Behaviour monitoring and HIV-prevalence among commercial sex workers as a component of second generation surveillance

ICF "International HIV/AIDS Alliance in Ukraine"

Analytical report

«Behaviour monitoring and HIV-prevalence among commercial sex workers as a component of second generation surveillance»

(based on results of the biobehavioral survey of 2011)

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The publication presents the results of the survey “Monitoring the behavior and HIV-infection prevalence among commercial sex workers as a component of second generation surveillance” conducted by the Kyiv International Institute of Sociology on the request of the International Charitable Fund “International HIV/AIDS Alliance in Ukraine” in 2011. The offered results concern social and demographic profile of FSW in Ukraine, practices of alcohol and drug use, condom use practices with different kinds of partners etc. Special attention is paid to the analysis of HIV-infection prevalence among FSW (as well as prevalence of positive test results on markers of syphilis, Hepatitis B and Hepatitis C) and level of FSWs’ coverage by prevention programmes. Survey results are highlighted both on national and regional levels. In some key aspects the results are compared to the results of a similar survey conducted in 2008-2009.

Monitoring results will be useful for representatives of central and local authorities, specialists (social and medical workers, psychologists etc.) and volunteers of non-governmental organizations who carry out prevention activities among FSW, for specialists of AIDS Centres – all those, who are involved in the project realization on working with the target group.

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SURVEY METHODOLOGY

The survey “Behaviour monitoring the and HIV-infection prevalence among commercial sex workers as a component of second generation surveillance” was conducted by the Kyiv International Institute of Sociology on the request of the International Charitable Fund “International HIV/AIDS Alliance in Ukraine” within the realization of the programme «Support for HIV/AIDS Prevention, Treatment and Care for Most Vulnerable Populations in Ukraine» (2007 - 2012), financed by the Global Fund to Fight AIDS, Tuberculosis and Malaria. The project was realized in cooperation with the Ukrainian AIDS Centre.

Key survey objectives

The key survey objectives included:

- Collection of behavioural and epidemiological data on indicators included into the list of National monitoring and evaluation indicators on the effectiveness of response to HIV/AIDS epidemics;
- Analysis of HIV-infection risk factors for FSWs;
- Analysis of tendencies in changes of knowledge, attitudes, practices and models of behaviour based on the comparison of data obtained to the data of previous surveys (2008-2009);
- Analysis of the FSWs’ coverage by prevention programmes;
- Identification of HIV, syphilis, Hepatitis B, Hepatitis C prevalence levels among FSWs in 25 regions of Ukraine.

Survey design

In order to realize the above-mentioned objectives, a cross-sectional survey design was selected, which provides a single-step cross-section of the situation by an independent (from other similar studies) sample.

The survey of 2011 was conducted with using RDS (respondent-driven sampling – sample guided by the respondents) and TLS (time-location sampling – sample according to time and location) methodologies, which served to provide maximum possible representativeness of the received data for hard-to-reach populations. These methodologies were used for the first time in 2008 for survey conduction among FSWs. These methodologies were also used in 2009 for the survey conduction.

RDS methodology is the modification of “snow ball” methodology, which gives an opportunity to obtain information close to the representative one. According to this methodology, researchers select only first few respondents (“primary respondents”), and then the respondents themselves identify and recruit all other respondents for remuneration.

It is assumed that in such a way the participants' selection (except "primary respondents") will be independent from the researchers, therefore it will be random to some extent – and this is the main criterion for receiving the representative sampling. "Primary respondents" were selected according to the quotas designed to provide the representation of different segments of FSWs. Key characteristics of "primary respondents" are listed below in table 1.

Table 1

Characteristics of "primary respondents"

City	Age, *years*	Work record, *years*	Have ever used injecting drugs	HIV status, *according to the respondent*	Client	Network size
Lugansk	18	2	no	HIV-negative	no	12
	34	17	no	HIV-negative	no	10
Zaporizhzhia	18	2	no	HIV-negative	no	15
	37	13	no	HIV-negative	no	13
Donetsk	35	10	no	HIV-negative	no	10
	16	1	no	HIV-negative	no	9
	34	11	yes	HIV-negative	no	10
	21	3	no	HIV-negative	no	10
Cherkasy	35	25	no	HIV-negative	no	15
	23	16	no	HIV-negative	yes	3
Kyiv	17	0	no	HIV-negative	yes	8
	23	5	no	HIV-negative	no	5
	25	4	no	had no testing	yes	10
	18	0	no	had no testing	yes	10
Chernigiv	18	1	no	had no testing	no	15
	18	1	no	had no testing	no	15
Sumy	28	2	no	had no testing	no	30
	18	2	no	had no testing	no	5

TLS methodology is the type of cluster sampling which involves the formation of geographical list of locations, where representatives of the target group gather. Researchers randomly select locations and visit them in order to recruit and interview representatives of the target group, who were at the location at a certain period of time. Successful implementation of the TLS methodology will be possible only if: firstly, an absolute majority of the target group representatives can be found at least at one geographical location; secondly, if it is possible to make the correct list of all (or at least all) locations; thirdly, if the researchers have access to geographical locations.

Before the field stage of the survey the formative research was conducted in order to create a full list of geographical locations for each city where the TLS methodology would be implemented. The formative research included a) expert interviews with people who have access to the locations where FSW work (FSW themselves, members of non-governmental organizations, law enforcement officers, taxi drivers etc.) to create the preliminary list of locations; b) visits to the locations for their field description; c) preparation of the final list of locations. The final list did not include locations that no longer worked (FSW no longer appeared there), locations "closed" for access, locations

that were dangerous for interviewers' lives. Then based on all the locations the schedule was formed, including dates and time of each certain location's visit by the research team. Mostly flats, hotels, saunas, bars, clubs etc. were the most hard-to-reach. Streets, railway stations, highways etc. were the most easily accessible. Accordingly, "street" FSW may be over-represented in the sampling structure of the cities, where TLS methodology was implemented. On average, regional teams conducted the survey visiting 15-20 locations.

On the whole, RDS methodology was implemented in 7 cities, while TLS methodology was implemented in 18 cities (see table 2 below). The methodology used in 2008-2009 and in 2011 was mainly the same in the corresponding cities. Compared to 2008-2009, the methodology was changed in Lviv (in 2008 the RDS methodology was used, while in 2011 – the TLS methodology), Zaporizhzhia (TLS in 2008, TLS in 2011), Sumy (TLS in 2008, RDS in 2011), Kharkiv (RDS in 2009, TLS in 2011).

Criteria for the respondents' selection:

- Have reached 14 years old;
- Have experience of providing sex services for remuneration (financial or in-kind) within the last 6 months;
- Live or work in the surveyed city;
- Gave informed consent to participate in the survey (in particular, agreed to give answers to the questionnaire, to be tested for four markers (HIV, syphilis, Hepatitis B, Hepatitis C).

Geographical scope and sample of the survey

Geographical scope of the survey included 23 regional centres of Ukraine, the capital of the Autonomous Republic of Crimea – Simferopol and the capital of Ukraine – Kyiv. The sample size in each city ranged from 150 to 300. The planned sample size was realized everywhere except Kherson. The planned number of respondents in Kherson was 300 people, but the research team was able to interview only 202 FSW. The total sample size is 5023 FSW. The field stage of the survey was realized during June-November 2011. Regional peculiarities of the project realization are highlighted below in Table 2.

Table 2

Method of FSWs' recruitment and sample realized

	Recruitment method	Sample realized*	Period of data collection
Vinnytsia	TLS	150	June, 7 – July, 11
Dnipropetrovsk	TLS	300	June, 26 – August, 15
Donetsk	RDS	306	June, 22 – September, 12
Zhytomyr	TLS	150	June, 21 – July, 29
Zaporizhzhia	RDS	202	June, 22 – September, 7
Ivano-Frankivsk	TLS	150	June, 16– July, 22

Kyiv	RDS	304	July, 6 – August, 11
Kirovograd	TLS	150	June, 16 – July, 24
Lugansk	RDS	152	June, 23 – July, 19
Lutsk	TLS	150	June, 17 – August, 9
Lviv	TLS	200	June, 16 – July, 6
Mykolaiv	TLS	301	June, 29 – September, 17
Odesa	TLS	300	June, 23 – September, 15
Poltava	TLS	200	July, 4 – August, 21
Rivne	TLS	150	June, 16 – July, 30
Simferopol	TLS	300	June, 21– August, 27
Sumy	RDS	152	September, 29 – November,9
Ternopil	TLS	150	June, 16 – July, 8
Uzhgorod	TLS	150	June, 16 – July, 27
Kharkiv	TLS	300	June, 24 – July, 27
Kherson	TLS	202	June, 15 – October, 10
Khmelnytskiy	TLS	150	June, 22 – July, 23
Cherkasy	RDS	152	June, 29 – August, 1
Chernivtsi	TLS	150	June, 15 – July, 5
Chernigiv	RDS	152	August, 1 – October, 4
TOTAL		**5023**	**June, 7 – November, 9**

*Including primary respondents (for cities, where RDS methodology was implemented).

Toolkit

Based on previous experience, the questionnaire was developed for the survey conduction, which contained a number of questions designed to explore the social and demographic structure of FSW population, their behavioural practices (especially in the sphere of commercial sex), practices of using alcohol and drugs, knowledge about HIV-infection, experience of HIV testing etc. In cities, where RDS methodology was implemented, respondents were also asked about the network size.

Realization of a biological component of the survey

Biological component of the survey (FSWs' blood testing for HIV) was realized by Ukrainian AIDS Centre in cooperation with regional AIDS centres. FSWs were tested for four markers – HIV, syphilis, Hepatitis B and Hepatitis C. Blood testing was conducting with the help of rapid tests for multi-infection diagnostics, New Vision Diagnostics "PROFITEST".

Ethical grounds of the survey

All the survey toolkit (Protocol of the bio-behavioural research, the developed questionnaire) underwent examination by the Commission of Professional Ethics from the Sociological Association of Ukraine and by the Committee of Medical Ethics from

the Institute of Epidemiology and Infectious Diseases named after L.V. Gromashevskiy of the Academy of Medical Sciences of Ukraine.

Key approaches to analyzing the survey results

For data analysis descriptive statistics were mainly used – one- and two-dimensional tables of distribution of answers (Chapters I-III, V). To determine the factors most closely connected with the presence of HIV-infection, regression analysis was used (Chapter IV).

At the regional level data for cities, where TLS methodology was implemented, were calculated in SPSS and for cities, where RDS methodology was used, they were calculated in RDSAT (special software for analysis of the data obtained with the use of RDS methodology). To analyze the situation at the national level, calculations were made by using SPSS software. Data for TLS cities were weighted by the representation of points in the sampling structure. Data for RDS cities were weighted with the use of the RDSAT software by the age of survey participants. Only in Chapter IV the data weighting for RDS cities was made not by age, but by HIV-status (also built and exported from RDSAT software). It should be noted that cities in the total national sample are represented disproportionately to the number of FSWs there. Thus, in the national sample some cities have more “weight” than they should, and some cities have less “weight” than they should, which could influence the calculations obtained.

The calculation pattern of 4 national indicators and HIV-infection prevalence at the national level was different among all FSW and FSW under of over 25 years. First of all, data were calculated at the regional level and then the average weighted national value was calculated (by sample size of each city). Indicator of HIV prevalence was calculated for two samples – for all FSW and for FSW who are not active IDU (because of the fact that by their practices part of FSWs are rather IDUs than actually FSWs). The sample size excluding active IDUs is 4816 FSW.

During the analysis “primary respondents” were excluded from the sample, because they were recruited not randomly within the project. The total weighted number of respondents excluding “primary respondents” is 5015. All of the given percentages were calculated for all respondents of the corresponding group, i.e. conditionally “missing” values (“hard to say”, “refuse to answer” etc.) were included in the denominator of calculations. Mean values were calculated only for those, who provided substantive response to the question. Sample sizes (weighted values) to which indicators have been calculated are listed in each table. It should be noted that the conditionally minimum limit for statistically reliable calculations is the sample size of 50 respondents which is being calculated. In some cases, sample sizes were less than 50. In such cases it cannot be stated that the obtained results are statistically reliable, but they can indicate certain trends. Therefore they were left in the tables. No calculations were given only for very small sample sizes.

In cases when values of separate groups of FSW were compared, z-distribution (for percentages) and Student’s t-distribution (for mean values) were used. If the difference

was statistically significant at 5%, «p<0.05» was put in brackets, if it was statistically significant at 1% - «p<0.01» was put. If the difference was statistically insignificant, «p>0.05» was put in brackets.

In order to monitor the dynamics of HIV prevalence at regional and national levels as well as changes of behavioural practices and knowledge of FSW, the obtained results were compared to the data of the similar survey, conducted in 2008-2009. Both in 2011 and in 2008-2009 the survey was conducted in all regional centres of Ukraine, Kyiv and Simferopol. In 2008 the survey was conducted in Dnipropetrovsk, Kirovograd, Lugansk, Lutsk, Lviv, Mykolaiv, Odesa, Sumy, Kherson, Khmelnytskiy. In 2009 the survey was conducted in Vinnytsia, Donetsk, Zhytomyr, Zaporizhzhia, Ivano-Frankivsk, Kyiv, Poltava, Rivne, Simferopol, Ternopil, Uzhgorod, Kharkiv, Cherkasy, Chernivtsi and Chernigiv. When interpreting the data, firstly, it is necessary to consider the fact that the ratio between sizes of regional samples were not identical in 2008-2009 and 2011. Secondly, the structure of FSW population interviewed in 2008-2009 and 2011 is a bit different (for example, by the share of injecting drug users). Accordingly, possible presence/absence of dynamics can be the result of these factors.

Key survey limitations

It should be noted that the cross-sectional survey design imposes certain limitations on the data analysis: the situation is presented at a certain moment and while interviewing what happened first is unknown – that which is considered as the cause or that which is considered as the consequence.

Other survey limitations are connected with two classes of problems: firstly, the difficulties faced by regional research teams which could influence the results obtained; secondly, the disadvantages of the methodologies used which could shift the results obtained.

The key fixed errors of regional research teams were:

- Cases of “pre-recruitment” in cities where TLS methodology was implemented – preliminary agreement that a FSW would come at a certain day to the location and be interviewed and tested there. However, possible violations were detected and corrected at early stages, therefore it did not lead to significant misrepresentation of the obtained results.
- Work in cities where TLS methodology was implemented at more than one location per day, which is the methodology violation. Such violations were corrected and data obtained with violations were excluded from the analysis.
- Over-representation of Roma people in Uzhgorod sample, which is a specific group of FSW that slightly face general population and may not represent the entire population of FSWs in the city.
- Violation of respondent’s motion sequence in the survey: blood testing preceded interviewing. As far as the pre-test counseling is followed by respondent’s informing about ways of HIV transmission, sequence violation of FSW participation in the survey can influence the level of knowledge measured within

the survey. The detected violations were quickly eliminated. Systematic violations were fixed only in Uzhgorod. However, the obtained results show that the level of knowledge in Uzhgorod is still very low.

- Single cases of getting in the sample of the respondents, who did not meet the inclusion criteria, are possible (injecting drug users, in particular). The most dangerous situation was in Donetsk, where the survey among FSW was conducted along with the survey among IDU. In this city the field stage of the survey among FSW was paused and continued only after IDUs' interviewing was finished. Before the interview (not only in Donetsk, but in all cities) the potential respondent was also asked additional questions designed to figure out whether the respondent really met the criteria (for example, where FSW find clients, how often they work etc.). If an interviewer had felt that the potential respondent did not meet the inclusion criteria, the interview was not conducted.

As it was mentioned above, the second main class of problems were the peculiarities of the methodologies used – RDS and TLS. These methodologies are currently the best for survey conduction among hard-to-reach populations, but at the same time they still have some disadvantages, which causes some bias in the sample. Such main problems include:

- In cities, where TLS methodology was implemented, lists were formed first of all from the locations, where local non-governmental organizations worked, which caused greater representation of their clients in the sample, which in turn could affect the results obtained;
- Work in cities, where TLS methodology was implemented, could be organized only at available locations. This could increase representation of "street" FSW in the sample, because such locations as flats, hotels, saunas, etc are mainly "closed", i.e. there was no access to them either by non-governmental organizations or by the research team;
- In cities, where RDS methodology was implemented, a small amount of remuneration could first of all encourage to come FSW with lower status, which in turn could shift the sample to more vulnerable FSW;
- As far as different methodologies are related to possible different shifts in the sample, data from different regions should be compared taking into account the possibility that they are not the result of a perfect regional situation, but the consequence of the methodology used;
- Dynamics should be carefully interpreted as it can be a methodical artifact – peculiarities of realization of the surveys of 2008-2009 and 2011 (for example, more / less representation of injecting drug users in the sample). In other words, presence / absence of changes does not necessarily mean that there is some dynamics, therefore analysis of the situation changes should be made carefully;
- Arrays for cities, where TLS and RDS methodologies were used, were mechanically combined, even though it was methodically incorrect, because so far in the literature there had been no scientifically based approaches to data fusion received with the help of TLS and RDS methodologies.

Among other problems there is also the fact that cities in the total national sample are represented disproportionately to the number of FSWs there. It was also mentioned above that results in different cities should be carefully compared. In this context it should be added that structures of FSW populations from different cities vary significantly, therefore differences in some indicators can be the consequence of it.

It should be noted that the sample of certain cities is mainly formed by clients of non-governmental organizations (Simferopol, Mykolaiv, Kharkiv and Lviv), which gives us grounds to consider the data obtained to be characteristic only of clients of NGOs, but not of FSW population in the city in general. There are also certain limitations connected with the sample formation from FSW who are injecting drug users (Poltava, Donetsk). HIV prevalence in such cities is much higher due to a double risk. The Table 3 shows the list of cities with the indication of a number of clients and injecting drug users in each city.

Table 3

Representation of clients of non-governmental organizations and injecting drug users in regional samples, *unweighted numebr*

	Number of respondents	Number of clients	Number of IDUs
Vinnytsia	150	113	2
Dnipropetrovsk	300	136	46
Donetsk	302	46	61
Zhytomyr	150	35	4
Zaporizhzhia	200	18	19
Ivano-Frankivsk	150	31	4
Kyiv	300	105	44
Kirovograd	150	96	13
Lugansk	150	11	0
Lutsk	150	96	20
Lviv	200	198	5
Mykolaiv	301	301	15
Odesa	300	232	10
Poltava	200	136	100
Rivne	150	110	20
Simferopol	300	298	3
Sumy	150	66	4
Ternopil	150	1	1
Uzhgorod	150	7	3
Kharkiv	300	295	2
Kherson	202	85	16
Khmelnytskiy	150	66	4
Cherkasy	150	65	32
Chernivtsi	150	111	8
Chernigiv	150	0	0

Data quality control

In order to monitor the quality of the project realization, an independent network of supervisors from KIIS together with experts of the ICF “International HIV/AIDS Alliance

in Ukraine" were conducting monitoring visits to regions and checking the quality of all necessary procedures. Violations detected were immediately reported to KIIS and corrected. In case of gross violations of the procedures, relevant questionnaires were excluded from the final data array.

Talking about Uzhgorod, it should be noted that a restriction on Roma respondents' interviewing was imposed in the course of the survey conduction, therefore the city sample was shifted to over-representation of this group only at some point. Moreover, as it was already mentioned above, procedures of interviewing and blood testing were systematically violated, which could improve the city results in case of the indicator on HIV awareness. However, further analysis showed that FSW who had been tested before interviewing, were characterized by the same knowledge as those FSW who were tested after the interviewing. Thus, for example, value of the national indicator on the level of knowledge is 30% among those who were interviewed with procedure violations and 27% among those who were interviewed without them. In other words, violations of the procedure did not influence the indicator of knowledge, therefore the obtained results could be considered reliable.

In other cities there were single cases of violation of the interviewing procedure, that is why they could not influence either the data of the city level or the data of the national level and they were not excluded from the final array.

In addition to quality control of the field stage of the survey, logical control of the gathered questionnaires was carried out. Thus, KIIS specialists checked input questionnaires by 143 logical conditions. In particular, testing results put in the questionnaire were checked with testing results put in the epidemiologist's notebook. Detected errors and logical contradictions were eliminated. Independent experts also conducted their own independent logical control over the prepared data array by 200 logical conditions. Their comments and remarks were considered and taken into account when preparing the final array.

Thus, the above-mentioned difficulties which regional research teams faced, were quickly eliminated which gives us grounds to confirm the reliability of the data obtained.

KEY SURVEY RESULTS

- Most FSWs (56%) are from 20 to 29 years old. The share of minor FSW (under 18 years old) makes up 2%. As compared to 2008-2009, the age structure of FSW has almost undergone no changes, though there is still some “ageing” – if an average age of female sex workers in 2008-2009 was 26.9 years, it is 27.5 years in 2011. At the same time, different regions of Ukraine differ significantly by the age structure of FSW: relatively “the youngest” FSW live / work in Ternopil (39% are under 19 years of age, average age of FSW is 22.5 years), relatively “the oldest” are in Donetsk (57% are of 30+ years of age, average age is 31.1 years), Ivano-Frankivsk (59% – 31.6) and Poltava (66% – 33.1).
- FSWwithcompletesecondaryorvocationaleducationprevailamong FSWpopulation (52%). Share of FSW with complete higher education makes up only 7% (as compared to 33% among women from general population of Ukraine). As compared to 2008-2009, there have been no significant changes in the educational structure of FSW. However, regions differ significantly – relatively the most educated are FSW from Sumy (53% have basic or complete higher education and only 5% have primary or basic secondary education), the least educated are FSW from Simferopol (6% and 60% correspondingly). Significant regional differences remain even when taking into account different age structure of FSW populations.
- FSWwhoarenotlivingwiththeirsexualpartnersdominateamongUkrainianFSWingenerala ndamongFSWfromcertainregionsinparticular (despite significant regional variability).
- Structure of FSW population by social status has remained almost unchanged as compared to 2008-2009. On the whole, the relative majority of FSW (45%) is unemployed, therefore commercial sex is in fact the only means for their existence. A third of FSW (34%) have permanent or occasional employment (including only 10% of those, who have permanent employment). Every tenth FSW is studying. There is quite a different situation by regions.
- Sex for remuneration is the key source of income for the absolute majority of FSW (77%). The relatively least dependent on this type of work are FSW from Cherkasy (commercial sex is the key source of income “only” for 31%) and Chernigiv (35%). The relatively most dependent are FSW from Zhytomyr (99%), Lviv (99%), Lutsk (99%) and Simferopol (97%).
- The financial status of FSW is almost the same as the financial status of women from general population living in regional centres (according to the opinion poll conducted by KIIS) – approximately a half of them lives in poor households (46%) almost the same number (42%) lives in the middle income households. In general, the financial status of FSW in all regions of Ukraine is average low (even though there are some significant differences).
- The absolute majority of FSW in Ukraine in general and in separate regions in particular, live either in an individual flat / house, shared flat, hostel. Vinnytsia stands out against all other cities, where 14% of FSW live in the street. Only 2FSW reported living in a children’s home, orphanages.

- As in 2008-2009, most FSW (60%) are residents of the surveyed city. Regions of Ukraine differ by this indicator, but still the absolute majority is either residents of the surveyed city or have lived there for more than a year. Dnipropetrovsk stands out against all other cities, where 43% of FSW are absolute “temporary residents” – they are not living permanently, but come from time to time in order to work in the commercial sex sphere.
- There are three large segment in the structure of FSW population according to the main client seeking method. The conditionally largest consists of those, who mostly work in streets, highways, at railway stations – their share makes up 45%. 24% of FSW mainly work at hotels, casino, bars, discos, in saunas etc. Almost the same share (27%) of FSW mostly find clients via telephone, Internet. Populations in different cities vary significantly – almost all FSW in Simferopol (94%) and Odesa (94%) are “street” ones, while only 1% of FSW in in Cherkasy and Chernigiv can be classifies as “street” ones. Accordingly, in some cities the sample is shifted to bigger representation of “street” FSW, while in other cities “street” FSW are less presented in the sample. There are still some other differences among main client seeking methods.
- “Street” FSW are mostly represented by older FSW (36% under 25 years of age and 64% of 25+ years of age), injecting drug users (12% have used injecting drugs within the last 12 months) and clients of non-governmental organizations (67% are clients). There is quite a different situation in case of FSW, who mostly find clients at hotels, bars, in saunas etc. – they are mostly represented by younger FSW (48% under 25 years of age and 52% of 25+ years of age), less of them are injecting drug users (3%) and clients of non-governmental organizations (40%). FSW who mostly find clients via telephone, Internet reach “street” FSW by age (36% under 25 years and 64% of 25+ years), but there are much less clients of non-governmental organizations (41%) and injecting drug users (6%) among them (although the number of the latter is higher than among FSW who mostly find clients at hotels, bars, in saunas etc.)
- Only 12% of FSW have never consumed alcohol within the last 30 days. Each fifth (18%) consumed alcohol every day. There appeared to be no significant changes as compared to 2008-2009 as well as regional variation. Thus, in Kharkiv there are most FSW who have never consumed alcohol within the last 30 days – 33% (as compared to no more than a quarter in other cities). At the same time the share of FSW who consume alcohol every day is especially high in such cities as Lutsk (44%), Vinnytsia (48%), Zhytomyr (52%) and Poltava (53%).
- 16% of the interviewed FSW have ever used drugs, including 8% of those, who have used injecting drugs within the last 12 months. Most FSW who are injecting drug users are in Poltava, where they make up 48%. None of the interviewed FSW have used injecting drugs within the last year in Lugansk, Ternopil and Chernigiv. There are significant changes at national and regional levels as compared to 2008-2009 (for example, the share of those, who have used injecting drugs within the last 30 days, reduced from 14% to 7%), though they are rather a methodical artifact than a real tendency. There are more injecting drug users among older FSW, “street” FSW and clients of non-governmental organizations.

- Opiates and stimulant were equally popular among those, who have used any drugs within the last year (59% of such FSW have used opiates and 57% have used stimulants). However, whereas older FSW use both opiates and stimulants, younger FSW prefer stimulants.
- According to the survey conducted in 2011 by the Analytical Centre "Socioconsulting", FSW have much earlier sexual debut as compared to women from general urban population – average age of their sexual debut is 16.0 years (as compared to 18.1 years). There are also significant intergenerational shifts towards earlier sexual debut – whereas there are 6% of FSW born before 1969 who had their sexual debut under 14 years of age, there are already 25% of such FSW born after 1990. The same trends are observed among women from general population of Ukraine, but the scope is much lower.
- FSW mostly start providing commercial sex services after reaching the age of majority, though younger FSW enter sex business much earlier (whereas there are 50% of older FSW who started providing commercial sex services before reaching the age of majority, there are 93% of such among younger FSW). Uzhgorod stands out against all other cities – average age of beginning to provide commercial sex services there is less than 18 years (this index is higher in other cities), and 51% of FSW in Uzhgorod entered the sphere of commercial sex before reaching the age of majority (this index is not more than a third in other cities).
- FSW with middle work record are the most presented by the duration of stay in sex business – 54% of FSW have provided commercial sex services from 2 to 10 years. Every fourth FSW (24%) has had an experience of working in this sphere for up to 2 years, 17% has been providing commercial sex services for more than 10 years. In general, as compared to 2008-2009, FSW structure by working experience has undergone no significant changes. Again, different regions differ significantly.
- Almost all FSW are actively involved in the sphere of commercial sex – the absolute majority provide such services no less than 2-3 times a week.
- Quite a lot of FSW have permanent and casual partners except commercial ones. Thus, a half of FSW (51%) have had at least one permanent partner within the last year and a third of FSW (34%) have had at least one casual partner within this period. Attention should be paid to the present regional peculiarity.
- On average, FSW have 7.6 commercial partners per week. Older FSW, "street" FSW and injecting drug users have some more partners.
- Even though the absolute majority of FSW (92%) used condoms during their most recent sexual contact with a commercial partner, only 74% of them used condoms when having vaginal sex with commercial partners, 68% used them during anal sex. Regions where corresponding dangerous practices are the most widespread should be supplemented by Lugansk (only 25% always use condoms during vaginal sex and only 17% - during anal sex) and Chernigiv (25% and 32% correspondingly). Except irregular condom use, every third FSW (35%) has an experience of condom misuse.
- The main reason for condom non-use with commercial partners is client's insisting, especially for additional payment. Even though there are 2% of FSW always ready to have sex without a condom, there are 37% of those, who would agree under certain circumstances. It should be noted that as compared to 2008-2009, the share of those

who would under no circumstances agree to provide sex services without a condom, has increased from 47% to 60%.

- FSW significantly less use condoms when having sex with their permanent partners (37% always use condoms during vaginal sex, 36% - during anal sex). They also use condoms with casual partners – less frequently than with commercial partners, but more frequently then with permanent ones (71% always use condoms during vaginal sex, 57% - during anal sex).
- Every tenth of FSW (10%) is HIV-positive. HIV prevalence is much higher among older FSW – 15% as compared to 3% among younger FSW. As compared to 2008-2009, there is reduction of HIV-infection prevalence (from 13%), but in general it is caused by the lowest share of injecting drug users in the sample of 2008-2009. Situation in regions is totally different – Donetsk is the "leader" with 43% of HIV-positive FSW. The following cities can be considered as the ones with the highest HIV prevalence – Poltava (27%), Kyiv (24%), Khmelnytskiy (19%), Cherkasy (14%), Kirovograd (14%), Odesa (14%). At the same time there were no HIV-positive FSW in Lugansk, Uzhgorod and Kharkiv. Differences are largely determined by different share of injecting drug users and age of FSW (actually, by duration of stay in the sex business industry). At regional level, HIV prevalence among younger FSW (under 25 years of age) is usually lower or the same. Regions characterized by the highest HIV prevalence among younger FSW include Donetsk (10%), Kyiv (8%), Rivne (7%), Odesa (7%), Kirovograd (7%), Zaporizhzhia (6%), Ivano-Frankivsk (6%), Dnipropetrovsk (6%), Poltava (5%), Simferopol (5%). Moreover, in such regions HIV prevalence even among young FSW who are not injecting drug users makes up from 5%.
- HIV prevalence among FSW who are not active injecting drug users makes up 9%. In particular, HIV prevalence makes up 3% among younger FSW and 13% among other FSW.
- HIV is concentrated among FSW who are injecting drug users – HIV prevalence makes up 41% among them as compared to 6% among those who have never used drugs. In this context it should be also noted that HIV prevalence among FSW who had positive test result for Hepatitis C marker makes up 37% as compared to 6% among FSW who had negative test result.
- Share of FSW with positive test result for syphilis makes up 6%, for Hepatitis B – 3%, for Hepatitis C – 12%. Moreover, if there are 48% of FSW who had positive test result for Hepatitis C among those who have injected drugs, there are 8% of such among FSW who have never used drugs at all. On the whole, 51% of those having positive test results for Hepatitis C reported having never used drugs. A part of such FSW (who reported not using injecting drugs, but still had positive test results for Hepatitis C) can possibly get Hepatitis C in other way, such as the sexual one. However, it is rather the fact that a part of FSW concealed the fact of using drugs.
- Results of the constructed logical regression model (for FSW who have not been HIV-positive during last testing) indicate that the drug use (first of all – injecting drugs) has the most distinctive connection with having HIV-status. "Work record" (strating from having a ten-year "work record" and more) is also quite strongly connected to HIV status in the sphere of commercial sex, while knowledge is less connected.

- Half of the interviewed FSW (52%) are clients of non-governmental organizations working with FSW or IDU. Moreover, in some cities almost all FSW are clients of NGOs (Mykolaiv – 100%, Simferopol – 100%, Lviv – 99%, Kharkiv – 98%). There are also cities with quite a big number of clients. It is more likely to be a methodical artifact that a real situation.
- Clients of non-governmental organizations are mostly represented by older FSW, “street” FSW and injecting drug users.
- 62% of FSW are generally covered by prevention programmes. 71% FSW have received some assistance from non-governmental organizations within the last 12 months. The given indicators vary significantly according to the region, but first of all differences are mediated by the share of clients in the population structure. Prevention programmes and assistance cover almost all clients and a few non-clients. Thus, on the whole, only 39% of non-clients received any assistance from non-governmental organizations.
- The absolute majority of FSW (76%) have ever been HIV-tested, including 59% of those, who have been tested during the last year. However, among clients of non-governmental organizations there are much more those FSW, who have been tested (94% as compared to 57% among non-clients). There are also significant changes by regions, but they are first of all mediated by the share of clients in the structure of FSW population.
- 56% of FSW correctly identify ways of preventing sexual transmission of HIV and reject major misconceptions about HIV transmission. The indicator value has increased a bit as compared to 2008-2009 (it was 59% at that time). Clients are characterized by much better knowledge – 65% as compared to 46% among non-clients.

CHAPTER I. SOCIAL AND DEMOGRAPHIC PROFILE OF FSW

1.1. Age, educational and family structure of FSW

The survey results demonstrated that an average age of female sex workers is 27.5 years (standard bias – 6.7 years). Generally, most female sex workers (56%) are in the age group 20-29 years (fig. 1.1.1). Every third FSW (34%) is 30 years and older, every tenth FSW (9%) is younger than 19 years old, including 2% of minors.

As compared to the previous survey, there is some "ageing" of the age structure of FSW. Thus, an average age of female sex workers in 2008-2009 was 26.9 years (standard bias – 6.9 years) ($p<0.01$) and, for example, the share of FSW younger than 19 years old was 14% ($p<0.01$).

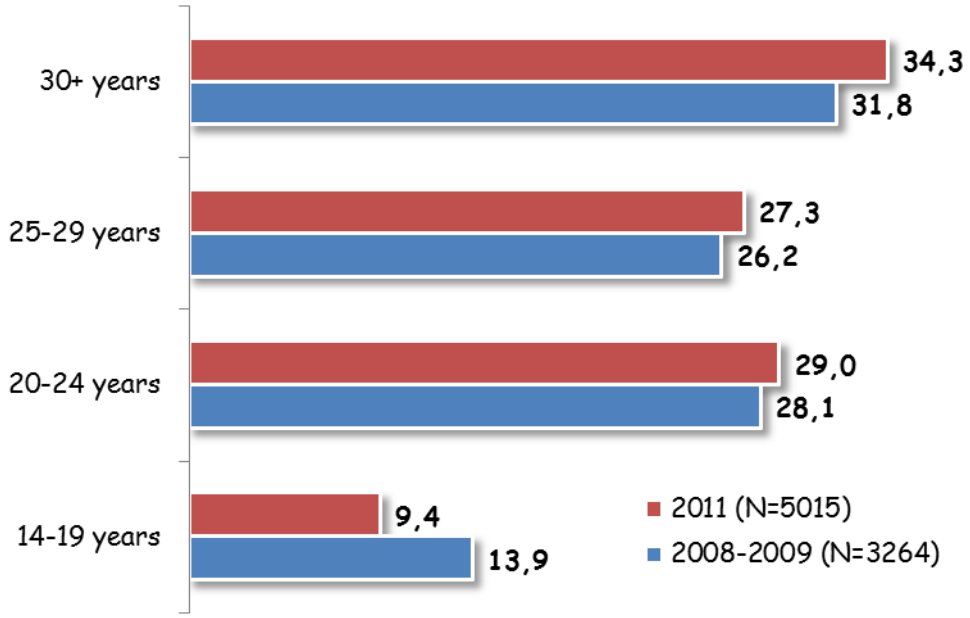


Fig. 1.1.1. **Age structure of FSW,** *%*

There is quite a significant difference in age structure of FSW by regions. Thus, for example, in Ternopil there are especially a lot of very young FSW (up to 19 years old) – 39% (table 1.1.1). There are many older FSW (older than 30 years) in Donetsk (57%), Ivano-Frankivsk (59%) and Poltava (66%). Generally, on average the oldest FSW live / work in Poltava, while the youngest are in Ternopil.

Table 1.1.1

Age structure of FSW (by regions)*, %

	Share of FSW at the age of…years				Average age**
	14-19	20-24	25-29	30+	
Poltava (*N*=200)	2.5	7.0	24.5	66.0	33.1
Ivano-Frankivsk (*N*=150)	3.7	18.6	19.1	58.7	31.6

Donetsk (*N*=302)	8.1	15.5	19.5	56.9	31.1
Rivne (*N*=150)	6.3	17.5	36.9	39.3	29.0
Zhytomyr (*N*=150)	2.0	18.8	39.2	40.0	28.5
Zaporizhzhia (*N*=200)	13.1	16.0	26.2	44.8	28.4
Simferopol (*N*=300)	11.9	21.0	18.8	48.4	28.2
Kirovograd (*N*=150)	7.2	22.5	32.5	37.7	28.1
Mykolaiv (*N*=301)	2.0	31.6	33.1	33.3	27.8
Chernivtsi (*N*=150)	11.5	25.3	25.4	37.8	27.8
Cherkasy (*N*=150)	2.4	30.6	36.3	30.6	27.4
Kyiv (*N*=300)***	11.3	22.7	31.7	33.6	27.3
Sumy (*N*=150)	9.6	31.0	21.2	38.1	27.3
Khmelnytskiy (*N*=150)	13.3	30.1	28.9	27.7	26.9
Lviv (*N*=200)	3.2	29.4	44.2	23.2	26.8
Kharkiv (*N*=300)	6.5	37.3	25.2	31.0	26.8
Lugansk (*N*=150)	5.1	42.0	31.4	21.4	26.7
Odesa (*N*=300)	10.6	34.3	27.2	27.9	26.7
Dnipropetrovsk (*N*=300)	12.8	34.1	25.9	27.2	26.2
Kherson (*N*=202)	16.4	37.6	14.7	31.3	26.1
Vinnytsia (*N*=150)	10.3	40.4	25.8	23.5	25.9
Lutsk (*N*=150)	2.4	39.8	47.9	10.0	25.4
Uzhgorod (*N*=150)	18.5	49.8	13.9	17.7	24.4
Chernigiv (*N*=150)	5.7	52.7	26.7	14.9	24.4
Ternopil (*N*=150)	39.3	33.3	14.7	12.7	22.5

* Ordered by the average age of FSW (from the oldest to the youngest).
** As far as RDSAT does not provide opportunity to calculate mean values, calculations for RDS cities were conducted in SPSS using weighs exported from RDSAT.
*** There is no information about age of 2 FSWs in Kyiv, therefore the mean value was calculated without their consideration.

Female sex workers are characterized by quite a low educational level. Thus, only 23% of FSW have basic or complete higher education, the majority (52%) has only complete secondary education (fig. 1.1.2). Moreover, by their educational level FSW are significantly inferior to women from general population of Ukraine living in regional centres and belonging to the same age group as the interviewed FSW. The share of people with complete higher education is 33%[1] as compared to only 7% among FSW ($p<0.01$). It should be noted that in comparison to 2008-2009, the educational structure of FSW has not faced significant changes.

[1]According to the data of the survey "Omnibus", which was conducted by the Kyiv International Institute of Sociology in June, 2011 by the national representative sample (N=2040).

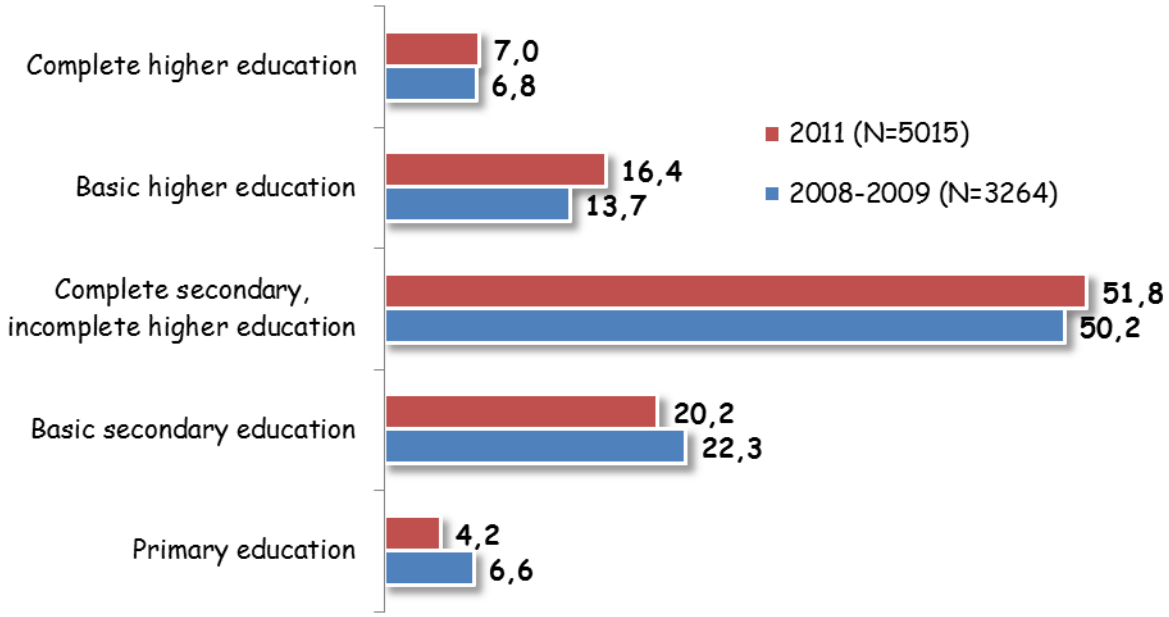


Fig. 1.1.2. **Educational structure of FSW,** *%*

Similar to the age structure, FSW from different cities are characterized by quite different educational structure. For example, in Simferopol there are especially many FSW with education not higher than the basic secondary – 60% (see Table 1.1.2). At the same time half of FSW in Sumy (53%) have basic or complete higher education.

Differences in educational structure can depend on differences in age structure of FSW from different cities. In other words, FSW from cities with "younger" age structure will have lower education exactly because of the fact that they have had no opportunity to get higher educational level due to their age. Therefore, in order to provide correct comparison of educational structure of FSW from different cities, calculations were performed separately among FSW of 25+ years of age (because people mostly get education till this age and only few raise their educational level after this age).

However, as it can be seen from Table 1.1.2, there are still significant differences in educational structure of FSW of 25+ years of age from different cities. Thus, for example, almost half of FSW of 25+ years of age in Simferopol (48%) have education not higher than the basic secondary. Quite a low educational level is observed among FSW in Chernivtsi (40% have education not higher than the basic secondary) and Khmelnytskiy (37%). Besides, it should be noted that every fifth of FSW of 25+ years of age in Chernivtsi (20%) have only primary education. The most educated are FSW from Kharkiv (52% have basic or complete higher education), Sumy (51%) and Kyiv (41%).

Table 1.1.2

Educational structure of FSW (by regions)*, %

	All FSW	FSW of 25+ years of age

	Primary education	Basic secondary education	Complete secondary, incomplete higher education	Basic higher education	Complete higher education	Primary education	Basic secondary education	Complete secondary, incomplete higher education	Basic higher education	Complete higher education
Kharkiv (N_1=300, N_2=168)**	1.0	28.2	29.0	32.3	9.4	0.6	20.0	27.5	40.3	11.6
Sumy (N_1=150, N_2=89)	1.3	3.9	41.6	36.2	17.1	1.9	3.9	42.9	30.9	20.4
Kyiv (N_1=300, N_2=208)	3.2	16.2	44.4	19.8	15.0	2.2	16.6	40.4	25.2	15.4
Chernigiv (N_1=150, N_2=61)	0.0	0.4	64.8	31.4	3.4	0.0	0.2	64.5	29.5	5.8
Cherkasy (N_1=150, N_2=107)	0.6	14.8	48.0	20.5	14.8	0.9	15.6	49.1	19.2	13.6
Mykolaiv (N_1=301, N_2=200)	2.3	7.7	65.1	23.2	1.7	1.0	8.1	58.5	29.9	2.5
Lugansk (N_1=150, N_2=79)	11.9	13.2	46.6	13.3	15.0	14.2	11.8	43.9	9.2	20.8
Ivano-Frankivsk (N_1=150, N_2=117)	6.1	13.9	46.6	19.1	9.8	7.1	9.6	48.2	17.5	11.8
Donetsk (N_1=302, N_2=239)	1.8	23.1	47.4	14.4	11.4	1.4	22.8	45.7	14.8	13.3
Lviv (N_1=200, N_2=135)	0.5	14.1	59.3	23.4	2.7	0.0	13.3	60.6	22.2	4.0
Dnipropetrovsk (N_1=300, N_2=159)	2.8	20.6	55.0	10.6	10.5	1.7	14.4	57.8	10.2	15.9
Rivne (N_1=150, N_2=114)	4.8	7.6	63.1	17.5	7.0	4.1	8.5	61.3	17.7	8.3
Poltava (N_1=200, N_2=181)	4.5	25.0	46.5	21.0	3.0	4.4	23.2	47.5	21.5	3.3
Uzhgorod (N_1=150, N_2=48)	16.2	22.1	46.5	12.4	2.9	8.0	21.6	45.9	19.1	5.4
Ternopil (N_1=150, N_2=41)	2.0	6.0	78.7	12.0	1.3	0.0	7.3	68.3	22.0	2.4
Kirovograd (N_1=150, N_2=105)	1.1	31.8	49.6	15.5	2.0	1.6	19.2	55.4	22.1	1.8
Odesa (N_1=300, N_2=165)	2.6	11.7	64.2	14.1	7.4	2.7	12.2	61.5	15.1	8.6
Vinnytsia (N_1=150, N_2=74)	12.0	26.6	47.2	13.0	1.3	5.7	18.9	51.6	21.1	2.6
Zaporizhzhia (N_1=200, N_2=150)	2.6	14.3	64.5	9.0	9.3	2.3	13.1	63.9	10.2	10.2
Chernivtsi (N_1=150, N_2=95)	23.0	23.8	40.2	6.4	6.5	20.3	19.7	44.1	8.2	7.7
Zhytomyr (N_1=150, N_2=119)	0.8	26.1	58.1	15.1	0.0	0.0	21.5	62.8	15.7	0.0
Khmelnytskiy (N_1=150, N_2=85)	2.6	30.9	51.9	8.0	6.0	2.3	34.7	47.8	8.2	7.0
Lutsk (N_1=150, N_2=87)	0.6	24.5	63.5	10.2	1.1	1.0	18.8	66.5	13.7	0.0
Kherson (N_1=202, N_2=93)	5.4	24.5	58.7	6.2	4.9	7.9	12.4	69.1	5.8	4.9
Simferopol (N_1=300, N_2=201)	5.4	55.0	33.7	2.8	3.0	1.4	47.0	42.8	4.2	4.5

* Ordered by the share of FSW with basic or complete higher education among FSW of 25+ years of age (from the largest to the smallest).

** N_1 – weighed number of all FSW, N_2 – weighed number of FSW of 25+ years of age.

The majority of FSW (64%) are not married and not cohabiting with their sexual partner (fig. 1.1.3). They can be accompanied by 10% of those FSW, who are officially married, but are not cohabiting with their husbands or any other sexual partners. Only a quarter of FSW (26%) is cohabiting with either a husband or a sexual partner. Besides, in 2008-2009 there were a bit less of FSW (56%), who were not married and were not cohabiting with a sexual partner ($p<0.01$).

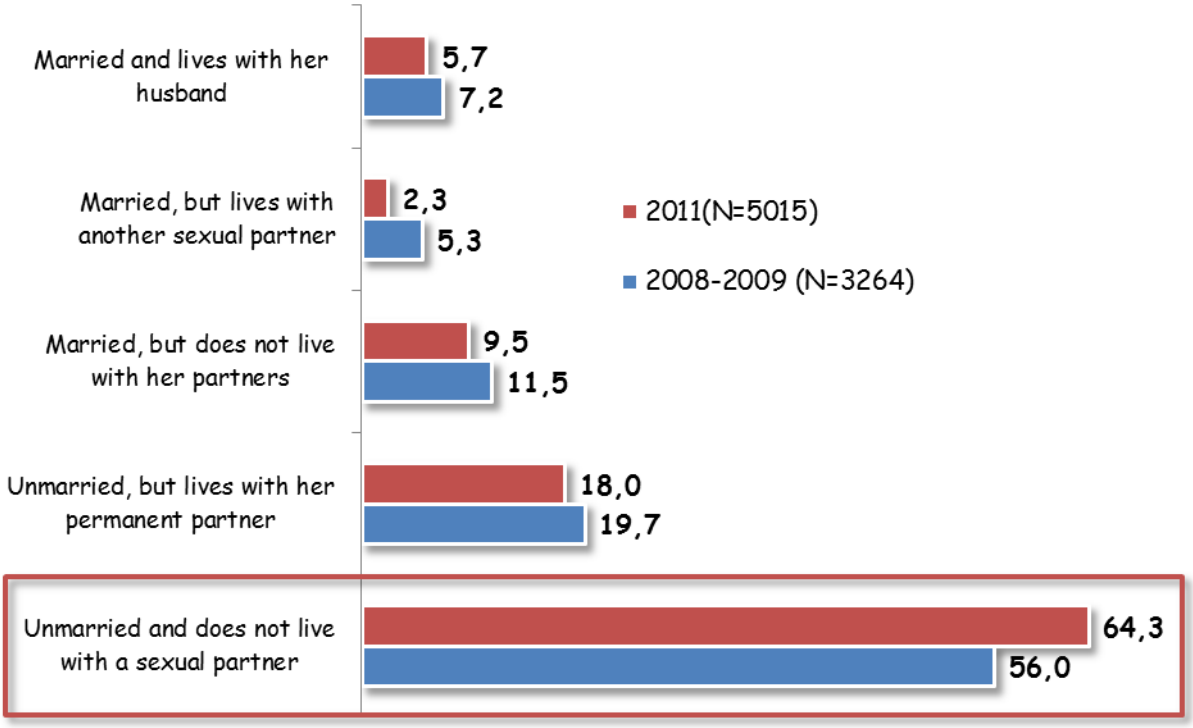


Fig. 1.1.3. **Family structure of FSW, %**

In the regional context information about family structure of FSW from different cities is presented below in Table 1.1.3. In general, FSW who are not married and not cohabiting with their sexual partner "dominate" in all regions. However, there are still certain differences. For example, if there are 92% and 91% of FSW who are unmarried and not cohabiting with their sexual partner in Lugansk and Chernigiv, there are "only" 47% and 48% of such FSW in Dnipropetrovsk and Kharkiv correspondingly.

Table 1.1.3

Family structure of FSW (by regions)*, %

	Married and lives with her husband	Married, but lives with another sexual partner	Married, but does not live with her partners	Unmarried, but lives with her permanent partner	Unmarried, does not live with a sexual partner
Lugansk (*N*=150)	3.1	1.0	1.0	3.0	92.0
Chernigiv (*N*=150)	0.0	0.0	0.7	8.1	91.2
Odesa (*N*=300)	1.7	0.8	13.6	4.6	79.2
Zaporizhzhia (*N*=201)	2.7	1.3	4.4	13.1	78.2
Lutsk (*N*=150)	1.3	1.7	9.0	11.4	76.5
Vinnytsia (*N*=150)	0.0	1.5	17.8	4.3	76.3

Simferopol (*N*=300)	0.7	0.0	3.5	22.1	73.7
Donetsk (*N*=302)	6.2	2.1	9.1	9.7	71.0
Kherson (*N*=202)	4.5	3.1	3.1	20.2	69.1
Zhytomyr (*N*=150)	4.4	0.6	6.4	20.1	68.5
Kirovograd (*N*=150)	3.2	0.0	9.1	21.7	66.0
Kyiv (*N*=300)	10.4	1.1	7.2	14.9	65.7
Ternopil (*N*=150)	5.3	4.0	10.7	16.0	62.0
Sumy (*N*=150)	19.0	2.5	4.9	13.4	60.2
Mykolaiv (*N*=301)	1.3	4.0	13.9	20.9	59.9
Chernivtsi (*N*=150)	6.5	0.5	9.8	25.2	58.0
Ivano-Frankivsk (*N*=150)	10.5	6.7	17.2	8.5	57.0
Khmelnytskiy (*N*=150)	5.2	4.6	3.3	30.6	56.3
Uzhgorod (*N*=150)	7.0	5.5	22.3	9.5	55.7
Rivne (*N*=150)	6.2	1.1	9.5	29.9	53.3
Poltava (*N*=200)	1.5	6.0	19.0	21.0	52.5
Lviv (*N*=200)	11.0	1.4	8.4	27.3	52.0
Cherkasy (*N*=150)	10.9	0.6	9.4	28.5	50.6
Kharkiv (*N*=300)	15.1	3.8	11.4	21.9	47.9
Dnipropetrovsk (*N*=300)	4.8	3.8	10.3	34.3	46.8

* Ordered by the share of FSW, who are unmarried and do not live with a sexual partner (starting from the largest to the smallest).

1.2. Social status of FSW

By the social status most FSW are unemployed (45%) (fig. 1.2.1). A quarter of FSW (24%) have occasional income and only one in ten FSW (10%) has a permanent job. The rest of FSW are either students or housewives. In comparison to 2008-2009 there were no significant changes in the structure of FSW by the social status.

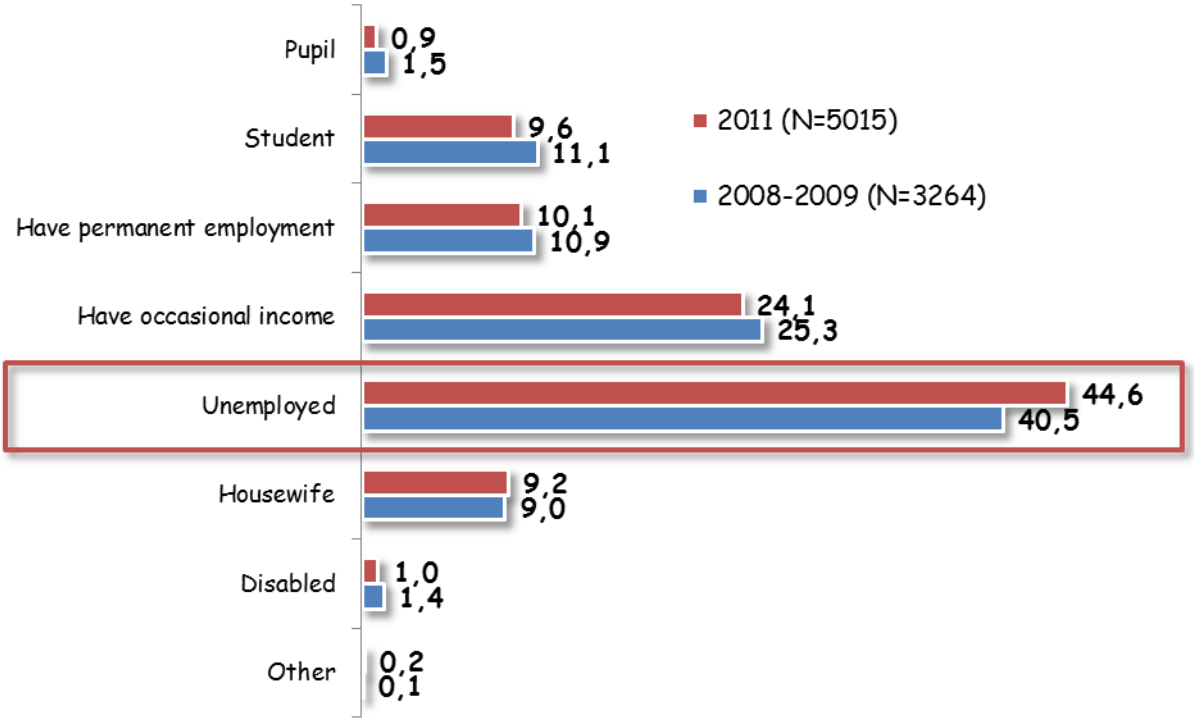


Fig. 1.2.1. **Social status of FSW (without taking into account their commercial sex work), %**

Structure of FSW by the social status is quite different in different cities. Thus, "unemployed" is the dominant status of FSW in Zhytomyr (92% chose this option), Vinnytsia (77%), Lviv (77%) and Chernivtsi (74%) (see Table 1.2.1). There are especially many students among FSW in Ternopil and Chernigiv – 39% and 31% correspondingly. It should be noted that the share of FSW who have permanent employment is usually not higher than a quarter of the whole population reaching a maximum of 31% in Cherkasy. There are also other significant differences. In this context it is appropriate to remind that the bigger share of pupils / students in some cities can be determined by younger age structure.

