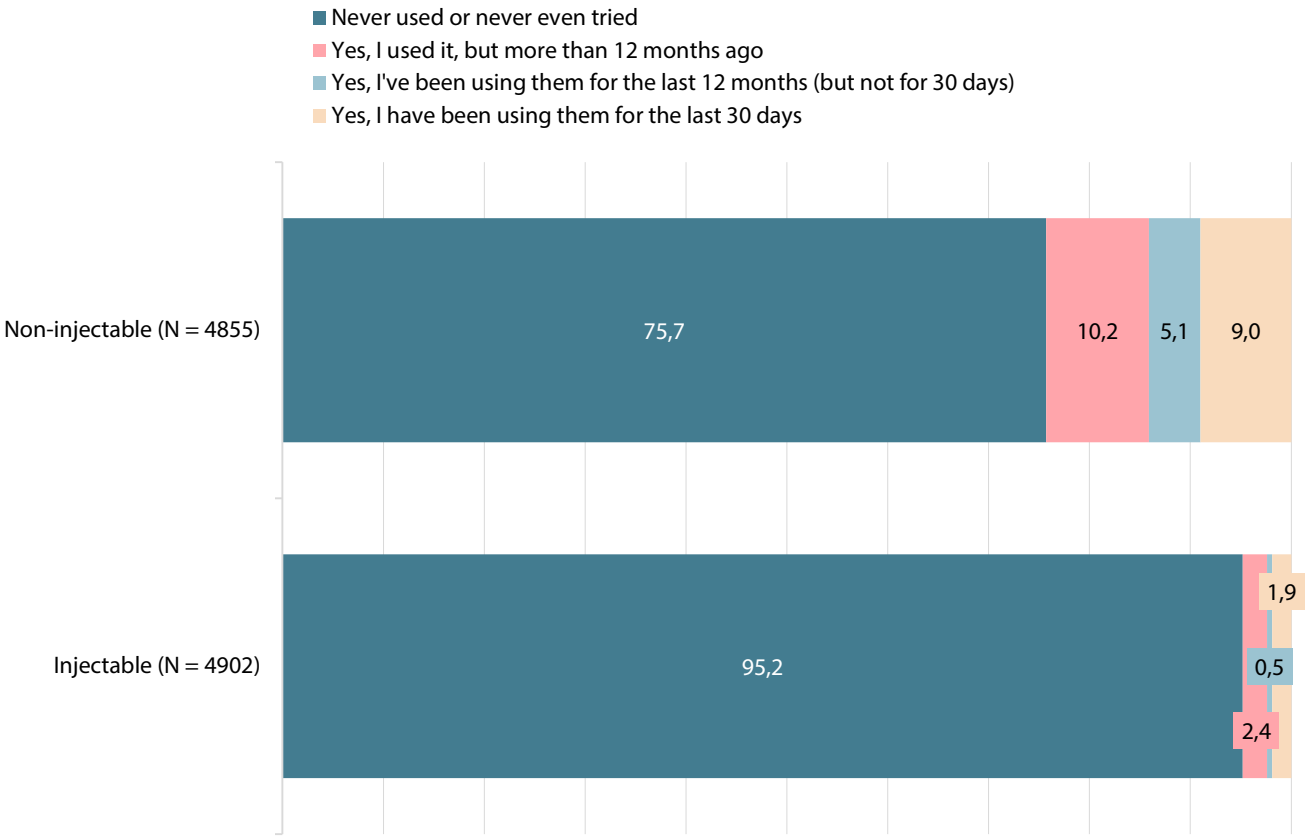


Figure 34. *The method of using narcotic substances in the last 12 months (N = 4,850, % among those who answered)*

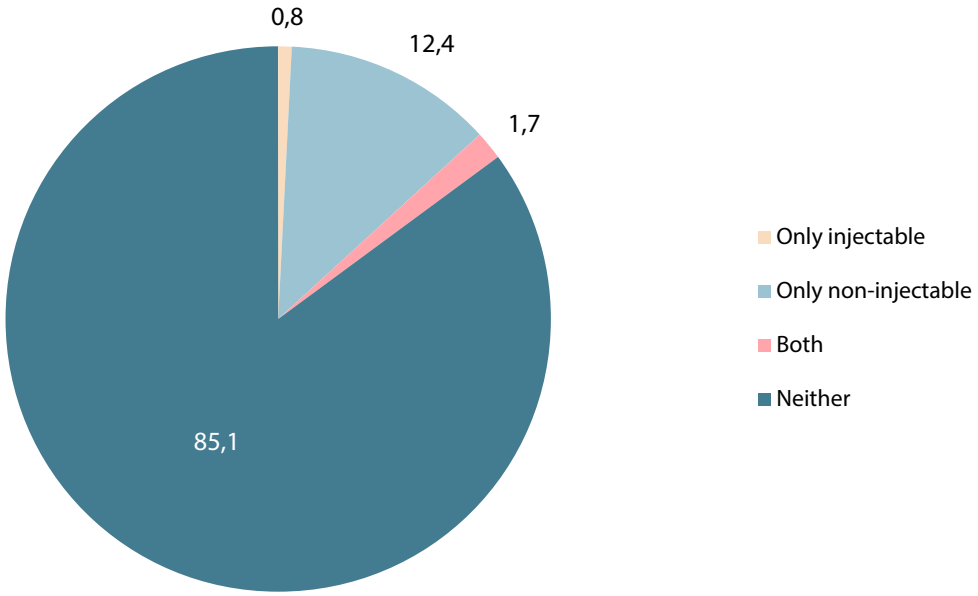


Table 24. *Experience of non-injecting and injecting drug use during the last 12 months, by socio-demographic characteristics (% among those who answered)*

Share of SWs and SEMs who used drugs in the last 12 months...	By injecting		By non-injecting method	
	n	%	n	%
Total	***119***	***2.4***	***684***	***14.1***
Age	***p<0.001***		***p=0.162***	
14–19	1	0.5	22	10.1
20–24	9	0.8	152	13.3
25–34	52	2.2	340	14.2
≥ 35	57	5.1	170	15.4
Gender	***p=0.014***		***p<0.001***	
Women	119	2.5	623	13.5
Men and trans* people	–	–	61	26.4
Education	***p<0.001***		***p=0.002***	
Incomplete secondary or lower	31	4.9	109	17.4
Complete secondary	44	2.7	251	15.5
Secondary professional	28	2.2	165	12.8
Higher *(Bachelor, Master)*	17	1.3	158	12.1
Occupation	***p=0.896***		***p=0.002***	
Sex work only	79	2.5	484	15.4
Full-time or odd jobs	26	2.4	129	12.1
Other *(students, unemployed, etc.)*	14	2.2	69	11.0
Personal monthly income, UAH	***p<0.001***		***p<0.001***	
≤ 15,000	45	4.6	142	14.7
15,001–24,000	16	2.0	87	10.9
24,001–35,000	20	1.7	146	12.6
≥ 35,001	5	0.6	175	19.8
Family status	***p=0.002***		***p=0.370***	
Have a husband/wife or a long-term sexual partner	40	3.7	140	13.3
Have no husband/wife or a long-term sexual partner	79	2.1	545	14.3

Share of SWs and SEMs who used drugs in the last 12 months...	By injecting		By non-injecting method	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.837***		***p<0.001***	
Yes	11	2.6	84	19.6
No	106	2.4	596	13.6
Length of working in sex business, years	***p<0.001***		***p<0.001***	
≤ 3	8	0.6	131	10.2
4–6	18	1.5	180	14.6
7–10	27	2.6	164	15.7
≥ 11	61	5.5	180	16.2
NGO client	***p=0.715***		***p<0.001***	
Yes	51	2.5	230	11.6
No	67	2.4	436	15.6
HIV status	***p<0.001***		***p<0.001***	
Positive	31	21.2	37	26.1
Negative	88	1.9	647	13.7
Principal method of finding clients	***p<0.001***		***p=0.044***	
Virtual venues	33	1.4	345	14.4
Through intermediaries	21	2.0	135	13.1
Street, road, highways	40	6.7	105	17.8
Entertainment facilities/events	9	2.3	50	12.5
Sauna/massage salon	15	6.6	26	11.5
Other ways	2	0.9	25	11.3

Table 25. *Type of drugs used by SWs and SEMs during the last 12 months (among those who used, multiple answer options, in %)*

Drug	Used injecting drugs in the last 12 months *(N = 119)*		Used non-injecting drugs in the last 12 months *(N = 684)*	
	n	%	n	%
Methadone	58	48. 2	49	7.2
Methamphetamine *("vint", pervintin)*	23	19.0	59	8.6
Liquid opium extract *("shirka", "the black one")*	19	15.5	1	0.1
Salt *(MDPV, mephedrone)*	17	14.4	79	11.5
Amphetamine in the form of powder *("fen")*	12	9.7	284	41.5
Cannabinoids *(marijuana (cannabis, weed), hemp seeds, hashish)*	7	5.6	323	47.2
Nalbuphine	6	4.9	5	0.7
Lyrica *(active substance – pregabalin, gabapentin)*	4	3.4	24	3.6
Buprenorphine *(subitex)*	4	3.2	4	0.6
Cocaine *(coke)*	2	1.6	64	9.3
Pharmaceutical stimulants *(baclofen, phenibut, concerta, dexedrine, adderall)*	2	1.6	44	6.5
Heroin	2	1.6	4	0.6
Methylenedioxymethamphetamine (Ecstasy, MDMA)	1	0.8	65	9.6
Hallucinogens *(LSD (acid), mescaline, tarene, ketamine, psilocin)*	1	0.8	54	7.9
Sedative drugs, barbiturates *(valium, barboval, diazepam, sonat, xanax, diphenhydramine, tropicamide, rinazolin, etc.).*	1	0.8	31	4.5
Ephedrine *("bodyaga", "boltushka", "jeff", "mulka", "fedya")*	1	0.8	5	0.7
Morphine	1	0.8	–	–
Tramadol *(tram, tramal)*	–	–	11	1.6
Street Buprenorphine *(Subitex)*	–	–	8	1.1
Speedball *(mixture of cocaine with heroin or morphine)*	–	–	3	0.4
Fentanyl *("White Chinese")*	–	–	2	0.3
Inhalants *(gasoline, acetone, ethanol, etc.)*	–	–	1	0.1

5.3 Use of alcohol and drugs during sex

Using alcohol or drugs before having sex can increase the risk of not using a condom. Among SWs and SEMs who drank alcohol in the past month, 4.8% did so before every sexual encounter with a client, and only 12.9% never drank alcohol before providing sex services *(Figure 35)*. A tenth of SWs and SEMs who used drugs (9.6%) reported their constant use before sex with a client. 75.8% of SWs and SEMs who used alcohol and drugs in the last month did so before providing sex services, and 3.0% used them before each sexual encounter.

Alcohol before sex with a client in the last month was more often used by SWs and SEMs who do not have a regular partner, with a work experience of more than 11 years, non-clients of NGOs and those who work in street points or in saunas/massage salons. The majority of participants with injection drug use experience used drugs (98.4%) or drugs and alcohol at the same time (88.4%) before providing sex services in the past month *(Table 26)*.

Figure 35. *Experience of alcohol and drug use before sex with the client in the past 30 days (among those who used substances in the past 30 days, % among those who answered)*

Table 26. *Alcohol and drug use before sex with a client in the last 30 days, by socio-demographic characteristics (among those who used substances in the last 30 days, % among those who answered)*

Number of SWs and SEMs, who in the last 30 days used before sex with client...	Alcohol (N = 3,925)		Drugs (N = 464)		Alcohol+drugs (N = 393)	
	n	%	n	%	n	%
Total	***3,418***	***87.1***	***422***	***90.8***	***298***	***75.8***
Age	***p=0.087***		***p=0.008***		***p=0.365***	
14–19	140	83.3	11	68.8	10	71.4
20–24	786	86.3	81	89.0	53	68.8
25–34	1,693	86.8	207	93.7	153	78.9
≥ 35	798	89.3	123	89.8	82	75.2
Gender	***p=0.732***		***p=0.820***		***p=0.113***	
Women	3,244	87.0	387	90.8	276	76.9
Men and trans* people	174	87.9	35	89.7	22	64.7
Education	***p=0.022***		***p=0.549***		***p=0.292***	
Incomplete secondary or lower	481	90.2	82	92.1	67	78.8
Complete secondary	1,144	88.0	145	89.0	113	79.6
Secondary professional	937	86.0	102	93.6	66	70.2
Higher *(Bachelor, Master)*	850	85.3	92	89.3	51	71.8
Occupation	***p=0.284***		***p=0.168***		***p=0.025***	
Sex work only	2,298	87.5	291	91.8	223	78.0
Full-time or odd jobs	710	85.4	91	91.0	57	75.0
Other *(students, unemployed, etc.)*	400	87.7	40	83.3	18	56.3
Personal monthly income, UAH	***p=0.101***		***p=0.558***		***p=0.559***	
≤ 15,000	675	88.8	111	91.7	73	79.3
15,001–24,000	586	85.7	47	90.4	35	68.6
24,001–35,000	828	87.2	90	88.2	68	75.6
≥ 35,001	563	84.7	92	93.9	64	76.2
Family status	***p<0.001***		***p=0.195***		***p=0.910***	
Have a husband/wife or a long-term sexual partner	694	83.4	95	94.1	61	76.3
Have no husband/wife or a long-term sexual partner	2,724	88.1	327	89.8	236	p=0.009

Number of SWs and SEMs, who in the last 30 days used before sex with client...	Alcohol (N = 3,925)		Drugs (N = 464)		Alcohol+drugs (N = 393)	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.621***		***p=0.232***		***p=0.124***	
Yes	310	86.1	56	94.9	43	84.3
No	3,074	87.0	363	90.1	253	74.4
Length of working in sex business, years	***p<0.001***		***p=0.458***		***p=0.323***	
≤ 3	846	84.0	70	87.5	46	73.0
4–6	850	85.3	99	89.2	67	70.5
7–10	736	88.0	103	93.6	75	78.9
≥ 11	830	90.4	133	91.7	97	80.2
Experience of using injecting drugs during life	***p=0.009***		***p<0.001***		***p=0.002***	
Yes	169	93.4	120	98.4	76	88.4
No	3,219	86.6	298	87.9	219	72.3
NGO client	***p<0.001***		***p=0.123***		***p=0.611***	
Yes	1,327	84.1	142	93.4	99	78.0
No	2,017	88.7	264	88.9	189	75.6
HIV status	***p=0.237***		***p=0.107***		***p=0.108***	
Positive	99	90.8	41	97.6	28	87.5
Negative	3,319	87.0	381	90.1	270	74.8
Principal method of finding clients	***p<0.001***		***p=0.022***		***p=0.006***	
Virtual venues	1,662	85.6	185	88.5	126	70.4
Through intermediaries	711	85.7	86	93.5	68	85.0
Street, road, highways	475	92.2	84	95.5	66	85.7
Entertainment facilities/events	278	87.7	25	78.1	17	70.8
Sauna/massage salon	131	91.0	26	100.0	14	73.7
Other ways	162	90.0	16	88.9	7	50.0

6. DEPRESSION

In the 2021 study, depression was assessed using the PHQ-9 *(Patient Health Questionnaire)*[11], a nine-item depression scale about the participant's condition over the past two weeks. Each question was evaluated from 0 to 3 points, accordingly, the total score ranged from 0 to 27. Participants who received up to four points did not have depression at all, score from five and more – indicated a certain level of depression. The reliability of the scale was tested using Cronbach's alpha, the indicator of which is 0.886 and indicates its acceptability for determining the level of depression.

The average level of depression among SWs and SEMs was 3.5 points, which according to the evaluation method corresponds to the absence of depression. 69.3% of the participants did not have any manifestations of depression, 0.9% of the participants had severe depression ***(Figure 36)***. The share of SWs and SEMs with a certain level of depression increased with age, was more typical for participants with low education, income up to UAH 24,000, experience of providing sex services for more than six years, and those who work at street venues ***(Table 27)***. Half of the SWs and SEMs who have experience using injectable drugs (54.2%) had depression, in 16.8% of them it was moderate or severe *(among those who did not practice injection use, this indicator was at the level of 2.2%)*.

In addition to determining depressive states, within the scope of the study, anxiety was assessed using the GAD-7 ***(Generalized Anxiety Disorder)***[12] technique used to diagnose generalized anxiety disorder. The tool consisted of seven questions about the participant's condition over the past two weeks. Each of them was evaluated from 0 to 3 points, the total score ranged from 0 to 21. The reliability of the scale *(Cronbach's alpha)* is 0.906, which allows for further analysis and interpretation of the results in an aggregated form.

The average level of anxiety among SWs and SEMs was 2.9 points, which corresponds to the minimum level of anxiety according to the evaluation method. 73.6% of participants had this indicator, and the average or high level was established in 6.6% of SWs and SEMs ***(Figure 37)***. The characteristics of SWs and SEMs who have a higher than minimum level of anxiety are similar to the characteristics of participants with a certain level of depression. Their share increases with age and work experience, it is higher among participants with low education, those who are employed only in sex work and work at street venues ***(Table 28)***. Almost a quarter of PWID reported moderate or high anxiety (22.3%), compared to 5.9% of participants who had never injected drugs.

11 *Kroenke K, Spitzer RL, Williams JB. The PHQ-9: validity of a brief depression severity measure. J Gen Intern Med. 2001 Sep;16(9):606-13 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1495268)*

12 *Munir S, Takov V. Generalized Anxiety Disorder. StatPearls Publishing; 2022. (https://www.ncbi.nlm.nih.gov/books/NBK441870)*

Figure 36. Prevalence of depressive states among SWs and SEMs (N = 4,961, in %)

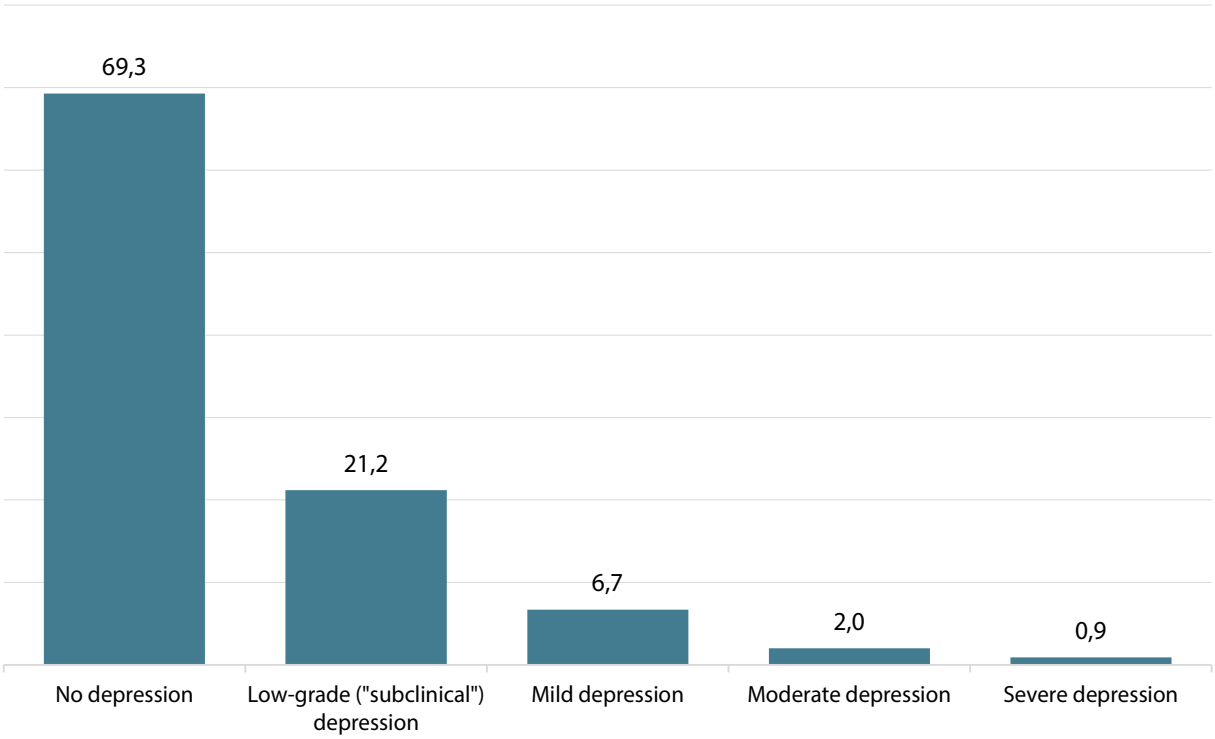


Figure 37. Prevalence of anxiety conditions among SWs and SEMs (N = 4,961, in %)

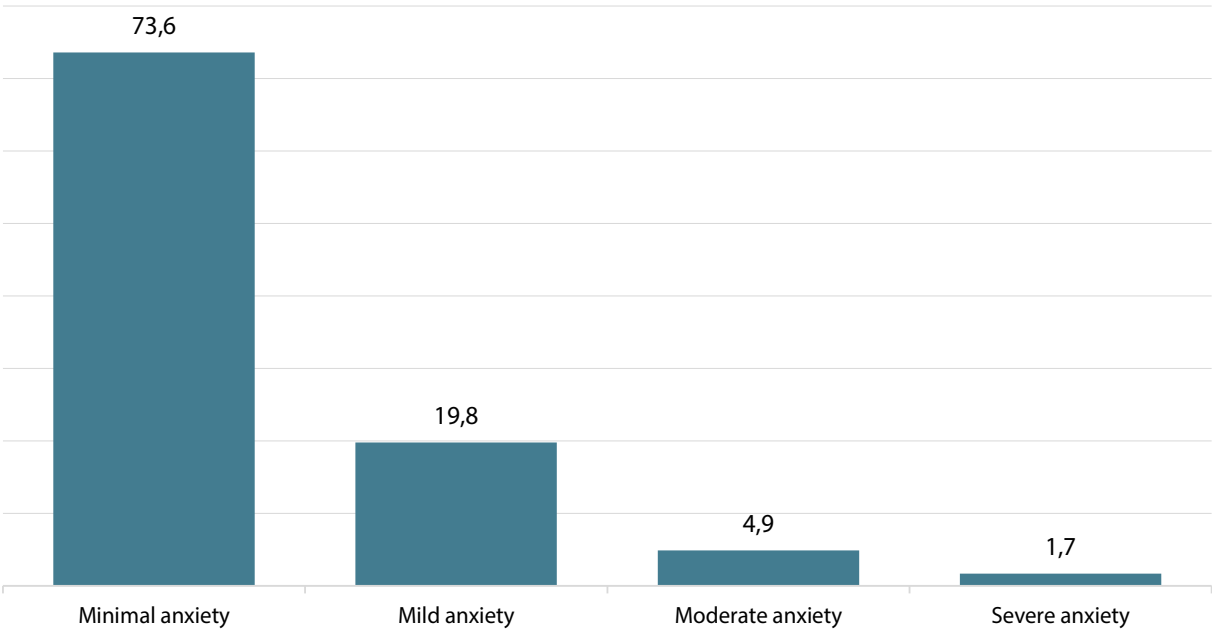


Table 27. *Level of depression among SWs and SEMs, by socio-demographic characteristics (% among those who answered)*

Characteristics	Average	Standard deviation	Absent (0–4)		Mild (5–9)		Moderate (10–14)		Moderately severe or severe (15–27)	
			n	%	n	%	n	%	n	%
Total (N = 4,961)	***3.5***	***4.4***	***3,435***	***69.3***	***1,051***	***21.2***	***330***	***6.7***	***145***	***2.9***
Age (N = 4,961)			***p<0.001***							
14–19	2.8	4.6	178	80.9	23	10.5	13	5.9	6	2.7
20–24	2.8	4.1	897	77.1	189	16.2	50	4.3	28	2.4
25–34	3.7	4.3	1,655	67.6	553	22.6	174	7.1	67	2.7
≥ 35	4.0	4.5	707	62.7	286	25.4	91	8.1	44	3.9
Gender (N = 4,961)			***p=0.002***							
Women	3.5	4.3	3,261	69.0	1,022	21.6	306	6.5	136	2.9
Men and trans* people	3.6	4.8	175	74.2	29	12.3	24	10.2	8	3.4
Education (N = 4,951)			***p<0.001***							
Incomplete secondary or lower	3.8	5.2	430	66.7	113	17.5	62	9.6	40	6.2
Complete secondary	3.0	4.1	1,211	73.4	321	19.5	83	5.0	35	2.1
Secondary professional	3.8	4.3	885	67.2	317	24.1	84	6.4	30	2.3
Higher *(Bachelor, Master)*	3.7	4.2	902	67.3	298	22.2	101	7.5	39	2.9
Occupation (N = 4,951)			***p=0.012***							
Sex work only	3.6	4.4	2,162	67.6	712	22.3	233	7.3	93	2.9
Full-time or odd jobs	3.4	4.4	776	71.6	213	19.6	57	5.3	38	3.5
Other *(students, unemployed, etc.)*	3.2	3.9	487	73.0	126	18.9	40	6.0	14	2.1
Personal monthly income, UAH (N = 3,876)			***p<0.001***							
≤ 15,000	3.6	4.6	675	67.8	201	20.2	81	8.1	38	3.8
15,001–24,000	3.7	4.5	551	67.9	162	20.0	76	9.4	22	2.7
24,001–35,000	3.4	4.3	817	69.7	256	21.8	60	5.1	40	3.4
≥ 35,001	3.5	3.9	620	69.1	215	24.0	50	5.6	12	1.3

Characteristics	Average	Standard deviation	Absent (0–4)		Mild (5–9)		Moderate (10–14)		Moderately severe or severe (15–27)	
			n	%	n	%	n	%	n	%
Family status (N = 4,961)			***p=0.045***							
Have a husband/wife or a long-term sexual partner	3.5	4.4	772	71.7	199	18.5	68	6.3	38	3.5
Have no husband/wife or a long-term sexual partner	3.5	4.3	2,663	68.6	852	21.9	262	6.7	106	2.7
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)			***p=0.383***							
Yes	3.5	4.5	296	67.9	90	20.6	32	7.3	18	4.1
No	3.5	4.3	3,122	69.7	939	21.0	292	6.5	125	2.8
Length of working in sex business, years (N = 4,745)			***p<0.001***							
≤ 3	3.1	4.4	984	75.8	211	16.3	66	5.1	37	2.9
4–6	3.6	4.1	845	67.7	289	23.1	85	6.8	30	2.4
7–10	3.7	4.4	705	66.6	243	22.9	80	7.6	31	2.9
≥ 11	3.7	4.5	759	66.6	261	22.9	80	7.0	39	3.4
Experience of using injecting drugs during life (N = 4,903)			***p<0.001***							
Yes	7.1	7.0	109	45.8	53	22.3	36	15.1	40	16.8
No	3.3	4.1	3,286	70.4	986	21.1	290	6.2	103	2.2
NGO client (N = 4,874)			***p=0.009***							
Yes	3.5	4.2	1,419	70.3	441	21.9	107	5.3	51	2.5
No	3.5	4.5	1,974	69.1	581	20.3	217	7.6	84	2.9
HIV status (N = 4,961)			***p=0.003***							
Positive	4.6	5.7	96	61.9	32	20.6	16	10.3	11	7.1
Negative	3.5	4.3	3,340	69.5	1019	21.2	314	6.5	133	2.8
Principal method of finding clients (N = 4,961)			***p<0.001***							
Virtual venues	3.6	4.1	1,682	68.6	562	22.9	157	6.4	52	2.1
Through intermediaries	3.3	4.2	735	70.3	221	21.1	63	6.0	27	2.6
Street, road, highways	4.4	5.2	370	61.5	141	23.4	52	8.6	39	6.5
Entertainment facilities/ events	3.4	4.8	306	75.7	51	12.6	29	7.2	18	4.5
Sauna/massage salon	3.2	4.5	160	69.6	46	20.0	17	7.4	7	3.0
Other ways	2.4	3.5	182	80.9	30	13.3	11	4.9	2	0.9

Table 28. *Level of anxiety among SWs and SEMs, by socio-demographic characteristics (% among those who answered)*

Anxiety level…	Average	St. dev.	Minimal (0–4)		Moderate (5–9)		Medium or high (10–21)	
			n	%	n	%	n	%
Total (N = 4,961)	***2.9***	***3.8***	***3,651***	***73.6***	***982***	***19.8***	***328***	***6.6***
Age (N = 4,961)			***p<0.001***					
14–19	2.3	3.7	177	80.5	31	14.1	12	5.5
20–24	2.2	3.5	930	80.0	180	15.5	53	4.6
25–34	2.9	3.6	1,780	72.7	506	20.7	163	6.7
≥ 35	3.3	4.0	763	67.7	264	23.4	100	8.9
Gender (N = 4,961)			***p=0.604***					
Women	2.8	3.7	3,471	73.5	939	19.9	315	6.7
Men and trans* people	2.5	3.6	180	76.3	43	18.2	13	5.5
Education (N = 4,953)			***p<0.001***					
Incomplete secondary or lower	3.1	4.2	436	67.6	143	22.2	66	10.2
Complete secondary	2.6	3.6	1,253	75.8	304	18.4	95	5.8
Secondary professional	2.9	3.8	955	72.5	277	21.0	85	6.5
Higher *(Bachelor. Master)*	2.7	3.4	1,001	74.8	257	19.2	81	6.0
Occupation (N = 4,949)			***p<0.001***					
Sex work only	3.0	3.8	2,287	71.5	676	21.1	236	7.4
Full-time or odd jobs	2.7	3.7	822	75.8	197	18.2	65	6.0
Other *(students. unemployed. etc.)*	2.1	2.9	532	79.9	108	16.2	26	3.9
Personal monthly income, UAH (N = 3,876)			***p=0.009***					
≤ 15,000	3.0	3.8	697	70.1	225	22.6	72	7.2
15,001–24,000	2.9	3.9	592	73.0	157	19.4	62	7.6
24,001–35,000	2.6	3.5	906	77.2	202	17.2	65	5.5
≥ 35,001	2.8	3.6	677	75.5	162	18.1	58	6.5
Family status (N = 4,961)			***p=0.301***					
Have a husband/wife or a long-term sexual partner	2.8	3.9	812	75.3	196	18.2	70	6.5
Have no husband/wife or a long-term sexual partner	2.8	3.7	2,839	73.1	786	20.2	258	6.6

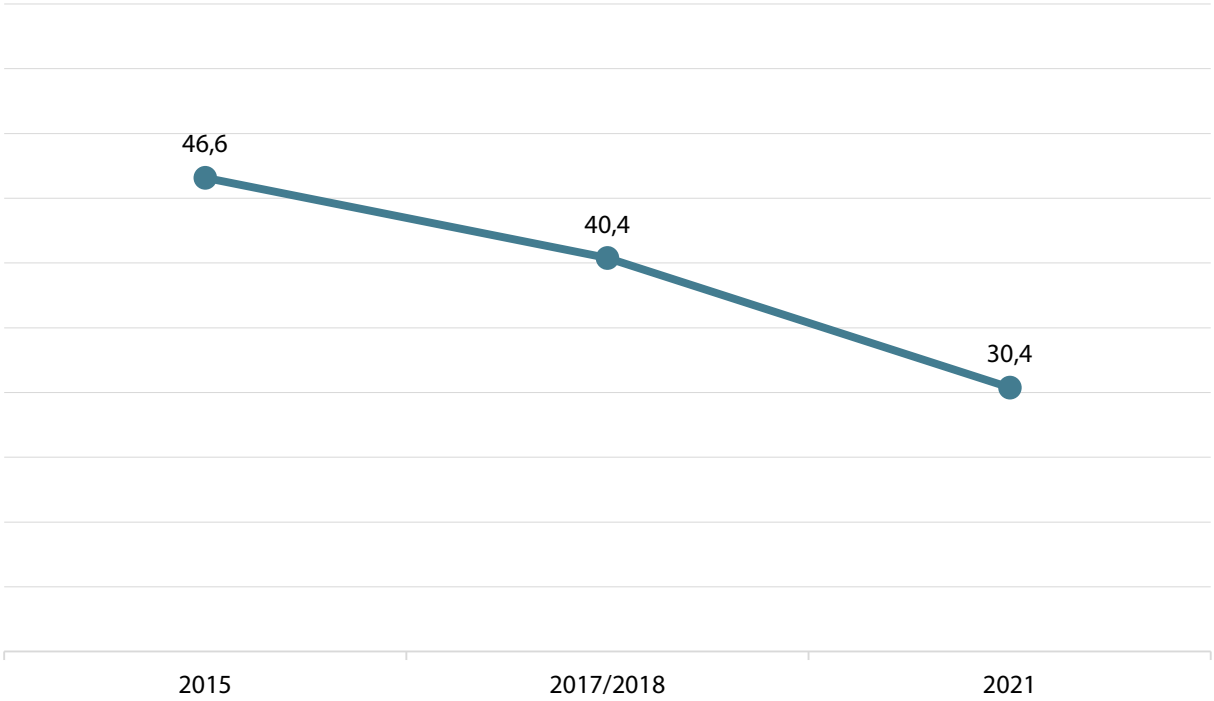
Anxiety level...	Average	St. dev.	Minimal (0–4)		Moderate (5–9)		Medium or high (10–21)	
			n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)					***p=0.702***			
Yes	2.9	3.6	314	72.0	91	20.9	31	7.1
No	2.8	3.7	3,308	73.9	875	19.5	295	6.6
Length of working in sex business, years (N = 4,745)					***p<0.001***			
≤ 3	2.6	3.7	1,021	78.6	201	15.5	77	5.9
4–6	2.7	3.5	931	74.5	248	19.8	71	5.7
7–10	2.9	2.4	773	73.0	214	20.2	72	6.8
≥ 11	3.1	3.8	790	69.4	263	23.1	85	7.5
Experience of using injecting drugs during life (N = 4,903)					***p<0.001***			
Yes	5.1	5.3	126	52.9	59	24.8	53	22.3
No	2.7	3.6	3,480	74.6	911	19.5	273	5.9
NGO client (N = 4,874)					***p=0.262***			
Yes	2.8	3.7	1,517	75.2	382	18.9	118	5.9
No	2.8	3.7	2,092	73.2	575	20.1	190	6.7
HIV status (N = 4,961)					***p=0.002***			
Positive	3.4	5.0	106	68.4	28	18.1	21	13.5
Negative	2.8	3.7	3,545	73.8	954	19.9	307	6.4
Principal method of finding clients (N = 4,961)					***p<0.001***			
Virtual venues	2.8	3.6	1,801	73.5	508	20.7	143	5.8
Through intermediaries	2.6	3.6	783	74.9	209	20.0	54	5.2
Street, road, highways	3.0	4.5	411	68.3	111	18.4	80	13.3
Entertainment facilities/events	2.6	3.5	300	74.1	79	19.5	26	6.4
Sauna/massage salon	2.3	3.7	175	76.1	41	17.8	14	6.1
Other ways	2.0	3.4	183	80.6	33	14.5	11	4.8

7. EXPERIENCE OF VIOLENCE

Compared to previous rounds of the survey, the share of SWs and SEMs who experienced violence during their involvement in the provision of sex services decreased, from 46.6% in 2015 to 30.4% in 2021 *(Figure 38)*. The most common forms of violence were verbal humiliation (60.4%), threats (54.5%), beatings (38.6%) and coercion to provide free services (34.2%), the frequency of the latter decreased from 49.5% in 2015 *(Figure 39)*.

Violence was more often reported by SWs over 35 years of age, with a low level of education, high income, experience of migration from the city to provide sex services and injection drug use. The share of SWs and SEMs experiencing violence increased with the length of engagement in sex business (*from 22.5% among those who worked for less than three years to 34.9% among SWs with more than 11 years of experience)* and was higher among those working for street venues and through intermediaries *(38.1% and 37.0%, respectively) (Table 29)*.

Figure 38. *Share of SWs and SEMs who experienced violence while providing sex services in 2015–2021 (in %)*



Half of the SWs and SEMs experienced violence from casual clients (55.0%), and 11.7% of participants indicated violence from regular clients. Every fifth participant (21.8%) reported incidents of violence by law enforcement officers *(Figure 40)*.

More than half of SWs and SEMs who experienced violence (66.0%) did not seek help. Those who applied sought help from close people, other SWs or administrators of the venue *(Figure 41)*. 7.5% of participants with experience of violence contacted non-governmental organizations, crisis centers or the police. This indicator is higher for NGO clients – among them, 10.0% of SWs and SEMs sought help from specialists compared to 5.8% of participants who do not use prevention services *(Table 30)*.

Figure 39. *Forms of violence experienced by SWs and SEMs in 2015–2021 (among those who experienced violence, in %)*

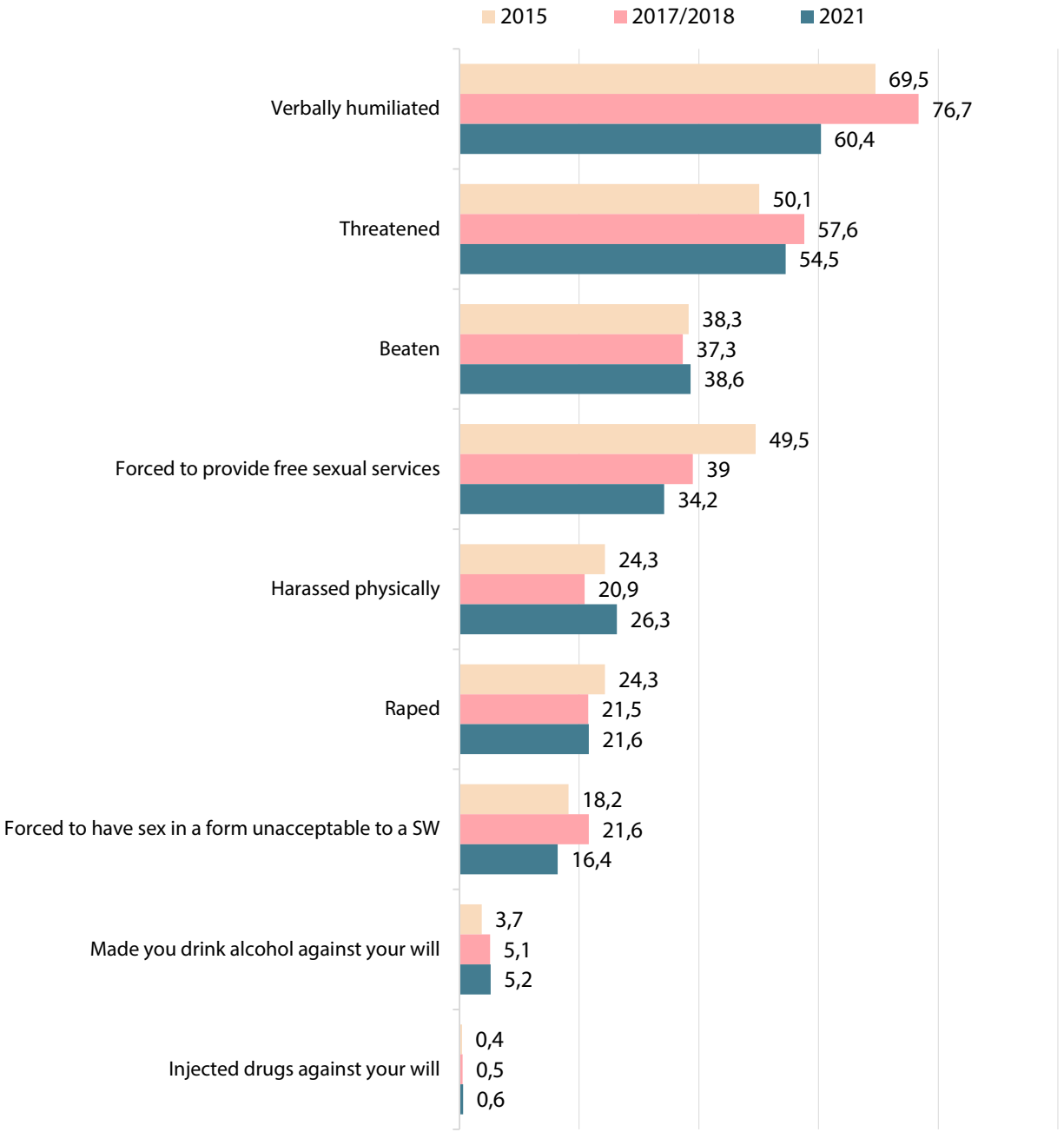


Table 29. *Share of SWs and SEMs who experienced violence while providing sex services, by socio-demographic characteristics (% among those who answered)*

Characteristics	Share of SWs and SEMs who experienced violence while providing sex services	
	n	%
Total (N = 4,705)	***1,431***	***30.4***
Age (N = 4,705)	***p<0.001***	
14–19	52	24.1
20–24	255	22.7
25–34	763	33.2
≥ 35	361	33.8
Gender (N = 4,705)	***p=0.542***	
Women	1,366	30.5
Men and trans* people	64	28.6
Education (N = 4,695)	***p<0.001***	
Incomplete secondary or lower	221	35.8
Complete secondary	380	24.1
Secondary professional	470	38.0
Higher *(Bachelor, Master)*	357	28.3
Occupation (N = 4,692)	***p=0.490***	
Sex work only	943	30.9
Full-time or odd jobs	314	30.3
Other *(students, unemployed. etc.)*	172	28.5
Personal monthly income, UAH (N = 3,660)	***p<0.001***	
≤ 15,000	265	27.7
15,001–24,000	235	29.7
24,001–35,000	401	35.5
≥ 35,001	234	30.0
Family status (N = 4,705)	***p=0.007***	
Have a husband/wife or a long-term sexual partner	354	33.8
Have no husband/wife or a long-term sexual partner	1,076	29.4

Characteristics	Share of SWs and SEMs who experienced violence while providing sex services	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,662)	***p<0.001***	
Yes	172	41.0
No	1,254	29.6
Length of working in sex business, years (N = 4,501)	***p<0.001***	
≤ 3	282	22.5
4–6	360	30.8
7–10	339	33.8
≥ 11	376	34.9
Experience of using injecting drugs during life (N = 4,654)	***p<0.001***	
Yes	125	55.8
No	1,298	29.3
NGO client (N = 4,628)	***p=0.078***	
Yes	549	28.8
No	849	31.2
HIV status (N = 4,705)	***p=0.586***	
Positive	48	32.4
Negative	1,382	30.3
Principal method of finding clients (N = 4,705)	***p<0.001***	
Virtual venues	610	26.7
Through intermediaries	372	37.0
Street, road, highways	218	38.1
Entertainment facilities/events	102	25.8
Sauna/massage salon	70	31.0
Other ways	59	26.7

Figure 40. *Perpetrator of violence against SWs and SEMs (N = 1,431, among those who experienced violence, multiple options, in %)*

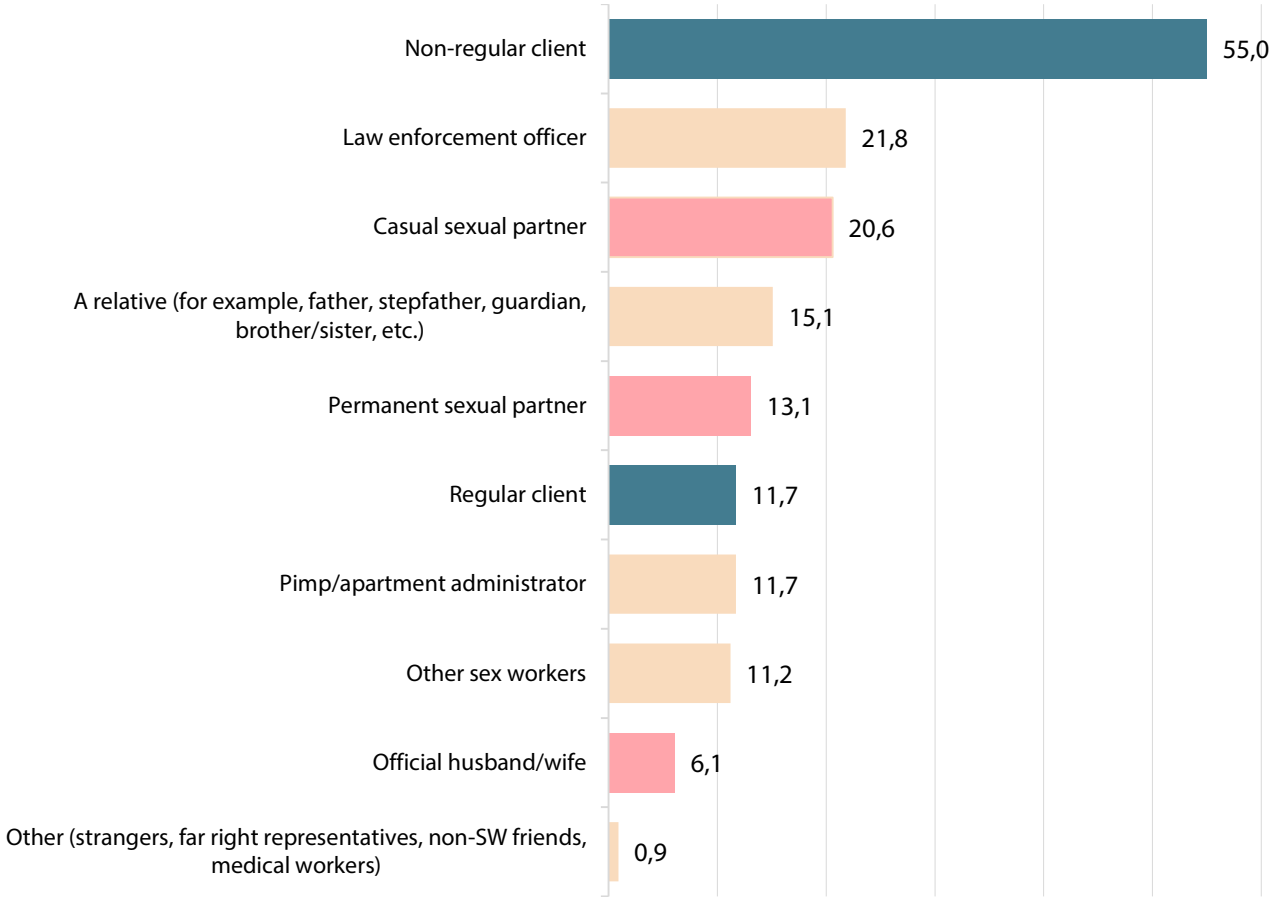


Figure. 41. *Persons or organizations from whom SWs and SEMs sought help in case of violence (N = 1,431, among those who experienced violence, multiple answer options, in %)*

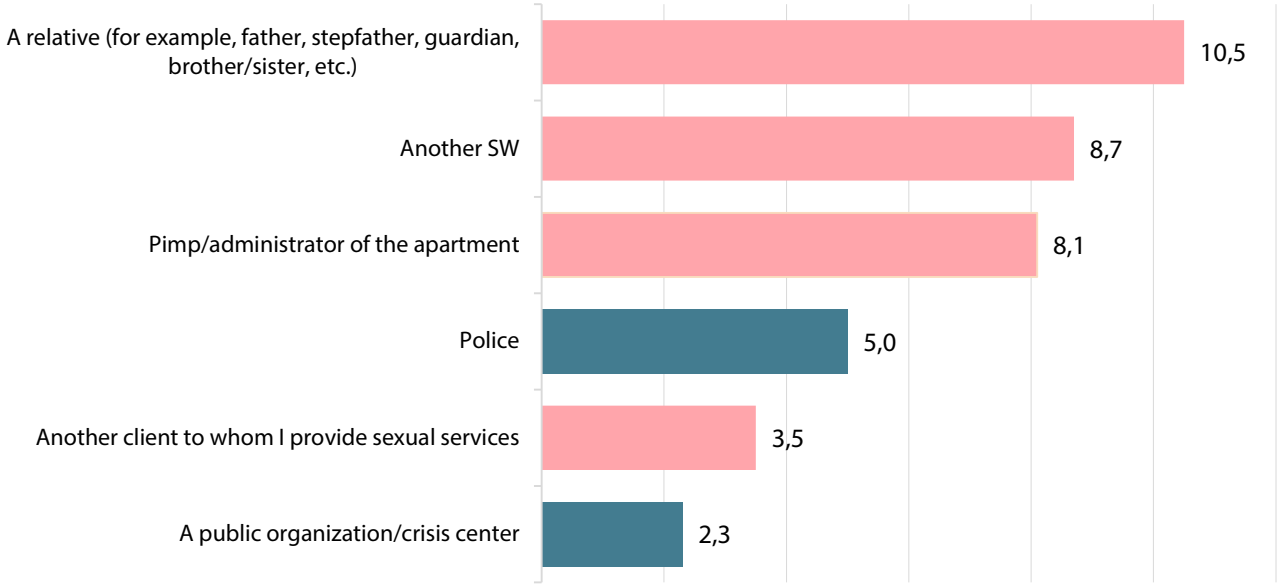


Table 30. *Seeking help from non-governmental organizations, crisis centers or the police in case of violence (N = 1,381, among those who experienced violence, % among those who answered)*

Characteristics	Sought help		Did not seek help	
	n	%	n	%
Total (N = 1,381)	***103***	***7.5***	***1,278***	***92.5***
Age (N = 1,381)	***p=0.156***			
14–19	2	4.3	45	95.7
20–24	12	5.0	229	95.0
25–34	56	7.6	685	92.4
≥ 35	34	9.6	319	90.4
Gender (N = 1,381)	***p=0.882***			
Women	98	7.4	1,220	92.6
Men and trans* people	5	7.9	58	92.1
Education (N = 1,377)	***p=0.141***			
Incomplete secondary or lower	14	6.8	193	93.2
Complete secondary	20	5.5	345	94.5
Secondary professional	44	9.6	414	90.4
Higher *(Bachelor, Master)*	24	6.9	323	93.1
Occupation (N = 1,379)	***p=0.235***			
Sex work only	67	7.4	843	92.6
Full-time or odd jobs	28	9.2	277	90.8
Other *(students, unemployed, etc.)*	8	4.9	156	95.1
Personal monthly income, UAH (N = 1,100)	***p=0.600***			
≤ 15,000	17	6.6	239	93.4
15,001–24,000	17	7.4	212	92.6
24,001–35,000	22	5.7	367	94.3
≥ 35,001	19	8.4	207	91.6
Family status (N = 1,381)	***p=0.123***			
Have a husband/wife or a long-term sexual partner	19	5.6	323	94.4
Have no husband/wife or a long-term sexual partner	84	8.1	955	91.9

Characteristics	Sought help		Did not seek help	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 1,380)	***p=0.295***			
Yes	9	5.5	156	94.5
No	94	7.7	1,121	92.3
Length of working in sex business, years (N = 1,316)	***p=0.316***			
≤ 3	15	5.6	251	94.4
4–6	23	6.6	326	93.4
7–10	30	9.0	303	91.0
≥ 11	32	8.7	336	91.3
Experience of using injecting drugs during life (N = 1,375)	***p=0.429***			
Yes	11	9.3	107	90.7
No	92	7.3	1,165	92.7
NGO client (N = 1,352)	***p=0.004***			
Yes	54	10.0	485	90.0
No	47	5.8	766	94.2
HIV status (N = 1,381)	***p=0.775***			
Positive	3	6.4	44	93.6
Negative	100	7.5	1,234	92.5
Principal method of finding clients (N = 1,381)	***p=0.073***			
Virtual venues	55	9.2	544	90.8
Through intermediaries	16	4.5	337	95.5
Street, road, highways	13	6.2	196	93.8
Entertainment facilities/events	9	9.4	87	90.6
Sauna/massage salon	8	11.8	60	88.2
Other ways	3	5.3	54	94.7

8. EXPERIENCE OF RECEIVING HEALTH SERVICES

8.1 Seeking healthcare and services quality assessment

A third of SWs and SEMs (29.5%) had health problems during the year that required medical assistance. Of them, 84.6% *(or 24.9% of the total sample)* contacted a health facility for consultation or treatment.

The need for medical assistance was more often reported by SWs over 25 years old, women, participants with secondary special education who had a regular partner and migration experience, with 4-6 years of work experience and those who work at virtual venues or through intermediaries ***(Table 31)***.

The rate of seeking medical facilities increases with increasing monthly income and is higher among SWs with higher education, among those who have never used drugs by injection, and among those who work at virtual venues. The least number of people who sought help was among sex workers from the street sites and saunas *(67.5% each)*.

SWs and SEMs who felt the need for health services and contacted health facilities mostly visited general polyclinics (52.5%). A third of the participants (38.2%) contacted private clinics ***(Figure 42)***. Almost all SWs (97.9%) received the necessary medical care during the last visit.

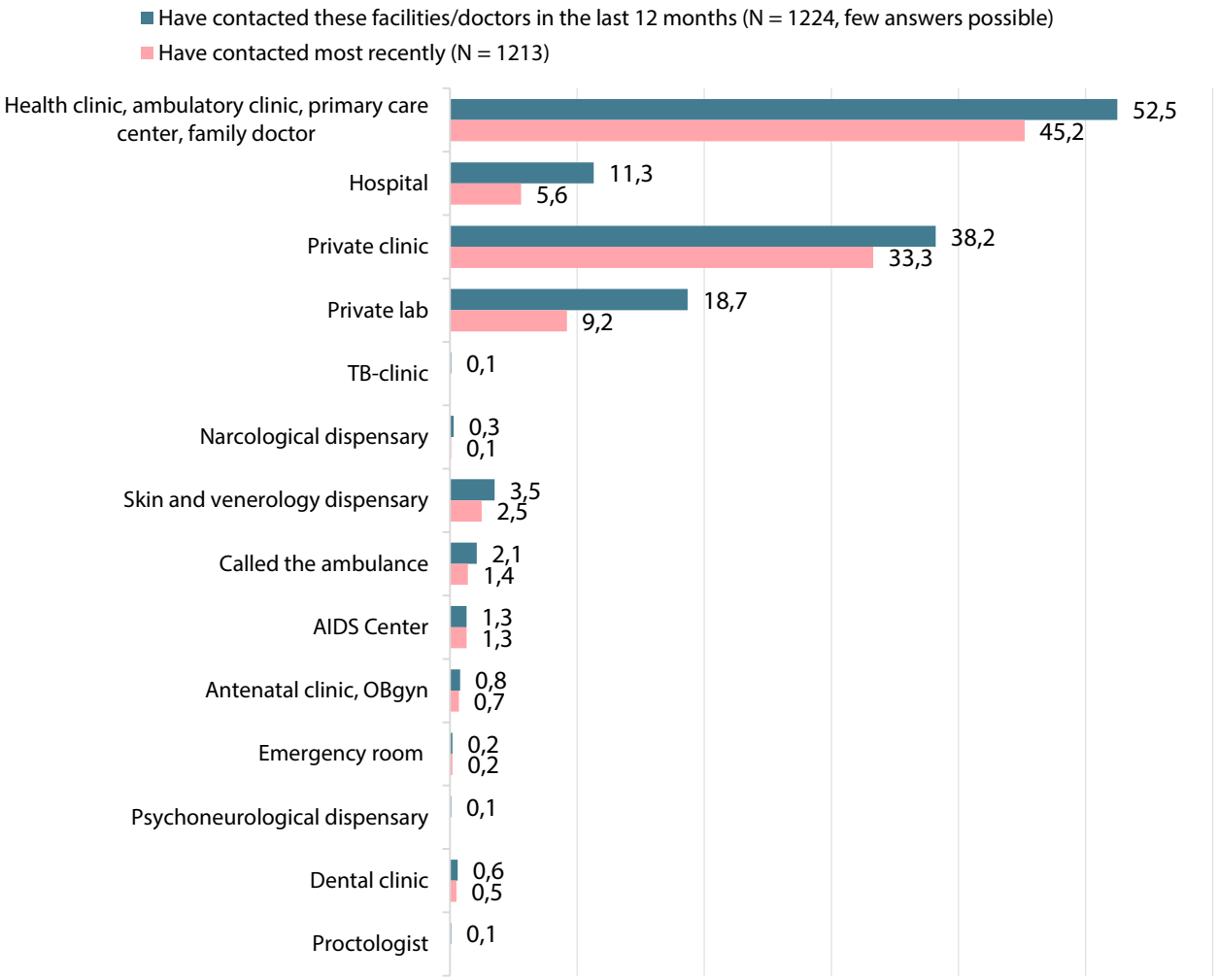
Half of the SWs and SEMs (46.2%) evaluated the attitude of the staff during the last visit to the health facility with a maximum of 10 venues, and 45.9% gave the highest assessment of the quality of the received medical services. In general, the median score of satisfaction with both aspects is nine points, higher for private clinics and laboratories, AIDS Centers and dentistry *(10 points each)*.

Table 31. *Prevalence of health problems and visits to medical facilities in the last 12 months (% among those who answered)*

Share of SWs and SEMs who during the last year...	Had health problems that required medical assistance *(N = 4,912)*		Applied to a health facility for consultation or treatment *(among those who had problems, N = 1,447)*	
	n	%	n	%
Total	***1,448***	***29.5***	***1,224***	***84.6***
Age	***p<0.001***		***p=0.272***	
14–19	37	17.1	29	78.4
20–24	252	21.9	222	88.1
25–34	801	33.0	670	83.8
≥ 35	359	32.2	303	84.6
Gender	***p<0.001***		***p=0.109***	
Women	1,404	30.0	1183	84.3
Men and trans* people	44	18.6	41	93.2
Education	***p<0.001***		***p<0.001***	
Incomplete secondary or lower	178	27.8	124	69.7
Complete secondary	357	21.8	305	85.4
Secondary professional	501	38.6	426	85.0
Higher *(Bachelor, Master)*	409	30.9	367	89.7
Occupation	***p<0.001***		***p=0.276***	
Sex work only	977	30.8	816	83.6
Full-time or odd jobs	342	31.9	295	86.3
Other *(students, unemployed, etc.)*	125	19.1	110	88.0
Personal monthly income, UAH	***p=0.261***		***p<0.001***	
≤ 15,000	282	28.7	215	76.2
15,001–24,000	236	29.5	197	83.5
24,001–35,000	372	31.9	318	85.5
≥ 35,001	284	32.0	260	91.5
Family status	***p<0.001***		***p=0.527***	
Have a husband/wife or a long-term sexual partner	395	37.1	338	85.6
Have no husband/wife or a long-term sexual partner	1,053	27.4	886	84.2

Share of SWs and SEMs who during the last year...	Had health problems that required medical assistance *(N = 4,912)*		Applied to a health facility for consultation or treatment *(among those who had problems, N = 1,447)*	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p=0.359***	
Yes	169	39.2	147	87.0
No	1,279	28.8	1,077	84.3
Length of working in sex business, years	***p<0.001***		***p=0.076***	
≤ 3	322	25.1	267	82.9
4–6	406	32.8	337	83.0
7–10	323	30.7	270	83.6
≥ 11	354	31.4	314	89.0
Experience of using injecting drugs during life	***p=0.909***		***p<0.001***	
Yes	70	29.9	48	68.6
No	1,370	29.6	1,170	85.5
NGO client	***p=0.007***		***p=0.483***	
Yes	629	31.3	538	85.5
No	785	27.8	660	84.2
HIV status	***p=0.258***		***p=0.697***	
Positive	38	25.3	33	86.8
Negative	1,410	29.6	1,191	84.5
Principal method of finding clients	***p<0.001***		***p<0.001***	
Virtual venues	757	31.2	666	88.1
Through intermediaries	326	31.5	281	86.2
Street, road, highways	163	27.3	110	67.5
Entertainment facilities/events	104	25.9	90	86.5
Sauna/massage salon	40	17.5	27	67.5
Other ways	58	25.9	51	86.4

Figure 42. Typology of health facilities to which SWs and SEMs applied during the last year (among those who applied, in %)



8.2 Availability and visiting of a family doctor

Half of the SWs and SEMs (48.4%) reported that they had a family doctor, that is, a signed contract and the possibility to consult a specialist, if necessary *(Table 32)*. Having a contract with a family doctor is less prevalent among young SWs and SEMs under 24, with a low level of education, who are only engaged in providing sex services, do not have a regular sexual partner, with experience of sex work up to three years, experience of injecting drug use, and those who work at street venues.

Half of the SWs and SEMs who had a family doctor (51.5%) met with him or her in person or consulted online during the last year. If we take into account the need for medical assistance, then 34.2% of those who needed it and had a family doctor, did not consult him during the year, saw the specialist only once during the signing of the contract. The share of SWs and SEMs who consulted a family doctor is higher among those who have a regular sexual partner (59.8%) and do not receive services from an NGO as a client (54.9%).

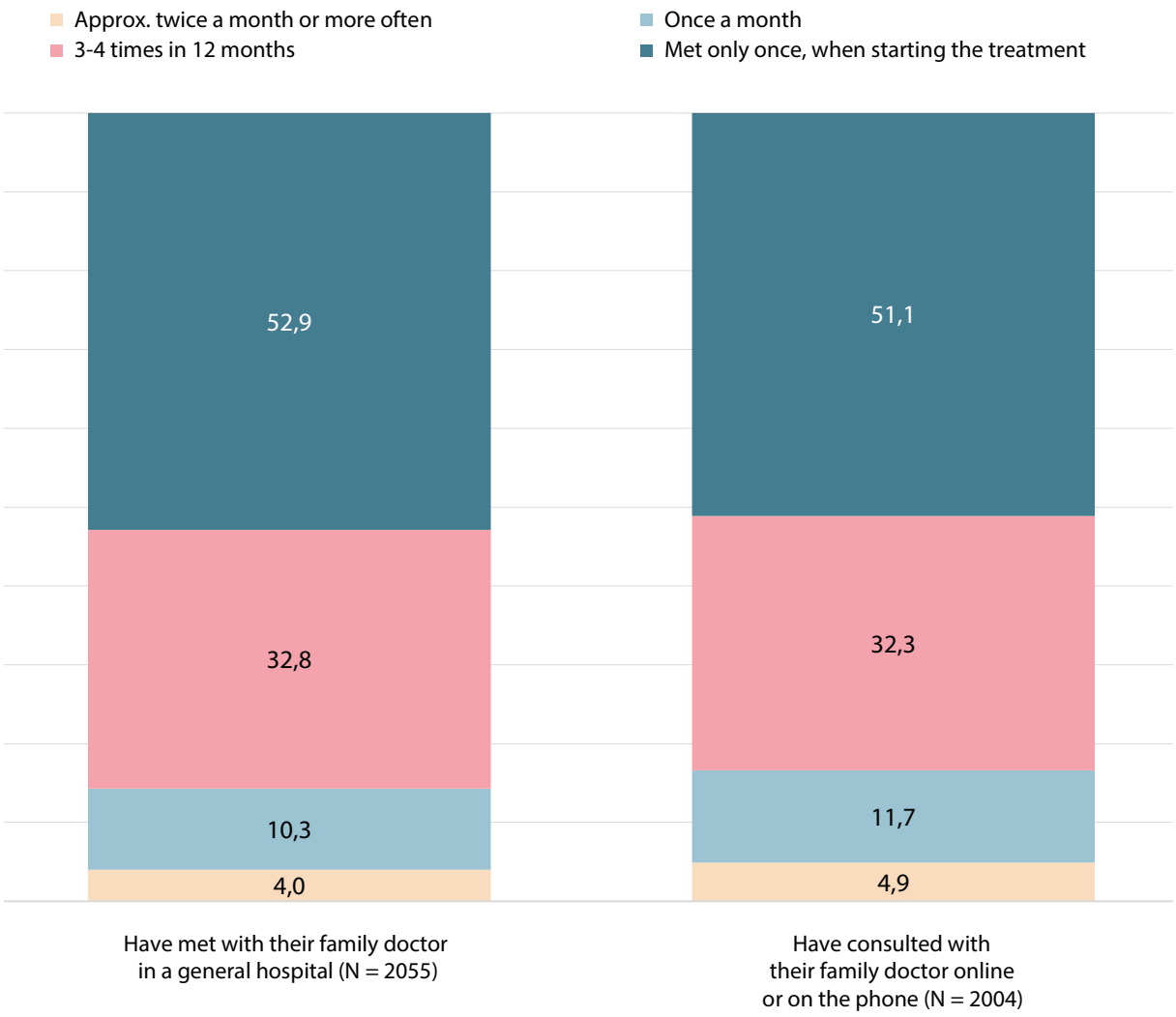
14.3% of SWs and SEMs who had a family doctor met him personally at a polyclinic, 16.6% consulted online or by phone every month during the last year *(Figure 43)*.

Table 32. *Share of SWs and SEMs who had a family doctor and consulted him during the last 12 months, by socio-demographic characteristics (% among those who answered)*

Share of SWs and SEMs, who...	Had a family doctor *(N = 4,886)*		Applied to a family doctor within the last 12 months *(in person or online/by phone)*			
			Among those who had a family doctor *(N = 2,109)*		Among those who had a family doctor and needed medical assistance *(N = 994)*	
	n	%	n	%	n	%
Total	***2,366***	***48.4***	***1,086***	***51.5***	***654***	***65.8***
Age	***p<0.001***		***p=0.174***		***p=0.261***	
14–19	69	32.2	24	42.1	11	64.7
20–24	477	41.7	201	48.7	91	61.9
25–34	1,227	50.8	566	51.6	366	64.7
≥ 35	593	53.2	295	54.2	187	70.6
Gender	***p=0.600***		***p=0.407***		***p=0.974***	
Women	2,258	48.5	1031	51.3	635	65.8
Men and trans* people	108	46.8	55	55.6	19	65.5
Education	***p<0.001***		***p=0.007***		***p=0.052***	
Incomplete secondary or lower	251	39.8	117	51.8	65	65.0
Complete secondary	671	41.3	264	45.4	132	58.4
Secondary professional	741	56.9	359	53.9	256	68.8
Higher *(Bachelor, Master)*	697	52.9	343	54.4	201	68.1
Occupation	***p<0.001***		***p=0.317***		***p=0.882***	
Sex work only	1,479	47.0	678	51.2	425	65.4
Full-time or odd jobs	581	54.2	278	53.9	171	67.1
Other *(students, unemployed, etc.)*	302	46.2	129	48.3	58	66.7
Personal monthly income, UAH	***p=0.008***		***p=0.003***		***p=0.002***	
≤ 15,000	460	46.9	221	50.9	123	61.5
15,001–24,000	411	51.5	194	51.7	115	69.3
24,001–35,000	586	50.6	314	59.6	198	75.0
≥ 35,001	391	44.4	177	47.8	109	60.2
Family status	***p<0.001***		***p<0.001***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	625	59.0	333	59.8	212	75.4
Have no husband/wife or a long-term sexual partner	1,741	45.5	753	48.5	443	62.1

Share of SWs and SEMs, who...	Had a family doctor *(N = 4,886)*		Applied to a family doctor within the last 12 months *(in person or online/by phone)*			
			Among those who had a family doctor *(N = 2,109)*		Among those who had a family doctor and needed medical assistance *(N = 994)*	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.627***		***p=0.044***		***p=0.364***	
Yes	210	49.4	115	58.4	74	69.8
No	2,130	48.2	959	50.8	580	65.4
Length of working in sex business, years	***p<0.001***		***p=0.253***		***p=0.035***	
≤ 3	539	42.2	229	47.9	113	58.2
4–6	603	49.1	277	52.0	179	66.5
7–10	546	52.0	261	52.8	167	71.7
≥ 11	583	51.7	289	53.9	183	66.3
Experience of using injecting drugs during life	***p<0.001***		***p=0.009***		***p=0.204***	
Yes	84	36.4	48	66.7	28	75.7
No	2,254	49.0	1,026	50.9	625	65.6
NGO client	***p=0.573***		***p<0.001***		***p=0.021***	
Yes	983	49.2	431	46.9	284	61.9
No	1,356	48.3	643	54.9	361	68.9
HIV status	***p=0.397***		***p=0.015***		***p=0.225***	
Positive	68	45.0	39	67.2	15	78.9
Negative	2,298	48.5	1,047	51.0	639	65.6
Principal method of finding clients	***p=0.001***		***p=0.099***		***p=0.204***	
Virtual venues	1,228	50.6	580	51.1	337	63.3
Through intermediaries	492	48.7	231	55.9	154	71.3
Street, road, highways	247	41.2	100	44.8	70	63.1
Entertainment facilities/events	192	48.2	88	53.3	50	72.5
Sauna/massage salon	98	43.4	35	44.9	13	56.5
Other ways	109	48.7	52	54.7	30	69.8

Figure 43. Frequency of visiting a family doctor during the last 12 months (among those who had a family doctor, % among those who answered)



9. HIV/AIDS AWARENESS

Awareness of SWs and SEMs regarding the need to use a condom correctly during every sexual contact remains almost unchanged compared to previous years, reaching 87.3% in 2021 *(Figure 44)*. This indicator is higher among those who had no other employment than sex work (89.1%), had a regular sexual partner (87.5%) and were a client of an NGO (91.7%).

In the 2021 survey, the questions about HIV/AIDS awareness of SWs and SEMs were changed: questions about ways of HIV transmission were replaced by questions about awareness about pre-exposure (PrEP) and post-exposure (PEP) prevention, antiretroviral therapy (ART) and viral load.

To a lesser extent, SWs and SEMs were aware of the possibilities of PrEP and PEP in reducing the chances of HIV infection, as well as about the unknown level of viral load – a third of SWs and SEMs answered these questions correctly *(33.0%, 34.6% and 34.7%, respectively)*, more than half of the participants did not have a clear opinion on these issues *(Figure 45)*.

In total, 14.5% of SWs and SEMs answered all seven questions of the questionnaire correctly. The level of knowledge about HIV is lower among SWs and SEMs under the age of 19, participants with incomplete secondary education or less, with experience of providing sex services for up to three years, and those who are not clients of NGOs *(Table 34)*. Awareness of certain aspects of HIV prevention and treatment differ depending on the socio-demographic characteristics of the participants *(Table 34, Table 35)*.

Figure 44. Share of SWs and SEMs who know that the correct use of a condom during each sexual contact allows you to avoid HIV infection, in 2015–2021 (% among those who answered)

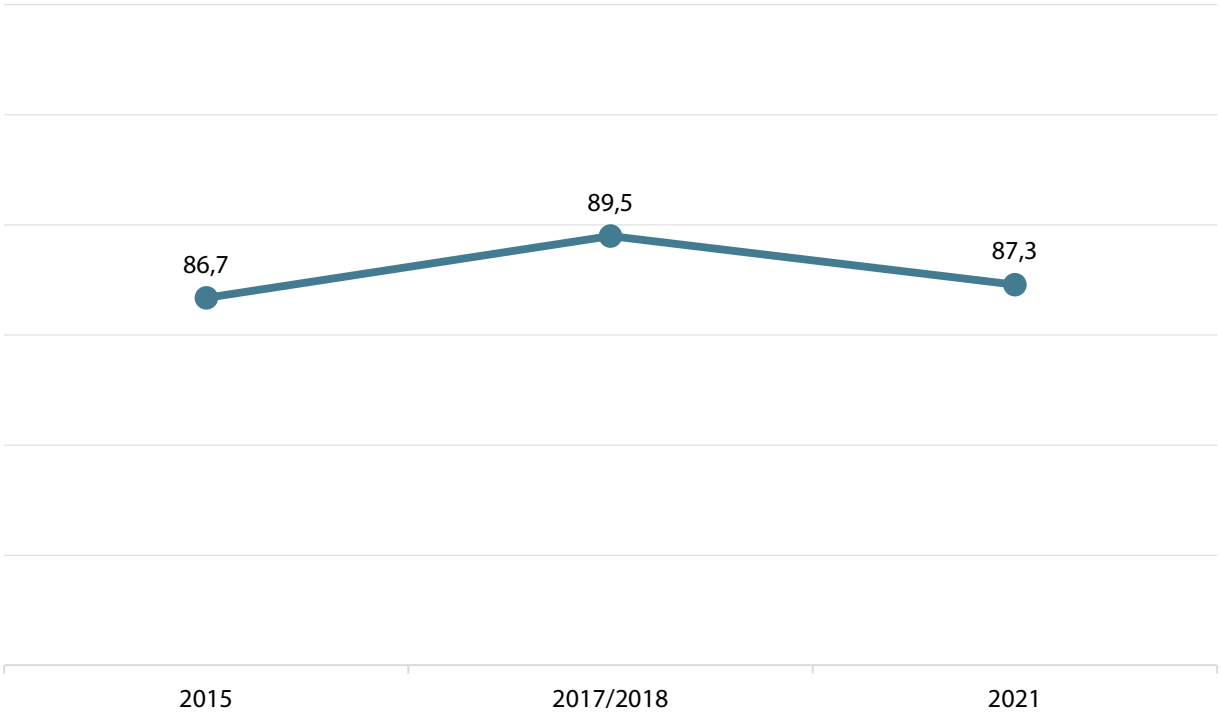


Figure 45. Share of SWs and SEMs who gave correct answers to questions about HIV (N = 4,961, in %)

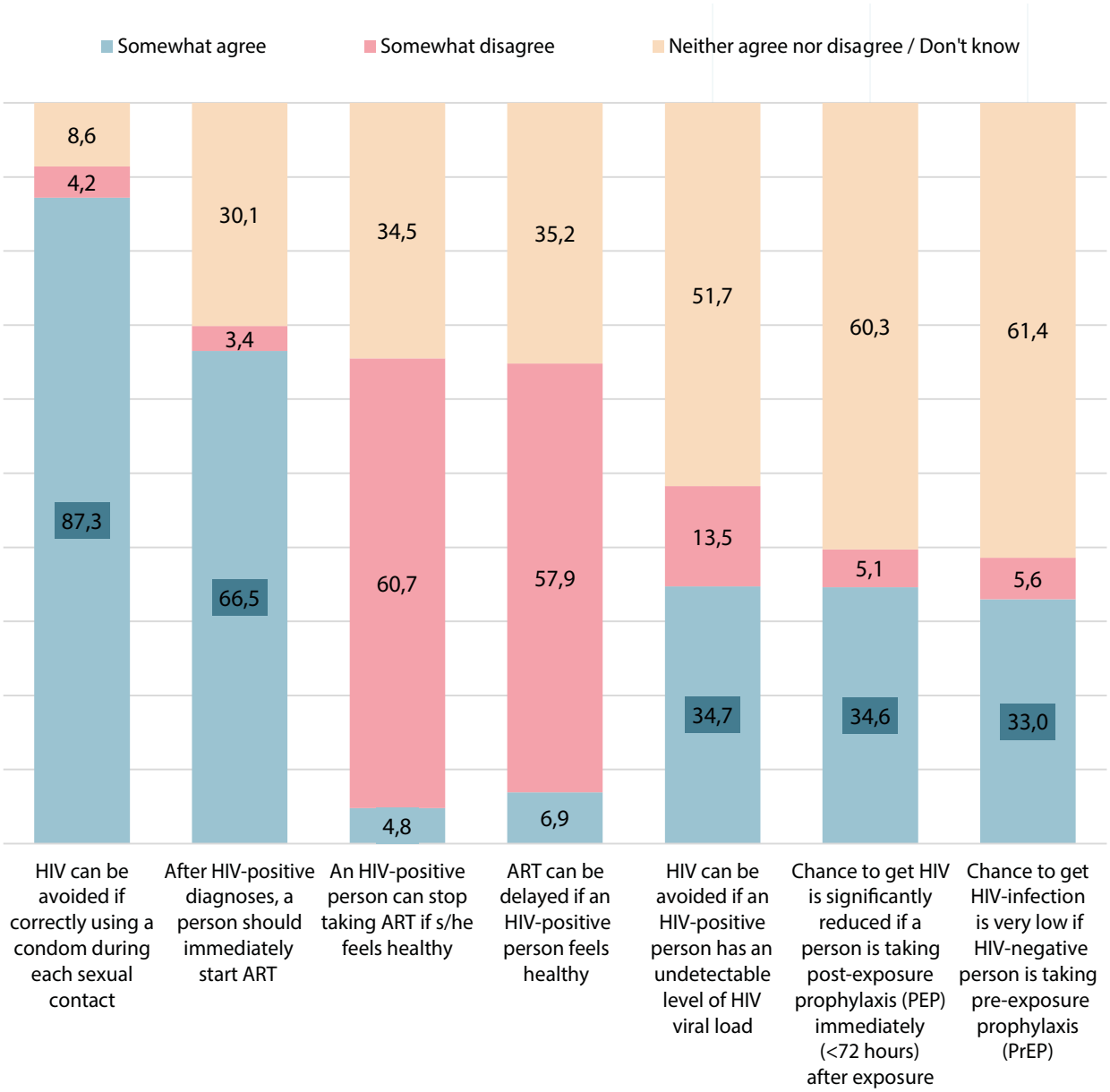


Table 33. *Level of knowledge about HIV among SWs and SEMs, by socio-demographic characteristics (% among those who answered)*

Characteristics	Share of SWs and SEMs who gave a correct answer to all 7 questions	
	n	%
Total (N = 4,961)	***718***	***14.5***
Age (N = 4,961)	***p=0.001***	
14–19	16	7.3
20–24	146	12.5
25–34	382	15.6
≥ 35	175	15.5
Gender (N = 4,961)	***p=0.195***	
Women	677	14.3
Men and trans* people	41	17.4
Education (N = 4,951)	***p<0.001***	
Incomplete secondary or lower	48	7.4
Complete secondary	216	13.1
Secondary professional	228	17.3
Higher *(Bachelor, Master)*	226	16.9
Occupation (N = 4,949)	***p<0.001***	
Sex work only	510	15.9
Full-time or odd jobs	155	14.3
Other *(students, unemployed, etc.)*	52	7.8
Personal monthly income, UAH (N = 3,874)	***p=0.289***	
≤ 15,000	147	14.8
15,001–24,000	111	13.7
24,001–35,000	186	15.9
≥ 35,001	151	16.9
Family status (N = 4,961)	***p=0.003***	
Have a husband/wife or a long-term sexual partner	186	17.3
Have no husband/wife or a long-term sexual partner	532	13.7

Characteristics	Share of SWs and SEMs who gave a correct answer to all 7 questions	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)	***p=0.059***	
Yes	77	17.7
No	641	14.3
Length of working in sex business, years (N = 4,744)	***p<0.001***	
≤ 3	141	10.9
4–6	196	15.7
7–10	163	15.4
≥ 11	192	16.9
Experience of using injecting drugs during life (N = 4,902)	***p=0.007***	
Yes	49	20.6
No	664	14.2
NGO client (N = 4,875)	***p<0.001***	
Yes	401	19.9
No	307	10.7
HIV status (N = 4,961)	***p=0.027***	
Positive	32	20.6
Negative	687	14.3
Principal method of finding clients (N = 4,961)	***p=0.075***	
Virtual venues	342	13.9
Through intermediaries	169	16.2
Street, road, highways	85	14.1
Entertainment facilities/events	55	13.6
Sauna/massage salon	24	10.5
Other ways	43	19.0

Table 34. *Share of SWs and SEMs who are aware of viral load, pre- and post-contact prevention, by socio-demographic characteristics (N = 4,961, % among those who answered)*

Share of SWs and SEMs who gave a correct answer to a statement…	HIV can be avoided if a HIV-positive person has an undetectable viral load		Chances to get infected with HIV are very low, if a HIV-negative person takes a pre-exposure prevention *(PrEP)*		Chances to get infected with HIV are very low, if a person takes post-exposure prevention *(PEP)* immediately *(<72 hours)* after a contact	
	n	%	n	%	n	%
Total	***1,723***	***34.7***	***1,635***	***33.0***	***1,715***	***34.6***
Age	***p<0.001***		***p=0.006***		***p<0.001***	
14–19	58	26.4	53	24.1	48	21.8
20–24	334	28.7	367	31.6	395	34.0
25–34	891	36.4	814	33.2	862	35.2
≥ 35	440	39.0	400	35.5	411	36.4
Gender	***p=0.049***		***p<0.001***		***p=0.080***	
Women	1,635	34.6	1,529	32.4	1,621	34.3
Men and trans* people	88	37.3	106	44.9	95	40.3
Education	***p<0.001***		***p<0.001***		***p<0.001***	
Incomplete secondary or lower	177	27.4	154	23.8	148	22.9
Complete secondary	570	34.5	497	30.1	533	32.3
Secondary professional	497	37.8	485	36.8	491	37.3
Higher *(Bachelor, Master)*	475	35.5	496	37.0	539	40.2
Occupation	***p<0.001***		***p<0.001***		***p<0.001***	
Sex work only	1,173	36.7	1,062	33.2	1,132	35.4
Full-time or odd jobs	356	32.8	394	36.3	395	36.4
Other *(students, unemployed, etc.)*	187	28.1	173	26.0	186	27.9
Personal monthly income, UAH	***p<0.001***		***p<0.001***		***p<0.001***	
≤ 15,000	373	37.5	390	39.2	404	40.6
15,001–24,000	259	32.0	253	31.2	269	33.2
24,001–35,000	417	35.5	395	33.7	422	36.0
≥ 35,001	307	34.2	269	30.0	274	30.5
Family status	***p<0.001***		***p<0.001***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	431	40.0	472	43.8	496	46.1
Have no husband/wife or a long-term sexual partner	1,292	33.3	1,163	30.0	1,219	31.4

Share of SWs and SEMs who gave a correct answer to a statement...	HIV can be avoided if a HIV-positive person has an undetectable viral load		Chances to get infected with HIV are very low, if a HIV-negative person takes a pre-exposure prevention *(PrEP)*		Chances to get infected with HIV are very low, if a person takes post-exposure prevention *(PEP)* immediately *(<72 hours)* after a contact	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.806***		***p<0.001***		***p<0.001***	
Yes	155	35.6	186	42.7	187	43.0
No	1,565	34.9	1,448	32.3	1,525	34.1
Length of working in sex business, years	***p<0.001***		***p<0.001***		***p<0.001***	
≤ 3	367	28.3	354	27.3	368	28.4
4–6	424	33.9	410	32.8	447	35.7
7–10	376	35.5	357	33.7	358	33.8
≥ 11	488	42.9	444	39.0	461	40.5
Experience of using injecting drugs during life	***p=0.020***		***p=0.032***		***p=0.118***	
Yes	99	41.6	97	40.8	97	40.8
No	1,605	34.4	1,521	32.6	1,599	34.3
NGO client	***p<0.001***		***p<0.001***		***p<0.001***	
Yes	864	42.8	788	39.0	859	42.6
No	833	29.2	821	28.7	829	29.0
HIV status	***p<0.001***		***p<0.001***		***p<0.001***	
Positive	73	47.1	78	50.6	75	48.4
Negative	1,650	34.3	1,556	32.4	1,640	34.1
Principal method of finding clients	***p<0.001***		***p=0.121***		***p=0.011***	
Virtual venues	836	34.1	796	32.5	812	33.1
Through intermediaries	381	36.4	346	33.1	396	37.9
Street, road, highways	225	37.4	200	33.2	204	33.9
Entertainment facilities/events	138	34.2	147	36.4	151	37.4
Sauna/massage salon	63	27.5	64	27.9	63	27.5
Other ways	79	35.1	83	36.7	88	38.9