Table 1.2.1

Social status of FSW (without taking into account their commercial sex work) (by regions)*, %

	Pupil	Student	Have permanent employment	Have occasional income	Unemployed	Housewife	Disabled
Cherkasy (*N*=150)	0.0	11.0	31.1	27.6	16.0	14.0	0.3
Kirovograd (*N*=150)	0.0	4.8	27.7	7.8	36.0	15.5	8.3
Chernigiv (*N*=150)	0.0	30.7	24.5	27.6	17.2	0.0	0.0

Sumy (*N*=150)	0.7	23.5	20.8	29.2	22.6	1.7	1.6
Ivano-Frankivsk (*N*=150)	0.6	6.1	20.4	22.6	45.4	4.9	0.0
Kyiv (*N*=300)	2.4	5.2	19.7	15.0	45.5	8.5	0.6
Donetsk (*N*=302)	0.0	5.5	19.5	20.4	34.2	14.9	3.2
Dnipropetrovsk (*N*=300)	0.8	7.6	12.7	8.5	60.9	9.6	0.0
Zaporizhzhia (*N*=200)	2.4	3.8	11.3	20.0	52.7	9.5	0.0
Lugansk (*N*=150)	0.0	7.0	8.3	33.1	50.5	1.1	0.0
Mykolaiv (*N*=301)	0.3	10.9	8.9	54.3	16.6	8.9	0.0
Ternopil (*N*=150)	0.0	38.7	6.7	14.0	31.3	5.3	4.0
Kharkiv (*N*=300)	0.0	3.1	6.5	32.1	20.7	37.6	0.0
Kherson (*N*=202)	2.9	22.5	5.1	27.1	23.3	17.9	1.1
Khmelnytskiy (*N*=150)	1.4	16.7	4.7	23.5	51.9	1.3	0.0
Rivne (*N*=150)	0.0	10.1	4.3	42.3	33.4	8.2	1.7
Odesa (*N*=300)	0.8	6.9	3.6	10.9	68.0	9.8	0.0
Simferopol (*N*=300)	4.9	0.5	3.5	24.0	64.4	2.4	0.3
Lviv (*N*=200)	0.0	2.2	3.3	9.6	76.8	8.1	0.0
Chernivtsi (*N*=150)	0.8	2.9	2.6	8.6	74.1	11.1	0.0
Poltava (*N*=200)	0.0	5.0	2.5	40.5	39.5	5.0	7.5
Zhytomyr (*N*=150)	0.0	1.3	2.2	5.0	91.6	0.0	0.0
Lutsk (*N*=150)	0.0	3.2	1.4	68.1	17.4	6.7	0.0
Vinnytsia (*N*=150)	0.0	6.4	0.6	14.1	77.0	1.9	0.0
Uzhgorod (*N*=150)	0.0	27.7	0.0	22.7	49.1	0.6	0.0

* Ordered by the share of FSW, who have permanent employment (from the largest to the smallest).

1.3. Key sources of income and financial status of FSW

Commercial sex is the key source of income for the absolute majority of FSW (77%) (fig. 1.3.1). Other permanent or temporary employment is the key source of income only for 11% of FSW.

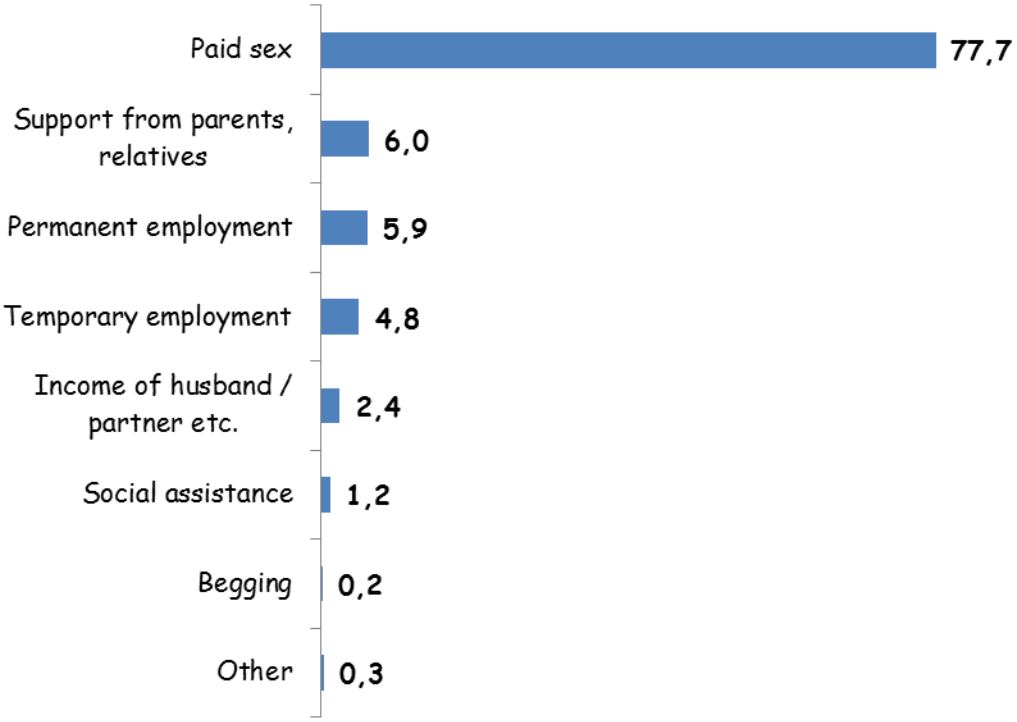


Fig. 1.3.1. **Key source of income for FSW,** *% (N=5015)*

However, not in all cities commercial sex has such a dominant status (although it is so in most cities). First of all, it concerns Cherkasy and Chernigiv, where, correspondingly, "only" 31% and 35% reported commercial sex as the key source of income (see Table 1.3.1). Instead, FSW from Lviv (99%), Zhytomyr (99%) and Lutsk (99%) rely totally on commercial sex. It should be noted that mostly not more than a fourth of FSW "rely" first on permanent employment (maximum – 28% of FSW in Cherkasy). There are some other significant differences in case of other cities.

Table 1.3.1

Key source of income for FSW (by regions)*, %

	Permanent employment	Temporary employment	Paid sex	Support from parents, relatives	Income of husband / partner	Social assistance	Begging	Other
Cherkasy (*N*=150)	28.0	11.5	30.6	24.4	4.3	1.2	0.0	0.0
Sumy (*N*=150)	21.2	11.9	57.0	6.9	3.0	0.0	0.0	0.0
Chernigiv (*N*=150)	21.2	14.3	34.8	27.8	0.7	1.2	0.0	0.0
Ivano-Frankivsk (*N*=150)	15.5	11.0	57.6	8.5	4.3	1.8	0.6	0.6
Kirovograd (*N*=150)	13.1	1.8	48.8	8.2	7.1	6.7	0.0	3.9
Dnipropetrovsk (*N*=300)	10.3	2.0	76.4	7.4	3.2	0.6	0.0	0.0
Donetsk (*N*=302)	10.3	9.9	70.3	2.2	3.3	1.9	0.0	0.0

Kyiv (*N*=300)	6.8	3.2	77.4	2.9	6.4	2.0	0.3	0.3
Lugansk (*N*=150)	6.3	1.0	91.6	0.0	0.0	0.0	0.0	0.0
Zaporizhzhia (*N*=200)	5.0	1.6	91.4	0.2	0.3	1.2	0.0	0.0
Ternopil (*N*=150)	4.7	5.3	53.3	30.0	5.3	0.7	0.0	0.0
Khmelnyskiy (*N*=150)	3.9	0.7	72.1	12.0	2.6	0.0	0.0	0.0
Rivne (*N*=150)	2.6	26.4	60.4	5.7	3.4	1.5	0.0	0.0
Kherson (*N*=202)	2.6	10.9	67.1	8.9	3.4	7.0	0.0	0.0
Odesa (*N*=300)	2.2	2.6	88.3	2.9	1.5	0.0	0.0	0.2
Kharkiv (*N*=300)	2.0	1.0	87.4	5.4	3.3	0.0	0.0	0.0
Chernivtsi (*N*=150)	1.8	2.8	89.9	1.3	0.7	1.6	0.0	0.8
Mykolaiv (*N*=301)	1.7	0.7	94.7	0.3	2.3	0.3	0.0	0.0
Poltava (*N*=200)	1.0	2.0	87.0	7.5	0.0	2.5	0.0	0.0
Simferopol (*N*=300)	0.9	0.6	96.9	0.3	1.2	0.0	0.0	0.0
Lviv (*N*=200)	0.4	0.0	99.1	0.0	0.4	0.0	0.0	0.0
Vinnytsia (*N*=150)	0.0	3.2	80.1	9.0	0.7	0.0	4.8	0.6
Lutsk (*N*=150)	0.0	0.0	98.9	0.6	0.6	0.0	0.0	0.0
Zhytomyr (*N*=150)	0.0	0.0	99.4	0.6	0.0	0.0	0.0	0.0
Uzhgorod (*N*=150)	0.0	8.4	72.7	1.1	0.0	2.5	0.0	4.6

* Ordered by the share of FSW, for whom permanent employment is the key source of income (from the largest to the smallest).

If talking about the financial status of FSW, 46% of them live in poor households (they have enough money to buy food, but it is not enough to buy clothes) and 42% live in the middle income households (have enough money to buy food and clothes and can save some money) (fig. 1.3.2). However, if comparing to the level of financial well-being of women from general population of Ukraine, their financial status is quite similar (43% of them live in poor households and 47% in middle income households).

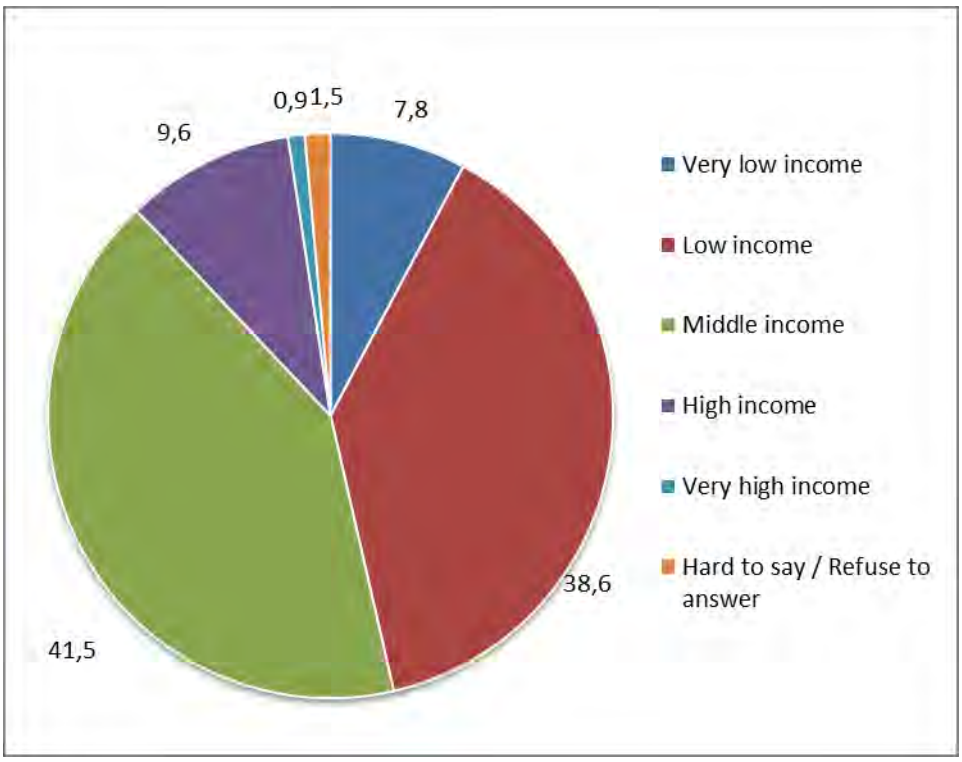


Fig. 1.3.2. **Financial status of households in which FSW are living,** *% (N=5015)*

According to figures from the table 1.3.2, there are certain differences by regions, though, as a rule, “middle” financial status usually means average low income.

Table 1.3.2

Financial status of households in which FSW are living (by regions)*, *income in %*

	Very low	Low	Middle	High	Very high
Lviv (*N*=200)	1.0	22.0	42.4	33.3	0.0
Kyiv (*N*=300)	8.2	30.8	31.6	21.7	7.1
Lutsk (*N*=150)	0.6	21.3	57.5	19.6	1.0
Cherkasy (*N*=150)	1.2	17.9	55.0	20.1	0.1
Rivne (*N*=150)	1.7	33.6	45.8	18.9	0.0
Mykolaiv (*N*=301)	2.8	23.5	53.6	17.4	1.3
Kharkiv (*N*=300)	1.1	14.1	65.1	17.5	0.4
Kirovograd (*N*=150)	3.1	32.2	49.0	13.4	0.6
Khmelnytskiy (*N*=150)	4.3	51.2	31.1	9.6	0.6
Lugansk (*N*=150)	0.0	0.0	88.9	9.7	0.0
Ivano-Frankivsk (*N*=150)	22.0	35.4	32.9	7.9	1.8
Dnipropetrovsk (*N*=300)	9.3	15.1	66.1	9.5	0.0
Odesa (*N*=300)	1.4	32.4	55.0	8.9	0.0
Sumy (*N*=150)	6.6	60.4	25.7	3.3	4.0
Zaporizhzhia (*N*=200)	10.2	50.0	33.9	3.4	2.3
Donetsk (*N*=301)	13.5	46.7	32.2	5.0	0.5
Ternopil (*N*=150)	5.3	57.3	31.3	3.3	0.0

Chernivtsi (*N*=150)	5.1	62.5	27.2	2.3	0.0
Poltava (*N*=200)	20.5	57.0	20.5	1.5	0.5
Vinnytsia (*N*=150)	51.6	36.2	9.6	0.6	1.3
Kherson (*N*=202)	6.7	48.1	42.6	1.4	0.0
Chernigiv (*N*=150)	2.3	56.9	35.5	1.0	0.0
Zhytomyr (*N*=150)	10.6	78.8	8.6	0.0	0.0
Simferopol (*N*=300)	0.2	56.0	43.7	0.0	0.0
Uzhgorod (*N*=150)	22.6	60.3	13.6	0.0	0.0

* Ordered by the share of FSW, who are living in households of high and very high income (from the largest to the smallest).

The absolute majority of FSW (on the whole and in separate regions) has where to live in the city (individual / shared flat, hostel etc) (table 1.3.3). However, attention should be paid to the situation in Vinnytsia, where 19% of FSW live either in the street or in the basement / attic.

Table 1.3.3

Place of residence of FSW (by country and by regions)*, *%*

	Individual flat/house	Shared flat	Hostel	Shelter, children's home, orphanage	In the street	In the basement or attic
Ukraine on the whole	**72.8**	**10.6**	**14.8**	**0.0**	**0.7**	**0.1**
Zaporizhzhia (*N*=200)	93.1	3.2	3.5	0.0	0.0	0.0
Dnipropetrovsk (*N*=300)	92.7	0.3	5.9	0.0	0.0	0.0
Sumy (*N*=150)	90.4	3.7	6.0	0.0	0.0	0.0
Lugansk (*N*=150)	89.5	4.9	5.6	0.0	0.0	0.0
Donetsk (*N*=302)	88.2	4.9	4.7	0.0	0.0	0.0
Cherkasy (*N*=150)	87.2	2.4	10.5	0.0	0.0	0.0
Zhytomyr (*N*=150)	86.6	4.8	7.9	0.0	0.0	0.0
Chernivtsi (*N*=150)	84.5	0.5	5.6	0.8	1.5	0.0
Kyiv (*N*=300)	84.5	3.7	9.7	0.0	1.5	0.0
Ivano-Frankivsk (*N*=150)	81.1	4.9	11.0	0.0	2.4	0.0
Rivne (*N*=150)	80.8	6.0	12.6	0.0	0.0	0.0
Kirovograd (*N*=150)	78.9	0.0	19.6	0.0	0.0	0.0
Odesa (*N*=300)	77.5	18.6	3.1	0.0	0.0	0.0
Khmelnytskiy (*N*=150)	74.1	5.8	17.3	0.0	0.7	0.0
Mykolaiv (*N*=301)	74.0	14.8	10.9	0.0	0.0	0.0
Lviv (*N*=200)	73.0	11.4	14.8	0.0	0.0	0.0
Simferopol (*N*=300)	71.4	6.0	22.4	0.0	0.0	0.0
Lutsk (*N*=150)	65.4	24.9	9.1	0.0	0.0	0.0
Kherson (*N*=202)	62.4	11.9	24.1	0.4	0.0	0.0
Poltava (*N*=200)	57.0	22.5	20.5	0.0	0.0	0.0

Chernigiv (*N*=150)	52.0	13.7	34.3	0.0	0.0	0.0
Vinnytsia (*N*=150)	51.5	7.5	22.3	0.0	14.3	4.4
Kharkiv (*N*=300)	45.2	32.7	21.7	0.0	0.0	0.0
Uzhgorod (*N*=150)	30.4	24.7	41.5	0.0	1.1	0.0
Ternopil (*N*=150)	29.3	24.0	46.7	0.0	0.0	0.0

* Ordered by the share of FSW, who are living in an individual flat / house (from the largest to the smallest).

1.4. Migration profile of FSW

According to the survey data of 2011 as well as according to the data of the interviewing conducted in 2008-2009, the absolute majority of FSW (60%) have been born and resided in the surveyed city (fig. 1.4.1). Every fourth FSW (29%) was not born there, but has been living in the city for more than a year.

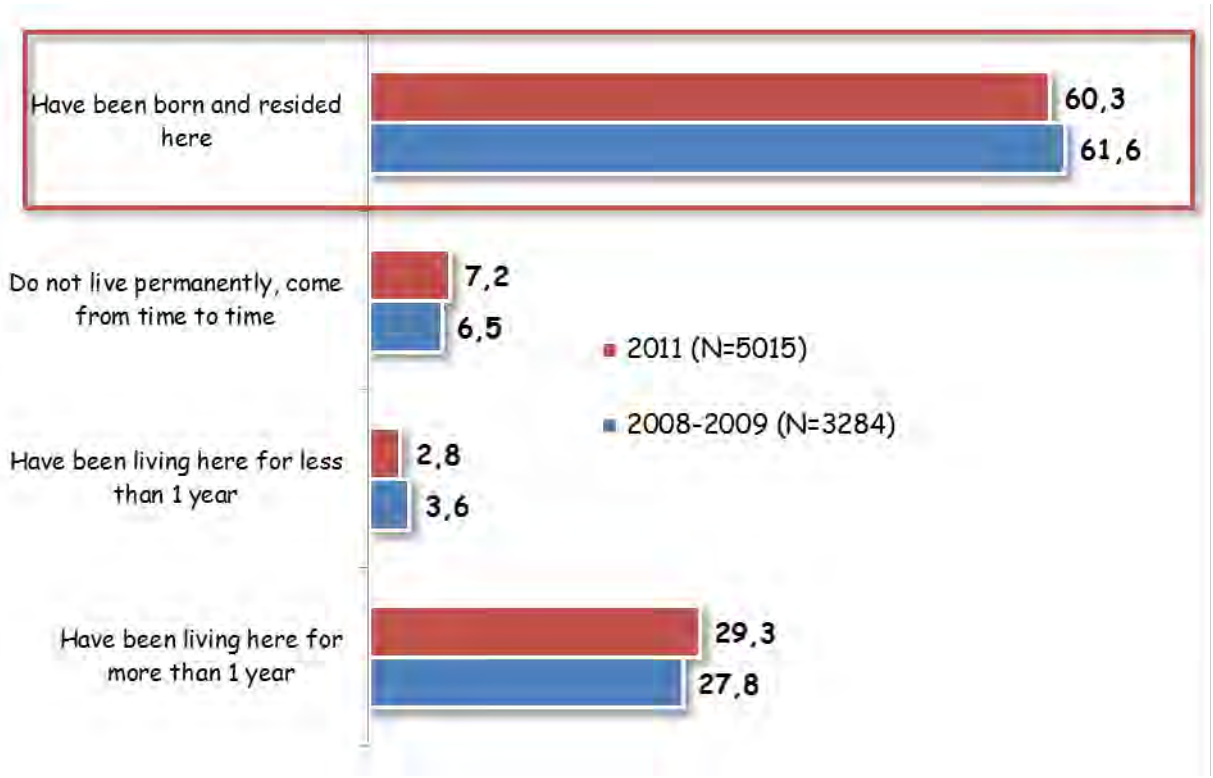


Fig. 1.4.1. **Duration of residence in the surveyed city, %**

There is quite a different situation on this issue in different cities. Thus, the maximum number of the fully “native” FSW is observed in Zhytomyr, where 95% of FSW have been born and resided in the surveyed city (see Table 1.4.1). The least number of “native” FSW is in Odesa – only 28%, even though at the same time more than half of FSW (55%) have been living in this city for more than a year. It should be also noted that Dnipropetrovsk stands out as compared to all other cities as almost half of FSW there (43%) are absolutely “temporary” residents, who are not living permanently, but come from time to time.

Table 1.4.1

Duration of residence in the surveyed city (by regions)*, %

	Have been born and resided here	Do not live permanently, come from time to time	Have been living in the city for less than 1 year	Have been living in the city for more than 1 year
Zhytomyr (*N*=150)	95.2	0.0	0.0	4.8
Zaporizhzhia (*N*=200)	87.7	0.2	0.5	11.4
Mykolaiv (*N*=301)	78.8	0.7	0.0	20.5
Donetsk (*N*=302)	78.3	0.0	0.4	19.2
Sumy (*N*=150)	70.6	0.2	0.6	28.5
Kirovograd (*N*=150)	70.0	7.7	0.7	19.9
Cherkasy (*N*=150)	69.6	0.6	1.3	28.6
Ivano-Frankivsk (*N*=150)	64.9	1.2	0.0	33.2
Lugansk (*N*=150)	64.6	0.0	1.6	33.7
Poltava (*N*=200)	64.0	4.0	6.0	25.0
Simferopol (*N*=300)	63.7	14.2	2.0	19.9
Kherson (*N*=202)	61.3	5.8	6.2	26.7
Kyiv (*N*=300)	60.4	1.8	2.6	34.3
Chernivtsi (*N*=150)	57.8	10.2	3.2	28.8
Lutsk (*N*=150)	57.4	2.3	0.0	40.3
Rivne (*N*=150)	57.0	9.1	3.1	30.7
Uzhgorod (*N*=150)	56.2	0.6	1.1	42.1
Lviv (*N*=200)	54.0	9.5	0.4	36.0
Ternopil (*N*=150)	54.0	3.3	0.7	41.3
Vinnytsia (*N*=150)	50.0	13.1	7.3	29.6
Khmelnytsiy (*N*=150)	49.8	4.7	5.3	37.6
Chernigiv (*N*=150)	47.2	0.5	1.6	50.7
Kharkiv (*N*=300)	43.4	18.2	4.1	34.3
Dnipropetrovsk (*N*=300)	41.8	42.8	2.5	12.9
Odesa (*N*=300)	28.0	3.0	14.0	54.6

* Ordered by the share of FSW, who have been born and lived in the surveyed city (from the largest to the smallest).

1.5. Client seeking methods

The most widespread method of seeking clients is using phone calls and Internet – 56% of the interviewed FSW have used such a method in the last 6 months (table 1.5.1). Seeking for clients in the street is on the “second” place – 41% of FSW have used this method. Looking for clients at casino, clubs, bars, disco etc. (33%) and in the highway (28%) is the most commonly used. The client seeking methods mentioned above were mostly named the main ones.

On the whole, the number of categories can be reduced and FSW working mostly in the streets, highways and at railway stations can be considered together as the “street” FSW. Their share in the population structure makes up 45% or almost the half. FSW working mostly in the sauna, at a hotel, casino, clubs, bars, disco etc can be also considered together, because their work is mainly concentrated upon certain places.

Such FSW make up 24%. Those FSW who are looking for clients via phone calls and Internet (27%) should be left as a separate group.

Table 1.5.1

Client seeking methods in the last 6 months*, %

	Have used this method in the last 6 months (N=5015)	Named this method the main one (N=5015)
Telephone calls, Internet	56.1	27.1
In the street	40.8	21.9
In the highway	28.1	18.6
At casino, clubs, bars, disco etc.	33.3	15.4
In the sauna	19.6	4.8
At the railway stations	8.8	4.5
At a hotel	16.4	3.7
Via friends, acquaintances, pimps, other clients etc.	2.4	1.3
Escort services	6.0	1.0
Have permanent clients	1.3	1.0
At stops	0.1	0.1
Other	0.5	0.3
Difficult to say / Refused to answer	0.2	0.3

* Ordered by the share of FSW, who named the corresponding seeking method the main one (from the largest to the smallest).

There are stark differences by regions in common client seeking methods. For example, if 95% of FSW had an experience of finding clients in the streets in Chernivtsi, only 5% had such an experience in Mykolaiv (table 1.5.2).

Table 1.5.2

Client seeking methods in the last 6 months (which have been used) (by regions), %

	In the street	In the highway	At a hotel	In the sauna	At railway stations	Telephone calls, Internet	At casino, clubs, bars, disco etc.	Escort services	Have permanent clients	Via friends, acquaintances, pimps, other clients etc.	At stops	Other
Vinnytsia (*N*=150)	47.3	25.6	0.6	17.9	39.7	27.8	1.3	0.0	0.0	0.0	0.0	0.0
Dnipropetrovsk (*N*=300)	8.2	17.9	7.7	8.0	0.6	86.4	5.8	0.0	0.0	0.0	0.0	0.0
Donetsk (*N*=302)	24.4	17.6	9.7	12.6	1.6	52.7	27.1	3.5	7.5	4.6	0.0	0.7
Zhytomyr (*N*=150)	25.6	67.5	32.3	3.8	0.0	31.7	31.3	0.0	0.0	0.0	0.0	0.0
Zaporizhzhia (*N*=200)	26.5	15.0	14.6	14.0	0.0	55.8	28.1	0.0	3.0	19.5	4.2	2.0
Ivano-Frankivsk (*N*=150)	89.6	12.2	14.0	29.3	27.4	69.8	30.5	0.0	0.0	0.0	0.0	0.0
Kyiv (*N*=300)	24.2	25.4	2.7	6.7	1.9	48.6	24.1	7.0	11.7	4.7	0.0	0.9
Kirovograd (*N*=150)	10.3	32.9	10.0	10.5	4.9	73.5	68.7	5.3	0.0	0.0	0.0	0.0

Lugansk (*N*=150)	10.1	23.1	16.4	48.2	0.8	42.1	14.9	0.0	0.0	1.0	0.0	0.0
Lutsk (*N*=150)	21.2	49.4	33.3	12.6	0.6	87.7	62.4	1.9	0.0	18.8	0.0	4.0
Lviv (*N*=200)	43.7	37.1	33.4	3.6	6.8	31.9	58.3	12.7	0.0	0.0	0.0	1.3
Mykolaiv (*N*=301)	4.6	6.6	34.8	39.1	1.0	83.3	54.4	21.2	0.7	0.3	0.0	0.0
Odesa (*N*=300)	86.1	18.2	6.1	2.4	12.5	39.4	8.8	0.6	0.0	0.0	0.0	0.0
Poltava (*N*=200)	33.5	96.5	15.5	10.5	10.0	32.0	9.5	3.0	0.0	0.0	0.0	1.5
Rivne (*N*=150)	39.4	81.8	0.6	0.0	20.0	54.6	11.6	0.0	0.0	0.0	0.0	0.0
Simferopol (*N*=300)	89.3	32.5	42.5	58.0	11.4	61.0	31.4	13.2	0.0	0.0	0.0	0.0
Sumy (*N*=150)	40.2	0.5	5.8	12.4	8.7	78.3	67.4	2.3	0.0	0.0	0.0	0.4
Ternopil (*N*=150)	44.0	28.0	33.3	18.0	14.0	52.7	84.0	40.7	0.0	0.0	0.0	0.0
Uzhgorod (*N*=150)	50.9	15.1	11.5	32.4	35.3	53.1	69.7	8.2	0.0	0.6	0.0	1.2
Kharkiv (*N*=300)	87.3	22.2	7.7	22.7	2.1	11.1	35.8	2.2	0.0	0.4	0.0	0.0
Kherson (*N*=202)	61.1	46.1	4.9	8.1	8.7	59.9	14.7	0.0	0.0	0.0	0.0	0.0
Khmelnytskiy (*N*=150)	5.3	39.0	24.8	46.6	5.1	65.8	39.5	0.6	0.0	0.0	0.0	0.6
Cherkasy (*N*=150)	6.2	3.0	5.5	13.6	0.8	76.1	48.5	1.0	0.5	16.2	0.0	1.7
Chernivtsi (*N*=150)	94.6	18.0	17.1	19.3	36.5	69.0	4.4	17.3	0.0	0.0	0.0	0.0
Chernigiv (*N*=150)	10.0	1.8	24.6	43.0	3.7	79.0	51.4	8.9	0.0	0.0	0.0	0.0

Data on the main seeking method by regions are listed below in the table 1.5.3. As it can be seen, FSW from different cities differ significantly according to this indicator.

Table 1.5.3

Client seeking methods in the last 6 months (main method) (by regions), *%*

	In the street	In the highway	At a hotel	In the sauna	At railway stations	Telephone calls, Internet	At casino, clubs, bars, disco etc.	Escort services	Have permanent clients	Via friends, acquaintances, pimps, other clients etc.	At stops	Other
Vinnytsia (*N*=150)	14.1	25.6	0.6	4.5	35.0	20.1	0.0	0.0	0.0	0.0	0.0	0.0
Dnipropetrovsk (*N*=300)	0.0	15.7	0.0	0.3	0.0	82.6	1.2	0.0	0.0	0.0	0.0	0.0
Donetsk (*N*=302)	12.4	11.4	3.5	7.0	0.0	38.9	15.0	2.6	5.0	1.9	0.0	0.0
Zhytomyr (*N*=150)	13.7	57.8	6.3	0.6	0.0	2.2	18.8	0.0	0.0	0.0	0.0	0.0
Zaporizhzhia (*N*=200)	12.9	12.0	0.8	1.6	0.0	37.5	16.4	0.0	1.0	12.4	4.4	0.9
Ivano-Frankivsk (*N*=150)	44.4	4.9	1.8	1.8	11.9	26.7	8.5	0.0	0.0	0.0	0.0	0.0
Kyiv (*N*=300)	11.7	17.2	0.8	3.2	0.8	33.5	12.5	3.4	11.3	4.1	0.0	0.7
Kirovograd (*N*=150)	2.6	22.6	0.0	0.0	0.0	45.3	28.9	0.6	0.0	0.0	0.0	0.0
Lugansk (*N*=150)	0.4	14.6	10.5	39.2	0.0	26.4	8.4	0.0	0.0	0.5	0.0	0.0
Lutsk (*N*=150)	1.3	39.4	14.6	2.9	0.0	21.9	12.6	0.0	0.0	5.0	0.0	2.3
Lviv (*N*=200)	12.8	23.7	17.8	1.3	4.9	4.2	31.2	4.1	0.0	0.0	0.0	0.0
Mykolaiv (*N*=301)	2.0	4.6	10.6	12.6	0.0	37.6	29.2	3.3	0.0	0.0	0.0	0.0
Odesa (*N*=300)	71.3	13.7	0.6	0.3	8.5	4.6	0.9	0.0	0.0	0.0	0.0	0.0
Poltava (*N*=200)	0.0	86.0	0.0	0.0	0.0	9.5	3.0	0.0	0.0	0.0	0.0	1.5
Rivne (*N*=150)	5.7	65.2	0.0	0.0	11.2	14.9	1.8	0.0	0.0	0.0	0.0	0.0

Simferopol (*N*=300)	70.2	15.5	1.5	0.0	8.1	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Sumy (*N*=150)	5.6	0.4	1.5	3.4	0.0	47.9	40.1	1.1	0.0	0.0	0.0	0.0
Ternopil (*N*=150)	8.0	10.0	7.3	6.0	12.7	2.0	50.0	2.7	0.0	0.0	0.0	0.0
Uzhgorod (*N*=150)	11.0	0.0	5.0	5.1	16.4	19.0	43.0	0.0	0.0	0.0	0.0	0.6
Kharkiv (*N*=300)	75.4	3.1	0.9	7.7	0.0	0.7	12.0	0.0	0.0	0.4	0.0	0.0
Kherson (*N*=202)	34.2	24.4	1.2	1.5	5.0	26.9	6.8	0.0	0.0	0.0	0.0	0.0
Khmelnytskiy (*N*=150)	1.3	19.5	9.6	13.9	0.0	34.3	20.0	0.0	0.0	0.0	0.0	0.6
Cherkasy (*N*=150)	0.0	1.0	0.0	1.2	0.0	60.1	26.5	0.3	0.4	9.4	0.0	1.1
Chernivtsi (*N*=150)	55.0	3.2	1.2	3.4	17.5	15.7	0.0	3.9	0.0	0.0	0.0	0.0
Chernigiv (*N*=150)	0.0	1.0	3.7	14.9	0.0	46.6	32.7	1.1	0.0	0.0	0.0	0.0

Table 1.5.4 shows data on intersection between usage of different client seeking methods. The table indicates the percentage of FSW using a certain method (listed in column) and using other methods (listed in rows). Thus, it can be seen that there are observable intersections between seeking methods. For example, there are 29% of those, who find clients at casino, clubs, bars etc among those who find them in the street. There is also 41% of those, who find clients in the street among those, who find them in saunas.

Table 1.5.4

Client seeking methods in the last 6 months (intersection between different methods), *% in column**

	% of FSW, who indicated that had been looking for clients in the last 6 months…									
	In the street (N=2048)	In the highway (N=1409)	At a hotel (N=824)	In the sauna (N=983)	At railway stations (N=442)	Telephone calls, Internet (N=2816)	At casino, clubs, bars, disco etc. (N=1671)	Escort services (N=302)	Have permanent clients (N=67)	Via friends, acquaintances, pimps, other clients etc. (N=122)
In the street	---	41.8	34.9	40.7	70.1	32.6	35.2	34.3	9.5	9.5
In the highway	28.8	---	14.1	13.4	25.9	20.0	15.2	9.8	4.5	7.7
At a hotel	14.0	8.3	---	40.5	7.4	19.4	22.6	32.5	7.3	12.4
In the sauna	19.5	9.3	48.3	---	13.6	22.9	24.1	25.3	6.9	5.5
At railway stations	15.1	8.1	4.0	6.1	---	6.6	5.3	13.4	0.0	1.6
Telephone calls, Internet	44.8	39.9	66.3	65.5	42.2	---	59.2	80.5	37.6	53.8
At casino, clubs, bars, disco etc.	28.7	18.0	45.8	40.9	19.9	35.1	---	51.4	10.1	39.6
Escort services	5.1	2.1	11.9	7.8	9.2	8.6	9.3	---	4.3	0.0
Have permanent clients	0.3	0.2	0.6	0.5	0.0	0.9	0.4	1.0	---	4.6
Via friends, acquaintances, pimps, other clients etc.	0.6	0.7	1.8	0.7	0.4	2.3	2.9	0.0	8.4	---
At stops	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.5
Other	0.7	0.8	0.4	0.5	0.2	0.5	0.6	0.0	0.5	0.5

* It means that for each group of FSW in the column there is the % in the rows, which also used the corresponding client seeking method.

The main client seeking method is an important characteristic which will be repeatedly used further during the analysis. In order to provide correct comparison of different FSW according to the main client seeking method, it is also necessary to understand how similar / different they are according to other important characteristics.

First of all, the table 1.5.5 below shows the prevalence of main client seeking methods among FSW who are different by age, practices of injecting drugs[2], membership of non-governmental organizations[3]. Thus, there are more "street" FSW among FSW of 25+ years of age (47% as compared to 42% among FSW under 25 years of age, $p<0.01$), injecting drug users (66% as compared to 44% among FSW, who are not injecting drugs, $p<0.01$) and clients of non-governmental organizations (58% as compared to 31%, $p<0.01$).

Talking about those FSW, who mostly find clients at hotels, bars, in saunas etc., they are usually under 25 years of age (30% as compared to 20% among FSW of 25+ years of age $p<0.01$), non-injecting drug users (25% as compared to 7% among FSW, who are injecting drugs, $p<0.01$) and non-clients of non-governmental organizations (30% as compared to 18% among clients of NGOs, $p<0.01$).

The share of those, who start with using telephone and Internet, is a bit higher among older FSW (28% as compared to 25% among younger FSW, $p<0.05$), non-injecting drug users (28% as compared to 21% among injecting drug users, $p<0.01$) and non-clients of non-governmental organizations (34% as compared to 21% among clients of NGOs, $p<0.01$).

Table 1.5.5

Main client seeking method among FSW different by age, practices of injecting drugs and membership of non-governmental organizations *, *%*

	Street, highway, railway station	Hotels, saunas, bars etc.	Telephone, Internet	Other answers**
Age				
- under 25 years (*N*=1926)	41.6	30.2	25.1	3.1
- of 25+ years(*N*=3087)	47.2	20.1	28.3	4.5
Injecting drugs				
- Have not injected drugs (*N*=4511)	43.5	25.3	27.6	3.6
- Have injected drugs (*N*=419)	65.5	7.2	20.6	6.8
Being a client of non-governmental organization				
- clients (*N*=2622)	57.7	18.2	21.2	2.9
- non-clients (*N*=2353)	31.3	30.2	33.5	4.9

[2]Here and further in the report (if other is not indicated in the text) the term "injecting drug users" will mean those FSW, who have been injecting drugs within the last 12 months, and the term "non-injecting drug users" will mean those FSW, who have not been injecting drugs within the last 12 months.

[3]The issue of (non-) membership of non-governmental organizations will be considered in detail in Chapter V.

* The table shows % among corresponding group of FSW, i.e. the share of FSW from a certain group, who first of all use a certain client seeking method.
** Include the options “other main client seeking methods”, “difficult to say”, “refuse to answer”.

The table 1.5.6 shows the structure of different segments of FSW according to the characteristics mentioned above. Thus, “street” FSW are mostly FSW at the age of 25+ years, who are clients of non-governmental organizations and among whom there are much more (as compared to other segments) injecting drug users (practices of using drugs among certain segments of FSW will be considered further in detail).

On the other hand, FSW, who mostly find clients at hotels, bars, in saunas etc., are equally represented by FSW less than 25 years of age and of 25+ years of age. There are more non-clients of non-governmental organizations among them as well as significantly less injecting drug users.

Those FSW, who mostly find clients via telephone and Internet, are usually non-clients of non-governmental organizations of 25+ years of age. Among them there are less injecting drug users than among “street” FSW, but more than among those FSW, who mostly find clients at hotels, bars, in saunas etc.

Table 1.5.6

Profile of FSWs’ segments according to the main client seeking method*, %

	Street, highway, railway station (*N*=2257)	Hotels, saunas, bars etc. (*N*=1201)	Telephone, Internet (*N*=1357)
Age			
- under 25 years	35.5	48.4	35.7
- of 25+ years	64.5	51.6	64.3
Injecting drugs			
- have not injected drugs	86.9	95.2	91.6
- have injected drugs	12.1	2.5	6.3
- difficult to say / refuse to answer	0.9	2.3	2.0
Being a client of non-governmental organization			
- clients	67.0	39.8	40.9
- non-clients	32.6	59.3	58.2
- difficult to say / refuse to answer	0.3	0.9	0.9

* The table shows % among the corresponding segment of FSW according to the main client seeking method, i.e. the share of FSW from a certain segment, who have appropriate characteristic.

1.6. Prevalence of alcohol and drug use

Practice of alcohol consumption

Alcohol consumption is quite a widespread and regular practice among FSW. According to the data obtained, only 12% of FSW had not consumed alcohol within the last month at all (see Fig. 1.6.1). Most FSW (58%) consumed alcohol at least once a week, including 18% of those, who drank alcohol every day. The situation is in general very similar to the situation described in the previous survey. Still, there is a weak tendency to reduction of the number of those, who consume alcohol at least once a week or every say and increase of the number of those, who consume alcohol less than once a week.

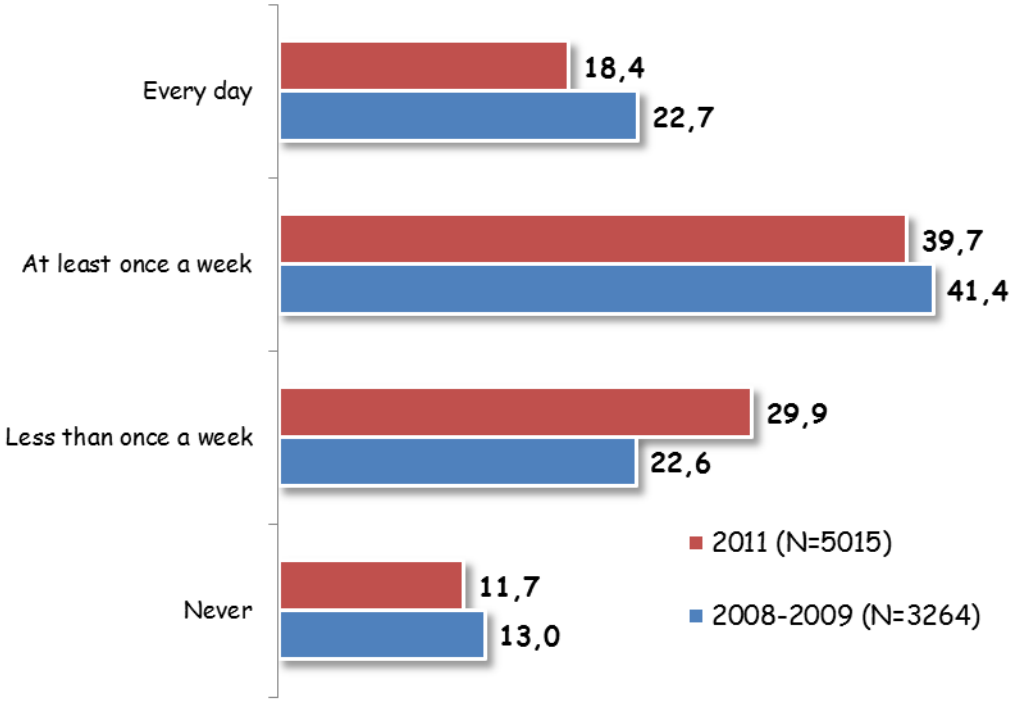


Fig. 1.6.1. **Practice of alcohol consumption within the last 30 days,** *%*

Regional character of alcohol consumption is quite visible. Thus, for example, in Kharkiv there are relatively much more FSW who have never drank alcohol within the last 30 days – 33% (compared to no more than a quarter in other cities) (see Table 1.6.1). However, the share of those who consume alcohol every day, is the biggest in Lutsk (44%), Vinnytsia (48%), Zhytomyr (52%) and Poltava (53%).

Table 1.6.1

Practice of alcohol consumption within the last 30 days (by regions)*, %

	Every day	At least once a week	Less than once a week	Never
Kharkiv (*N*=300)	6.8	18.9	41.8	32.5
Mykolaiv (*N*=301)	7.0	45.8	22.1	25.2
Chernivtsi (*N*=150)	30.5	22.3	24.9	22.3
Kyiv (*N*=300)	6.1	28.7	42.9	21.5
Donetsk (*N*=302)	14.9	40.8	24.5	17.8
Uzhgorod (*N*=150)	23.3	37.2	22.3	17.2
Odesa (*N*=300)	6.3	36.2	41.8	15.4

Ivano-Frankivsk (*N*=150)	20.7	29.1	38.4	11.7
Zaporizhzhia (*N*=200)	12.5	40.1	35.8	11.4
Cherkasy (*N*=150)	7.3	60.0	21.9	10.9
Dnipropetrovsk (*N*=300)	19.5	41.8	28.7	10.0
Sumy (*N*=150)	11.5	48.4	30.5	9.7
Kherson (*N*=202)	19.5	36.1	35.7	8.6
Kirovograd (*N*=150)	16.8	50.0	25.0	8.2
Khmelnytskiy (*N*=150)	10.5	59.0	23.3	7.2
Lviv (*N*=200)	22.6	51.6	19.6	6.2
Rivne (*N*=150)	8.3	21.0	67.4	3.4
Ternopil (*N*=150)	21.3	61.3	12.0	3.3
Lutsk (*N*=150)	44.0	49.4	3.7	2.9
Zhytomyr (*N*=150)	52.3	37.8	7.3	2.6
Poltava (*N*=200)	52.5	35.5	9.5	2.5
Simferopol (*N*=300)	25.0	42.5	30.7	1.8
Vinnytsia (*N*=150)	47.7	36.4	15.2	0.6
Lugansk (*N*=150)	4.5	78.2	16.8	0.5
Chernigiv (*N*=150)	0.0	11.0	89.0	0.0

* Ordered by the share of FSW who have never consumed alcohol within the last month (from the biggest to the smallest).

It should be noted that practices of alcohol consumption are quite similar among young FSW (under 25 years of age) and older FSW (of 25+ years of age).

In terms of the main client seeking method, “street” FSW are leading by the frequency of alcohol consumption – 27% of them drink alcohol every day compared to 12% of FSW, who mostly find clients at hotels, bars, in saunas etc. ($p<0.01$) and 10% of FSW, who mostly find clients via telephone, Internet ($p<0.01$).

Injecting drug users also more often consume alcohol – 32% of them drink it every day compared to 17% of FSW who are not injecting drug users ($p<0.01$).

It should be also noted that practices of alcohol consumption are very similar among clients and no-clients of non-governmental organizations.

Drug use practice

According to the data obtained, 16% of FSW (i.e. every sixth) have ever tried some kind of drugs (injecting and (or) non-injection) (see fig. 1.6.2). 8% of FSW have used injecting drugs within the last 12 months, 7% - within the last 30 days. It means that the drug use practice is quite popular among FSW.

At the same time attention should be paid to the changes compared to 2008-2009. Thus, prevalence of drug use has significantly decreased – from 29% to 16% of those, who have ever tried some kind of drugs ($p<0.01$). The share of those, who have used injecting drugs within the last 30 days, decreased twice – from 14% to 7% ($p<0.01$).

Reduction of the prevalence of drug use is also observed in case of certain age groups of FSW. Thus, if in 2008-2009 9% of FSW under 25 years of age reported having used injecting drugs within the last 30 days, there were only 2% of such FSW in 2011 ($p<0.01$). The prevalence reduced from 18% to 10% ($p<0.01$) among FSW of 25+ years of age.

In the context of analyzing the dynamics of drug use prevalence , it should be noted that we cannot categorically state that FSW are far less using drugs now. On the one hand, the revealed dynamics can really indicate the reduction of the prevalence of drug use. However, on the other hand, the dynamics can be a methodical artifact – consequence of the methodical peculiarities of realization of the surveys of 2008-2009 and 2011[4].

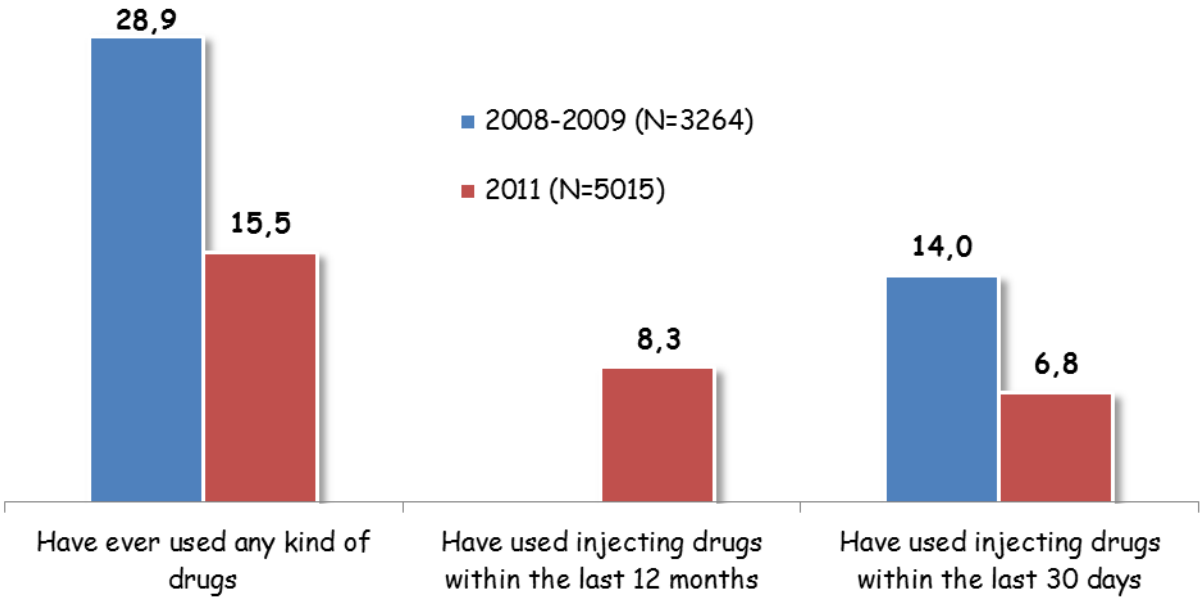


Fig. 1.6.2. **Drug use practice,** %

It should be also noted that the indirect indicator of injecting drug use is Hepatitis C. According to the survey results, the prevalence of Hepatitis C makes up 9% among those who have not used injecting drugs within the last 12 months and 8% among those who have never used drugs at all. From another perspective, among FSW who had positive test results for Hepatitis C marker, there were “only” 32% of those who had used injecting drugs within the last year and “only” 46% of those, who had ever used drugs at all (both injecting and non-injecting) (see Fig. 1.6.3).

In this context it is necessary to point out that prevalence of Hepatitis C was measured relatively objectively[5] – by blood testing of FSW, while drug use was measured subjectively – according to the respondents’ words. As far as the drug use is a socially unacceptable practice, a part of FSW could possibly “keep back” the truth on their real

[4]Key survey limitations and, in particular, limitations on the comparison with data of 2008-2009 have been considered in the chapter, devoted to survey methodology.
[5]We say “relatively objectively”, because a test has sensitivity indexes (share of positive test results in a group of sick people) and peculiarities (share of negative test results in a group of healthy people). In other words, there is a small number of FSW with Hepatitis C, whose test result was negative and a small number of healthy FSW whose test result was positive.

practices from the interviewers. As a result, the calculated estimates of the drug use prevalence should be considered as the greatest lower bound. In reality, the prevalence of such practices can be some higher.

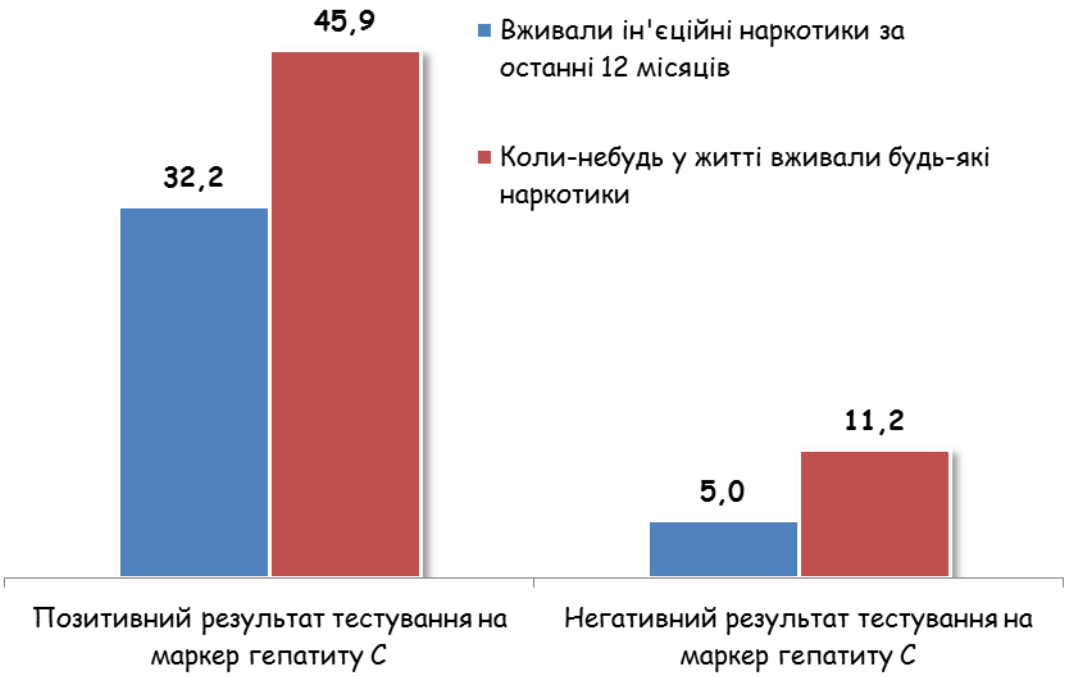


Fig. 1.6.3. **Drug use practice (among FSW groups according to the test result for Hepatitis C marker),** *%*

In the regional context Poltava is the obvious “leader” by the prevalence of drug use – a half of FSW (48%) have had an experience of using injecting drugs within the last 30 days (see Table 1.6.2). Donetsk is far behind on the “second” place – every fifth FSW (20%) has used injecting drugs within the last month. Then Cherkasy (17%), Dnipropetrovsk (13%), Lutsk (12%) and Kyiv (10%) follow. In other cities the number of FSW who have used injecting drugs within the last 30 days, makes up to 5%. It should be again noted that possible differences in the prevalence of drug use among FSW from different cities can be the result of methodical peculiarities of project realization in every separate city.