Table 35. *Share of SWs and SEMs who are knowledgeable about ART, by socio-demographic characteristics (N = 4,961, % among those who answered)*

Share of SWs and SEMs who gave a correct answer to the statement…	After HIV diagnosis established, a person should immediately start antiretroviral therapy *(ART)*		ART can be postponed, if a HIV-positive person feels healthy		A HIV-positive person may stop taking ART, if they feel healthy	
	n	%	n	%	n	%
Total	***3,298***	***66.5***	***2,873***	***57.9***	***3,010***	***60.7***
Age	***p<0.001***		***p<0.001***		***p<0.001***	
14–19	116	52.7	92	41.8	98	44.5
20–24	737	63.4	624	53.7	654	56.2
25–34	1,689	68.9	1,472	60.1	1,529	62.4
≥ 35	756	67.0	685	60.8	729	64.6
Gender	***p=0.626***		***p=0.046***		***p=0.023***	
Women	3,134	66.3	2,718	57.5	2,849	60.3
Men and trans* people	163	69.4	155	65.7	162	68.6
Education	***p<0.001***		***p<0.001***		***p<0.001***	
Incomplete secondary or lower	357	55.3	295	45.7	318	49.2
Complete secondary	1,045	63.3	890	53.9	950	57.5
Secondary professional	963	73.2	845	64.2	866	65.8
Higher *(Bachelor, Master)*	926	69.1	837	62.5	870	65.0
Occupation	***p<0.001***		***p<0.001***		***p=0.002***	
Sex work only	2,159	67.5	1,881	58.8	1,971	61.6
Full-time or odd jobs	747	68.9	647	59.7	675	62.3
Other *(students, unemployed, etc.)*	383	57.6	339	50.9	357	53.6
Personal monthly income, UAH	***p<0.001***		***p<0.001***		***p<0.001***	
≤ 15,000	669	67.3	596	60.0	624	62.8
15,001–24,000	563	69.4	485	59.8	519	64.1
24,001–35,000	793	67.6	694	59.2	714	60.9
≥ 35,001	564	62.9	505	56.4	525	58.6
Family status	***p<0.001***		***p<0.001***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	793	73.6	679	63.0	728	67.5
Have no husband/wife or a long-term sexual partner	2,505	64.5	2,194	56.5	2,283	58.8

Share of SWs and SEMs who gave a correct answer to the statement...	After HIV diagnosis established, a person should immediately start antiretroviral therapy *(ART)*		ART can be postponed, if a HIV-positive person feels healthy		A HIV-positive person may stop taking ART, if they feel healthy	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.883***		***p=0.138***		***p=0.080***	
Yes	289	66.3	235	53.9	246	56.5
No	3,005	67.1	2,634	58.8	2,760	61.6
Length of working in sex business, years	***p<0.001***		***p<0.001***		***p<0.001***	
≤ 3	805	62.0	699	53.9	727	56.0
4–6	904	72.3	782	62.6	812	65.0
7–10	701	66.2	621	58.6	646	61.0
≥ 11	757	66.6	660	58.0	710	62.4
Experience of using injecting drugs during life	***p=0.046***		***p<0.001***		***p=0.042***	
Yes	162	68.4	141	59.2	151	63.4
No	3,111	66.7	2,709	58.1	28,34	60.8
NGO client	***p<0.001***		***p<0.001***		***p<0.001***	
Yes	1,533	76.0	1,427	70.7	1,485	73.6
No	1,712	59.9	1,407	49.3	1,480	51.8
HIV status	***p=0.008***		***p<0.001***		***p=0.005***	
Positive	115	74.2	104	67.1	108	70.1
Negative	3,183	66.2	2,769	57.6	2,902	60.4
Principal method of finding clients	***p=0.038***		***p<0.001***		***p=0.025***	
Virtual venues	1,641	66.9	1,464	59.7	1,525	62.2
Through intermediaries	708	67.7	582	55.6	610	58.3
Street, road, highways	400	66.4	348	57.8	374	62.1
Entertainment facilities/events	276	68.3	228	56.3	243	60.0
Sauna/massage salon	129	56.1	121	52.8	128	55.9
Other ways	143	63.3	130	57.5	131	58.0

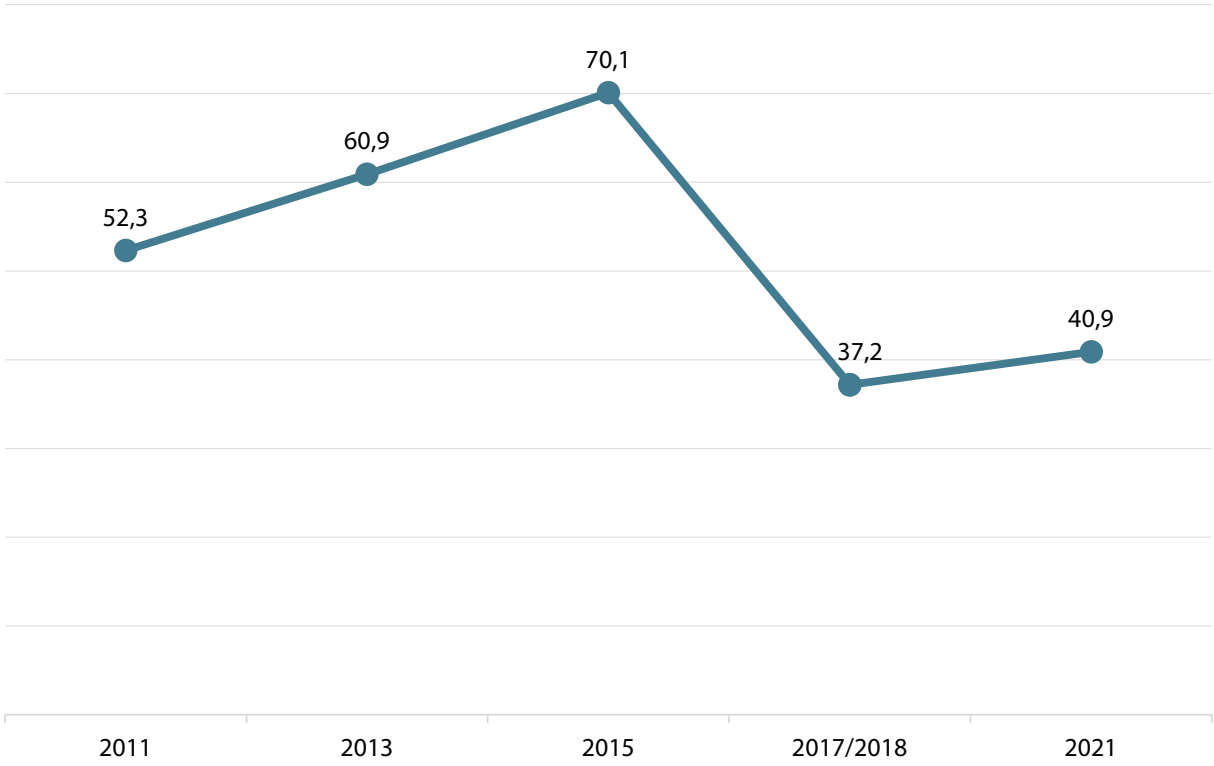
10. ACCESS TO PREVENTION SERVICES

10.1 Using NGO services

In the 2021 study, 40.9% of SWs and SEMs reported that they are clients of HIV-service NGOs and have a card of the organization, this figure is higher compared to 2017 *(Figure 46)*. Among the sex workers and SEMs that indicated that they are clients of NGOs, 70.0% have been using the services of organizations for more than a year, the median duration is two years. The following sub-groups have longer experience of HIV services use: SW-PWID *(3.6 years)*, HIV-positive SWs and those working at street venues *(three years each)*. SWs and SEMs with up to three years of experience in providing sex services were clients of organizations for one year, the rest – for three years. Nearly half (49.8%) of the participants received NGO services in the last year, and 38.5% in the last month. The rate of SW and SEMs coverage with preventive services varies depending on the calculation method *(Figure 47)*.

During the year, almost half of the SWs and SEMs received male condoms, social worker consultations, HIV testing and lubricants, a third received informational materials and tuberculosis screening *(Figure 48)*. Among SWs who practiced injecting drug use in the last year, 42.9% of participants received sterile syringes from NGOs during this time, and 33.6% – in the last 30 days.

Figure 46. *Share of SW and SEMs clients of NGOs engaged in HIV prevention in 2011–2021 (in %)*



The share of users of NGO services increases with the age of the participants, it is higher among sex workers that are with a monthly income of up to UAH 24,000, without experience of migration for the provision of sex services, with HIV-positive status and those who work on the street venues *(Table 36)*. Appeals to NGOs are less common among young SWs and SEMs under the age of 19, with a high income *(more than UAH 35,000 per month)* and those who work in saunas/massage salons. Among the sex workers and SEMs that indicated that they are clients of NGOs, 99.1% received at least one service in the last year and 83.3% – in the last month.

For the vast majority of SWs and SEMs that use NGO services (83.9%), access to HIV services has not changed over the past year; 5.5% of participants indicated improvement, and 6.6% – deterioration of access to preventive services, 4.1% could not assess the changes.

***Figure 47.** Indicator of SWs and SEMs coverage with prevention services (N = 4,961, in %)*

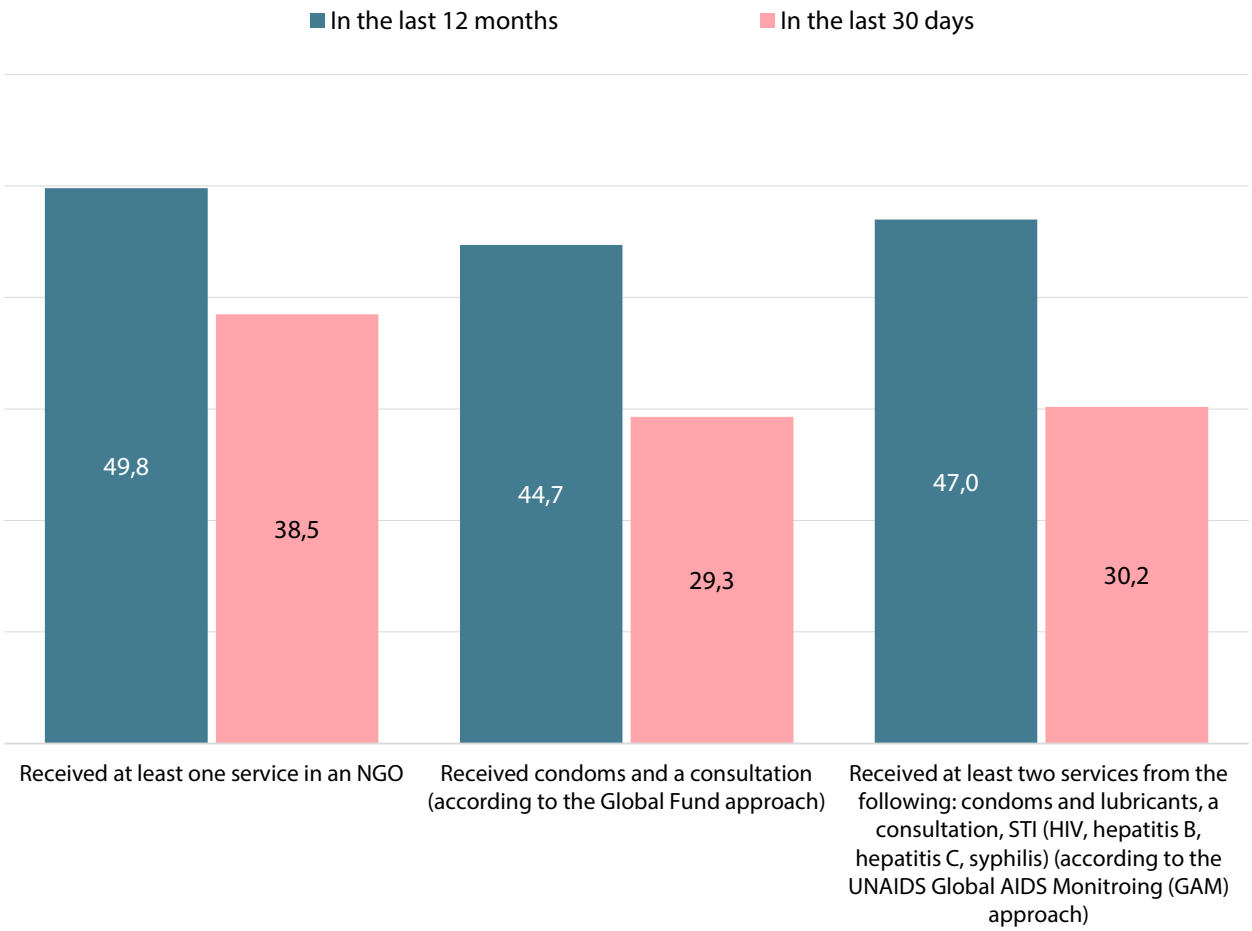


Figure 48. *Coverage of various types of preventive services for the last 12 months and 30 days (N = 4,961, in %)*

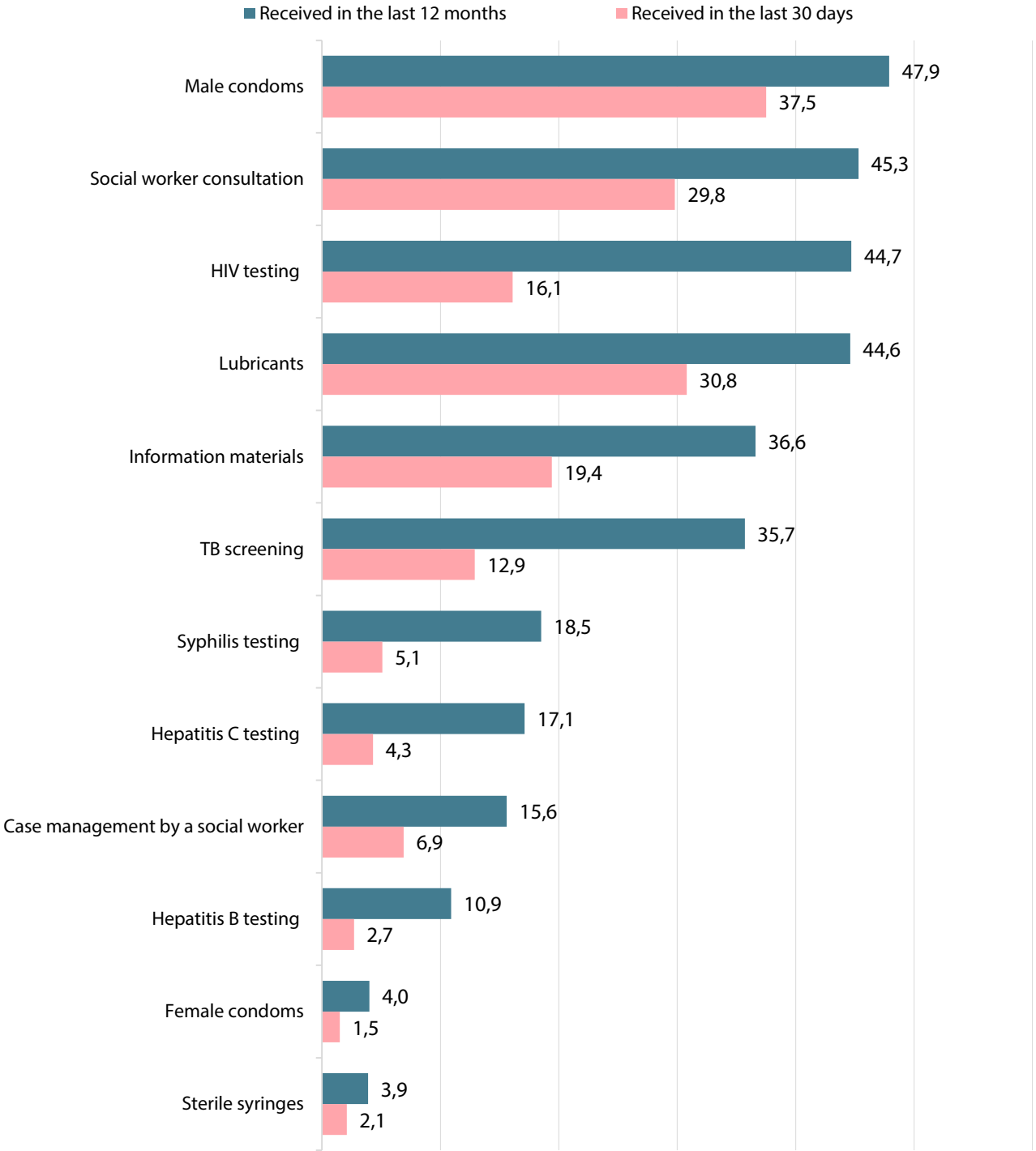


Table 36. *Share of SWs and SEMs who received services from NGOs during the last 12 months and 30 days (N = 4,961, in %)*

Number of SWs and SEMs who received services from NGOs in the last...	12 months		30 days	
	n	%	n	%
Total	***2,472***	***49.8***	***1,910***	***38.5***
Age	***p<0.001***		***p<0.001***	
14–19	63	28.6	49	22.3
20–24	536	46.1	431	37.1
25–34	1,261	51.5	933	38.1
≥ 35	612	54.3	497	44.1
Gender	***p=0.452***		***p=0.614***	
Women	2,363	50.0	1,825	38.6
Men and trans* people	110	46.6	86	36.4
Education	***p=0.002***		***p=0.024***	
Incomplete secondary or lower	289	44.8	242	37.5
Complete secondary	789	47.8	682	41.3
Secondary professional	688	52.3	496	37.7
Higher *(Bachelor, Master)*	702	52.4	486	36.3
Occupation	***p=0.109***		***p<0.001***	
Sex work only	1,633	51.0	1,336	41.8
Full-time or odd jobs	533	49.1	358	33.0
Other *(students, unemployed, etc.)*	303	45.6	214	32.2
Personal monthly income, UAH	***p<0.001***		***p<0.001***	
≤ 15,000	541	54.4	454	45.7
15,001–24,000	495	61.1	439	54.1
24,001–35,000	553	47.1	407	34.7
≥ 35,001	441	49.2	268	29.9
Family status	***p=0.112***		***p=0.586***	
Have a husband/wife or a long-term sexual partner	565	52.5	416	38.6
Have no husband/wife or a long-term sexual partner	1,908	49.1	1,494	38.5

Number of SWs and SEMs who received services from NGOs in the last...	12 months		30 days	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p<0.001***	
Yes	170	39.1	108	24.8
No	2,296	51.3	1,798	40.2
Length of working in sex business, years	***p<0.001***		***p<0.001***	
≤ 3	609	46.9	459	35.4
4–6	679	54.4	504	40.4
7–10	519	49.0	395	37.3
≥ 11	579	50.9	485	42.6
Experience of using injecting drugs during life	***p=0.147***		***p=0.032***	
Yes	130	54.6	108	45.6
No	2,323	49.8	1,786	38.3
NGO client	***p<0.001***		***p<0.001***	
Yes	1,999	99.1	1,681	83.3
No	430	15.1	212	7.4
HIV status	***p<0.001***		***p=0.002***	
Positive	94	60.6	74	47.7
Negative	2,379	49.5	1,837	38.2
Principal method of finding clients	***p<0.001***		***p<0.001***	
Virtual venues	1,301	53.1	935	38.1
Through intermediaries	472	45.1	397	38.0
Street, road, highways	374	62.0	312	51.8
Entertainment facilities/events	173	42.7	158	39.0
Sauna/massage salon	59	25.8	41	17.9
Other ways	94	41.6	67	29.6

10.2 Buying condoms on their own

Nearly one-third (29.5%) of SWs and SEMs felt the need for condoms in the last month, 60.5% of participants bought them on their own during this period. Mostly these are SWs and SEMs who combined sex work with other employment, with an income of over UAH 24,000, had a regular sexual partner and experience of migration to provide sex services, work in saunas/massage salons or through intermediaries *(Table 37)*. Among SWs and SEMs who are clients of NGOs and, accordingly, had access to free condoms, 29.2% bought them in the last 30 days, and among non-clients – 83.6%.

The median number of condoms purchased by SWs and SEMs on their own in the past month was 30 *(25th–75th percentiles: 20–48)*. The median cost of one condom is UAH 17 *(25th–75th percentiles: UAH 12–25)*. Overall, the median cost of condoms over the past 30 days was UAH 500 *(25th–75th percentiles: UAH 300–700)*.

Almost 10% (9.9%) of SWs and SEMs reported that during the last month there were cases when they could not buy condoms, even though they were needed. The most common reasons are closed pharmacies or shops (36.7%) and unwillingness to go and buy condoms (31.1%) *(Figure 49)*.

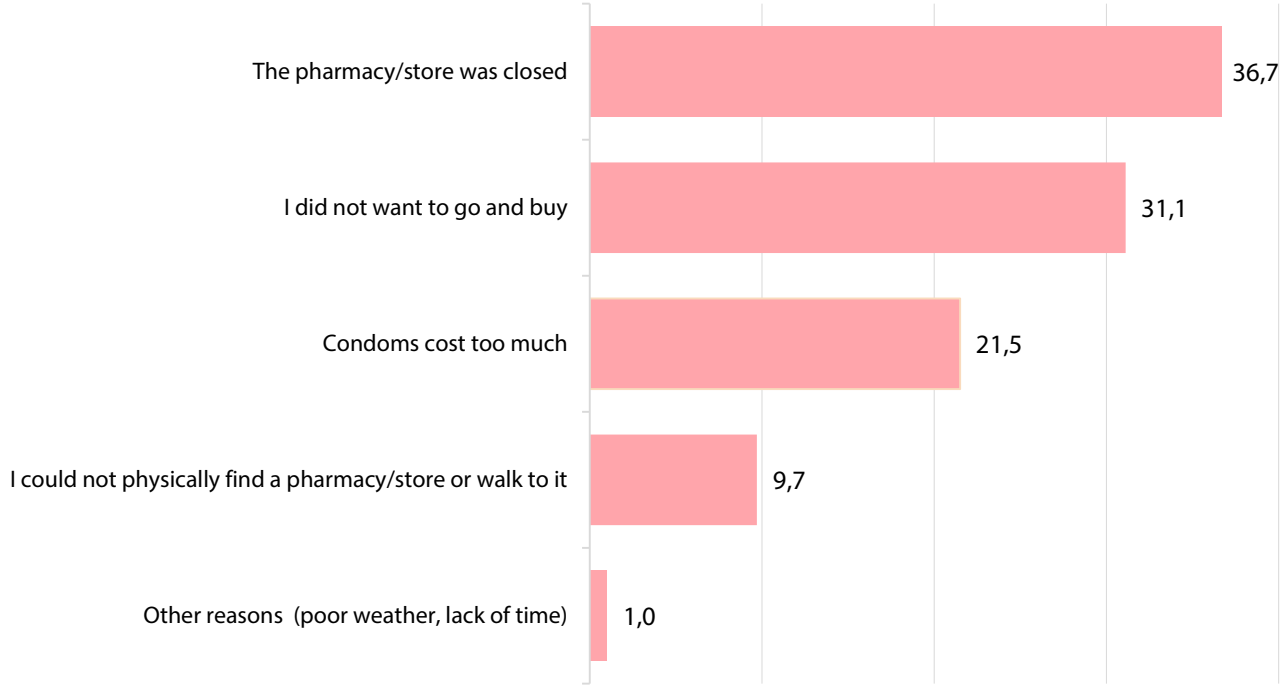
Table 37. *Share of SWs and SEMs who bought condoms on their own during the last 30 days, by socio-demographic characteristics (% among those who answered)*

Characteristics	Bought condoms *(N = 4,749)*		Number of condoms bought *(N = 2,871, among those who bought)*	
	n	%	median	IQR
Total	***2,871***	***60.5***	***30***	***20-48***
Age	***p=0.006***			
14–19	141	68.1	25	20-40
20–24	669	59.5	30	20-40
25–34	1,445	61.8	30	20-48
≥ 35	616	57.1	30	20-40
Gender	***p=0.119***			
Women	2,727	60.2	30	20-40
Men and trans* people	144	65.5	24	12-30
Education	***p=0.107***			
Incomplete secondary or lower	383	63.0	25	20-40
Complete secondary	913	58.2	30	20-54

Characteristics	Bought condoms *(N = 4,749)*		Number of condoms bought *(N = 2,871, among those who bought)*	
	n	%	median	IQR
Secondary professional	764	60.6	30	20-48
Higher *(Bachelor, Master)*	807	61.9	30	20-40
Occupation	***p<0.001***			
Sex work only	1,786	58.4	30	20-60
Full-time or odd jobs	675	64.3	24	15-30
Other *(students, unemployed, etc.)*	402	63.6	24	20-38
Personal monthly income, UAH	***p<0.001***			
≤ 15,000	527	54.7	20	12-30
15,001–24,000	384	49.0	30	20-40
24,001–35,000	729	64.6	30	20-44
≥ 35,001	556	64.6	30	20-50
Family status	***p<0.001***			
Have a husband/wife or a long-term sexual partner	684	65.6	25	20-40
Have no husband/wife or a long-term sexual partner	2,187	59.0	30	20-45
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***			
Yes	295	70.9	30	20-40
No	2,539	59.2	30	20-40
Length of working in sex business, years	***p=0.178***			
≤ 3	758	60.3	25	20-36
4–6	688	57.4	30	20-40
7–10	632	62.0	30	20-48
≥ 11	647	60.1	26	20-40
Experience of using injecting drugs during life	***p=0.260***			
Yes	126	56.8	25	12-30
No	2,713	60.5	30	20-40

Characteristics	Bought condoms (N = 4,749)		Number of condoms bought (N = 2,871, among those who bought)	
	n	%	median	IQR
NGO client	***p<0.001***			
Yes	580	29.2	24	12-36
No	2,250	83.6	30	20-45
HIV status	***p=0.129***			
Positive	80	54.4	25	20-40
Negative	2,791	60.6	30	20-40
Principal method of finding clients	***p<0.001***			
Virtual venues	1,368	58.7	30	20-40
Through intermediaries	672	67.1	30	20-50
Street, road, highways	263	45.6	25	19-40
Entertainment facilities/events	239	60.4	30	20-48
Sauna/massage salon	187	83.9	20	20-40
Other ways	141	64.1	30	14-49

Figure 49. *Reasons for cases when SWs and SEMs could not buy condoms if they needed them in the last 30 days (N = 483, among those who had such cases, in %)*



10.3 Awareness and readiness to PrEP and PEP

A third of SWs and SEMs (33.1%) have heard about pre-exposure prevention (PrEP) as a method to protect oneself from HIV infection. The higher level of awareness was observed among SWs aged over 25, men and trans* people, participants with a higher level of education, an income of more than UAH 15,000, and those who have a regular sexual partner. SWs with experience of migration to provide sex services, longer work experience, NGO clients and those working through intermediaries showed a higher level of awareness about PrEP *(Table 38)*.

Among HIV-negative participants, a third (32.9%) had heard about PrEP, and only 2.7% had experience of taking the medications during the last year. SWs and SEMs without such experience generally do not have an unequivocal opinion about their readiness to accept PrEP in accordance with the conditions for obtaining it *(Figure 50)*.

Almost 5.0% (4.8%) SW and SEMs can become potential participants in the PrEP program *(Figure 51)*. To calculate this indicator, the desire to receive the service and the criteria for prescribing PrEP in accordance with the Health Care Standard for pre-exposure and post-exposure drug prevention of HIV infection of the Ministry of Health of Ukraine[13] were taken into account.

The indicator of willingness to take PrEP increases with age *(from 3.2% among SWs younger than 19 years to 7.2% among participants over 35 years old)* and experience of providing sex services *(from 3.6% among participants with experience up to three years to 6.6% among those who have been providing services for more than 11 years)*. SWs who had other full-time or part-time work, an income of up to UAH 15,000, a regular sexual partner, experience of migration in connection with sex work and injecting drug use showed a greater willingness to participate in the prevention program *(Table 39)*.

34.0% of SWs and SEMs heard about post-exposure prevention (PEP), mostly participants over 25 years old, with a higher education level, the presence of a regular sexual partner, experience of migration to provide sex services, experience of providing them for three years or more, clients of NGOs and those looking for clients through intermediaries *(Table 40)*. 57.8% of HIV-negative SWs and SEMs have never heard of the existence of PEP.

About half of HIV-negative SWs and SEMs agreed to certain conditions for receiving PEP, with the most critical attitude towards obtaining medications at the AIDS Center *(Figure 52)*. In general, a third of HIV-negative participants (31.8%) showed willingness and readiness to take PEP if necessary, adhering to all the conditions of prescription and monitoring of admission *(Table 41)*. A greater share of those unprepared for this type of prevention was observed among SWs and SEMs who combine sex work with other employment, do not have a regular partner, have been providing sex services for more than 11 years, do not use the services of NGOs, and those who work in saunas/massage salons or on the street venues.

13 *Ministry of Health of Ukraine. Public health standards in PrEP and PEP HIV prevention, 2021 (https://phc.org.ua/sites/default/files/users/user90/28648-dn_189_05_02_2021_dod.pdf)*

Table 38. *Awareness of PrEP, by socio-demographic characteristics (% among those who answered)*

Characteristics	Heard of PrEP		Did not hear of PrEP		Do not remember/ difficult to answer	
	n	%	n	%	n	%
Total (N = 4,923)	***1,630***	***33.1***	***2952***	***60.0***	***342***	***6.9***
Age (N = 4,923)			***p<0.001***			
14–19	32	14.5	172	78.2	16	7.3
20–24	344	29.7	753	65.0	61	5.3
25–34	890	36.5	1,342	55.1	204	8.4
≥ 35	364	32.8	685	61.7	61	5.5
Gender (N = 4,923)			***p<0.001***			
Women	1,513	32.3	2,849	60.8	327	7.0
Men and trans* people	117	49.8	103	43.8	15	6.4
Education (N = 4,913)			***p<0.001***			
Incomplete secondary or lower	142	22.4	448	70.6	45	7.1
Complete secondary	496	30.2	1,042	63.5	102	6.2
Secondary professional	473	36.1	726	55.5	110	8.4
Higher *(Bachelor, Master)*	513	38.6	732	55.1	84	6.3
Occupation (N = 4,913)			***p<0.001***			
Sex work only	1,090	34.2	1,879	59.0	217	6.8
Full-time or odd jobs	376	35.0	627	58.3	72	6.7
Other *(students, unemployed, etc.)*	159	24.4	441	67.6	52	8.0
Personal monthly income, UAH (N = 3,847)			***p<0.001***			
≤ 15,000	302	30.8	639	65.2	39	4.0
15,001–24,000	270	33.6	474	59.0	60	7.5
24,001–35,000	423	36.2	671	57.5	73	6.3
≥ 35,001	290	32.4	531	59.3	75	8.4
Family status (N = 4,923)			***p<0.001***			
Have a husband/wife or a long-term sexual partner	457	42.6	549	51.2	66	6.2
Have no husband/wife or a long-term sexual partner	1,173	30.5	2,402	62.4	276	7.2

Characteristics	Heard of PrEP		Did not hear of PrEP		Do not remember/ difficult to answer	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,879)	***p<0.001***					
Yes	191	44.0	204	47.0	39	9.0
No	1,436	32.3	2,708	60.9	301	6.8
Length of working in sex business, years (N = 4,711)	***p<0.001***					
≤ 3	338	26.2	868	67.2	85	6.6
4–6	445	35.7	707	56.7	95	7.6
7–10	358	34.0	620	58.9	74	7.0
≥ 11	417	37.2	645	57.5	59	5.3
Experience of using injecting drugs during life (N = 4,875)	***p=0.771***					
Yes	80	34.3	135	57.9	18	7.7
No	1,538	33.1	2,787	60.0	317	6.8
NGO client (N = 4,843)	***p<0.001***					
Yes	922	46.0	917	45.7	166	8.3
No	689	24.3	1,989	70.1	160	5.6
HIV status (N = 4,923)	***p=0.104***					
Positive	61	41.2	78	52.7	9	6.1
Negative	1,569	32.9	2,874	60.2	333	7.0
Principal method of finding clients (N = 4,923)	***p<0.001***					
Virtual venues	817	33.6	1,436	59.1	178	7.3
Through intermediaries	404	38.8	573	55.0	64	6.1
Street, road, highways	158	26.5	388	65.1	50	8.4
Entertainment facilities/events	131	32.7	241	60.1	29	7.2
Sauna/massage salon	40	17.5	179	78.2	10	4.4
Other ways	80	35.6	134	59.6	11	4.9

Figure 50. *Share of SWs and SEMs who would agree to take PrEP under different conditions of its receipt (N = 4,676, among HIV-negative people who did not take PrEP during the last year, % among those who answered)*

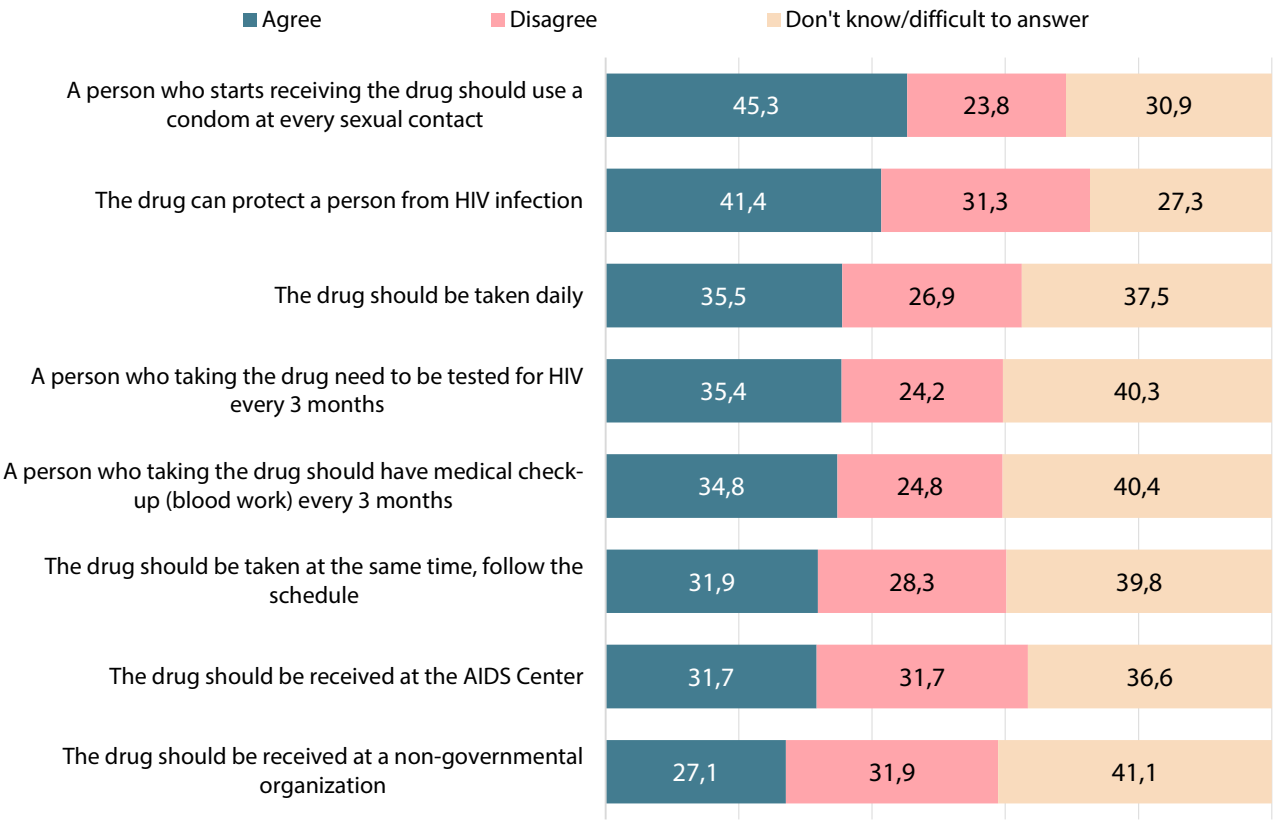
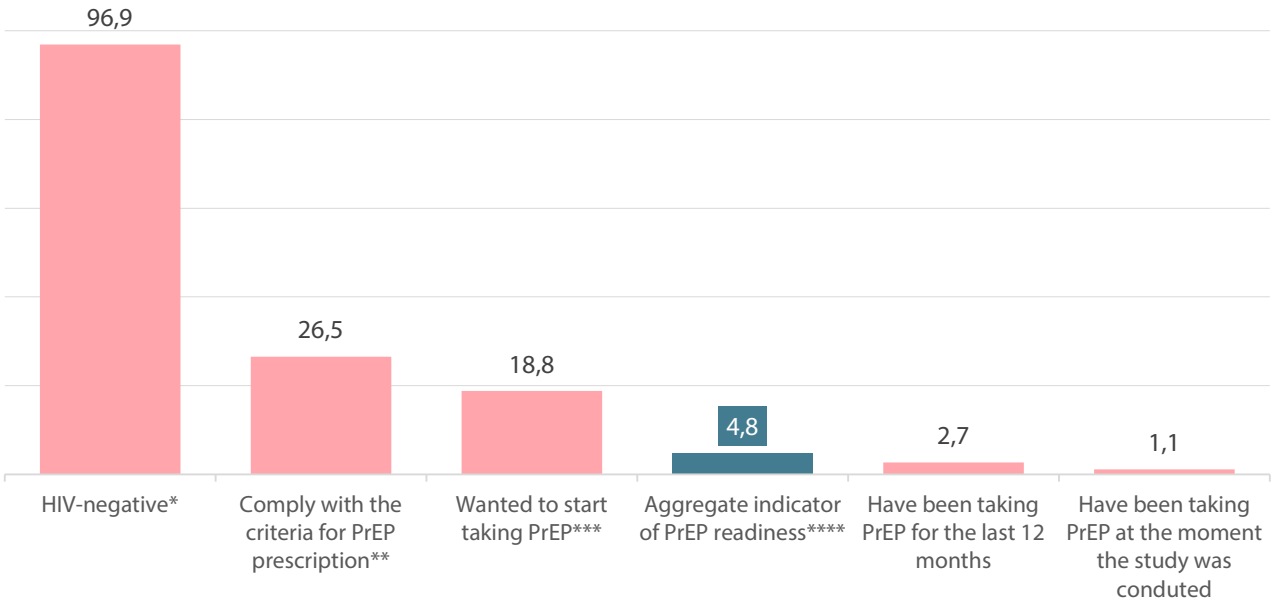


Figure 51. *PrEP eligibility and willingness cascade (among HIV-negative respondents, in %)*



* Received a negative HIV test result within this study
** Comply with the criteria for PrEP prescription: have HIV-negative status, had unsafe vaginal or anal sex with more than one partner in the last 30 days OR had an HIV-positive client in the last 30 days OR had an HIV-positive permanent sexual partner
*** Mentioned that wanted to start taking PrEP and agreed with all the conditions of PrEP treatment and treatment monitoring
**** Aggregate indicator of PrEP readiness – share of HIV-negative SW who comply with the criteria for PrEP prescription and wanted to start taking PrEP

Table 39. *Indicator of willingness to take PrEP, by socio-demographic characteristics (N = 4,961, in %)*

Characteristics	Aggregate indicator readiness and of willingness to PrEP	
	n	%
Total (N = 4,961)	***239***	***4.8***
Age (N = 4,961)	***p<0.001***	
14–19	7	3.2
20–24	40	3.4
25–34	110	4.5
≥ 35	81	7.2
Gender (N = 4,961)	***p=0.083***	
Women	222	4.7
Men and trans* people	17	7.2
Education (N = 4,951)	***p=0.033***	
Incomplete secondary or lower	30	4.7
Complete secondary	61	3.7
Secondary professional	67	5.1
Higher *(Bachelor, Master)*	80	6.0
Occupation (N = 4,951)	***p=0.003***	
Sex work only	142	4.4
Full-time or odd jobs	73	6.7
Other *(students, unemployed, etc.)*	24	3.6
Personal monthly income, UAH (N = 3,874)	***p<0.001***	
≤ 15,000	73	7.3
15,001–24,000	28	3.5
24,001–35,000	50	4.3
≥ 35,001	31	3.5
Family status (N = 4,961)	***p<0.001***	
Have a husband/wife or a long-term sexual partner	129	12.0
Have no husband/wife or a long-term sexual partner	109	2.8

Characteristics	Aggregate indicator readiness and of willingness to PrEP	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)	***p<0.001***	
Yes	38	8.7
No	200	4.5
Length of working in sex business, years (N = 4,746)	***p=0.004***	
≤ 3	47	3.6
4–6	53	4.2
7–10	56	5.3
≥ 11	75	6.6
Experience of using injecting drugs during life (N = 4,903)	***p=0.003***	
Yes	21	8.8
No	216	4.6
NGO client (N = 4,873)	***p=0.021***	
Yes	81	4.0
No	156	5.5
Principal method of finding clients (N = 4,961)	***p=0.445***	
Virtual venues	112	4.6
Through intermediaries	58	5.5
Street, road, highways	33	5.5
Entertainment facilities/events	16	4.0
Sauna/massage salon	7	3.1
Other ways	13	5.8

Table 40. *Awareness of PEP, by socio-demographic characteristics (% among those who answered)*

Characteristics	Heard of PEP		Did not hear of PEP		Do not remember/ difficult to answer	
	n	%	n	%	n	%
Total (N = 4,870)	***1,654***	***34.0***	***2,800***	***57.5***	***416***	***8.5***
Age (N = 4,870)	***p<0.001***					
14–19	37	17.1	168	77.8	11	5.1
20–24	339	29.7	728	63.7	75	6.6
25–34	896	37.1	1,286	53.3	232	9.6
≥ 35	382	34.8	617	56.2	98	8.9
Gender (N = 4,870)	***p=0.023***					
Women	1,556	33.6	2,680	57.8	401	8.6
Men and trans* people	98	42.1	120	51.5	15	6.4
Education (N = 4,862)	***p<0.001***					
Incomplete secondary or lower	155	24.7	432	68.8	41	6.5
Complete secondary	454	28.1	1,018	63.0	143	8.9
Secondary professional	491	37.7	686	52.6	126	9.7
Higher *(Bachelor, Master)*	551	41.9	659	50.1	106	8.1
Occupation (N = 4,857)	***p=0.278***					
Sex work only	1,080	34.3	1,814	57.6	254	8.1
Full-time or odd jobs	367	34.5	602	56.5	96	9.0
Other *(students, unemployed, etc.)*	200	31.1	379	58.9	65	10.1
Personal monthly income, UAH (N = 3,822)	***p=0.010***					
≤ 15,000	319	32.8	589	60.5	65	6.7
15,001–24,000	257	32.0	482	60.0	64	8.0
24,001–35,000	426	36.8	644	55.6	89	7.7
≥ 35,001	311	35.1	484	54.6	92	10.4
Family status (N = 4,870)	***p<0.001***					
Have a husband/wife or a long-term sexual partner	466	43.9	524	49.3	72	6.8
Have no husband/wife or a long-term sexual partner	1,188	31.2	2276	59.8	344	9.0

Characteristics	Heard of PEP		Did not hear of PEP		Do not remember/ difficult to answer	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,827)	***p<0.001***					
Yes	182	42.3	211	49.1	37	8.6
No	1,469	33.4	2,553	58.1	375	8.5
Length of working in sex business, years (N = 4,662)	***p<0.001***					
≤ 3	336	26.3	836	65.4	106	8.3
4–6	454	36.8	667	54.1	113	9.2
7–10	360	34.5	607	58.1	77	7.4
≥ 11	423	38.2	592	53.5	91	8.2
Experience of using injecting drugs during life (N = 4,832)	***p=0.332***					
Yes	88	38.1	122	52.8	21	9.1
No	1,554	33.8	2,651	57.7	387	8.4
NGO client (N = 4,794)	***p<0.001***					
Yes	957	47.9	866	43.4	173	8.7
No	670	23.9	1,903	68.0	225	8.0
HIV status (N = 4,870)	***p=0.023***					
Positive	65	44.5	71	48.6	10	6.8
Negative	1,589	33.6	2729	57.8	406	8.6
Principal method of finding clients (N = 4,870)	***p<0.001***					
Virtual venues	802	33.2	1,383	57.3	230	9.5
Through intermediaries	442	42.5	537	51.6	61	5.9
Street, road, highways	156	27.0	346	59.9	76	13.1
Entertainment facilities/events	127	32.4	240	61.2	25	6.4
Sauna/massage salon	49	21.6	163	71.8	15	6.6
Other ways	78	35.8	131	60.1	9	4.1

Figure 52. *Share of SWs and SEMs who would agree to take PEP under various conditions of its receipt (N = 4,676, among HIV-negative, % among those who answered)*

Table 41. *Indicator of readiness to receive PEP, by socio-demographic characteristics (N = 4,806, among HIV-negative, in %)*

Characteristics	Indicator of readiness to PEP, if necessary	
	n	%
Total (N = 4,806)	***1,530***	***31.8***
Age (N = 4,806)	***p=0.812***	
14–19	64	29.1
20–24	364	31.5
25–34	767	32.0
≥ 35	335	32.3
Gender (N = 4,806)	***p=0.802***	
Women	1,456	31.8
Men and trans* people	74	32.6
Education (N = 4,797)	***p=0.032***	
Incomplete secondary or lower	184	30.2
Complete secondary	469	29.5
Secondary professional	427	33.4
Higher *(Bachelor, Master)*	449	34.0
Occupation (N = 4,795)	***p<0.001***	
Sex work only	1,062	34.1
Full-time or odd jobs	308	29.6
Other *(students. unemployed. etc.)*	156	24.3
Personal monthly income, UAH (N = 3,759)	***p=0.121***	
≤ 15,000	298	32.1
15,001–24,000	235	29.7
24,001–35,000	397	34.5
≥ 35,001	273	30.7
Family status (N = 4,806)	***p<0.001***	
Have a husband/wife or a long-term sexual partner	383	37.3
Have no husband/wife or a long-term sexual partner	1,147	30.4

Characteristics	Indicator of readiness to PEP, if necessary	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,763)	***p=0.924***	
Yes	138	32.2
No	1,388	32.0
Length of working in sex business, years (N = 4,594)	***p<0.001***	
≤ 3	413	32.1
4–6	445	36.0
7–10	328	32.0
≥ 11	276	26.4
Experience of using injecting drugs during life (N = 4,755)	***p=0.032***	
Yes	71	39.4
No	1,456	31.8
NGO client (N = 4,725)	***p<0.001***	
Yes	747	38.1
No	759	27.4
Principal method of finding clients (N = 4,806)	***p<0.001***	
Virtual venues	718	30.0
Through intermediaries	428	42.0
Street, road, highways	152	27.0
Entertainment facilities/events	122	31.2
Sauna/massage salon	39	18.2
Other ways	71	31.8

11. HIV TESTING COVERAGE

11.1 Experience of HIV testing

Compared to the previous round of the study, the share of SWs and SEMs who had experience testing for HIV infection during their lifetime increased *(from 76.3% to 86.5%)*. The share of those who were tested for HIV in the last 12 months and received a result remained almost unchanged at 62.8% compared to 59.8% in 2017 ***(Figure 53)***.

In general, the majority of SWs and SEMs who participated in the study believed that they would be able to easily get tested for HIV in the near future (90.0%) and knew where to go for it (86.9%) ***(Figure 54)***. Among those who knew about testing sites and considered them available, 93.8% had been tested for HIV during their lifetime *(or 86.5% of the total)*. 74.0% of SWs and SEMs who had experienced HIV testing during their lifetime had been tested in the last 12 months *(or 64.0% of the total)*. Among HIV-positive SWs who did not know their status, 92.5% took an HIV test during their lifetime, 62.3% – in the last 12 months. and got the result. The rate of HIV testing among youth according to the UNAIDS Global AIDS Monitoring (GAM) methodology, which takes into account the experience of testing in the last 12 months and receiving a negative result or awareness of HIV-positive people about their status, was 64.2%.

A lower level of coverage of HIV testing during the last year was observed among SWs and SEMs under the age of 19, with a low level of education, those who combined sex work with other employment, had a low level of income, less than three or more than 11 years of experience in providing sex services, and worked in saunas or massage parlors ***(Table 42)***. Almost half of SWs with injection drug use experience (55.7%) were not tested for HIV in the last 12 months. A large difference in testing coverage was observed depending on the status of the client of preventive programs – 89.7% of clients took an HIV test in the last year against 44.2% of tested non-clients.

Almost half of the SWs and SEMs who tested for HIV during the last year and received a result (49.2%) did a screening test in non-governmental organizations, mobile clinics or with the help of a social/outreach worker ***(Figure 55)***. Repeat, confirmatory HIV testings in half of the cases were also provided in the NGO network (50.5%).

The main reasons for avoiding HIV testing among SWs and SEMs who had never been tested were confident in the safety of their sexual behavior (34.6%) and unwillingness to take a test (29.2%) ***(Figure 56)***.

Figure 53. Coverage with HIV testing in 2011–2021 (in %)

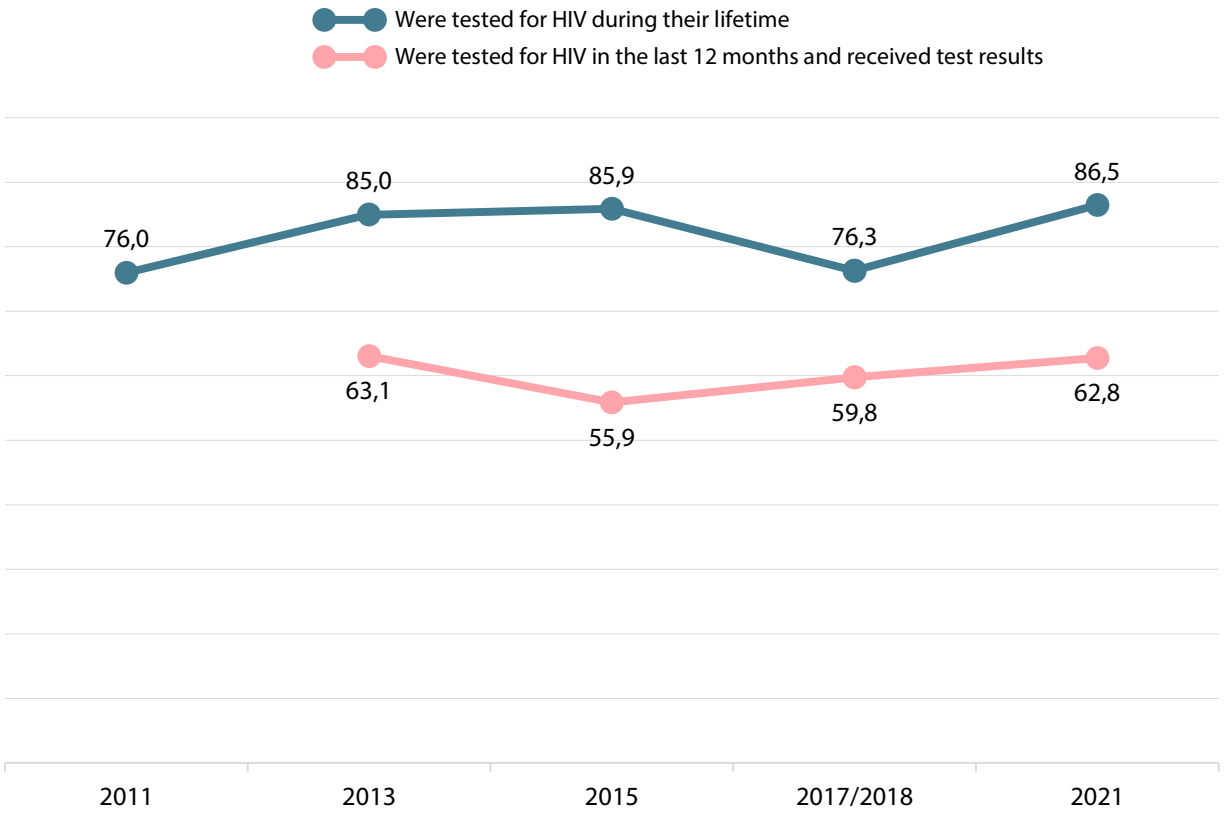


Figure 54. HIV testing coverage (N = 4,961, in %)

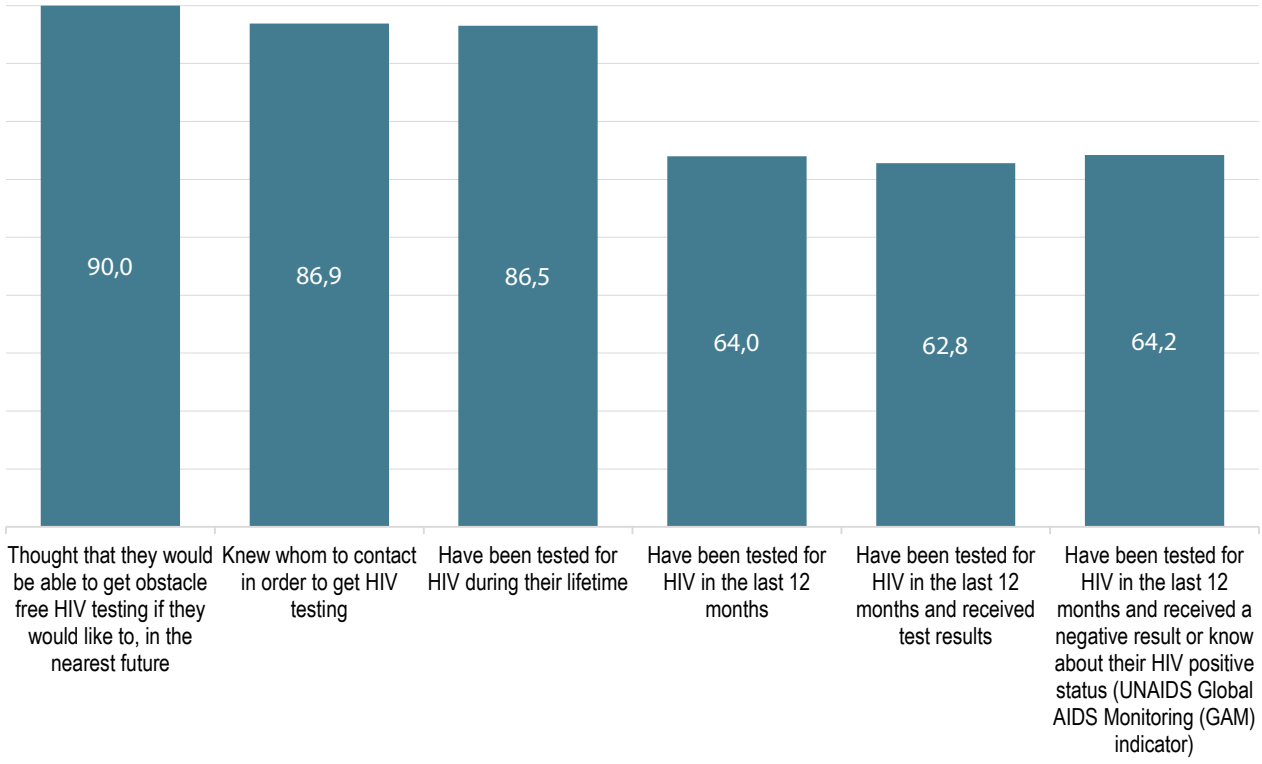


Table 42. *Share of SWs and SEMs who underwent HIV testing during the last 12 months and received its result, by socio-demographic characteristics (in %)*

Characteristics	Tested		Not tested	
	n	%	n	%
Total (N = 4,961)	***3,114***	***62.8***	***1,847***	***37.2***
Age (N = 4,961)	***p<0.001***			
14–19	93	42.3	127	57.7
20–24	738	63.4	426	36.6
25–34	1,597	65.2	853	34.8
≥ 35	686	60.8	442	39.2
Gender (N = 4,961)	***p=0.768***			
Women	2,968	62.8	1,757	37.2
Men and trans* people	146	61.9	90	38.1
Education (N = 4,951)	***p<0.001***			
Incomplete secondary or lower	359	55.7	286	44.3
Complete secondary	971	58.8	680	41.2
Secondary professional	863	65.6	453	34.4
Higher *(Bachelor, Master)*	918	68.6	421	31.4
Occupation (N = 4,949)	***p<0.001***			
Sex work only	2,127	66.5	1073	33.5
Full-time or odd jobs	612	56.5	472	43.5
Other *(students, unemployed. etc.)*	369	55.5	296	44.5
Personal monthly income, UAH (N = 3,873)	***p<0.001***			
≤ 15,000	566	56.9	428	43.1
15,001–24,000	551	68.0	259	32.0
24,001–35,000	780	66.5	393	33.5
≥ 35,001	646	72.1	250	27.9
Family status (N = 4,961)	***p=0.704***			
Have a husband/wife or a long-term sexual partner	682	63.3	396	36.7
Have no husband/wife or a long-term sexual partner	2,432	62.6	1,451	37.4

Characteristics	Tested		Not tested	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,913)	***p=0.418***			
Yes	265	60.9	170	39.1
No	2,816	62.9	1,662	37.1
Length of working in sex business, years (N = 4,746)	***p<0.001***			
≤ 3	816	62.8	483	37.2
4–6	853	68.2	397	31.8
7–10	673	63.6	386	36.4
≥ 11	677	59.5	461	40.5
Experience of using injecting drugs during life (N = 4,901)	***p<0.001***			
Yes	105	44.3	132	55.7
No	2,990	64.1	1,674	35.9
NGO client (N = 4,874)	***p<0.001***			
Yes	1810	89.7	207	10.3
No	1,264	44.2	1,593	55.8
HIV status (N = 4,961)	***p<0.001***			
Positive	67	43.2	88	56.8
Negative	3,047	63.4	1,759	36.6
Principal method of finding clients (N = 4,961)	***p<0.001***			
Virtual venues	1,642	66.9	811	33.1
Through intermediaries	694	66.3	352	33.7
Street, road, highways	341	56.6	261	43.4
Entertainment facilities/events	225	55.7	179	44.3
Sauna/massage salon	92	40.0	138	60.0
Other ways	119	52.7	107	47.3

Figure 55. Organizations and institutions where SWs and SEMs underwent HIV screening and repeat tests (% among those who answered)

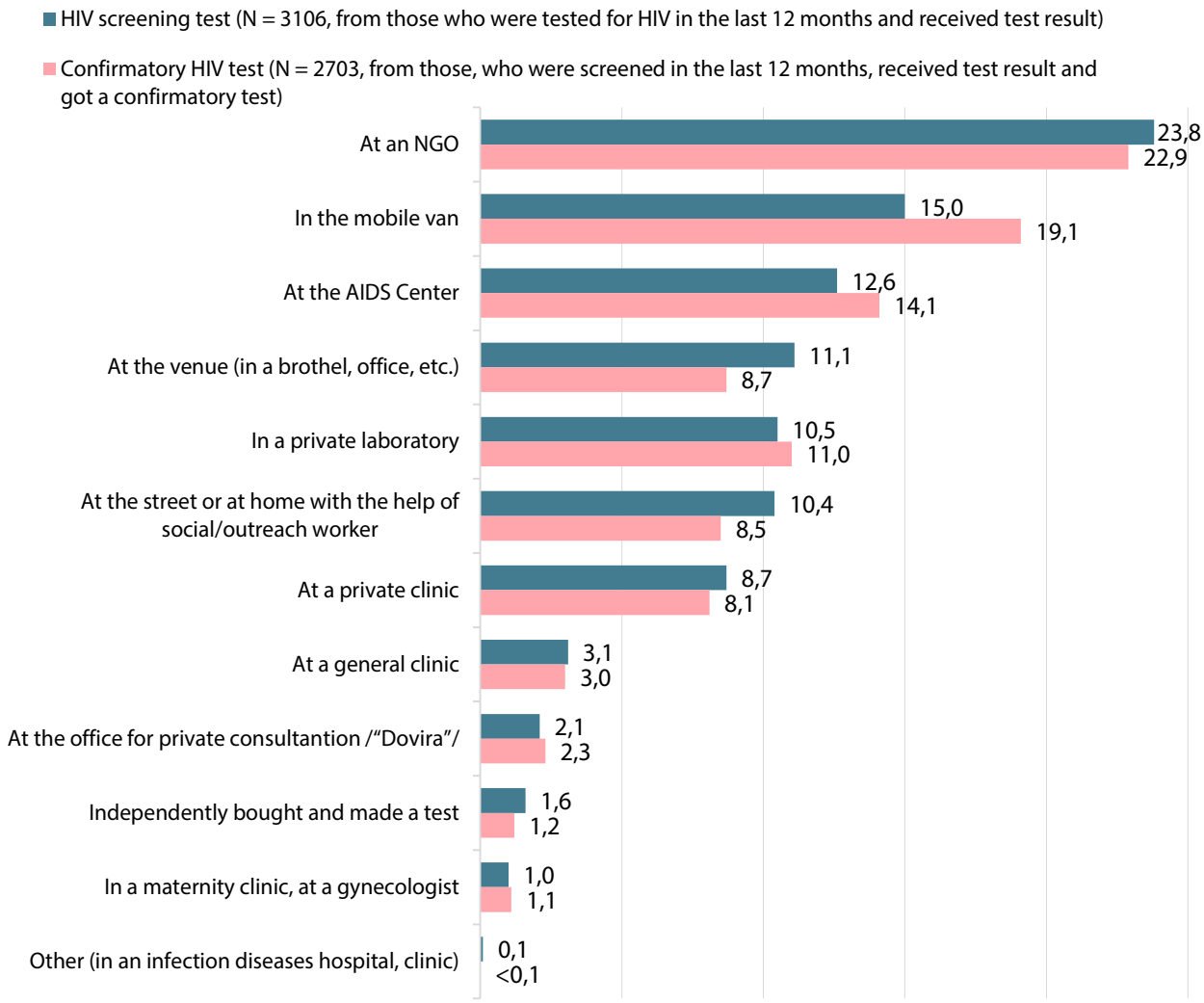
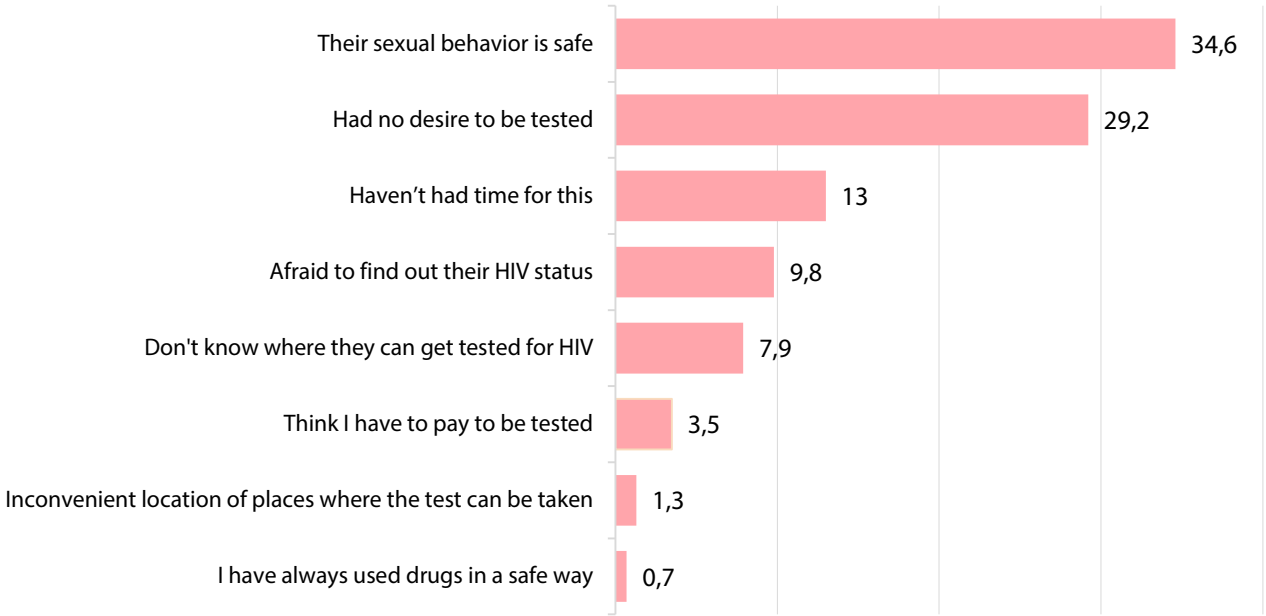


Figure 56. Reasons for not taking an HIV test (N = 544, among those who have never taken an HIV test, % among those who answered)



11.2 HIV testing in the NGOs

37.2% of SWs and SEMs did a rapid HIV test at an NGO in 2020 and 40.6% in 2021. During this period, 16.5% and 15.8% were tested for syphilis, respectively *(Table 43)*.

More than half of those who underwent HIV testing at an NGO in 2021 (56.7%) reported that the test was performed by a social worker. Almost a third (29.2%) self-tested under the instructions of a social worker *(Figure 57)*. Almost all SWs and SEMs who were tested in NGOs rated all the proposed criteria with the maximum score: convenient time, convenient place, completeness of information provided by a social or medical worker, and ensuring confidentiality. The average score for each of these criteria was 10 out of 10 points.

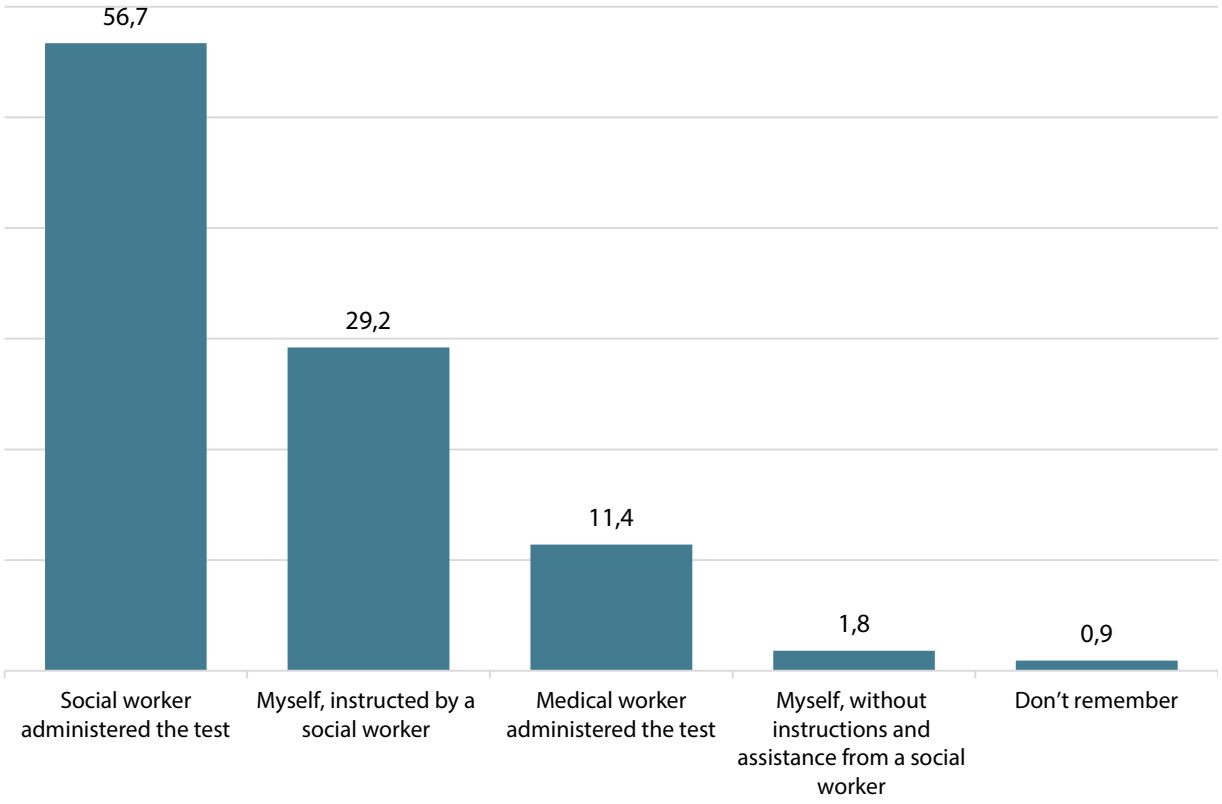
Table 43. *HIV and syphilis testing in NGOs during 2021, by socio-demographic characteristics (% of respondents)*

During 2021, they got tested in the NGO for...	HIV (N = 4,940)		Syphilis (N = 4,939)	
	N	%	N	%
Total	***2,006***	***40.6***	***782***	***15.8***
Age	***p<0.001***		***p<0.001***	
14–19	45	20.5	18	8.1
20–24	435	37.4	165	14.2
25–34	1,045	42.9	419	17.2
≥ 35	481	42.9	180	16.1
Gender	***p<0.001***		***p=0.020***	
Women	1,936	41.2	733	15.6
Men and trans* people	69	29.2	49	20.8
Education	***p<0.001***		***p<0.001***	
Incomplete secondary or lower	218	34.1	77	12.1
Complete secondary	628	38.3	228	13.9
Secondary professional	583	44.4	235	17.9
Higher *(Bachelor, Master)*	574	43.0	241	18.0
Occupation	***p<0.001***		***p<0.001***	
Sex work only	1,400	43.9	569	17.8
Full-time or odd jobs	386	35.7	159	14.7
Other *(students, unemployed, etc.)*	219	33.2	54	8.2

During 2021, they got tested in the NGO for...	HIV (N = 4,940)		Syphilis (N = 4,939)	
	N	%	N	%
Personal monthly income, UAH	***p<0.001***		***p<0.001***	
≤ 15,000	372	37.9	175	17.8
15,001–24,000	404	49.9	78	9.6
24,001–35,000	489	41.7	177	15.1
≥ 35,001	370	41.2	141	15.7
Family status	***p=0.057***		***p<0.001***	
Have a husband/wife or a long-term sexual partner	470	43.8	235	21.9
Have no husband/wife or a long-term sexual partner	1,535	39.7	547	14.2
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***		***p=0.798***	
Yes	128	29.4	65	14.9
No	1,876	42.0	716	16.0
Length of working in sex business, years	***p<0.001***		***p<0.001***	
≤ 3	489	37.7	142	10.9
4–6	597	47.8	251	20.1
7–10	443	42.1	170	16.1
≥ 11	419	37.1	189	16.8
Experience of using injecting drugs during life	***p<0.001***		***p=0.002***	
Yes	85	36.0	41	17.3
No	1,914	41.1	735	15.8
NGO client	***p<0.001***		***p<0.001***	
Yes	1,715	85.3	634	31.5
No	269	9.4	142	5.0
HIV status	***p<0.001***		***p=0.040***	
Positive	35	23.5	13	8.7
Negative	1,971	41.1	769	16.1

During 2021, they got tested in the NGO for...	HIV (N = 4,940)		Syphilis (N = 4,939)	
	N	%	N	%
Principal method of finding clients	*p<0.001*		*p<0.001*	
Virtual venues	1,025	41.9	352	14.4
Through intermediaries	448	42.9	215	20.6
Street, road, highways	270	45.3	94	15.7
Entertainment facilities/events	137	34.1	44	10.9
Sauna/massage salon	37	16.2	29	12.7
Other ways	87	38.8	48	21.6

Figure 57. Conducting HIV testing in NGOs in 2021 (N = 2,004, among those who underwent HIV testing in NGOs in 2021, % among those who answered)



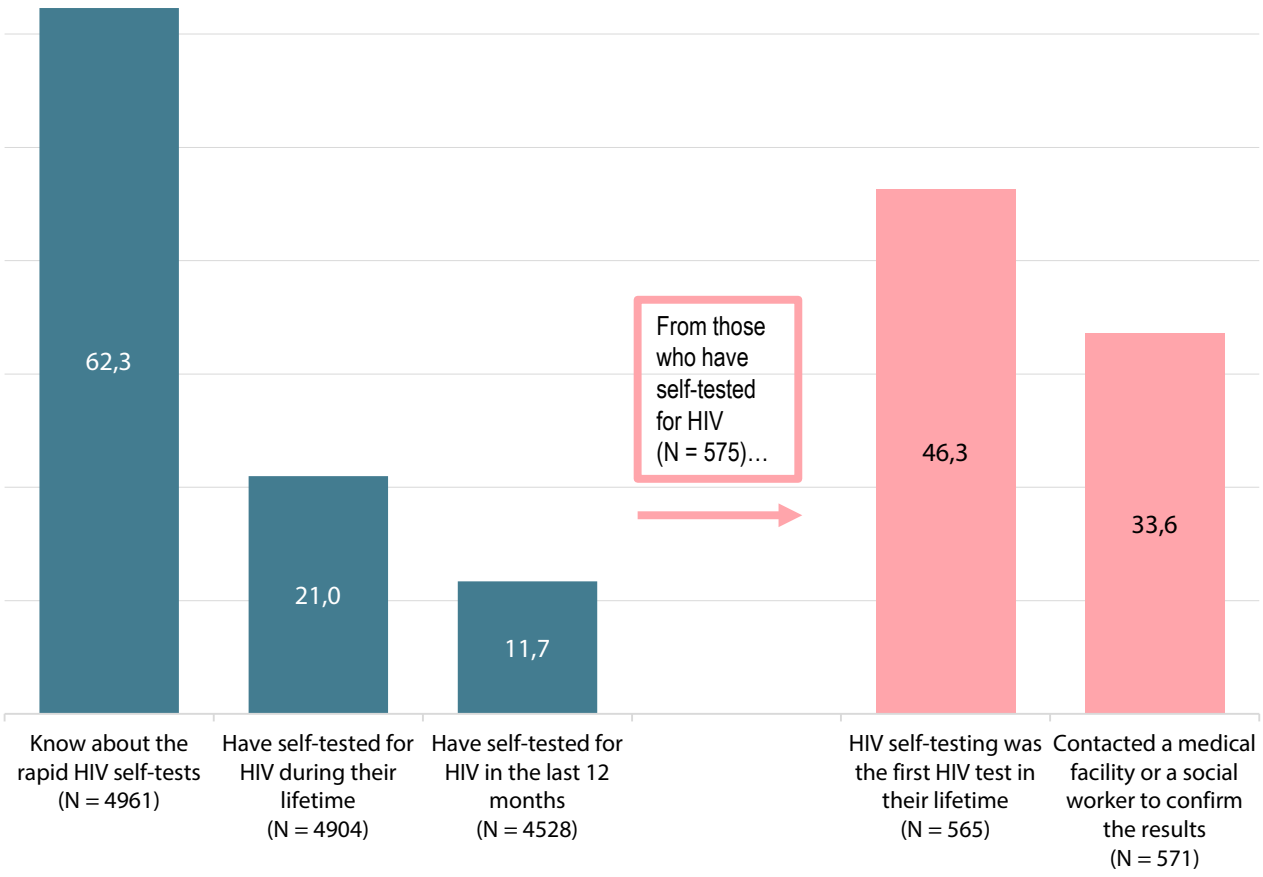
11.3 Self-testing for HIV

Two-thirds of all SWs and SEMs (62.3%) are aware of the existence of rapid HIV tests for self-use, without the help or supervision of a medical or social worker. 21.0% of SWs have ever done a self-test, 11.7% within the last month *(Figure 58)*. These are mainly SWs and SEMs who have no other employment than sex work (15.6%), clients of NGOs (22.1%) and those who worked mainly in entertainment establishments (15.2%), through intermediaries (14, 3%) and at virtual venues (13.7%). According to the rest of the characteristics, there are no statistically significant differences between SWs and SEMs with the experience of self-testing for HIV during the last year and those without such experience.

More than half of the SWs and SEMs who underwent self-testing for HIV during the year (60.8%) received the test at an NGO, a mobile clinic or from a social worker, and 21.6% bought it at a pharmacy *(Figure 59)*.

For the majority of SWs and SEMs (84.8%), the last test for self-testing for HIV was with blood, another 15.2% of participants used an oral test. 75.2% of all SWs and SEMs who underwent self-testing for HIV during the last year did not experience any difficulties using such a test, this indicator differs depending on the type of test *(Figure 60)*.

Figure 58. Coverage with self-testing for HIV (% among those who answered)



Among the SWs and SEMs who underwent self-testing for HIV during the year and agreed to report its results, almost all received a negative test (98.2%). Among those who received a positive result during self-testing *(1.8% or 10 people)*, half went to a medical facility or a social worker to check the result. Among the SWs and SEMs who received a negative test result, more than half (66.5%) did not go anywhere for a check, 27.8% went to a social worker, and 5.6% went to a medical institution.

Figure 59. *The method of obtaining a test for self-testing for HIV (N = 565, among those who did self-testing for HIV during the last 12 months, % among those who answered)*

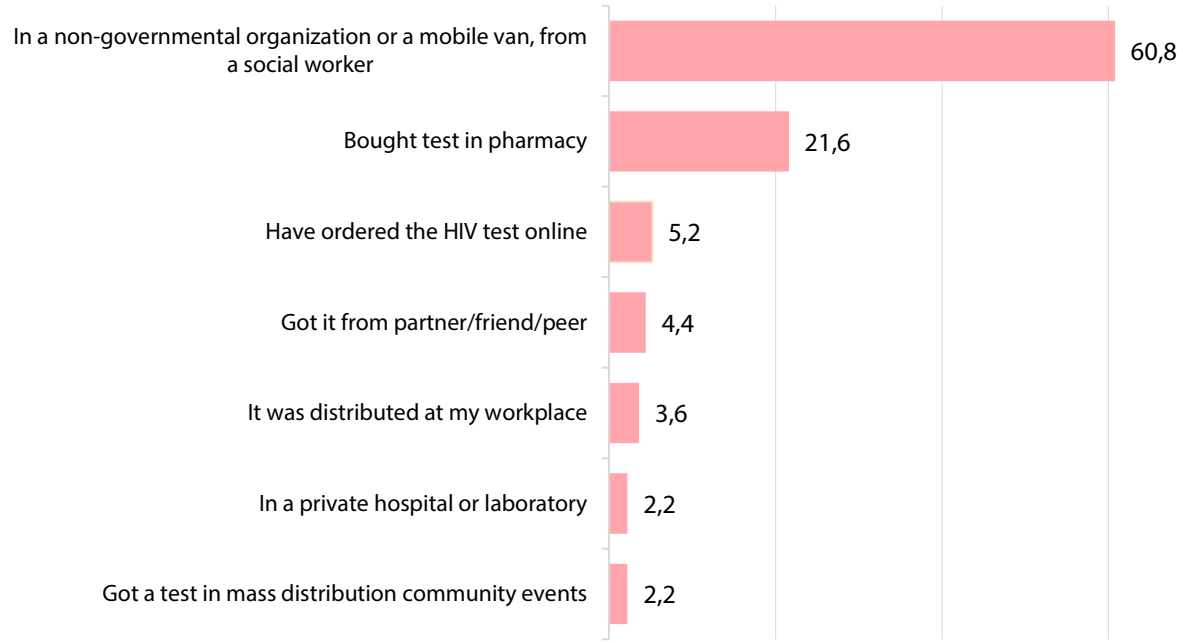
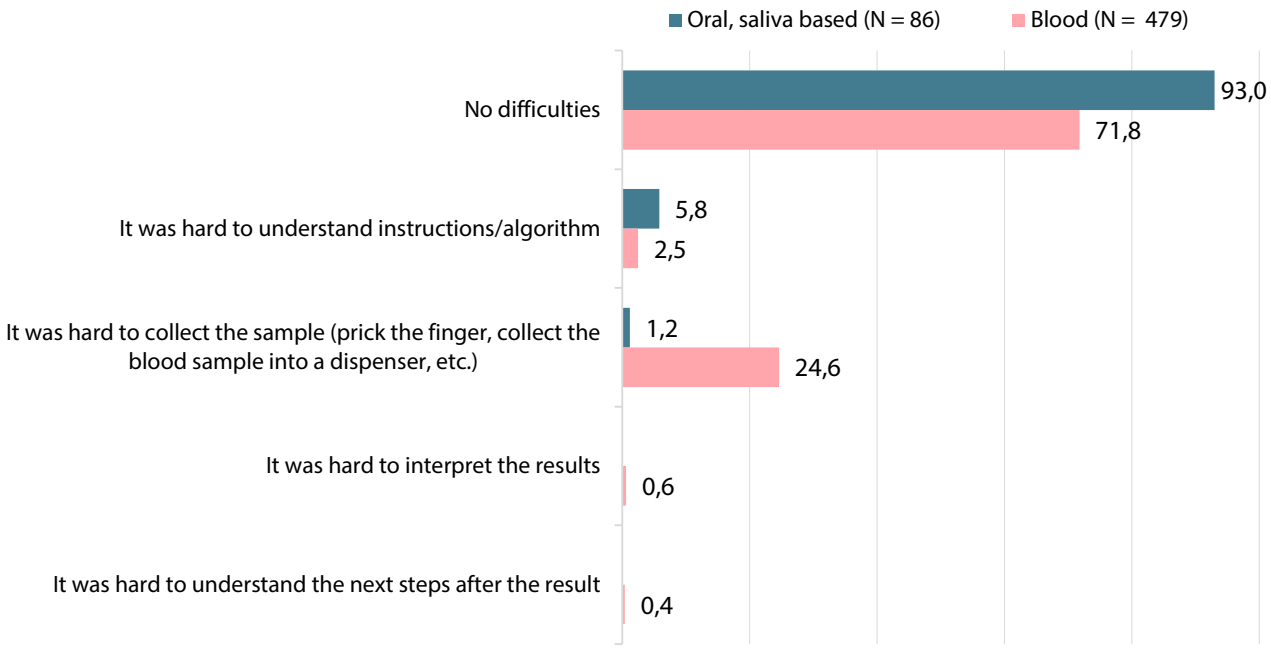


Figure 60. *Difficulties with using an HIV test depending on its type (p<0.001, among those who did self-testing for HIV during the last 12 months, % among those who answered)*

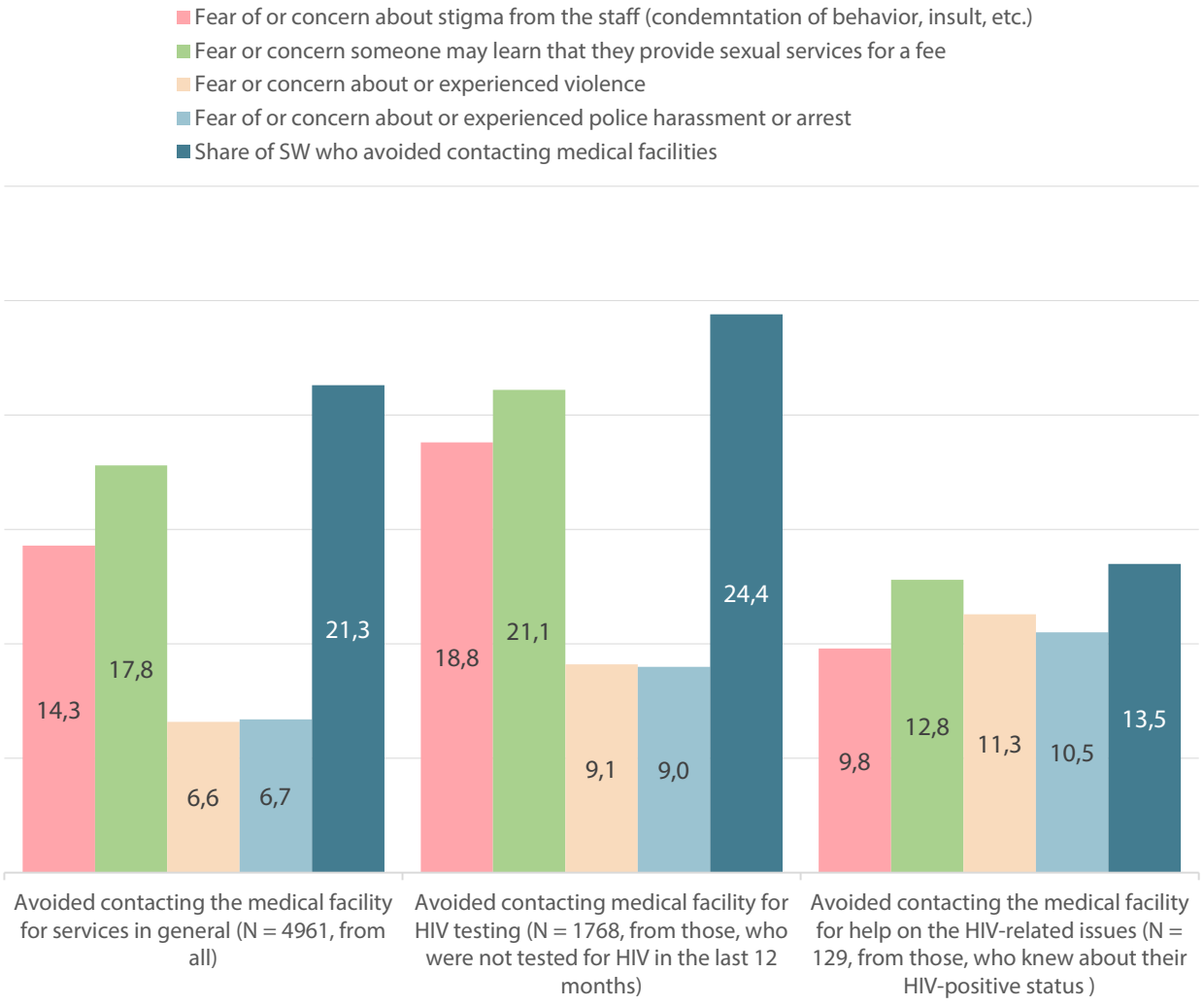


12. AVOIDANCE TO SEEK HEALTH SERVICES BECAUSE OF STIGMA AND DISCRIMINATION

The 2021 study assessed for the first time avoidance of seeking health services due to stigma and discrimination, according to the UNAIDS Global AIDS Monitoring (GAM) guidelines. The measurement of this indicator was carried out according to four aspects – avoidance of seeking health services in general, HIV testing, medical care in connection with HIV and HIV treatment, and through four concerns – stigmatization by staff *(judgmental treatment, negative attitude, etc.)*, fear that someone learns that a respondent is providing commercial sex services, possible or experienced violence, possible or experienced harassment or arrest by law enforcement bodies.