Table 1.6.2

Drug use practice (by regions)*, *%*

	Have ever used some kind of drugs	Have used injecting drugs within the last 12 months	Have used injecting drugs within the last 30 days
Poltava (*N*=200)	57.5	50.0	48.0
Donetsk (*N*=302)	24.9	20.4	19.7
Cherkasy (*N*=150)	33.6	21.8	16.5
Dnipropetrovsk (*N*=300)	27.9	15.7	13.4
Lutsk (*N*=150)	27.5	14.3	12.3

Kyiv (*N*=300)	20.2	11.5	9.8
Sumy (*N*=150)	5.2	5.0	5.0
Kirovograd (*N*=150)	25.0	9.2	3.8
Zaporizhzhia (*N*=200)	12.0	5.3	3.8
Kherson (*N*=202)	14.2	7.7	3.5
Chernivtsi (*N*=150)	8.2	4.6	3.1
Odesa (*N*=300)	15.4	3.0	2.7
Mykolaiv (*N*=301)	11.5	5.0	2.6
Lviv (*N*=200)	4.6	2.3	2.3
Zhytomyr (*N*=150)	4.7	2.8	2.2
Rivne (*N*=150)	15.8	12.3	2.2
Khmelnytskiy (*N*=150)	32.9	2.6	1.9
Vinnytsia (*N*=150)	3.7	1.5	1.5
Ivano-Frankivsk (*N*=150)	4.9	2.4	1.2
Uzhgorod (*N*=150)	16.0	1.8	1.2
Simferopol (*N*=300)	2.1	0.7	0.7
Kharkiv (*N*=300)	3.2	0.7	0.4
Lugansk (*N*=150)	2.2	0.0	0.0
Ternopil (*N*=150)	3.3	0.7	0.0
Chernigiv (*N*=150)	3.2	0.0	0.0

* Ordered by the share of FSW who have used injecting drugs within the last month (from the biggest to the smallest).

The Table 1.6.3 below presents data on the share of FSW who have used injecting drugs in certain cities according to the surveys of 2008-2009 and 2011. As it can be seen, the share of injecting drug users has strongly reduced in many cities. For example, their number decreased from 33% to 1% in Simferopol and from 30% to 3% in Zaporizhzhia. It is quite unlikely that much less FSW really use drugs in these cities. It is rather a methodical artifact, therefore when further analyzing the dynamics of individual indicators at the regional level, attention should be paid to the significantly different sample structure by drug use practice in case of some cities.

Table 1.6.3

Percentage of FSW, who have used injecting drugs in the last 30 days (by regions) *, %

	2008-2009	2011
Poltava (N_1=150, N_2=200)	48.0	48.0
Donetsk (N_1=150, N_2=302)	28.9	19.7
Cherkasy (N_1=95, N_2=150)	17.5	16.5
Dnipropetrovsk (N_1=100,N_2=300)	20.0	13.4
Lutsk (N_1=100, N_2=150)	31.0	12.3
Kyiv (N_1=256, N_2=300)	29.4	9.8
Sumy (N_1=100, N_2=150)	5.0	5.0
Kirovograd (N_1=100, N_2=150)	15.9	3.8
Kherson (N_1=100, N_2=202)	8.0	3.5
Zaporizhzhia (N_1=150, N_2=200)	27.9	3.8

Chernivtsi (N_1=151, N_2=150)	0.0	3.1
Odesa (N_1=100, N_2=300)	8.6	2.7
Mykolaiv (N_1=100, N_2=301)	9.0	2.6
Lviv (N_1=95,N_2=200)	1.8	2.3
Zhytomyr (N_1=150, N_2=150)	15.3	2.2
Rivne (N_1=152, N_2=150)	4.1	2.2
Khmelnytskiy (N_1=101, N_2=150)	13.9	1.9
Vinnytsia (N_1=150, N_2=150)	1.3	1.5
Ivano-Frankivsk (N_1=150, N_2=150)	2.7	1.2
Uzhgorod (N_1=100, N_2=150)	5.0	1.2
Simferopol (N_1=150, N_2=300)	32.6	0.7
Kharkiv (N_1=149, N_2=300)	1.7	0.4
Lugansk (N_1=100,N_2=150)	0.0	0.0
Ternopil (N_1=150, N_2=150)	0.0	0.0
Chernigiv (N_1=150, N_2=152)	0.0	0.0

* Ordered by the share of FSW, who have used injecting drugs within the last month, according to the data of 2011 survey (from the biggest to the smallest).

Drug use is definitely more widespread among older FSW. Whereas every tenth (10%) FSW had an experience of drug use among younger FSW (under 25 years of age), every fifth (19%) ($p<0.01$) had such an experience among older FSW (of 25+ years of age). If talking about injecting drug users, there are 2% of them among younger FSW and 10% (which is five times more) among older FSW ($p<0.01$).

Drug use is less widespread among FSW who mostly try to find clients at hotels, bars, in saunas etc. – 8% of them had an experience of drug use (as compared to 18% among “street” FSW and 17% among FSW who mostly find clients via telephone, Internet) ($p<0.01$). There are 2% of injecting drug users among them (as compared to 10% and 5% correspondingly) ($p<0.01$).

It was noted earlier in this chapter that there is some intersection between age and main client seeking method. In this connection the question arises on whether older FSW use drugs more often because there are more “street” FSW among them, or vice versa, “street” FSW use drugs more often because there are more older FSW among them. According to the obtained results, if analyzing only younger FSW (under 25 years of age) by segments of main client seeking methods, then, firstly, prevalence of injecting drug use is significantly lower in all segments as compared to corresponding segments of older FSW (of 25+ years of age). Secondly, there is less prevalence of injecting drug use among both younger and older FSW who mostly find clients at hotels, bars, in saunas etc. It means that both the older age (which actually indicates greater experience of dangerous practices) and preferred client seeking methods are connected to drug use practices (in particular, injecting drugs).

It should be added that there are more people having experience of drug use among clients of non-governmental organizations – 20% as compared to 11% among non-clients ($p<0.01$). In case of injecting drug use, prevalence of the practice makes up 12% and 4% correspondingly. Again, as it was mentioned above, older and “street” FSW

dominate among clients of non-governmental organizations, which can determine greater prevalence of injecting drug use practice. However, if taking into account the influence of such factors, there is still a tendency that drug use practice (in particular, injecting drugs) is more widespread among clients.

Prevalence of different types of drugs

The most widespread drug is liquid opium extract – 6% of the interviewed FSW have used this drug within the last 30 days (the prevalence of use within the last 12 months makes up 7%) (see Table 1.6.4). The conditionally "second" place is devoted to methamphetamine solution (3% and 4% correspondingly), and powder amphetamine is on the "third" place (2%). Other drug use is less popular among FSW.

In general, it should be noted that 6% of FSW have had experience of using some kinds of opiates within the last 30 days. The same percentage of FSW have had experience of using any stimulants. However, there is quite a different situation among FSW different by age. Thus, there is a tendency that using opiates rather than stimulants is more widespread among older FSW, while using stimulants rather than opiates is more characteristic of younger FSW.

Table 1.6.4

Prevalence of use of different types of drugs (among all FSW)*, *%*

	All FSW (N=5015)		FSW under 25 years of age (N=1926)		FSW of 25+ years of age (N=3087)	
	12 months	30 days	12 months	30 days	12 months	30 days
Class of drugs						
- any opiates	7.5	6.0	2.9	2.3	10.4	8.3
- any stimulants	7.0	5.8	5.5	4.7	7.9	6.5
Types of drugs						
- liquid opium extract ("shyrka", "chorna")	6.8	5.5	2.1	1.6	9.7	7.8
- methamphetamine solution ("vint", "pervitin")	4.0	3.2	2.1	1.5	5.2	4.3
- powder amphetamine ("fen")	2.2	1.6	3.0	2.6	1.7	1.0
- methylenedioxy-methamphetamine ("ecstasy", MDMA)	1.2	0.7	1.8	1.2	0.8	0.4
- powder methamphetamine	0.9	0.6	1.4	1.0	0.6	0.4
- other stimulants	0.7	0.6	0.5	0.4	0.9	0.7
- tramadol / tramal	1.0	0.6	0.8	0.5	1.1	0.7
- other opiates	0.7	0.6	0.3	0.3	0.9	0.7
- methcathinone ("jeff")	0.7	0.5	0.3	0.3	0.9	0.6
- heroin	0.6	0.4	0.4	0.1	0.7	0.5
- cocaine	0.6	0.4	0.6	0.4	0.6	0.4
- cathinone ("bovtushka", "mulka")	0.4	0.3	0.2	0.1	0.6	0.4
- LSD, mushrooms	0.3	0.1	0.3	0.3	0.3	0.1

- other drugs	2.3	1.7	1.9	1.5	2.5	1.7

* Ordered by the share of FSW who have used corresponding type of drug within the last month, among all FSW (from the most widespread to the least widespread).

In order to illustrate the current situation with the drug scene, data regarding the use of different types of drugs were calculated for those who have used any drugs within the last 30 days (see Table 1.6.5). If talk about the class of drugs, the share of those who use opiates and stimulants is almost the same – 59% of FSW who have used any drugs within the last month have used opiates and 57% have used stimulants ($p>0.05$). As far as certain drugs are concerned, liquid opium extract ("shyrka", "chorna") is the leading one – every second FSW (54%) reported having used exactly this opiate within the last 30 days.

More than just distinctive are the differences among FSW different by age. Thus, among younger FSW (under 25 years of age) who have used any drugs within the last 30 days, "only" 33% have used opiates as compared to 68% of older FSW (of 25+ years of age) ($p<0.01$). Value shares of those taking stimulants is 67% and 53% correspondingly ($p<0.01$). In should be noted that the thing is not in the fact that young people take mostly stimulants while older FSW prefer opiates, but that young people really prefer stimulants, while older FSW use both opiates and stimulants. Thus, the use of both stimulants and opiates is more distinctive among older FSW – 28% of them have used them both within the last month as compared to only 13% of such among younger FSW ($p<0.01$).

Unfortunately, the data obtained give us the possibility to only state "preferences" of certain categories of FSW, but do not give the answer whether we're dealing with age-related features of drug use (in this case the number of young FSW using opiates will increase) or the thing is in the drug scene transformation, where stimulants will dominate.

Table 1.6.5

Share of FSW who have used certain types of drugs within the last 30 days (among FSW, who have used drugs at all within the last 30 days) *, %

	All FSW (N=512)	FSW under 25 years of age (N=134)	FSW of 25+ years of age (N=378)
Class of drugs			
- any opiates	58.8	32.9	68.0
- any stimulants	56.8	67.1	53.2
Types of drugs			
- liquid opium extract ("shyrka", "chorna")	53.5	23.4	64.1
- methamphetamine solution ("vint", "pervitin")	31.5	21.1	35.1
- powder amphetamine ("fen")	15.4	37.0	7.8
- methylenedioxy-methamphetamine ("ecstasy", MDMA)	6.7	17.6	2.9
- powder methamphetamine	6.0	14.7	2.9
- other stimulants	6.0	6.2	5.9
- tramadol / tramal	5.7	6.6	5.4

- other opiates	5.6	5.0	5.8
- methcathinone (“jeff”)	4.8	3.6	5.3
- heroin	3.8	2.1	4.4
- cocaine	3.6	5.1	3.0
- cathinone (“bovtushka”, “mulka”)	2.7	1.8	3.0
- LSD, mushrooms	1.3	3.6	0.5
- other drugs	16.3	22.2	14.2

* Ordered by the share of FSW, who have used corresponding type of drug within the last month, among all FSW (from the most widespread to the least widespread).

The Table 1.6.6 below shows the prevalence of use of different types of drugs separately for FSW who use different client seeking methods (prevalence has been calculated among all FSW regardless of whether they have used any drugs or not).

First of all, attention should be paid again to greater prevalence of drug use among “street” FSW. There is also a tendency that use of opiates is more widespread among “street” FSW than the use of stimulants. Instead, use of stimulants rather than opiates is more common for other FSW. However, such situation can be to some extent determined by different age structure of FSW using different client seeking methods. According to the further analysis, the tendency (to different “preferences” among FSW different by client seeking method) is first of all observed among younger FSW (under 25 years of age). It partially exists among older FSW (of 25+ years of age) – namely, use of opiates really dominates among “street” FSW, however prevalence of the use of stimulants is the same as of the use of opiates among two other groups by the main client seeking method.

The “leader” (relatively the most common drug) among all selected segments of FSW is liquid opium extract (“shyrka”, “chorna”), though its “leadership” is “distinctive” only among “street” FSW.

Table 1.6.6

Prevalence of use of different type of drugs (among all FSW, for whom the corresponding client seeking method is the main one), %

	Streets, highways, railway stations (N=2257)		Hotels, saunas, bars etc. (N=1021)		Telephone, Internet (N=1357)	
	12 months	30 days	12 months	30 days	12 months	30 days
Class of drugs						
- any opiates	11.4	9.3	2.5	1.7	4.9	3.8
- any stimulants	7.4	6.4	4.2	3.3	8.1	6.4
Types of drugs						
- liquid opium extract (“shyrka”, “chorna”)	10.5	8.6	2.2	1.5	4.4	3.5
- methamphetamine solution (“vint”, “pervitin”)	5.5	4.8	1.1	0.7	3.6	2.7
- tramadol / tramal	1.4	0.9	0.1	0.0	0.9	0.3
- other opiates	1.1	0.9	0.3	0.3	0.4	0.4
- methcathinone (“jeff”)	0.9	0.6	0.0	0.0	1.0	0.7
- methylenedioxy-methamphetamine	0.7	0.6	1.3	0.8	1.6	0.6

("ecstasy", MDMA)						
- other stimulants	0.6	0.5	1.1	1.0	0.6	0.5
- powder amphetamine ("fen")	0.6	0.4	1.6	1.1	4.5	3.3
- heroin	0.6	0.3	0.3	0.2	0.7	0.7
- cathinone ("bovtushka", "mulka")	0.5	0.3	0.4	0.2	0.4	0.3
- cocaine	0.4	0.3	0.2	0.1	1.1	0.5
- powder methamphetamine	0.4	0.2	0.4	0.3	2.1	1.7
- LSD, mushrooms	0.2	0.0	0.5	0.3	0.3	0.1
- other drugs	1.5	1.2	1.3	0.5	3.4	2.7

For clarity, the prevalence has been also recalculated only among FSW who have used certain types of drugs within the last 30 days (see Table 1.6.7). Thus, as it can be seen below, three out of four "street" FSW (74%) have used opiates within the last month as compared to "only" one out of three FSW who mostly find clients at hotels, bars, in saunas etc (35%) ($p<0.01$) or via telephone, Internet (37%) ($p<0.01$). At the same time it should be noted that even though the share of those, who have used stimulants, is smaller among street FSW, it is still very big – 52% as compared to 65% ($p<0.01$) and 62% ($p<0.01$) correspondingly. In general, 31% of "street" FSW using drugs have used both stimulants and opiates as compared to 17% ($p<0.01$) and 14% ($p<0.01$) correspondingly.

Table 1.6.7

Share of FSW, who have used certain types of drugs within the last 30 days (among all FSW, for whom the corresponding client seeking method is the main one and who have used any drugs within the last 30 days), %

	Street, highway, railway station (N=282)	Hotels, saunas, bars etc. (N=60)	Telephone, Internet (N=139)
Class of drugs			
- any opiates	74.3	34.8	37.0
- any stimulants	51.7	65.4	62.4
Types of drugs			
- liquid opium extract ("shyrka", "chorna")	68.9	30.1	33.9
- methamphetamine solution ("vint", "pervitin")	38.2	13.8	26.6
- tramadol / tramal	7.0	0.0	2.8
- other opiates	6.8	6.6	3.8
- methcathinone ("jeff")	5.0	0.0	7.1
- methylenedioxy-methamphetamine ("ecstasy", MDMA)	4.5	17.1	6.3
- other stimulants	3.8	20.0	4.9
- heroin	2.3	4.6	6.5
- powder amphetamine ("fen")	2.9	21.3	32.4
- cathinone ("bovtushka", "mulka")	2.3	4.5	3.2
- cocaine	2.2	2.7	5.0
- powder methamphetamine	1.7	5.3	16.3
- LSD, mushrooms	0.3	6.3	0.7

- other drugs	9.9	10.9	26.1

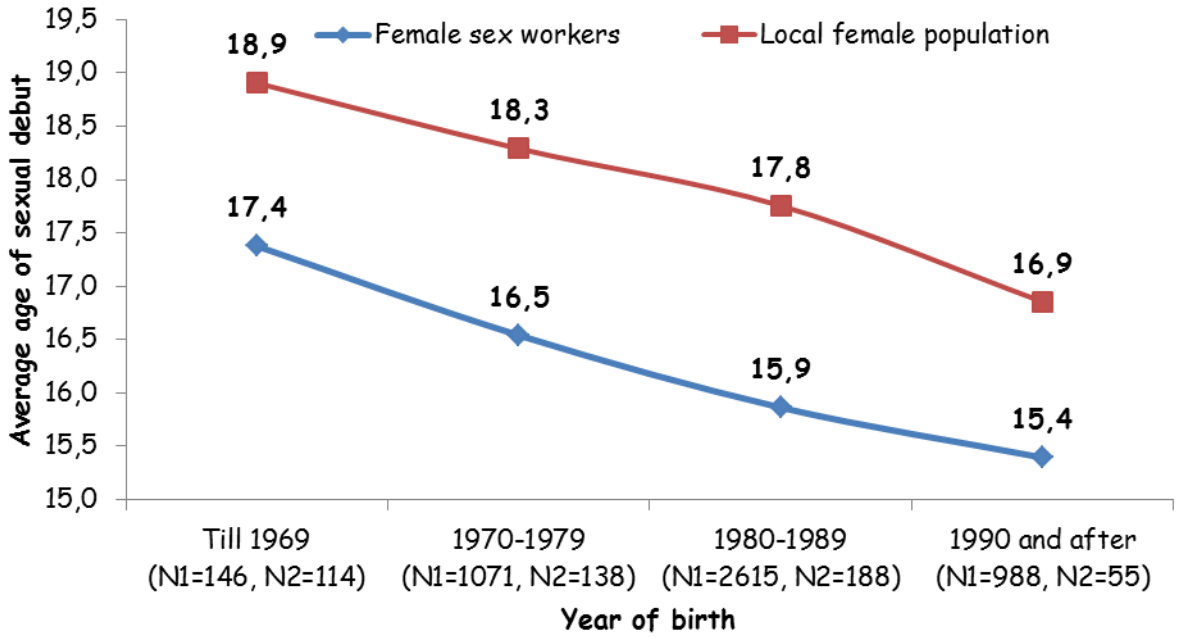
CHAPTER II. SEXUAL BEHAVIOUR AND USE OF CONDOMS

2.1 Sexual debut and beginning to provide paid sex services

Sexual debut

Female sex workers are characterized by quite an early sexual debut. According to the results of the conducted survey, an average age of sexual debut is 16.0 years (standard bias – 1.7). For a comparison – an average age of sexual debut among women from general population of Ukraine living in cities is 18.1 years (standard bias – 2.0) ($p<0.01$)[6].

In 2008-2009 an average age of sexual debut among FSW was also 16.0 years (standard bias – 1.7). However, at the same time there is a distinct intergenerational tendency to the decrease in the age of sexual debut. Whereas an average age of sexual debut among oldest FSW (born before 1969) is 17.4 years (standard bias – 1.8), it makes up 15.4 years (standard bias – 1.5) among youngest FSW (born in 1990 and after) ($p<0.01$) (see Fig. 2.1.1). However, this trend exists not only among FSW – similar dynamics can be observed among general female population of Ukraine – their average age of sexual debut has decreased from 18.9 years (standard bias – 1.8) among the oldest generation to 16.9 years among the youngest generation (standard bias – 1.7) ($p<0.01$).



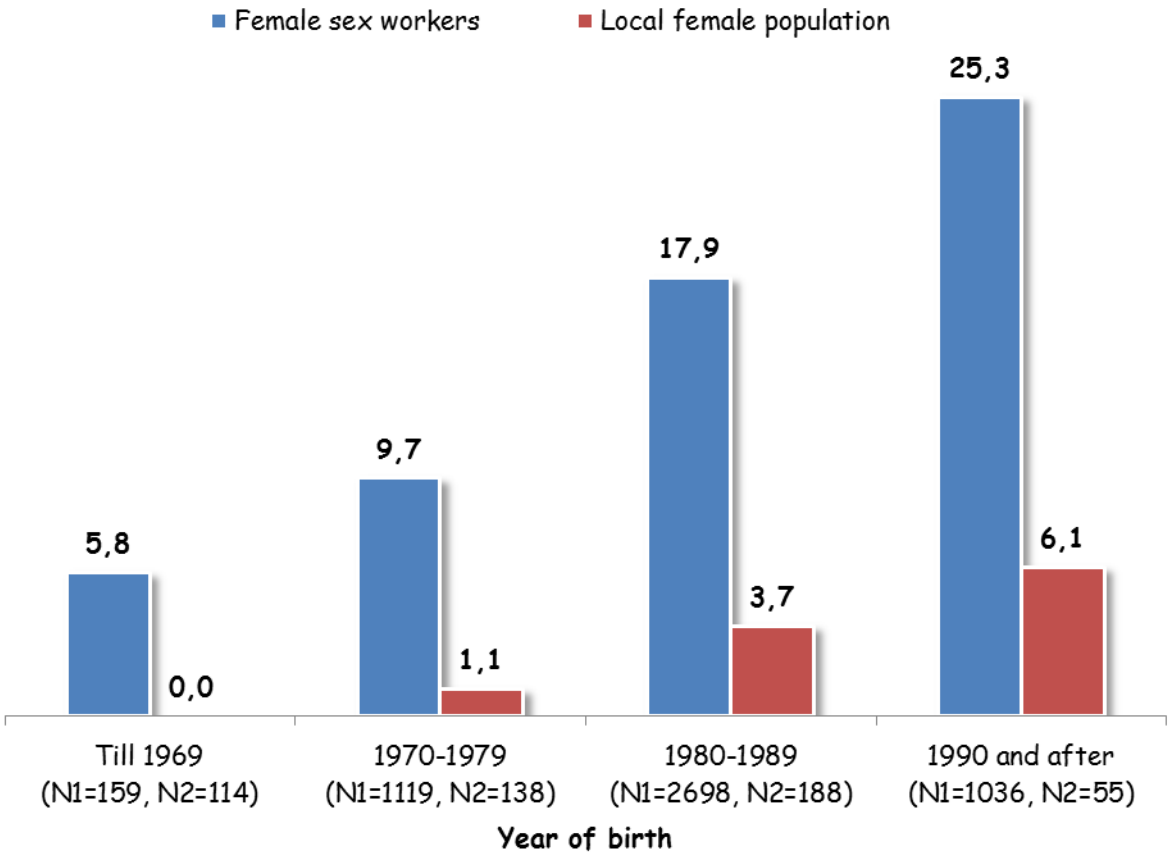
* N_1 – weighted number of respondent FSW of a corresponding birth cohort who answered the questions, N_2 – number of female respondents living in the cities and having answered the questions.

Fig. 2.1.1. **Average age of sexual debut (by birth cohorts)**

[6]According to the survey conducted by the Analytical Centre "Socioconsulting" in 2011 on the request of the ICF "Inernational HIV/AIDS Alliance in Ukraine". Hereinafter, FSW population is compared to women living in the cities, who have ever had sexual contacts.

As it can be seen from fig. 2.1.2, cases of especially early sexual debut (under 14 years of age, including cases of sexual debut at 14 years of age) have most rapidly increased. Only 6% among FSW of the oldest generation indicated having started sexual life under 14 years of age, while every fourth (25%) among youngest FSW had especially early sexual debut ($p<0.01$). In general, 17% of the current FSW population have started their sexual life at especially early age (in 2008-2009 prevalence of the experience of early sexual debut was also 17%).

There is a similar tendency among women from the general population of Ukraine, but it should be noted that the "scope" of prevalence of the experience of early sexual debut is incomparable – even now only 6% among the youngest women in Ukraine had their first sexual contact under 14 years of age.



* N_1 – weighted number of all female respondents of a corresponding birth cohort, N_2 – number of female respondents living in the cities.

Fig. 2.1.2. **Share of people who had their sexual debut before reaching 14 years of age (by birth cohorts), %**

In general, if a simple majority of urban female population had sexual debut at the age of 18-24 years (according to the survey, 45% of women had sexual debut exactly at this age as compared to 30% of women who had it before reaching 18 years), then an

absolute majority of FSW (80%) had their sexual debut before reaching 18 years (see Fig. 2.1.3). It is necessary to give a warning that a quarter of women from the general population of Ukraine (25%) hesitated when answering this question, therefore shares of those who had their sexual debut under 18 years of age, at the age of 18-24 years or 25-29 years are higher in reality.

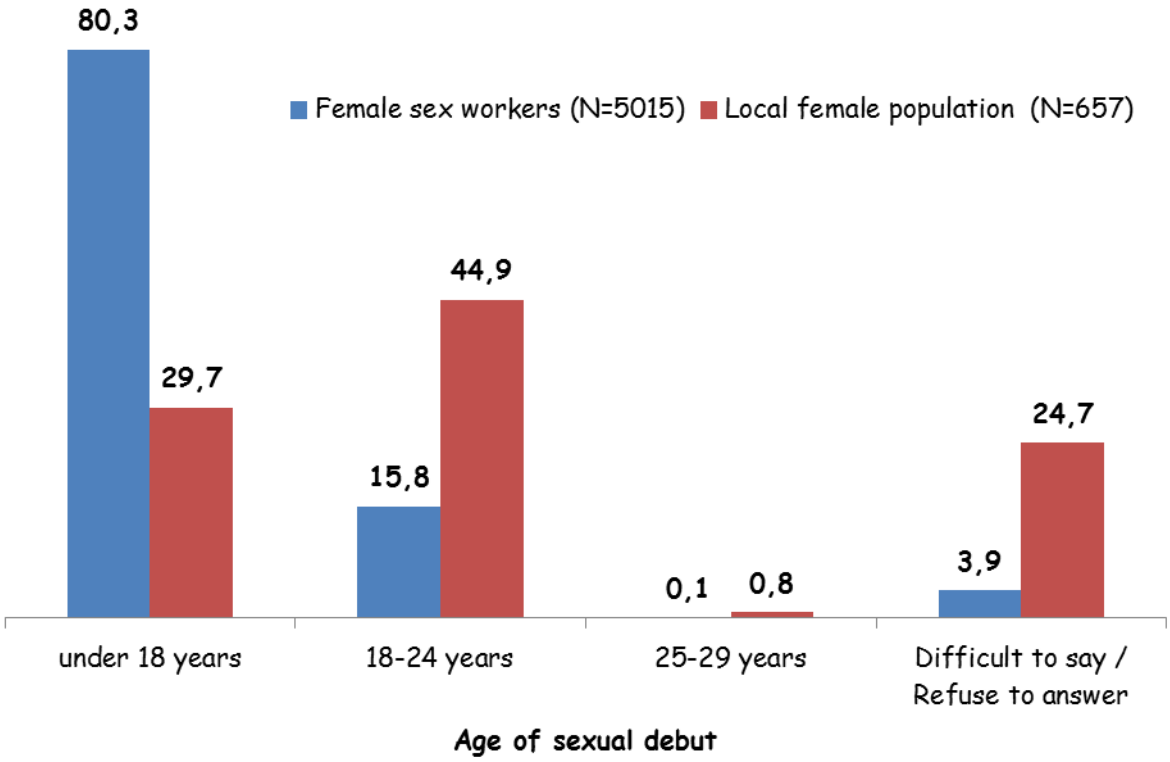


Fig. 2.1.3. **Share of people who had their sexual debut at specified age, %**

FSW interviewed in Khmelnytskiy and Uzhgorod, are characterized by the earliest sexual debut (average age of sexual debut is 15.2 years and 15.2 years correspondingly, standard bias – 2.0 and 1.8 correspondingly) as compared to the FSW interviewed in other cities (table 2.1.1). The share of those who had especially early sexual debut in these cities makes up 34% and 37% correspondingly, while in other cities the share of such FSW mostly does not exceed one fourth[7]. FSW interviewed in Chernivtsi are characterized by relatively the latest sexual debut (average age of sexual debut is 16.8 years, standard bias – 2.5), even though every fifth (17%) had sexual debut before reaching 14 years.

Table 2.1.1

Age of sexual debut of FSW (by regions)*

	Average age of sexual debut**	% of FSW, who had sexual debut at the age under 14 years

[7]In this context it should be noted that there were a lot of Roma women among FSW interviewed in Uzhgorod.

Uzhgorod (N_1=135, N_2=150) ***	15.2	37.4
Khmelnytskiy (N_1=121, N_2=150)	15.2	34.2
Zhytomyr (N_1=150, N_2=150)	15.4	25.5
Simferopol (N_1=299, N_2=300)	15.4	25.8
Kharkiv (N_1=300, N_2=300)	15.5	23.7
Kyiv (N_1=300, N_2=300)	15.6	25.2
Kirovograd (N_1=148, N_2=150)	15.6	21.3
Lutsk (N_1=149, N_2=150)	15.7	16.8
Zaporizhzhia (N_1=201, N_2=200)	15.8	21.0
Rivne (N_1=140, N_2=150)	15.8	16.6
Ternopil (N_1=94, N_2=150)	15.8	3.3
Mykolaiv (N_1=273, N_2=301)	15.9	13.2
Cherkasy (N_1=151, N_2=150)	15.9	19.4
Lviv (N_1=200, N_2=200)	16.0	9.0
Odesa (N_1=300, N_2=300)	16.2	13.9
Kherson (N_1=202, N_2=202)	16.2	19.9
Donetsk (N_1=298, N_2=302)	16.3	11.9
Poltava (N_1=159, N_2=200)	16.3	11.0
Dnipropetrovsk (N_1=298, N_2=300)	16.4	14.7
Ivano-Frankivsk (N_1=150, N_2=150)	16.4	12.5
Sumy (N_1=151, N_2=150)	16.4	8.8
Vinnytsia (N_1=149, N_2=150)	16.5	15.8
Chernigiv (N_1=151, N_2=150)	16.5	1.0
Lugansk (N_1=151, N_2=150)	16.6	7.0
Chernivtsi (N_1=150, N_2=150)	16.8	17.0

* Ordered by the average age of sexual debut (from the earliest to the latest.
** As far as RDSAT does not provide opportunity to calculate mean values, calculations for RDS cities were conducted in SPSS using weighs exported from RDSAT.
*** N_1 – weighted number of respondent FSW who answered the question, N_2 – weighted number of all respondent FSW.

Beginning to provide paid sex services

If FSW usually have their sexual debut before reaching the age of majority, they usually start providing paid sex services at more adult age. An average age of beginning to provide paid sex services is 21.2 years (standard bias – 4.3). If compared to the results of the previous survey, the age of beginning to provide paid sex services even increased a bit – in 2008-2009 it was 20.5 years (standard bias – 4.5) ($p<0.01$).

However, there is distinctive intergenerational reduction of average age of beginning to provide paid sex services by separate birth cohorts. Thus, in case of oldest FSW average age is 27.9 years (standard bias – 6.9), while in case of youngest FSW it makes up 17.5 years (standard bias – 1.5) (see Fig. 2.1.4).

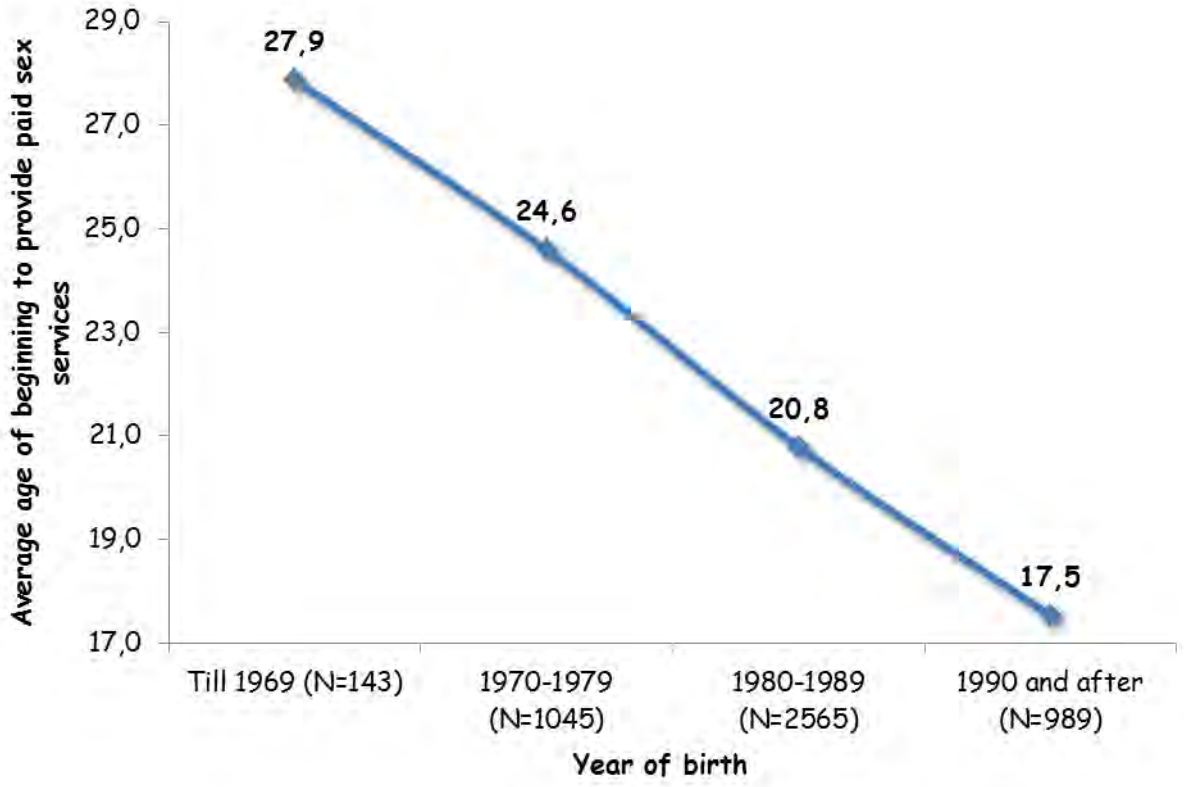


Fig. 2.1.4. **Average age of beginning to provide paid sex services (by birth cohorts)**

On the whole, if “only” a half (50%) among older FSW started to provide paid sex services before reaching the age of majority, there are 93% of such among youngest FSW ($p<0.01$) (fig. 2.1.5). That means that apart from the decrease of age of sexual debut, there is a tendency to the increasingly early involvement in sex business.

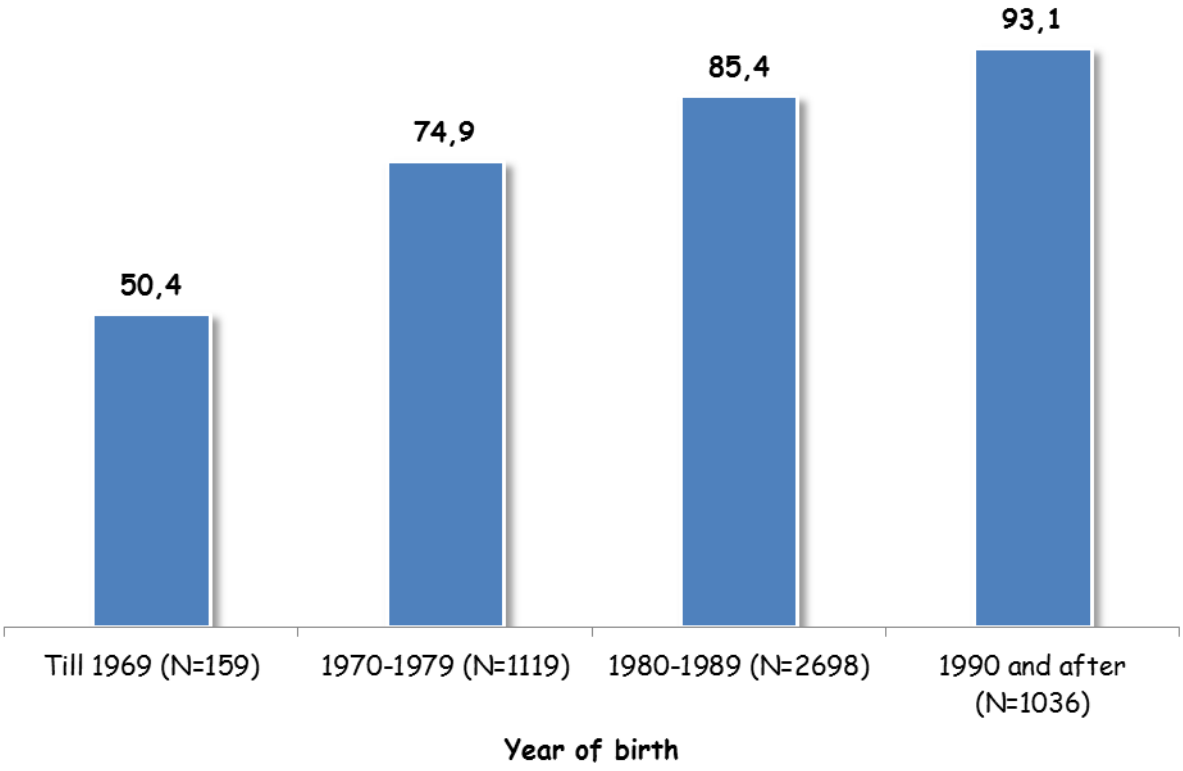


Fig. 2.1.5. **Share of those, who started to provide paid sex services before reaching the age of majority (by birth cohorts), %**

In general, slightly more than half of FSW (58%) started providing commercial sex services at the age of 18-24 years (see Fig. 2.1.6). 16% of interviewed FSW started providing commercial sex services before reaching the age of majority.

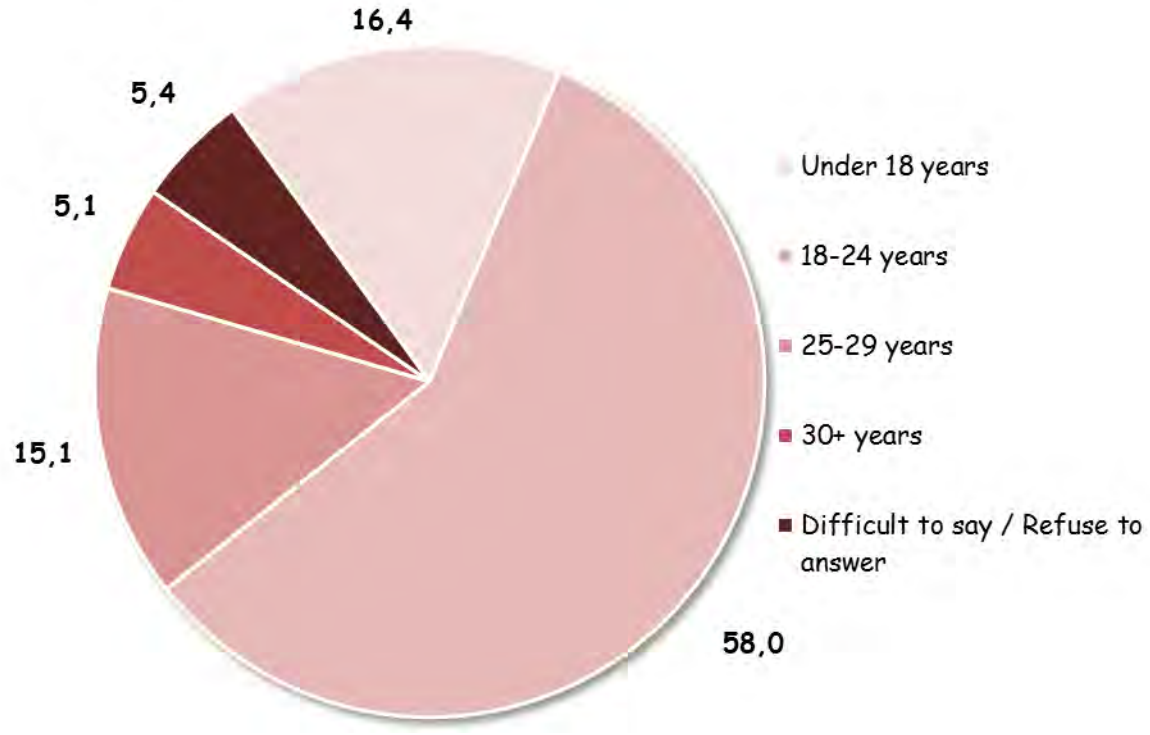


Fig. 2.1.6. **Beginning to provide paid sex services (share by age), %**

In regional context, the “leader” by the age of beginning to provide commercial sex services is Uzhgorod (see Table 2.1.2). Thus, average age of beginning to provide sex services by FSW in Uzhgorod makes up 17.5 years (standard bias – 2.5). Moreover, Uzhgorod is the only city where average age of beginning to provide commercial sex services is lower than 18 years. In fact, half of FSW in the city (51%) started providing paid sex services before reaching the age of majority.

In other cities average age of beginning to provide commercial sex services is from 18 years, and the share of those who started providing them before reaching the age of majority, does not exceed a quarter (except Ternopil and Simferopol, where 31% of FSW started providing paid sex services before reaching the age of majority).

Table 2.1.2

Age of beginning to provide paid sex services (by regions)*

	Average age of beginning to provide sex services**	% of FSW, who started to provide sex services before reaching 18 years old
Uzhgorod (N_1=123, N_2=150)***	17.5	50.6
Ternopil (N_1=122, N_2=150)	18.7	30.7
Khmelnytskiy (N_1=61, N_2=150)	19.3	11.8
Vinnytsia (N_1=149, N_2=150)	19.8	18.7
Lugansk (N_1=151, N_2=150)	20.1	15.1
Kherson (N_1=202, N_2=202)	20.1	23.6
Simferopol (N_1=299, N_2=300)	20.2	30.8
Lutsk (N_1=150, N_2=150)	20.3	18.8
Chernigiv (N_1=152, N_2=150)	20.5	3.8
Odesa (N_1=298, N_2=300)	20.8	15.6
Kharkiv (N_1=300, N_2=300)	20.8	14.7
Kirovograd (N_1=135, N_2=150)	20.9	24.2
Kyiv (N_1=298, N_2=300)	21.0	16.3
Zaporizhzhia (N_1=201, N_2=200)	21.3	18.2
Chernivtsi (N_1=150, N_2=150)	21.3	23.2
Mykolaiv (N_1=253, N_2=301)	21.5	7.6
Sumy (N_1=151, N_2=150)	21.7	17.8
Lviv (N1=200, N_2=200)	21.8	4.1
Cherkasy (N_1=150, N_2=150)	21.8	13.5
Ivano-Frankivsk (N_1=149, N_2=150)	22.0	14.0
Poltava (N_1=152, N_2=200)	22.2	8.0
Dnipropetrovsk (N_1=299, N_2=300)	22.6	9.2
Donetsk (N_1=298, N_2=302)	22.7	17.2
Rivne (N_1=150, N_2=150)	23.1	3.2
Zhytomyr (N_1=150, N_2=150)	23.3	2.0

* Ordered by the average age of beginning to provide paid sex services (from the earliest to the latest).
** As far as RDSAT does not provide opportunity to calculate mean values, calculations for RDS cities were conducted in SPSS using weighs exported from RDSAT.
*** N_1 – weighted number of respondent FSW who answered the question, N_2 – weighted number of all respondent FSW.

2.2 "Work record" and frequency of provision of paid sex services

«Work record»[8] of FSW in the sphere of commercial sex

FSW with middle "work record" are the most presented in FSW structure by the duration of stay in sex business – 54% of FSW have provided commercial sex services from 2 to 10 years (see Fig. 2.2.1). Every fourth FSW (24%) has had experience of working in this sphere up to 2 years, 17% provide commercial sex services for more than 10 years. In general, FSW structure has not undergone significant changes by working experience as compared to 2008-2009.

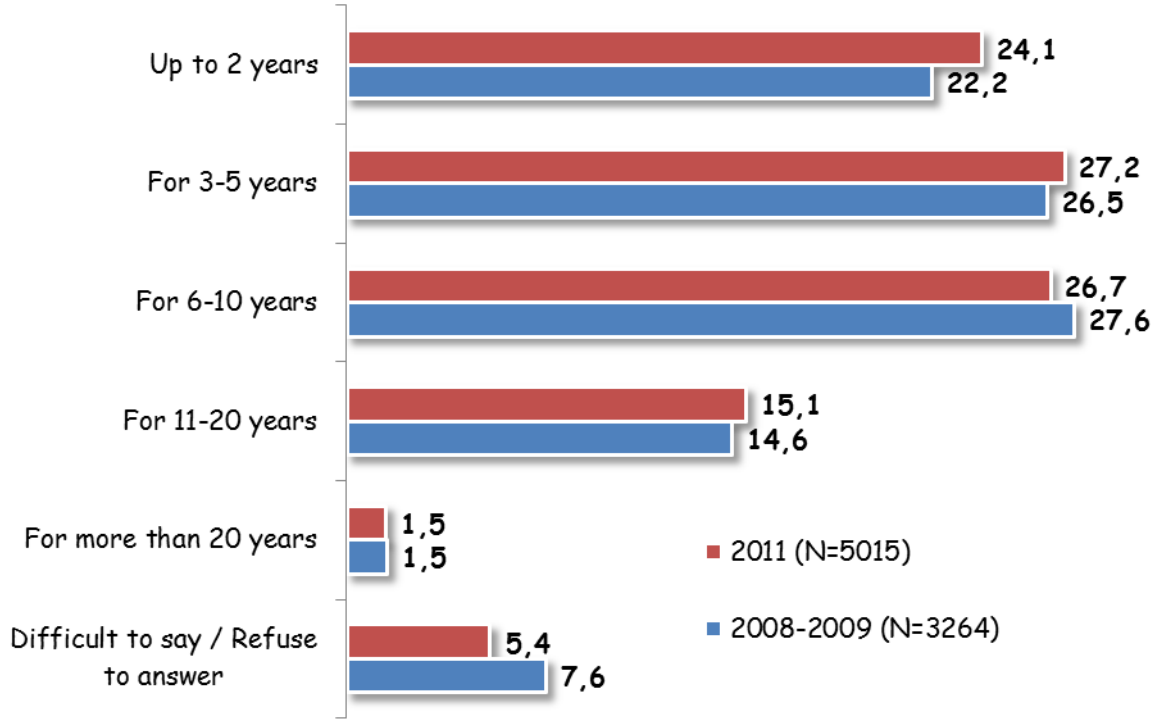


Fig. 2.2.1. **Duration of providing commercial sex services,** *%*

Figure 2.2.2 below presents the cumulative percentage of FSW depending on their "work record" in sex business. Each value shows how many FSW have this or lesser experience of providing commercial sex services.

[8]«Work record» is calculated as the difference between the age of FSW and age of beginning to provide paid sex services.

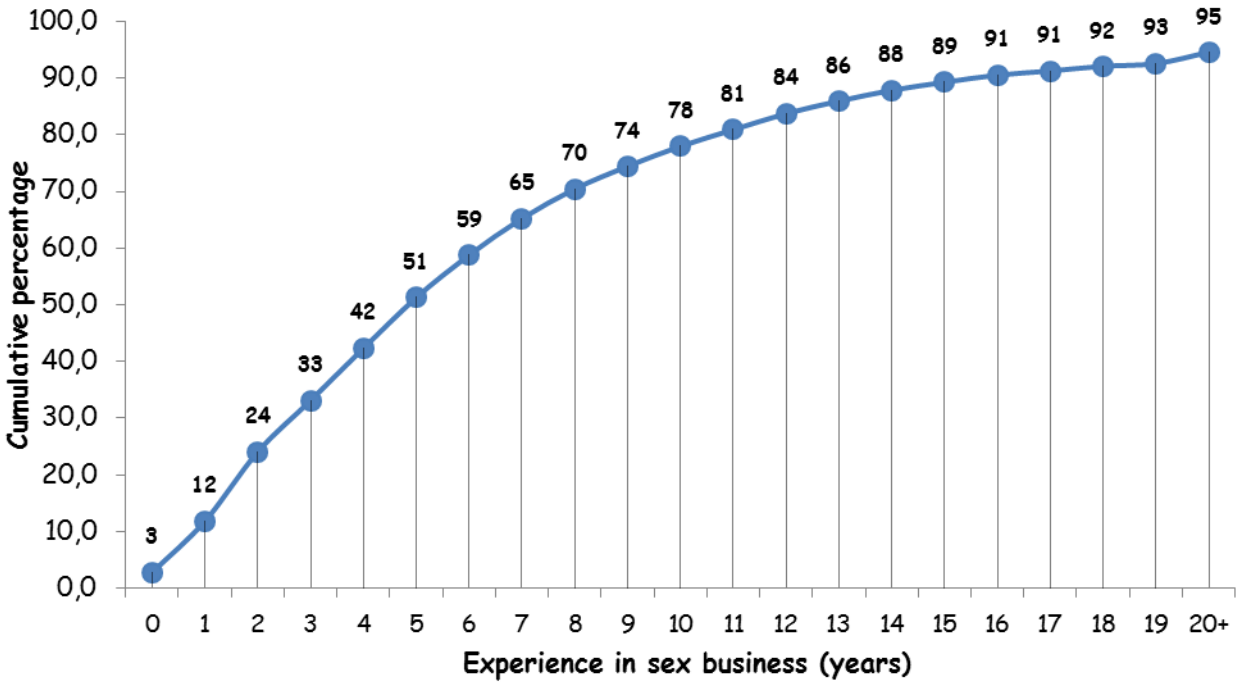


Fig. 2.2.2. **Percentage of FSW, who have corresponding of lesser "work record" (cumulative percentage), %**

As it can be seen in Table 2.2.1, FSW structure by "work record" in sex business is significantly different in different cities. For example, Dnipropetrovsk and Ternopil strongly stand out against other cities by the number of FSW with the experience in sex business of up to 2 years – 55% and 47% correspondingly. At the same time, the situation is absolutely different in Poltava and Mykolaiv, where only 9% and 7% correspondingly have an appropriate working experience. There are still some other differences. In this context it should be noted that cities differ significantly by age structure of FSW population (see previous chapter), which determines differences by "work record".

Table 2.2.1

Duration of providing commercial sex services (by regions)*, %

	Up to 2 years	From 2 to 10 years	More than 10 years
Dnipropetrovsk (*N*=300)	55.0	36.5	8.2
Ternopil (*N*=150)	47.3	28.7	5.3
Odesa (*N*=300)	35.3	44.8	19.0
Chernigiv (*N*=150)	34.1	63.2	2.7
Lviv (*N*=200)	32.9	59.2	7.9
Kherson (*N*=202)	31.8	52.5	15.7
Sumy (*N*=150)	27.1	59.3	13.5
Vinnytsia (*N*=150)	26.8	57.1	15.5
Cherkasy (*N*=150)	25.5	59.7	14.4
Zaporizhzhia (*N*=200)	25.0	48.5	26.2
Rivne (*N*=150)	24.8	64.2	11.0
Chernivtsi (*N*=150)	22.3	58.5	19.2

Donetsk (*N*=302)	21.5	42.5	34.3
Kharkiv (*N*=300)	20.4	64.7	15.0
Kyiv (*N*=300)	20.3	63.6	14.9
Zhytomyr (*N*=150)	19.4	73.8	6.8
Uzhgorod (*N*=150)	16.9	47.7	17.4
Khmelnytskiy (*N*=150)	16.0	20.3	4.5
Lugansk (*N*=150)	15.1	73.9	11.0
Kirovograd (*N*=150)	14.6	60.7	14.5
Simferopol (*N*=300)	14.4	53.8	31.5
Ivano-Frankivsk (*N*=150)	13.7	45.6	40.1
Lutsk (*N*=150)	11.4	86.9	1.7
Poltava (*N*=200)	9.0	38.5	28.5
Mykolaiv (*N*=301)	6.7	62.9	14.5

* Ordered by the share of FSW with the experience in sex business of up to 2 years (from the biggest to the smallest).

Frequency of provision of paid sex services

According to the survey results, no less than three fourths of FSW provide sex services at least 2-3 times a week irrespective of their "work record" (fig. 2.2.3). It means that even FSW who have been just involved in the sex business provide services with a rather high frequency.

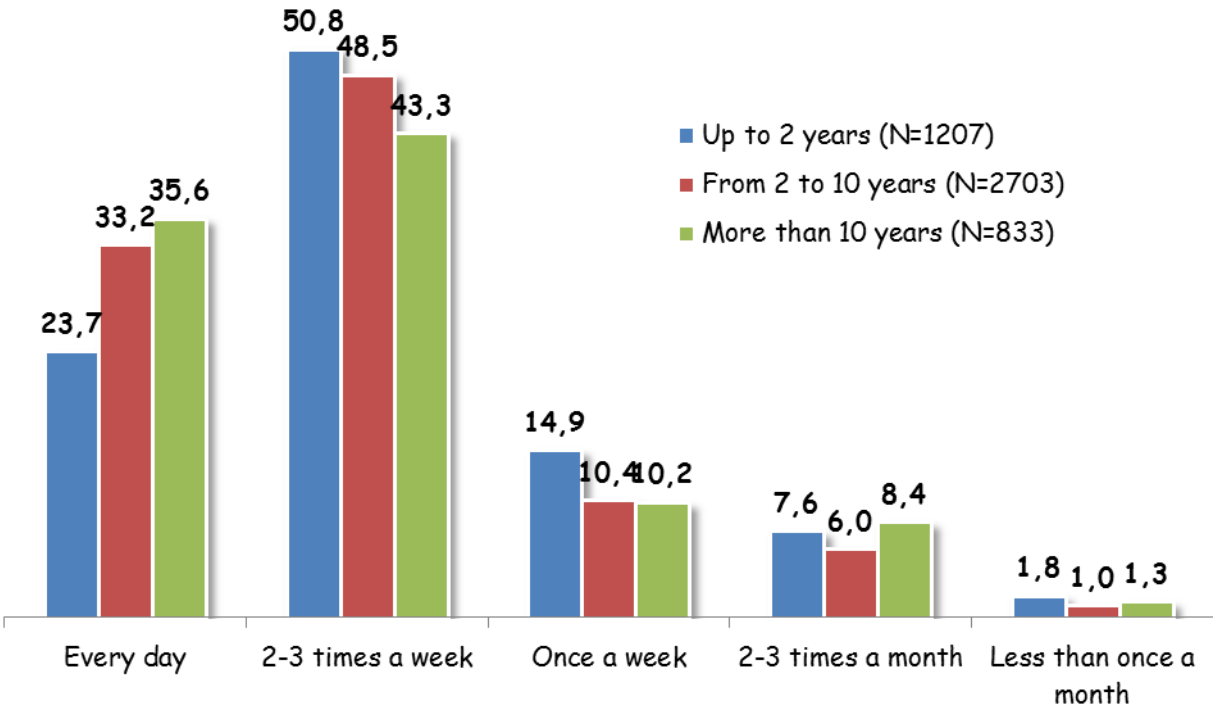


Fig. 2.2.3. **Frequency of provision of paid sex services (among FSW with different "work record"), %**

Frequency of provision of sex services is approximately the same among FSW different by age. The most noticeable differences concern FSW different by the main client seeking method, injecting and non-injecting drug users, clients and non-clients of non-governmental organizations (table 2.2.2).

Thus, 44% of "street" FSW noted that they had provided paid sex services every day or almost every day, while there were "only" 22% of such FSW among those, who found clients at hotels, bars, in saunas etc and 20% among those who found clients via telephone or Internet.

Injecting drug users are also notably much more involved. If there are 43% of them, who provide sex services every day or almost every day, there are "only" 30% of such among non-injecting drug users. Obviously, one of the main factors of bigger involvement of injecting drug users is the necessity to find money for drugs.

Clients of non-governmental organizations are much more heavily involved in the sphere of sex business – 42% of them provide paid sex services every day or almost every day vs. "only" 19% of non-clients. It can be assumed that first of all those FSW, who mostly feel the risk of being involved in the sphere of sex business, turn to non-governmental organizations for help. That is those FSW who provide paid sex services more frequently also more often turn to non-governmental organizations and become their members.

It should be also noted that there is some intersection among such characteristics as client seeking method, injecting drugs and membership of non-governmental organizations (see the previous chapter). Thus, clients of non-governmental organizations are much more represented by "street" FSW and injecting drug users. However, if taking into account such possible mutual conditions, "street" FSW, injecting drug users and clients of non-governmental organizations still remain to be slightly more involved in the sphere of sex business. Moreover, combination of these characteristics is connected with bigger involvement in commercial sex sphere. Thus, "street" FSW, who are injecting drug users and clients of non-governmental organizations (58% of them provide paid sex services every day) are relatively the most involved, while non-"street" FSW, who are not injecting drugs and are not clients of non-governmental organizations are the least involved (15% of FSW, who mostly find clients at hotels, bars, in saunas etc. and 12% of FSW, who mostly find clients via telephone, Internet).

Table 2.2.2

Frequency of provision of sex services (among FSW different by age, main client seeking method, injecting drugs)

	Every day	2-3 times a week	Once a week	2-3 times a month	Less than once a month
Age					
- 14-24 years (N=1926)	29.3	49.2	13.4	5.4	1.1
- 25+ years (N=3087)	32.3	47.2	10.1	7.5	1.3
Main client seeking method					
- street, highway, railway	44.4	45.0	5.7	3.4	0.4

station (N=2257)					
- hotels, saunas, casino etc. (N=1201)	21.5	52.2	15.6	7.0	1.4
- telephone, Internet (N=1357)	20.3	49.0	16.8	10.2	1.9
Injecting drugs					
- non-injecting drug users (N=4511)	30.3	49.4	11.4	6.4	1.0
- injecting drug users (N=419)	42.5	34.5	9.2	10.6	3.0
Clients/non-clients of non-governmental organizations					
- clients (N=2622)	41.9	45.4	6.8	3.6	0.8
- non-clients (N=2353)	19.2	51.0	16.6	10.3	1.7

2.3. Presence and number of sexual partners

Presence of different types of sexual partners

Except regular contacts with commercial partners, FSW usually have contacts both with permanent and casual partners. Thus, 97% of FSW have had at least one client within the last week, and every third FSW (33%) also reported having at least one permanent partner as well (see Fig. 2.3.1). Every tenth FSW (12%) also have had at least one casual partner within the last week.

If analyzing the (non-) presence of non-commercial partners within the last year, even more FSW have other partners except commercial ones – half of FSW (51%) have had at least one permanent partner within the last year and a third of FSW (34%) have had at least one casual partner within the last year.

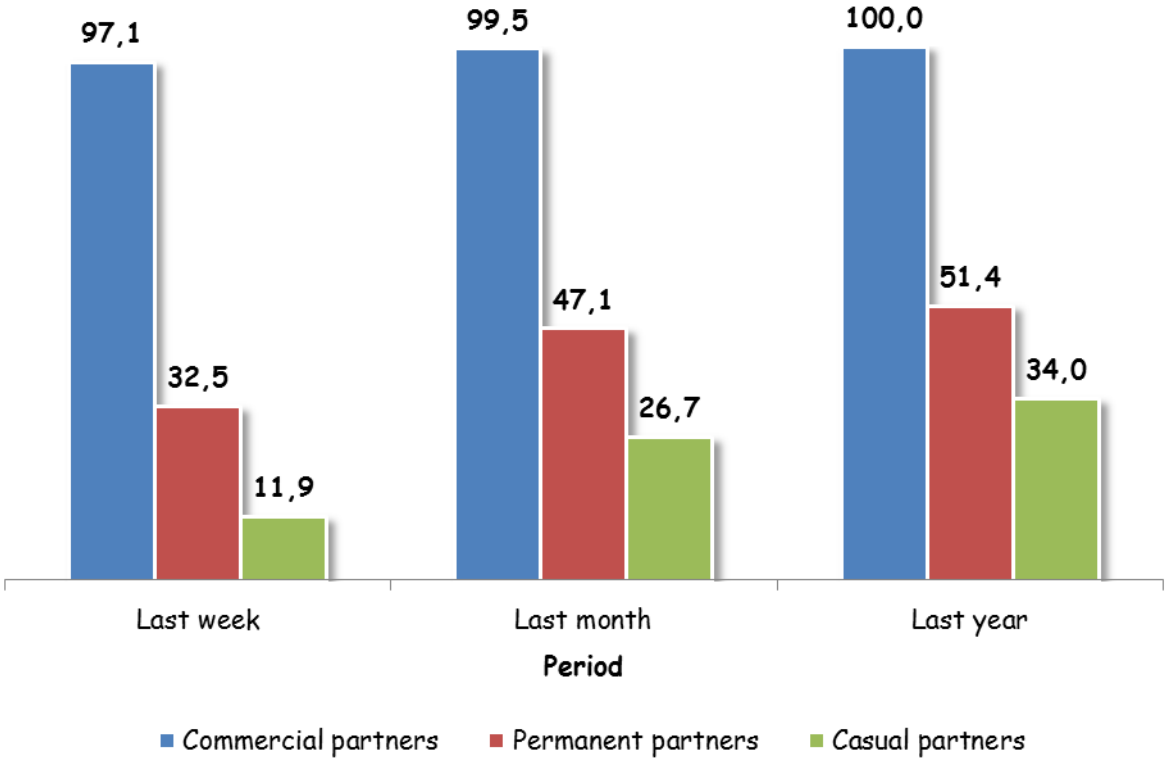


Fig. 2.3.1. **Share of FSW, who have had a corresponding sexual partner within the last week, month and year,** *%*

There are noticeable differences concerning presence of permanent and casual partners among FSW from different cities. As it can be seen below in Table 2.3.1, for example, only 1% of FSW have had permanent partners in Odesa within the last week, while there have been 65% of such FSW in Khmelnytskiy. There are also evident variations depending on the city in case of casual partners – from 2% in Chernigiv, Zhytomyr, Lugansk up to 30% in Lviv.

Table 2.3.1

Presence of different types of sexual partners (by regions)*, %

	Last week			Last month			Last year		
	Commercial partners	Permanent partners	Casual partners	Commercial partners	Permanent partners	Casual partners	Commercial partners	Permanent partners	Casual partners
Odesa (*N*=300)	87.3	1.0	11.6	100.0	9.7	27.2	100.0	17.8	31.0
Lugansk (*N*=150)	100.0	14.0	2.4	100.0	14.0	2.5	100.0	14.0	2.5
Vinnytsia (*N*=150)	100.0	20.0	19.6	100.0	23.8	26.0	100.0	27.8	31.1
Chernigiv (*N*=150)	100.0	23.1	1.4	100.0	74.7	17.2	100.0	81.4	21.6
Zhytomyr (*N*=150)	99.1	23.2	1.7	100.0	24.5	1.7	100.0	25.1	1.7
Zaporizhzhia (*N*=200)	93.5	23.8	9.8	99.7	36.9	17.2	100.0	44.3	23.5

Uzhgorod (*N*=150)	93.7	24.8	11.6	99.4	58.8	51.8	100.0	60.5	53.5
Donetsk (*N*=302)	93.5	28.1	11.8	96.6	50.0	27.8	100.0	55.2	33.1
Poltava (*N*=200)	65.5	28.5	14.0	100.0	34.0	19.5	100.0	36.5	22.0
Rivne (*N*=150)	100.0	28.5	5.7	100.0	47.4	31.6	100.0	58.7	47.0
Kirovograd (*N*=150)	84.0	30.3	19.7	99.3	42.8	27.0	100.0	43.4	27.7
Dnipropetrovsk (*N*=300)	96.8	30.4	2.9	100.0	45.4	5.3	100.0	58.1	15.0
Lviv (*N*=200)	99.6	32.5	29.5	100.0	74.7	76.6	100.0	74.7	77.5
Ternopil (*N*=150)	100.0	34.0	22.0	100.0	56.7	48.7	100.0	56.7	48.7
Chernivtsi (*N*=150)	98.5	34.5	4.8	100.0	38.3	5.3	100.0	38.3	5.3
Simferopol (*N*=300)	100.0	35.1	15.2	100.0	44.7	32.9	100.0	49.2	55.8
Mykolaiv (*N*=301)	98.7	35.4	22.8	100.0	44.8	27.5	100.0	46.1	28.8
Kyiv (*N*=300)	87.4	35.8	9.8	98.1	54.9	30.8	100.0	62.1	48.5
Lutsk (*N*=150)	98.9	37.8	6.6	100.0	44.1	21.2	100.0	53.8	59.3
Cherkasy (*N*=150)	81.6	44.8	5.3	98.2	61.0	43.7	100.0	73.0	64.3
Kharkiv (*N*=300)	100.0	45.5	3.5	100.0	57.1	16.2	100.0	57.4	16.2
Ivano-Frankivsk (*N*=150)	92.1	47.7	26.8	100.0	61.4	50.3	100.0	62.7	50.3
Sumy (*N*=150)	100.0	47.8	14.9	100.0	69.0	26.2	100.0	69.0	27.4
Kherson (*N*=202)	99.3	51.6	14.0	100.0	57.0	23.3	100.0	57.5	26.6
Khmelnytskiy (*N*=150)	93.3	64.8	5.8	100.0	68.8	23.9	100.0	69.4	39.1

* Ordered by the share of FSW who have had permanent partners within the last week (from the biggest to the smallest).

Commercial partners

According to the survey, the majority of FSW (51%) have had from 1 to 5 commercial partners within the last week (see Fig. 2.3.2). A quarter of FSW (23%) have had from 6 to 10 commercial partners and almost a quarter (21%) have had more than 10 partners. An average number of commercial partners within the last week makes up 7.6 (standard bias – 8.2).

As compared the survey data of 2011 to 2008-2009, there have become a bit more FSW who have had from 1 to 5 commercial partners (51% as compared to 44% in FSW structure according to the survey of 2008-2009, $p<0.01$) and less FSW who have had from 11 to 20 commercial partners (14% as compared to 18%, $p<0.01$). An average number of commercial partners has reduced from 8.5 (standard bias – 8.5) to 7.6 ($p<0.01$).

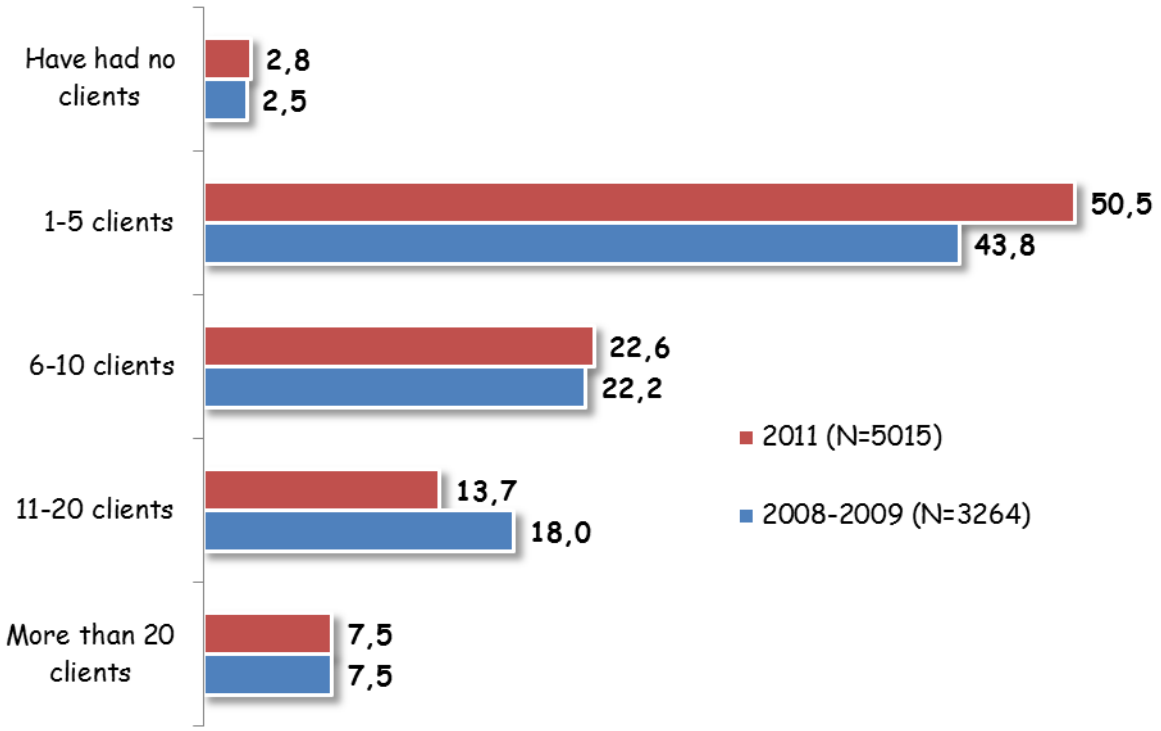


Fig. 2.3.2. **Percentage distribution by the number of commercial partners within the last week, %**

Situation differs significantly from city to city. Thus, FSW interviewed in Simferopol had the biggest number of commercial partners – 81% of FSW have had more than 20 commercial partners within the last week (see Table 2.3.2). Moreover, FSW from Simferopol are significantly ahead of FSW from all other cities by the number of commercial partners. It can be possibly connected to the fact that Simferopol is the capital of the Autonomous Republic of Crimea, which is the main Ukrainian resort. It means that a lot of people, who are potential commercial partners, visit Simferopol in summer (when the interviewing was conducted), which leads to such great differences in the average number of commercial partners. FSW from Cherkasy and Chernigiv have had the smallest number of commercial partners.

Table 2.3.2

Distribution of FSW by the number of commercial partners within the last week (by regions)*

	% of FSW who have had appropriate number of clients					
	Had no clients	1-5 clients	6-10 clients	11-20 clients	More than 20 clients	Average number of clients**
Simferopol (N_1=300, N_2=300) ***	0.0	0.6	0.8	17.2	81.4	24.1
Zhytomyr (N_1=150, N_2=149)	0.0	6.3	37.2	39.9	15.7	14.3
Poltava (N_1=200, N_2=131)	0.0	13.5	19.5	23.5	9.0	13.5

Lviv (N_1=200, N_2=199)	0.0	9.1	39.6	40.5	10.3	12.4
Vinnytsia (N_1=150, N_2=150)	0.0	9.0	35.6	54.1	1.3	12.0
Kirovograd (N_1=150, N_2=139)	8.7	46.5	12.5	11.8	13.2	11.6
Lugansk (N_1=150, N_2=151)	0.0	22.0	27.4	49.6	0.9	10.1
Dnipropetrovsk (N_1=300, N_2=300)	3.2	37.8	29.4	28.4	1.2	8.1
Rivne (N_1=150, N_2=150)	0.0	51.0	27.9	13.9	7.2	7.7
Mykolaiv (N_1=301, N_2=298)	0.3	47.0	32.1	15.6	4.0	7.6
Odesa (N_1=300, N_2=276)	4.8	42.0	34.7	9.4	1.2	6.5
Kharkiv (N_1=300, N_2=300)	0.0	55.2	35.1	8.5	1.2	6.2
Khmelnytskiy (N_1=150, N_2=142)	1.3	56.6	29.6	5.1	1.9	5.7
Chernivtsi (N_1=150, N_2=149)	1.0	55.7	35.1	7.0	0.8	5.6
Lutsk (N_1=150, N_2=150)	1.1	63.9	27.7	5.3	1.9	5.5
Ternopil (N_1=150, N_2=150)	0.0	74.7	22.0	2.0	1.3	4.6
Ivano-Frankivsk (N_1=150, N_2=144)	3.7	70.7	12.8	8.5	0.0	4.1
Sumy (N_1=150, N_2=151)	0.0	70.9	27.0	2.1	0.0	3.9
Uzhgorod (N_1=150, N_2=145)	2.7	68.4	23.3	2.0	0.0	3.8
Kyiv (N_1=300, N_2=299)	11.1	70.8	13.1	3.2	0.9	3.5
Zaporizhzhia (N_1=200, N_2=201)	6.9	78.1	12.1	2.6	0.1	3.2
Donetsk (N_1=302, N_2=295)	3.3	79.4	13.6	0.7	0.1	3.1
Kherson (N_1=202, N_2=202)	0.7	87.6	10.0	1.2	0.4	3.1
Cherkasy (N_1=150, N_2=151)	17.7	70.0	10.7	1.6	0.0	2.4
Chernigiv (N_1=150, N_2=152)	0.0	99.6	0.4	0.0	0.0	2.1

* Ordered by the average number of clients during a week (from the biggest to the smallest).
** As far as RDSAT does not provide opportunity to calculate mean values, calculations for RDS cities were conducted in SPSS using weighs exported from RDSAT.
*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW who answered the question.

FSW who have different main client seeking methods face the most striking differences regarding the number of clients. Thus, “street” FSW have much more commercial partners during a week – every third of them (33%) have had more than 10 clients, whereas there are 13% of such among FSW who mostly find clients at hotels, bars, in saunas etc. ($p<0.01$) and 12% among FSW who mostly find clients via telephone, Internet ($p<0.01$). In general, the number of commercial partners among “street” FSW makes up 10.5 per week (standard bias – 10.0) as compared to 5.7 (standard bias – 5.4) ($p<0.01$) and 5.0 (standard bias – 5.1) among two other categories by the main client seeking method ($p<0.01$).

The results of the conducted survey also show that younger FSW have fewer commercial partners – an average of 7.0 (standard bias – 8.2) among FSW under 25 years of age as compared to 7.9 (standard bias – 8.1) among FSW of 25+ years of age ($p<0.01$).

There are also fewer commercial partners among non-injecting drug users – 7.5 (standard bias – 7.6) as compared to 8.6 (standard bias – 13.0) among injecting drug users.

Attention should be also paid to the fact that according to the survey, clients of non-governmental organizations have at average twice as many commercial partners as FSW who are not clients of any organization – 9.9 (standard bias – 9.5) as compared to 5.0 (standard bias – 5.2) ($p<0.01$).

As far as the above-mentioned characteristics intersect, differences depend on one another to some extent. However, if taking into account the impact of other variables as indirect ones, there is still a tendency that “street” FSW, injecting drug users and clients of non-governmental organizations have a slightly more clients per week.

It should be also noted that HIV-positive FSW (defined by the results of testing with rapid tests) also have fewer commercial partners on average – 6.5 (standard bias – 7.3) as compared to 7.7 (standard bias – 8.2) among HIV-negative FSW ($p<0.01$). Besides, an average number of clients per week among FSW, who know (think) that they are HIV-positive, makes up 5.4 (standard bias – 5.8) and 8.7 (standard bias – 9.5) among FSW who know (think) that they are HIV-negative ($p<0.01$). The issue can possibly be the fact that some FSW modify their sexual behavior knowing about HIV status.

During the survey respondents were also asked about the number of commercial partners in the last working day. According to the survey results, an average number of clients in the last working day makes up 1.9 (standard bias – 1.7). In general, 20% of FSW have had no clients at all in the last working day (see Fig. 2.3.3). The majority of FSW (52%) have had 1-2 clients, a quarter (27%) have had more than 2 clients. Tendencies regarding the number of commercial partners in the last working day among FSW of certain cities and categories are mostly the same as the ones regarding the number of clients in the last week. Therefore we’re not going to comment this in detail.

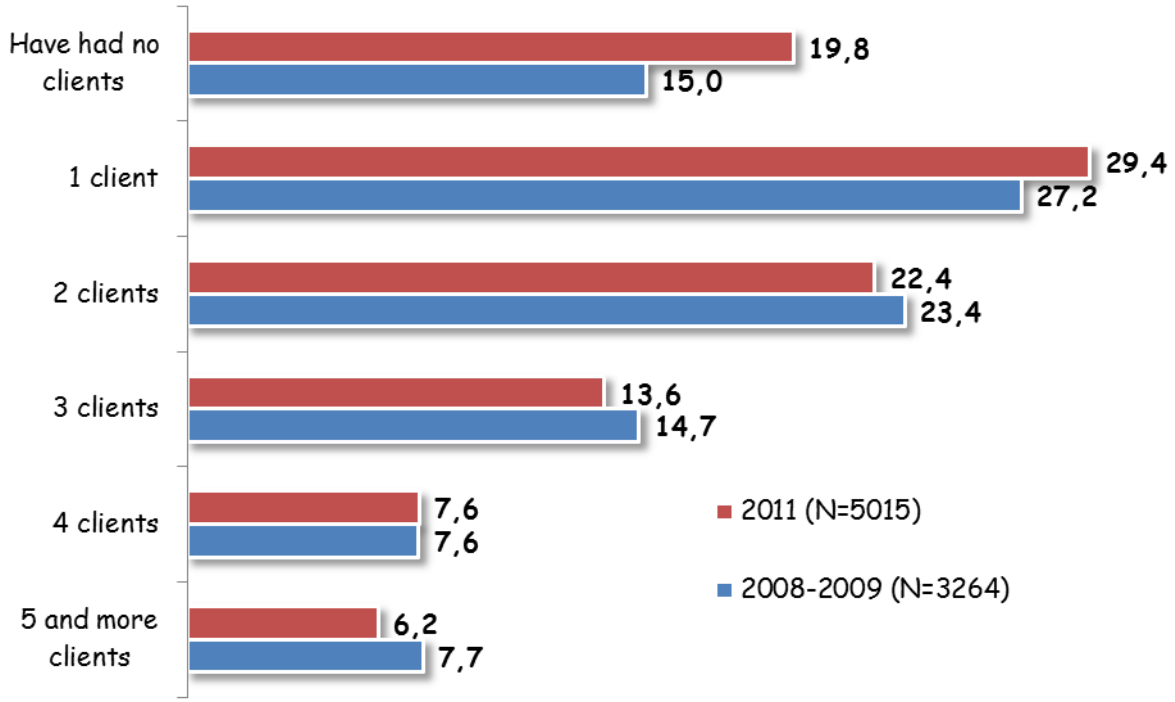


Fig. 2.3.3. **Share of FSW, who have had appropriate number of commercial partners within the last day, %**

Non-commercial partners

As it was already mentioned above, two thirds of FSW (67%) have had no permanent partners within the last week at all (see Fig. 2.3.4). Every fourth FSW (29%) has had one permanent partner, 4% reported having two and more partners. In general, according to the survey results the average number of permanent partners of FSW makes up 0.4 (standard bias – 0.6) within the last week.

The number of casual partners is even lower – 88% of FSW have had no casual partners at all, 8% have had one casual partner, 4% reported having two and more casual partners. The average number of casual partners – 0.2 (standard bias – 0.6).

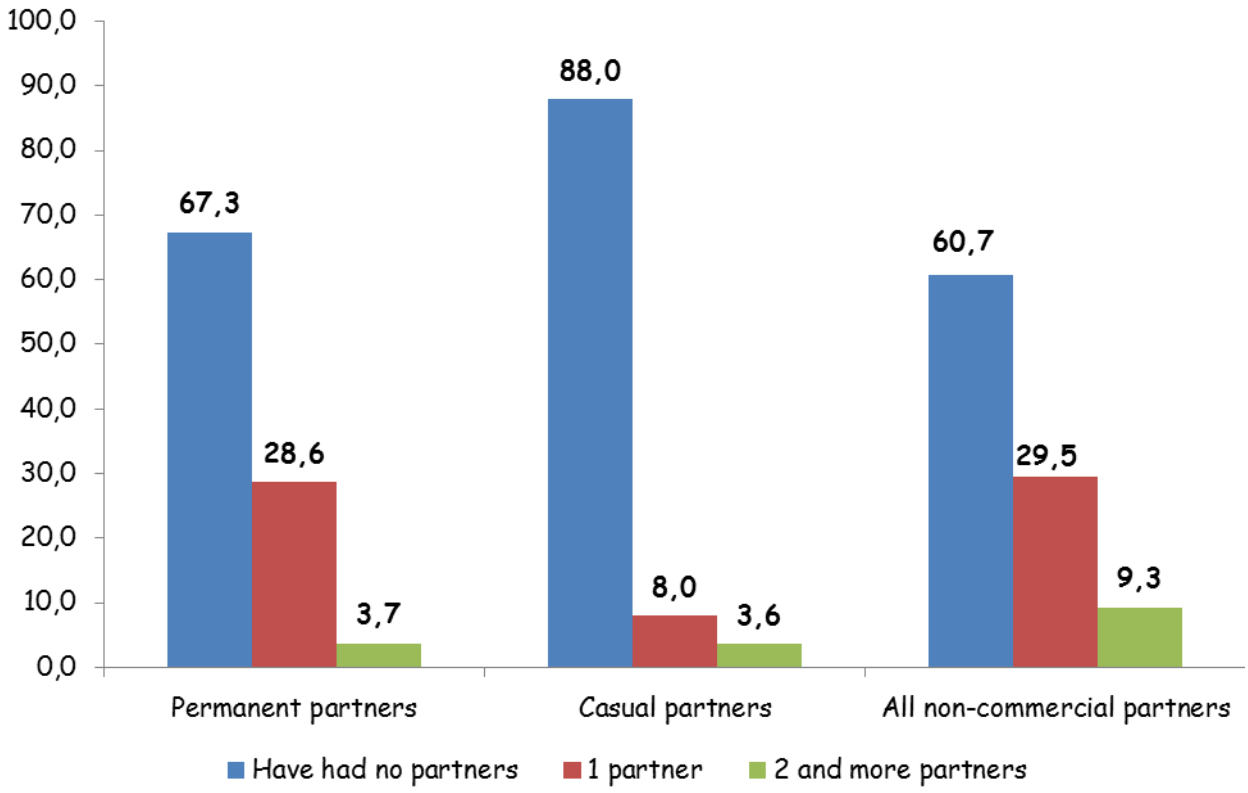


Fig. 2.3.4. **Share of FSW, who have had appropriate number of non-commercial partners within the last week, %**

The Table 2.3.3 below presents data on non-commercial partners by regions.

Table 2.3.3

Non-commercial partners within the last week (by regions)*, %

	Have had no partners	1 partner	2 and more partners	Average number**	Have had no partners	1 partner	2 and more partners	Average number**	Have had no partners	1 partner	2 and more partners	Average number**
Khmelnytskiy (N_1=150, N_2=150, N_3=150, N_4=150)	35.2	60.3	4.5	0.7	94.2	4.6	1.3	0.1	33.3	58.3	8.4	0.8
Kherson (N_1=202, N_2=202, $N_3$202, N_4=202)	48.4	48.8	2.8	0.6	86.0	11.2	2.8	0.2	43.2	44.7	12.1	0.7
Kharkiv (N_1= 300, N_2=300, N_3=300, N_4=300)	54.5	44.2	1.3	0.5	96.5	2.8	0.7	0.0	53.4	43.2	3.4	0.5
Cherkasy (N_1=150, N2=151, N_3=151, N_4=151)	55.2	40.6	4.2	0.5	94.7	5.3	0.0	0.0	52.1	42.9	5.0	0.5
Sumy (N_1=151, N_2=151, N_3=151, N_4=151)	52.2	39.1	8.7	0.6	84.6	11.1	4.3	0.2	47.0	36.3	16.7	0.8
Lutsk (N_1=150, N_2=150, N_3=150, N_4=150)	62.2	34.9	2.9	0.4	93.4	6.0	0.6	0.1	57.6	37.8	4.6	0.5
Simferopol (N_1=300, N_2=299, N_3=300, N_4=299)	64.9	34.6	0.2	0.4	84.8	14.0	1.1	0.2	54.5	39.4	5.9	0.5
Kyiv (N_1=300, N_2=299, N_3=299, N_4=299)	63.8	33.7	1.9	0.4	88.8	6.8	3.5	0.2	57.5	34.2	7.4	0.5
Ivano-Frankivsk (N_1=150, N_2=149, N_3=149, N_4=149)	52.3	33.7	13.4	0.7	73.2	20.1	6.1	0.3	44.4	29.4	25.6	1.0
Chernivtsi (N_1=150, N_2=150, N_3=150, N_4=150)	65.5	33.0	1.5	0.4	95.2	3.3	1.5	0.1	63.8	32.2	4.1	0.5
Ternopil (N_1=150, N_2=150, N_3=150, N_4=150)	66.0	32.7	1.3	0.4	78.0	21.3	0.7	0.2	52.7	38.0	9.3	0.6
Dnipropetrovsk (N_1=300, N_2=300, N_3=300, N_4=300)	69.6	30.1	0.3	0.3	97.1	2.9	0.0	0.0	66.9	32.5	0.6	0.3
Kirovograd (N_1=150, N_2=150, N_3=150, N_4=150)	69.7	29.7	0.7	0.3	80.3	13.6	6.2	0.4	54.6	34.6	10.8	0.7
Lviv (N_1=200, N_2=199, N_3=199, N_4=199)	67.5	28.1	3.9	0.4	70.5	16.4	12.6	0.5	51.8	26.4	21.4	0.8
Rivne (N_1= 150, N_2=150, N_3=150, N_4=150)	71.5	27.9	0.6	0.3	94.3	3.9	1.8	0.1	66.3	31.3	2.4	0.4
Chernigiv (N_1=150,	76.9	23.1	0.0	0.2	98.6	1.4	0.0	0.0	75.4	24.6	0.0	0.3

N_2=152, N_3=152, N_4=152)												
Mykolaiv (N_1=301, N_2=299, N_3=300, N_4=299)	64.6	24.2	10.6	0.5	77.2	15.6	7.0	0.3	52.3	26.2	20.9	0.8
Poltava (N_1=200, N_2=195, N_3=198, N_4=195)	71.5	23.5	2.5	0.3	86.0	5.5	7.5	0.2	64.5	21.0	12.0	0.5
Zaporizhzhia (N_1=200, N_2=201, N_3=201, N_4=201)	75.9	21.7	2.2	0.3	89.6	5.6	4.5	0.1	69.3	24.2	6.3	0.4
Zhytomyr (N_1=150, N_2=150, N_3=150, N4=150)	76.8	21.5	1.7	0.3	98.3	0.0	1.7	0.1	76.0	20.6	3.4	0.4
Donetsk (N_1=302, N_2=297, N_3=295, N_4=295)	69.2	19.8	8.7	0.4	85.4	7.0	4.6	0.2	62.5	21.8	12.8	0.6
Uzhgorod (N_1=150, N_2=150, N_3=148, N_4=148)	75.2	16.2	8.6	0.4	88.4	9.3	1.1	0.1	71.3	16.6	10.9	0.5
Vinnytsia (N_1=150, N_2=150, N_3=150, N_4=150)	80.0	12.9	7.1	0.3	80.4	10.0	9.7	0.3	70.2	14.0	15.7	0.6
Lugansk (N_1=150, N_2=151, N_3=151, N_4=151)	85.9	7.9	6.2	0.2	97.6	0.0	2.4	0.1	86.0	7.1	6.9	0.3
Odesa (N_1= 300, N_2=300, N_3=298, N_4=298)	99.0	0.6	0.3	0.0	88.4	3.7	7.3	0.2	87.8	4.4	7.3	0.2

* Ordered by the share of FSW who have had one permanent partner (from the biggest to the smallest).
** As far as RDSAT does not provide opportunity to calculate mean values, calculations for RDS cities were conducted in SPSS using weighs exported from RDSAT.
*** N_1 – weighted number of all respondent FSW (for columns, where % is given), N_2 – weighted number of respondent FSW who answered the question on the number of permanent partners (for calculation of mean value), N_3 – weighted number of respondent FSW who answered the question on the number of casual partners (for calculation of mean value),N_4 – weighted number of respondent FSW who answered the question on the number of non-commercial partners (for calculation of mean value).

2.4. Condom use practices

Use of condoms during sex with commercial partners

Using the survey results, the National indicator "Percentage of FSW, who have provided commercial sex services in the past 12 months and reported the use of condom during their most recent commercial sex contact" was calculated. As of 2011, the value of this indicator is 92% (95% confidence intervals – 91.2%-92.8%), which even exceeds the value of the indicator in 2008-2009 (88%, 95% confidence intervals – 87.3%-89.5%, $p<0.01$) (fig. 2.4.1).

The value of the national indicator does not have statistically significant differences between FSW under 25 years of age (89%) and FSW of 25+ years of age (88%, $p>0.05$), though it has somehow increased among both categories.

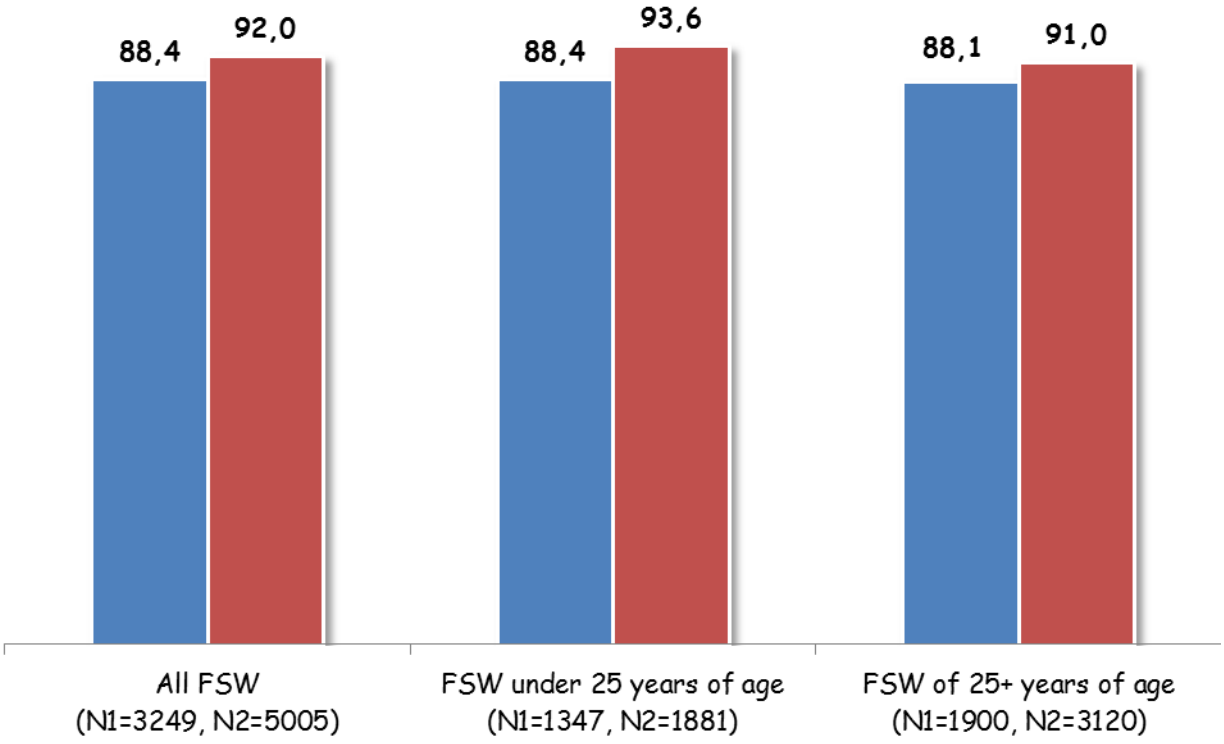


Fig. 2.4.1. **National indicator "Percentage of FSW, who have provided commercial sex services in the past 12 months and reported the use of condom during their most recent commercial sex contact", %**

In the national context the value of national indicator ranges from "only" 72% in case of FSW from Kyiv to 100% among FSW from Dnipropetrovsk and Kharkiv (see Table 2.4.1). The indicator of condom use is also quite high among certain age groups of FSW. Exceptions are only young FSW (under 25 years of age) of Ivano-Frankivsk, including the value of the indicator which makes up 58%.

Table 2.4.1

National indicator «Percentage of FSW, who have provided commercial sex services in the past 12 months and reported the use of condoms during their most recent commercial sex contact» (by regions)*, %

	All FSW		FSW under 25 years of age***		FSW of 25+years of age***	
	2008-2009	2011	2008-2009	2011	2008-2009	2011
Vinnytsia (N_1=150, N_2=150, N_3=42, N_4=76, N_5=108, N_6=74) ***	97.1	83.9	100.0	79.6	95.9	88.4
Dnipropetrovsk (N_1=100, N_2=300, N_3=39, N_4=141, N_5=61, N_6=159)**	77.7	100.0	88.3	100.0	70.4	100.0
Donetsk (N_1=150, N_2=302, N_3=49, N_4=63, N_5=101, N_6=239)	87.5	87.9	78.1	96.3	90.0	84.9
Zhytomyr (N_1=150, N_2=150, N_3=103, N_4=31, N_5=47, N_6=119)	79.3	99.4	77.7	97.0	83.0	100.0
Zaporizhzhia (N_1=150, N_2=200, N_3=29, N_4=50, N_5=121, N_6=150)	76.2	84.1	84.0	89.1	72.9	83.2
Ivano-Frankivsk (N_1=150, N_2=150,	83.3	84.5	88.0	57.5	81.0	92.2

N_3=50, N_4=33, N_5=100, N_6=117)						
Kyiv (N_1=255, N_2=300, N_3=50, N_4=88, N_5=205, N_6=208)	89.9	71.6	89.3	72.8	90.7	71.0
Kirovograd (N_1=100, N_2=150, N_3=41, N_4=45, N_5=59, N_6=105)	83.2	91.3	77.2	92.5	87.3	90.8
Lugansk (N_1=100, N_2=150, N_3=47, N_4=71, N_5=53, N_6=79)	91.4	99.2	94.9	100.0	87.2	98.3
Lutsk (N_1=100, N_2=150, N_3=49, N_4=63, N_5=51, N_6=87)	64.0	91.6	61.2	94.1	66.7	89.7
Lviv (N_1=95, N_2=200, N_3=45, N_4=65, N_5=50, N_6=135)	85.4	97.5	74.2	100.0	92.5	96.3
Mykolaiv (N_1=100, N_2=301, N_3=30, N_4=101, N_5=70, N_6=200)	98.0	97.7	100.0	99.0	97.1	97.0
Odesa (N_1=100, N_2=300, N_3=55, N_4=135, N_5=45, N_6=165)	97.1	99.5	97.3	100.0	96.7	99.0
Poltava (N_1=150, N_2=200, N_3=42, N_4=19, N_5=108, N_6=181)	83.3	79.0	90.5	89.5	80.6	77.9
Rivne (N_1=152, N_2=150, N_3=50, N_4=36, N_5=102, N_6=114)	95.8	91.5	96.2	88.8	95.6	92.4
Simferopol (N_1=150, N_2=300, N3=86, N_4=99, N_5=64, N_6=201)	100.0	98.7	100.0	99.2	100.0	98.5
Sumy (N_1=100, N_2=151, N_3=51, N_4=61, N_5=49, N_6=90)	86.0	97.1	84.3	94.6	87.8	97.9
Ternopil (N_1=150, N_2=150, N_3=80, N_4=109, N_5=70, N_6=41)	90.0	94.7	92.5	95.4	87.1	92.7
Uzhgorod (N_1=100, N_2=150, N_3=63, N_4=102, N_5=37, N_6=48)	74.0	91.9	73.0	94.4	75.7	86.5
Kharkiv (N_1=148, N_2=300, N_3=64, N_4=132, N_5=84, N_6=168)	97.1	100.0	98.8	100.0	93.5	100.0
Kherson (N_1=100, N_2=202, N_3=44, N_4=109, N_5=56, N_6=93)	95.0	94.4	90.9	96.6	98.2	91.8
Khmelnytskiy (N_1=101, N_2=150, N_3=46, N_4=65, N_5=55, N_6=85)	86.7	87.4	93.6	88.9	81.0	86.3
Cherkasy (N_1=95, N_2=150, N_3=29, N_4=43, N_5=66, N_6=107)	89.4	96.8	83.1	100.0	93.9	95.4
Chernivtsi (N_1=151, N_2=150, N_3=79, N_4=55, N_5=72, N_6=95)	97.4	93.2	98.7	94.8	95.8	92.2
Chernigiv (N_1=150, N_2=150, N_3=88, N_4=89, N_5=62, N_6=61)	92.2	78.9	90.6	83.5	96.0	74.2

* Ordered by the share of FSW, who were using condom during their most recent commercial sex contact among all FSW interviewed in 2011 (from the highest to the lowest).

** In some cases, the number of respondents for whom % was calculated is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of respondent FSW interviewed in 2008-2009, N_2 – weighted number of all respondent FSW interviewed in 2011, N_3 – weighted number of all respondent FSW under 25 years of age interviewed in 2008-2009, N_4 – weighted number of all respondent FSW under 25 years of age interviewed in 2011, N_5 – weighted number of all respondent FSW of 25+ years of age interviewed in 2008-2009, N_6 – weighted number of all respondent FSW of 25+ years of age interviewed in 2011.

It should be noted that even when the most recent contact was the oral one, 85% of FSW reported the use of condom (see Fig. 2.4.2).

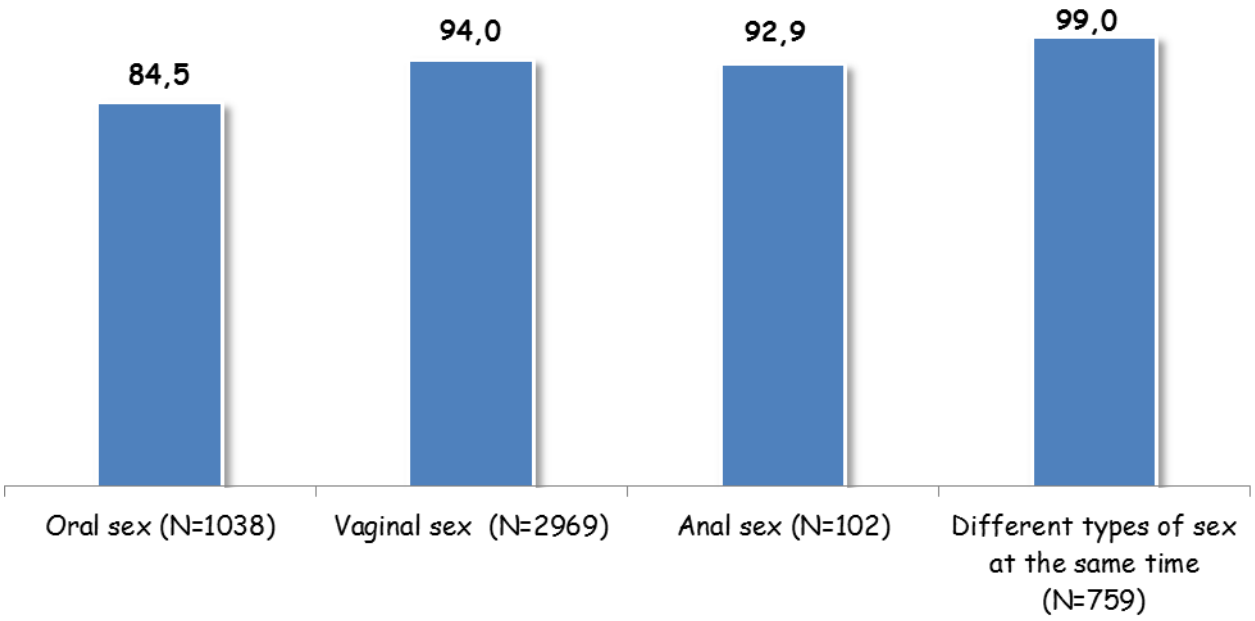


Fig. 2.4.2. **National indicator "Percentage of FSW, who have provided commercial sex services in the past 12 months and reported the use of condom during their most recent commercial sex contact" (according to the type of the most recent sex contact), %**

According to the survey, not less than nine tenth of FSW among certain categories (by main client seeking method, by being a client or a non-client of non-governmental organizations, by injecting drug use, by HIV status) used condoms during their last commercial contact.

However, at the same time a third of FSW (37%) is ready under certain circumstances (with permanent partners whom they know well, for additional payment, with clients whom they trust) to provide commercial sex services without a condom (see Fig. 2.4.3). Another 2% of FSW reported being always ready to provide sex services without condoms. Therefore, even though the absolute majority of FSW reported the use of condom during their most recent commercial sex contact, a significant part still assumes the possibility of its non-use..

It should be also noted that in general, as compared to 2008-2009, the number of those who would on no account agree to provide commercial sex services without condoms has increased from 47% up to 60% ($p<0.01$). Instead, the number of those who assume such a possibility under certain circumstances has decreased from 44% to 37% ($p<0.01$), and the number of those who are always ready for sex without condoms – from 7% to 2% ($p<0.01$). Thus, there is some positive dynamics on this issue in recent years.

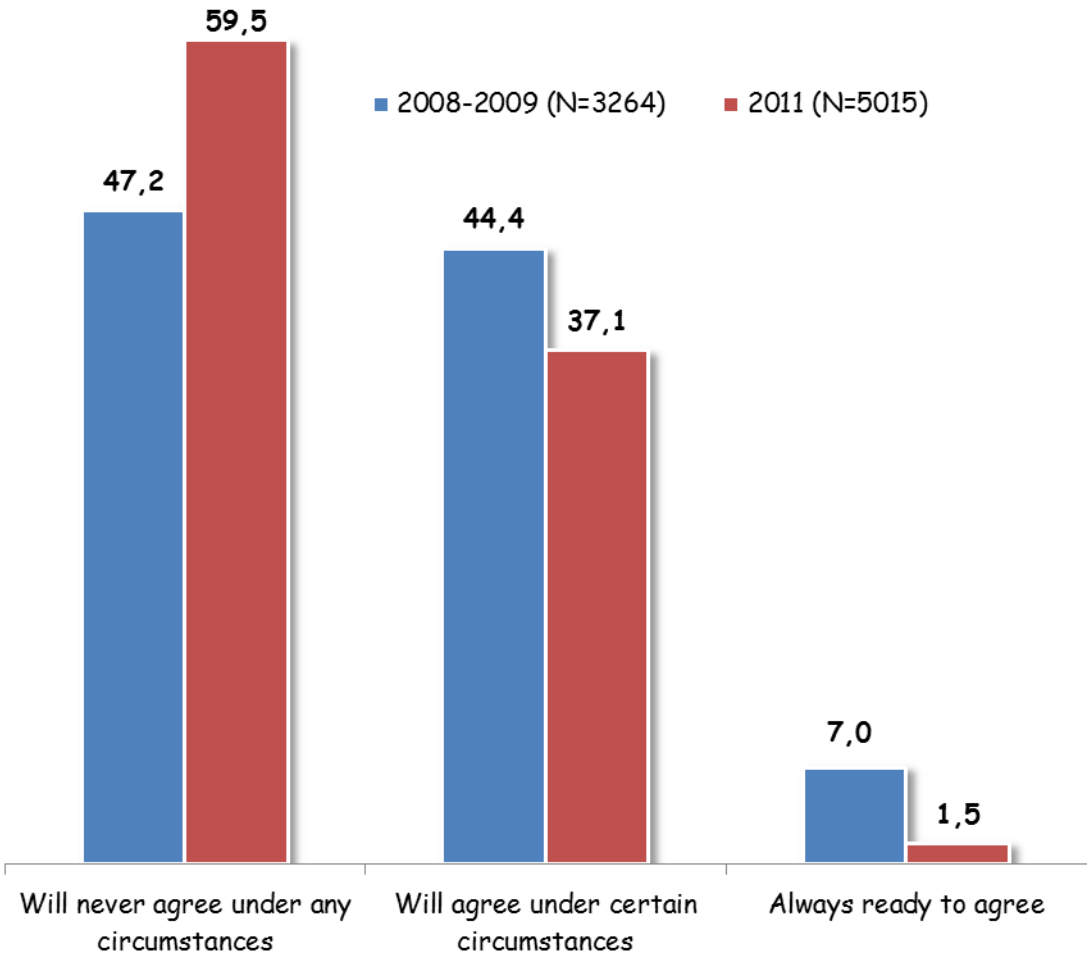


Fig. 2.4.3. **Possibility to provide sex services without condom use**, *%*

According to the data from Table 2.4.2, orientation on the constant use of condoms vary significantly from city to city. Thus, the biggest share of FSW who would never agree under any circumstances to provide sex services without condoms is in Zhytomyr and Dnipropetrovsk (96% and 95% correspondingly). The smallest share of such FSW is in Uzhgorod (12%) and Chernigiv (8%).

Table 2.4.2

Possibility to provide sex services without condom use (by regions)*, %

	Always ready to agree	Will agree under certain circumstances	Will never agree under any circumstances
Zhytomyr (*N*=150)	0.0	3.8	96.2
Dnipropetrovsk (*N*=300)	0.0	4.6	95.1
Odesa (*N*=300)	0.3	9.0	87.8
Chernivtsi (*N*=150)	0.0	19.3	80.7
Simferopol (*N*=300)	0.2	26.4	73.4
Ternopil (*N*=150)	0.7	26.7	72.7
Kharkiv (*N*=300)	6.8	23.9	69.3
Mykolaiv (*N*=301)	0.3	28.9	69.1
Kherson (*N*=202)	3.9	26.7	69.0

Kirovograd (*N*=150)	0.7	21.9	68.1
Lviv (*N*=200)	0.0	34.5	65.0
Vinnytsia (*N*=150)	0.6	34.7	64.6
Cherkasy (*N*=150)	1.4	33.0	61.8
Donetsk (*N*=302)	0.2	39.9	56.9
Lutsk (*N*=150)	0.0	43.5	56.5
Sumy (*N*=150)	0.0	46.6	53.4
Kyiv (*N*=300)	5.2	48.8	45.4
Khmelnytskiy (*N*=150)	0.0	47.6	41.8
Poltava (*N*=200)	0.0	44.5	40.0
Zaporizhzhia (*N*=200)	2.8	58.4	38.5
Rivne (*N*=150)	1.5	66.5	32.0
Lugansk (*N*=150)	0.5	68.4	31.1
Ivano-Frankivsk (*N*=150)	1.8	71.8	21.2
Uzhgorod (*N*=150)	7.0	80.9	11.5
Chernigiv (*N*=150)	0.0	94.4	5.6

* Ordered by the share of FSW who would under no circumstances agree to provided sex services without condoms (from the biggest to the smallest).

Situation with readiness to provide commercial sex services without use of condoms is almost the same among certain categories of FSW. It should be just noted that among clients of non-governmental organizations there are more FSW who would under no circumstances agree to have sex without condoms– 67% as compared to 60% among non-clients ($p<0.01$). Attention should be also paid to the fact that a third of FSW (31%), who were tested for HIV and knew being HIV-positive, suggests the opportunity of providing commercial sex services without condoms.

If talking about real practices of non-use of condoms, the most popular reason is commercial partner's insisting – 39% of FSW who did not use condom during the last time, noted this reason (see Fig. 2.4.4). Other reasons for non-use of condoms are much less widespread.

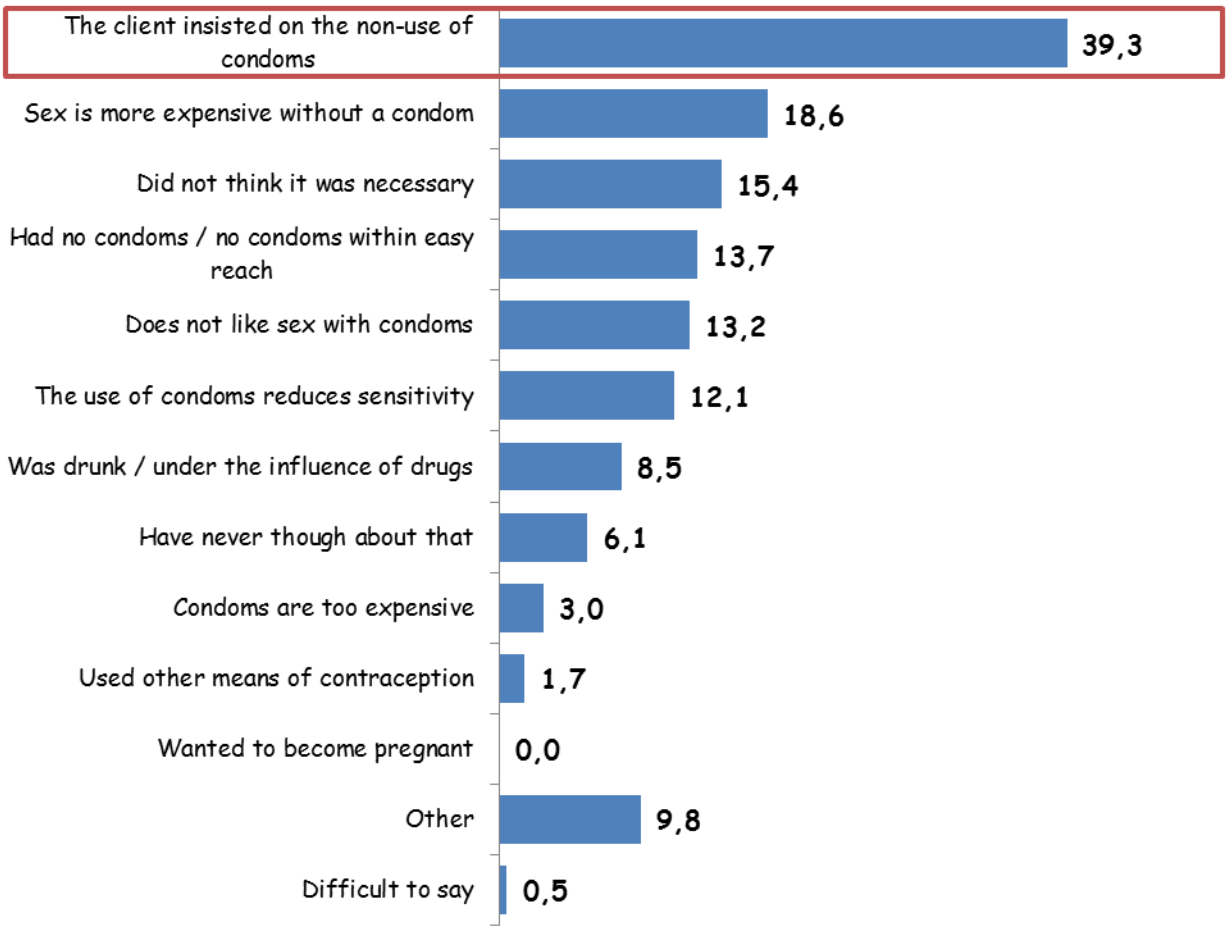


Fig. 2.4.4. **Reasons for non-use of condoms during the most recent commercial sex contact,** *% (N=355)*

If consider that the experience of condom use during the most recent sex contact is the correct indicator of general condom use practices, quite an optimistic picture emerges. However, condoms will become an effective barrier from HIV infection only in case of their regular use. According to the survey, 58% of FSW have always used condoms during oral sex with commercial partners within the last month, 74% have used them during vaginal sex and 68% have used them during anal sex (figures were calculated among those, who had provided such services) (see Fig. 2.4.5). On the one hand, the indicator is high enough, but on the other hand, quite a lot of FSW practice irregular condom use.