21.3% of all SWs and SEMs avoided seeking medical services as a whole over the last year, in particular 17.8% – because of the fear that someone will find out about their engagement in sex work *(Figure 61)*. The rate of avoidance of health services is higher among young SWs and SEMs, men and trans* people, SWs and SEMs with a low level of education and monthly income, among those who have had experience of injection drug use and HIV-positive status, and are not clients of prevention programs *(Table 44)*.

Figure 61. *Avoidance of seeking medical services due to stigma and discrimination in the last 12 months (in %)*



24.4% of SWs and SEMs who had not been tested for HIV in the past year reported that they avoided testing, mainly due to fear that someone would find out about their provision of sex services and possible stigmatization by staff. The share of SWs and SEMs who avoided testing is higher among those under the age of 19, with a low educational level, and among those who are not clients of NGOs.

13.5% of HIV-positive SWs who were aware of their status at the time of the survey avoided seeking healthcare in connection with HIV during the last year. The share of such sex workers does not have statistically significant differences depending on the characteristics of the participants. None of the HIV-positive people who had never taken or stopped taking ART at the time of the study avoided HIV treatment due to fear of stigma and discrimination.

Table 44. *Avoidance of medical services due to stigma and discrimination during the last 12 months, by socio-demographic characteristics (% among those who answered)*

Share of SWs and SEMs, who, in the last 12 month avoided seeking the following services because of stigma and discrimination...	Health services in general *(N = 4,961, among all)*		HIV testing *(N = 1,768, among those who were not tested for HIV in the last 12 months)*	
	n	%	n	%
Total	***1,058***	***21.3***	***436***	***24.4***
Age	***p=0.002***		***p<0.001***	
14–19	60	27.3	45	36.3
20–24	276	23.7	107	26.4
25–34	518	21.1	201	24.3
≥ 35	205	18.2	82	19.1
Gender	***p=0.001***		***p=0.749***	
Women	988	20.9	22	25,9
Men and trans* people	70	29.7	414	24.4
Education	***p=0.002***		***p<0.001***	
Incomplete secondary or lower	170	26.4	94	33.3
Complete secondary	359	21.7	149	22.6
Secondary professional	272	20.7	86	19.8
Higher *(Bachelor, Master)*	255	19.0	106	26.3
Occupation	***p=0.057***		***p=0.067***	
Sex work only	652	20.4	233	22.6
Full-time or odd jobs	258	23.8	118	25.6
Other *(students, unemployed, etc.)*	145	21.8	84	29.0

Share of SWs and SEMs, who, in the last 12 month avoided seeking the following services because of stigma and discrimination...	Health services in general *(N = 4,961, among all)*		HIV testing *(N = 1,768, among those who were not tested for HIV in the last 12 months)*	
	n	%	n	%
Personal monthly income, UAH	***p<0.001***		***p=0.258***	
≤ 15,000	253	25.5	122	29.3
15,001–24,000	145	17.9	59	23.3
24,001–35,000	240	20.5	89	24.0
≥ 35,001	187	20.8	61	26.2
Family status	***p=0.176***		***p=0.015***	
Have a husband/wife or a long-term sexual partner	246	22.8	114	29.0
Have no husband/wife or a long-term sexual partner	812	20.9	321	23.1
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.154***		***p=0.356***	
Yes	105	24.1	45	27.3
No	947	21.1	386	24.0
Length of working in sex business, years	***p=0.753***		***p=0.237***	
≤ 3	276	21.3	128	27.5
4–6	263	21.0	86	22.3
7–10	207	19.5	86	23.1
≥ 11	236	20.8	101	22.7
Experience of using injecting drugs during life	***p<0.001***		***p=0.312***	
Yes	83	34.9	37	28.0
No	961	20.6	389	24.1
NGO client	***p<0.001***		***p<0.001***	
Yes	312	15.5	23	11.9
No	719	25.2	401	25.9
HIV status	***p<0.001***		***p=0.606***	
Positive	50	32.3	23	26.7
Negative	1,009	21.0	413	24.3
Principal method of finding clients	***p=0.014***		***p=0.229***	
Virtual venues	522	21.3	205	26.4
Through intermediaries	235	22.5	85	24.9
Street, road, highways	133	22.1	62	24.5
Entertainment facilities/events	73	18.1	33	19.1
Sauna/massage salon	62	27.1	31	23.1
Other ways	33	14.5	19	17.9

13. REPRODUCTIVE HEALTH

The 2021 study was the first to analyze women's reproductive health, namely: pregnancy experience, visits to female health clinics, HIV and syphilis testing during pregnancy, and contraception methods used by women at the time of the study.

Of the total number of women, 40.2% reported that they had been pregnant during their lifetime. For a quarter of SWs and SEMs (24.5%), none of the pregnancies resulted in the birth of a child. The share of such is higher among young SWs under the age of 24, with a low educational level, who have no other employment than sex work, with an income of UAH 15,000–35,000, experience of migration to provide sex services and less experience in sex work, among non-clients of NGOs and those working in saunas/ massage salons or through intermediaries *(Table 45)*.

Almost all SWs, whose last pregnancy ended with the birth of a child, visited the prenatal care clinic – 93.8%. 85.9% of women with injection drug use reported visiting a prenatal clinic, compared with 94.4% of women who never used drugs.

91.2% of SWs who attended a female health consultation clinic reported that they were offered an HIV test during their last pregnancy *(Figure 62)*. 82.8% of SWs who were observed in the female health consultation clinic were tested for HIV, almost all of them received a negative test result (98.7%). Another 13.2% of SWs could not remember whether they were tested for HIV during their last pregnancy or not.

76.9% of SWs indicated that they were offered a syphilis test during their last pregnancy. 73.2% of women visiting the prenatal care clinic were tested, 0.6% of them received a positive result and underwent appropriate treatment.

Of the total number of women, 6.5% of SWs reported that they were trying to get pregnant at the time of the study. Among the remaining respondents, 89.1% used at least one method of contraception, mostly male condoms *(Table 46)*. About 3% of the participants practiced interrupted sexual intercourse, emergency contraception or the calendar method as a way to protect themselves from unintended pregnancy.

Table 45. *Experience of pregnancy among SWs and SEMs, by socio-demographic characteristics (among women who were pregnant during their lifetime, % among those who answered)*

The share of SWs and SEMs who were pregnant and...	No pregnancy resulted in childbirth *(N = 1,825, among those who had been pregnant)*		Went to prenatal care clinic during the last pregnancy *(N = 1,379, among those whose pregnancy resulted in childbirth)*	
	n	%	n	%
Total	***447***	***24.5***	***1,293***	***93.8***
Age	***p<0.001***		***p<0.001***	
14–19	6	75.0	1	50.0
20–24	89	64.5	41	82.0
25–34	261	26.5	681	94.2
≥ 35	90	13.0	571	94.5
Education	***p<0.001***		***p=0.643***	
Incomplete secondary or lower	68	33.7	124	92.5
Complete secondary	144	28.6	333	92.8
Secondary professional	121	19.9	460	94.5
Higher *(Bachelor, Master)*	111	21.9	373	94.4
Occupation	***p<0.001***		***p=0.670***	
Sex work only	320	27.4	797	94.2
Full-time or odd jobs	95	21.6	323	93.9
Other *(students, unemployed, etc.)*	31	14.3	172	92.5
Personal monthly income, UAH	***p<0.001***		***p=0.949***	
≤ 15,000	61	16.1	296	93.1
15,001–24,000	81	25.6	221	94.0
24,001–35,000	134	29.3	301	93.2
≥ 35,001	63	22.3	203	92.7
Family status	***p=0.200***		***p=0.544***	
Have a husband/wife or a long-term sexual partner	120	22.5	386	93.2
Have no husband/wife or a long-term sexual partner	327	25.3	908	94.1

The share of SWs and SEMs who were pregnant and...	No pregnancy resulted in childbirth *(N = 1,825, among those who had been pregnant)*		Went to prenatal care clinic during the last pregnancy *(N = 1,379, among those whose pregnancy resulted in childbirth)*	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.001***		***p=0.319***	
Yes	51	35.7	85	91.4
No	393	23.5	1,202	94.0
Length of working in sex business, years	***p<0.001***		***p=0.017***	
≤ 3	81	35.7	134	91.8
4–6	117	25.8	322	95.5
7–10	102	21.9	350	96.2
≥ 11	113	19.1	440	91.7
Experience of using injecting drugs during life	***p=0.893***		***p<0.001***	
Yes	33	25.0	85	85.9
No	411	24.5	1197	94.4
NGO client	***p<0.001***		***p=0.547***	
Yes	154	18.9	618	93.4
No	285	28.9	659	94.1
HIV status	***p=0.019***		***p=0.019***	
Positive	11	13.6	62	87.3
Negative	436	25.0	1,232	94.2
Principal method of finding clients	***p<0.001***		***p=0.127***	
Virtual venues	182	22.4	601	95.5
Through intermediaries	133	31.4	270	92.8
Street, road, highways	57	19.3	216	90.8
Entertainment facilities/events	29	22.7	91	91.9
Sauna/massage salon	31	33.3	59	95.2
Other ways	15	20.3	56	94.9

Figure 62. Experience of pregnancy among SWs and SEMs (% among those who answered)

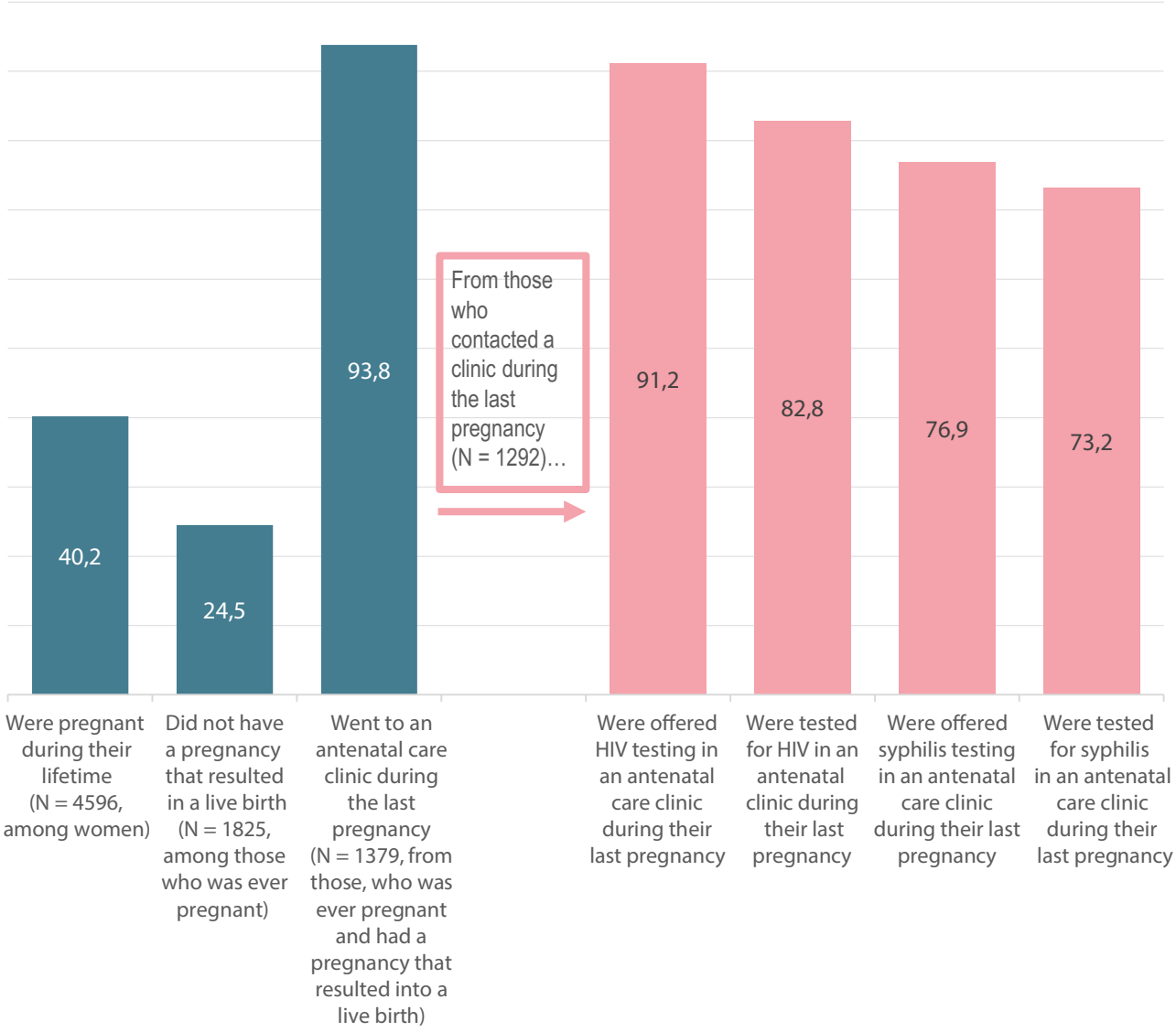


Table 46. *Contraception methods used by SWs and SEMs (among those who are not trying to get pregnant at the time of the study, in %)*

Contraception methods	Methods of contraception used by SWs at the time of the study *(several options, N = 4,165)*		Principal method of contraception *(one option, N = 3,646)*	
	n	%	n	%
Male condoms	3,561	85.5	3,369	92.4
Oral contraceptives	410	9.8	106	2.9
Intrauterine contraceptives	220	5.3	83	2.3
Interrupted intercourse	141	3.4	8	0.2
Emergency / urgent contraception	129	3.1	3	0.1
Female condoms	110	2.6	15	0.4
Calendar method	105	2.5	6	0.2
Vaginal ring	85	2.0	21	0.6
Progestogen-only contraceptives	34	0.8	2	0.1
Diaphragms, cervical caps	27	0.7	13	0.3
Spermicides	28	0.7	–	–
Plasters	25	0.6	2	0.1
Surgical sterilization	19	0.5	18	0.5
Injectable medications	11	0.3	2	0.1
Latex napkins	1	<0.1	–	–

14. COVID-19 PREVALENCE AND IMPACT

According to the results of the study, almost a third of the SWs and SEMs (28.8%) were exposed to a person who had a confirmed diagnosis of COVID-19 during the last year. At the same time, 14.5% of participants had symptoms such as fever, dry cough, and shortness of breath, which could indicate infection, and 3.1% were hospitalized due to the disease *(Figure 63)*.

Over the past year, a quarter of all SWs and SEMs (25.8%) were tested for COVID-19, among which 15.2% *(or 3.9% of all participants)* received a positive test result. The testing rate is lower among SWs and SEMs with a low level of education and monthly income, no experience of migration to provide sex services, with experience of sex work for more than 11 years, SW-PWID, HIV-positive respondents and those who work at street venues or in saunas/massage salons *(Table 47)*. There are no statistically significant differences in the results of testing for COVID-19 by socio-demographic characteristics.

When taking into account a positive test result for COVID-19 or the presence of symptoms without testing or hospitalization for the disease in the past 12 months, the prevalence of COVID-19 among SWs and SEMs was 10.3% *(95% CI: 9, 5–11.2%)*.

Half of SWs and SEMs (49.9%) reported that their client base has decreased due to COVID-19, so they have less revenue than usual. 32.7% of participants were forced to temporarily stop providing sex services due to quarantine restrictions, 24.0% of participants – due to fear of getting sick *(Figure 64)*.

***Figure 63.** Experience of COVID-19 over the past 12 months (% among those who answered)*

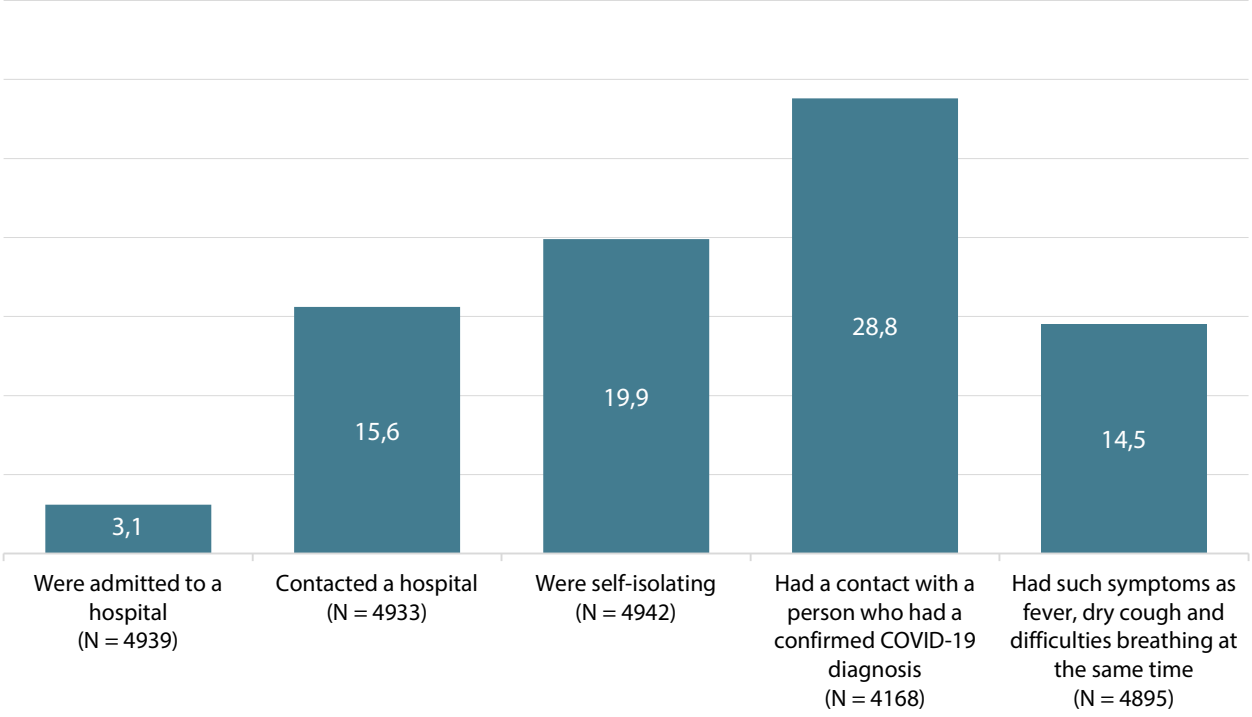
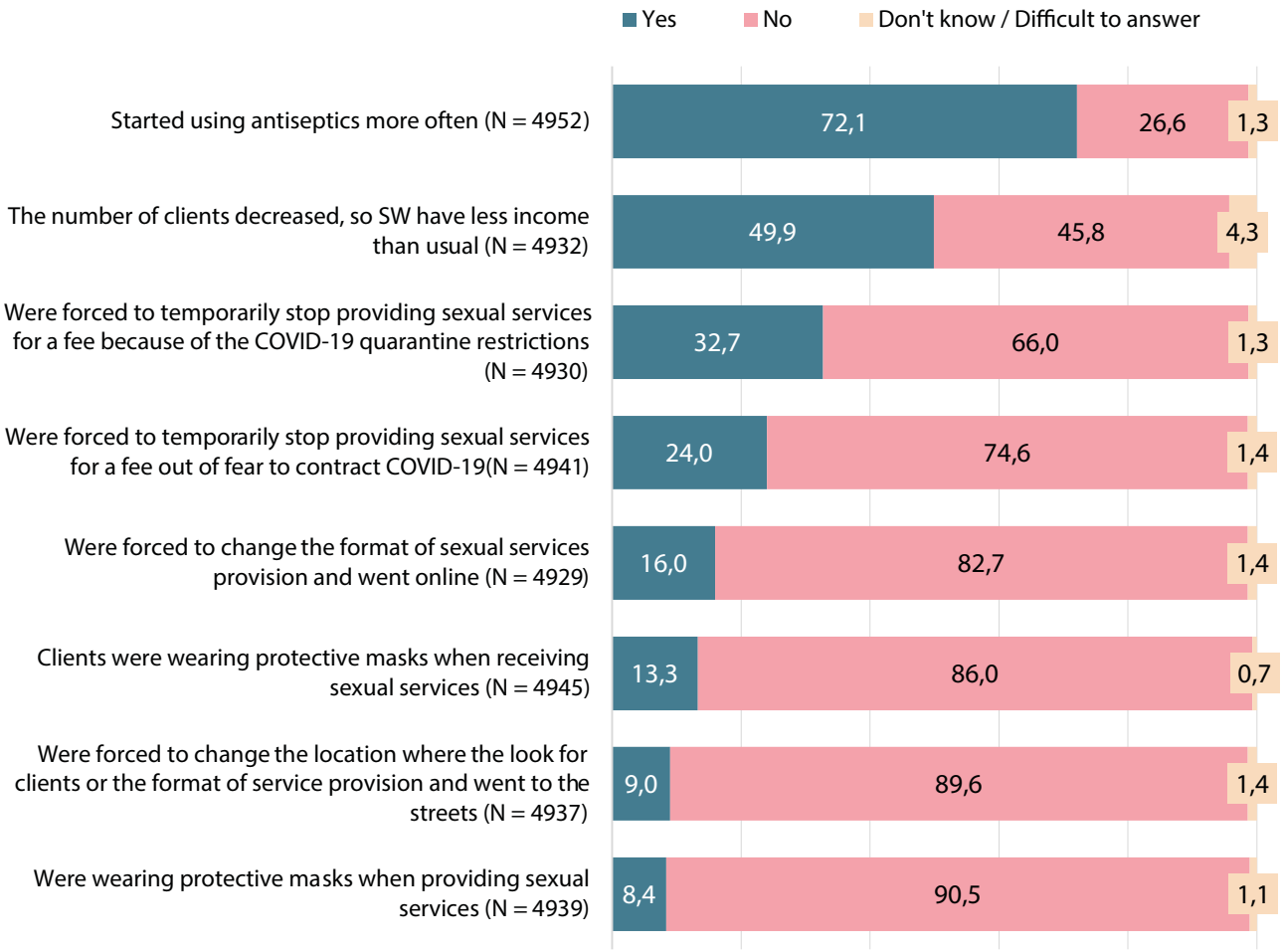


Table 47. *Experience of testing for COVID-19, by socio-demographic characteristics (% among those who answered)*

Share of SWs and SEMs who during the last 12 months...	Got tested for COVID-19 *(N = 4,932, among all)*	
	n	%
Total	***1,271***	***25,8***
Age	***p=0.103***	
14–19	58	26.6
20–24	289	25.0
25–34	662	27.2
≥ 35	263	23.4
Gender	***p=0.027***	
Women	1,196	25.5
Men and trans* people	74	31.9
Education	***p<0.001***	
Incomplete secondary or lower	125	19.5
Complete secondary	358	21.8
Secondary professional	370	28.3
Higher *(Bachelor, Master)*	416	31.2
Occupation	***p=0.827***	
Sex work only	826	26.0
Full-time or odd jobs	280	25.9
Other *(students, unemployed, etc.)*	164	24.8
Personal monthly income, UAH	***p<0.001***	
≤ 15,000	159	16.1
15,001–24,000	192	23.8
24,001–35,000	386	33.0
≥ 35,001	332	37.3
Family status	***p=0.434***	
Have a husband/wife or a long-term sexual partner	266	24.9
Have no husband/wife or a long-term sexual partner	1,006	26.0

Share of SWs and SEMs who during the last 12 months...	Got tested for COVID-19 *(N = 4,932, among all)*	
	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p<0.001***	
Yes	166	38.4
No	1,103	24.8
Length of working in sex business, years	***p<0.001***	
≤ 3	346	26.9
4–6	354	28.4
7–10	283	26.9
≥ 11	238	21.0
Experience of using injecting drugs during life	***p<0.001***	
Yes	30	12.8
No	1,235	26.6
NGO client	***p=0.295***	
Yes	538	26.7
No	719	25.4
HIV status	***p<0.001***	
Positive	18	12.0
Negative	1,253	26.2
Principal method of finding clients	***p<0.001***	
Virtual venues	668	27.4
Through intermediaries	331	31.9
Street, road, highways	80	13.3
Entertainment facilities/events	103	25.6
Sauna/massage salon	26	11.3
Other ways	63	28.1

***Figure 64.** The impact of COVID-19 on the provision of sex services during the last 12 months (% among those who answered)*



15. SELF-REPORTED PREVALENCE OF TB AND STIS

From 1.2% to 20.3% of the participants reported experience of having had a certain sexually transmitted infection, and 0.4% indicated that they had pulmonary tuberculosis *(Figure 65)*. Hepatitis B vaccination coverage is low, with 8.8% of SWs reporting that they had been vaccinated and 9.6% not knowing if they had received the vaccine.

The prevalence of all self-reported diseases was higher among SWs with lifetime injection drug use *(Table 48, Table 49)*. The rate of self-declaration for the listed diseases, except for hepatitis C, syphilis and pulmonary tuberculosis, was higher among SWs that do not use NGO services, which can be explained by better access to testing and confirmation of diagnosis among the organizations' clients. The share of SWs who reported that they were ill with herpes, chlamydia, gonorrhea is higher among those who sought clients mainly through intermediaries, for human papilloma virus (HPV) – among participants who worked in saunas or at virtual venues, and hepatitis B, hepatitis C, syphilis and pulmonary tuberculosis were more often reported by SWs from street venues.

The experience of treating a certain disease has shown differences in access to it. Hepatitis C treatment was the least accessible: 46.5% of SWs who knew they had this disease had never been treated. Among participants suffering from hepatitis B and pulmonary tuberculosis, this figure was 18.1 and 11.6%, respectively. All participants who reported syphilis received treatment *(Figure 66)*.

***Figure 65.** Self-reported prevalence of tuberculosis and sexually transmitted infections (N = 4,961, in %)*

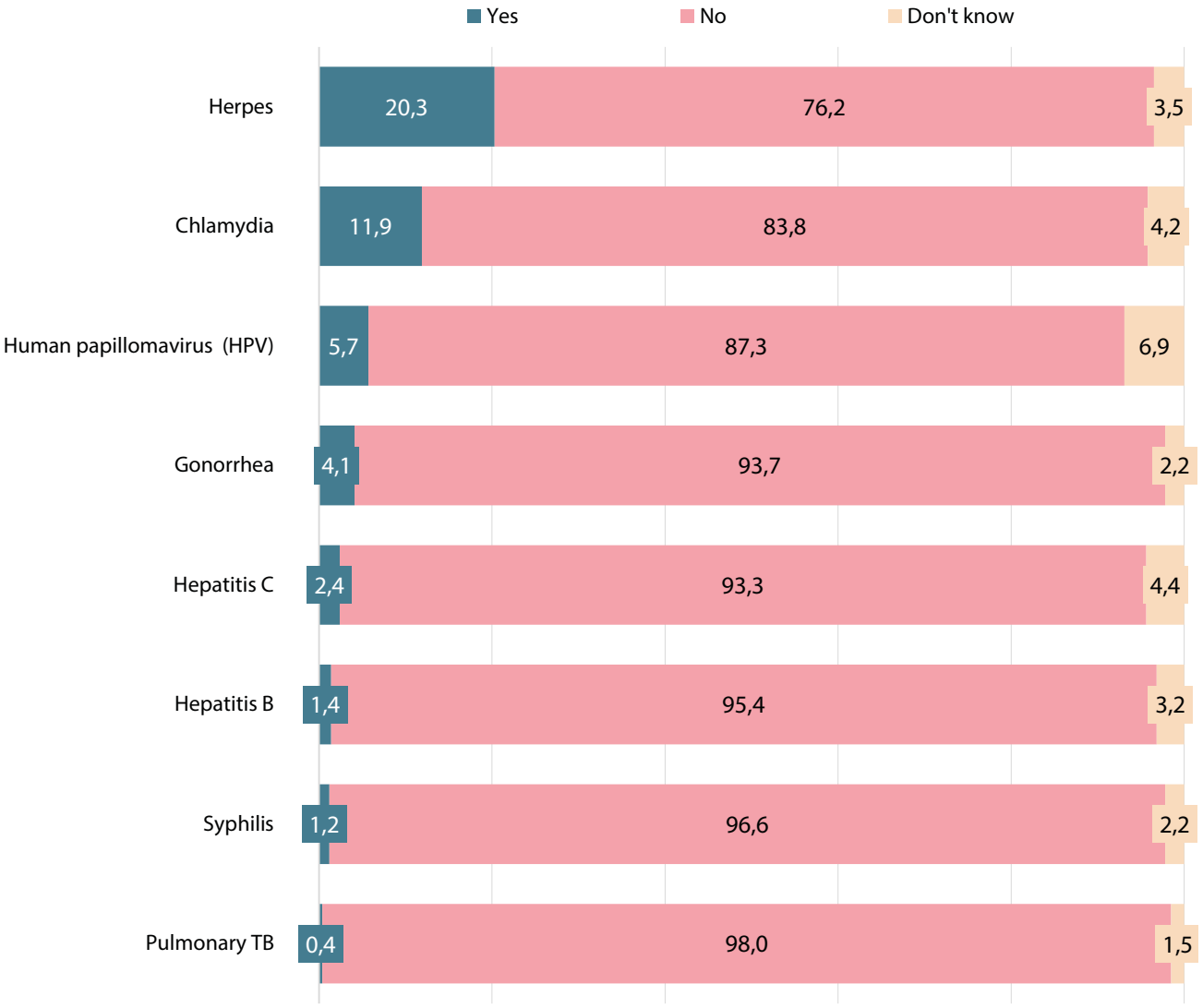


Table 48. *Prevalence of herpes, chlamydia, HPV, and gonorrhea by self-declaration of SWs, by socio-demographic characteristics (N = 4,961, % among those who answered)*

Characteristics	Herpes		Chlamydiosis		HPV		Gonorrhea	
	n	%	n	%	n	%	n	%
Total (N = 4,961)	***1,005***	***20,3***	***592***	***11,9***	***285***	***5,7***	***205***	***4,1***
Age	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
14–19	23	10.4	8	3.6	4	1.8	4	1.8
20–24	169	14.5	89	7.6	40	3.4	29	2.5
25–34	553	22.6	333	13.6	157	6.4	137	5.6
≥ 35	261	23.2	163	14.5	84	7.4	35	3.1
Gender	***p<0.001***		***p=0.006***		***p=0.820***		***p=0.496***	
Women	977	20.7	580	12.3	271	5.7	192	4.1
Men and trans* people	28	11.9	13	5.5	14	5.9	13	5.5
Education	***p=0.020***		***p<0.001***		***p=0.005***		***p=0.049***	
Incomplete secondary or lower	143	22.2	83	12.9	33	5.1	34	5.3
Complete secondary	358	21.7	157	9.5	78	4.7	75	4.5
Secondary professional	235	17.9	161	12.2	79	6.0	51	3.9
Higher *(Bachelor, Master)*	266	19.9	190	14.2	96	7.2	45	3.4
Occupation	***p<0.001***		***p<0.001***		***p<0.001***		***p=0.121***	
Sex work only	716	22.4	406	12.7	205	6.4	139	4.3
Full-time or odd jobs	196	18.1	144	13.3	57	5.3	35	3.2
Other *(students, unemployed, etc.)*	92	13.8	42	6.3	22	3.3	31	4.7
Personal monthly income, UAH	p=0.010		p<0.001		p<0.001		p=0.006	
≤ 15,000	184	18.5	89	9.0	47	4.7	30	3.0
15,001–24,000	176	21.7	102	12.6	67	8.3	32	3.9
24,001–35,000	247	21.1	174	14.8	68	5.8	60	5.1
≥ 35,001	148	16.5	70	7.8	42	4.7	17	1.9
Family status	***p=0.008***		***p=0.065***		***p=0.485***		***p=0.124***	
Have a husband/wife or a long-term sexual partner	253	23.5	146	13.6	59	5.5	56	5.2
Have no husband/wife or a long-term sexual partner	752	19.4	447	11.5	226	5.8	149	3.8

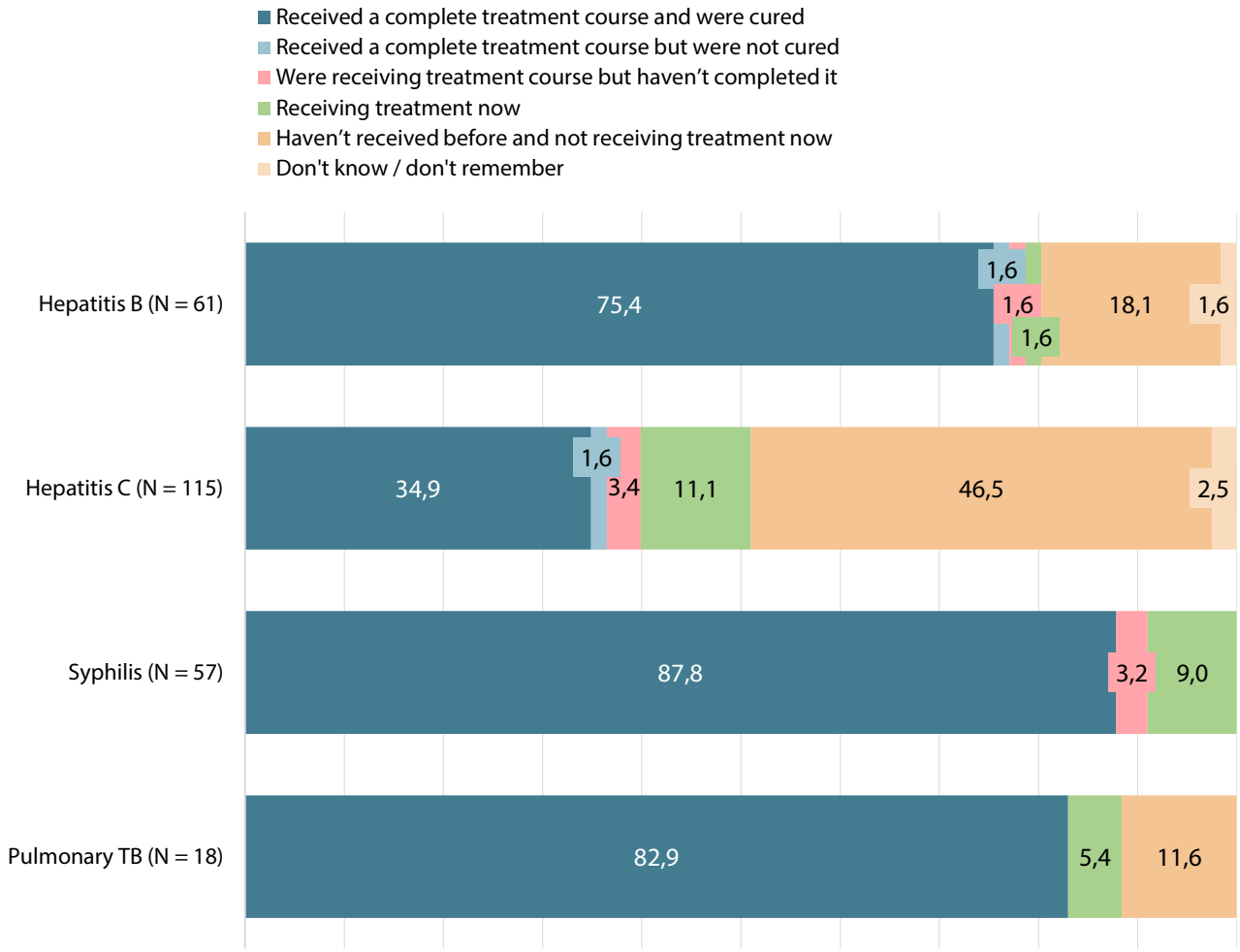
Characteristics	Herpes		Chlamydiosis		HPV		Gonorrhea	
	n	%	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.045***		***p<0.001***		***p<0.001***		***p=0.016***	
Yes	85	19.5	65	14.9	19	4.3	24	5.5
No	903	20.2	527	11.8	259	5.8	181	4.0
Length of working in sex business, years	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
≤ 3	193	14.9	82	6.3	41	3.2	27	2.1
4–6	254	20.3	183	14.6	79	6.3	56	4.5
7–10	246	23.2	165	15.6	86	8.1	61	5.8
≥ 11	263	23.1	126	11.1	64	5.6	31	2.7
Experience of using injecting drugs during life	***p<0.001***		***p<0.001***		***p=0.042***		***p<0.001***	
Yes	65	27.3	42	17.7	18	7.6	20	8.4
No	933	20.0	543	11.6	266	5.7	184	3.9
NGO client	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Yes	402	19.9	228	11.3	111	5.5	72	3.6
No	587	20.5	351	12.3	170	6.0	124	4.3
HIV status	***p<0.001***		***p=0.590***		***p=0.025***		***p=0.211***	
Positive	33	21.4	15	9.7	7	4.5	4	2.6
Negative	972	20.2	577	12.0	278	5.8	201	4.2
Principal method of finding clients	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Virtual venues	412	16.8	232	9.5	154	6.3	56	2.3
Through intermediaries	287	27.4	191	18.3	49	4.7	93	8.9
Street, road, highways	132	21.9	90	15.0	35	5.8	29	4.8
Entertainment facilities/events	85	21.0	34	8.4	22	5.4	16	4.0
Sauna/massage salon	54	23.6	18	7.9	16	7.0	5	2.2
Other ways	37	16.4	28	12.4	10	4.4	7	3.1

Table 49. *Prevalence of hepatitis B, hepatitis C, syphilis and tuberculosis according to self-declaration of SW, according to socio-demographic characteristics (% among those who answered)*

Characteristics	Hepatitis B		Hepatitis C		Syphilis		Pulmonary TB	
	n	%	n	%	n	%	n	%
Total (N = 4,961)	***68***	***1.4***	***117***	***2.4***	***57***	***1.2***	***21***	***0.4***
Age	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
14–19	-	-	-	-	1	0.5	-	-
20–24	7	0.6	4	0.3	6	0.5	-	-
25–34	29	1.2	49	2.0	30	1.2	11	0.4
≥ 35	32	2.8	65	5.8	20	1.8	10	0.9
Gender	***p=0.355***		***p=0.287***		***p=0.140***		***p=0.448***	
Women	67	1.4	113	2.4	57	1.2	21	0.4
Men and trans* people	1	0.4	4	1.7	-	-	-	-
Education	***p<0.001***		***p<0.001***		***p=0.001***		***p=0.227***	
Incomplete secondary or lower	14	2.2	28	4.3	10	1.6	7	1.1
Complete secondary	22	1.3	33	2.0	11	0.7	6	0.4
Secondary professional	23	1.7	32	2.4	25	1.9	4	0.3
Higher *(Bachelor, Master)*	8	0.6	25	1.9	12	0.9	4	0.3
Occupation	***p<0.001***		***p=0.010***		***p=0.108***		***p=0.093***	
Sex work only	30	0.9	75	2.3	43	1.3	13	0.4
Full-time or odd jobs	17	1.6	33	3.0	11	1.0	6	0.6
Other *(students, unemployed, etc.)*	22	3.3	9	1.4	3	0.5	2	0.3
Personal monthly income, UAH	***p<0.001***		***p<0.001***		***p=0.021***		***p=0.060***	
≤ 15,000	21	2.1	40	4.0	13	1.3	5	0.5
15,001–24,000	8	1.0	11	1.4	15	1.9	3	0.4
24,001–35,000	15	1.3	27	2.3	9	0.8	6	0.5
≥ 35,001	5	0.6	14	1.6	8	0.9	-	-
Family status	***p=0.597***		***p=0.042***		***p=0.551***		***p=0.877***	
Have a husband/wife or a long-term sexual partner	12	1.1	36	3.3	16	1.5	4	0.4
Have no husband/wife or a long-term sexual partner	56	1.4	81	2.1	42	1.1	17	0.4

Characteristics	Hepatitis B		Hepatitis C		Syphilis		Pulmonary TB	
	n	%	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.123***		***p=0.008***		***p<0.001***		***p=0.004***	
Yes	6	1.4	8	1.8	6	1.4	1	0.2
No	62	1.4	107	2.4	51	1.1	30	0.4
Length of working in sex business, years	***p<0.001***		***p<0.001***		***p=0.215***		***p=0.007***	
≤ 3	5	0.4	12	0.9	10	0.8	-	-
4–6	13	1.0	20	1.6	14	1.1	3	0.2
7–10	14	1.3	16	1.5	12	1.1	6	0.6
≥ 11	33	2.9	62	5.5	21	1.8	19	0.9
Experience of using injecting drugs during life	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Yes	16	6.7	51	21.5	12	5.0	8	3.4
No	49	1.1	64	1.4	44	0.9	12	0.3
NGO client	***p<0.001***		***p<0.001***		***p<0.001***		***p<0.001***	
Yes	20	1.0	58	2.9	32	1.6	9	0.4
No	48	1.7	59	2.1	23	0.8	12	0.4
HIV status	***p<0.001***		***p<0.001***		***p=0.346***		***p<0.001***	
Positive	15	9.7	36	23.2	2	1.3	6	3.9
Negative	53	1.1	81	1.7	55	1.1	15	0.3
Principal method of finding clients	***p=0.006***		***p<0.001***		***p=0.029***		***p<0.001***	
Virtual venues	31	1.3	46	1.9	29	1.2	3	0.1
Through intermediaries	12	1.1	24	2.3	5	0.5	6	0.6
Street, road, highways	16	2.7	31	5.1	12	2.0	8	1.3
Entertainment facilities/events	5	1.2	9	2.2	5	1.2	2	0.5
Sauna/massage salon	3	1.3	6	2.6	3	1.3	2	0.9
Other ways	1	0.4	1	0.4	3	1.3	-	-

Figure 66. *Experience of treatment of hepatitis B, hepatitis C, syphilis, tuberculosis and sexually transmitted infections, self-reported (among those who were ill, in %)*



16. PREVALENCE OF HIV, HEPATITIS C, AND SYPHILIS

16.1 Prevalence of HIV among SWs

According to the results of the 2021 study, the prevalence of HIV among SWs was 3.1% *(95% CI: 2.7–3.6%)*. Among SWs under the age of 24, this indicator is at the level of 0.7%, among participants over 25 years old – 4.1%, which is less than in the previous rounds of the study *(Figure 67)*.

Among the SWs who reported their HIV-positive status, 96.3% of participants confirmed it based on the results of testing within the study *(Table 50)*. 0.5% of SWs who reported HIV-negative status during the survey received a positive test result. In total, 83.2% of HIV-positive people knew their status based on the results of testing, 20% of participants believed they were HIV-negative, and 3.9% did not know their status or refused to inform the study team.

The prevalence of HIV among SWs increases with age *(up to 8.0% among SWs aged 35 and over)* and work experience *(from 0.8% among SWs who provide sex services up to three years to 8.0% of SWs who work more than 11 years)* *(Table 51)*. A higher proportion of HIV-positive SWs was observed among participants with low education and a low level of monthly income, as well as among those who have a regular sexual partner, work in street venues or in saunas/massage parlors. HIV prevalence among PWID was 24.1% versus 1.9% among SWs who never practiced injecting drugs.

Figure 67. Prevalence of HIV among SWs in 2008–2021 (in %)

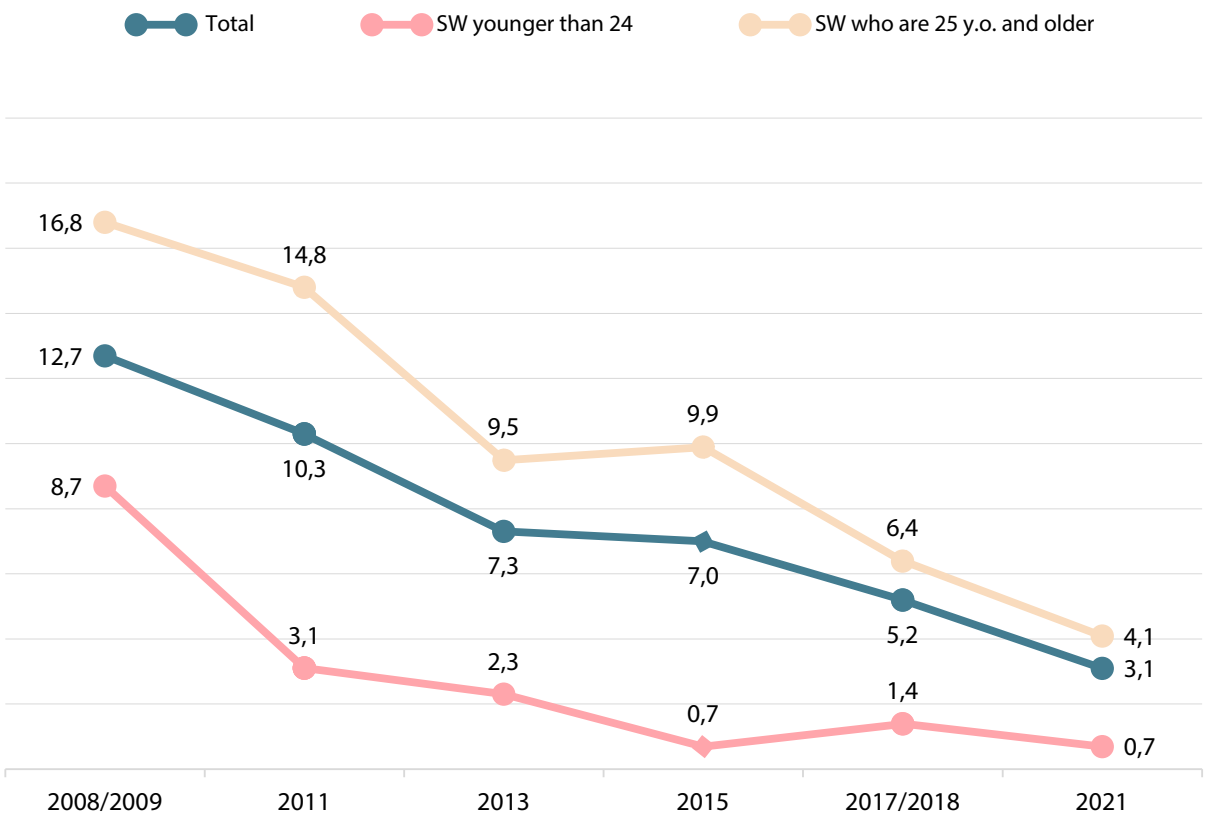


Table 50. Comparison of HIV status by self-reporting and by HIV testing (N = 4,961, in %)

HIV status, self-reported	HIV status, by testing					
	Positive		Negative		Total	
	n	%	n	%	n	%
Positive	129	96.3	5	3.7	134	100.0
Negative	20	0.5	4,143	99.5	4,163	100.0
No information on HIV status *(were not tested or refused to inform)*	6	0.9	658	99.1	664	100.0
Total	***155***	***3.1***	***4,806***	***96.9***	***4,961***	***100.0***

Table 51. *Prevalence of HIV among SWs, by socio-demographic characteristics (N = 4,961, in %)*

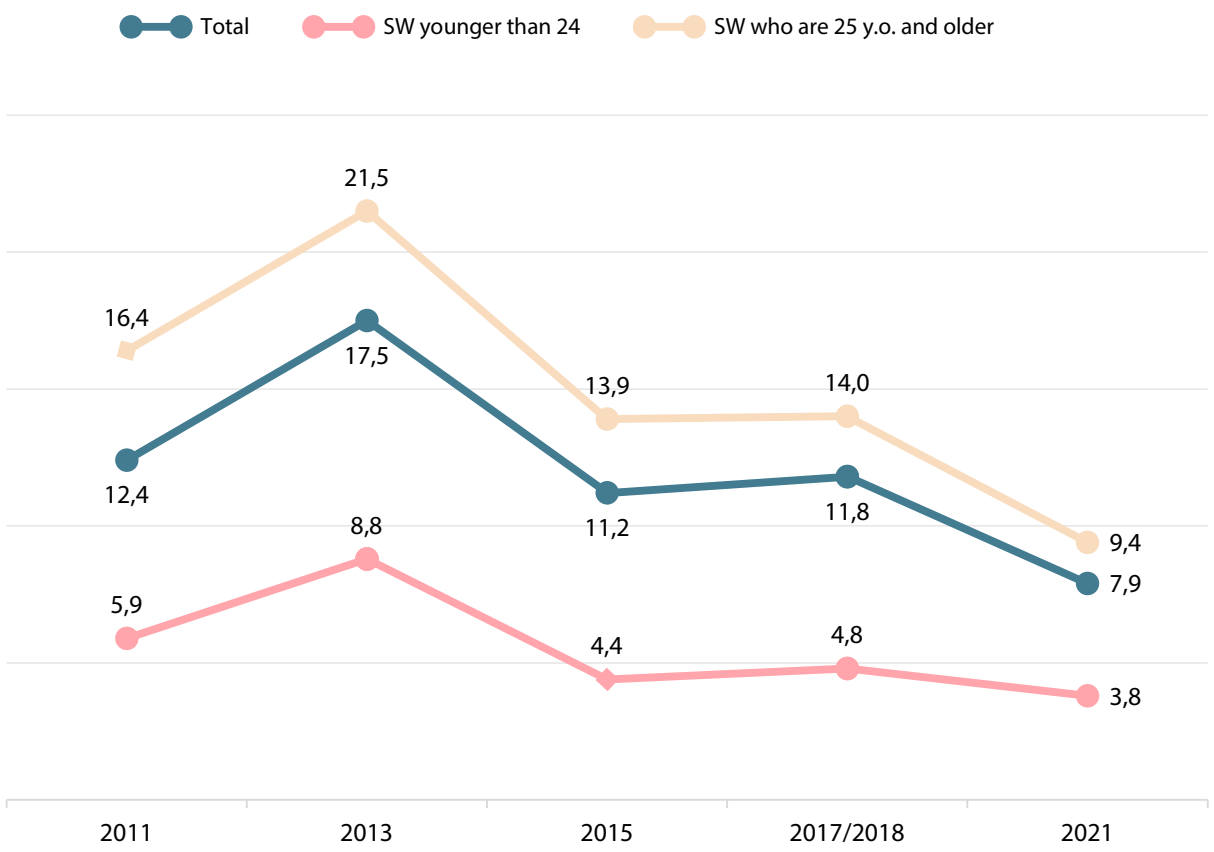
Share of SWs who received HIV testing result...	Positive		Negative	
	n	%	n	%
Total (N = 4,961)	***155***	***3.1***	***4,806***	***96.9***
Age (N = 4,961)	***p<0.001***			
14–19	-	-	220	100.0
20–24	9	0.8	1,154	99.2
25–34	55	2.2	2,394	97.8
≥ 35	90	8.0	1,037	92.0
Gender (N = 4,961)	***p=0.533***			
Women	146	3.1	4579	96.9
Men and trans* people	9	3.8	227	96.2
Education (N = 4,951)	***p<0.001***			
Incomplete secondary or lower	36	5.6	609	94.4
Complete secondary	63	3.8	1,588	96.2
Secondary professional	38	2.9	1,278	97.1
Higher *(Bachelor, Master)*	17	1.3	1,322	98.7
Occupation (N = 4,949)	***p=0.091***			
Sex work only	87	2.7	3,112	97.3
Full-time or odd jobs	43	4.0	1,041	96.0
Other *(students, unemployed, etc.)*	24	3.6	642	96.4
Personal monthly income, UAH (N = 3,875)	***p<0.001***			
≤ 15,000	67	6.7	927	93.3
15,001–24,000	20	2.5	791	97.5
24,001–35,000	21	1.8	1,152	98.2
≥ 35,001	7	0.8	890	99.2
Family status (N = 4,961)	***p=0.001***			
Have a husband/wife or a long-term sexual partner	50	4.6	1028	95.4
Have no husband/wife or a long-term sexual partner	105	2.7	3778	97.3
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)	***p=0.066***			
Yes	7	1.6	429	98.4
No	143	3.2	4,335	96.8

Share of SWs who received HIV testing result...	Positive		Negative	
	n	%	n	%
Length of working in sex business, years (N = 4,746)	***p<0.001***			
≤ 3	10	0.8	1,288	99.2
4–6	16	1.3	1,234	98.7
7–10	34	3.2	1,026	96.8
≥ 11	91	8.0	1,047	92.0
Experience of using injecting drugs during life (N = 4,901)	***p<0.001***			
Yes	57	24.1	180	75.9
No	89	1.9	4,575	98.1
Experience of using injecting drugs in the last 12 months (N = 4,901)	***p<0.001***			
Yes	31	26.1	88	73.9
No	115	2.4	4,667	97.6
NGO client (N = 4,873)	***p=0.581***			
Yes	58	2.9	1,959	97.1
No	90	3.2	2,766	96.8
Principal method of finding clients (N = 4,961)	***p<0.001***			
Virtual venues	56	2.3	2,396	97.7
Through intermediaries	28	2.7	1,018	97.3
Street, road, highways	38	6.3	564	93.7
Entertainment facilities/events	13	3.2	391	96.8
Sauna/massage salon	15	6.6	214	93.4
Other ways	4	1.8	222	98.2

16.2 Hepatitis C prevalence

Within the scope of the study, 7.9% of SWs and SEMs *(95% CI: 7.2–8.7%)* had a positive result for antibodies to viral hepatitis C, which is three times more than the share of participants who reported that they had been or are suffering from hepatitis C (2.4%). Among participants who believed they did not have hepatitis C, 5.9% tested positive for hepatitis C antibodies, and among those who did not know whether they had hepatitis, 11.6% tested positive. Compared to the previous waves of the study, the prevalence of hepatitis C among SWs and SEMs is decreasing in both age groups *(Figure 68)*.

Figure 68. *Prevalence of antibodies to hepatitis C among SWs in 2008–2021 (in %)*



As in the case of HIV, hepatitis C is more common among SWs older than 35 years (14.8%), with experience of providing sex services for more than 11 years (14.9%), with incomplete secondary education or less (13.0%) and income up to UAH 15,000 (15.3%). A greater proportion of SWs with antibodies to hepatitis C among participants who, in addition to sex work, have full-time or occasional work (10.7%), provide services mainly in saunas/massage salons or at street sites/venues *(15.3% and 14. 5% respectively)*. The prevalence of hepatitis C among SW-PWID was 43.3% compared to 6.0% of SWs and SEMs who never injected drugs. Half of HIV-positive SWs (58.4%) had a positive test result for hepatitis C antibodies.

Table 52. *Prevalence of antibodies to hepatitis C among SWs, by socio-demographic characteristics (N = 4,961, in %)*

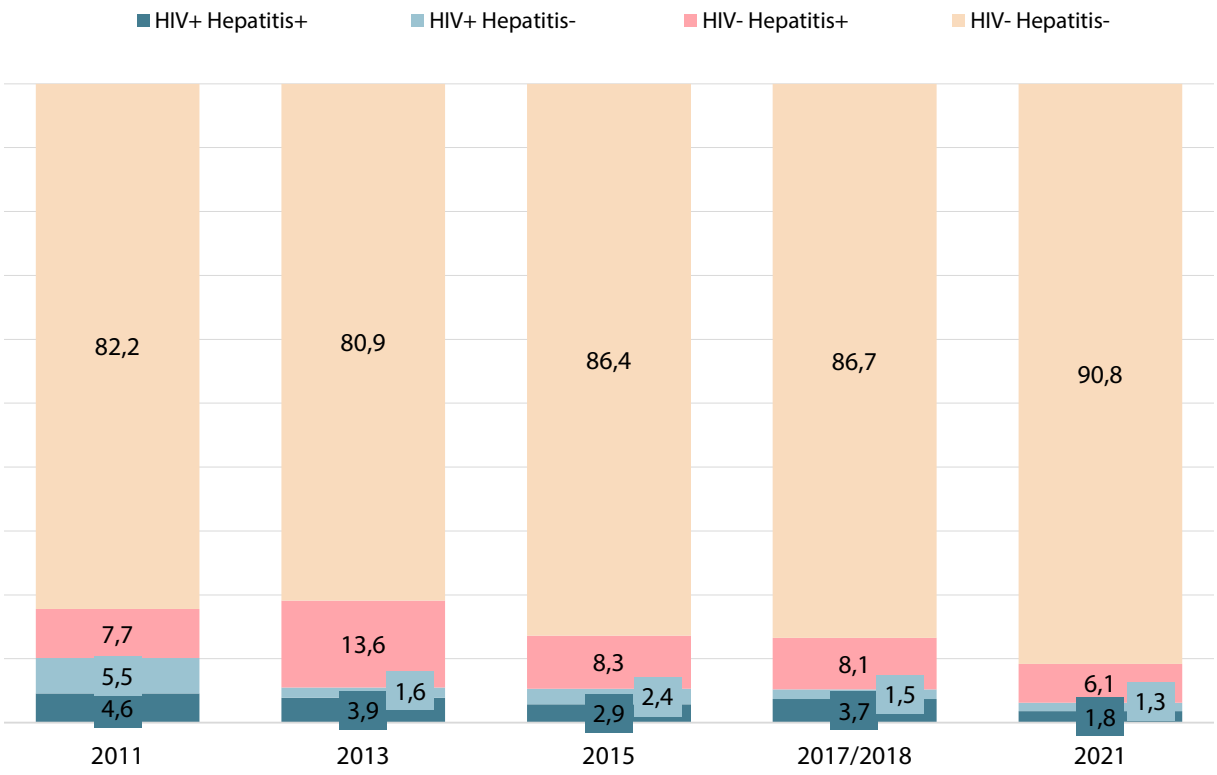
Share of SWs who received the result of hepatitis C testing...	Positive		Negative	
	n	%	n	%
Total (N = 4,961)	***391***	***7.9***	***4,570***	***92.1***
Age (N = 4,961)	***p<0.001***			
14–19	10	4.5	210	95.5
20–24	43	3.7	1,120	96.3
25–34	171	7.0	2,278	93.0
≥ 35	167	14.8	961	85.2
Gender (N = 4,961)	***p=0.255***			
Women	377	8.0	4,348	92.0
Men and trans* people	14	5.9	222	94.1
Education (N = 4,951)	***p<0.001***			
Incomplete secondary or lower	84	13.0	561	87.0
Complete secondary	148	9.0	1,503	91.0
Secondary professional	90	6.8	1,226	93.2
Higher *(Bachelor, Master)*	69	5.2	1,270	94.8
Occupation (N = 4,949)	***p<0.001***			
Sex work only	229	7.2	2,971	92.8
Full-time or odd jobs	116	10.7	968	89.3
Other *(students, unemployed, etc.)*	46	6.9	619	93.1
Personal monthly income, UAH (N = 3,875)	***p<0.001***			
≤ 15,000	152	15.3	843	84.7
15,001–24,000	46	5.7	765	94.3
24,001–35,000	70	6.0	1,103	94.0
≥ 35,001	24	2.7	872	97.3
Family status (N = 4,961)	***p=0.053***			
Have a husband/wife or a long-term sexual partner	100	9.3	977	90.7
Have no husband/wife or a long-term sexual partner	291	7.5	3593	92.5

Share of SWs who received the result of hepatitis C testing...	Positive		Negative	
	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)	***p=0.447***			
Yes	30	6.9	406	93.1
No	354	7.9	4,124	92.1
Length of working in sex business, years (N = 4,745)	***p<0.001***			
≤ 3	59	4.5	1,239	95.5
4–6	64	5.1	1,186	94.9
7–10	83	7.8	976	92.2
≥ 11	170	14.9	968	85.1
Experience of using injecting drugs during life (N = 4,902)	***p<0.001***			
Yes	103	43.3	135	56.7
No	280	6.0	4,384	94.0
NGO client (N = 4,873)	***p=0.237***			
Yes	148	7.3	1,870	92.7
No	236	8.3	2,621	91.7
HIV status (N = 4,961)	***p<0.001***			
Positive	90	58.4	64	41.6
Negative	301	6.3	4,505	93.7
Principal method of finding clients (N = 4,961)	***p<0.001***			
Virtual venues	150	6.1	2,302	93.9
Through intermediaries	73	7.0	973	93.0
Street, road, highways	87	14.5	515	85.5
Entertainment facilities/events	35	8.6	370	91.4
Sauna/massage salon	35	15.3	194	84.7
Other ways	11	4.9	215	95.1

16.3 Prevalence of HIV/HCV co-infection

The prevalence of dual infection in 2021 has decreased compared to previous rounds of the study, and is 1.8% *(95% CI: 1.5–2.2%)*. Among the total surveyed sample, 6.1% of the participants had only hepatitis C, and 1.3% had only HIV infection *(Figure 69)*.

Figure 69. Prevalence of HIV/HCV co-infection in 2011–2021 (in %)



16.4 Syphilis prexvalence

According to the results of syphilis testing within the study, 3.9% *(95% CI: 3.4–4.4%)* of SWs and SEMs received a positive result, which is three times more than the share of participants who reported that they had syphilis (1.2%). Positive test results were obtained for 3.0% of SWs and SEMs who believed they were not ill, and 10.1% who did not know their status. 79.7% of participants who tested positive for syphilis during the survey indicated that they did not have the disease or did not know about it. Syphilis Rapid Diagnostic Test, Bioline 3.0. was used to detect antibodies of all isotypes (IgG, IgM, IgA) against Treponema pallidum, this Treponemal test does not differentiate lifetime syphilis from active. Here and after all the results should be interpreted as lifetime prevalence. All prevalence results calculated as % reactive result on rapid test to syphilis.

The characteristics of SWs and SEMs with a positive test result for syphilis are similar to those who received positive test results for HIV and hepatitis C. To a greater extent, these SW are over 35 years old (7.2%), with a low level of education *(6.4% among those who has incomplete secondary education or below)*, income up to UAH 15,000 (5.7%),

experience of providing sex services for remuneration for more than 11 years (7.0%) and experience of injecting drug use (13.4%). Unlike HIV and hepatitis C, the prevalence of which is higher among SWs and SEMs working at street venues and in saunas/massage salons, syphilis was also more common among SWs and SEMs working through intermediaries *(Table 53)*.

Table 53. *Prevalence of syphilis among SWs and SEMs, by socio-demographic characteristics (N = 4,961, in %)*

Share of SWs who received a...syphilis test result	Positive		Negative	
	n	%	n	%
Total (N = 4,961)	***192***	***3,9***	***4,769***	***96,1***
Age (N = 4,961)	***p<0.001***			
14–19	3	1.4	217	98.6
20–24	28	2.4	1,135	97.6
25–34	80	3.3	2,370	96.7
≥ 35	81	7.2	1,047	92.8
Gender (N = 4,961)	***p=0.005***			
Women	191	4.0	4,534	96.0
Men and trans* people	1	0.4	235	99.6
Education (N = 4,951)	***p<0.001***			
Incomplete secondary or lower	41	6.4	604	93.6
Complete secondary	66	4.0	1,585	96.0
Secondary professional	52	4.0	1,264	96.0
Higher *(Bachelor, Master)*	31	2.3	1,308	97.7
Occupation (N = 4,949)	***p=0.318***			
Sex work only	133	4.2	3,067	95.8
Full-time or odd jobs	34	3.1	1,050	96.9
Other *(students, unemployed, etc.)*	25	3.8	641	96.2
Personal monthly income, UAH (N = 3,875)	***p<0.001***			
≤ 15,000	57	5.7	938	94.3
15,001–24,000	32	3.9	779	96.1
24,001–35,000	44	3.8	1,129	96.2
≥ 35,001	15	1.7	881	98.3

Share of SWs who received a...syphilis test result	Positive		Negative	
	n	%	n	%
Family status (N = 4,961)	***p=0.003***			
Have a husband/wife or a long-term sexual partner	58	5.4	1,019	94.6
Have no husband/wife or a long-term sexual partner	133	3.4	3,750	96.6
Migration outside the city for the purpose of providing sex services in the last 12 months (N = 4,914)	***p=0.644***			
Yes	15	3.4	421	96.6
No	174	3.9	4,304	96.1
Length of working in sex business, years (N = 4,745)	***p<0.001***			
≤ 3	33	2.5	1,266	97.5
4–6	40	3.2	1,210	96.8
7–10	31	2.9	1,028	97.1
≥ 11	80	7.0	1,057	93.0
Experience of using injecting drugs during life (N = 4,902)	***p<0.001***			
Yes	32	13.4	206	86.6
No	155	3.3	4,509	96.7
NGO client (N = 4,873)	***p=0.587***			
Yes	81	4.0	1,937	96.0
No	106	3.7	2,751	96.3
HIV status (N = 4,961)	***p=0.003***			
Positive	13	8.4	142	91.6
Negative	179	3.7	4,627	96.3
Principal method of finding clients (N = 4,961)	***p<0.001***			
Virtual venues	70	2.9	2,382	97.1
Through intermediaries	53	5.1	993	94.9
Street, road, highways	44	7.3	558	92.7
Entertainment facilities/events	11	2.7	393	97.3
Sauna/massage salon	10	4.3	220	95.7
Other ways	3	1.3	223	98.7

17. RECENT HIV INFECTION

As part of the study, SWs who received a positive HIV test result were offered to undergo a rapid test to determine recent HIV infection – Asante Rapid HIV-1 Recency Assay. Subsequently, already in laboratory conditions, all DBS samples from HIV-positive SWs were tested to determine the level of viral load using the Abbott Real Time HIV-1 Test, which confirmed the result regarding recent infection *(Table 54)*.

Based on the results of testing, 3.9% *(95% CI: 1.6–7.8%)* of HIV-positive SWs had recent HIV infection. Their share does not have statistically significant differences depending on their characteristics *(Table 55)*.

Table 54. *Stages of testing to determine recent HIV infection (in absolute numbers)*

The total number of tested SWs	4,961
HIV-positive SWs based on the results of three rapid tests	155
Received a result for a recent infection using a rapid test	8
DBS are collected and sent to the laboratory for validation	155
DBS are tested for viral load	155
Have a long-term HIV infection *(VL <1,000 copies)*	149
Have a recent HIV infection *(VL >1,000 copies)*	6

Table 55. *Share of SWs with recent HIV infection (N = 155, among HIV-positive, in %)*

Share of SWs with recent infection	n	%
Total	**6**	**3.9**
Age	***p=0.006***	
14–19	–	–
20–24	2	22.2
25–34	3	5.5
≥ 35	1	1.1
Gender	***p=0.306***	
Women	5	3.4
Men and trans* people	1	11.1
Education	***p=0.907***	
Incomplete secondary or lower	1	2.9
Complete secondary	2	3.2
Secondary professional	2	5.3
Higher *(Bachelor, Master)*	1	5.9

Share of SWs with recent infection	n	%
Occupation	***p=0.562***	
Sex work only	4	4.6
Full-time or odd jobs	2	4.7
Other *(students, unemployed, etc.)*	–	–
Personal monthly income, UAH	***p=0.083***	
≤ 15,000	–	–
15,001–24,000	2	10.0
24,001–35,000	1	4.8
≥ 35,001	–	–
Family status	***p=0.665***	
Have a husband/wife or a long-term sexual partner	1	2.0
Have no husband/wife or a long-term sexual partner	5	4.8
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=1.000***	
Yes	–	–
No	6	4.2
Length of working in sex business, years	***p=0.037***	
≤ 3	2	20.0
4–6	-	-
7–10	2	5.9
≥ 11	2	2.2
Experience of using injecting drugs during life	***p=1.000***	
Yes	2	3.5
No	4	4.5
NGO client	***p=1.000***	
Yes	2	3.4
No	3	3.3
Principal method of finding clients	***p=0.755***	
Virtual venues	1	1.8
Through intermediaries	2	7.1
Street, road, highways	2	5.3
Entertainment facilities/events	–	–
Sauna/massage salon	1	6.7
Other ways	–	–

18. HIV TREATMENT CASCADE

According to the UNAIDS goals, it is possible to significantly reduce the probability of HIV transmission and the further spread of the epidemic by achieving three goals: 95% of all PLHIV know their status; 90% of PLHIV who know their status receive ART; 90% of those who receive ART have an undetectable viral load.

In the 2021 study, all HIV-positive participants and those who reported taking ART were referred to a PHC providing HIV care to confirm the participant's HIV status and ART experience. Due to this, in the current study round, indicators of the cascade of HIV treatment among SWs were calculated taking into account verified data on the experience of HIV-positive persons.

According to the results of the 2021 study, the cascade of HIV treatment among SWs exceeds the indicators of 2017 *(Figure 70)* and is 83.1–93.8–79.7%. Among HIV-positive SWs, 83.1% (95% CI: 76.8-88.5%) of participants knew their status, 93.8% (95% CI: 88.6-97.0%) of them received treatment, and among those who were on ART, 79.7% (95% CI: 71.5-85.8%) of people achieved viral suppression *(<1000 copies, according to the results of laboratory analysis of collected DBS samples)*.

Awareness of one's HIV status increases with age *(from 44.4% among 20–24 year olds to 95.6% among SWs over 35 years old)* and experience of providing sex services *(from 50.0% of SWs working for less than three years, up to 91.2% who have been working for more than 11 years)*. There were no other differences between SWs in terms of their socio-demographic characteristics, either with regard to taking ART or achieving an undetectable viral load *(Table 56)*.

Figure 70. *Cascade of HIV treatment among SWs in 2017–2021 (for 7 study cities in 2021, in %)*

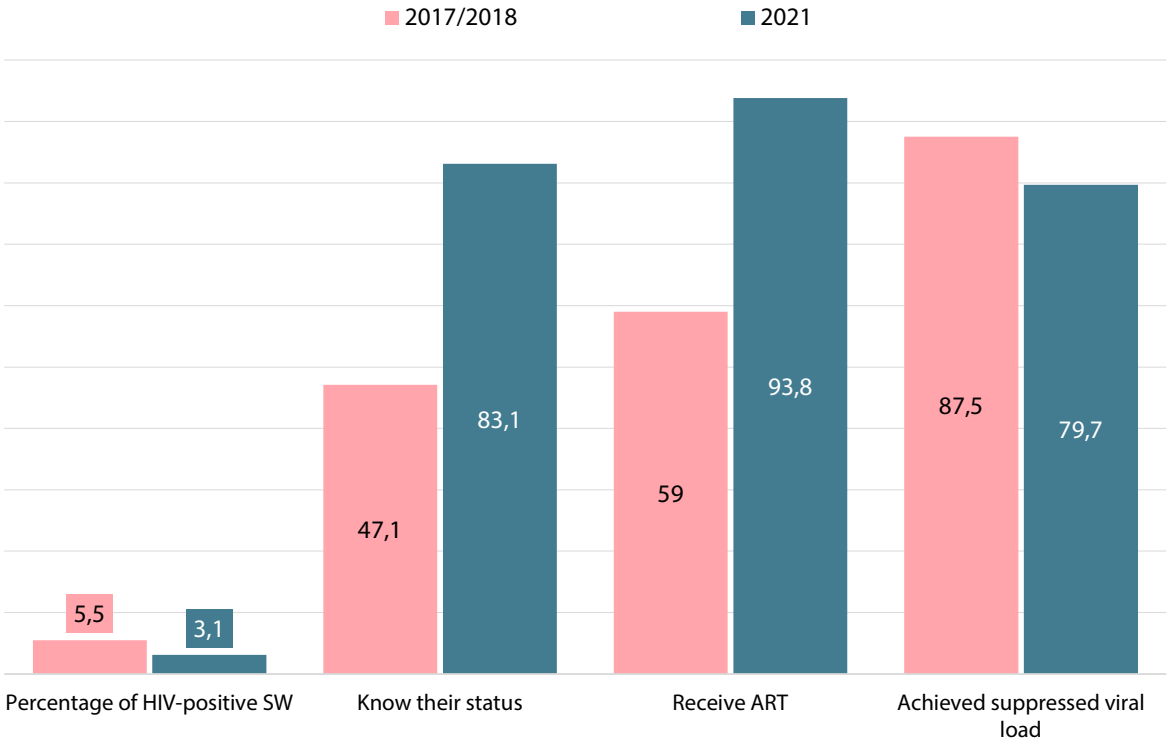


Table 56. *Indicators of the HIV treatment cascade, by socio-demographic characteristics (N = 155, among HIV-positive, in %)*

Share of HIV-positive SWs, who...	Know their HIV status *(N = 155)*		Receive ART *(among those who know about their HIV status, N = 129)*		Achieved an undetectable viral load *(among those who receive ART, N = 121)*	
	n	%	n	%	n	%
Total	***129***	***83.1***	***121***	***93.8***	***96***	***79.8***
Age	***p<0.001***		***p=0.223***		***p=0.120***	
14–19	–	–	–	–	–	–
20–24	4	44.4	3	75.0	1	33.3
25–34	38	69.1	35	92.1	28	80.0
≥ 35	87	95.6	83	95.4	67	81.7
Gender	***p=0.358***		***p=1.000***		***p=0.379***	
Women	120	82.2	112	93.3	91	81.3
Men and trans* people	9	100.0	9	100.0	6	66.7
Education	***p=0.130***		***p=0.468***		***p=0.413***	
Incomplete secondary or lower	33	94.3	32	94.1	22	71.0
Complete secondary	50	79.4	45	90.0	37	82.2
Secondary professional	32	84.2	31	96.9	27	87.1
Higher *(Bachelor, Master)*	12	70.6	12	100.0	9	75.0
Occupation	***p=0.598***		***p=0.896***		***p=0.228***	
Sex work only	70	80.5	65	92.9	51	78.5
Full-time or odd jobs	37	86.0	35	94.6	31	88.6
Other *(students, unemployed, etc.)*	21	87.5	20	95.2	14	70.0
Personal monthly income, UAH	***p=0.759***		***p=0.207***		***p=0.097***	
≤ 15,000	57	85.1	55	94.8	46	85.2
15,001–24,000	15	75.0	12	80.8	7	58.3
24,001–35,000	17	81.0	17	94.4	12	75.0
≥ 35,001	6	85.7	6	100.0	6	100.0
Family status	***p=0.167***		***p=0.713***		***p=0.341***	
Have a husband/wife or a long-term sexual partner	45	90.0	43	95.6	37	86.0
Have no husband/wife or a long-term sexual partner	84	80.0	78	92.9	60	76.9

Share of HIV-positive SWs, who...	Know their HIV status *(N = 155)*		Receive ART *(among those who know about their HIV status, N = 129)*		Achieved an undetectable viral load *(among those who receive ART, N = 121)*	
	n	%	n	%	n	%
Migration outside the city for the purpose of providing sex services in the last 12 months	***p=0.101***		***p=1.000***		***p=0.189***	
Yes	4	57.1	4	100.0	2	50.0
No	120	83.9	112	93.3	90	80.4
Length of working in sex business, years	***p=0.001***		***p=0.010***		***p=0.163***	
≤ 3	5	50.0	3	60.0	1	33.3
4–6	10	66.7	9	90.0	9	90.0
7–10	26	76.5	26	100.0	20	76.9
≥ 11	83	91.2	78	94.0	64	82.1
Experience of using injecting drugs during life	***p=0.383***		***p=1.000***		***p=0.226***	
Yes	49	86.0	46	93.9	40	87.0
No	71	79.8	67	94.4	51	76.1
NGO client	***p=0.509***		***p=0.257***		***p=0.109***	
Yes	47	79.7	46	97.9	40	87.0
No	77	84.6	70	90.9	52	74.3
Principal method of finding clients	***p=0.688***		***p=0.200***		***p=0.918***	
Virtual venues	47	83.9	44	93.6	35	81.4
Through intermediaries	23	82.1	19	82.6	15	78.9
Street, road, highways	30	76.9	29	96.7	23	79.3
Entertainment facilities/events	11	84.6	11	100.0	8	72.7
Sauna/massage salon	14	93.3	14	100.0	11	78.6
Other ways	4	100.0	4	100.0	4	100.0

CONCLUSIONS

SOCIAL AND DEMOGRAPHIC PROFILE

Since 2008, there has been a decrease in the share of SWs and SEMs under the age of 19 *(4.4% in 2021)*. As in previous years, their average age was 29 years *(± 7 years)*. In the research sample, 95.2% are women, the rest are men or trans* people. More than half of the respondents had incomplete or complete higher education and lived in rented housing. For 64.5% of participants, sex work was the only occupation, the median income was observed at the level of UAH 25,000 per month. 66.6% of participants did not have a regular sexual partner, and among those who had one, almost half concealed the fact of their engagement in sex business from their partner. Every tenth participant (8.9%) had the experience of providing sex services outside their locality during the year, most of whom traveled to other regions of Ukraine.

SEXUAL BEHAVIOUR

On average, the participants started providing sex services at the age of 22 *(± 4 years)*, and one in ten – before the age of 18. The share of SWs and SEMs that use the Internet or telephone as the main way of finding clients continues to increase, and the share of those who work at street venues is decreasing.

Businessmen continue to be the predominant group of SW clients, while military personnel, taxi drivers and law enforcement officers remain highly represented. The share of SWs and SEMs that provide services to bisexuals or homosexuals and foreigners is increasing. The share of those who provide services to PWID remains stable and is mainly represented by participants who have their own experience of injecting drug use. Compared to previous studies, the rate of providing sex services to two or more clients in one day is increasing, as well as the proportion of those who had more than one regular and casual non-commercial partner is increasing.

CONDOM USE

The use of a condom during the last sexual contact with the client is at the level of previous years, in 2021 the indicator is 92.4%. The use of a condom during sex depends on the type of sexual contact, and most often SWs and SEMs practice unprotected oral sex (19.5%) compared to vaginal (2.0%) or anal (9.4%). The main reason for not using a condom is client insistence. Always during oral sex in the last 30 days, 64.3% of SWs and SEMs used a condom, during anal sex – 81.6%, during vaginal sex – 89.5%.

Condom use with noncommercial partners is less common than with clients. During the last sex with a regular partner, a condom was used by 62.2% of SWs and SEMs, with a casual partner – 87.7%, these indicators exceed the results of previous studies. Among SWs and SEMs with a regular partner, 36.7% to 55.7% of participants always used a condom during the last month *(depending on the type of contact)*. Regular condom use with a casual partner is more common. Among SWs and SEMs who had such partners, 53.1% of participants indicated that they always used a condom during oral sex, 72.0% during anal sex, and 82.5% during vaginal sex.

From 10.2% to 27.2% of SWs and SEMs reported that they had a certain practice of improper condom use with clients in the last month, from 12.6% to 25.2% – with regular partners, from 10.2% to 17 .2% – with random ones. Among such practices are cases where the condom has torn or slipped; starting sex without a condom and putting it on in the process; continuing sex after removing the condom.

57.0% of SWs and SEMs reported that sex without a condom is unacceptable for them under any conditions. At the same time, there is an increasing share of SWs and SEMs who are ready to have unprotected sex with a client under the condition of additional payment, the presence of a trusting relationship between them or during oral sex.

Group sex was practiced by every fifth study participant during the month, 82.7% of them always used a condom during group sex, and 75.3% of participants used a condom when changing each sexual partner. From 11.1 to 19.6% of respondents had one or another case of incorrect condom use.