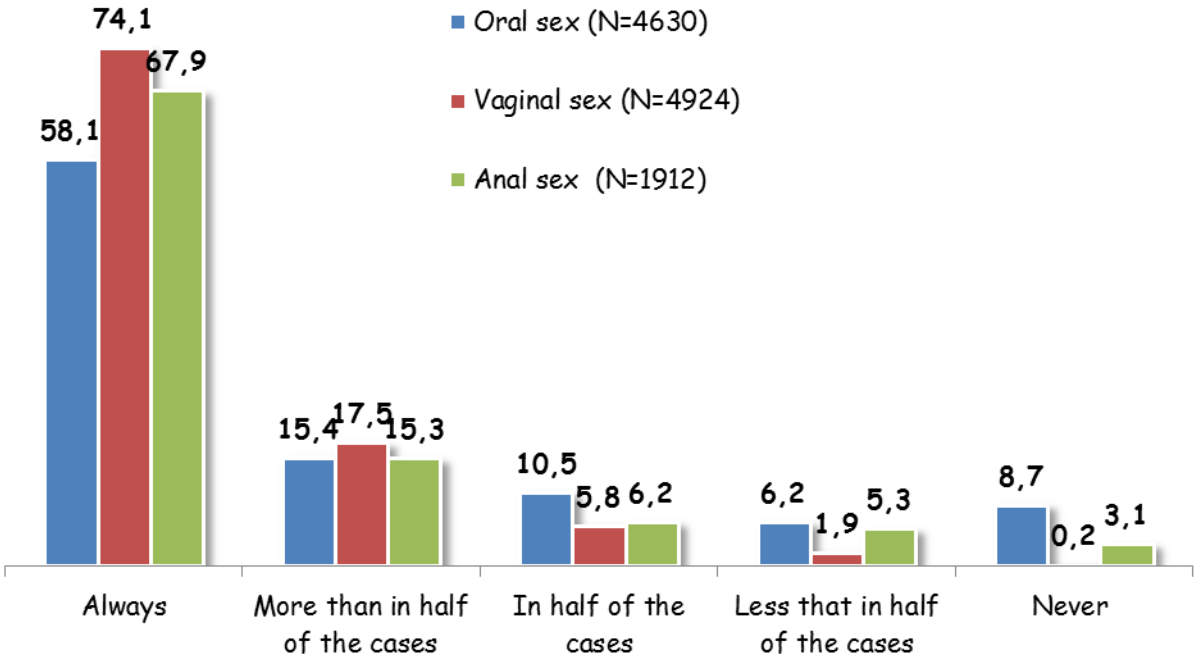


Fig. 2.4.5.**Frequency of condom use with commercial partners within the last month (among those, who have provided such services)**, *%*

The Table 2.4.3 below presents data on the regular condom use with commercial partners by regions. As it can be seen, in most cities no less than three thirds of FSW always use condoms when having sex with commercial partners. However, attention should be paid to three cities with especially low level of regular condom use – Uzhgorod, Lugansk and Chernigiv. Thus, only 36% of FSW in Uzhgorod have always used condoms during vaginal sex and only 26% have used condoms during anal sex with commercial partners. Similar figures for FSW from Lugansk make up 25% and 18% correspondingly and for FSW from Chernigiv – 24% and 32% correspondingly. However, it should be also noted that according to the survey, HIV prevalence in these cities is one of the lowest (see next chapter).

Table 2.4.3

Share of FSW who have always used condoms with commercial partners (by regions)*, %

	Oral sex	Vaginal sex	Anal sex***
Odesa (N_1=299, N_2=298, N_3=9)***	98.3	98.7	---
Kharkiv (N_1=297, N_2=300, N_3=74)	82.4	98.6	82.0
Dnipropetrovsk (N_1=292, N_2=300, N_3=45)	91.7	97.8	100.0
Zhytomyr (N_1=149, N_2=150, N_3=92)	95.9	97.5	99.0
Ternopil (N_1=111, N_2=150, N_3=88)	60.4	92.7	94.3

Lviv (N_1=199, N_2=200, N_3=97)	69.3	90.7	94.2
Chernivtsi (N_1=96, N_2=150, N_3=6)	64.0	89.1	---
Mykolaiv (N_1=295, N_2=301, N_3=172)	63.7	87.7	89.0
Sumy (N_1=135, N_2=149, N_3=81)	36.9	81.7	56.7
Kirovograd (N_1=131, N_2=136, N_3=32)	70.5	80.7	84.4
Vinnytsia (N_1=145, N_2=150, N_3=61)	64.8	78.8	74.6
Simferopol (N_1=297, N_2=299, N_3=57)	87.9	76.8	96.4
Khmelnytskiy (N_1=143, N_2=147, N_3=44)	60.2	75.9	82.0
Kherson (N_1=197, N_2=202, N_3=47)	68.5	75.6	64.6
Cherkasy (N_1=144, N_2=148, N_3=70)	23.1	72.6	75.8
Rivne (N_1=148, N_2=149, N_3=54)	54.4	71.9	84.9
Lutsk (N_1=149, N_2=150, N_3=122)	38.4	64.3	71.1
Donetsk (N_1=277, N_2=298, N_3=149)	34.6	61.5	49.3
Zaporizhzhia (N_1=186, N_2=197, N_3=89)	40.4	59.8	51.0
Poltava (N_1=197, N_2=199, N_3=134)	44.2	55.8	47.8
Kyiv (N_1=247, N_2=264, N_3=149)	34.1	52.8	62.5
Ivano-Frankivsk (N_1=121, N_2=145, N_3=37)	23.8	46.7	40.0
Uzhgorod (N_1=107, N_2=148, N_3=104)	5.3	35.9	26.4
Lugansk (N_1=150, N_2=150, N_3=31)	21.4	24.7	17.0
Chernigiv (N_1=150, N_2=150, N_3=108)	0.8	24.8	31.7

* Ordered by the share of FSW who have always used condoms during vaginal sex with clients (from the biggest to the smallest).

** «---» means that there are not enough FSW in the city sample, who have provided anal sex services, for reliable statistical calculations. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of all respondent FSW, who have provided oral sex services within the last month, N_2 – weighted number of respondent FSW, who have provided vaginal sex services within the last month, N_3 – weighted number of respondent FSW, who have provided anal sex services within the last month.

In general, prevalence of the regular condom use practice with commercial partners is quite similar among FSW different by age, main client seeking method, injecting and non-injecting drug users, HIV-negative and HIV-positive FSW. The most noticeable differences concern clients and non-clients of non-governmental organizations. Thus, if 83% of FSW among clients of non-governmental organizations always use condoms when having sex with commercial partners, 64% of FSW among non-clients do this ($p<0.01$). As far as anal sex is concerned, relative indicators make up 80% and 57% correspondingly ($p<0.01$), oral sex – 71% and 43% ($p<0.01$).

Attention should be paid that only 65% of FSW who are injecting drugs users, have always used condoms during vaginal sex with clients and 57% during anal sex. As far as HIV epidemics among FSW is concentrated first of all in the subgroup of injecting drug users, exactly these FSW who are at the same time can be not characterized as those who regularly use condoms, should be a special target for prevention programmes. The survey results also showed that only 72% of FSW who had known about their HIV-positive status before interview conduction, always used condoms during vaginal sex and only 76% of them used them during anal sex.

In addition to regular condom use there is also one more condition in order the condoms are the reliable protection – correctness of their use. However, every third FSW (35%) reported having had some cases of condom misuse during contacts with commercial partners[9] within the last month (see Fig. 2.4.6). The most widespread situation of condom misuse was a condom tearing or slipping off – such cases were mentioned by every fourth FSW (26%). 11% of FSW reported having an experience of condom putting on after the start of sexual intercourse and 9% - cased of continued sex after the condom was removed.

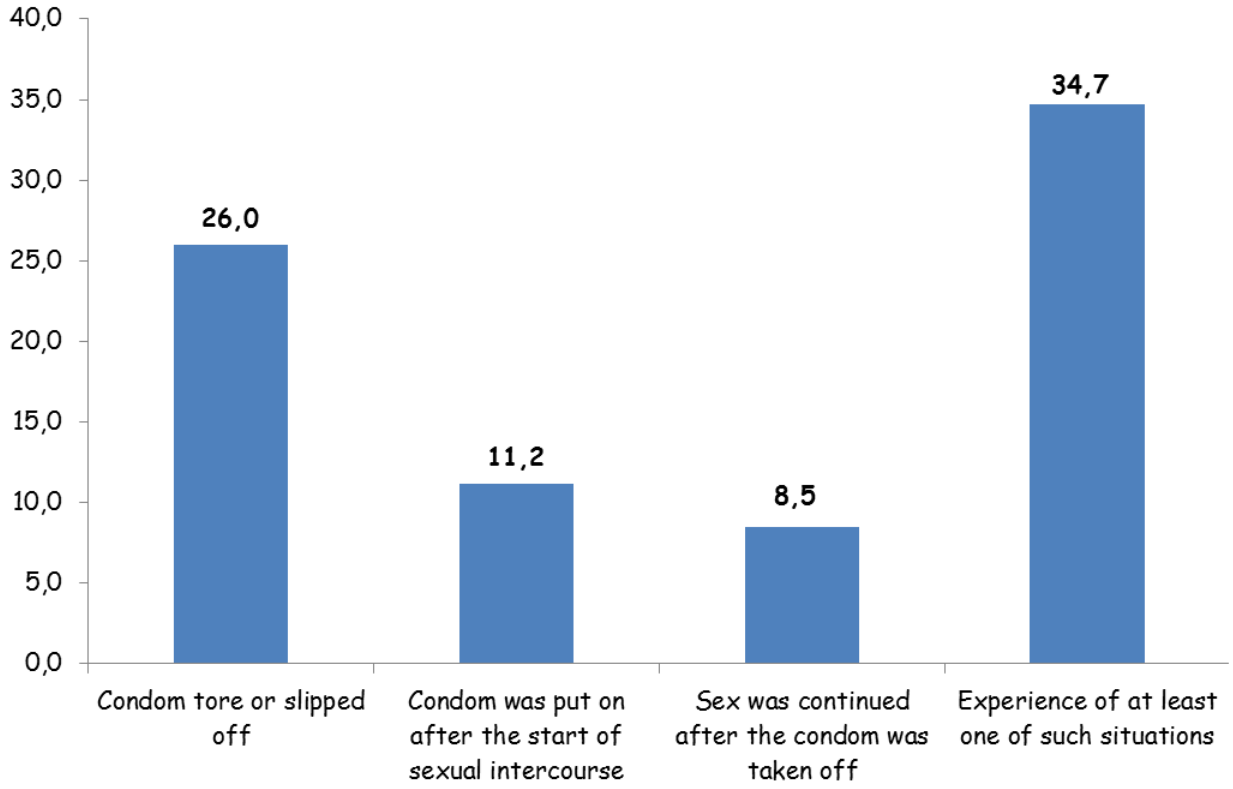


Fig. 2.4.6. **Prevalence of experience regarding misuse of condoms with commercial partners (among those, who have used condoms at all within the last month),** *% (N=4938)*

In this regard the most problematic situation is in Lviv, where 59% of FSW had an experience of at least one situation of condom misuse (see Table 2.4.4). The least problematic is the situation in Zhytomyr, where only 10% had such an experience. In general, cases of a condom tearing or slipping off are the most common. Though, Kyiv and Lugansk stand out against all other cities – 42% and 38% of FSW had an experience of condom putting on before the start of sexual intercourse (in other cities prevalence of such situations mostly does not exceed one fifth from the total amount).

[9]Index was calculated only among FSW who did not deny condom use during sex with commercial partners. According to the survey, only 1% of FSW who have had commercial partners within the last week, have never used condoms.

Table 2.4.4

Prevalence of experience regarding misuse of condoms with commercial partners (among those, who have used condoms at all within the last month) (by regions)*, %

	Condom tore or slipped off	Condom was put on after the start of sexual intercourse	Sex was continued after the condom was taken off	Experience of at least one of such situations
Lviv (*N*=200)	51.9	18.9	7.4	58.7
Kyiv (*N*=265)	30.4	20.2	22.3	51.4
Chernigiv (*N*=150)	20.2	41.7	13.4	49.4
Zaporizhzhia (*N*=197)	36.6	14.1	23.1	47.7
Donetsk (*N*=298)	32.5	17.6	15.3	45.2
Kherson (*N*=202)	36.5	16.0	13.5	44.8
Lugansk (*N*=150)	6.6	38.0	5.5	43.4
Mykolaiv (*N*=301)	38.5	5.3	2.0	40.8
Uzhgorod (*N*=148)	24.1	14.9	13.9	40.4
Cherkasy (*N*=148)	26.3	12.3	9.9	39.2
Khmelnytskiy (*N*=147)	35.2	6.7	9.9	38.4
Sumy (*N*=150)	21.6	8.7	19.4	38.1
Ivano-Frankivsk (*N*=145)	33.2	2.5	8.8	36.9
Dnipropetrovsk (*N*=300)	36.5	1.1	1.4	36.5
Rivne (*N*=150)	15.9	22.7	5.0	36.0
Vinnytsia (*N*=150)	30.4	20.0	19.9	35.8
Chernivtsi (*N*=150)	29.3	6.2	4.1	34.8
Poltava (*N*=199)	19.1	14.1	12.1	30.2
Kirovograd (*N*=143)	17.6	7.4	4.1	23.5
Odesa (*N*=300)	22.4	1.0	1.0	22.6
Kharkiv (*N*=300)	18.7	4.0	1.1	20.3
Ternopil (*N*=150)	12.0	4.7	6.7	17.3
Lutsk (*N*=150)	13.1	3.9	0.0	14.5
Simferopol (*N*=300)	12.4	0.5	1.8	14.1
Zhytomyr (*N*=150)	9.5	1.3	0.6	10.1

* Ordered by the share of FSW who have had any experience of condom misuse (from the highest to the lowest).

The experience of situations of condom misuse is approximately the same among certain categories of FSW.

Condom use during sex with permanent partners

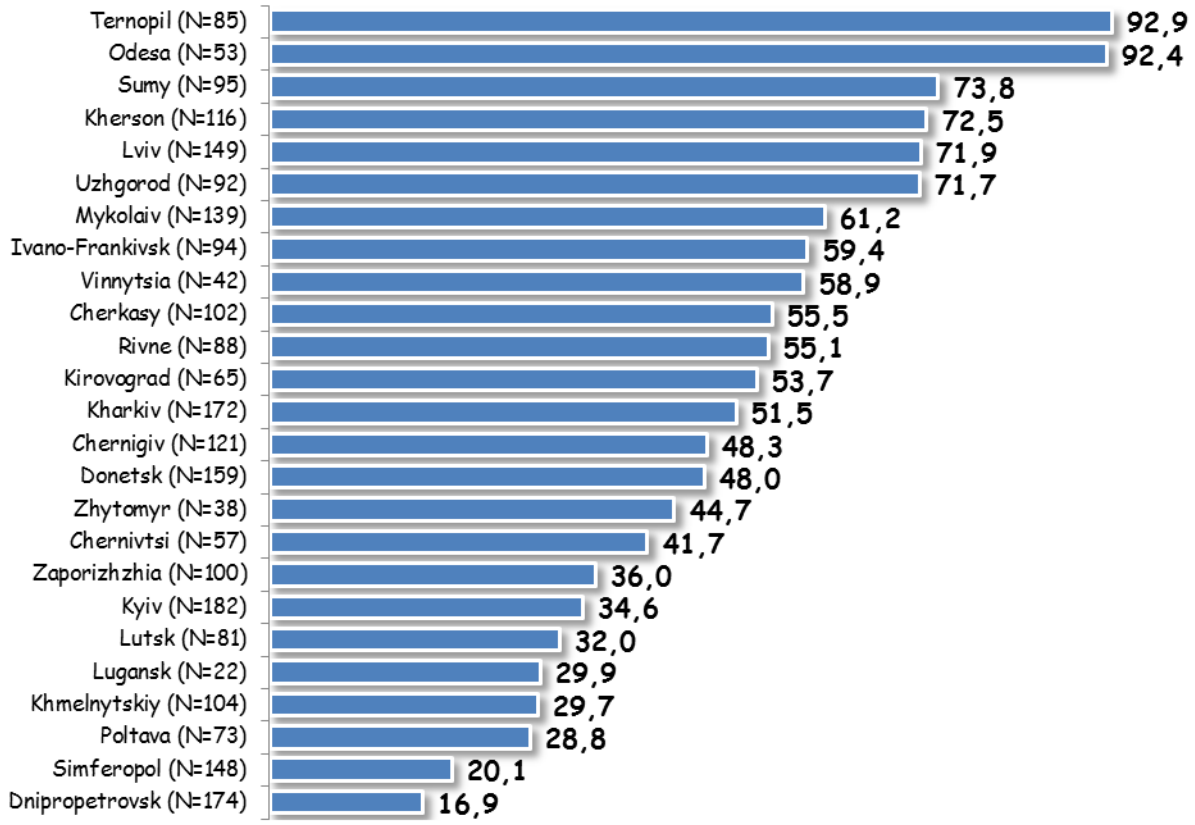
If in case of commercial partners there is a clear orientation on condom use, then in case of permanent partners prevalence of condom use experience is significantly lower. Thus, 50% of FSW who have had permanent partners within the last year, reported condom use during the most recent sex contact (see Fig. 2.4.7). This figure is even somewhat lower as compared to the previous survey – 59% of FSW reported condom use during the most recent sex contact in 2008-2009 ($p<0.01$).

There are a bit more of those, who used condom during their most recent sex contact, among younger FSW – 56% among FSW under 25 years of age as compared to 47% of FSW of 25+ years of age ($p<0.01$). Though, there is decrease in condom use among both age groups as compared to 2008-2009 ($p<0.01$).

** N_1 – weighted number of respondent FSW from a corresponding group, interviewed in 2008-2009, N_2 – weighted number of respondent FSW from a corresponding group, interviewed in 2011.

Fig. 2.4.7. **Condom use during the most recent sex contact with a permanent partner among FSW, who have had such partners within the last year, %**

Condom use practices with permanent partners vary significantly according to the city, reaching maximum in Ternopil, where 93% of FSW reported condom use during the most recent sex contact, and minimum in Dnipropetrovsk, where only 17% used condoms (see Fig. 2.4.8).



* In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

Fig. 2.4.8. **Condom use during the most recent sex contact with a permanent partner among FSW, who have had such partners within the last year (by regions), %**

FSW who mostly find clients at hotels, bars, in saunas etc. use condoms more often (60% as compared to 49% among “street” FSW and 43% among FSW, who find clients via telephone, Internet, $p<0.01$), although their usage level is significantly inferior to the level of condom use when having sex with commercial partners. It should be also noted that whereas there were significant differences of condom use practices between clients and non-clients of non-governmental organizations, there is no such difference in case of permanent partners (49% as compared to 52%, $p>0.05$).

Practices of injecting drug users and HIV-positive FSW can be considered the most dangerous, as exactly these groups largely “promote” the spread of epidemics. Thus, only 45% used condom during the most recent sex contact with a permanent partner among injecting drug users. Even though according to this indicator, FSW who are injecting drug users are not much inferior to FSW in general, special risks of this group should be taken into account. The corresponding indicator among HIV-positive FSW (determined by test results) makes up 52% and 60% among HIV-positive FSW, who have already known their status before the interview.

Main reasons for condom non-use with permanent partners are the following: FSW did not like sex with condoms (31% pointed this option), did not think it was necessary (24%), trusted or knew the partner very well or were sure in the partner (21%) (see Fig. 2.4.9). Attention should be paid to low prevalence of such reasons as absence of a condom within easy reach (3%) and the fact that condoms are too expensive (1%). In other words, the main reason for condom non-use is the psychological one.

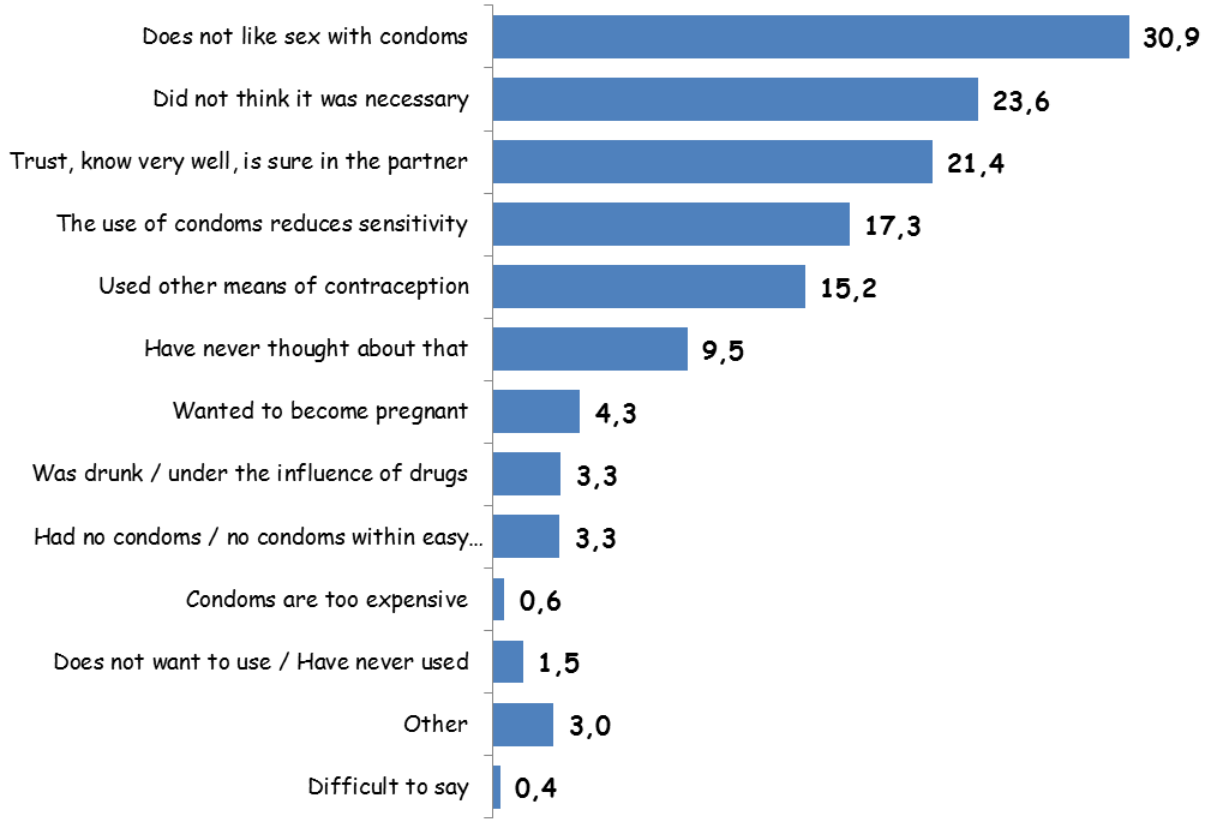


Fig. 2.4.9. **Reasons for condom non-use during the most recent sex contact with a permanent partner,** *% (N=1225)*

If talk about the frequency[10] of condom use with regular partners, the situation is even worse – only 37% of FSW always use condoms during vaginal sex with a regular

[10]In the survey toolkit an inaccuracy was admitted connected with the estimation of the frequency of condom use with different types of partners. Thus, before asking about the frequency of condom use during certain types of sex, there were questions concerning the experience of condom misuse with these partners. If a respondent answered to the last question that she had never used condoms, questions on the frequency of condom use with these partners were omitted. Apparently, even if it is clear that such FSW never use condoms, but it is not clear what types of sex they have practiced (because it can be only found out when asking about the frequency of condom use which included the alternative option – "did not practice this type of sex"). In case of commercial partners it is quite justified to ignore such FSW who have never used condoms, but it is still not clear what sex services they provided, because there are very few of them (only 1% out of all FSW).
However, it cannot be done so in case of permanent and casual partners as many FSW reported not using condoms with them. In order to find at least partial solution of the problem, data on the frequency of condom use were calculated in the following way. It was assumed that the prevalence of certain practices among FSW who reported having never used condoms is the same as among those FSW for whom we have relevant information. Apparently it was calculated for each separate type of sex how many FSW should be added to the category "never" and to the denominator. In other words, we estimated how many

partner and only 36% - during anal sex (see Fig. 2.4.10). At the same time there are correspondingly 32% and 36% of those who do not use condoms.

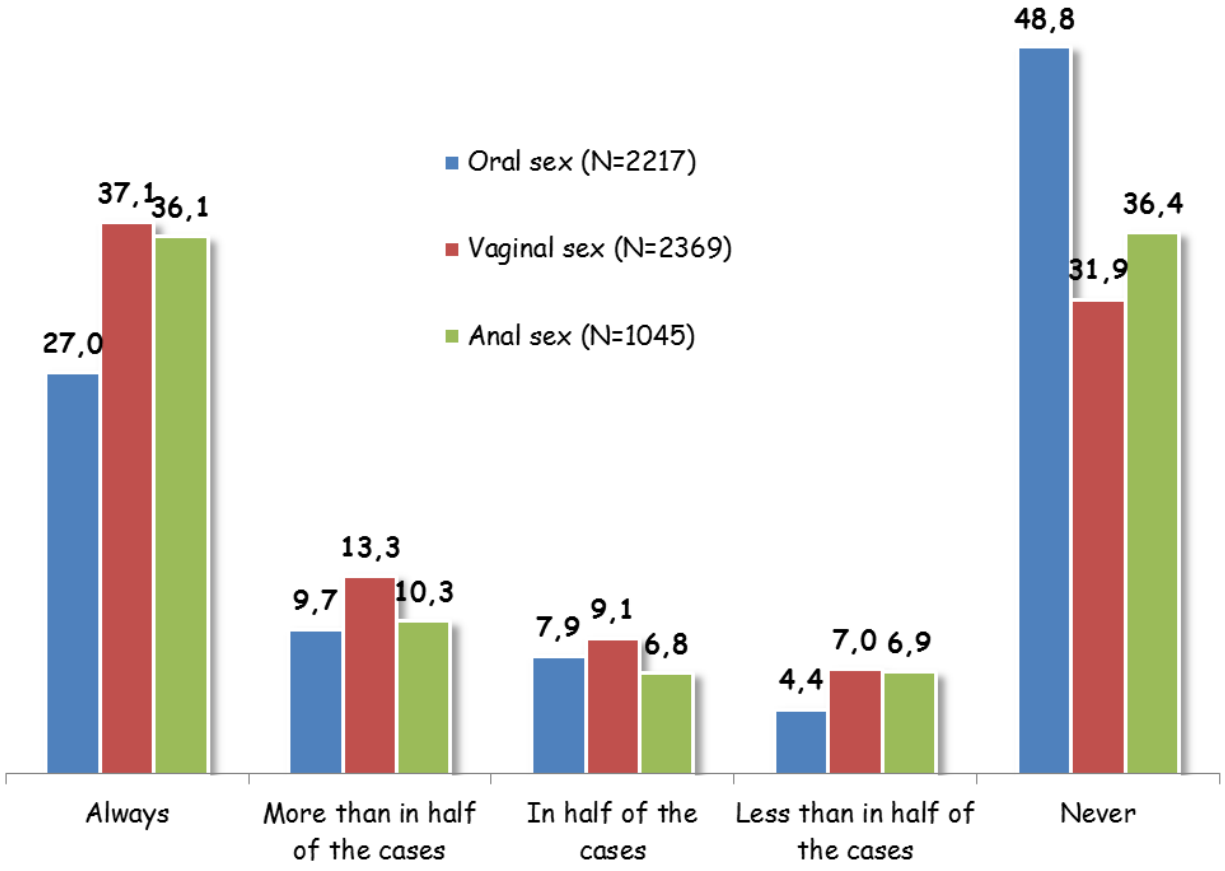


Fig. 2.4.10.**Frequency of condom use with permanent partners within the last month (among those, who have had corresponding sex with their permanent partner), %**

The Table 2.4.5 below shows that the situation is much different in different cities. For example, in case of vaginal sex the relatively best situation is in Odesa and Ternopil, where 87% and 86% of FSW correspondingly always use condoms with permanent partners. The worst situation is in Dnipropetrovsk and Simferopol, where 76% and 77% of FSW correspondingly never use condoms during vaginal sex with permanent partners.

Table 2.4.5

Share of FSW who always / never use condoms with a permanent partner (by regions)*, %

	Oral sex	Vaginal sex	Anal sex***

of those for whom we did not have necessary information, theoretically practiced appropriate type of sex and increased the denominator by this number. The same number should have been added to the category “never”, because these FSW immediately indicated having never used condoms.

	Always	Never	Always	Never	Always	Never
Odesa (N_1=29, N_2=29, N_3=2)***	81.1	13.2	86.7	5.1	---	---
Ternopil (N_1=80, N_2=85, N_3=65)	69.0	22.2	85.9	5.9	94.1	5.9
Lviv (N_1=145, N_2=149, N_3=30)	53.5	24.2	65.7	13.2	63.1	12.6
Kherson (N_1=115, N_2=115, N_3=17)	62.5	28.6	65.2	15.3	---	---
Mykolaiv (N_1=135, N_2=136, N_3=83)	37.9	14.8	62.6	2.9	70.6	4.3
Vinnytsia (N_1=36, N2=36, N_3=23)	37.7	39.7	51.1	29.0	58.5	37.3
Kharkiv (N_1=170, N_2=171, N_3=40)	41.1	4.0	48.4	0.7	63.1	13.3
Sumy (N_1=81, N_2=91, N_3=52)	26.7	38.1	48.0	22.9	38.1	33.2
Kirovograd (N_1=61, N_2=63, N_3=17)	33.6	47.1	46.0	42.7	52.5	42.7
Chernivtsi (N_1=27, N_2=57, N_3=5)	25.8	61.5	41.1	51.7	---	---
Zhytomyr (N_1=37, N_2=37, N_3=12)	36.8	60.6	36.8	51.7	48.1	44.1
Rivne (N_1=69, N_2=74, N_3=27)	26.8	46.6	35.9	33.1	50.2	27.2
Zaporizhzhia (N_1=77, N_2=85, N_3=39)	27.1	37.1	31.9	34.1	33.7	32.3
Donetsk (N_1=132, N_2=141, N_3=76)	23.4	47.0	31.7	29.1	25.6	34.2
Cherkasy (N_1=81, N_2=85, N_3=47)	11.7	81.4	28.2	38.9	25.1	46.2
Lutsk (N_1=66, N_2=66, N_3=49)	14.1	71.6	27.6	65.3	32.2	65.3
Ivano-Frankivsk (N_1=72, N_2=93, N_3=16)	15.5	50.4	24.6	5.9	28.0	21.7
Khmelnytskiy (N_1=103, N_2=103, N_3=22)	19.6	68.3	24.2	65.4	17.3	65.4
Uzhgorod (N_1=69, N_2=88, N_3=74)	0.0	41.3	22.6	6.0	8.8	10.2
Poltava (N_1=67, N_2=68, N_3=61)	13.5	62.5	20.6	35.3	19.7	55.7
Kyiv (N_1=179, N_2=178, N_3=125)	12.4	75.8	19.4	55.6	26.0	59.1
Chernigiv (N_1=112, N_2=112, N_3=80)	1.0	68.5	17.4	5.7	26.3	6.0
Dnipropetrovsk (N_1=119, N_2=136, N_3=20)	9.3	81.4	12.8	75.9	9.1	75.9
Simferopol (N_1=118, N_2=134, N_3=12)	5.9	91.1	6.0	77.2	22.8	77.2
Lugansk (N_1=23, N_2=23, N_3=9)	0.0	60.8	2.8	60.8	---	---

* Ordered by the share of FSW who have always used condoms during vaginal sex with permanent partners (from the biggest to the smallest).

** «---» means that there are not enough FSW in the city sample, who have provided anal sex services, for reliable statistical calculations. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of all respondent FSW, who have had oral sex with permanent partners within the last month, N_2 – weighted number of respondent FSW, who have had vaginal sex with permanent partners within the last month, N_3 – weighted number of respondent FSW, who have had anal sex with permanent partners within the last month.

In general, the level of condom use with permanent partners is quite similar among different groups of FSW. Though, it should be still noted that it is higher among clients of non-governmental organizations – 42% among them always use condoms during vaginal sex with permanent partners (as compared to 32% among FSW who are not clients of non-governmental organizations, $p<0.01$) and 45% during anal sex (as compared to 30%, $p<0.01$). Younger FSW (under 25 years of age) as well as FSW who mostly find clients at hotels, bars, in saunas etc. are also characterized by a higher level of condom use.

Attention should be also paid to the fact that only 39% of FSW, who have known their HIV-positive status before the interview, always use condoms during vaginal sex with permanent partners, while 30% do not use them at all (similar values are for anal sex – 44% and 30% correspondingly). On the whole, only 40% of HIV-positive FSW always use condoms during vaginal sex with permanent partners, 35% never use them (for anal sex – 37% and 43% correspondingly). In another very risk group of injecting drug users indexes for vaginal sex make up only 36% and 38% correspondingly, for anal sex – 34% and 49% correspondingly.

Situations of condom misuse are very common during sex with permanent partners. Thus, 41% of FSW have got into one of such situations within the last month (see Fig. 2.4.11). The following cases are common to some similar extent: when a condom tore or slipped off (21%), when a condom was put on after the start of sexual intercourse (22%), when sex was continued after condom was taken off.

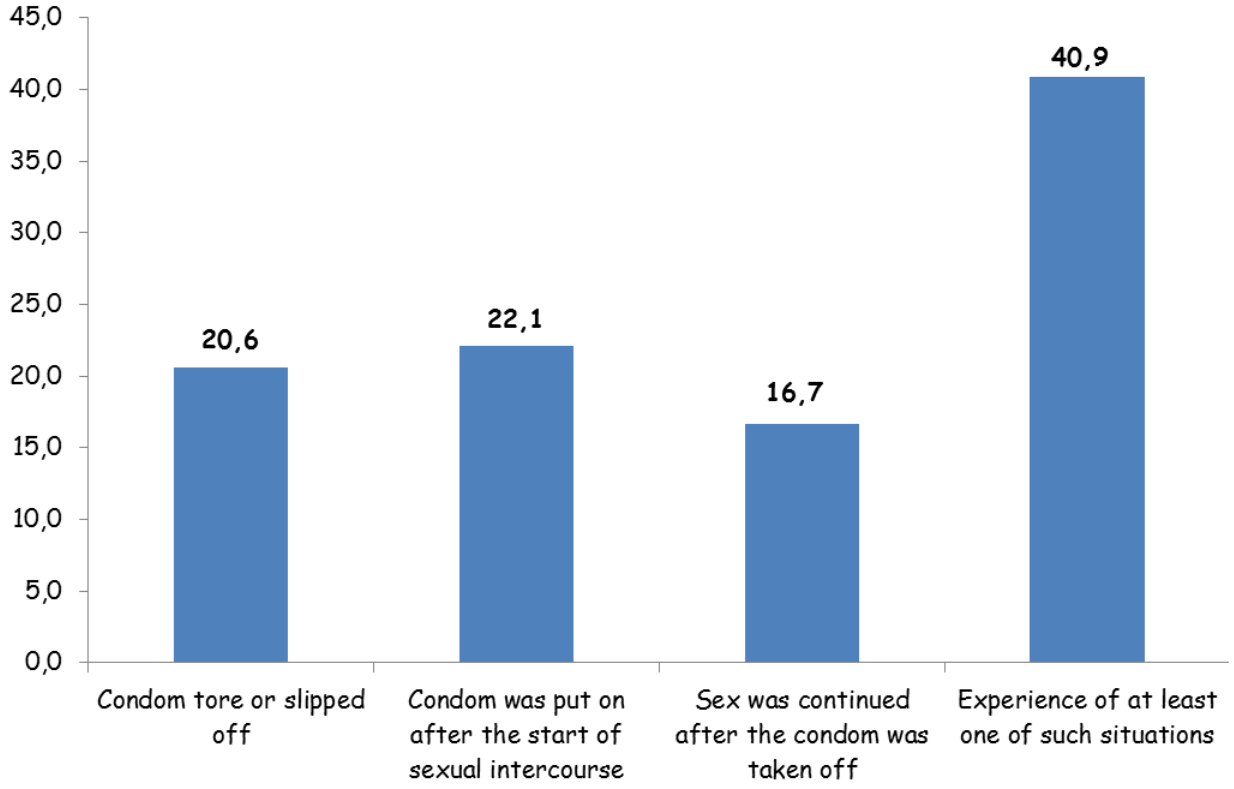


Fig. 2.4.11. **Prevalence of experience regarding misuse of condoms with permanent partners (among those, who have used condoms at all within the last month),** *% (N=1648)*

There is significant variability in experience of condom misuse with permanent partners by regions. Thus, Kharkiv and Dnipropetrovsk are the “leaders” by prevalence of such experience, where 59% and 56% of FSW correspondingly had experience of at least one of such situations (see Table 2.4.6). The least common experience is among FSW from Rivne (10%) and Odesa (14%).

Table 2.4.6

Prevalence of experience regarding misuse of condoms with permanent partners (among those, who have used condoms at all within the last month) (by regions)*, %**

	A condom tore or slipped off	A condom was put on after the start of sexual intercourse	Sex was continued after condom was taken off	Experience of at least one of such situations
Kharkiv (N=170)**	18.6	41.6	19.3	58.6
Dnipropetrovsk (N=33)	38.5	43.9	48.4	56.2
Mykolaiv (N=135)	40.1	24.4	21.4	52.7
Lviv (N=130)	34.0	28.7	17.5	52.6
Donetsk (N=103)	27.4	26.6	11.3	50.4
Kyiv (N=81)	16.9	30.2	24.5	48.8
Chernigiv (N=107)	5.5	42.9	11.3	49.5
Sumy (N=71)	26.5	15.5	32.0	46.2
Poltava (N=48)	12.5	31.3	27.1	41.7
Cherkasy (N=55)	24.6	22.4	14.1	38.4
Zaporizhzhia (N=58)	24.5	14.6	21.8	41.7
Ivano-Frankivsk (N=88)	19.6	5.2	14.0	35.7
Kherson (N=102)	22.5	12.3	15.3	35.3
Vinnytsia (N=25)	26.5	7.6	15.2	34.1
Chernivtsi (N=28)	23.5	5.5	8.2	31.8
Khmelnytskiy (N=36)	21.9	2.7	17.4	30.9
Simferopol (N=31)	2.0	10.6	23.6	29.5
Uzhgorod (N=84)	19.5	11.1	21.2	29.5
Kirovograd (N=37)	4.6	17.0	2.8	21.6
Odesa (N=28)	14.3	0.0	0.0	14.3
Ternopil (N=80)	2.5	6.3	6.3	12.5
Rivne (N=54)	3.0	6.5	0.0	9.5
Lutsk (N=23)	3.8	0.0	0.0	3.8
Zhytomyr (N=20)	0.0	0.0	0.0	0.0
Lugansk (N=9)	---	---	---	---

* Ordered by the share of FSW who have had any experience of condom misuse (from the highest to the lowest).

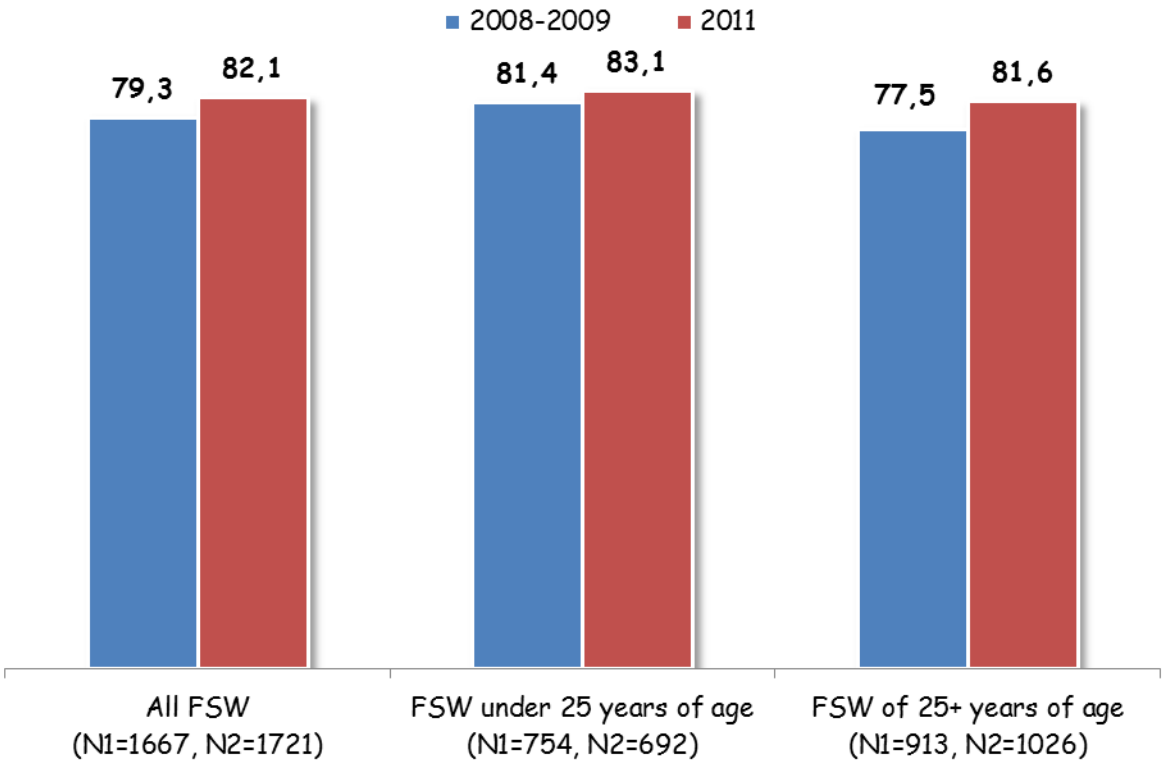
** «---» means that there are not enough FSW in the city sample, who have reported condom use with permanent partners, for reliable statistical calculations. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

Experience of situations of condom misuse is quite similar among certain groups of FSW.

Condom use during sex with casual partners

Condom use with casual partners, as can be seen below on Figure 2.4.12, holds the relatively “intermediate” position between condom use with commercial and permanent

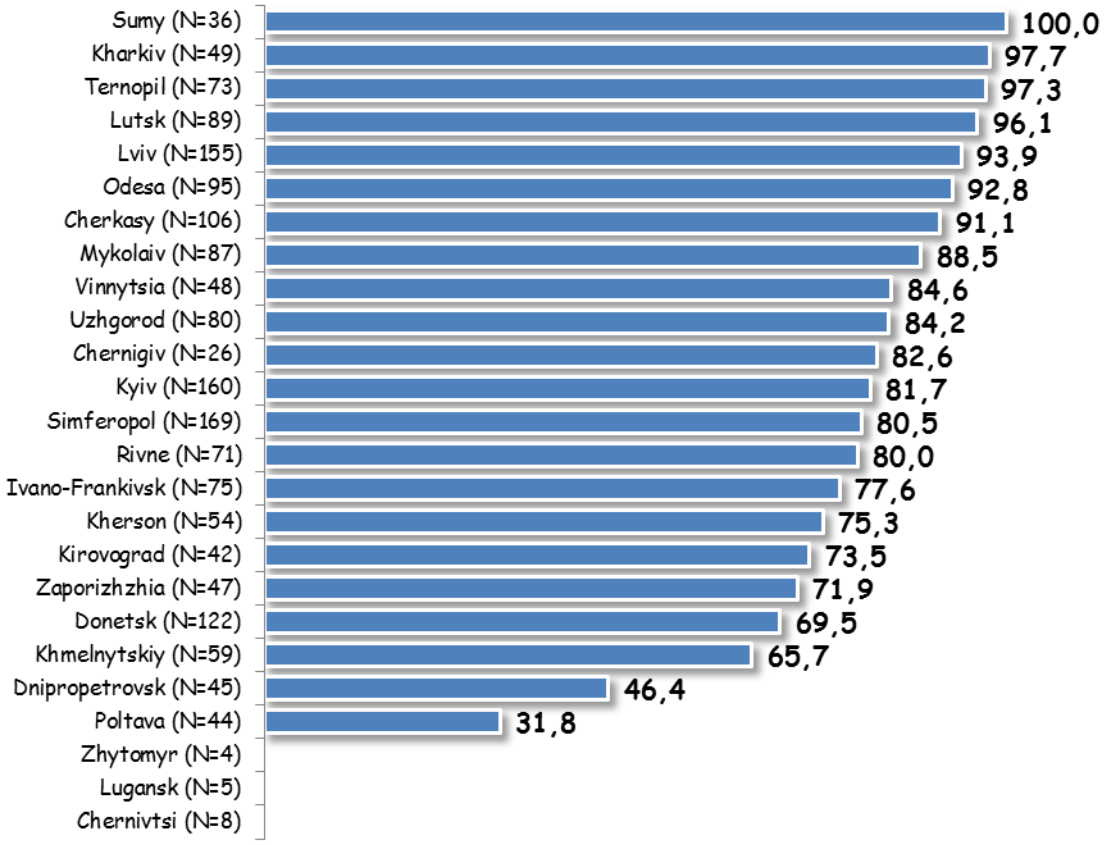
partners. Thus, 82% of FSW, who have had casual partners within the last year, used condom during their most recent sexual contact (this percentage is higher than in case of permanent partners and lower than in case of commercial partners, $p<0.01$). There have been no significant changes as compared to 2008-2009.



** N_1 – weighted number of respondent FSW from a corresponding group, interviewed in 2008-2009, N_2 – weighted number of respondent FSW from a corresponding group, interviewed in 2011.

Fig. 2.4.12. **Condom use during the most recent sexual contact with a casual partner among FSW, who have had such partners within last year, %**

No less than two thirds of FSW in almost all cities used condoms during the most recent sexual contact with a casual partner (see Fig. 2.4.13). Dnipropetrovsk and Poltava are the only exceptions, where level of condom use makes up 46% and 32% correspondingly.



* There are no data for Zhytomyr, Lugansk and Chernivtsi, as there are not enough FSW in these cities, who have had casual partners within the last year for reliable statistical calculations.

Fig. 2.4.13. **Condom use during the most recent sexual contact with a casual partner among FSW who have had such partners within the last year (by regions), %**

According to the survey results, situation among certain groups of FSW is more or less similar.

The main reason for condom non-use during the most recent sexual contact with a casual partner is alcohol intoxication / drug influence (43% of FSW mentioned that reason) (see Fig. 2.4.14). Quite a lot of FSW (22%) explained condom non-use by its absence within easy reach.

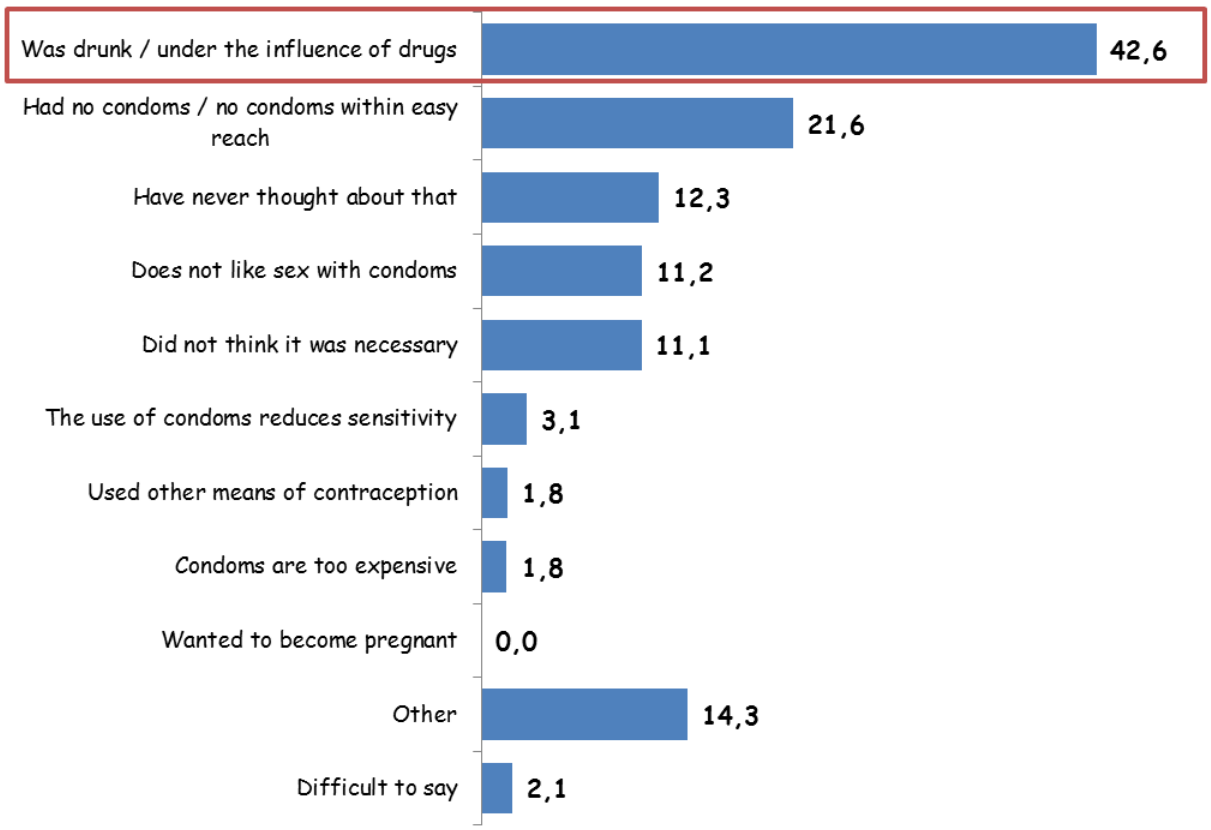


Fig. 2.4.14. **Reasons for condom non-use during the most recent sexual contact with a casual partner**, %

If talk about the frequency of condom use with casual partners, only 71% of FSW always use condoms (see Fig. 2.4.15). In case of anal sex this value is even lower – 57%. That means that quite a lot of FSW from time to time have an experience of Яunprotected sex with casual partners.

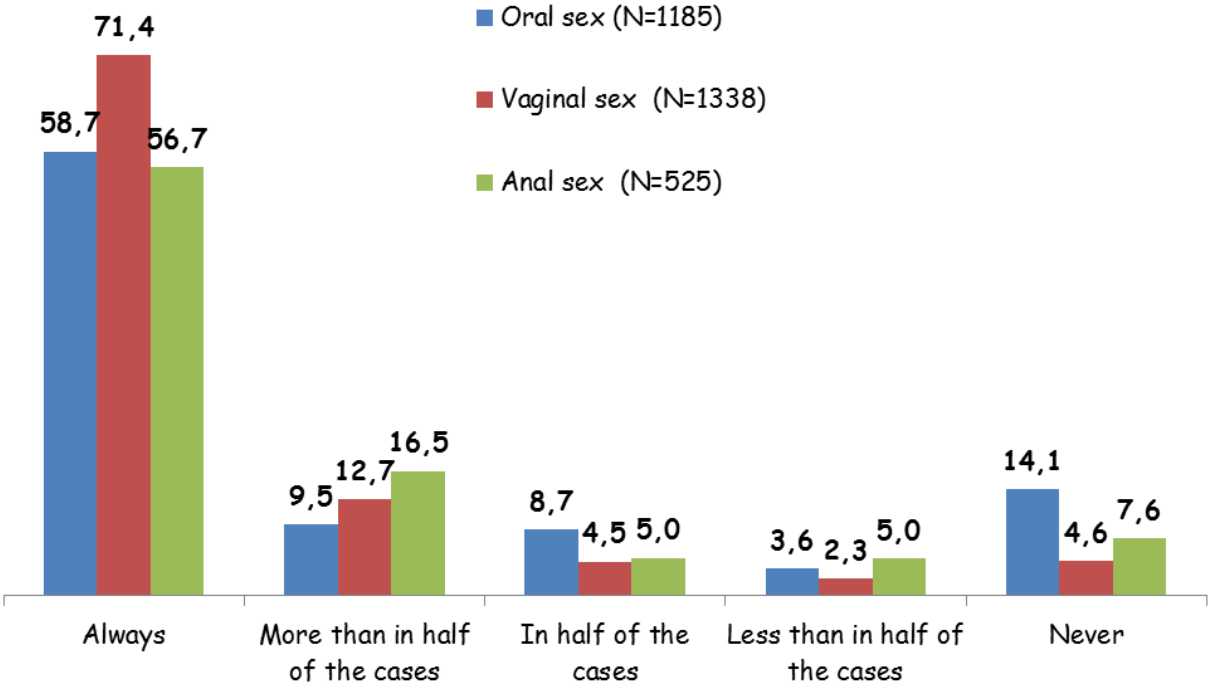


Fig. 2.4.15. **Frequency of condom use with casual partners within the last month (among those, who have had appropriate sex with casual partners), %**

The Table 2.4.7 below presents data on the frequency of condom use with casual partners by regions.

Table 2.4.7

Share of FSW who always / never use condoms with casual partners (by regions)*, %**

	Oral sex***		Vaginal sex***		Anal sex***	
	Always	Never	Always	Never	Always	Never
Ternopil (N_1=62, N_2=73, N_3=60)***	93.5	3.2	97.3	0.0	96.7	0.0
Odesa (N_1=83, N_2=82, N_3=5)	92.2	0.0	93.0	0.0	---	---
Mykolaiv (N_1=72, N_2=85, N_3=31)	72.2	0.0	92.9	1.2	83.9	6.5
Kharkiv (N_1=49, N_2=49, N_3=23)	95.6	0.0	92.7	0.0	77.0	13.3
Lviv (N_1=152, N_2=153, N_3=59)	80.9	0.0	92.3	0.0	88.7	0.0
Sumy (N_1=30, N_2=34, N_3=16)	41.7	27.6	87.6	0.0	63.3	0.0
Simferopol (N_1=82, N_2=96, N_3=12)	91.9	5.0	84.9	5.0	---	---
Cherkasy (N_1=63, N_2=73, N_3=27)	32.7	39.4	84.6	0.0	67.2	27.1

Lutsk (N_1=31, N_2=32, N_3=16)	55.8	13.9	78.3	2.7	64.4	2.7
Vinnytsia (N_1=39, N_2=40, N_3=23)	57.6	3.3	70.8	3.3	66.6	3.2
Rivne (N_1=39, N_2=47, N_3=3)	62.5	25.1	69.0	15.7	---	---
Khmelnytskiy (N_1=31, N_2=36, N_3=5)	51.1	5.4	66.2	5.4	---	---
Chernigiv (N_1=13, N_2=18, N_3=6)	50.1	5.5	65.1	0.0	---	---
Kherson (N_1=45, N_2=47, N_3=10)	64.4	16.7	64.2	11.5	70.0	11.5
Kirovograd (N_1=28, N_2=37, N_3=1)	48.3	18.8	60.0	11.6	---	---
Dnipropetrovsk (N_1=16, N_2=16, N_3=2)	30.7	4.9	56.7	4.9	---	---
Ivano-Frankivsk (N_1=50, N_2=74, N_3=12)	24.0	23.3	55.9	4.8	31.7	4.8
Donetsk (N_1=90, N_2=99, N_3=59)	34.4	22.3	53.0	4.5	33.7	5.6
Zaporizhzhia (N_1=33, N_2=36, N_3=15)	33.1	16.0	55.4	10.5	31.2	11.2
Poltava (N_1=35, N_2=38, N_3=29)	37.1	5.7	42.1	0.0	44.8	6.9
Kyiv (N_1=96, N_2=105, N_3=64)	28.4	44.2	40.0	18.3	42.6	17.3
Uzhgorod (N_1=64, N_2=76, N_3=64)	8.1	35.5	26.6	0.0	11.5	4.7
Zhytomyr (N_1=4, N_2=4, N_3=3)	---	---	---	---	---	---
Lugansk (N_1=4, N_2=5, N_3=2)	---	---	---	---	---	---
Chernivtsi (N_1=5, N_2=8, N_3=0)	---	---	---	---	---	---

* Ordered by the share of FSW who have always used condoms during vaginal sex with casual partners (from the biggest to the smallest).