USE OF ALCOHOL AND DRUGS

Compared to previous years, the level of alcohol use has decreased – 80.3% of participants used it in the last month (*median number of times – 6)*. According to the AUDIT-C scale, which was used in this study for the first time, a high level of alcohol abuse was observed in 13.6% of SWs and SEMs, a serious level was observed in 7.8% of participants *(mainly among men and trans* people, with low income, experience of drinking injecting drugs, working at street venues)*.

The share of SWs and SEMs with experience of injecting drug use decreased – in 2021, 1.9% of SWs and SEMs had such experience during the last month. Non-injecting use is more common both during lifetime and during the last month (9.0%). Almost all SWs and SEMs with experience of injection drug use during the year used a sterile needle and syringe during the last injection (96.5%). Among the most common drugs for injection use is methadone, for non-injection drugs – marijuana and amphetamine, which were the first drugs for the participants.

4.8% of SWs with experience of drinking alcohol in the past month did so before each sexual encounter with a client and only 12.9% of participants never did so. A tenth of SWs and SEMs who used drugs (9.6%) reported constant drug use before sex with a client. 75.8% of SWs and SEMs who used alcohol and drugs in the last month did so before providing sex services, and 3.0% used them before each sexual encounter.

DEPRESSION

In general, participants are not characterized by depression and anxiety. According to the PHQ-9 assessment, 69.3% of SWs and SEMs had no symptoms of depression, severe depression was characteristic of 0.9% of participants. According to GAD-7 estimates, 73.6% of respondents had a minimum level of anxiety, and 6.6% had a high level of anxiety. However, depression and anxiety are more common among SW-PWID, half of them had some level of depression, and a quarter had anxiety.

EXPERIENCE OF VIOLENCE

Compared to previous years, the share of SWs and SEMs who experienced violence during the provision of sex services decreased: 46.6% in 2015 to 30.4% in 2021. The most common forms of violence were verbal humiliation, threats and beatings. Despite the decrease in the prevalence of coercion to provide free services since 2015, almost a third of SWs and SEMs with experience of violence had such cases. Most often, SWs and SEMs encountered violence from casual clients (55.0%), and every fifth participant reported such actions by law enforcement officers. Practices of seeking help in case of violence, in particular to specialized institutions or specialists, remain not widespread among the target group – 66.6% of participants did not seek any help, and among those who sought help, only 7.5% tried to get it from public organizations, crisis centers or the police.

EXPERIENCE OF RECEIVING HEALTH SERVICES

Over the past year, a third of the SWs and SEMs had health problems that required medical assistance; most of them went to a medical institution for consultation or treatment (84.6%). The referral rate increases with an increase in the monthly income of the participants and is more characteristic of SWs with higher education, without experience of injecting drug use, and those who work at virtual venues. Half of the SWs and SEMs who needed medical assistance chose general polyclinics, another third chose private medical institutions. Almost all participants received the necessary medical care during the last visit (97.9%).

48.4% of participants had a declaration with a family doctor, half of them met with him personally or consulted online during the last year. If we take into account the need for medical assistance, a third of the SWs and SEMs who needed it and had a family doctor did not consult him, they saw a specialist only when signing the contract.

HIV/AIDS AWARENESS

Awareness of the need to use a condom correctly during every sexual encounter remains stable at 87.3% in 2021. To a lesser extent, SWs and SEMs are aware of the possibilities of PrEP and PEP in reducing the chances of HIV infection, as well as of an undetectable viral load – only a third gave the correct answers to these questions. The level of knowledge about HIV is lower among young SWs and SEMs, among participants with incomplete secondary education or below, experience of providing sex services for up to three years, and those who do not use NGO services.

ACCESS TO PREVENTION SERVICES

40.9% of SWs and SEMs reported that they are clients of HIV-service NGOs and have a client card, which is higher than in 2017. Two thirds of them have been using the services of organizations for more than a year. The rate of coverage of preventive services for the last year ranges from 44.7% to 49.8%, depending on the calculation method. Almost half of the participants received male condoms, social worker counseling, HIV testing and lubricants in the past year, and a third received informational materials and tuberculosis screening. 42.9% of SW-PWID received sterile syringes from NGOs in the last 12 months. The vast majority of NGO clients reported that access to services has not changed over the past year, 6.6% of participants noted a deterioration.

A third of the SW and SEM felt the need for condoms in the last month, 60.5% of the participants bought them on their own. The median number of condoms purchased by SWs and SEMs themselves over the past 30 days was 30, and the cost of one condom was UAH 17. One in ten participants reported that during this time there were occasions when they needed condoms but could not buy them, mostly because pharmacies or shops were closed or they did not want to go and buy them.

A third of the total respondents had heard about PrEP, and 2.7% of HIV-negative SWs and SEMs had experience of taking the drug during the year. Almost every 20th SW and SEM (4.8%) can become a potential participant in PrEP programs, taking into account HIV status, prescription criteria and willingness to take drugs according to the terms of admission. A third of the total sample had heard about PEP (34.0%). About half of HIV-negative SWs and SEMs agreed to one or another conditions for receiving PEP, with the most critical attitude to obtaining medications at the AIDS Center. In general, a third of HIV-negative participants (31.8%) expressed a desire and willingness to take drugs in case of need in accordance with the conditions of their prescription and monitoring of intake.

HIV TESTING COVERAGE

Compared to previous years, the share of SWs who were tested for HIV during their lifetime has increased, it is 86.5%. The share of SWs and SEMs with experience in testing and obtaining results during the year remains unchanged – 62.8% in 2021. In general, the majority of SWs and SEMs who took part in the study believe that they could easily get tested in the near future (90.0%) and know where to do it (86.9%). Among the HIV-positive participants who did not know their status, almost all took an HIV test during their lifetime and two thirds within a year. For half of the SWs and SEMs that were tested during the year (49.2%), the test was done at an NGO, a mobile clinic or with the help of a social worker. Repeated, confirmatory testing was also carried out in half of the cases in the NGO network. The main reasons for avoiding HIV testing were confidence in the safety of one's sexual behavior and lack of desire to take the test.

In the NGO network, 37.2% of respondents were tested for HIV in 2020 and 40.6% in 2021. During this period, 16.5% and 15.8% were tested for syphilis, respectively. Half of the participants who were tested for HIV at an NGO in 2021 did so with the help of a social worker, another third – independently according to his instructions. The time, place and completeness of the information provided by the social worker, as well as confidentiality, were rated by the participants with the highest possible score.

Two-thirds of all SWs and SEMs are aware of the existence of rapid HIV tests for self-use. 21.0% of SWs and SEMs had the experience of self-testing for HIV, and 11.7% of participants took such a test during the last month. The main source of obtaining the test is an NGO, a mobile clinic or a social worker (60.8%), and 21.6% of SWs and

SEMs who self-tested during the year bought it themselves at a pharmacy. For the majority of SWs and SEMs (84.8%), the last test for self-testing was with the use of blood, for the rest – an oral test. Two-thirds of the participants with the experience of passing such a test during the year did not face any problems or difficulties with its use, while 24.6% of those who passed the test using blood noted that it was difficult to collect a sample for testing *(prick a finger, draw blood from pipette, etc.)*. 1.8% of SWs and SEMs who did a self-test during the year received a positive result during the last test, half of them turned to a health facility or a social worker to check the result. Among those who received a negative result, a third contacted a social worker, and 5.6% – a health facility.

AVOIDANCE OF SEEKING HEALTH SERVICES BECAUSE OF STIGMA AND DISCRIMINATION

Avoidance of seeking health services due to stigma and discrimination was assessed for the first time in 2021, according to UNAIDS Global AIDS Monitoring recommendations. One in five participants had not sought medical help in general in the past year, including 17.8% due to fear of someone finding out they were providing sex services for a fee. HIV testing was avoided by 24.4% of participants who had not taken a test in the last 12 months, mostly also due to the fear of disclosing their affiliation to the SW and SEMs and possible stigmatization by the staff. 13.5% of HIV-positive SWs and SEMs who knew about their status at the time of the study avoided seeking medical help in connection with HIV during the year. At the same time, none of the HIV-positive SWs and SEMs who had never taken ART or at the time of participation in the study did not avoid treatment due to fear of stigma and discrimination

REPRODUCTIVE HEALTH

Almost half of SW women (40.2%) reported that they had experienced pregnancy during their lifetime, for 24.5% of the participants, none of the pregnancies ended in the birth of a child. Almost all of those SWs and SEMs who gave birth to a child during the last pregnancy visited the prenatal care clinic (93.8%), this is less typical for SW-PWID (85.9%). 91.2% of clinic visitors reported that they were offered an HIV test, 82.8% were tested *(and almost all of them received a negative result)*. 76.9% of participants were offered testing for syphilis during a visit to a women's consultation during the last pregnancy, and 73.2% took such a test. At the time of the study, 6.5% of women were trying to get pregnant, the rest mainly used male condoms as a method of contraception. About 3% of the participants practiced interrupted sexual intercourse, emergency contraception or the calendar method as a way to prevent unwanted pregnancy.

COVID-19 PREVALENCE AND IMPACT

A third of SWs had contact with a person who was diagnosed with COVID-19 during the year, 14.5% simultaneously had an elevated temperature, dry cough and shortness of breath. 3.1% of participants were hospitalized due to COVID-19. One in four was tested during the last year, and 15.2% of those interviewed received a positive test result. When taking into account a positive test result for COVID-19 or the presence of symptoms without testing or hospitalization for the disease in the past 12 months, the prevalence of COVID-19 among SWs and SEMs was 10.3% *(95% CI: 9,5–11.2%)*. Half of the participants reported that due to the COVID-19 pandemic, the number of their clients has decreased, so they have less income than usual. A third of SWs and SEMs were forced to temporarily stop providing sex services due to quarantine restrictions, and 24.0% – due to fear of getting sick.

SELF-REPORTED PREVALENCE OF TB AND STIS

From 1.2% to 20.3% of SWs and SEMs reported that they had a certain sexually transmitted infection, and 0.4% of participants indicated that they had pulmonary tuberculosis. The self-reported prevalence of all these diseases was higher among SWs and SEMs with lifetime injection drug use. Hepatitis B vaccination coverage is low, with 8.8% of SWs reporting that they had been vaccinated and 9.6% not knowing if they had received the vaccine. The experience of treating this or that disease has shown differences in access to it. Hepatitis C treatment was the least accessible: 46.5% of SWs and SEMs who knew they had the disease had never been treated. Among participants suffering from hepatitis B and pulmonary tuberculosis, this figure was 18.1 and 11.6%, respectively. All participants who reported syphilis received treatment.

PREVALENCE OF HIV, HEPATITIS C AND SYPHILIS

According to the results of the 2021 study, the prevalence of HIV among SWs was 3.1% *(95% CI: 2.7–3.6%)*. This indicator is at the level of 0.7% among SWs under the age of 24, and 4.1% among participants over 25 years of age, which is less than in previous rounds of the study.

Within the scope of the study, 7.9% of SWs and SEMs *(95% CI: 7.2–8.7%)* had a positive result for antibodies to viral hepatitis C, which is three times more than the share of participants who reported that they had or are suffering from hepatitis C (2.4%). Compared to previous years, the prevalence of hepatitis C among SWs and SEMs is decreasing in both age groups *(3.8% among SWs and SEMs under 24 years and 9.4% among participants over 25 years old)*.

The prevalence of dual infection in 2021 has decreased compared to previous years and is 1.8% *(95% CI: 1.5–2.2%)*. Among the total surveyed, 6.1% of the participants had only hepatitis C, and 1.3% had only HIV infection.

According to the results of syphilis testing, 3.9% *(95% CI: 3.4–4.4%)* of SWs and SEMs received a positive result, which is three times more than the share of those who reported that they had syphilis (1.2%). 79.7% with a positive test result for syphilis during the survey indicated that they did not have the disease or did not know about it.

RECENT HIV INFECTION

According to the results of laboratory testing of DBS samples within the study, 3.9% of HIV-positive SWs had recent HIV infection *(95% CI: 1.6–7.8%)*. It is worth noting that statistically significant differences depending on the characteristics of such SWs were not recorded.

HIV TREATMENT CASCADE

According to the results of the 2021 study, the cascade of HIV treatment among SWs is 83.1–93.8–79.7%, which exceeds the indicators of the previous study in 2017–2018. Among HIV-positive SWs, 83.1% of participants knew their status, 93.8% of them received treatment, and among those who were on ART, 79.7% achieved viral suppression *(<1000 copies, according to the results of laboratory analysis of the collected DBS samples)*. Awareness of SWs regarding their HIV-positive status increases with age and experience of providing sex services. There were no differences in socio-demographic characteristics either with regard to taking ART or achieving an undetectable viral load.

RECOMMENDATIONS

1. Based on the IBBS results, HIV-service projects need to pay more focused attention to SW-PWID with low educational level and low income as well as street SWs and those who work in saunas and massage salons. Coordinated efforts are needed to find those sub-groups of SWs and link them to the relevant prevention programs that meet the needs of this target group.

2. Given the increasing popularity of online resources for clients search, it is necessary to use Internet as an informational channel for SWs on the existing HIV prevention, testing, sexual and reproductive health services, particularly those provided by the community-based organizations. This may include developing a separate SW-targeting resource referring to the existing services and information. Alternatively, this may be in the form of targeted ads on popular web sites.

3. Engage the community of SWs in raising awareness about sex worker rights, outreach, and collaboration with other HIV service providers, both governmental and non-governmental, to determine the range of services that can be provided through the peer delivery model and areas where those services should be provided. Strengthen and/or expand peer-to-peer service provision to minimize existing barriers to accessing health and social services, and reduce stigma, discrimination, and violence.

4. Include the condom-negotiating skills building for SWs into the existing prevention programs and interventions. These skills building activities should emphasize the importance of proper and consistent condom use during different types of sexual contacts *(including oral sex)* with all types of clients, and risks associated with provision of sexual services under the influence of alcohol and drugs.

5. Given the current situation with the prevalence of violence, it is important to inform community representatives about existing opportunities to receive help in case of violation of their rights *(for example, the REAct project)*, as well as to educate the SW community on what to do in the case of violence and what help is available in their particular settings for the survivors of sexual and physical violence. It is also important to work with law enforcement representatives to reduce the level of stigma and discrimination against SWs.

6. Strengthen cooperation between community-driven HIV prevention programs and family doctors, consider training family doctors and primary health care staff on how to provide services to SWs, combat stigma and discrimination, and inform about the specifics of counseling and managing patients from this group. Based on the successful experience of NGO specialists and doctors from AIDS Centers, it would be highly beneficial to develop the recommendations or guides for the family doctors on the specifics of communication with SWs, additional testing that should be offered *(i.e. STIs testing)* and specifics of treatment and clinical management.

7. Promote PrEP to reduce the chances of getting HIV infection and inform community members about the benefits of taking PrEP and sites where PrEP can be received. It is also important to inform the community about PEP, sites where PEP can be obtained and conditions when PEP is needed to be administered to reduce the risk of HIV infection.

8. Promote HIV self-testing among SWs in combination with counseling, social support and social care services in case a need in a confirmatory testing arises, registration for outpatient treatment, and starting ART. It is suggested to educate SWs about the existence of HIV self-tests, existing ways to obtain such tests, and training SWs on how to self-test according to the instructions, how to take a blood/saliva sample correctly.

9. Within existing prevention programs, it is important to pay attention to the sexual and reproductive health of SWs: debunk myths about coitus interrupts or the calendar method as effective methods of contraception, inform about evidence-based methods of contraception and prevention of unwanted pregnancy, inform about the ways to take care of oneself and one's unborn child during pregnancy. Organize educational sessions with specialists of antenatal care clinics on the need to test patients for HIV and syphilis, report their results and refer them for treatment whenever necessary.

ANNEX 1. REGIONAL INDICATORS

Table 57. Age, gender, and family status of SWs and SEMs by regions (among all, % among those who answered)

City	Share of persons who consider themselves SWs		Average age (standard deviation, min – max)	Age intervals								Number of female SWs and SEMs		Presence of a regular sexual partner	
				14–19		20–24		25–34		≥ 35					
	n	%		n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	597	71.8	26 (5. 16-51)	66	7.8	287	33.7	437	51.4	61	7.2	850	99.9	274	32.2
Kyiv	817	96.5	31 (6. 18-54)	6	0.7	146	17.1	497	58.1	207	24.2	806	94.2	153	17.9
Kropyvnytskyy	471	95.0	33 (6. 18-54)	1	0.2	23	4.6	271	54.1	206	41.1	474	94.8	134	26.8
Lviv	487	76.2	25 (5. 18-42)	50	7.1	305	43.4	313	44.5	35	5.0	581	82.8	101	14.4
Mariupol	416	89.1	33 (9. 16-62)	31	6.2	50	10.0	199	39.8	220	44.0	491	98.2	118	23.6
Odesa	700	84.1	28 (7. 17-59)	40	4.7	281	33.0	373	43.8	157	18.4	834	98.1	132	15.5
Kharkiv	678	97.0	32 (8. 17-52)	26	3.7	73	10.4	359	51.2	243	34.7	688	98.1	165	23.5
Total	***4,166***	***86.6***	***29 (7. 16-62)***	***220***	***4.4***	***1,164***	***23.5***	***2450***	***49.4***	***1,128***	***22.7***	***4,725***	***95.2***	***1,078***	***21.7***
Cherkasy	479	97.8	29 (6. 18-51)	6	1.2	115	23.2	287	57.9	88	17.7	496	100.0	109	22.0

Table 58. *Occupation and income of sex workers and SEMs by region (among all, % among those who answered)*

City	Occupation						Income for the last 30 days in UAH, median (25th – 75th percentiles)	Personal monthly income, UAH							
	Sex work only		Full-time or odd jobs		Other (students, unemployed, etc.)			≤ 15,000		15,001–24,000		24,001–35,000		≥ 35,001	
	n	%	n	%	n	%		n	%	n	%	n	%	n	%
Dnipro	636	74.8	113	13.3	101	11.9	25,000 (20,000 – 32,000)	93	16.2	116	20.2	277	48.2	89	15.5
Kyiv	504	58.9	191	22.3	161	18.8	50,000 (30,000 – 60,000)	41	5.4	68	9.0	165	21.8	484	63.9
Kropyvnytskyy	276	55.3	201	40.3	22	4.4	10,000 (8,000 – 15,000)	264	81.7	36	11.1	21	6.5	2	0.6
Lviv	336	48.2	234	33.6	127	18.2	30,000 (23,000 – 35,000)	43	8.4	101	19.8	259	50.8	107	21.0
Mariupol	212	42.7	140	28.2	145	29.2	13,000 (10,000 – 17,000)	234	73.4	57	17.9	17	5.3	11	3.4
Odesa	646	76.1	122	14.4	81	9.5	20,000 (15,000 – 25,000)	198	27.1	317	43.4	206	28.2	10	1.4
Kharkiv	589	84.0	84	12.0	28	4.0	28,000 (20,000 – 40,000)	122	18.5	115	17.5	229	34.7	193	29.3
Total	***3,200***	***64.6***	***1,084***	***21.9***	***666***	***13.4***	***25,000 (15,000 – 35,000)***	***994***	***25.7***	***811***	***20.9***	***1,173***	***30.3***	***897***	***23.1***
Cherkasy	203	41.1	185	37.4	106	21.5	13,000 (4,500 – 17,000)	257	68.2	89	23.6	30	8.0	1	0.3

Table 59. Experience of providing sex services and principal method of finding clients in the regional dimension (among all, % among those who answered)

City	Share of SWs and SEMs who started providing services under the age of 18		Median length of engage-ment in sex business	Principal method of finding clients											
				Virtual venues		Through intermedi-aries		Street, road, highways		Entertain-ment facilities/ events		Sauna/ massage salon		Other ways	
	n	%		n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	84	9.9	4	106	12.5	537	63.2	52	6.1	69	8.1	42	4.9	44	5.2
Kyiv	33	3.9	5	656	76.6	69	8.1	105	12.3	2	0.	-	-	24	2.8
Kropyvnytskyy	42	8.5	10	232	46.5	29	5.8	96	19.2	43	8.6	61	12.2	38	7.6
Lviv	67	10.0	5	488	69.6	79	11.3	25	3.6	49	7.0	13	1.9	47	6.7
Mariupol	72	14.8	11	195	39.1	26	5.2	102	20.4	70	14.0	82	16.4	24	4.8
Odesa	86	10.2	5	444	52.2	134	15.8	141	16.6	99	11.6	5	0.6	27	3.2
Kharkiv	109	15.6	9	331	47.2	172	24.5	80	11.4	71	10.1	26	3.7	21	3.0
Total	***492***	***10.1***	***6***	***2,452***	***49.4***	***1,046***	***21.1***	***602***	***12.1***	***404***	***8.2***	***229***	***4.6***	***226***	***4.6***
Cherkasy	28	5.7	6	92	18.5	68	13.7	72	14.5	143	28.8	37	7.5	84	16.9

Table 60. *SW and SEMs clients from the number of "bridge groups" for the last 30 days in the regional dimension (among all, % among those who answered)*

City	Share of SWs and SEMs that provided sex services to bisexuals and/or homosexuals		Share of SWs and SEMs that provided sex services to people who inject drugs		Share of SWs and SEMs that provided sex services to foreigners		Share of SWs and SEMs that provided sex services to HIV-positive clients	
	n	%	n	%	n	%	n	%
Dnipro	59	7.0	259	30.6	493	58.1	28	3.4
Kyiv	82	9.6	36	4.2	457	53.4	5	0.6
Kropyvnytskyy	71	14.2	80	16.0	82	16.4	21	4.3
Lviv	186	26.6	12	1.7	502	71.6	36	5.1
Mariupol	10	2.0	30	6.4	80	16.3	33	6.8
Odesa	18	2.1	34	4.0	562	66.2	7	0.8
Kharkiv	140	20.0	145	20.7	457	65.4	26	3.8
Total	***566***	***11.5***	***597***	***12.1***	***2,634***	***53.2***	***156***	***3.2***
Cherkasy	96	19.4	69	13.9	202	40.7	92	18.6

Table 61. *The presence of sexual partners of sex workers and SEMs in the last 30 days in the regional dimension (among all, % among those who answered)*

City	Had regular and casual clients		Had only regular clients		Had only casual clients		Had a regular non-commercial partner		Had only one regular non-commercial partner *(among those who had contact)*		Had a casual non-commercial partner		Had only one casual non-commercial partner *(among those who had contact)*	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	487	79.1	35	5.7	94	15.3	267	31.6	260	97.4	122	14.8	50	41.3
Kyiv	809	95.9	25	3.0	10	1.2	162	19.0	137	84.6	37	4.4	13	35.1
Kropyvnytskyy	444	92.7	27	5.6	8	1.7	162	33.6	144	88.9	81	17.0	41	50.6
Lviv	579	93.2	18	2.9	24	3.9	260	39.2	169	65.0	350	53.8	96	27.4
Mariupol	344	94.2	18	4.9	3	0.8	216	45.5	55	25.5	276	76.2	7	2.5
Odesa	693	90.0	34	4.4	43	5.6	215	25.8	146	67.9	194	25.4	18	9.3
Kharkiv	582	93.1	23	3.7	20	3.2	245	27.3	153	62.4	256	39.1	36	14.1
Total	***3,939***	***91.2***	***180***	***4.2***	***201***	***4.7***	***1,527***	***31.8***	***1,064***	***69.7***	***1,316***	***28.7***	***260***	***19.8***
Cherkasy	474	98.1	7	1.4	2	0.4	220	44.8	98	44.5	247	50.7	50	20.3

Table 62. Use of condoms with clients in the regional dimension (among those who had such contacts, % among those who answered)

City	A condom was used during the last sex with the client		Always used a condom during vaginal sex with clients in the past 30 days		Always used a condom during anal sex with clients in the past 30 days		Always used a condom during oral sex with clients in the past 30 days		Share of SWs and SEMs who would not agree to sex without a condom with a client under any circumstances *(among all)*	
	n	%	n	%	n	%	n	%	n	%
Dnipro	779	92.0	768	92.0	387	84.3	624	76.4	510	59.9
Kyiv	802	93.8	796	97.1	271	82.6	461	54.0	499	58.3
Kropyvnytskyy	435	87.0	419	85.3	330	82.3	367	74.1	327	65.4
Lviv	618	87.9	493	79.4	434	75.6	272	39.5	236	33.6
Mariupol	462	93.1	407	82.7	317	79.8	337	68.5	278	55.6
Odesa	836	98.5	817	96.3	394	91.8	643	80.4	637	74.9
Kharkiv	642	91.6	593	85.7	404	77.4	410	58.6	341	48.6
Total	***4,574***	***92.4***	***4,294***	***89.5***	***2,537***	***81.6***	***3,315***	***64.3***	***2,828***	***57.0***
Cherkasy	433	87.3	390	78.6	308	78.4	188	38.2	92	18.5

Table 63. Condom use with regular non-commercial partners in the regional dimension (among those who had such contacts, % among those who answered)

City	Had always used a condom during the last sex with a regular partner		Had always used a condom during vaginal sex with regular partners in the past 30 days		Had always used a condom during anal sex with regular partners in the past 30 days		Had always used a condom during oral sex with regular partners in the past 30 days	
	n	%	n	%	n	%	n	%
Dnipro	89	34.6	52	20.4	20	16.7	21	8.6
Kyiv	78	50.6	44	28.9	22	46.8	23	15.1
Kropyvnytskyy	55	35.7	42	28.0	35	29.4	33	21.4
Lviv	195	76.2	140	61.7	126	58.1	78	30.7
Mariupol	189	88.3	162	77.5	122	72.2	151	71.2
Odesa	173	85.2	163	80.3	105	84.7	133	66.8
Kharkiv	126	58.1	118	54.9	94	64.8	86	39.8
Total	***905***	***62.2***	***721***	***51.1***	***525***	***55.7***	***526***	***36.7***
Cherkasy	168	76.4	151	69.3	120	71.9	94	43.9

Table 64. *Condom use with casual non-commercial partners in the regional dimension (among those who had such contacts, % among those who answered)*

City	Had always used a condom during the last sex with a casual partner		Had always used a condom during vaginal sex with casual partners in the past 30 days		Had always used a condom during anal sex with casual partners in the past 30 days		Had always used a condom during oral sex with casual partners in the past 30 days	
	n	%	n	%	n	%	n	%
Dnipro	89	80.9	88	83.0	33	56.9	44	47.8
Kyiv	33	97.1	31	96.9	14	70.0	13	56.5
Kropyvnytskyy	64	82.1	53	70.7	49	70.0	51	66.2
Lviv	294	86.5	243	82.1	197	69.6	138	41.1
Mariupol	230	84.6	221	82.2	137	72.9	204	75.0
Odesa	175	97.2	162	91.0	83	88.3	115	75.7
Kharkiv	197	89.5	170	78.7	96	72.7	51	75.7
Total	***1,082***	***87.7***	***967***	***82.5***	***608***	***72.0***	***616***	***53.1***
Cherkasy	220	91.3	183	75.9	145	81.0	151	64.0

Table 65. *Prevalence of incorrect condom use practices and condom use practices during group sex in the last 30 days with different types of partners by region (among those who had such contact, % among those who answered)*

City	Had cases of incorrect condom use with clients		Had cases of incorrect condom use with regular partners		Had cases of incorrect condom use with casual partners		Had group sex in the last 30 days *(among all)*		Always use a condom during group sex		Always use a condom when changing partners during group sex	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	359	44.3	150	73.2	45	43.3	222	26.3	200	90.5	168	77.8
Kyiv	345	41.2	86	59.3	12	36.4	70	8.2	57	82.6	53	76.8
Kropyvnytskyy	240	49.0	43	41.7	21	27.3	110	22.1	90	82.6	84	78.5
Lviv	270	39.9	85	36.2	83	25.3	183	27.2	130	71.0	128	69.9
Mariupol	110	23.3	60	29.4	58	22.1	56	11.4	47	82.5	40	74.1
Odesa	243	29.0	47	23.7	44	24.9	156	18.4	144	92.3	122	78.2
Kharkiv	268	39.8	46	24.6	65	32.2	194	27.7	149	76.8	134	72.0
Total	***1,835***	***38.2***	***517***	***40.5***	***328***	***27.7***	***992***	***20.2***	***817***	***82.7***	***730***	***75.2***
Cherkasy	234	47.8	84	39.8	86	36.4	115	23.2	83	72.2	66	57.4

Table 66. *Experience of drinking alcohol in the regional dimension (among all, % among those who answered)*

City	Have consumed alcoholic beverages during the last 30 days		AUDIT-C alcohol abuse risks							
			Low risk		Moderate risk		High risk		Serious risk	
	n	%	n	%	n	%	n	%	n	%
Dnipro	675	80.2	276	34.3	294	36.5	132	16.4	103	12.8
Kyiv	645	75.8	354	42.1	335	39.9	113	13.5	38	4.5
Kropyvnytskyy	386	77.2	213	44.8	182	38.3	44	9.3	36	7.6
Lviv	602	86.6	249	39.2	254	40.0	82	12.9	50	7.9
Mariupol	391	79.3	193	42.0	142	30.9	87	18.9	38	8.3
Odesa	684	80.7	363	44.8	380	46.9	54	6.7	14	1.7
Kharkiv	572	82.1	239	34.8	233	33.9	129	18.8	86	12.5
Total	***3,955***	***80.3***	***1,888***	***40.1***	***1,819***	***38.6***	***641***	***13.6***	***365***	***7.8***
Cherkasy	363	73.3	213	43.6	215	44.1	49	10.0	11	2.3

Table 67. *Experience of using narcotic substances and experience of using alcohol and drugs before sex with a client in the regional dimension (% among those who answered)*

City	Used injectable drugs during the last 30 days *(among all)*		Used injectable drugs during the last 12 months *(among all)*		Used non-injectable drugs during the last 12 months *(among all)*		Used alcohol before sex with the client in the last 30 days *(among those who used it)*		Used drugs before sex with the client in the last 30 days *(among those who used)*		Used alcohol + drugs before sex with the client in the last 30 days *(among those who used)*	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	22	2.6	29	3.4	145	17.3	605	91.1	95	95.0	71	84.5
Kyiv	3	0.4	3	0.4	162	19.2	549	549	92	95.8	63	77.8
Kropyvnytskyy	39	7.9	46	9.3	101	20.4	347	347	94	96.9	62	84.9
Lviv	1	0.1	1	0.1	84	12.5	531	531	32	71.1	20	48.8
Mariupol	18	3.8	21	4.4	55	11.6	383	383	40	95.2	28	80.0
Odesa	-	-	2	0.2	27	3.2	536	536	8	80.0	5	62.5
Kharkiv	12	1.7	18	2.6	111	15.9	467	467	60	82.2	49	68.1
Total	***95***	***1.9***	***119***	***2.4***	***684***	***14.1***	***3,418***	***87.1***	***422***	***90.8***	***298***	***75.8***
Cherkasy	6	1.2	16	3.2	90	18.5	337	93.1	43	93.5	26	74.3

Table 68. The level of depression and anxiety in the regional dimension (among all, % among those who answered)

City	Depression level under PHQ-9										Anxiety level under GAD-7							
	average	St. dev	absent		mild		moderate		moderately severe or severe		absent	St. dev.	minimal		moderate		medium or high	
			n	%	n	%	n	%	n	%			n	%	n	%	n	%
Dnipro	4.6	5.2	528	62.0	196	23.0	77	9.0	50	5.9	3.6	4.0	563	66.2	220	25.9	68	8.0
Kyiv	4.0	3.9	544	63.6	242	28.3	49	5.7	21	2.5	2.9	3.5	627	73.2	172	20.1	57	6.7
Kropyvnytskyy	3.5	4.7	355	70.9	107	21.4	19	3.8	20	4.0	3.5	4.1	326	65.3	142	28.5	31	6.2
Lviv	3.0	3.6	536	76.2	115	16.4	45	6.4	7	1.0	2.0	2.9	574	81.7	108	15.4	21	3.0
Mariupol	3.2	4.2	346	69.1	108	21.6	37	7.4	10	2.0	2.2	3.3	387	77.6	94	18.8	18	3.6
Odesa	2.5	3.7	662	77.9	139	16.4	36	4.2	13	1.5	2.2	3.6	692	81.4	116	13.6	42	4.9
Kharkiv	3.8	4.8	464	66.3	144	20.6	68	9.7	24	3.4	3.6	4.4	482	68.8	130	18.5	89	12.7
Total	***3.5***	***4.4***	***3,435***	***69.3***	***1051***	***21.2***	***330***	***6.7***	***145***	***2.9***	***2.9***	***3.8***	***3,651***	***73.6***	***982***	***19.8***	***328***	***6.6***
Cherkasy	4.1	3.6	315	63.5	135	27.2	41	8.3	5	1.0	3.3	3.2	348	70.2	121	24.4	27	5.4

Table 69. Experience of violence in the regional dimension (% among those who answered)

City	Experienced violence during the provision of sex services *(among all)*		Experienced violence from representatives of law enforcement agencies *(among those who experienced violence)*		Did not seek help *(among those who experienced violence)*		Sought help from NGOs, crisis centers or police *(among those who experienced violence*	
	n	%	n	%	n	%	n	%
Dnipro	367	44.8	149	40.6	174	51.9	32	9.6
Kyiv	225	31.1	24	10.7	123	54.9	26	11.6
Kropyvnytskyy	154	32.1	22	14.2	115	75.7	15	9.8
Lviv	210	30.8	33	15.7	168	81.6	2	1.0
Mariupol	59	12.0	4	6.9	32	56.1	2	3.5
Odesa	127	15.1	14	11.1	116	93.5	4	3.2
Kharkiv	289	43.2	65	22.5	182	64.8	22	7.8
Total	***1,431***	***30.4***	***311***	***21.8***	***910***	***66.0***	***103***	***7.5***
Cherkasy	134	27.5	17	12.7	83	66.9	30	24.2

Table 70. *Experience of receiving health services over the past 12 months in the regional dimension (% among those who answered)*

City	Had health problems that required medical attention *(among all)*		Applied to a health facility for consultation or treatment				Had a family doctor *(among all)*		Contacted a family doctor personally or by phone			
			Among all		Among those who had problems				Among those who had a family doctor		Among those who had a family doctor and felt the need for medical assistance	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	302	36.1	226	27.0	226	75.1	411	50.4	211	70.1	149	82.8
Kyiv	338	40.0	284	33.3	284	84.0	412	48.4	158	39.5	120	54.8
Kropyvnytskyy	169	33.9	119	23.8	119	70.0	233	46.7	78	34.2	60	45.1
Lviv	131	18.9	123	17.7	123	94.6	378	54.8	198	59.6	80	78.4
Mariupol	39	7.9	35	7.1	35	89.7	256	51.8	100	47.8	19	59.4
Odesa	164	19.4	143	16.9	143	87.2	357	42.0	156	46.2	68	61.8
Kharkiv	305	43.6	294	42.2	294	96.7	319	46.4	186	61.4	158	72.8
Total	***1,448***	***29.5***	***1,224***	***24.9***	***1,224***	***84.6***	***2,366***	***48.4***	***1,086***	***51.5***	***654***	***65.8***
Cherkasy	236	47.7	217	44.0	217	92.3	318	64.2	198	63.1	163	85.3

Table 71. *Awareness of HIV/AIDS in the regional dimension (share of SWs and SEMs who gave correct answers to the questions) (among all, % among those who answered)*

City	HIV can be avoided if one uses a condom correctly every time they have sex		After an HIV-positive diagnosis, a person should start ART immediately		An HIV-positive person can stop taking ART if they feel healthy		ART can be delayed if an HIV-positive person feels healthy		HIV can be avoided if an HIV-positive person has an undetectable HIV viral load		The chances of contracting HIV are significantly reduced if a person takes PEP immediately after exposure		The chances of contracting HIV are very low if an HIV-positive person takes PrEP	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	735	86.4	553	65.0	430	50.5	411	48.3	268	31.5	302	35.5	247	29.0
Kyiv	796	93.0	498	58.2	500	58.4	477	55.7	276	32.3	198	23.1	174	20.3
Kropyvnytskyy	442	88.4	312	62.4	312	62.4	297	59.3	248	49.6	198	39.6	206	41.2
Lviv	578	82.2	488	69.4	446	63.4	439	62.5	203	28.9	262	37.3	279	39.7
Mariupol	375	75.0	323	64.6	279	55.8	257	51.5	131	26.2	167	33.5	169	33.8
Odesa	748	87.9	602	70.8	566	66.6	529	62.3	248	29.1	292	34.4	275	32.4
Kharkiv	654	93.3	522	74.6	477	68.0	463	66.0	349	49.8	296	42.2	285	40.7
Total	***4,328***	***87.3***	***3,298***	***66.5***	***3,010***	***60.7***	***2,873***	***57.9***	***1723***	***34.7***	***1,715***	***34.6***	***1,635***	***33.0***
Cherkasy	422	85.1	398	80.2	267	53.8	224	45.3	372	75.0	356	71.8	357	72.0

Table 72. *Access to preventive services in the last 12 months in the regional dimension (% among those who answered)*

City	Share of sex workers that are clients of NGOs *(among all)*		Received at least one service from an NGO *(among all)*		Received condoms and counseling *(according to the Global Fund approach) (among all)*		Received at least two services *(condoms and lubricants, counselling, STI testing) (according to the GAM approach) (among all)*		Reported that access to HIV services has worsened *(among NGO clients)*	
	n	%	n	%	n	%	n	%	n	%
Dnipro	173	20.4	199	23.4	184	21.6	188	22.1	73	42.2
Kyiv	600	70.1	629	73.5	572	66.8	615	71.8	2	0.3
Kropyvnytskyy	221	44.6	266	53.2	255	51.0	264	52.8	2	0.9
Lviv	59	8.5	199	28.3	151	21.5	171	24.3	19	32.2
Mariupol	17	3.5	132	26.4	52	10.4	69	13.8	3	16.7
Odesa	743	87.5	833	98.0	794	93.4	816	96.0	6	0.8
Kharkiv	204	29.2	213	30.4	207	29.5	209	29.8	6	2.9
Total	***2,018***	***40.9***	***2,472***	***49.8***	***2,216***	***44.7***	***2,332***	***47.0***	***111***	***5.5***
Cherkasy	160	32.4	258	52.0	173	34.9	206	41.5	7	4.4

Table 73. *Purchase of condoms by the respondents themselves in the last 30 days in the regional dimension (% among those who answered)*

City	Felt the need to obtain condoms *(among all)*		Bought condoms on their own *(among all)*		Number of condoms bought *(among those who bought them)*		Expenditures to buy one condom, in UAH *(among those who bought them)*		There were cases when SWs and SEMs could not buy condoms, though they needed them *(among all)*	
	n	%	n	%	Median	IQR	Median	IQR	n	%
Dnipro	533	63.5	677	83.4	30	20-50	15	12-30	161	19.8
Kyiv	193	22.7	387	46.5	27	20-50	13	5-20	45	5.3
Kropyvnytskyy	28	5.7	232	49.9	10	6-20	25	17-60	38	7.6
Lviv	288	41.6	545	79.2	30	21-40	21	16-30	63	9.0
Mariupol	111	23.1	414	89.2	30	20-50	12	10-15	107	22.8
Odesa	81	9.6	120	14.5	20	10-35	19	15-25	10	1.2
Kharkiv	206	29.6	497	75.1	30	20-50	17	13-23	59	8.5
Total	***1.440***	***29.5***	***2871***	***60.5***	***30***	***20-48***	***17***	***12-25***	***483***	***9.9***
Cherkasy	136	27.6	350	73.4	15	5-30	20	13-54	73	14.9

Table 74. *Awareness and readiness to take PrEP and PEP in the regional dimension (% among those who answered)*

City	Heard about PrEP *(among all)*		Aggregate indicator of readiness to PrEP *(among all)*		Took PrEP in the last 12 months *(among HIV-negative respondents)*		Were taking PrEP as of the moment of participating in the study *(among HIV-negative respondents)*		Heard about PEP *(among all)*		Indicator of readiness to take PEP, if necessary *(among HIV-negative respondents)*	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	274	32.3	36	4.2	46	5.6	9	1.1	303	36.0	376	45.2
Kyiv	213	24.9	20	2.3	19	2.2	2	0.2	273	32.3	283	33.5
Kropyvnytskyy	182	36.9	54	10.8	6	1.3	2	0.4	182	37.4	197	41.3
Lviv	294	42.0	51	7.3	49	7.0	32	4.6	245	35.3	193	27.5
Mariupol	117	24.1	34	6.8	2	0.4	1	0.2	102	21.8	84	19.3
Odesa	286	33.9	12	1.4	3	0.4	3	0.4	252	30.0	199	24.2
Kharkiv	262	37.5	30	4.3	5	0.7	3	0.4	297	42.8	199	28.7
Total	***1,630***	***33.1***	***239***	***4.8***	***130***	***2.7***	***52***	***1.1***	***1,654***	***34.0***	***1,530***	***31.8***
Cherkasy	292	58.9	55	11.1	163	34.5	148	31.4	353	71.3	234	49.7

Table 75. Coverage of HIV testing in the regional dimension (among all, in %)