** «---» means that there are not enough FSW in the city sample, who have provided anal sex services, for reliable statistical calculations. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of all respondent FSW, who have had oral sex with casual partners within the last month, N_2 – weighted number of respondent FSW, who have had vaginal sex with casual partners within the last month, N_3 – weighted number of respondent FSW, who have had anal sex with casual partners within the last month.

Even though in general situation among certain groups of FSW is quite similar, attention should be paid to differences between clients and non-clients of non-governmental organizations. Thus, if 80% among clients of non-governmental organizations always use condoms during sex with casual partners, there are 60% of such among non-clients ($p<0.01$). In case of anal sex the ratio is 66% against 50% ($p<0.01$), in case of oral sex it is 71% against 43% ($p<0.01$). It should be also noted that there is a tendency on more frequent condom use by FSW working at hotels, bars, in saunas etc (as compared to FSW who find clients in other places) and FSW who are not injecting drug users. Still, these trends are less distinctive that in case of clients / non-clients.

In this context it should be also added that only 69% of FSW, who know about their HIV-positive status, always use condoms with casual partners. In general, if taking only those FSW who appeared to be HIV-positive by test result, only 63% of them always use condoms during sex with casual partners.

According to the survey, every fourth FSW (26%) who had an experience of casual contacts, also had an experience of condom misuse (see Fig. 2.4.16). The most common situation was when a condom tore or slipped off (18%).

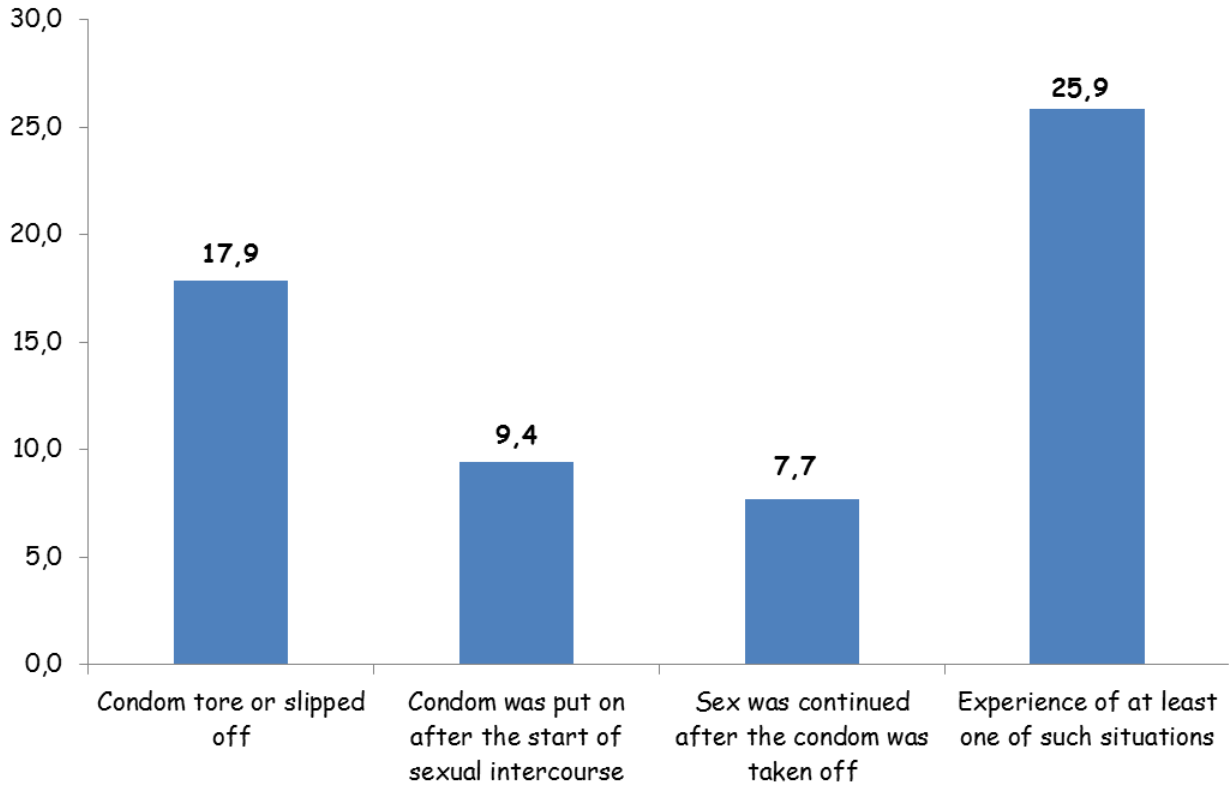


Fig. 2.4.16. **Prevalence of experience regarding condom misuse with casual partners (among those who had an experience of condom use during sex with casual partners),** *% (N=1301)*

Chernigiv is an absolute "leader" by the prevalence of experience regarding condom misuse – 77% of FSW, who have had casual partners, had such an experience (see Table 2.4.8). Moreover, such prevalence is first of all caused by quite a widespread experience of condom putting on after the start of sexual intercourse. The least common is the experience of FSW from Ternopil – 2%.

Table2.4.8

Prevalence of experience regarding condom misuse with casual partners (among those who had an experience of condom use during sex with casual partners) (by regions)*, %**

	A condom tore or slipped off	A condom was put on after the start of sexual intercourse	Sex was continued after condom was taken off	Experience of at least one of such situations
Chernigiv (N=18)	18.7	74.3	0.0	74.3
Dnipropetrovsk (N=15)	41.4	41.8	45.0	61.8
Zaporizhzhia (N=33)	32.9	28.0	43.0	46.7
Lviv (N=153)	38.1	12.7	7.1	44.6
Kyiv (N=87)	11.4	21.7	17.7	39.4
Vinnytsia (N=39)	36.1	20.9	20.9	36.1
Sumy (N=35)	26.7	6.2	22.3	31.4
Donetsk (N=97)	16.0	11.3	11.7	30.4

Ivano-Frankivsk (N=72)	27.4	1.3	3.8	29.9
Kherson (N=42)	17.0	11.3	15.7	29.9
Mykolaiv (N=85)	17.6	7.1	1.2	23.5
Khmelnytskiy (N=34)	20.2	0.0	2.8	23.1
Cherkasy (N=73)	9.0	6.6	8.3	21.8
Poltava (N=39)	15.4	2.6	5.1	20.5
Kirovograd (N=36)	15.9	5.3	0.0	18.3
Rivne (N=41)	9.9	3.3	4.2	17.4
Uzhgorod (N=78)	8.0	6.5	11.1	16.1
Kharkiv (N=49)	11.1	4.4	4.4	13.4
Simferopol (N=95)	9.2	0.8	0.0	9.9
Odesa (N=84)	9.7	0.0	0.0	9.7
Lutsk (N=31)	6.5	0.0	0.0	6.5
Ternopil (N=73)	1.4	1.4	1.4	2.7
Zhytomyr (N=4)	---	---	---	---
Lugansk (N=5)	---	---	---	---
Chernivtsi (N=7)	---	---	---	---

* Ordered by the share of FSW, who have had any experience of condom misuse (from the highest to the lowest).

** «---» means that there are not enough FSW in the city sample, who have used condoms with casual partners, for reliable statistical calculations. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

In general, the situation is quite similar among certain groups of FSW.

CHAPTER III. TESTING RESULTS FOR HIV AND OTHER INFECTIONS

3.1. HIV prevalence

According to the survey conducted, HIV prevalence among all FSW (including active injecting drug users) makes up 10% (95% confidence intervals – 9.5%–11.2%)[11] (see Fig. 3.1.1). Moreover, HIV prevalence in 2011 is lower than in 2008-2009, when it made up 13% (95% confidence intervals – 11.5%-13.9%) ($p<0.01$). Obviously, this reduction is caused first of all by decrease of the share of injecting drug users in the structure of FSW (see first chapter), as HIV infection mostly concentrates among this segment of FSW. These moments are described more in detail below.

Overall reduction of HIV prevalence concerns both main age groups of FSW, but first of all it is observed exactly among younger FSW. Whereas in 2008-2009 HIV prevalence among FSW under 25 years of age made up 9%, in 2011 it was 3% ($p<0.01$). HIV prevalence has reduced from 16% to 14% in case of FSW of 25+ years of age ($p<0.01$).

It should be noted that the dynamics of a number of HIV-positive FSW depends on several different processes. The most important ones are: 1) dynamics of the level of infection rate, i.e. the number of those who become infected with HIV (deceleration / acceleration of the numerator increasing of the indicator of HIV prevalence among FSW population); 2) dynamics of the number of FSW (quantitative changes of the indicator's denominator); 3) rapid dying of infected FSW (quantitative changes of indicator's numerator). Accordingly, for example, reduction of the number of HIV-positive FSW could possibly happen due to rough increasing of FSW population, i.e. due to denominator increase. As a result, in such situation it would be hardly correct to talk about positive changes. Consequently, in order to provide correct analysis of the dynamics of HIV prevalence, the survey data should be correlated to other relevant data such as, for example, information on FSW population size estimate.

[11] It should be noted, than unlike other data in the report, HIV prevalence (and several other indicators) was calculated by a different scheme. Namely, at first the indicator was calculated separately for each city, including cities where RDS methodology was implemented, data were calculated in RDSAT. Then the prevalence for each city was brought to one joint national indicator and average weighted prevalence in all cities was calculated.
Calculations were made among all FSW and among FSW under and over 25 years of age by such a scheme. For other groups of FSW (for example, according to drug use) calculations were made in SPSS, where data for RDS cities were weighted by age.

*N_1 – weighted number of all respondent FSW of a corresponding group, interviewed in 2008-2009, N_2 – weighted number of all respondent FSW of a corresponding group, interviewed in 2011.

Fig. 3.1.1. **HIV prevalence among FSW, %**

As far as the data from the first chapter are concerned, a significant part of interviewed FSW are injecting drug users. Besides, a part of them are active drug users (injecting drugs not less than 10 times a month), therefore they can be rather considered to be IDU than FSW. In this connection, HIV prevalence among FSW who are not active IDU should be also analyzed. As it can be seen below on Figure 3.1.2. HIV prevalence among such FSW makes up 9%. HIV prevalence among younger FSW makes up 3%, while among older FSW it is 13%.

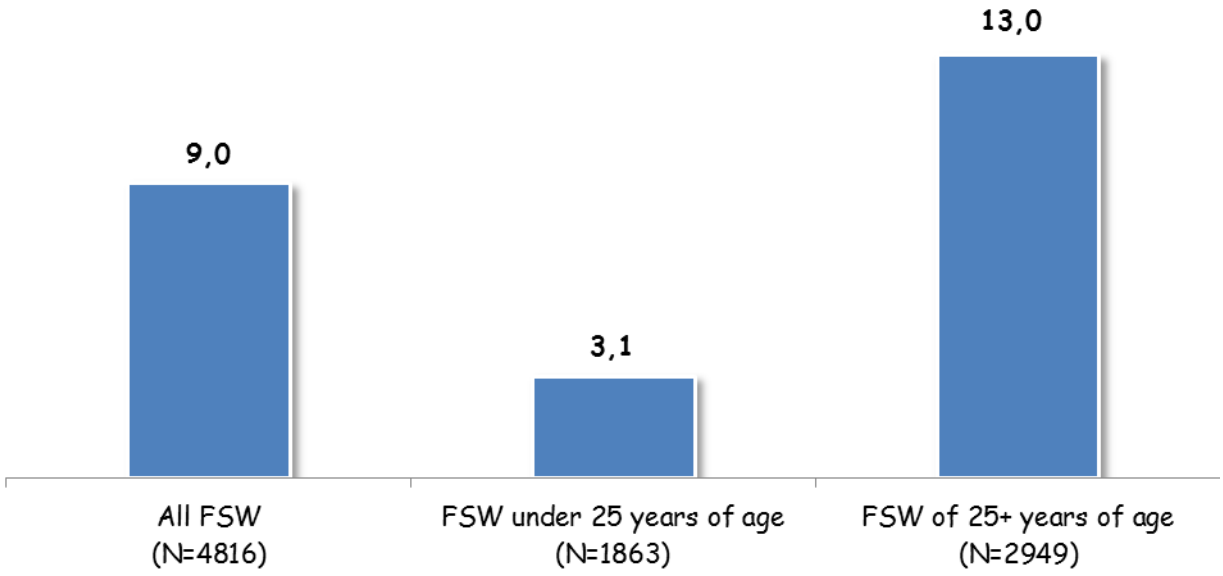


Fig. 3.1.2. **HIV prevalence among FSW who are not active injecting drug users,** *%*

Different cities are characterized by a totally different epidemiological situation. Thus, unambiguous “leaders” by HIV prevalence are Donetsk (405 of FSW are HIV-positive), Poltava (27%), Kyiv (24%) and Khmelnytskiy (19%) (see Table 3.1.1). Instead, there are three cities where there were no HIV-positive FSW in the sample – Kharkiv, Lugansk and Uzhgorod. It should be also noted that in these cities interviewing was conducted in 2008-2009, and none of FSW was HIV-positive.

According to the data, HIV is concentrated first of all among older age groups of FSW. Thus, HIV prevalence among younger FSW (under 25 years of age) is the maximum of “only” 9% among FSW of Donetsk and Kyiv. Indeed, HIV prevalence among older FSW (of 25+ years of age) in the same cities is 49% and 32% correspondingly. Similar “disproportions” are also typical for other cities.

It should be noted once again that as far as HIV infection is especially common among injecting drug users, the worse epidemiological situation in some cities can be caused by larger representation of injecting drug users among FSW population (regional dimension of FSW structure by drug use has been reviewed in the first chapter). Therefore, the Table 3.1.1 below also presents data of the HIV prevalence among FSW who are injecting drug users. As it can be seen, HIV prevalence among FSW who are not injecting drug users as compared to all other FSW in the city, is really lower. However, epidemiological situation still remains quite different by regions. Thus, Donetsk, Kyiv, Poltava and Khmelnytskiy are still characterized by the highest HIV prevalence.

It makes sense to separately consider FSW under 25 years of age who are not injecting drug users, as they are characterized by less experience in commercial sex sphere and

absence of dangerous practice of injecting drugs. Thus, it should be pointed out that Kyiv is the "leader" among such FSW, where HIV prevalence makes up 8%, while the indicator value among corresponding FSW in Donetsk is 5%.

As it will be described below, HIV prevalence is different among other segments of FSW (for example, among FSW different by their main client seeking method). Since the structure of FSW population is a bit different in different cities (see first chapter for detailed information), it may cause differences in HIV prevalence. However, significant variability in indicators of HIV prevalence can be hardly explained by just differences in the populations structure. It was clearly shown above, that substantial variability still remains even if not taking into account FSW who are injecting drug users. It will probably remain if considering other differences in the population structure, therefore the data obtained earlier rather indicate the presence of really excellent epidemiological situation in different cities.

Table 3.1.1

HIV prevalence among FSW (by regions)*, %

	All FSW	FSW at the age of…		FSW who are not IDU		FSW – not active IDU ****
		Under 25 years of age	Of 25+ years of age	ALL	Under 25 years of age	
Donetsk (N_1=302, N_2=63, N_3=239, N_4=228, N_5=52, N_6=283)***	42.7	9.5	51.9	36.7	6.0	38.2
Poltava (N_1=200, N_2=19, N_3=181, N_4=98, N_5=15, N_6=152)****	26.5	5.3	28.7	18.4	6.7	23.0
Kyiv (N_1=300, N_2=88, N_3=208, N_4=249, N_5=79, N_6=274)	24.2	7.7	33.5	22.2	6.9	23.7
Khmelnytskiy (N_1=150, N_2=65, N_3=85, N_4=142, N_5=65, N_6=147)	18.7	1.5	31.9	15.6	1.5	17.1
Cherkasy (N_1=150, N_2=43, N_3=107, N_4=118, N_5=40, N_6=136)	14.4	0.9	20.5	6.1	0.9	12.6
Kirovograd (N_1=150, N_2=45, N_3=105, N_4=136, N5=42, N_6=147)	13.7	6.5	16.7	10.9	6.8	13.3
Odesa (N_1=300, N_2=135, N_3=165, N_4=291, N_5=134, N_6=297)	13.5	7.2	18.8	11.8	6.5	13.1
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117, N_4=145, N_5=33, N_6=149)	9.8	5.5	11.0	7.6	5.5	9.2
Dnipropetrovsk (N_1=300, N_2=141, N_3=159, N_4=242, N_5=125, N_6=276)	9.6	5.5	13.1	4.2	4.8	6.5
Kherson (N_1=202, N_2=109, N_3=93, N_4=185, N_5=104, N_6=)	9.3	4.2	15.3	6.8	3.7	9.4
Mykolaiv (N_1=301, N_2=101, N_3=200, N_4=251, N_5=87, N_6=294)	7.1	0.0	10.6	4.5	0.0	6.2
Lviv (N_1=200, N_2=65, N_3 $N_3$135, N_4=191, N_5=64, N_6=196)	5.7	1.5	7.7	6.0	1.6	5.8
Zhytomyr (N_1=150, N_2=31, N_3=119, N_4=146, N_5=31, N_6=150)	5.3	3.0	5.9	2.6	3.0	5.3
Lutsk (N_1=150, N_2=63, N_3=87, N_4=129, N_5=55, N_6=136)	5.2	1.4	7.9	2.0	0.0	2.5
Zaporizhzhia (N_1=200, N_2=50, N_3=150, N_4=180, N_5=48, N_6=193)	4.8	5.6	4.2	3.8	7.2	4.5
Rivne (N_1=150, N_2=36, N_3=114, N_4=130, N_5=34, N_6=149)	4.8	7.4	3.9	5.0	5.9	4.8

Simferopol (N_1=300, N_2=99, N_3=201, N_4=297, N_5=97, N_6=298)	3.6	4.8	2.9	3.4	4.9	3.3
Ternopil (N_1=150, N_2=109, N_3=41, N_4=144, N_5=106, N_6=150)	2.0	1.8	2.4	2.1	1.9	2.0
Chernivtsi (N_1=150, N_2=55, N_3=95, N_4=142, N_5=54, N_6=145)	2.0	0.0	3.2	0.5	0.0	0.5
Vinnytsia (N_1=150, N_2=76, N_3=74, N_4=148, N_5=75, N_6=148)	1.5	1.8	1.3	1.6	1.8	1.6
Chernigiv (N_1=150, N_2=89, N_3=61, N_4=147, N_5=88, N_6=150)	1.0	0.9	0.7	1.1	0.9	1.0
Sumy (N_1=150, N_2=61, N_3=89, N_4=146, N_5=49, N_6=147)	0.9	0.0	1.7	0.9	0.0	0.9
Lugansk (N_1=150, N_2=71, N_3=79, N_4=150, N_5=71, N_6=150)	0.0	0.0	0.0	0.0	0.0	0.0
Uzhgorod (N_1=150, N_2=102, N_3=48, N_4=147, N_5=101, N_6=148)	0.0	0.0	0.0	0.0	0.0	0.0
Kharkiv(N_1=300, N_2=132, N_3=168, N_4=296, N_5=128, N_6=300)	0.0	0.0	0.0	0.0	0.0	0.0

* Ordered by the share of HIV-positive FSW among all respondents (from the highest to the lowest).
** Active IDUs are those who have used injecting drugs for 10 times and more within a month.
*** N_1 – weighted number of all respondent FSW, N_2 – зweighted number of respondent FSW under 25 years of age, N_3 – weighted number of respondent FSW of 25+ years of age, N_4 – weighted number of respondent FSW who have not used injecting drugs in the last 12 months, N_5 – weighted number of respondent FSW under 25 years of age, who have not used injecting drugs in the last 12 months, N_6 – weighted number of respondent FSW, who are not active IDUs.
**** In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

The Table 3.1.2 below presents the comparison of HIV prevalence according to the results of the surveys of 2008-2009 and 2011. As far as the samples of two surveys vary significantly in some cities by the share of injecting drug users (see first chapter), HIV prevalence is also compared separately for FSW who have not used injecting drugs within the last 30 days. It should be noted that samples for each city are small enough, therefore the majority of visual differences are statistically insignificant.

Table 3.1.2

HIV prevalence among FSW (by regions)*, %

	All FSW		FSW not IDU	
	2008-2009	2011	2008-2009	2011
Donetsk (N_1=150, N_2=302, N_3=101, N_4=245)**	39.0	42.7	32.9	36.0
Poltava (N_1=150, N_2=200, N_3=78, N_4=104)	19.3	26.5	11.5	20.2
Kyiv (N_1=256, N_2=300, N_3=181, N_4=262)	24.7	24.2	15.0	22.7
Khmelnytskiy (N_1=101, N_2=150, N_3=87, N_4=147)	18.1	18.7	13.0	17.1
Cherkasy (N_1=95, N_2=150, N_3=74, N_4=127)	17.9	14.4	11.2	8.8
Kirovograd (N_1=100, N_2=150, N_3=84, N_4=144)	17.0	13.7	14.4	12.2
Odesa (N_1=100, N_2=300, N_3=91, N_4=292)	16.5	13.5	12.7	11.8
Ivano-Frankivsk (N_1=150, N_2=150, N_3=146, N_4=148)	7.3	9.8	6.8	9.3
Dnipropetrovsk (N_1=100, N_2=300, N_3=77, N_4=244)	14.0	9.6	2.5	4.3
Kherson (N_1=100, N_2=202, N_3=92, N_4=195)	11.0	9.3	4.3	7.4
Mykolaiv (N_1=100, N_2=301, N_3=91, N_4=293)	24.0	7.1	16.5	6.2
Lviv (N_1=95, N_2=200, N_3=94, N_4=195)	9.0	5.7	9.4	5.9

Zhytomyr (N_1=150, N_2=150, N_3=127, N_4=147)	10.0	5.3	7.9	3.2
Lutsk (N_1=100, N_2=150, N_3=69, N_4=132)	13.0	5.2	5.8	2.0
Zaporizhzhia (N_1=150, N_2=200, N_3=92, N_4=185)	4.0	4.8	6.1	3.9
Rivne (N_1=152, N_2=150, N_3=146, N_4=147)	8.6	4.8	6.6	4.9
Simferopol (N_1=150, N_2=300, N_3=101, N_4=298)	25.0	3.6	7.3	3.3
Ternopil (N_1=150, N_2=150, N_3=150, N_4=150)	5.3	2.0	5.3	2.0
Chernivtsi (N_1=151, N_2=150, N_3=151, N_4=145)	0.0	2.0	0.0	0.5
Vinnytsia (N_1=150, N_2=150, N_3=148, N_4=148)	10.7	1.5	10.8	1.6
Chernigiv (N_1=150, N_2=150, N_3=150, N_4=150)	0.0	1.0	0.0	1.0
Sumy (N_1=100, N_2=150, N_3=95, N_4=146)	17.0	0.9	14.7	0.9
Lugansk (N_1=100, N_2=150, N_3=100, N_4=150)	0.0	0.0	0.0	0.0
Uzhgorod (N_1=100, N_2=150, N_3=95, N_4=148)	0.0	0.0	0.0	0.0
Kharkiv (N_1=149, N_2=300, N_3=146, N_4=299)	0.0	0.0	0.0	0.0

* Ordered by the share of HIV-infected FSW among all respondents according to the survey data of 2011 (from the highest to the lowest).

** N_1 – weighted number of all respondent FSW interviewed in 2008-2009, N_2 – weighted number of respondent FSW interviewed in 2011, році, N_3 – weighted number of respondent FSW who have not used injecting drugs within the last month and were interviewed in 2008-2009, N_4 – weighted number of respondent FSW who have not used injecting drugs within the last month and were interviewed in 2011.

The most distinctive is the connection in case of drug use. Thus, there are “only” 6% of HIV-positive FSW among those who have never used any drugs (see Fig. 3.1.3). HIV prevalence among those who have had an experience of using only non-injecting drugs within the last year makes up 11% ($p<0.01$) and 41% among those who have used injecting drugs within the last year ($p<0.01$). It should be noted that HIV prevalence among those who have tried using drugs, but have not used them within the last year makes up 32% ($p<0.01$). Obviously, it probably concerns FSW who have had earlier experience of injecting drug use, that’s why HIV prevalence is so high among this group (unfortunately, the data obtained do not provide possibility to distinguish former injecting and non-injecting drug users). To some extent this assumption is confirmed by the fact that every third (35%) of those who have ever used drugs, but not within the last year, suffers from Hepatitis C. In this context it should be noted that 37% of FSW who had positive test result for Hepatitis C marker were HIV-infected as compared to 6% of those, who had negative test result.

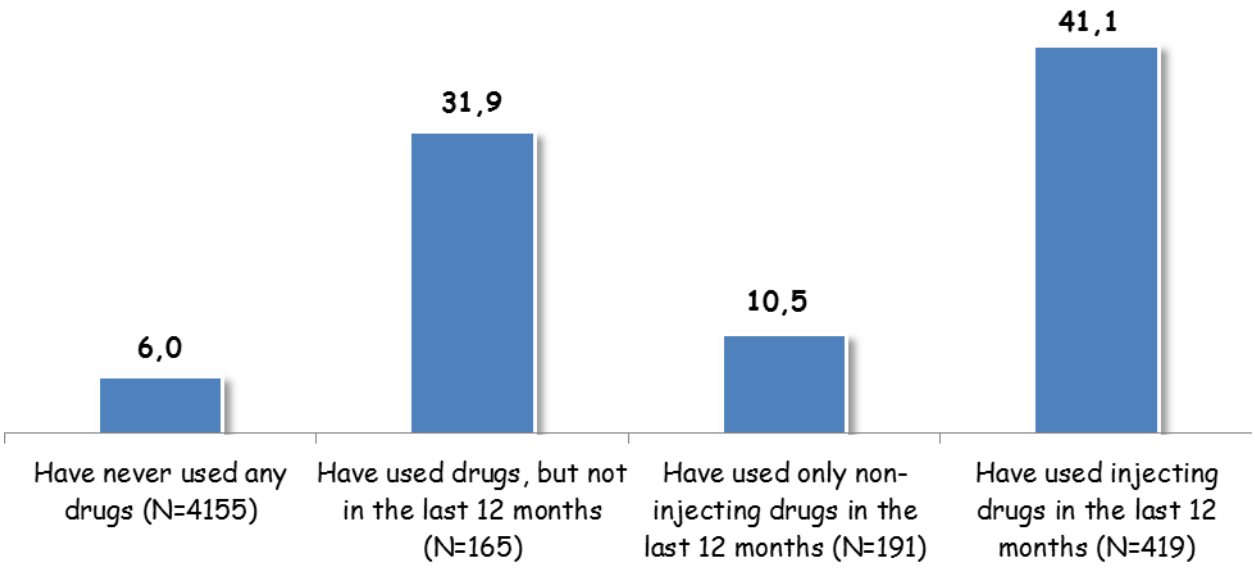


Fig. 3.1.3. **HIV prevalence among FSW according to drug use practice, %**

In order to clarify the previous moment, the Figure 3.1.4 below shows the data on the number of HIV-positive and HIV-negative injecting drug users (according to their words) and those, who had positive test result for Hepatitis C marker.

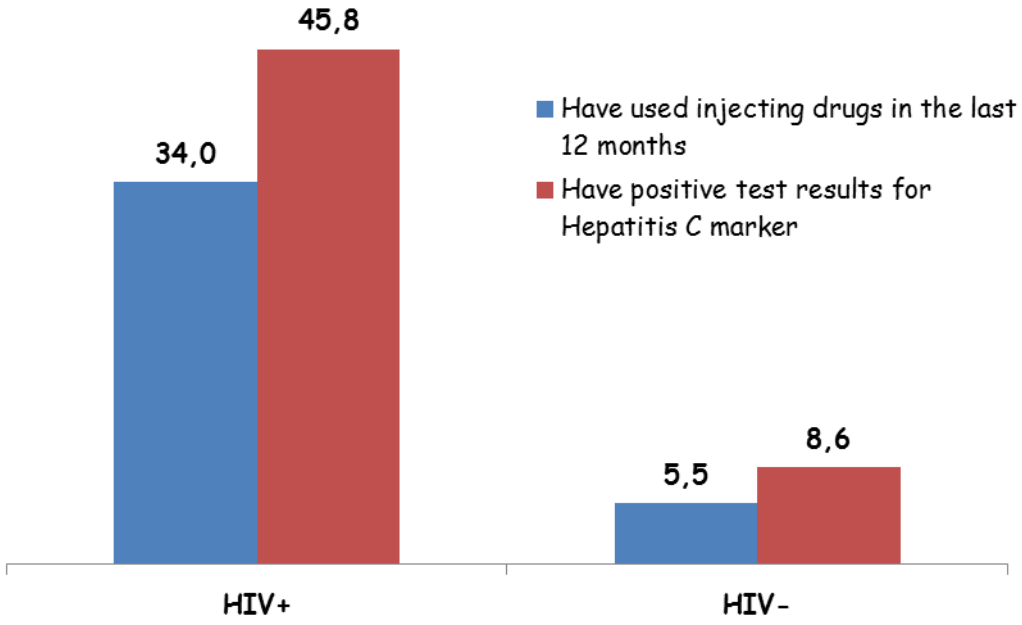


Fig. 3.1.4. **Share of injecting drug users and those, who had positive test result for Hepatitis C marker, among HIV-positive and HIV-negative FSW, %**

The dynamics of HIV prevalence among FSW who have been used injecting drugs or not within the last month is given below in Table 3.1.3 (as far as according to the data of

the survey conducted in 2008-2009 it is impossible to distinguish the category of those who have used drugs within the last year, hereinafter data will be compared for those, who have used drugs within the last month). Thus, if analyze FSW on the whole, HIV prevalence among those who use injecting drugs and those who do not has notchanges significantly as compared to 2008-2009 ($p>0.05$). If analyze the group of FSW of 25+ years of age, there are also no significant changes ($p>0.05$).

There were significant changes only among FSW under 25 years of age. Thus, in 2008-2009, HIV prevalence among FSW under 25 years who were injecting drug users, made up 41% as compared to 17% in 2011 (it should be noted that in the sample of 2011 there were only 43 FSW under 25 years of age, who were at the same time injecting drug users, i.e. the calculated HIV prevalence among them cannot be regarded as statistically reliable, but can be used for accessing trends). There is also a decrease in the share of the HIV-infected among young FSW who are not injecting drug users – from 6% to 3% ($p<0.01$).

As a result, decrease in the share of HIV-infected FSW is first of all caused by the decrease in the share of injecting drug users. Though, if to control practices of injecting drug use, there is really some decrease[12] concerning younger FSW. The question on whether the reduction of the number of injection drug users is a real situation or a methodical artifact remains open. Unfortunately, there are not enough data yet in order to support one of the assumptions.

Table 3.1.3

HIV prevalence among FSW by age and drug use practice, *, %

	2008-2009	2011
All FSW		
- used injecting drugs (N_1=457, N_2=340)*	42.1	43.9
- did not use injecting drugs (N_1=2807, N_2=4590)	8.5	7.6
FSW under 25 years of age		
- used injecting drugs (N_1=124, N_2=43)	40.7	17.4
- did not use injecting drugs (N_1=1247, N_2=1846)	5.5	2.9
FSW of 25+ years of age		
- used injecting drugs (N_1=333, N_2=296)	42.7	47.8
- did not use injecting drugs (N_1=1560, N_2=2744)	10.8	10.7

*N_1 – weighted number of respondents in the sample of 2008-2009, N_2 – weighted number of respondents in the sample of 2011.

HIV prevalence is given below in Table 3.1.4 among other segments of FSW. There are separate data among injecting and non-injecting drug users. As far as the main client seeking method is concerned, there is a tendency to lower HIV prevalence among those who mostly find clients at hotels, bars, in saunas etc. (4% as compared to 12% among "street" FSW and 11% among FSW who mostly find clients via telephone, Internet,

[12]Необхідно нагадати, що структура вибірок обох досліджень відрізняється і за іншими параметрами, які також можуть бути пов'язані з поширеністю ВІЛ-інфекції. Тобто виявлена динаміка може до певної міри опосередковуватися цими іншими параметрами.

p<0.01). Such differences are also common for non-injecting drug users. However, HIV prevalence among injecting drug users by the main client seeking method is almost the same (even though attention should be paid to the fact that there were quite a few "non-street" FSW using injecting drugs in the sample).

There is linear increase of HIV prevalence among FSW with different "work record" with its increasing. Thus, while there are 5% of HIV-positive FSW with "work record" of up to 2 years, there are 21% of such FSW with "work record" of more than 10 years. The same tendencies appear among both injecting and non-injecting drug users.

Quite an ambiguous situation is observed in terms of clients and non-clients of non-governmental organizations (structure of FSW population by this indicator will be considered in detail in Chapter V). Thus, HIV prevalence among clients makes up 12%, among non-clients – 8% (p<0.01). However, such predominance is characteristic only for FSW who are injecting drug users. HIV prevalence among such FSW who are clients of non-governmental organizations makes up 44% as compared to 34% of those who are non-clients (p<0.01). In case of FSW who are not injecting drugs HIV prevalence among clients and non- clients is approximately the same – 8% and 7% correspondingly (p>0.05). The tendency to HIV prevalence among clients can be possibly explained by the fact that FSW who know that their dangerous practices can lead to negative results more often apply to NGOs. Others are less aware of the necessity to cooperate with NGOs till the time some negative things happen.

Table 3.1.4

HIV prevalence among FSW by main client seeking method, "work record" and (not) belonging to a non-governmental organization *, %

	All FSW	FSW-not IDU	FSW-IDU
Main client seeking method			
- street, highway, railway station (N_1=2257, N_2=1962, N_3=274)*	11.5	7.4	40.0
- hotels, saunas, bars etc. (N_1=1201, N_2=1143, N_3=30)	4.4	3.4	44.7
- telephone, Internet (N_1=1357, N_2=1243, N_3=86)	11.4	9.2	42.2
Duration of stay in sex business			
- up to 5 years(N_1=2572, N_2=2411, N_3=129)	4.8	3.7	25.0
- 6-10 years (N_1=1338, N_2=1204, N_3=120)	11.7	9.1	39.2
- more than 10 years (N_1=833, N_2=685, N_3=141)	21.2	13.8	55.2
Being a client of non-governmental organization			
- clients(N_1=2622, N_2=2249, N_3=316)	12.1	7.7	43.8
- non-clients (N_1=2353, N_2=2233, N_3=102)	7.8	6.5	33.0

*N_1 – weighted number of all respondent FSW of a corresponding group, N_2 – weighted number of respondents of a corresponding group who have not used injecting drugs within the last year, N_3 – weighted number of respondents of a corresponding group who have used injecting drugs within the last year.

3.2. Prevalence of positive test results for syphilis marker

The share of FSW whose test results for the syphilis marker were positive makes up 6% among all of the interviewed respondents (see Fig. 3.2.1). Slightly more frequently the positive result was noticed among older FSW (of 25+ years of age) which makes up 8% as compared to 3% among younger FSW (under 25 years of age ($p<0.01$).

It should be noticed that comparing with the years 2008-2009, only in case of older FSW some increase in the amount of positive test results is observed from 6% to 8% ($p<0.05$). In case of all the interviewed FSW in general and younger FSW in particular the situation in 2011 is close to the one which was in 2008-2009 ($p>0.05$).

*N_1 – weighted number of all respondent FSW of a corresponding group interviewed in 2008-2009, N_2 – weighted number of all respondent FSW of a corresponding group interviewed in 2011.

Fig. 3.2.1. **Prevalence of positive test results for syphilis marker among FSW, %**

According to the survey results, some regions clearly vary depending on the amount of positive test results for syphilis markers. The “leaders” are Lutsk (18% of FSW had positive test results) and Odessa (17%) (see Table 3.2.1). At the same time in two cities – Simferopol and Lugansk – the test results of all the FSW were negative.

A tendency is mainly observed that the share of positive results is higher among older FSW. Especially dramatic difference between older and younger FSW is observed among FSW of the “leader” cities as well as among FSW of Khmelnytskyi (which also belongs to the cities with the highest indicators of the part of positive results). Thus, in Lutsk only 1% of younger FSW had positive results comparing with 31% among older

FSW. In case of Odessa the correlation is 5% and 26% respectively. In Khmelnytskyi none of the younger FSW had syphilis comparing with every fifth (18%) of older FSW. Age differences between FSW from the other cities are less noticeable.

Table 3.2.1

Prevalence of positive test results for syphilis marker among FSW (by regions)*, %

	All FSW	FSW under 25 years of age	FSW of 25+ years of age
Lutsk (N_1=150, N_2=63, N_3=87)**	18.2	1.4	30.5
Odesa (N_1=300, N_2=135, N_3=165)	16.8	5.2	26.2
Uzhgorod (N_1=150, N_2=102, N_3=48)***	10.9	10.8	11.3
Khmelnytskiy (N_1=150, N_2=65, N_3=85)	10.0	0.0	17.7
Chernivtsi (N_1=150, N_2=55, N_3=95)	9.5	4.7	12.3
Dnipropetrovsk (N_1=300, N_2=141, N_3=159)	9.0	4.9	12.6
Rivne (N_1=150, N_2=36, N_3=114)	8.8	7.0	9.4
Kherson (N_1=202, N_2=109, N_3=93)	7.7	4.2	11.8
Zhytomyr (N_1=150, N_2=31, N_3=119)	7.4	0.0	9.4
Kirovograd (N_1=150, N_2=45, N_3=105)	7.0	7.5	6.8
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	7.4	3.6	8.5
Kharkiv (N_1=300, N_2=132, N_3=168)	5.6	3.9	6.9
Donetsk (N_1=302, N_2=63, N_3=239)	5.5	5.6	5.9
Vinnytsia (N_1=150, N_2=76, N_3=74)	5.1	4.3	5.9
Mykolaiv (N_1=301, N_2=101, N_3=200)	4.6	0.0	7.0
Poltava (N_1=200, N_2=19, N_3=181)	3.5	0.0	3.9
Kyiv (N_1=300, N_2=88, N_3=208)	2.1	2.3	2.8
Chernigiv (N_1=150, N_2=89, N_3=61)	1.4	2.3	0.0
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	1.2	0.0	1.6
Lviv (N_1=200, N_2=65, N_3=135)	0.9	1.3	0.7
Sumy (N_1=150, N_2=61, N_3=89)	0.7	0.6	0.7
Ternopil (N_1=150, N_2=109, N_3=41)	0.7	0.0	2.4
Cherkasy (N_1=150, N_2=43, N_3=107)	0.5	0.0	0.8
Lugansk (N_1=150, N_2=71, N_3=79)	0.0	0.0	0.0
Simferopol (N_1=300, N_2=99, N_3=201)	0.0	0.0	0.0

* Ordered by the share of FSW whose test results for syphilis marker were positive (from the highest to the lowest).

** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW under 25 years of age, N_3 – weighted number of respondent FSW of 25+ years of age.

*** In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

Below in the Table 3.2.2 is indicated the prevalence of positive results among specific groups of FSW. Special attention should be paid to the fact that among FSW who are clients of non-governmental organizations 7% had positive test results. As far as syphilis is a curable disease, such results show that either NGOs didn't have enough time to motivate "their own" FSW to treat syphilis or they don't pay enough attention to the possibility of the existence of such diseases.

Table 3.2.2

Prevalence of positive test results for syphilis marker among FSW (by main client seeking method, "work record" and (not) belonging to non-governmental organizations, %

	All FSW	Among FSW… Under 25 years of age	Among FSW… Of 25% + years of age
Injecting drug use			
- did not use injecting drugs (N_1=4511, N_2=1832, N_3=2679)	5.7	2.9	7.5
- used injecting drugs (N_1=419, N_2=57, N_3=361)	8.1	7.4	8.3
Main client seeking method			
- street, highway, railway station (N_1=2257, N_2=801, N_3=1456)	7.8	4.3	9.8
- hotels, saunas, casino etc. (N_1=1201, N_2=581, N_3=620)	3.2	1.5	4.8
- telephone, Internet (N_1=1357, N_2=484, N_3=873)	4.7	2.3	6.1
Duration of stay in sex business			
- up to 5 years (N_1=2572, N_2=1652, N_3=919)	4.4	2.8	7.3
- 6-10 years (N_1=1338, N_2=175, N_3=1163)	6.6	4.1	6.9
- more than 10 years (N_1=833, N_2=1, N_3=833)	7.5	---	7.4
Being a client of non-governmental organization			
- clients (N_1=2622, N_2=840, N_3=1782)	6.6	2.7	8.4
- non-clients (N_1=2353, N_2=1072, N_3=1281)	4.7	3.0	6.2

*N_1 – weighted number of all respondent FSW of a corresponding group, N_2 – weighted number of respondents of a corresponding group under 25 years of age, N_3 – weighted number of respondents of a corresponding group of 25+ years of age.

3.3. Prevalence of positive test results for Hepatitis B marker

Prevalence of positive test results for Hepatitis B marker is indicated by 3% among all of the interviewed FSW (see Fig. 3.3.1). Slightly more frequently the positive results were observed among older FSW (of 25+ years of age) which is 4% as compared to 2% among younger FSW (under 25 years of age) ($p<0.01$).

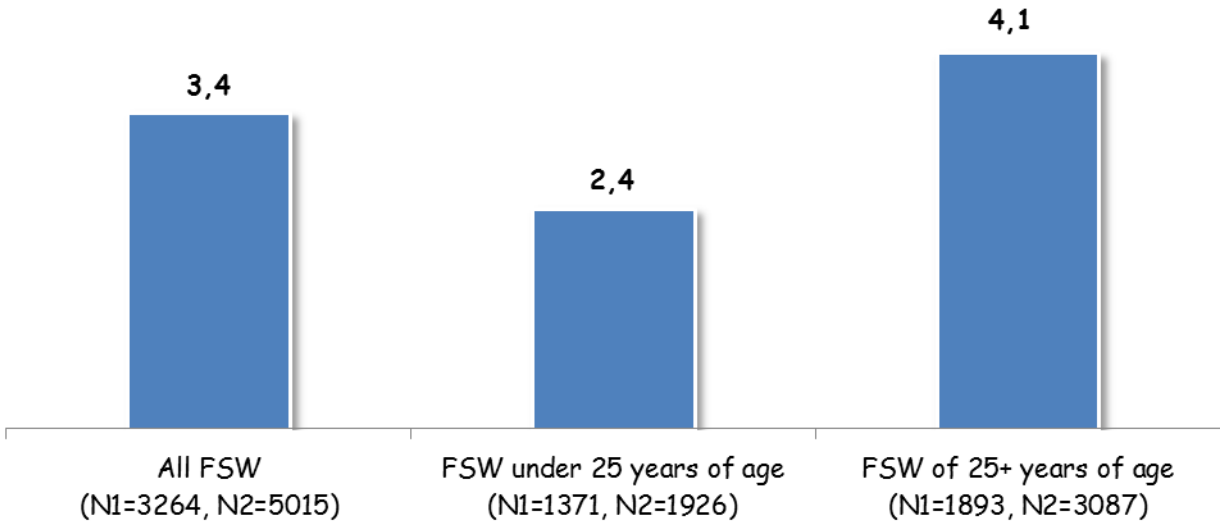


Fig. 3.3.1. **Prevalence of positive test results for Hepatitis B marker among FSW, %**

As in the case of other diseases, the epidemic situation varies in different regions. Thus, the "leaders" according to the share of FSW with positive test results appeared to be Kirovograd (15%) and Poltava (10%) (see Table 3.3.1). At the same time in Simferopol, Zhytomyr, Kherson, Khmelnytskyi and Chernigiv all the interviewed FSW had negative results. Attention should also be paid to the existing differences in the prevalence of the disease among FSW of different age groups.

Table 3.3.1

Prevalence of positive test results for Hepatitis B marker among FSW (by regions)*, %

	All FSW	FSW…	
		Under 25 years of age	Of 25+ years of age
Kirovograd (N_1=150, N_2=45, N_3=105)**	15.4	16.1	15.1
Poltava (N_1=200, N_2=19, N_3=181)***	10.0	5.3	10.5
Rivne (N_1=150, N_2=36, N_3=114)	7.1	3.8	8.1
Donetsk (N_1=302, N_2=39, N_3=239)	6.7	3.8	8.0
Lviv (N_1=200, N_2=65, N_3=135)	6.5	7.7	5.9
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	6.3	0.0	8.0

Uzhgorod (N_1=150, N_2=102, N_3=48)	6.2	4.8	9.3
Kyiv (N_1=300, N_2=88, N_3=208)	4.6	5.6	3.6
Cherkasy (N_1=150, N_2=43, N_3=107)	3.4	0.0	5.4
Lugansk (N_1=150, N_2=79, N_3=71)	3.9	8.0	1.0
Lutsk (N_1=150, N_2=63, N_3=87)**	3.2	2.7	3.5
Mykolaiv (N_1=301, N_2=101, N_3=200)	3.0	2.0	3.5
Kharkiv (N_1=300, N_2=132, N_3=168)	2.9	0.8	4.6
Odesa (N_1=300, N_2=135, N_3=165)	2.3	3.8	1.0
Ternopil (N_1=150, N_2=109, N_3=41)	2.0	1.8	2.4
Vinnytsia (N_1=150, N_2=76, N_3=74)	1.9	0.0	3.9
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	2.8	1.7	3.4
Dnipropetrovsk (N_1=300, N_2=141, N_3=159)	1.2	0.5	1.7
Chernivtsi (N_1=150, N_2=55, N_3=95)	1.0	1.4	0.8
Sumy (N_1=150, N_2=61, N_3=89)	0.7	1.7	0.8
Zhytomyr (N_1=150, N_2=31, N_3=119)	0.0	0.0	0.0
Simferopol (N_1=300, N_2=99, N_3=201)	0.0	0.0	0.0
Kherson (N_1=202, N_2=109, N_3=93)	0.0	0.0	0.0
Khmelnytskiy (N_1=150, N_2=65, N_3=85)	0.0	0.0	0.0
Chernigiv (N_1=150, N_2=89, N_3=61)	0.0	0.0	0.0

* Ordered by the share of FSW whose test results for Hepatitis B marker were positive (from the highest to the lowest).
** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW under 25 years of age, N_3 – weighted number of respondent FSW of 25+ years of age.
*** In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

In terms of individual segments of FSW, the most evident differences are observed in case of injecting drug use. Thus, if among those who are not injecting drug users, the share of respondents with positive test result for hepatitis B marker makes up 3% while among those who are injecting drug users it makes up 10% ($p<0.01$) (see Table 3.3.2).

In terms of segments of FSW according to the main client seeking method, prevalence of positive results is generally quite close. However, some age peculiarities are observed. Thus, in case of “street” FSW the share of those who had positive results is practically identical among younger (under 25 years of age) and older FSW (of 25 + years of age). At the same time among the other two segments of FSW, wider prevalence is observed in case of older FSW.

According to the received results, the accumulation of experience of dangerous practices (providing commercial sexual services) is connected to the increase of the share of positive results from 2% among FSW with “work record” of up to 2 years to 5% among FSW with “work record” of more than 10 years ($p<0.01$).

Special attention should be paid to the fact that more often positive results were observed among FSW who were the clients of NGOs, 4% as compared to 3% among those who were non-clients. ($p<0.01$).

Table 3.3.2

Prevalence of positive test results for Hepatitis B marker among FSW (by main client seeking method, "work record" and (not) belonging to non-governmental organizations, %

	All FSW	FSW… Under 25 years of age	Of 25+ years of age
Injecting drug use			
- did not use injecting drugs (N_1=4511, N_2=1832, N_3=2679)	2.9	2.2	3.4
- used injecting drugs (N_1=419, N_2=57, N_3=361)	9.6	8.9	9.8
Main client seeking method			
- street, highway, railway station (N_1=2257, N_2=801, N_3=1456)	3.9	3.5	4.1
- hotels, saunas, casino etc. (N_1=1201, N_2=581, N_3=620)	2.7	1.7	3.6
- telephone, Internet (N_1=1357, N_2=484, N_3=873)	3.5	1.8	4.5
Duration of stay in sex business			
- up to 5 years (N_1=2572, N_2=1652, N_3=919)	2.3	2.2	2.4
- 6-10 years (N_1=1338, N_2=175, N_3=1163)	3.7	4.7	3.6
- more than 10 years (N_1=833, N_2=1, N_3=833)	5.4	---	5.4
Being a client of non-governmental organization			
- clients (N_1=2622, N_2=840, N_3=1782)	4.1	2.7	4.7
- non-clients (N_1=2353, N_2=1072, N_3=1281)	2.6	2.2	3.0

*N_1 – weighted number of all respondent FSW of a corresponding group, N_2 – weighted number of respondents of a corresponding group under 25 years of age, N_3 – weighted number of respondents of a corresponding group of 25+ years of age.

3.4. Prevalence of positive test results for Hepatitis C marker

According to the obtained results, 12% of the interviewed FSW had positive test results for Hepatitis C marker (see Fig. 3.4.1). Slightly more frequently the positive results were observed among older FSW (of 25+ years of age) which is 16% as compared to 6% among younger FSW (under 25 years of age) ($p<0.01$).

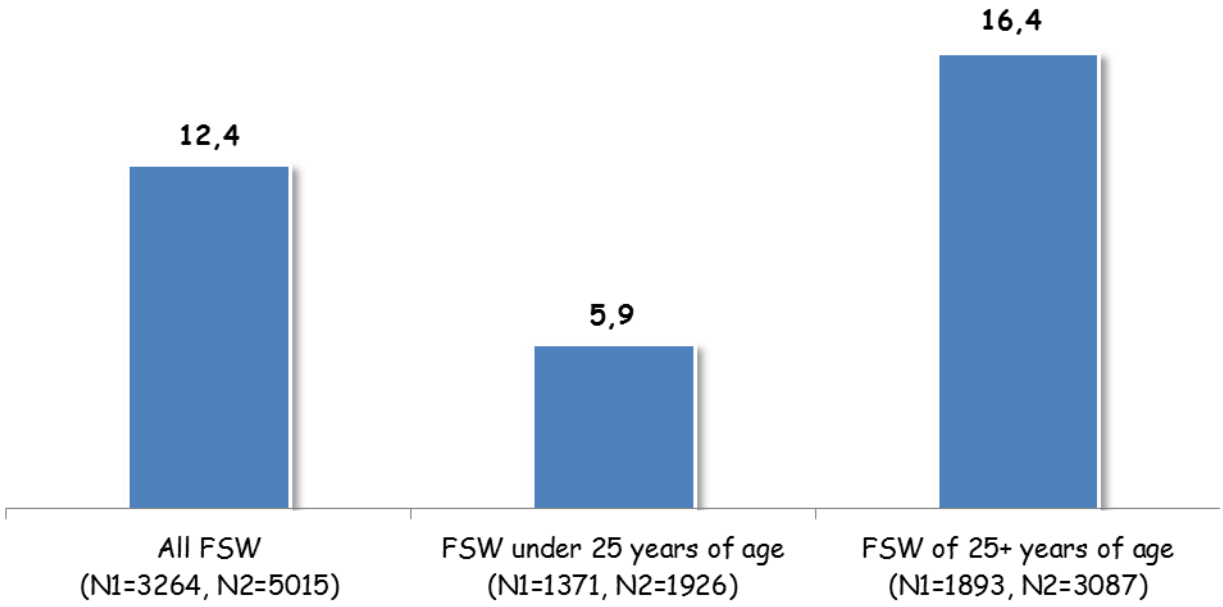


Fig. 3.4.1. **Prevalence of positive test results for Hepatitis C marker among FSW, %**

The share of positive results varies significantly according to the region. Thus, whereas every third FSW in Zaporizhzhia (38%) and Donetsk (32%) had positive result, there were only 1% in Chernigiv (see Table 3.4.1).

Obviously, regional differences are largely conditioned by the number of injecting drug users in the structure of FSW population. However, even if data are calculated only among FSW who are not injecting drug users, significant regional differences will still take place, as it can be seen from the table. However, attention should be paid at Donetsk. Thus, if 26% among all FSW who are not injecting drugs had a positive result in this city, the indicator value is only 1% among the same FSW, but under 25 years of age.