City	Believed that they would be able to get tested for HIV without any obstacles if they wanted to do it in the near future		Knew where to get an HIV test		Have been tested for HIV sometimes in their life		Have been tested for HIV in the last 12 months		Have been tested for HIV in the last 12 months and received the result		Have been tested for HIV in the last 12 months and received a negative result or are aware of their HIV-positive status *(GAM indicator)*	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	646	75.9	674	79.3	682	80.0	467	54.9	464	54.5	432	51.9
Kyiv	772	90.1	774	90.4	827	96.6	728	85.0	715	83.5	726	85.0
Kropyvnytskyy	483	96.6	452	90.4	450	90.0	278	55.6	272	54.4	283	57.8
Lviv	614	87.3	518	73.8	513	73.0	344	48.9	331	47.1	331	49.2
Mariupol	462	92.4	419	83.8	357	71.4	122	24.4	117	23.4	153	31.3
Odesa	824	96.9	821	96.5	830	97.6	778	91.5	772	90.8	766	90.2
Kharkiv	662	94.3	651	92.9	630	89.9	458	65.3	442	63.1	444	64.1
Total	***4,463***	***90.0***	***4,309***	***86.9***	***4,289***	***86.5***	***3,175***	***64.0***	***3,114***	***62.8***	***3,136***	***64.2***
Cherkasy	442	88.9	377	76.0	428	86.3	242	48.8	224	45.2	254	51.6

Table 76. *Experience of self-testing for HIV in the regional dimension (% among those who answered)*

City	Knew about the existence of rapid HIV tests for self-use *(among all)*		Self-tested for HIV sometimes during their life *(among all)*		Self-tested for HIV within the last 12 months *(among all)*		Among those who were self-tested for HIV during the last 12 months...					
							Self-testing for HIV was the first HIV test in life		Contacted a health facility or a social worker to check the result		They did not experience any difficulties using the test for self-testing for HIV	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	460	54.1	188	22.2	111	13.2	44	40.4	42	38.2	52	48.2
Kyiv	642	75.0	81	9.5	56	6.6	24	42.9	1	1.8	46	82.1
Kropyvnytskyy	334	66.8	133	26.7	86	17.3	34	40.0	53	62.4	52	61.2
Lviv	392	55.8	91	13.1	51	7.5	24	49.0	15	29.4	37	74.0
Mariupol	135	27.0	33	6.7	12	2.4	7	70.0	2	16.7	12	100.0
Odesa	701	82.5	330	38.9	196	23.3	104	53.1	52	26.5	186	95.4
Kharkiv	426	60.8	182	26.0	62	8.9	22	37.9	27	44.3	43	70.5
Total	***3,090***	***62.3***	***1,038***	***21.0***	***574***	***11.7***	***261***	***46.3***	***192***	***33.6***	***429***	***75.2***
Cherkasy	302	60.9	131	26.4	92	18.7	42	51.9	26	29.5	64	75.3

Table 77. *Avoidance of seeking medical services due to stigma and discrimination in the regional dimension (% among those who answered)*

City	Share of SWs and SEMs who in the last 12 months avoided seeking...because of stigma and discrimination					
	Health services in general *(among all)*		HIV testing *(among those who were not tested for HIV during the last 12 months)*		Health services in connection with HIV *(among those who knew about their HIV-positive status)*	
	n	%	n	%	n	%
Dnipro	225	26.4	101	26.3	1	5.9
Kyiv	173	20.2	43	33.6	1	11.1
Kropyvnytskyy	102	20.4	37	16.6	2	9.5
Lviv	226	32.1	102	28.4	–	–
Mariupol	150	30.0	109	28.8	13	21.7
Odesa	101	11.9	12	16.7	1	5.9
Kharkiv	81	11.6	33	13.6	–	–
Total	***1058***	***21.3***	***436***	***24.4***	***17***	***13.5***
Cherkasy	239	48.2	85	33.3	–	–

Table 78. *Pregnancy experience in the regional dimension (% among those who answered)*

City	Had been pregnant at a certain time in their life		No pregnancy resulted in childbirth *(among those who were pregnant)*		Attended prenatal care clinic during the last pregnancy *(among those whose pregnancy ended with the birth of a child)*		Among those who visited the clinic during the last pregnancy ...				They reported that they were trying to get pregnant at the time of the study *(among all)*	
							Got tested for HIV in the clinic		Got tested for syphilis in the clinic			
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	388	48.1	161	41.8	202	90.2	159	78.3	151	74.8	40	5.6
Kyiv	326	43.1	32	9.8	274	93.5	220	80.6	224	81.8	8	1.0
Kropyvnytskyy	197	42.5	39	21.1	139	95.9	110	79.1	95	68.3	61	14.2
Lviv	180	31.7	53	30.1	113	91.9	104	93.7	77	68.1	4	0.7
Mariupol	182	37.5	12	6.6	166	97.1	113	68.1	80	48.2	91	19.0
Odesa	324	39.0	65	20.2	242	94.2	222	92.1	183	75.6	9	1.1
Kharkiv	252	36.8	86	34.3	157	95.2	141	89.2	137	87.3	76	11.1
Total	***1,849***	***40.2***	***448***	***24.5***	***1,293***	***93.8***	***1,068***	***82.8***	***946***	***73.2***	***290***	***6.5***
Cherkasy	152	31.0	14	9.2	128	92.8	111	86.7	97	75.2	79	16.1

Table 79. Prevalence and impact of COVID-19 in the last 12 months in the regional dimension (among all, % among those who answered)

City	Had contacts with a person diagnosed with COVID-19		Were on self-isolation		Applied to a hospital		Had such symptoms as fever, dry cough and shortness of breath at the same time		Were in the hospital		Were tested for COVID-19		Calculated COVID-19 prevalence	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	237	35.8	185	21.9	194	23.1	219	26.4	28	3.3	256	30.5	127	14.9
Kyiv	246	31.7	110	12.9	66	7.7	97	11.5	28	3.3	298	34.9	47	5.5
Kropyvnytskyy	86	18.5	100	20.0	113	22.6	99	20.0	29	5.8	57	11.4	97	19.4
Lviv	225	42.5	211	30.1	127	18.2	75	10.8	22	3.1	204	29.3	60	8.5
Mariupol	65	14.3	117	23.5	43	8.7	43	8.8	8	1.6	57	11.5	34	6.8
Odesa	83	12.3	138	16.3	47	5.5	70	8.3	2	0.2	176	20.8	60	7.1
Kharkiv	258	43.0	120	17.1	179	25.6	105	15.1	35	5.0	224	32.1	86	12.3
Total	***1,201***	***28.8***	***981***	***19.9***	***771***	***15.6***	***708***	***14.5***	***151***	***3.1***	***1,271***	***25.8***	***511***	***10.3***
Cherkasy	259	55.1	220	44.6	172	34.9	188	38.1	87	17.7	199	40.4	158	31.9

Table 80. *Prevalence of tuberculosis and STDs by self-declaration in the regional dimension (among all, % among those who answered)*

City	Herpes		Chlamydiosis		Human papillomavirus (HPV)		Gonorrhea		Hepatitis B		Pulmonary TB	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	327	38.5	210	24.7	52	6.1	108	12.7	10	1.2	6	0.7
Kyiv	146	17.1	94	11.0	35	4.1	23	2.7	1	0.1	-	-
Kropyvnytskyy	84	16.8	13	2.6	13	2.6	9	1.8	8	1.6	8	1.6
Lviv	77	11.0	64	9.1	49	7.0	30	4.3	2	0.3	-	-
Mariupol	116	23.2	42	8.4	30	6.0	6	1.2	35	7.0	3	0.6
Odesa	152	17.9	56	6.6	51	6.0	5	0.6	11	1.3	4	0.5
Kharkiv	103	14.7	113	16.1	56	8.0	23	3.3	1	0.1	-	-
Total	***1,005***	***20.3***	***592***	***11.9***	***285***	***5.7***	***205***	***4.1***	***68***	***1.4***	***21***	***0.4***
Cherkasy	219	44.2	39	7.9	85	17.3	28	5.6	48	9.7	21	4.2

Table 81. *Prevalence of HIV and hepatitis C in the regional dimension (among all, in %)*

City	HIV prevalence									HCV prevalence								
	Total			Among SWs aged under 24			Among SWs aged 25 and older			Total			Among SWs aged under 24			Among SWs aged 25 and older		
	n	%	95% CI	n	%	95% CI	N	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI
Dnipro	20	2.4	1.5-3.5	1	0.3	0.0-1.3	19	3.8	2.4-5.8	84	9.9	8.0-12.0	30	8.5	5.9-11.7	54	10.8	8.3-13.8
Kyiv	11	1.3	0.7-2.2	–	–	–	11	1.6	0.8-2.7	34	4.0	2.8-5.4	1	0.7	0.1-3.0	34	4.8	3.4-6.6
Kropyvnytskyy	23	4.6	3.0-6.7	–	–	–	23	4.8	3.2-7.0	118	23.6	20.0-27.5	3	12.5	3.6-29.7	115	24.2	20.5-28.2
Lviv	2	0.3	0.1-0.9	1	0.3	0.0-1.3	1	0.3	0.0-1.3	5	0.7	0.3-1.6	–	–	–	5	1.4	0.6-3.1
Mariupol	6	13.0	10.3-16.2	1	1.2	0.1-5.6	64	15.3	12.1-19.0	91	18.2	15.0-21.8	5	64.1	2.4-13.0	86	20.6	16.9-24.6
Odesa	27	3.2	2.2-4.5	5	1.6	0.6-3.4	22	4.2	2.7-6.1	38	4.5	3.2-6.0	13	4.1	2.3-6.7	25	4.7	3.2-6.8
Kharkiv	7	1.0	0.4-2.0	1	1.0	0.1-4.6	6	1.0	0.4-2.0	20	2.9	1.8-4.3	1	1.0	0.1-4.6	19	3.2	2.0-4.8
Total	***155***	***3.1***	***2.7-3.6***	***9***	***0.7***	***0.3-1.2***	***146***	***4.1***	***3.5-4.8***	***391***	***7.9***	***7.2-8.7***	***53***	***3.8***	***2.9-4.9***	***338***	***9.4***	***8.5-10.4***
Cherkasy	25	5.0	3.4-7.2	–	–	–	25	6.6	4.5-9.5	37	7.5	5.4-10.0	3	2.5	0.7-6.5	34	9.1	6.5-12.3

Table 82. *Prevalence of co-infection of HIV/hepatitis C and syphilis in the regional dimension (among all, in %)*

City	Prevalence of HIV/HCV co-infection						Lifetime prevalence of syphilis					
	HIV+ HCV+		HIV+ HCV-		HIV- HCV+		total		Among SWs aged under 24		Among SWs aged 25 and older	
	n	%	n	%	n	%	n	%	n	%	n	%
Dnipro	10	1.2	10	1.2	74	8.7	58	6.8	16	4.5	42	8.4
Kyiv	–	–	11	1.3	34	4.0	32	3.7	5	3.3	28	4.0
Kropyvnytskyy	18	3.6	5	1.0	101	20.2	37	7.4	1	4.2	36	7.6
Lviv	1	0.1	1	0.1	4	0.6	2	0.3	1	0.3	1	0.3
Mariupol	48	9.6	17	3.4	44	8.8	40	8.0	1	1.2	39	9.3
Odesa	11	1.3	16	1.9	27	3.2	6	0.7	3	0.9	3	0.6
Kharkiv	3	0.4	4	0.6	17	2.4	16	2.3	4	4.0	12	2.0
Total	***90***	***1.8***	***64***	***1.3***	***301***	***6.1***	***129***	***3.9***	***31***	***2.2***	***160***	***4.5***
Cherkasy	21	4.3	3	0.6	16	3.2	7	1.5	1	0.8	6	1.6

Table 83. *Cascade of HIV treatment and recent HIV infection in the regional dimension (in % to the previous column)*

City	Share of HIV-positive SWs			Know about their HIV-positive status			Receive ART			Achieved undetectable viral load			Share of recent HIV infection *(among HIV-positive respondents)*	
	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%	95% CI	n	%
Dnipro	20	2.4	1.5-3.5	17	85.0	65.1-95.6	15	88.2	67.3-97.5	12	80.0	55.6-94.0	2	10.0
Kyiv	11	1.3	0.7-2.2	9	81.8	53.3-96.0	9	100.0	–	8	88.9	58.6-98.8	2	18.2
Kropyvnytskyy	23	4.6	3.0-6.7	21	91.3	74.9-98.1	21	100.0	–	21	100.0	–	–	–
Lviv	2	0.3	0.1-0.9	2	100.0	–	2	100.0	–	1	50.0	6.1-93.9	1	50.0
Mariupol	6	13.0	10.3-16.2	59	90.8	82.0-96.1	57	96.6	89.6-99.3	44	75.9	65.1-86.6	–	–
Odesa	27	3.2	2.2-4.5	17	63.0	44.2-79.1	15	88.2	67.3-97.5	9	60.0	35.3-81.2	–	–
Kharkiv	7	1.0	0.4-2.0	4	57.1	23.5-86.1	2	50.0	12.3-87.7	2	100.0	–	1	14.3
Total	***155***	***3.1***	***2.7-3.6***	***129***	***83.1***	***76.8-88.5***	***121***	***93.8***	***88.6-97.0***	***96***	***79.8***	***71.5-85.8***	***6***	***3.9***
Cherkasy	25	5.0	3.4-7.2	25	100.0	–	25	100.0	–	22	88.0	71.3-96.5	–	–

ANNEX 2. FORMATIVE ASSESSMENT RESULTS

Within the framework of the IBBS, a formative assessment was conducted among SWs as a preparatory stage of the study. The formative assessment consisted of conducting interviews with key informants, followed by creating a list of places of concentration of SWs *("SW venues")*, determining the level of their availability for the study team, venue working hours, and describing the structure of the organization of sex work in the cities of the study. Within this stage, the SW venues were mapped and validated by regional teams visiting these places to check the results and correctness of the information received from key informants at the mapping stage. If at the validation stage the regional team found out about additional SW venues, information about which was not known at the mapping stage, visits were also made to them and the results for them were taken into account in the general array.

Virtual venues *(websites, announcements on online sites, etc.)* were included in the formative assessment and were additionally checked for presence only in the online space. In the event that the virtual venue had a physical location, it was indicated as physical according to the list of venue types *(for example, at the same time as the Internet site there is a physical office in which the SWs are located, accordingly, the type of this venue is indicated as "Office")*.

The formative assessment was carried out between March 17 and April 14 *(mapping stage)* and from June 21 to July 31 *(validation stage)*.

At the mapping stage, 1,212 informants were interviewed, who provided information on 2,581 unique SW venues *(Figure 71)*, half of which were representatives of the target group, that is, the sex workers themselves (45.6%), another 18.2% were taxi drivers and truck drivers *(Figure 72)*.

Figure 71. *The number of key informants from whom information was obtained about the SW venues (N = 1,212, in absolute numbers)*

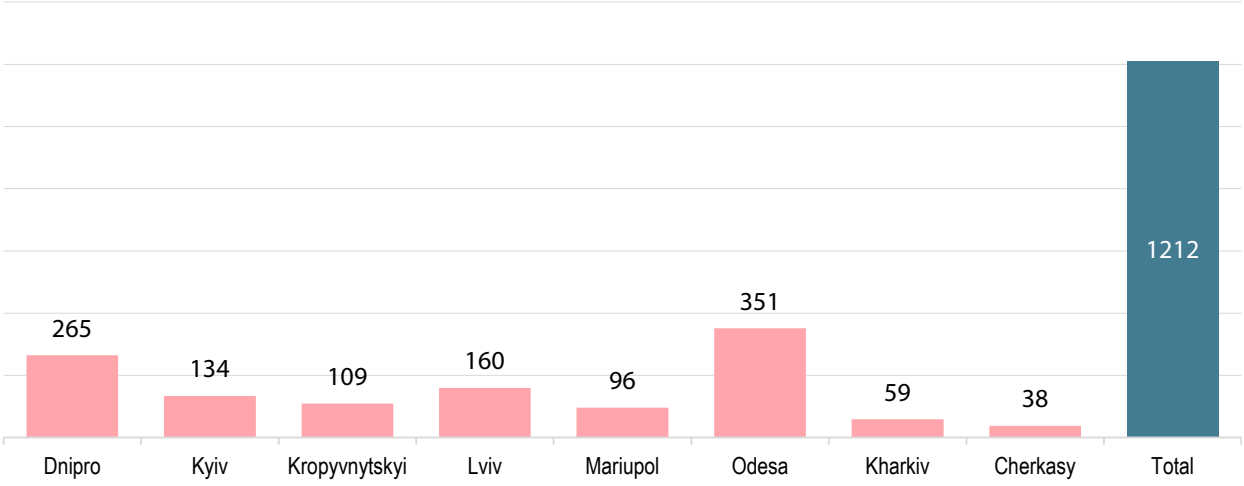
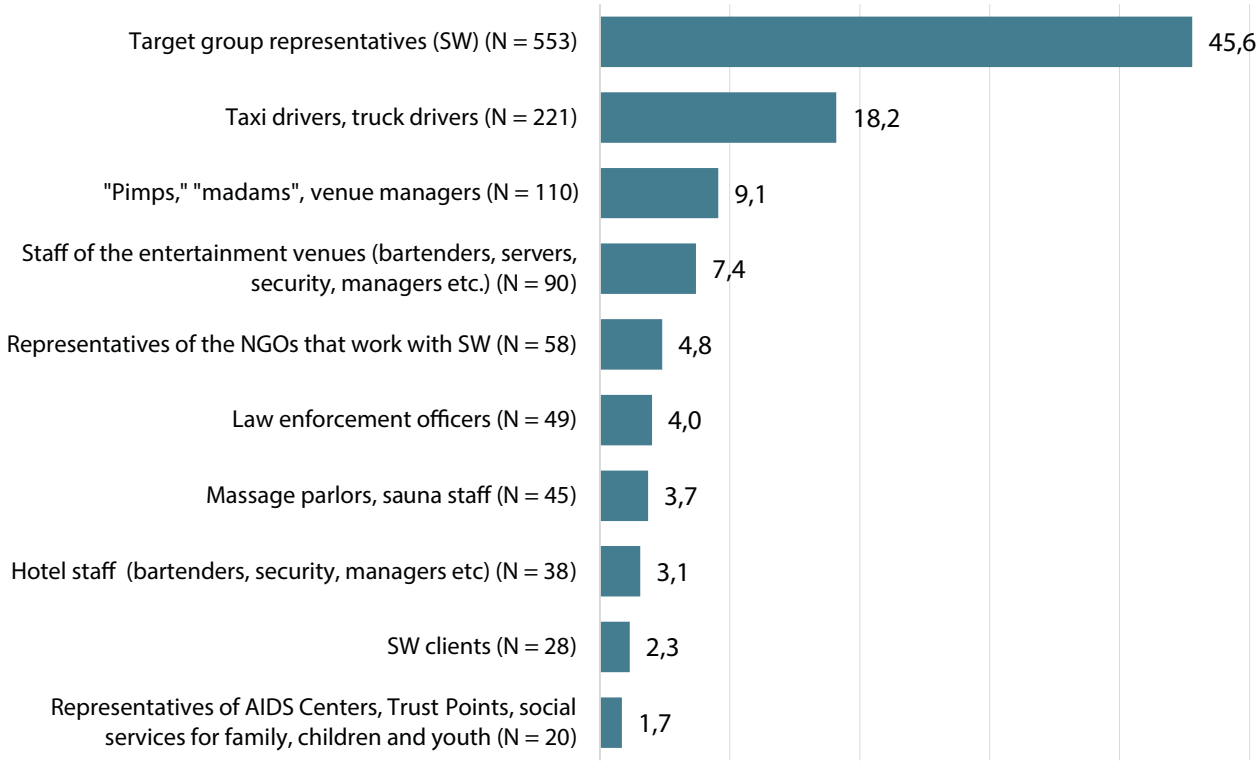
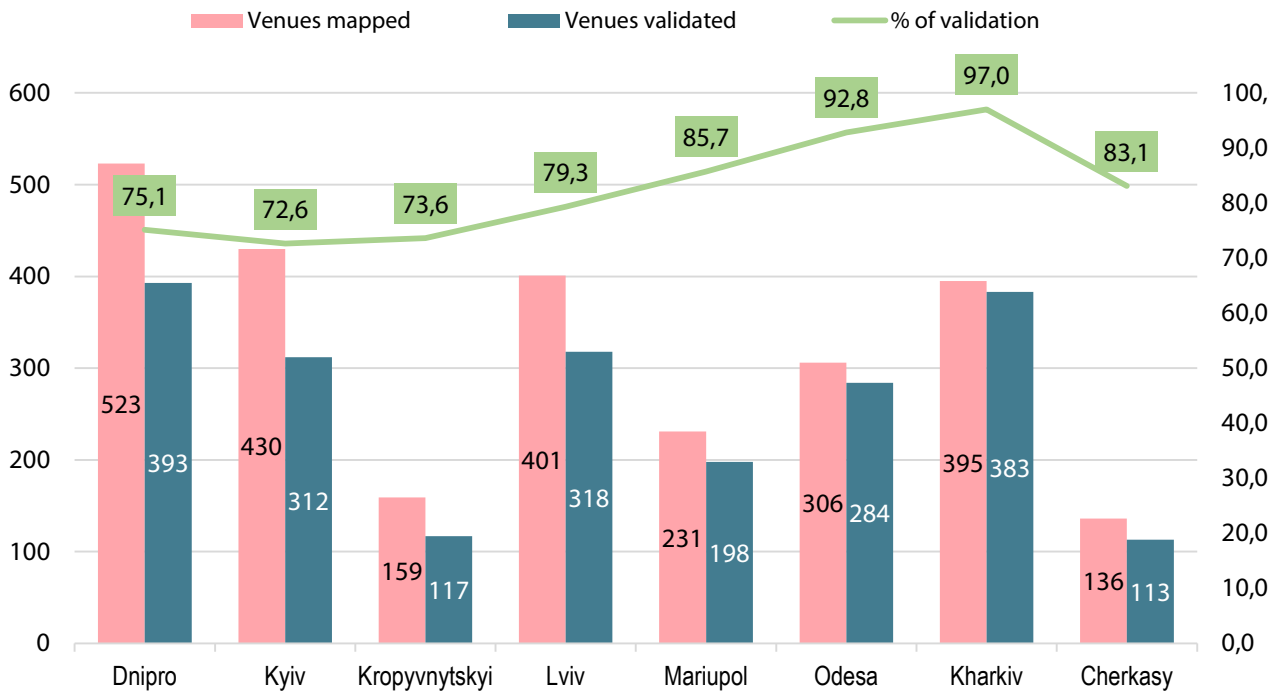


Figure 72. *Typology of key informants from whom information was obtained about the SW venues, in % (N = 1,212)*



In total, information was obtained on 2,581 unique SW venues in eight cities, of which 82.1% *(2,118 venues)* were confirmed as functioning at the time of the study. This indicator varies depending on the city and ranges from 75.1% to 97.0% *(Figure 73)*. The largest number of venues was found in large cities such as Dnipro (393), Kharkiv (383), Lviv (318) and Kyiv (312), the smallest – in Kropyvnytskyi (117) and Cherkasy (113).

Figure 73. *Identified and confirmed SW venues*



Among the cities as a whole, the most popular venues of work were own or rented apartment (43.2%), virtual places (11.7%) and the street (11.1%). The share of apartments in the typology of venues prevailed in all cities, except for Kropyvnytskyi *(conceding to virtual venues and exports)* and Lviv, where the escort was in first place *(Table 84)*.

Table 84. *Typology of SW venues by city (N = 2,118, in %)*

City	Office ("brothel")	Street (open space, park, square, etc.)	Motorway, highway	Entertainment facilities (night clubs, casinos, discos, etc.)	Catering facilities (cafes, restaurants, bars, etc.)	Recreation facilities (massage salon, sauna, etc.)	Art clubs / strip clubs	Hotel / motel	Apartment (own, rented)	Escort/on call	Virtual venues (Internet)	Pimps	Total
Dnipro	11.5	9.2	1.8	2.8	16.0	13.7	1.8	9.9	32.8	0.3	0.3	–	393
Kyiv	7.1	8.3	4.2	1.0	–	–	0.3	1.0	53.8	–	24.4	–	312
Kropyvnytskyy	–	9.4	10.3	1.7	8.5	17.9	–	8.5	5.1	13.7	23.9	0.9	117
Lviv	–	3.1	1.3	0.9	0.3	0.6	0.6	3.5	28.6	35.8	17.0	8.2	318
Mariupol	–	18.2	1.0	3.0	9.6	18.2	–	10.6	38.4	–	1.0	–	198
Odesa	0.7	21.1	4.6	2.5	2.1	0.4	1.1	3.5	54.9	–	9.2	–	284
Kharkiv	2.3	11.0	1.0	1.0	1.0	1.0	1.0	2.6	67.4	0.8	10.2	0.5	383
Cherkasy	–	13.3	5.3	4.4	15.9	6.2	–	8.8	27.4	–	18.5	–	113
Total	***78***	***236***	***61***	***41***	***121***	***125***	***17***	***114***	***915***	***134***	***247***	***29***	***2,118***

The vast majority of venues – 2,001 out of 2,118 (94.5%) – are not seasonal and operate all year round *(Figure 74)*, and 92.1% *(1,950 out of 2,118)* venues work every day, without days off *(Figure 75)*. The rest operate every day except Monday, or only on weekdays, etc.

Figure 74. Share of venues that work all year round by region (N = 2,118, in %)

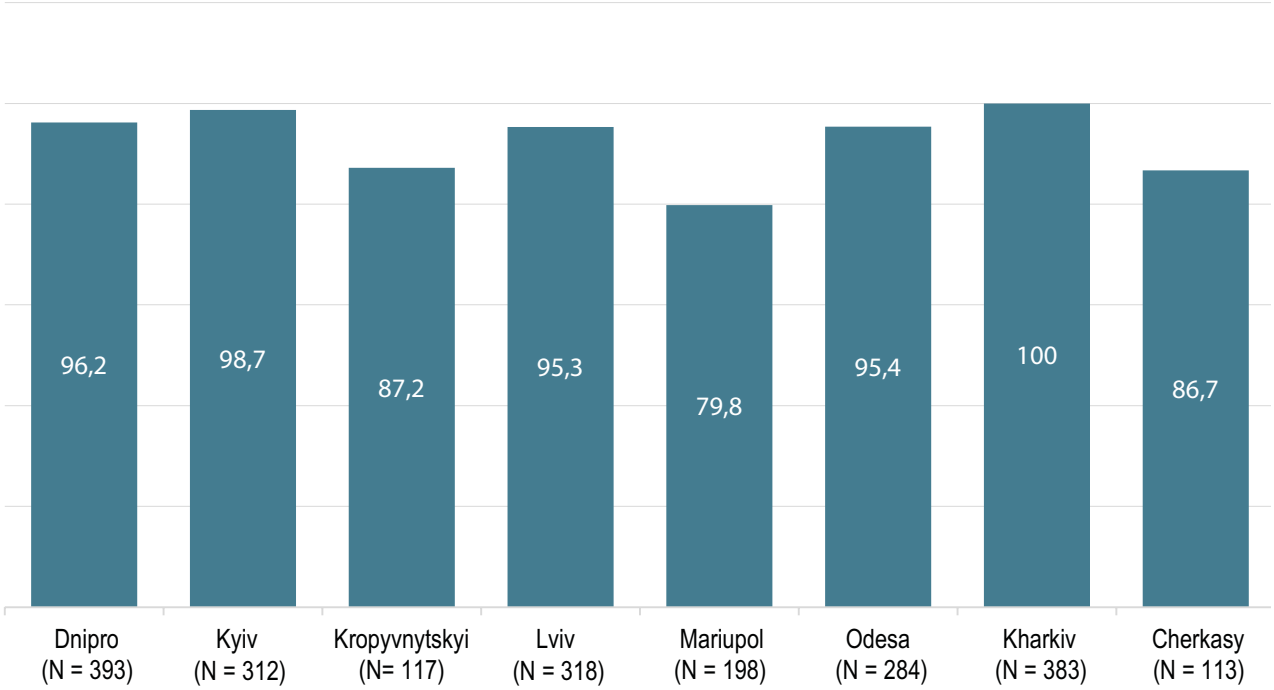
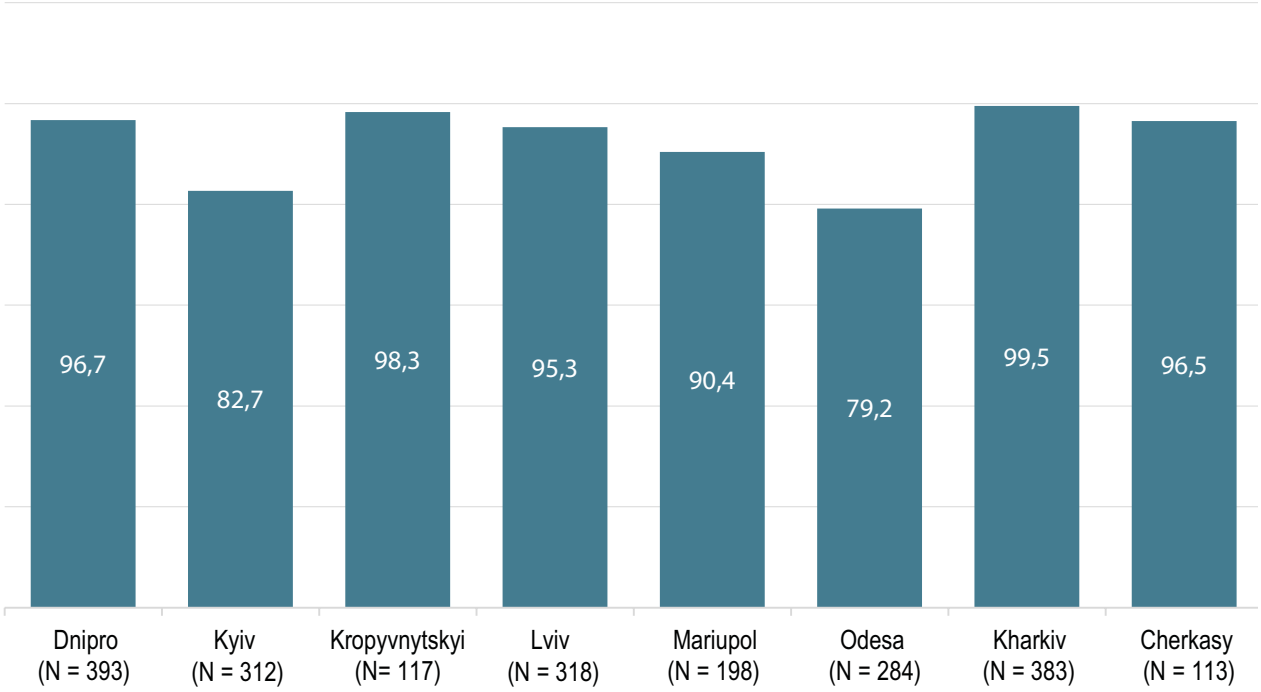


Figure 75. Share of venues that work all week by region (N = 2,118, in %)



During the validation, the team was at each venue for 30 minutes, counting the number of SWs there. In total, 7,866 SWs aged 14 and over were recorded during this time period, which is close to the average number of SWs that can be seen at venues during the day, as reported by SWs on them *(Table 85)*.

Table 85. *Number of SWs at venues (N = 2,118, in absolute numbers)*

City	Minimum possible number of SWs at venues	Average number of SWs at venues	Maximum possible number of SWs at venues	Number of SWs at venues during the team visits
Dnipro	733	1,523	2,287	1,424
Kyiv	473	981	1,658	1,115
Kropyvnytskyy	156	373	589	462
Lviv	481	1,428	2,355	1,011
Mariupol	238	642	1,047	681
Odesa	737	1,497	2,250	1,500
Kharkiv	901	1,229	1,558	1,242
Cherkasy	164	1,017	1,793	431
Total	3,883	8,690	13,537	7,866

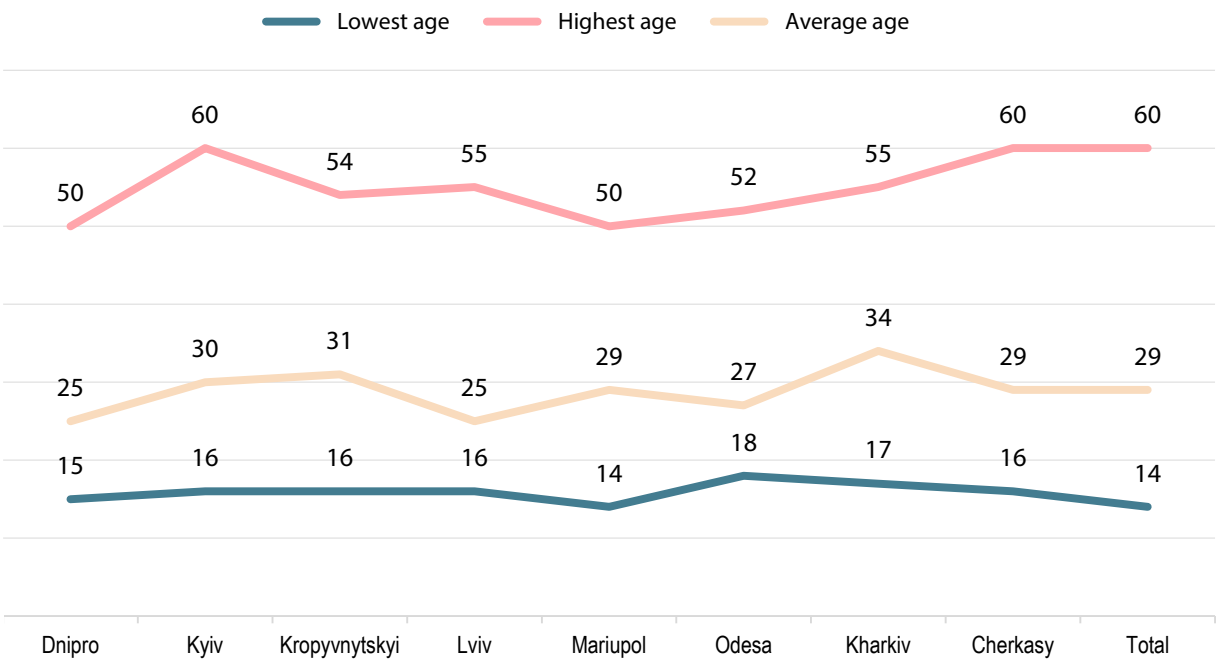
Male SWs were present at 4.6% of venues out of the total number, the largest number of such venues was found in the city of Lviv (15.4%). SW-trans* people were present at 0.9% of all venues, in the city of Kyiv this indicator reaches 2.6%. The venues at which SW-PWID work made up 8.3% of the total, the most such places in Cherkasy (31.0%), the least in Kharkiv (1.6%) and Lviv, where they are absent or information about them remains unknown *(Table 86)*.

Table 86. *The presence of men, trans* people and PWID from the number of SWs at venues by cities (N = 2,118, in %)*

City	Total number of venues	Number of venues where male SWs are present	% of venues with male SWs	Number of male SWs at venues	Number of venues where SW-trans* people are present	% of venues where SW-trans* people are present	Number of SW-trans*people at venues	Number of venues where SW_PWID are present	% of venues where SW-PWID are present	Number of SW-PWID at venues
Dnipro	393	9	2.3	12	2	0.5	5	48	12.2	93
Kyiv	312	17	5.4	62	8	2.6	30	18	5.8	25
Kropyvnytskyy	117	4	3.4	4	–	–	–	15	12.8	31
Lviv	318	49	15.4	455	5	1.6	40	–	–	–
Mariupol	198	2	1.0	3	–	–	–	27	13.6	61
Odesa	284	–	–	–	2	0.7	3	26	9.2	48
Kharkiv	383	13	3.4	21	3	0.8	3	6	1.6	9
Cherkasy	113	3	2.7	3	–	–	–	35	31.0	85
Total	***2,118***	***97***	***4.6***	***560***	***20***	***0.9***	***81***	***175***	***8.3***	***352***

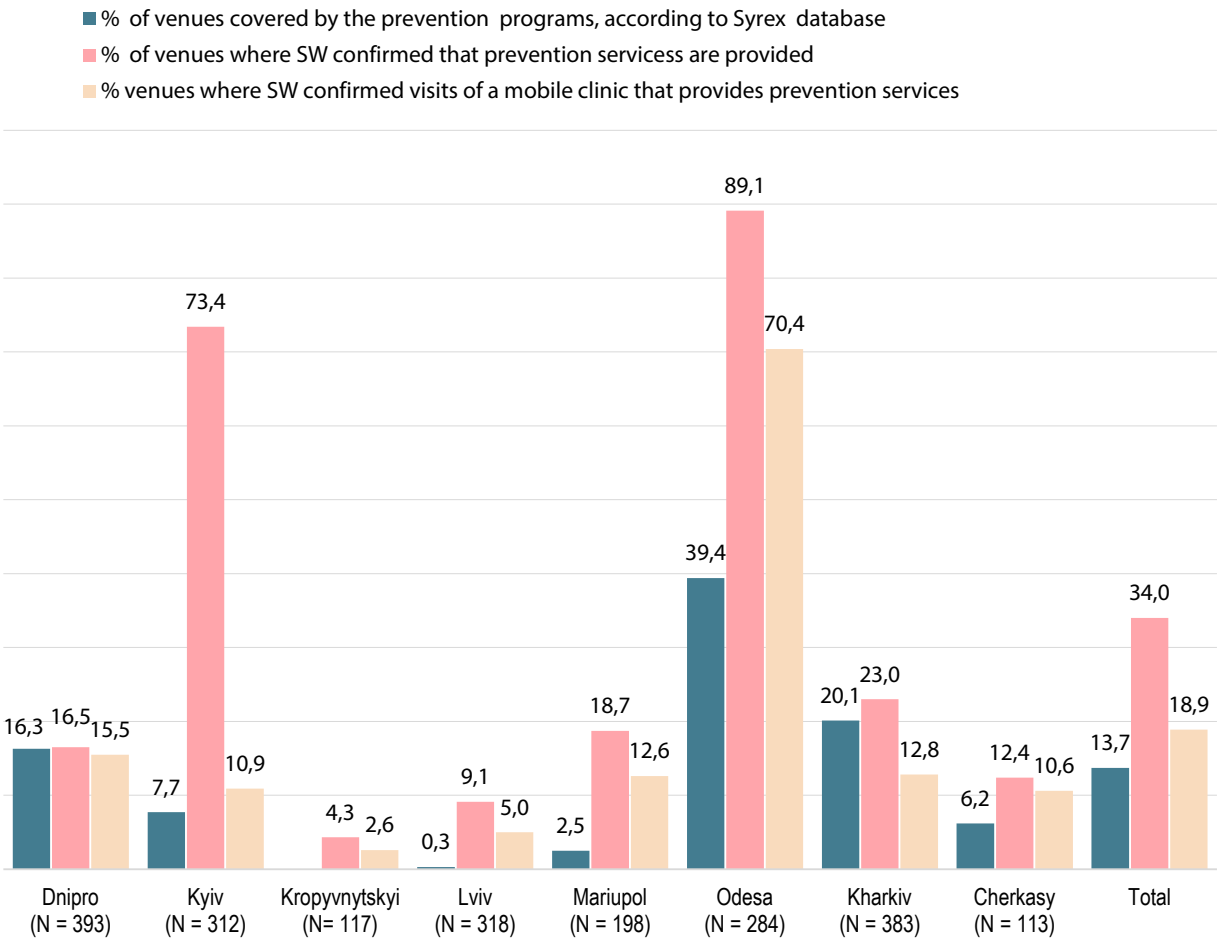
The average age of SWs at the venues is 29 years, which corresponds to the results of the biobehavioral study. In all cities, except Odesa, the minimum age of SWs at the venues was less than 18 years, the maximum was 60 years *(Figure 76)*.

Figure 76. *Age characteristics of SWs at venues across cities (N = 2,118, in absolute numbers)*



Of the 2,118 confirmed as active at the time of assessment, 290 sites *(or 13.7%)* were known to be covered by prevention programs according to the Syrex database. Such an indicator can be explained both by the peculiarities of fixing the venues at which HIV service projects provided services within the boundaries of mobile dispensary visits or outreach routes *(for example, fixing the start and end of the route, without specifying all addresses)*, and by the dynamics of changes in venues from those or other reasons *(closure of establishments due to quarantine restrictions, law enforcement agencies, etc.)*. If we take into account information from SWs who were present during the team's visit, preventive services are provided in a third of venues *(34.0% or 720 venues)*, and the share of those visited by mobile clinics was 18.9% *(400 venues)*. The corresponding indicators differ from the city of the study – in Kyiv, 73.4% of the venues reported the provision of preventive services to the SW, while in Kropyvnytskyi – 4.3%. From 70.4% of venues in Odesa to 2.6% of venues in Kropyvnytskyi are covered by visits to mobile clinics *(Figure 77)*.

Figure 77. Coverage of SW work venues with prevention services (N = 2,118, in %)



Report on the findings of the study: "Integrated biological and behavioral surveillance among sex workers in Ukraine, 2021"

Authors:

O. Kovtun

R. Kulchynska

Y. Sazonova

Editor: **V. Bozhok**

Layout: **I. Sukhomlynova**

Alliance for Public Health

ICF "Alliance For Public Health"
24 Bulvarno-Kudryavska St., Building 3
01601 Kyiv, Ukraine
Tel.: (050) 403 23 38
e-mail: office@aph.org.ua

www.facebook.com/alliancepublichealth

WWW.APH.ORG.UA

Alliance
for Public Health

ICF “Alliance for Public Health”
24 Bulvarno-Kudryavska St., Building 3
01601 Kyiv, Ukraine

Tel.: (050) 403 23 38
e-mail: office@aph.org.ua
www.facebook.com/alliancepublichealth
WWW.APH.ORG.UA

KYIV – 2023