Table 3.4.1

Prevalence of positive test results for Hepatitis C marker among FSW (by regions)*, %

	FSW…			FSW-not IDU	
	All FSW	Under 25 years of age	Of 25+ years of age	all	Under 25 years
Zaporizhzhia (N_1=200, N_2=50, N_3=150, N_4=180, N_5=48)**	38.5	25.0	42.5	35.5	25.7
Donetsk (N_1=302, N_2=39, N_3=239, N_4=228, N_5=52)	32.4	8.0	38.2	27.3	1.8
Kirovograd (N_1=150, N_2=45, N_3=105, N_4=136, N5=42) ***	24.4	15.9	28.1	22.9	16.7
Kyiv (N_1=300, N_2=88, N_3=208, N_4=249, N_5=79)	22.1	7.9	29.3	17.8	7.9
Poltava (N_1=200, N_2=19, N_3=181, N_4=98, N_5=15)	21.0	10.5	22.1	16.3	13.3

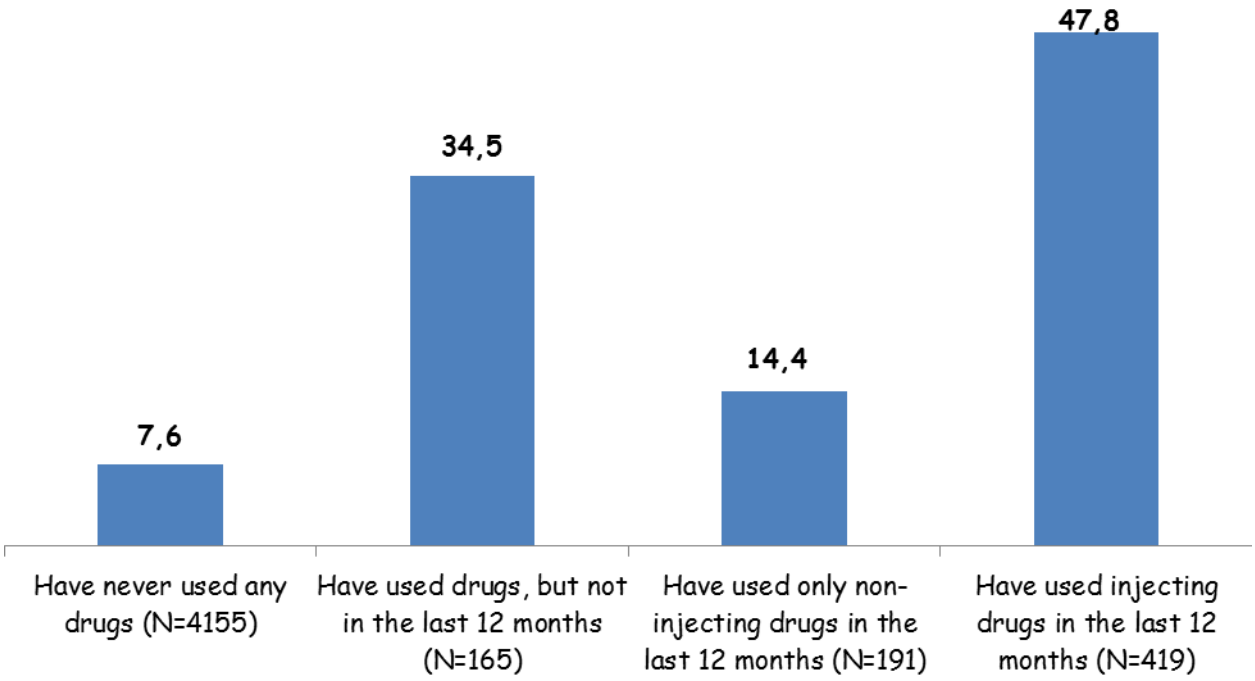
Cherkasy (N_1=150, N_2=43, N_3=107, N_4=118, N_5=40)	17.8	13.1	20.1	6.2	0.9
Dnipropetrovsk (N_1=300, N_2=141, N_3=159, N_4=242, N_5=125)	16.8	8.2	24.3	6.1	5.2
Khmelnytskiy (N_1=150, N_2=65, N_3=85, N_4=142, N_5=65)	13.3	1.5	22.4	11.4	1.5
Odesa (N_1=300, N_2=135, N_3=165, N_4=291, N_5=134)	13.2	4.3	20.4	11.1	4.3
Lutsk (N_1=150, N_2=63, N_3=87, N_4=129, N_5=55)	12.3	7.3	15.9	6.9	6.8
Uzhgorod (N_1=150, N_2=102, N_3=48, N_4=147, N_5=101)	10.7	10.2	11.8	10.4	9.6
Mykolaiv (N_1=301, N_2=101, N_3=200, N_4=251, N_5=87)	10.0	0.0	15.1	2.9	0.0
Kherson (N_1=202, N_2=109, N_3=93, N_4=185, N_5=104)	8.8	4.9	13.3	5.5	2.6
Lviv (N_1=200, N_2=65, N_3 $N_3$135, N_4=191, N_5=64)	7.8	5.8	8.8	6.3	4.4
Lugansk (N_1=150, N_2=71, N_3=79, N_4=150, N_5=71)	7.0	10.8	3.6	0.0	0.0
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117, N_4=145, N_5=33)	5.5	0.0	7.1	3.2	0.0
Rivne (N_1=150, N_2=36, N_3=114, N_4=130, N_5=34)	5.1	1.9	6.1	4.8	0.0
Sumy (N_1=150, N_2=61, N_3=89, N_4=146, N_5=59)	4.4	2.7	6.5	3.4	2.5
Kharkiv (N_1=300, N_2=132, N_3=168, N_4=296, N_5=128)	3.8	5.1	2.8	3.9	5.3
Ternopil (N_1=150, N_2=109, N_3=41, N_4=144, N_5=106)	3.3	3.7	2.4	2.8	2.8
Chernivtsi (N_1=150, N_2=55, N_3=95, N_4=142, N_5=54)	2.8	0.0	4.4	1.1	0.0
Simferopol (N_1=300, N_2=99, N_3=201, N_4=297, N_5=97)	2.7	5.2	1.4	2.2	4.6
Zhytomyr (N_1=150, N_2=31, N_3=119, N_4=146, N_5=31)	1.6	0.0	2.0	0.0	0.0
Vinnytsia (N_1=150, N_2=76, N_3=74, N_4=148, N_5=75)**	1.5	0.0	3.1	0.7	0.0
Chernigiv (N_1=150, N_2=89, N_3=61, N_4=147, N_5=88)	0.6	0.0	1.6	0.6	0.0

* Ordered by the share of FSW whose test results for Hepatitis C marker were positive (from the highest to the lowest).

** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW under 25 years of age, N_3 – weighted number of respondent FSW of 25+ years of age, N_4 – weighted number of respondent FSW who have not used injecting drugs within the last 12 months, N_5 – weighted number of respondent FSW under 25 years of age who have not used injecting drugs within the last 12 months.

*** In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

As it was expected, positive test results for Hepatitis C marker were most frequently observed among FSW, who have had an experience of injecting drug use within the last 12 months – 48% (see Fig. 3.4.2). There were a lot of positive results among FSW who have had an experience of drug use, but not within the last year – 35%. Such situations were less frequent among FSW who have used only non-injecting drugs within the last year (14%) and among FSW who have never used any drugs at all (either injecting or non-injecting) (8%).



3.4.2. **Prevalence of positive test results for Hepatitis C marker among FSW depending on the drug use practice, %**

There is a tendency that positive results are more frequent among FSW who mostly find clients via telephone, Internet (see Table 3.4.2).

It can be also seen that with increasing of the "work record", the share of FSW with positive results increases – from 8% among FSW with a 5-year "work record" in sex business up to 23% among FSW with "work record" of more than 10 years. It can be assumed that this situation is largely determined by the fact that there are more injecting drug users among FSW with greater experience[13]. However, the results obtained somehow contradict this assumption. Thus, in the table data for each segment are given also separately for injecting and non-injecting drug users. And the share of positive results among FSW who are injecting drug users different by "work record" is very close. However, together with the "work record" increase of FSW who are not injecting drugs, there is the linear increase of the share of respondents with positive results – from 6% among FSW with "work record" of up to 5 years to 17% among FSW with "work record" of more than 10 years. It can be to some extent explained by the fact that a part of older FSW with, relatively, bigger "work record" provided false information on their injecting drug use practices. Attention should be also paid to the fact that when determining FSW-IDU we are talking about injecting drug use within the last year. That can be possible that FSW used to use injecting drugs and was infected with Hepatitis C at that time, but she is not an injecting drug user now, therefore she cannot be IDU according to our classification. As far as such FSW are mostly represented among older FSW, there appears to be higher share of FSW with Hepatitis C among the corresponding category. It should be also taken into account that greater experience of

[13]Their number increases from 3% among FSW with "work record" of up to 2 years to 27% among FSW with "work record" of more than 20 years.

providing commercial sex services is connected to the accumulation of risks to get the virus when having sex, even though it is almost unlikely to get Hepatitis C this way.

Table 3.4.2

Prevalence of positive test results for Hepatitis C marker among FSW depending on the on the main client seeking method, "work record" and (not) belonging to non-governmental organizations*, %

	All FSW	FSW-not IDU	FSW-IDU
Main client seeking method			
- street, highway, railway station (N_1=2257, N_2=1962, N_3=274)*	12.5	7.9	44.9
- hotels, saunas, bars etc. (N_1=1201, N_2=1143, N_3=30)	7.3	6.2	38.0
- telephone, Internet (N_1=1357, N_2=1243, N_3=86)	14.7	11.4	55.5
Duration of stay in sex business			
- up to 5 years (N_1=2572, N_2=2411, N_3=129)	8.0	5.6	49.0
- 6-10 years (N_1=1338, N_2=1204, N_3=120)	13.0	9.4	46.5
- more than 10 years (N_1=833, N_2=685, N_3=141)	22.9	17.2	48.2
Being a client of non-governmental organizations			
- clients (N_1=2622, N_2=2249, N_3=316)	13.0	7.8	47.0
- non-clients (N_1=2353, N_2=2233, N_3=102)	11.6	9.7	50.2

*N_1 – weighted number of all respondent FSW of a corresponding group, N_2 – weighted number of respondents of a corresponding group who have not used injecting drugs within the last year, N_3 – weighted number of respondents of a corresponding group who have used injecting drugs within the last year.

CHAPTER IV. RISK FACTORS OF HIV INFECTION

4.1. Logical regression of HIV prevalence.

In the previous chapter we mentioned the data of HIV prevalence among FSW generally as well as the data of HIV prevalence among certain groups of FSW. In this chapter we are making an attempt to construct the model of logical regression which will provide the answers to the issues of how existence or absence of certain characteristics influences the probability of having HIV. For example, how the increasing “work record” of FSW in the sphere of sex industry influences the probability of having HIV.

Besides, implementation of the logical regression will make it possible to highlight the factors which indeed have independent from other factors connection with the dependent variable (existence/absence of HIV). In other words, quite often there happen the situations when we have intersection of characteristics important for us, which leads to the vagueness concerning which one of them is connected with the probability of having HIV. Implementation of the logical regression will help to find the answer for this problem as far as there was analyzed “clear connection” with the dependent variable while possible influence of the other factors is counted in the analysis.

However, there are some drawbacks from the point of interpretation of the logical regression model results for determination of variables connected with the existence of HIV. First of all, attention should be paid to the fact that in our case behavioral practices which we consider as independent variables are not “separated” in time with the moment of HIV infection (in case of FSW who have such infection) and may as well be the result rather than the reason of infection. For the correct determination of the influence, for example, of condom use practices with commercial partners on the probability of HIV infection we should have for FSW who already have such infection, the information about such practices before the moment of HIV infection. In other words, we are interested in how a certain FSW behaved before being infected or avoided the infection. However, we have only variables which refer to the practices of condom use only during the last month before the moment of interviewing and testing (but not the moment of HIV infecting which is not known to us). The same refers to other behavioral practices (for example, the drug abuse) and factors. As a result of such “non-separation” of time, the received analysis results can’t serve as an unambiguous ground to talk about some variables as about real factors of HIV infection, i.e. about the things which influence the probability of HIV infection. The received results make it possible to assert that FSW with certain characteristics with certain chances may have or not have HIV.

For at least partial solution of this problem the model of logical regression was built not for all FSW but for those who: 1) had the experience of testing for HIV before and 2) the last testing had negative result. As far as these FSW think that they are not infected with

HIV (according to the results of their last testing), we can suppose that their practices were less changeable with time (comparing to the practices noted during the interview in the behavioral questionnaire). This fact will give us opportunity to analyze more accurately connection between practices and existence of HIV infection. It is important to mention that such approach still doesn't give us opportunity to assert that, for example, some practices are actually the factors of infecting or non-infecting of HIV. However, such approach to a greater extend brings us to such conclusions.

Totally, 2469 respondents of all interviewed FSW (weighted amount) correspond to the mentioned criteria. According to the test result within the survey, 95 of them (or 4%) turned out to be infected with HIV.

Before proceeding to actually the construction of the logical regression model there should be determined the variables which are connected with the existence/absence of HIV-infection. Below in the table 4.1.1 the HIV prevalence is mentioned according to certain characteristics/practices of FSW, which are often considered as those which are connected with certain HIV-status. Besides, it is mentioned whether there exists the statistically significant connection (according to the criteria of Pearson's chi-square) [14]. If index p (which is put in brackets near all the characteristics/practices) is lower than 0.05, then connection between the characteristics/practices is considered to be statistically significant.

Table 4.1.1

Connection between presence of HIV infection and certain characteristics / practices among FSW, who had experience in HIV testing and whose last test results were negative

	% of HIV-positive	N
Education (p=0.92)		
- primary / basic secondary	4.2	559
- complete secondary, vocational, incomplete higher	3.8	1304
- basic higher	4.2	403
- complete higher	2.9	197
- difficult to say / refuse to answer	0.0	3
Social status (excluding employment in commercial sex sphere) (p=0.02)		
- studying	0.8	257
- unemployed	4.4	1176
- have permanent employment	5.8	253
- have occasional employment	4.0	572
- housewives	1.4	182
- disabled	10.7	19
- difficult to say / refuse to answer (including other)	0.0	8
Native or comer (p=0.23)		
- native	4.5	1440

[14]As it was mentioned in the description of the survey methodology, in this chapter for cities, where RDS methodology was implemented, scales by the HIV-status exported from RDSAT will be used.

- comer	3.1	1023
- difficult to say / refuse to answer	0.0	4
Level of financial welfare (p<0.01)		
- very low	7.9	156
- low	4.9	948
- middle	2.7	1075
- high or very high	3.1	259
- difficult to say / refuse to answer	0.0	28
Key source of income (p<0.01)		
- permanent employment	5.0	152
- temporary employment	9.7	123
- sex for remuneration	3.5	1927
- support from parents, relatives	0.6	154
- income of husband, partner, etc.	6.3	55
- social assistance	6.2	22
- difficult to say / refuse to answer (including other)	10.2	34
Frequency of providing sex services (p<0.01)		
- every day	3.2	873
- 2-3 times a week	3.0	1132
- once a week	4.4	240
- no more than 2-3 times a month	11.2	197
- difficult to say / refuse to answer	3.2	26
Main client seeking method (p=0.01)		
- hotel, sauna, casino, bars, restaurants etc.	2.0	575
- street, highway, railway station	4.6	1123
- telephone, Internet	3.6	696
- other	10.6	69
- difficult to say / refuse to answer	0.0	4
Duration of stay in sex business (p<0.01)		
- up to 2 years	2.1	629
- 3-5 years	3.5	701
- 6-10 years	3.1	653
- 11-20 years	6.8	374
- more than 20 years	12.4	28
- difficult to say / refuse to answer	9.7	81
Number of commercial partners per week (p<0.01)		
- up to 5 clients	3.9	1217
- 6-10 clients	3.5	540
- 11-20 clients	3.7	374
- more than 20 clients	3.0	295
- difficult to say / refuse to answer	17.1	41
Condom use during the most recent sexual contact with a commercial partner (p=0.30)		
- used	3.7	2337
- did not use	6.2	120
- difficult to say / refuse to answer	10.2	10
Frequency of condom use during vaginal sex with commercial		

partners in the last 30 days (p=0.02)		
- always	3.8	1878
- in most cases	4.5	384
- in half of the cases or less frequently	3.6	178
- had no vaginal sex / no clients	0.0	10
- did not know / did not remember	40.1	2
- have never used condoms	0.0	14
Frequency of condom use during anal sex with commercial partners in the last 30 days (p=0.08)		
- always	2.3	677
- in most cases	2.7	144
- in half of the cases or less frequently	2.5	118
- had no vaginal sex / no clients	4.8	1502
- did not know / did not remember	9.0	11
- have never used condoms	0.0	14
Readiness to provide sex services without condom use (p=0.02)		
- would agree under no circumstances	3.8	1580
- would agree under certain circumstances	3.8	829
- always ready	0.0	31
- difficult to say / refuse to answer	14.0	27
Experience of providing sex services to homosexuals within the last year (p=0.32)		
- did not provide	3.6	1941
- provided	4.8	238
- difficult to say / refuse to answer	5.2	288
Experience of providing sex services to IDUs within the last year (p<0.01)		
- did not provide	3.1	1806
- provided	7.3	316
- difficult to say / refuse to answer	5.0	345
Experience of providing sex services to foreigners within the last year (p=0.99)		
- did not provide	4.0	1112
- provided	3.8	1280
- difficult to say / refuse to answer	3.9	75
Experience of condom misuse (p<0.01)		
- had no problems	3.4	1652
- had certain problems	4.4	762
- difficult to say / refuse to answer	16.8	36
- had no clients	0.0	4
- have never used condoms	0.0	14
Presence of injecting drug users among permanent sexual partners in the last year (p=0.21)		
- there were not IDUs	3.9	2240
- there were IDUs	6.3	111
- difficult to say / refuse to answer	1.7	115
Presence of injecting drug users among casual sexual partners in the last year (p=0.76)		

- there were not IDUs	3.9	2177
- thre were IDUs	4.8	117
- difficult to say / refuse to answer	3.5	172
Level of knowledge (p=0.02)		
- made at least one mistake	4.9	1024
- gave correct answers to all five questions	3.1	1442
Coverage by prevention programmes (p=0.80)		
- are not covered by prevention programmes	3.7	800
- covered by prevention prorammes	4.0	1667
Being a client of non-governmental organization (p=0.40)		
- clients	4.3	1470
- non-clients	3.3	987
- difficult to say / refuse to answer	0.0	10
Alcohol consumption in the last 30 days (p=0.10)		
- every day	3.6	424
- not less than once a week	3.0	999
- less than once a week	4.3	802
- never	6.5	240
- difficult to say / refuse to answer	0.0	3
Drug use experience (p<0.01)		
- have never used	2.7	2136
- have ever used, but not in the last 12 months	20.4	77
- have used only non-injecting drugs in the last 12 months	1.2	84
- have used injecting drugs in the last 12 months	15.4	134
- difficult to say / refuse to answer	0.0	37

As it can be seen, the following characteristics/practices are statistically significantly connected with the existence/absence of HIV-infection: social status, level of financial welfare, key source of income, frequency of providing sex-services, main client seeking method, duration of working in the sex industry, frequency of condom use during the vaginal sex with commercial partners in the last 30 days, readiness to provide sex-services without condom use, experience of providing sex-services to IDUs within the last year, experience condom misuse, level of knowledge, experience of drug use. Close to statistically significantly connected characteristics/practices are the frequency of condom use during anal sex with commercial partners within the last 30 days and alcohol consumption within the last 30 days. These are the variables that were used further for the construction of the logical regression model.

The peculiarity of construction of logical regression models is that for every single variable it is necessary to determine with which category (which is called “reference”) the other categories of this variable will be compared for the analysis of the correspondence of chances to be HIV-infected. For example, in the case of duration of working in the sex industry we determined that FSW with the less than 2 years’ experience belong to the “reference” category. It means that other categories will be compared to the category of FSW with the experience of less than 2 years. The

received chances of the HIV existence should be interpreted in the following way – what is the probability of FSW of certain category to be HIV-infected compared to FSW of our "reference" category. For example, what is the probability that FSW with the experience of over 20 years will be HIV-infected as compared to the FSW with the experience of less than 2 years. It should be mentioned, that for each variable its separate "reference" category is determined.

For the model construction the Backward Conditional method was used. For the quality evaluation of the logical regression model the Nagelkerke R Square index is used. In case of our model the index is 0.228 which is considered to be an acceptable level of quality. However, another indicator of model's quality is the factor of how accurately (according to the variables included to the model) the HIV-status of FSW is predicted. Thus, talking about FSW who are not HIV-infected, in 99.8% of cases their HIV-status is correctly predicted with the help of the constructed model. However, if talking about HIV-infected FSW, then only 2.0% of such cases are being predicted correctly. It means that unfortunately the model badly "determines" who of the FSW are HIV-infected. Such situation proves that none of the variables provide the opportunity to accurately determine the HIV-status of the respondent.

Nevertheless, the received results still allow making some conclusions about the connection between separate characteristics of FSW and their HIV-status. Below in the table 4.1.2 there are mentioned the data referring to the amount of standardized index Exp(B) and the level of its significance for all characteristics. The standardized index Exp(B) indicates in how many times the probability of FSW who have certain characteristics to be HIV-infected compared with the FSW from the "reference" category differs. When the index Exp(B) is higher than 1, then it means that probability of FSW with such characteristics to be HIV-infected is higher that the probability of FSW from the "reference" category. If the index Exp(B) is lower than 1, then the probability is lower as well.

In the table 4.1.2 there were left the variables which are statistically significantly connected with the dependent variable of HIV-status (determining individual characteristics/practices it is necessary to consider the statistical significance – if the index is lower than 0.05, than probability of FSW with the corresponding characteristics/practice to be HIV-infected as compared to the "reference" category will be statistically significantly different).

The mostly evident connection is noticed in the case of drug use, duration of working in the sphere of sex industry and the level of knowledge. Thus, the same FSW who have ever used drugs, but have not used them within the last 12 months, have in 6.5 times higher probability to have HIV than FSW who have never in their life used drugs. Those, who during the last 12 months took injecting drugs, have in 5.1 times higher probability. Instead the probability to have HIV among FSW, who have used only non-injecting drugs during the last 12 months, statistically doesn't differ from the probability to have HIV among FSW who have never used drugs.

As far as the duration of working in the sphere of sex business is concerned, the threshold experience may be considered the experience of over 10 years. Thus, FSW whose work experience in this sphere is from 3 to 5 years or from 6 to 10 years, have the same probability to have HIV as FSW with the experience of less than 2 years. Instead, FSW with work record from 11 to 20 years have in 2.2 times higher probability, with work record of over 20 years – in 3.8 times higher probability to have HIV as compared to FSW with work record of less than 2 years.

According to the level of knowledge, the FSW who are less aware (made at least one mistake answering 5 questions concerning the existing ways of HIV-infecting and how the infection is not transmitted), have in 1.6 times higher probability to have HIV-infection than FSW who are more aware of these issues.

Considerable connection is noticed concerning the frequency of providing sex services, but nevertheless, it is opposite to the prospective one. Thus, the probability to have HIV-infection is higher among those who provide sexual services less frequently. But it should not be interpreted that frequent providing of sexual services “protects” FSW. Evidently, there are other factors, which were not considered during the analysis and therefore their influence could not be counted. For example, maybe those FSW who practiced dangerous behaviour with the time realized the wrongness of their actions and then started to use safer practices – for example, to provide sexual services less frequently. Although, they could be infected during the dangerous practices (but didn’t know about it for sure). As a result, those who now provide sexual services less frequently, have the higher prevalence of HIV-infection. In this context we should mention than unambiguous connection is noticed in the case of alcohol consumption – those who have never consumed alcohol have higher chances to be HIV-infected. The reasons of such situation may be the same as the ones described higher in this abstract.

The rest of variables have considerably weaker and substantially less expressed connection with the HIV-status, but they were left in the model for the consideration of their possible indirect influence.

Table 4.1.2

Results of construction of logical regression model for FSW, who were tested for HIV and whose last test results were negative

	N	Share of HIV-positive	Statistical significance	Exp(B)	95% confidence intervals	
					Lower limit	Upper limit
Social status						
- studying («reference category»)	257	0.8	0.23	1.0	---	---
- unemployed	1176	4.4	0.09	3.8	0.8	18.0
- have permanent employment	253	5.8	0.11	4.0	0.7	22.3

- have occasional employment	572	4.0	0.20	2.8	0.6	13.8
- housewives	182	1.4	0.89	0.9	0.1	6.6
- disabled	19	10.7	0.23	4.2	0.4	45.5
- difficult to say / refuse to answer	8	0.0	1.00	<0.01	<0.01	---
Level of financial welfare						
- very low	156	7.9	0.33	1.7	0.6	4.9
- low	948	4.9	0.20	1.7	0.7	4.0
- middle	1075	2.7	0.83	0.9	0.4	2.2
- high or very high («reference category»)	259	3.1	0.14	1.0	---	---
- difficult to say / refuse to answer	28	0.0	1.00	<0.01	<0.01	---
Key source of income						
- permanent employment («reference category»)	152	5.0	0.02	1.0	---	---
- temporary employment	123	9.7	0.32	2.0	0.5	7.6
- sex for remuneration	1927	3.5	0.95	1.0	0.3	3.4
- support from parents, relatives	154	0.6	0.03	0.1	0.0	0.8
- income of husband, partner, etc.	55	6.3	0.81	0.8	0.2	4.4
- social assistance	22	6.2	0.85	0.8	0.1	8.3
- difficult to say / refuse to answer (including other)	34	10.2	0.05	5.6	1.0	30.1
Frequency of providing sex services						
- every day	873	3.2	0.00	0.3	0.1	0.7
- 2-3 times a week	1132	3.0	0.00	0.3	0.2	0.7
- once a week	240	4.4	0.21	0.6	0.2	1.4
- no more than 2-3 times a month («reference category»)	197	11.2	0.02	1.0	---	---
- difficult to say / refuse to answer	26	3.2	0.17	0.2	0.0	2.3
Duration of stay in sex business						
- up to 2 years («reference category»)	629	2.1	0.02	1.0	---	---
- 3-5 years	701	3.5	0.49	1.3	0.6	2.7
- 6-10 years	653	3.1	0.65	1.2	0.6	2.5
- 11-20 years	374	6.8	0.03	2.2	1.1	4.7
- more than 20 years	28	12.4	0.06	3.8	1.0	15.2
- difficult to say / refuse to answer	81	9.7	0.01	4.3	1.5	12.9
Experience of condom misuse						
- had no problems («reference category»)	1652	3.4	0.03	1.0	---	---
- had certain problems	762	4.4	0.47	1.2	0.7	1.9
- difficult to say / refuse to answer	36	16.8	0.00	5.2	1.8	15.3
- had no clients	4	0.0	---	---	---	---
- have never used condoms	14	0.0	---	---	---	---
Level of knowledge						
- gave correct answers to all five questions («reference category»)	1442	3.1	---	1.0	---	---
- made at least one mistake	1024	4.9	0.05	1.6	1.0	2.5
Experience of drug use						
- have never used («reference category»)	2136	2.7	0.00	1.0	---	---
- Have ever used, nut not in the last 12 months	77	20.4	0.00	6.5	3.2	13.5
- have used only non-injecting drugs in the last 12 months	84	1.2	0.35	0.4	0.0	2.9

- used injecting drugs in the last 12 months	134	15.4	0.00	5.1	2.7	9.7
- difficult to say / refuse to answer	37	0.0	1.00	<0.01	<0.01	---
Alcohol consumption in the last 30 days						
- every day	802	4.3	0.20	0.6	0.3	1.3
- not less than once a week	424	3.6	0.01	0.3	0.1	0.7
- less than once a week	999	3.0	0.03	0.4	0.2	0.9
- never («reference category»)	240	6.5	0.07	1.0	---	---
- difficult to say / refuse to answer	3	0.0	1.00	<0.01	<0.01	---
Frequency of condom use during anal sex with commercial partners in the last 30 days						
- always («reference category»)	677	2.3	0.08	1.0	---	---
- in most cases	144	2.7	0.55	0.7	0.2	2.4
- in half of cases or less frequently	118	2.5	0.26	0.4	0.1	1.8
- had no anal sex / no clients	1502	4.8	0.08	1.7	0.9	3.1
- did not know / did not remember	11	9.0	0.65	0.6	0.1	6.2
- have never used condoms	14	0.0	---	---	---	---
Constant	---	---	<0.01	<0.01	---	---

CHAPTER V. COVERAGE BY PREVENTION PROGRAMMES. LEVEL OF KNOWLEDGE. TESTING FOR HIV

5.1.Coverage by prevention programmes

Main factors that help prevent HIV-infection (or at least reduce its probability) can be conditionally classified into those that are directly connected with models and practices of FSW behavior and those that are connected with establishments and institutions which activity is aimed at changing FSW behavior. In the first case, the question is in real regular and correct condom use when providing sex services, subjective focus of FSW on regular condom use, reduction of the number of “suspicious” clients, avoiding such practices as injecting drug use etc. Similar behavior models and practices were considered in previous chapters. In the second case, we’re talking about coverage by prevention programmes, which will be described below.

Percentage of FSW who are clients of non-governmental organizations

Obviously, FSW who are clients of non-governmental organizations will be the first covered by prevention programmes. Therefore, let us first consider how much FSW are the clients. Thus, according to the results obtained, a half of FSW (52%) are clients of non-governmental organizations (have a card or an individual code) working with FSW or IDU (see Fig. 5.1.1).

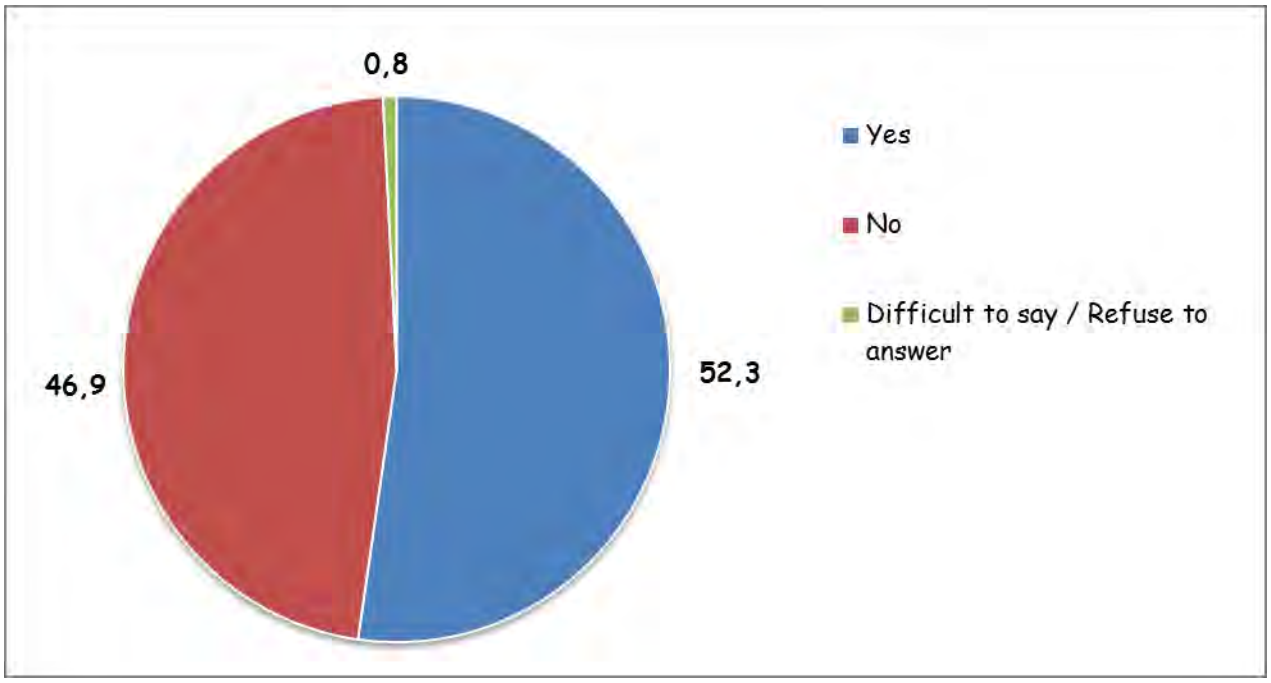


Fig. 5.1.1. **Percentage of FSW who are clients of non-governmental organizations (have a card or an individual code) working with FSW or IDU**

The situation is absolutely different in different cities. Thus, the total "clientization" is observed in Mykolaiv (100% of FSW are clients), Simferopol (100%), Lviv (99%), Kharkiv (98%) (see Fig. 5.1.2). It is possibly connected to methodical peculiarities of project realization, i.e. the number of clients is highly oversized. At the same time there are some regions with a very few number of clients – Lugansk (7%), Zaporizhzhia (5%), Uzhgorod (5%), Ternopil (1%), Chernigiv (0%).

Such results should be taken into consideration when considering certain indicators of coverage by prevention programmes. That means that possible especially high indicators of coverage by prevention programmes will be explained first of all by the fact that due to some methodical peculiarities the sample appeared to contain too many clients of non-governmental organizations and not enough non-clients.

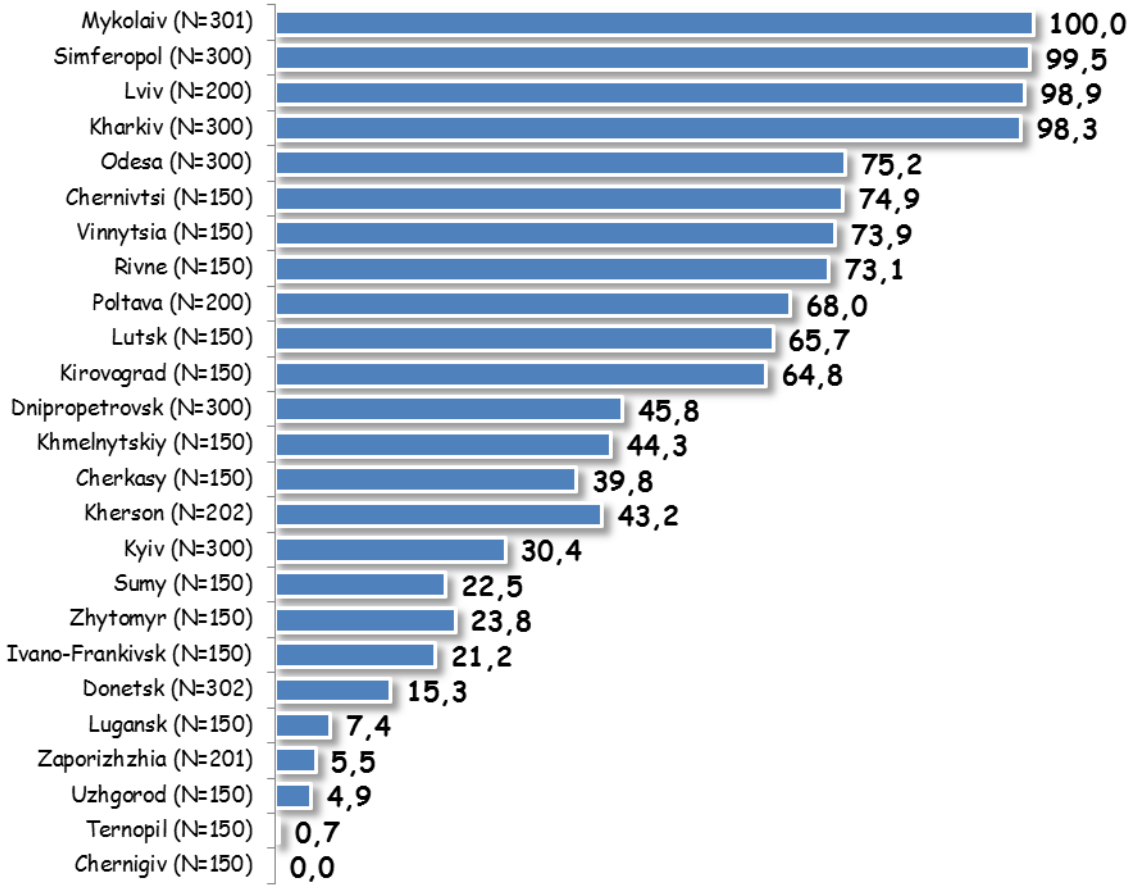


Fig. 5.1.2. **Percentage of FSW who are clients of non-governmental organizations (have a card or an individual code) working with FSW or IDU (by regions), %**

There are noticeably more clients among older FSW (58% as compared to 44% among younger FSW, p<0.01), among “street” FSW (67% as compared to 40% of those who mostly find clients at hotels, bars, in saunas etc. and to 40% of those who find them via telephone, Internet p<0.01), among FSW using injecting drugs (76% as compared to 50% among those who are not using injecting drugs), among HIV-positive FSW (63% as compared to 51% among FSW who are HIV-negative)[15].

So far younger FSW working elsewhere except in streets, highways, at railway stations, not injecting drugs and being HIV-negative are less covered by prevention programmes. In general, when studying the profile of FSW who are clients and non-clients it seems that non-governmental organizations more likely counteract with the consequences (for example, providing help to FSW who have already been HIV-infected or used injection drugs etc.) then conduct prevention activities. On the one hand, work with HIV-infected people or with those whose practices are especially dangerous (for example, injecting drug use) is also prevention as it prevents HIV prevalence from target group representatives to other people. On the other hand, providing assistance to female sex workers is also very important in order to avoid infecting and especially dangerous practices. And the second component of prevention work seems to be weaker.

The majority of clients have already been for quite a long period of time in the organizations (60% have been clients of NGOs for more than a year), but at the same time every third FSW (30%) has joined NGO only during the last year (see Fig. 5.1.3).

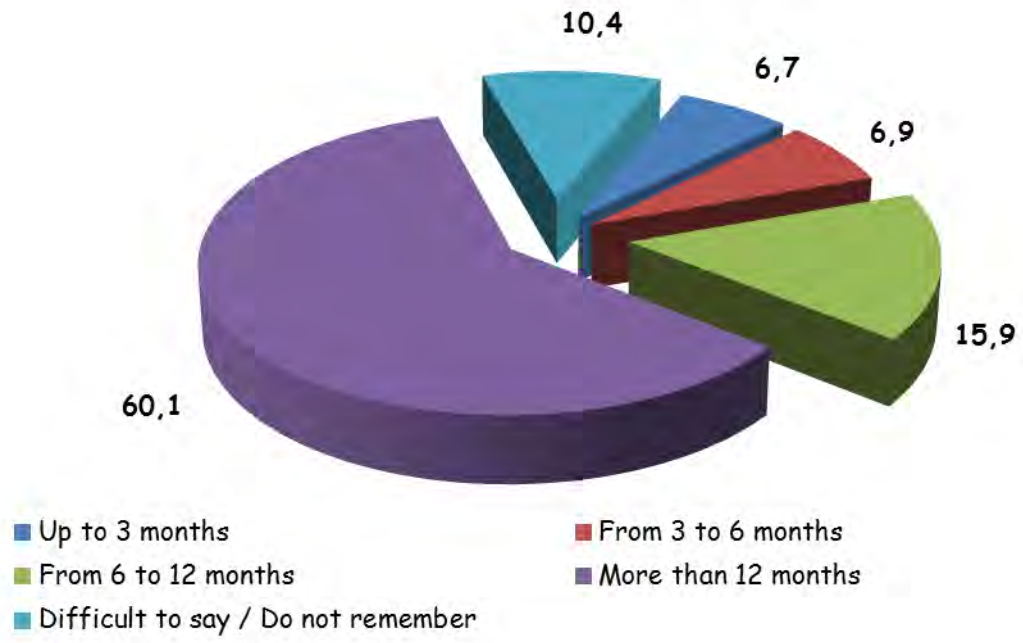


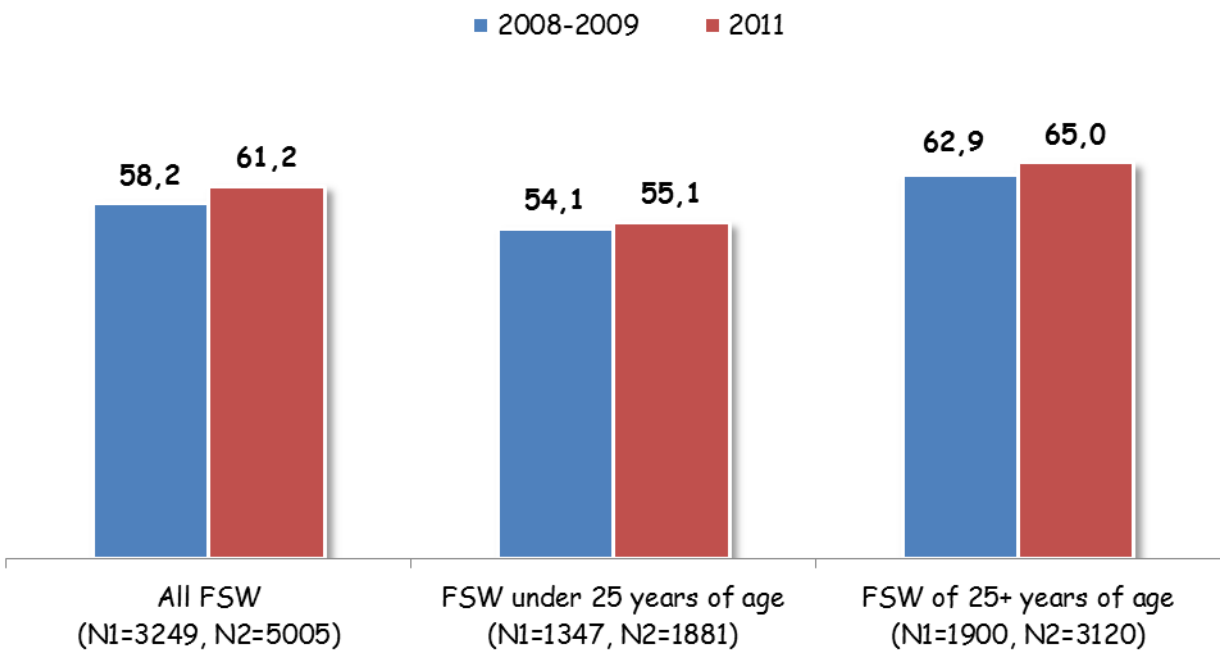
Fig. 5.1.3. **Duration of stay in the status of a client of a non-governmental organization, % among FSW who are clients of non-governmental organizations (have a card or an individual code) working with FSW or IDU**

[15]If talk about FSW who know themselves that they are HIV-positive, there are 72% of clients of non-governmental organization among them as compared to 60% of such among FSW who think that they are HIV-negative(p<0.01).

Almost all FSW who are clients (98%) reported having received condoms from representatives of their organization within the last 6 months (for absolute majority of FSW these were the first 6 months of 2011).

National indicator "Percentage of FSW covered by prevention programmes"

Let us now in fact consider indicators of coverage by prevention programmes. According to the survey, the national indicator "Percentage of FSW covered by prevention programmes" was calculated. The numerator of the indicator includes FSW who have received condoms within the last 12 months and who know where to apply for HIV testing. The denominator of the indicator includes all interviewed FSW. On the whole, as of 2011, the value of the indicator makes up 62% (95% confidence intervals – 60.1%-62.9%), which is even higher than 58% which was in 2008-2009 (95% confidence intervals – 56.5%-59.9%) ($p<0.01$) (see Fig. 5.1.4)[16]. Slightly higher coverage is observed among older FSW (of 25+ years of age) – 66% as compared to 55% among younger FSW (under 25 years of age) ($p<0.01$).



*N_1 – weighted number of all respondent FSW of a corresponding group interviewed in 2008-2009, N_2 – weighted number of all respondent FSW of a corresponding group interviewed in 2011.

Fig. 5.1.4. **Percentage of FSW covered by prevention programmes**

[16] Again, it should be noted that national indicators (among all FSW and FSW under and over 25 years of age) are calculated by quite a different scheme than other results described in this survey (see the description of the survey methodology).

Situation with the coverage varies significantly according to the city. In some cases there is 100% (or almost) 100% coverage – like in Mykolaiv, Simferopol, Lviv, Kharkiv (see Table 5.1.1). However, it should be noted that exactly in these four cities almost all interviewed FSW are clients of non-governmental organizations which is rather a methodical artifact due to the methodology used. That is in case of these cities we cannot state that all (or almost all) FSW are covered by prevention rogrammes. Still, the lowest coverage is observed among FSW from Ternopil (2%) and Chernigiv (5%).

Attention should be also paid to the fact that in most cases the number of clients is closely related to the number of people covered by prevention programmes. However, there are some exceptions. The most distinct differences[17] are observed in Uzhgorod, where only 5% of FSW are clients, while a half (53%) is covered by prevention programmes. Similar differences occur in Lutsk (67% of clients as compared to 93% of covered by prevention programmes), Donetsk (17% as compared to 38%), Ivano-Frankivsk (21% as compared to 44%) and Lugansk (7% as compared to 33%).

As it can be seen in the table below, clients of NGOs are the first to be covered. As far as non-clients are concerned, there is no more than one third of them covered. The only significant exception is FSW in Lutsk, among whom 78% of non-clients are covered with prevention programmes.

Table 5.1.1

Percentage of FSW covered by prevention programmes (by regions)*

	All FSW	FSW…		Non-governmental organizations***	
		Under 25 years of age	Of 25+ years of age	Clients	Non-clients
Mykolaiv (N_1=301, N_2=101, N_3=200, N_4=301, N_5=0)***	100.0	100.0	100.0	100.0	---
Simferopol (N_1=300, N_2=99, N_3=201, N_4=299, N_5=1)	99.8	100.0	99.7	100.0	---
Lviv (N_1=200, N_2=65, N_3=135, N_4=198, N_5=2)	99.5	100.0	99.2	100.0	---
Kharkiv (N_1=300, N_2=132, N_3=168, N_4=295, N_5=3)	98.9	98.5	99.2	99.5	---
Lutsk (N_1=150, N_2=63, N_3=87, N_4=99, N_5=50)	92.5	89.1	95.0	100.0	77.5
Vinnytsia (N_1=150, N_2=76, N_3=74, N_4=111, N_5=39)	82.1	77.4	86.9	100.0	31.2
Rivne (N_1=150, N_2=36, N_3=114, N_4=110, N_5=40)	82.1	74.9	84.4	98.4	37.9
Chernivtsi (N_1=150, N_2=55, N_3=95, N_4=112, N_5=38)	81.2	80.9	81.5	95.4	38.9
Kirovograd (N_1=150, N_2=45, N_3=105, N_4=97, N_5=44)	75.0	72.7	76.0	100.0	30.6
Odesa (N_1=300, N_2=135, N_3=165, N_4=226, N_5=74)	74.2	63.2	83.2	95.5	9.8
Poltava (N_1=200, N_2=19, N_3=181, N_4=136, N_5=62)	72.5	36.8	76.2	94.1	24.2
Khmelnytskiy (N_1=150, N_2=65, N_3=85, N_4=67, N_5=72)	66.0	45.6	81.6	98.6	33.8
Kherson (N_1=202, N_2=109, N_3=93, N_4=87, N_5=114)	57.1	41.6	75.4	94.2	29.2
Uzhgorod (N_1=150, N_2=102, N_3=48, N_4=7, N_5=143)	53.1	54.2	50.8	---	50.7
Kyiv (N_1=300, N_2=88, N_3=208, N_4=105, N_5=190)	45.0	43.3	46.4	82.6	29.1

[17]Розбіжності рахувалися як абсолютна різниця між відсотком тих, хто охоплений профілактичними програмами, і відсотком тих, хто є клієнтом громадських організацій.

Ivano-Frankivsk (N_1=150, N_2=33, N_3=117, N_4=32, N_5=118)	43.6	39.7	44.7	97.1	29.2
Dnipropetrovsk (N_1=300, N_2=141, N_3=159, N_4=137, N_5=160)	43.4	39.1	47.2	94.1	0.5
Lugansk (N_1=150, N_2=71, N_3=79, N_4=11, N_5=138)	37.3	37.1	35.0	96.0	33.4
Donetsk (N_1=302, N_2=63, N_3=239, N_4=46, N_5=244)	36.9	15.5	42.8	92.7	26.6
Cherkasy (N_1=150, N_2=43, N_3=107, N_4=65, N_5=85)	36.3	27.9	43.2	98.3	4.0
Zhytomyr (N_1=150, N_2=31, N_3=119, N_4=13, N_5=26)	27.5	15.8	30.6	96.1	6.1
Sumy (N_1=150, N_2=61, N_3=89, N_4=66, N_5=84)	27.3	37.7	23.4	100.0	4.5
Zaporizhzhia (N_1=200, N_2=50, N_3=150, N_4=18, N_5=180)	19.5	23.5	17.6	98.1	15.5
Chernigiv (N_1=150, N_2=89, N_3=61, N_4=0, N_5=150)	4.6	6.8	2.4	---	4.6
Ternopil (N_1=150, N_2=109, N_3=41, N_4=1, N_5=149)	2.0	0.9	4.9	---	1.3

* Ordered by the share of FSW covered by prevention programmes (from the highest to the lowest).
** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.
*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW under 25 years of age, N_3 – weighted number of respondent FSW of 25+ years of age, N_4 – weighted number of respondent FSW who are clients of non-governmental organizations, N_5 – weighted number of respondent FSW who are not clients of non-governmental organizations.

In the Table 5.1.2 below data are compared regarding coverage by prevention programmes according to the surveys of 2008-2009 and 2011. There are significant differences in certain cases. For example, in Kharkiv 39% of FSW were covered by prevention programmes in 2008-2009, while in 2011 there have been 99% of such FSW. There are other similar cases of such a quick dynamics. Obviously, it is hardly appropriate to say that similar changes have really happened – it is rather a methodical artifact, therefore the dynamics ontained should be quite carefully interpreted.

Table 5.1.2

Percentage of FSW covered by prevention programmes (by regions)*

	2008-2009	2011
Vinnytsia (N_1=150, N_2=150)**	93.8	82.1
Dnipropetrovsk (N_1=100, N_2=300)	23.9	43.4
Donetsk (N_1=150, N_2=302)	70.6	36.9
Zhytomyr (N_1=150, N_2=150)	28.0	27.5
Zaporizhzhia (N_1=150, N_2=200)	19.7	19.5
Ivano-Frankivsk (N_1=150, N_2=150)	43.3	43.6
Kyiv (N_1=256, N_2=300)	40.9	45.0
Kirovograd (N_1=100, N_2=150)	88.3	75.0
Lugansk (N_1=100, N_2=150)	17.1	37.3
Lutsk (N_1=100, N_2=150)	77.0	92.5
Lviv (N_1=95, N_2=200)	100.0	99.5
Mykolaiv (N_1=100, N_2=301)	97.0	100.0
Odesa (N_1=100, N_2=300)	65.3	74.2
Poltava (N_1=150, N_2=200)	79.3	72.5
Rivne (N_1=152, N_2=150)	77.2	82.1
Simferopol (N_1=150, N_2=300)	98.1	99.8
Sumy (N_1=100, N_2=150)	97.0	27.3
Ternopil (N_1=150, N_2=150)	25.3	2.0

Uzhgorod (N_1=100, N_2=150)	16.0	53.1
Kharkiv (N_1=149, N_2=300)	35.8	98.9
Kherson (N_1=100, N_2=202)	70.0	57.1
Khmelnytskiy (N_1=101, N_2=150)	61.5	66.0
Cherkasy (N_1=95, N_2=150)	61.7	36.3
Chernivtsi (N_1=151, N_2=150)	100.0	81.2
Chernigiv (N_1=150, N_2=150)	7.5	4.6

* Ordered by the share of FSW covered by prevention programmes, among all respondents according to the survey of 2011 (from the highest to the lowest).
** N_1 – weighted number of all respondent FSW interviewed in 2008-2009, N_2 – weighted number of respondent FSW interviewed in 2011.

As far as different groups of FSW are concerned, it should be noted that the most covered with prevention programmes (except older FSW) are “street” FSW (72% covered as compared to 52% among FSW who mostly find clients at hotels, bars, in saunas etc. and to 51% among FSW who find clients via telephone, Internet, $p<0.01$)., FSW who are injecting drug users (83% as compared to 60% among FSW who do not use drugs, $p<0.01$), HIV-positive FSW (74% as compared to 60% among FSW who are HIV-negative, $p<0.01$). There are more clients of non-governmental organizations among corresponding groups of FSW.

On the whole, clients of non-governmental organizations are the first to be covered. Thus, if among clients of non-governmental organizations there are 98% of FSW covered by prevention programmes, there are only 22% of such among non-clients of non-governmental organizations ($p<0.01$). In other words, prevention programmes are by far quite effective among clients and significantly less effective among non-clients.

It should be noted that according to the survey, HIV prevalence among FSW covered by prevention programmes is higher than among FSW who are not covered – 12% as compared to 10% ($p<0.01$). Evidently, this is a result of the fact that either dangerous working conditions connected with high risk of infecting or the HIV-infection itself strongly encourage FSW to contact and work with non-governmental organizations.

At the same time the positive thing is that among FSW covered by prevention programmes there are much more FSW who regular use condoms during vaginal (80% as compared to 65% among those who are not covered, $p<0.01$) and anal sex (75% as compared to 59%, $p<0.01$).

Receiving condoms and knowledge of where a person can be HIV-tested

In terms of coverage by prevention programmes, separate components of the indicator should be considered such as receiving condoms and knowledge of where a person can be HIV-tested. As it can be seen on fig. 5.1.5, the absolute majority of FSW (91%) know where they can be HIV-tested, while condoms were received only by 64% of FSW (which is also quite a high indicator).

In terms of age groups, it should be noted that older FSW have received condoms more frequently (68% as compared to 58% among younger FSW, p<0.01), and are better acknowledged of places where they can be HIV-affected (93% as compared to 88%, p<0.01).)

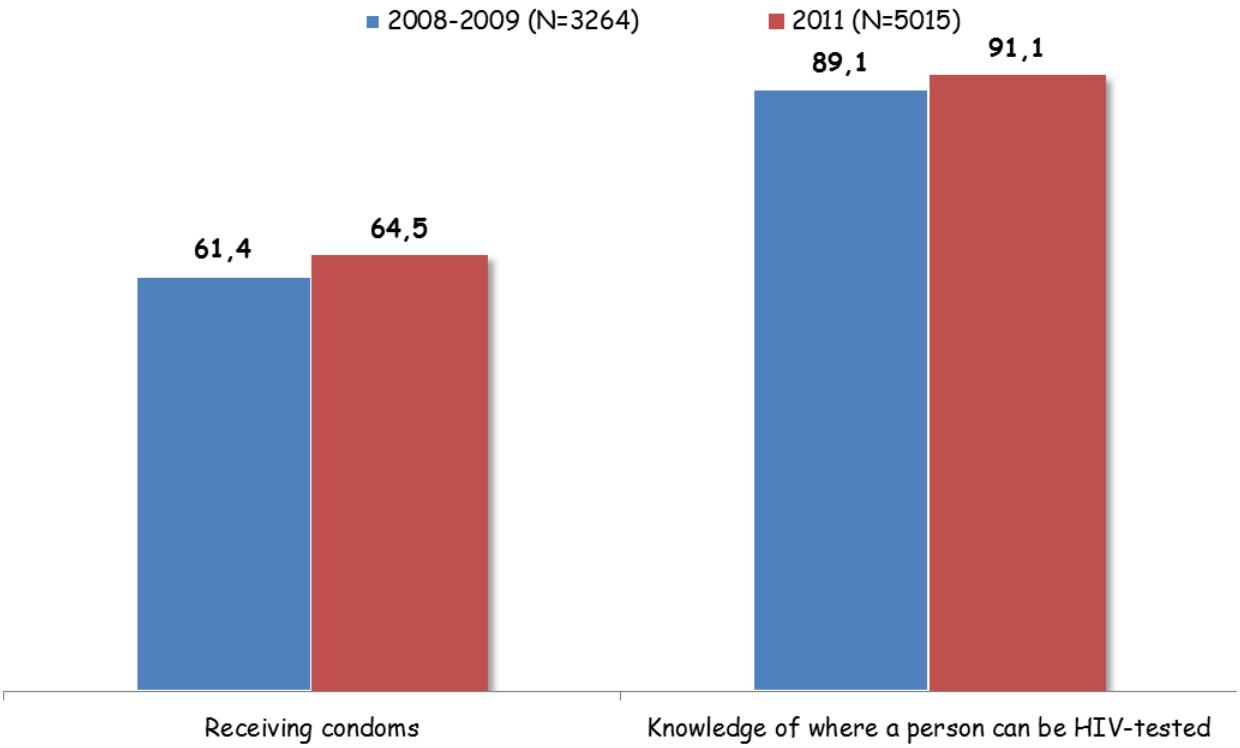


Fig. 5.1.5. **Percentage of FSW who know where they can be HIV-tested and percentage of FSW who have received condoms within the last year**

In fact, in all cities the absolute majority of FSW know where they can be HIV-tested (see Table 5.1.3). The totally different situation is with receiving condoms. While there is 100% of condom receiving in a number of cities, in other cities the index is extremely low – only 5% of FSW in Chernigiv and 3% of FSW in Ternopil have received condoms. It should be noted that attention should be paid to non-clients – they almost haven't received condoms.

Table 5.1.3

Percentage of FSW who know where they can be HIV-tested and percentage of FSW who have received condoms within the last year (by regions)*

	Have received condoms***			Know where they can be HIV-tested***		
	All	Clients	Non-clients	All	Clients	Non-clients
Mykolaiv (N_1=301, N_2=301, N_3=0)***	100.0	100.0	---	100.0	100.0	---
Simferopol (N_1=300, N_2=299, N_3=1)	99.8	100.0	---	100.0	100.0	---
Kharkiv (N_1=300, N_2=295, N_3=3)	99.7	100.0	---	99.2	99.5	---
Lviv (N_1=200, N_2=198, N_3=2)	99.5	100.0	---	100.0	100.0	---
Lutsk (N_1=150, N_2=99, N_3=50)	92.5	100.0	77.5	100.0	100.0	100.0

Vinnytsia (N_1=150, N_2=111, N_3=39)	89.0	100.0	57.7	84.0	100.0	38.6
Chernivtsi (N_1=150, N_2=112, N_3=38)	87.4	100.0	49.9	86.3	95.4	59.3
Rivne (N_1=150, N_2=110, N_3=40)	83.1	99.0	39.9	97.2	99.4	91.2
Poltava (N_1=200, N_2=136, N_3=62)	79.0	99.3	33.9	85.5	94.1	66.1
Odesa (N_1=300, N_2=226, N_3=74)	78.5	100.0	13.5	88.5	95.5	67.3
Kirovograd (N_1=150, N_2=97, N_3=44)	75.7	100.0	32.9	91.4	100.0	75.0
Kherson (N_1=202, N_2=87, N_3=114)	70.7	100.0	48.9	78.2	94.2	65.8
Khmelnytskiy (N_1=150, N_2=67, N_3=72)	69.2	100.0	37.8	94.9	98.6	92.0
Uzhgorod (N_1=150, N_2=7, N_3=143)	56.4	---	54.2	85.6	---	84.9
Kyiv (N_1=300, N_2=105, N_3=190)	55.0	94.2	38.1	84.8	82.5	86.5
Ivano-Frankivsk (N_1=150, N_2=32, N_3=118)	46.0	100.0	31.5	91.5	97.1	89.9
Dnipropetrovsk (N_1=300, N_2=137, N_3=160)	45.8	99.4	0.5	88.1	94.7	82.2
Lugansk (N_1=150, N_2=11, N_3=138)	41.6	92.3	38.0	96.4	96.0	95.9
Donetsk (N_1=302, N_2=46, N_3=244)	41.0	98.8	30.4	84.6	91.1	84.4
Cherkasy (N_1=150, N_2=65, N_3=85)	35.6	98.0	3.7	95.7	100.0	92.8
Zhytomyr (N_1=150, N_2=13, N_3=26)	29.2	100.0	7.1	95.5	96.1	95.3
Sumy (N_1=150, N_2=66, N_3=84)	27.3	100.0	4.5	85.0	100.0	78.4
Zaporizhzhia (N_1=200, N_2=18, N_3=180)	21.3	94.7	17.1	83.5	96.3	82.7
Chernigiv (N_1=150, N_2=0, N_3=150)	4.6	---	0.0	87.7	---	0.0
Ternopil (N_1=150, N_2=1, N_3=149)	2.7	---	2.0	94.0	---	94.0

* Ordered by the share of FSW who have received condoms (from the highest to the lowest).
** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.
*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW who are clients of non-governmental organizations, N_3 – weighted number of respondent FSW who are not clients of non-governmental organizations.

It was already mentioned above that the level of coverage by prevention programmes is significantly lower among FSW who are not clients of non-governmental organizations. This is first of all connected to the fact that only 26% of FSW who are not clients have received condoms within the last year (see Fig. 5.1.6). The relarive indicator among clients makes up almost 100% ($p<0.01$). That is distribution of condoms fully cover all the clients, but it almost does not cover other FSW. In case of knowing where a person can be HIV-tested, there are also certain differences but they are not that significant – 98% of clients know where they can be HIV-tested as compared to 84% among non-clients ($p<0.01$).

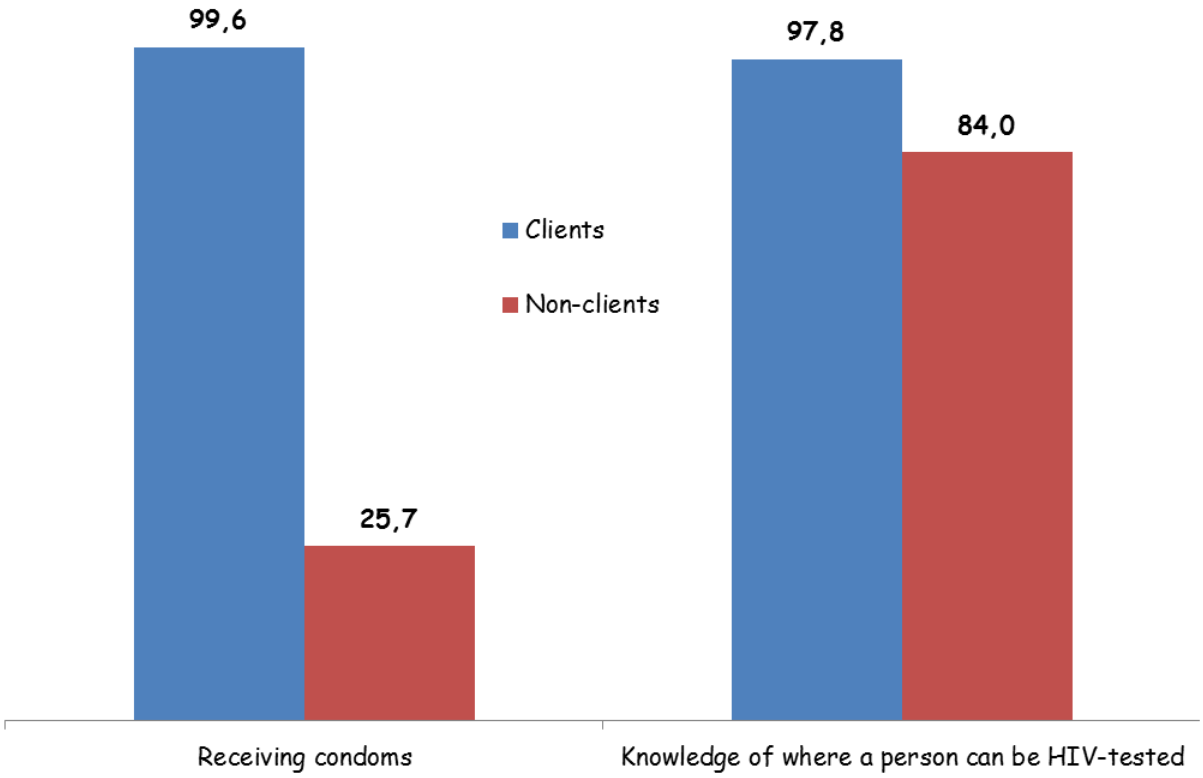


Fig. 5.1.6. **Percentage of FSW who know where they can be HIV-tested and percentage of FSW who have received condoms within the last year (by clients and non-clients of non-governmental organizations)**

Assistance from non-governmental organizations having received by FSW within the last 12 months

While interviewing, respondents were also asked what kinds of assistance they had received from non-governmental organizations (despite being clients or non-clients). In general, 71% of FSW have received this or that assistance (see Table 5.1.4). First of all they were provided with condoms (62% reported that). Quite widespread are also free testing for HIV/AIDS (48%), receiving informational leaflets, booklets (41%), receiving personal hygiene items (40%), free testing for sexually transmitted infections (38%).

It was already mentioned above that coverage by prevention programmes is significantly lower among FSW who are not clients of non-governmental organizations. Thus, almost 100% of clients of non-governmental organizations have received some assistance within the last year. The assistance most frequently received was: a) receiving condoms (99% of FSW who are clients of non-governmental organizations have received such assistance); b) testing and counseling on HIV/AIDS (79% and 51% correspondingly); c) receiving personal hygiene items and disinfectants (71% and 55% correspondingly); г) receiving informational materials (65%). Other kinds of assistance have been received by significantly fewer clients of non-governmental organizations.

In case of FSW ,who are not clients of non-governmental organizations, only 39% have received some assistance.

Table 5.1.4

Percentage of FSW who have received corresponding assistance from non-governmental organizations within the last year *

	Among all FSW (N=5015)	Among… Clients (N=2622)	Non-clients (N=2353)
Have received at least some help	*70.7*	*99.6*	*38.9*
Receiving condoms	62.1	99.2	21.1
Free testing for HIV/AIDS	47.7	79.0	13.4
Receiving informational leaflets, booklets	40.6	65.4	13.3
Receiving personal hygiene items	40.3	70.5	7.3
Free testing for sexually transmitted infections	38.1	66.1	7.6
Receiving disinfectants	29.6	55.3	1.4
Counseling on HIV/AIDS, sexually transmitted infections and ways of their transmission prevention	29.3	51.2	5.3
Psychological consultations	13.8	24.6	2.0
Free treatment of sexually transmitted infections	11.0	17.7	3.7
Peer-to-peer counseling	11.0	20.6	0.4
Participation in mutual support groups	9.3	17.0	0.8
“Trust line”	8.6	13.5	3.1
Legal consultations	7.6	14.0	0.6
Syringe exchange	6.4	10.7	1.7
Counseling on safer drug use	5.5	10.1	0.4
Other	2.1	3.3	0.8

* Ordered by the share of FSW who have received corresponding kind of help (from the highest to the lowest).

The Table 5.1.5 below presents data by separate cities. As it can be seen, the least assistance has been provided to FSW from Lugansk (36% reported having received some assistance), Sumy (34%), Zhytomyr (26%), Zaporizhzhia (17%). In most cities not less than twho thirds of FSW have received this or that assistance within the last year.

Table 5.1.5

Share of FSW who have received assistance from non-governmental organizations within the last year (by regions)*, %

	Have received at least some help	Syringes	Disinfectants	Personal hygiene items	Condoms	Informational materials	«Trust line»	Mutual support groups	Counseling on safe drug use	Counseling on HIV/AIDS, sexually transmitted infections	Legal consultations	Psychological consultations	Peer-to-peer counseling	Free testing for HIV/AIDS	Free testing for STI	Free treatment of STI	Other
Lviv (*N*=200)	100.0	1.8	60.3	64.2	99.5	41.6	3.6	4.3	1.9	53.0	3.7	6.6	2.1	92.6	45.4	25.0	0.5
Mykolaiv (*N*=301)	99.7	1.0	83.1	96.7	99.3	99.0	23.7	38.4	5.6	96.0	64.1	80.8	45.0	97.7	98.3	42.5	2.0
Kharkiv (*N*=300)	99.7	0.4	89.6	93.0	99.7	36.1	39.4	1.0	0.0	17.7	7.4	18.9	0.3	82.0	60.0	10.9	0.0
Simferopol (*N*=300)	99.5	0.9	98.6	99.5	99.5	14.4	0.5	1.3	0.2	5.9	0.0	0.4	3.1	79.5	98.9	11.8	0.2
Ternopil (*N*=150)	94.7	0.0	0.0	0.7	2.0	18.0	12.0	0.0	0.0	1.3	0.7	3.3	0.0	78.7	79.3	12.7	0.0
Rivne (*N*=150)	92.5	2.2	3.4	43.0	82.0	37.1	6.9	33.0	3.4	34.0	0.0	6.3	6.0	68.7	49.6	2.5	0.0
Vinnytsia (*N*=150)	91.7	2.8	56.6	72.5	88.3	81.1	3.2	30.6	2.2	72.1	16.9	33.0	16.0	68.8	70.5	10.3	0.0
Lutsk (*N*=150)	91.4	17.6	71.7	71.7	90.2	78.0	1.1	17.1	22.4	60.7	0.6	1.1	4.8	51.7	61.7	9.6	0.0
Chernivtsi (*N*=150)	87.4	2.6	0.5	68.2	86.9	79.2	34.6	22.1	6.4	48.3	5.3	17.6	45.9	67.5	61.8	4.8	1.2
Poltava (*N*=200)	82.0	49.5	57.0	60.5	74.0	59.5	23.5	27.0	39.0	48.5	7.0	33.0	35.0	42.5	42.0	36.0	1.0
Odesa (*N*=300)	80.0	0.9	7.1	10.7	77.6	47.0	3.2	0.0	0.6	3.3	1.4	5.6	1.0	47.6	7.0	0.0	1.8
Kherson (*N*=202)	77.2	7.8	14.8	30.9	68.0	54.1	2.6	2.7	4.1	15.7	11.6	17.0	2.5	38.2	29.2	11.6	1.0
Kirovograd (*N*=150)	73.3	11.6	39.5	3.4	67.8	65.7	2.0	22.9	8.9	63.7	11.4	20.8	63.7	54.9	61.6	10.8	41.9
Khmelnytskiy (*N*=150)	68.6	0.6	2.0	32.9	67.3	43.3	3.3	10.7	2.6	36.6	1.3	16.8	8.8	38.9	14.5	1.3	0.6
Uzhgorod (*N*=150)	67.5	0.6	2.3	36.5	51.3	27.0	0.9	3.2	2.9	14.4	3.2	8.0	0.0	28.4	11.8	9.2	0.0
Ivano-Frankivsk (*N*=150)	64.3	4.9	7.5	22.4	46.0	28.5	27.0	7.5	4.3	25.2	4.4	8.1	7.5	30.3	15.1	1.2	2.0
Kyiv (*N*=300)	62.4	5.9	2.9	16.5	53.4	22.9	2.7	2.7	4.3	6.5	4.6	6.6	9.1	22.3	8.4	9.0	3.5
Chernigiv (*N*=150)	48.0	0.0	0.0	0.0	1.6	35.6	0.0	0.0	0.0	33.7	0.0	0.0	0.0	0.8	0.5	0.0	0.0

	Have received at least some help	Syringes	Disinfectants	Personal hygiene items	Condoms	Informational materials	«Trust line»	Mutual support groups	Counseling on safe drug use	Counseling on HIV/AIDS, sexually transmitted infections	Legal consultations	Psychological consultations	Peer-to-peer counseling	Free testing for HIV/AIDS	Free testing for STI	Free treatment of STI	Other
Dnipropetrovsk (*N*=300)	45.8	2.2	3.6	13.7	45.6	43.2	0.6	0.0	13.6	42.0	0.6	0.0	2.9	30.4	31.2	5.6	0.0
Donetsk (*N*=302)	44.3	16.3	10.6	19.6	34.1	15.4	5.5	5.6	2.6	9.0	3.0	6.6	5.5	24.5	9.1	14.8	1.4
Cherkasy (*N*=150)	42.6	26.9	22.3	28.0	38.3	33.7	1.6	16.8	13.2	23.2	13.2	16.9	18.3	34.8	18.4	3.8	1.2
Lugansk (*N*=150)	37.7	0.0	4.7	28.2	37.8	1.6	0.8	0.0	0.0	0.4	1.4	7.3	0.0	9.5	8.4	0.8	0.8
Sumy (*N*=150)	29.4	1.6	0.8	21.4	23.7	22.6	1.8	2.6	0.8	21.2	1.9	6.7	3.0	26.2	19.6	5.8	0.0
Zhytomyr (*N*=150)	25.9	2.8	3.8	0.6	25.2	17.2	0.0	0.6	0.6	9.8	0.8	0.0	1.6	15.6	13.8	0.6	1.9
Zaporizhzhia (*N*=200)	15.9	6.9	6.0	6.9	11.2	7.2	0.1	0.2	2.1	3.0	0.7	0.6	1.5	6.0	0.6	4.3	0.9

* Ordered by the share of FSW who have received corresponding kind of assistance (from the highest to the lowest).

However, it should be noted that samples of different cities differe significantly by the share of clients and non-clients of non-governmental organizations. Since, as it was mentioned above, FSW who are not clients of non-governemntal organizations receive significantly less assistance, regional differences are to some extent explained by the different share of clients and non-clients in city samples. In other words, the less number of clients in a city sample can possibly influence the fact that there are less people in this city who have received any assistance from non-governmental organizations within the last year.

The Table 5.1.6 below presents data regarding the share of those who have received any assistance for each city separately for clients and non-clients of non-governmental organizations. Thus, almost all clients in all cities have received some assistance. As far as non-clients are concerned, there are significant differences regarding assistance provision. Thus, Ternopil is the "leader" by penetration of non-clients of non-governmental organizations in the group – 95% of such FSW have received some assistance from NGOs within the last year. Rivne and Lutsk should be also noted, where three out of four FSW who are not clients of non-governmental organizations (75% and 74% correspondingly) have received some assistance. The lowest penetration in prevention programmes among FSW who are not clients of non-governmental organizations is observed in Sumy (only 7% have received some assistance), Cherkasy (7%), Zhytomyr (3%), Dnipropetrovsk (1%). As far as Simferopol, Lviv, Mykoliav and Kharkiv are concerned, there appeared to be very few non-clients in the samples, therefore the level of penetration cannot be estimated for these cities.

Table 5.1.6

Percentage of FSW who have received assistance from non-governmental organizations within the last year (by regions separately for clients and non-clients of non-governmental organizations)*

	Clients***	Non-clients***
Ternopil (N_1=1, N_2=149)***	---	94.6
Rivne (N_1=110, N_2=40)	99.0	74.7
Lutsk (N_1=99, N_2=50)	100.0	74.0
Vinnytsia (N_1=111, N_2=39)	100.0	68.2
Uzhgorod (N_1=7, N_2=143)	---	65.9
Kherson (N_1=87, N_2=114)	100.0	60.4
Ivano-Frankivsk (N_1=32, N_2=118)	100.0	54.7
Chernivtsi (N_1=112, N_2=38)	100.0	49.9
Kyiv (N_1=105, N_2=190)	93.4	49.5
Chernigiv (N_1=0, N_2=150)	---	48.0
Poltava (N_1=136, N_2=62)	100.0	41.9
Khmelnytskiy (N_1=67, N_2=72)	100.0	36.4
Donetsk (N_1=46, N_2=244)	100.0	34.6
Lugansk (N_1=11, N_2=138)	96.0	33.4
Kirovograd (N_1=97, N_2=44)	100.0	22.9
Odesa (N_1=226, N_2=74)	99.5	20.9
Zaporizhzhia (N_1=18, N_2=180)	92.0	11.3

Sumy (N_1=66, N_2=84)	100.0	10.4
Cherkasy (N_1=65, N_2=85)	100.0	6.5
Zhytomyr (N_1=13, N_2=26)	100.0	2.7
Dnipropetrovsk (N_1=137, N_2=160)	99.4	0.5
Lviv (N_1=198, N_2=2)	100.0	---
Mykolaiv (N_1=301, N_2=0)	99.7	---
Simferopol (N_1=299, N_2=1)	100.0	---
Kharkiv (N_1=295, N_2=3)	100.0	---

* Ordered by the share of FSW who are non-clients of non-governmental organizations and have received any assistance from non-governmental organizations within the last year (from the highest to the lowest).
** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.
*** N_1 – weighted number of respondent FSW who are clients of non-governmental organizations, N_2 – weighted number of respondent FSW who are non-clients of non-governmental organizations.

It should be also analyzed how common is getting assistance among separate groups of FSW who are not clients of non-governmental organizations. Therefore, further here data will be presented only for non-clients (almost everyone from a separate group of FSW who are clients of non-governmental organizations have received assistance within the last year). Thus, among younger FSW (under 25 years of age) who are not clients of non-governmental organizations there are more of those who have received any kind of assistance – 43% as compared to 36% among older FSW (of 25+ years of age) who are also non-clients ($p<0.01$).

According to the main client seeking method, the least covered are FSW who mostly find clients via telephone, Internet – 28% as compared to 48% of "street" FSW ($p<0.01$) and to 43% of those, who mostly find clients at hotels, bars, saunas etc. ($p<0.01$).

More covered are injection drug users who are not clients of non-governmental organizations (52% as compared to 38% among those who do not use injection drugs, $p<0.01$) and HIV-positive FSW (50% as compared to 38% among FSW who are HIV-negative, $p<0.01$).

5.2. Experience of HIV testing

In the previous section it was mentioned that the absolute majority of FSW (91%) know what places it is necessary to address if they need to get HIV tested. Besides it should be noted that the absolute majority of FSW (90%) think that testing is available to them (moreover, the situation comparing with the last survey even improved, in 2008-2009 the amount of such FSW made up 87%, $p<0.01$) [18].

[18]If talk about FSW who consider HIV testing not available to them, in the most cases such respondents explained this reason by telling that they didn't know whom to address (45 % of such FSW chose this option). Quite considerable percentage of FSW mentioned such reasons as fear because of the possible spread of information about their status (16%), the absence of sufficient costs (16%), non-awareness of where the appropriate institution is situated (13%). The rest of the reasons were mentioned less frequently.

However, the share of those who have ever got tested is considerably lower and made up 76% (see Table 5.2.1). Moreover, if among clients of NGOs 94% of interviewed respondents have ever got tested, then among the non-clients this indicator makes only 57%.

Talking about the regions, the leaders are Mykolayiv, Simferopol and Lviv where practically 100% level of HIV testing is observed at any time. It should be reminded that these are the cities which belong to the list of those, where the highest indicators of coverage by prevention programs are registered (see the previous section). Evidently, it is connected with the fact that practically all FSW presented in the sample are clients of NGOs. The same refers to other cities which in our relative "rating" take the highest positions. The higher the number of NGO clients is in the sample, the higher is the number of those who have ever got HIV tested (which is an evident consequence). Relatively the worst situation is observed in Sumy where only 41% of FSW have ever got HIV tested.

Analyzing the regional data separately among non-clients, it can be noticed that the prevalence of HIV testing practices significantly varies among FSW from different cities. Thus, the most successful is Ternopil (87% of FSW who are not NGO clients have ever got HIV tested), Dnipropetrovsk (83%), Rivne (81%), Lutsk (80%) and Uzhgorod (77%). Relatively the worst situation is in Vinnytsya and Poltava where only 19% and 18% respectively being non-clients of NGOs have ever got HIV tested.

Table 5.2.1

Experience of HIV testing (by country and by regions)*, %

	Have ever applied for testing			Have been ever tested for HIV		
	All FSW	Clients	Non-clients**	All FSW	Clients	Non-clients**
Ukraine in general (N_1=5015, N_2=2622, N_3=2353)***	**72.5**	**90.2**	**53.5**	**76.2**	**94.0**	**56.9**
Mykolaiv (N_1=301, N_2=301, N_3=0)**	98.3	98.3	---	99.3	99.3	---
Simferopol (N_1=300, N_2=299, N_3=1)	89.5	89.7	---	99.3	99.6	---
Lviv (N_1=200, N_2=198, N_3=2)	98.6	99.1	---	99.0	99.5	---
Lutsk (N_1=150, N_2=99, N_3=50)	92.5	98.5	80.1	92.5	98.5	80.1
Rivne (N_1=150, N_2=110, N_3=40)	91.0	94.7	80.9	90.5	94.1	80.9
Kharkiv (N_1=300, N_2=295, N_3=3)	88.5	88.7	---	88.7	89.2	---
Ternopil (N_1=150, N_2=1, N_3=149)	88.0	---	87.9	87.3	---	87.2
Dnipropetrovsk (N_1=300, N_2=137, N_3=160)	74.6	89.8	62.0	87.0	92.1	83.3
Odesa (N_1=300, N_2=226, N_3=74)	78.7	88.7	48.5	83.5	94.0	51.9
Vinnytsia (N_1=150, N_2=111, N_3=39)	78.1	100.0	16.0	78.7	100.0	18.5
Uzhgorod (N_1=150, N_2=7, N_3=143)	70.2	---	68.7	78.5	---	77.4
Kirovograd (N_1=150, N_2=97, N_3=44)	79.9	96.3	46.2	78.1	95.5	44.2
Chernivtsi (N_1=150, N_2=112, N_3=38)	53.6	62.4	27.4	76.4	88.2	41.3
Cherkasy (N_1=150, N_2=65, N_3=85)	73.4	97.4	54.1	73.5	97.5	55.4
Chernigiv (N_1=150, N_2=0, N_3=150)	71.4	---	71.4	71.4	---	71.4
Lugansk (N_1=150, N_2=11, N_3=138)	80.8	94.1	78.1	62.7	74.8	60.1

Donetsk (N_1=302, N_2=46, N_3=244)	66.4	89.9	62.7	66.0	99.0	60.3
Poltava (N_1=200, N_2=136, N_3=62)	61.0	82.4	14.5	65.0	86.8	17.7
Ivano-Frankivsk (N_1=150, N_2=32, N_3=118)	60.2	82.0	54.4	60.2	82.0	54.4
Khmelnytskiy (N_1=150, N_2=67, N_3=72)	54.1	92.2	26.1	58.4	93.9	28.9
Kyiv (N_1=300, N_2=105, N_3=190)	53.6	66.1	48.5	59.2	73.1	52.9
Kherson (N_1=202, N_2=87, N_3=114)	51.3	86.5	24.8	57.5	91.5	31.9
Zaporizhzhia (N_1=200, N_2=18, N_3=180)	41.8	82.8	38.9	51.2	91.9	48.6
Sumy (N_1=150, N_2=66, N_3=84)	50.1	97.3	32.9	51.9	99.2	33.7
Zhytomyr (N_1=150, N_2=13, N_3=26)	39.9	78.0	28.0	41.3	78.6	29.6

* Ordered by the share of those, who have ever been tested for HIV among non-clients of non-governmental organizations.

** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW who are clients of non-governmental organizations, N_3 – weighted number of respondent FSW who are non-clients of non-governmental organizations.

In this context it should also be mentioned that the testing practices are more spread among older FSW. Among FSW of 25+ years of age 81% of respondents have ever got HIV tested while among FSW under 25 years of age the indicator is 69% ($p<0.01$) (see Table 5.2.2). Besides, among injection drug users there are most of them who have already got HIV tested – 88% as compared to 75% ($p<0.01$), which is probably connected with the fact that among them there are more clients of non-governmental organizations. At the same time, among FSW who differ according to the main client seeking, the prevalence of experience of HIV testing is practically the same.

As it can be also seen in the table, the situation dramatically differs between clients and non-clients of non-governmental organizations. Thus, the absolute majority of clients (at average, nine out of ten) have already been HIV tested. In the case of different groups of non-clients, only half or slightly more have already been HIV tested.

Table 5.2.2

Experience of HIV testing (by age, main client seeking method, injecting drug use), %

	Have ever applied for testing			Have been ever tested for HIV		
	All FSW	Clients	Non-clients	All FSW	Clients	Non-clients
Age						
- under 25 years (N_1=1926, N_2=840, N_3=1072)	65.5	86.0	49.7	69.1	91.2	52.0
- of 25+ years(N_1=3087, N_2=1782, N_3=1281)	77.0	92.2	56.6	80.7	95.4	60.9
Main client seeking method						
- street, highway, railway station (N_1=2257, N_2=1513, N_3=736)	73.1	87.7	43.6	77.6	92.8	46.8
- hotels, saunas, casino etc. (N_1=1201, N_2=478, N_3=712)	74.7	96.4	60.2	74.9	97.5	60.0
- telephone, Internet (N_1=1357, N_2=556, N_3=789)	71.4	91.7	57.4	76.5	94.4	64.0

Injecting drug use within the last 12 months						
- have not used (N_1=4511, N_2=2249, N_3=2233)	71.4	89.9	53.2	75.0	93.9	56.4
- have used (N_1=419, N_2=316, N_3=102)	83.6	91.7	58.3	87.8	94.7	66.2

** N_1 – weighted number of all respondent FSW of a corresponding group, N_2 – weighted number of respondent FSW of a corresponding group who are clients on non-governmental organizations, N_3 – weighted number of respondent FSW of a corresponding group who are non-clients of non-governmental organizations.

However, HIV testing may be a useful instrument of modification of the behavioral practices only in case of regular conduction of this procedure. According to the data of the questionnaire the national indicator was determined “Percentage of FSW, who have been tested for HIV within the last 12 months and received test result”. Thus, slightly more than half of FSW (59%) have had experience of HIV testing during the last 12 months (see Fig. 5.2.1). Slightly higher indicator is observed among older FSW – 60% among FSW of 25+ years of age as compared to 57% among FSW under 25 years of age ($p<0.01$). There appeared to be no changes as compared to 2008-2009.

It should be noticed that generally among those FSW who have already got HIV tested, 78% have got tested during the last 12 months. Those who haven’t got tested during the last year mostly explain that they have got tested before (43% noted this reason) and that they don’t think it is necessary to get tested more often than once a year (28%).

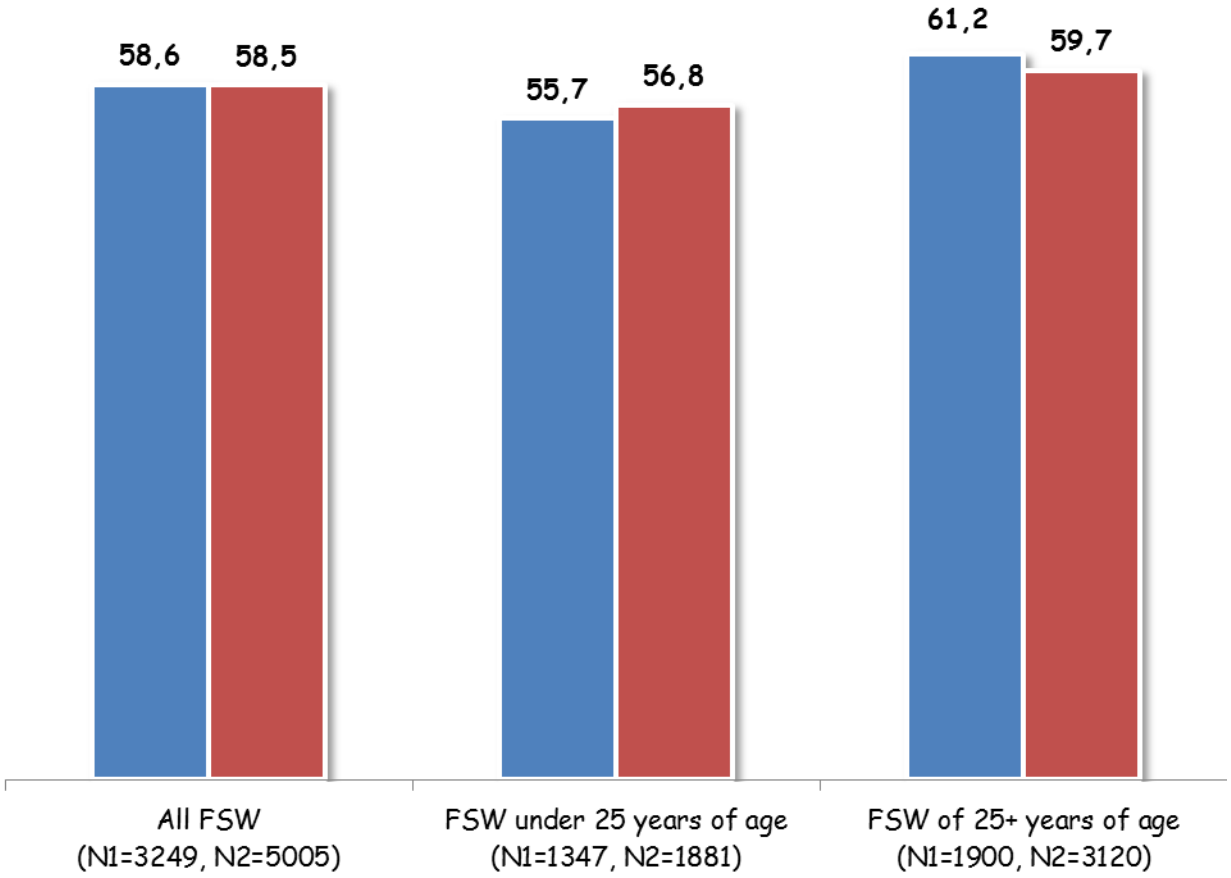


Fig. 5.2.1. **Percentage of FSW, who have been tested for HIV within the last 12 months and received test result**

The leader according to the testing practices within the last 12 months is Mykolayiv, where the indicator makes up 98% which again is a consequence of total representation of NGO clients in the sample (see Table 5.2.3). Dramatically low indicator is observed among FSW from Zhytomyr (24%), Chernigiv (25%) and Zaporizhya (26%).

Considering the regional data only among the NGO clients, it appears to be evident that there are only 55% among them in Kyiv who have already got HIV tested. Attention should also be paid to some of other cities where not all FSW who are NGO clients have got HIV tested during the last year.

Talking about non-clients of NGOs, it should be mentioned that relatively the best situation is observed in Ternopil (72% of respondents got HIV tested within the last year), Uzhgorod (62%) and Rivne (60%). In the vast majority of the rest of the cities among the non-clients of NGOs not more than third part of respondents got HIV tested.

Table 5.2.3

Percentage of FSW, who have been tested for HIV within the last 12 months and received test result (by regions)*

	All FSW	Among…	
		Clients**	Non-clients**
Mykolaiv (N_1=301, N_2=301, N_3=0)***	98.0	98.0	---
Lviv (N_1=200, N_2=198, N_3=2)	93.1	93.5	---
Kharkiv (N_1=300, N_2=295, N_3=3)	84.8	85.5	---
Simferopol (N_1=300, N_2=299, N_3=1)	78.7	79.0	---
Rivne (N_1=150, N_2=110, N_3=40)	78.6	85.7	59.6
Odesa (N_1=300, N_2=226, N_3=74)	72.2	82.9	39.9
Vinnytsia (N_1=150, N_2=111, N_3=39)	72.1	91.0	18.5
Ternopil (N_1=150, N_2=1, N_3=149)	72.0	---	72.5
Kirovograd (N_1=150, N_2=97, N_3=44)	66.7	87.8	26.7
Uzhgorod (N_1=150, N_2=7, N_3=143)	64.1	---	62.3
Chernivtsi (N_1=150, N_2=112, N_3=38)	62.8	78.5	15.9
Lutsk (N_1=150, N_2=99, N_3=50)	58.3	78.7	19.9
Dnipropetrovsk (N_1=300, N_2=137, N_3=160)	49.9	75.7	28.4
Kherson (N_1=202, N_2=87, N_3=114)	48.5	90.0	17.9
Khmelnytskyi (N_1=150, N_2=67, N_3=72)	46.9	83.3	22.3
Donetsk (N_1=302, N_2=46, N_3=244)	46.1	93.0	37.5
Lugansk (N_1=150, N_2=11, N_3=138)	45.5	70.0	43.6
Cherkasy (N_1=150, N_2=65, N_3=85)	45.3	88.9	19.3
Poltava (N_1=200, N_2=136, N_3=62)	45.0	61.0	9.7
Ivano-Frankivsk (N_1=150, N_2=32, N_3=118)	41.3	67.6	34.2
Kyiv (N_1=300, N_2=105, N_3=190)	37.3	55.9	30.1
Sumy (N_1=150, N_2=66, N_3=84)	31.4	86.6	13.2
Zaporizhzhia (N_1=200, N_2=18, N_3=180)	26.0	63.5	23.9
Chernigiv (N_1=150, N_2=0, N_3=150)	24.6	---	24.6
Zhytomyr (N_1=150, N_2=13, N_3=26)	23.7	66.9	10.1

* Ordered by the share of those, who have been tested for HIV within the last 12 months and received test result (from the highest to the lowest).

** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent FSW who are clients of non-governmental organizations, N_3 – weighted number of respondent FSW who are non-clients of non-governmental organizations.

Below in the Table 5.2.4 the data for the years 2008-2009 and the year 2011 are compared. As it can be seen, in some cases significant changes are observed. However, most likely it is a methodological artifact, i.e. the received dynamics doesn't reflect the real processes. Therefore, the received results should be carefully interpreted.

Table 5.2.4

Percentage of FSW, who have been tested for HIV within the last 12 months and received test result (by regions)*

	2008-2009	2011
Mykolaiv (N_1=100, N_2=301)**	55.0	98.0
Lviv (N_1=95, N_2=200)	80.0	93.1
Kharkiv (N_1=149, N_2=300)	47.5	84.8
Simferopol (N_1=150, N_2=300)	96.8	78.7
Rivne (N_1=152, N_2=150)	68.6	78.6
Odesa (N_1=100, N_2=300)	58.2	72.2
Vinnytsia (N_1=150, N_2=150)	86.8	72.1
Ternopil (N_1=150, N_2=150)	60.0	72.0
Kirovograd (N_1=100, N_2=150)	85.1	66.7
Uzhgorod (N_1=100, N_2=150)	44.0	64.1
Chernivtsi (N_1=151, N_2=150)	57.6	62.8
Lutsk (N_1=100, N_2=150)	72.0	58.3
Dnipropetrovsk (N_1=100)	25.8	49.9
Kherson (N_1=100, N_2=202)	43.0	48.5
Khmelnytskiy (N_1=101, N_2=150)	51.6	46.9
Donetsk (N_1=150, N_2=302)	69.9	46.1
Lugansk (N_1=100, N_2=150)	74.1	45.5
Cherkasy (N_1=95, N_2=150)	53.9	45.3
Poltava (N_1=150, N_2=200)	41.3	45.0
Ivano-Frankivsk (N_1=150, N_2=150)	57.3	41.3
Kyiv (N_1=256, N_2=300)	54.1	37.3
Sumy (N_1=100, N_2=150)	90.0	31.4
Zaporizhzhia (N_1=150, N_2=200)	15.7	26.0
Chernigiv (N_1=150, N_2=150)	59.1	24.6
Zhytomyr (N_1=150, N_2=150)	30.7	23.7

* Ordered by the share of FSW who have been HIV tested within the last year and received their result, among all respondents according to the survey of 2011 (from the highest to the lowest).
** N_1 – weighted number of all respondent FSW interviewed in 2008-2009, N_2 – weighted number of respondent FSW interviewed in 2011.

In the terms of separate groups of FSW (according to the age, the main client seeking method, injecting drug use) common tendencies are observed among the FSW of the respective groups who are NGO clients. The absolute majority of such respondents during the last year got HIV tested and know their results (see Table 5.2.5), while among FSW of the respective groups who are not the NGO clients only one out of three respondents during the last 12 months got HIV tested and know their results.

Table 5.2.5

Percentage of FSW, who have been tested for HIV within the last 12 months and received test result (by age, main client seeking method and injecting drug use)

	All FSW	Among…	
		Clients	Non-clients
Age			
- under 25 years (N_1=1926, N_2=840, N_3=1072)	56.5	84.7	34.8
- of 25+ years (N_1=3087, N_2=1782, N_3=1281)	60.3	82.4	30.2
Main client seeking method			
- streets, highways, railway stations (N_1=2257, N_2=1513, N_3=736)	63.6	80.3	29.6
- hotels, saunas, casino etc. (N_1=1201, N_2=478, N_3=712)	58.9	91.8	37.2
- telephone, Internet (N_1=1357, N_2=556, N_3=789)	53.0	83.9	31.5
Injecting drugs in the last 12 months			
- have not injected (N_1=4511, N_2=2249, N_3=2233)	58.0	84.0	32.2
- have injected (N_1=419, N_2=316, N_3=102)	65.1	75.6	32.8

* N_1 – weighted number of all respondent female sex workers of a corresponding group, N_2 – weighted number of respondent clients of non-governmental organizations, N_3 – weighted number of respondent non-clients of non-governmental organizations.

In the context of testing practices we should also mention that the third of FSW (34%) in 2011 got HIV tested with the use of rapid tests in non-governmental organizations (see Table 5.2.6). However, among the NGO clients more than a half of respondents got tested (60%) while among non-clients this indicator makes only 6%.

In the regional terms it appears to be evident that in Kyiv among the NGO clients only one out of three FSW (36%) got HIV tested in the NGO. Generally, in 2011 in different cities among clients at average half of the respondents got HIV tested with the help of rapid tests.

Concerning FSW who are not the NGO clients, in the regional terms there were observed not more than the quarter of respondents who in 2011 got HIV tested in the organizations with available HIV testing practices by means of rapid tests.

Table 5.2.6

Percentage of FSW, who were tested for HIV with the use of rapid tests in non-governmental organizations in 2011 (by country and by regions)*

	All FSW	Among… ***	
		Clients	Non-clients
Ukraine in general (N_1=5015, N_2=2622, N_3=2353)* **	**34.1**	**59.5**	**6.1**
Mykolaiv (N_1=301, N_2=301, N_3=0)	88.7	88.7	---
Lviv (N_1=200, N_2=198, N_3=2)	71.8	72.1	---
Vinnytsia (N_1=150, N_2=111, N_3=39)	54.2	71.3	5.5
Simferopol (N_1=300, N_2=299, N_3=1)	50.2	50.4	---
Rivne (N_1=150, N_2=110, N_3=40)	49.2	62.7	12.7
Odesa (N_1=300, N_2=226, N_3=74)	44.1	57.5	3.5
Kharkiv (N_1=300, N_2=295, N_3=3)	43.0	43.4	---
Chernivtsi (N_1=150, N_2=112, N_3=38)	42.2	48.7	22.7

Khmelnytskiy (N_1=150, N_2=67, N_3=72)	36.9	77.3	1.3
Lutsk (N_1=150, N_2=99, N_3=50)	35.6	54.2	0.0
Kirovograd (N_1=150, N_2=97, N_3=44)	34.0	52.4	0.0
Kherson (N_1=202, N_2=87, N_3=114)	33.5	70.1	5.7
Poltava (N_1=200, N_2=136, N_3=62)	30.0	42.6	1.6
Dnipropetrovsk (N_1=300, N_2=137, N_3=160)	26.9	58.2	0.5
Cherkasy (N_1=150, N_2=65, N_3=85)	26.6	59.5	0.6
Sumy (N_1=150, N_2=66, N_3=84)	25.3	84.3	7.6
Uzhgorod (N_1=150, N_2=7, N_3=143)	22.6	---	22.3
Donetsk (N_1=302, N_2=46, N_3=244)	20.8	61.1	13.3
Kyiv (N_1=300, N_2=105, N_3=190)	18.9	36.8	11.6
Ivano-Frankivsk (N_1=150, N_2=32, N_3=118)	13.9	50.4	4.1
Zhytomyr (N_1=150, N_2=13, N_3=26)	13.1	52.5	0.8
Zaporizhzhia (N_1=200, N_2=18, N_3=180)	5.4	38.7	3.4
Lugansk (N_1=150, N_2=11, N_3=138)	2.2	43.6	1.0
Ternopil (N_1=150, N_2=1, N_3=149)	1.3	---	1.3
Chernigiv (N_1=150, N_2=0, N_3=150)	0.6	---	0.6

* Ordered by the share of those who was tested for HIV in non-governmental organizations in 2011.
** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.
*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent clients of non-governmental organizations, N_3 – weighted number of respondent non-clients of non-governmental organizations.

Talking about actually the testing process, the absolute majority of FSW who have ever been tested for HIV reported having undergone pre- (81%) and post-test (77%) counseling. We should also note that among FSW who in the interview reported being HIV infected, the absolute majority (74%) are registered in the AIDS Center. However, only 39% among them are the participants of the antiretroviral therapy (6% of them were participant of the antiretroviral therapy in the past but at the moment they are not).

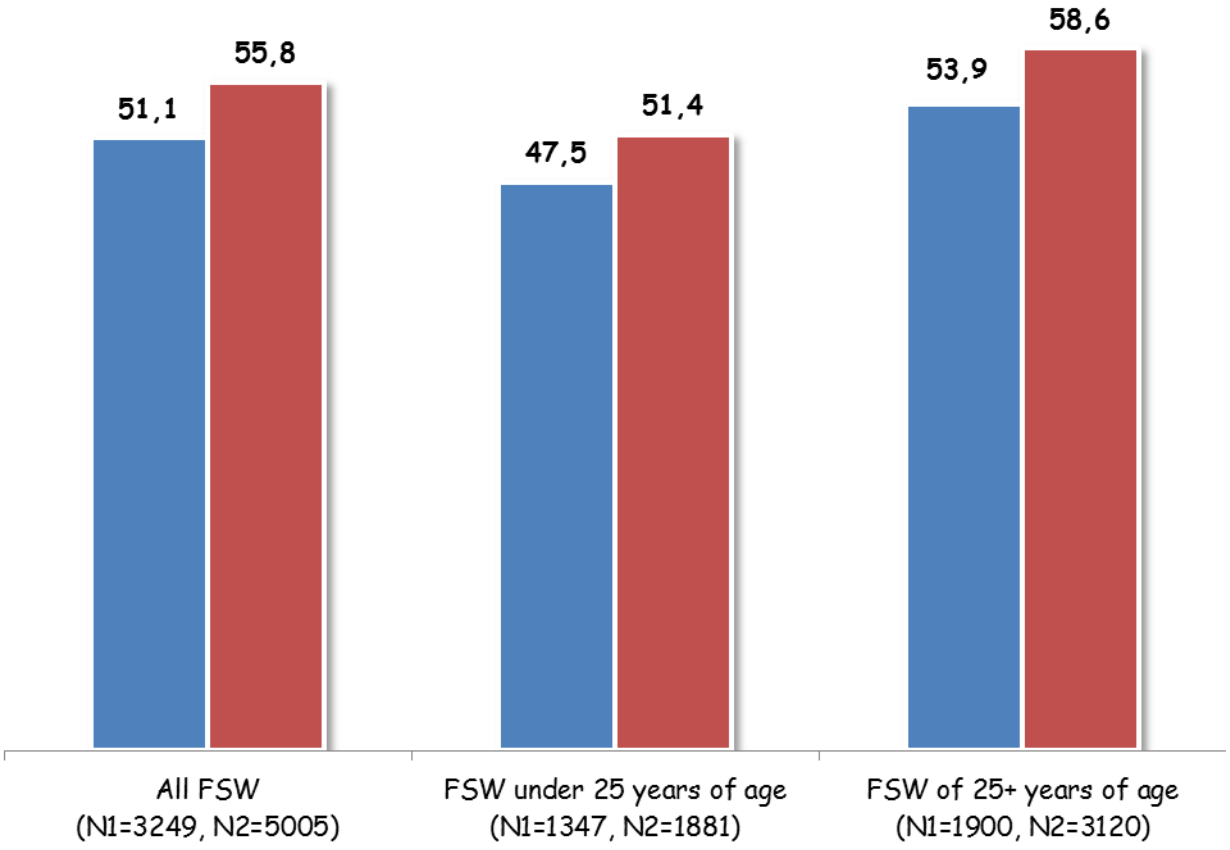
5.3. Level of knowledge about HIV

Obviously, the necessary condition for correct behavioural practices that would minimize the risk of HIV infection is correct knowledge about the infection, in particular about ways of preventing the sexual transmission of HIV and major misconceptions about HIV trasmission. In this connection one of the national indicators – “Percentage of FSW who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission” – is devoted to estimation of the level of knowledge.

According to the obtained results, the indicator value in 2011 was 56% (95% confidence interval – 54.5%-57.2%), which is even higher than it was in 2008-2009 - 50% (95% confidence interval – 48.0%-51.4%) ($p<0.01$) (see Fig. 5.3.1).

As before, older FSW (of 25+ years of age) are characterized by better knowledge – 59% as compared to 51% among younger FSW (under 25 years of age) ($p<0.01$).

FSW who are clients of non-governmental organizations are characterized by significantly better knowledge – 65% among them gave correct answers to all five questions as compared to only 46% among FSW who are non-clients of non-governmental organizations.



* N_1 – number of respondents of a corresponding group in the survey of 2008-2009, N_2 – number of respondents of a corresponding group in the survey of 2011.

Fig. 5.3.1. **Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission**

Variation in the level of knowledge of FSW from different cities is observed in the preliminary results. Thus, FSW from Mykolaiv are characterized by the best knowledge – the indicator valur makes up 95% among them (see Table. 5.3.1). It should be also reminded that the FSW sample in Mykolaiv contains the niggest number of clients and the highest coverage by prevention programmes. The “second” place by the level of knowledge is taken by FSW from Cherkasy (90%), where both the share of clients and

the coverage level are quite average. Attention should be paid to the fact that the lowest level of knowledge is observed in Uzhgorod (28%) and Dnipropetrovsk (23%). In case of Uzhgorod it may be possibly connected to significant representation of Roma people in the sample. More ambiquous situation is in Dnipropetrovsk, where, firstly, almost a half of FSW are clients og non-governmental organizations and covered by prevention programmes (which is significantly higher than the level of knowledge). Secondly, the absolute majority of locations, where interviewing was conducted, were offices of non-governmental organizations or the ones NGOs had access to. Apparently, as far as social workers regularly visit them, the highest level of knowledge could have been expected.

It is appropriate to consider the results separately for clients and non-clients of non-governmental organizations, as in the previous chapters. Thus, clients of non-governmental organizations are mostly characterized by quite a high level of knowledge. However, there are few cities of exceptions, which need attention. Thus, in Odesa only 32% gave correct answers to all five questions among FSW who are clients of non-governmental organizations as compared to 40% of such in Kherson and 42% in Kharkiv. In other cities at least a half of clients correctly identify ways of preventing the sexual transmission of HIV and reject major misconseptions about HIV transmission.

As far as non-clients are concerned, the level of knowledge is approximately the same (as among clients) or lower (in some cases it is significantly lower). Attention should be paid to Chernivtsi and Dnipropetrovsk, where only 14% and 7% correspondingly gave correct answers to all five questions.

Table 5.3.1

Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission (by regions)*

	All FSW	Among…	
		Clients**	Non-clients**
Mykolaiv (N_1=301, N_2=301, N_3=0)***	95.0	95.0	---
Cherkasy (N_1=150, N_2=65, N_3=85)	89.7	83.1	94.8
Poltava (N_1=200, N_2=136, N_3=62)	77.5	86.0	58.1
Chernigiv (N_1=150, N_2=0, N_3=150)	75.6	---	75.6
Kirovograd (N_1=150, N_2=97, N_3=44)	74.6	85.5	57.1
Simferopol (N_1=300, N_2=299, N_3=1)	73.9	74.0	---
Sumy (N_1=150, N_2=66, N_3=84)	73.3	85.3	67.9
Khmelnytskiy (N_1=150, N_2=67, N_3=72)	71.9	78.1	68.5
Lviv (N_1=200, N_2=198, N_3=2)	71.1	71.3	---
Zhytomyr (N_1=150, N_2=13, N_3=26)	65.6	72.7	63.4
Rivne (N_1=150, N_2=110, N_3=40)	55.1	59.3	43.9
Lugansk (N_1=150, N_2=11, N_3=138)	54.7	58.2	53.8
Lutsk (N_1=150, N_2=99, N_3=50)	52.9	68.1	22.9
Donetsk (N_1=302, N_2=46, N_3=244)	52.2	61.7	52.8
Vinnytsia (N_1=150, N_2=111, N_3=39)	51.7	59.8	29.0
Zaporizhzhia (N_1=200, N_2=18, N_3=180)	50.8	68.4	49.9
Chernivtsi (N_1=150, N_2=112, N_3=38)	48.3	59.7	14.1

Kyiv (N_1=300, N_2=105, N_3=190)	47.3	54.0	45.2
Kherson (N_1=202, N_2=87, N_3=114)	41.8	39.9	42.9
Kharkiv (N_1=300, N_2=295, N_3=3)	41.6	41.9	---
Ivano-Frankivsk (N_1=150, N_2=32, N_3=118)	38.7	71.2	30.0
Odesa (N_1=300, N_2=226, N_3=74)	31.3	32.0	29.2
Ternopil (N_1=150, N_2=1, N_3=149)	30.7	---	30.9
Uzhgorod (N_1=150, N_2=7, N_3=143)	27.7	---	27.6
Dnipropetrovsk (N_1=300, N_2=137, N_3=160)	22.6	41.9	6.5

* Ordered by the share of those who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission

** «---» means that statistical calculations cannot be done sue to a small number of respondents. In some cases, the number of respondents for whom % was calculated, is less than 50, therefore data cannot be considered statistically reliable. However, they can be used for accessing the trends.

*** N_1 – weighted number of all respondent FSW, N_2 – weighted number of respondent clients of non-governmental organizations, N_3 – weighted number of respondent non-clients of non-governmental organizations.

The Table 5.3.2 below presents the data comparison of 2008-2009 and 2011. As it can be seen, there are striking differences in some cases. However, this is rather a methodical artifact, i.e. the dynamics obtained does not reflect real processes, therefore the obtained results should be carefully interpreted.

Table 5.3.2

Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission (by regions)*, *by years*

	2008-2009	2011
Mykolaiv (N_1=100, N_2=301)**	62.0	95.0
Cherkasy (N_1=95, N_2=150)	61.4	89.7
Poltava (N_1=150, N_2=200)	66.7	77.5
Chernigiv (N_1=150, N_2=150)	67.4	75.6
Kirovograd (N_1=100, N_2=150)	71.9	74.6
Simferopol (N_1=150, N_2=300)	28.2	73.9
Sumy (N_1=100, N_2=150)	84.0	73.3
Khmelnytskiy (N_1=101, N_2=150)	44.3	71.9
Lviv (N_1=95, N_2=200)	14.7	71.1
Zhytomyr (N_1=150, N_2=150)	42.7	65.6
Rivne (N_1=152, N_2=150)	58.8	55.1
Lugansk (N_1=100, N_2=150)	10.4	54.7
Lutsk (N_1=100, N_2=150)	47.0	52.9
Donetsk (N_1=150, N_2=302)	51.5	52.2
Vinnytsia (N_1=150, N_2=150)	66.6	51.7
Zaporizhzhia (N_1=150, N_2=200)	49.6	50.8
Chernivtsi (N_1=151, N_2=150)	55.6	48.3
Kyiv (N_1=256, N_2=300)	63.3	47.3
Kherson (N_1=100, N_2=202)	53.0	41.8
Kharkiv (N_1=149, N_2=300)	50.5	41.6
Ivano-Frankivsk (N_1=150, N_2=150)	43.3	38.7

Odesa (N_1=100, N_2=300)	24.4	31.3
Ternopil (N_1=150, N_2=150)	34.7	30.7
Uzhgorod (N_1=100, N_2=150)	18.0	27.7
Dnipropetrovsk (N_1=100)	34.7	22.6

* Ordered by the share of FSW who gave correct answers to all five questions (from the highest to the lowest).
** N_1 – weighted number of all respondent FSW interviewed in 2008-2009, N_2 – weighted number of all respondent FSW interviewed in 2011.

The Table 5.3.3 below presents data by different group of FSW (by age, main client seeking method, injecting drug use) in general and for clients and non-clients in particular. On the whole, FSW of different groups are characterized by quite a similar level of knowledge.

However, if consider clients and non-clients separately, there are certain differences attention should be paid at. Thus, "street" FSW who are clients are significantly inferior by the level of knowledge to other FSW who are clients – 58% of them gave correct answers to all five questions as compared to 76% of such among FSW who mostly find clients at hotels, bars, in saunas etc. and 71% of such among FSW who mostly find clients via telephone, Internet (p<0.01).

As far as non-clients are concerned, lower awareness is observed as compared to clients. There are especially striking differences in the group of injecting drug users. The level of knowledge among clients makes up 72% in this group as compared to only 34% among non-clients (p<0.01). On the whole, if talk about non-clients, injecting drug users are characterized by a lower level of knowledge than those who are not injecting drug users (34% as compared to 47% correspondingly) (p<0.01). "Street" FSW are also characterized by lower level of knowledge (38% as compared to 51% and 48% correspondingly) (p<0.01).

Table 5.3.3

Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission (by age, main client seeking method and injecting drugs)

	All FSW	Among…	
		Clients	Non-clients
Age			
- under 25 years (N_1=1926, N_2=840, N_3=1072)	50.9	58.3	45.1
- of 25+ years (N_1=3087, N_2=1782, N_3=1281)	58.6	67.4	46.9
Main client seeking method			
- streets, highways, railway stations (N_1=2257, N_2=1513, N_3=736)	51.3	57.9	37.6
- hotels, saunas, bars etc. (N_1=1201, N_2=478, N_3=712)	61.2	76.3	51.2
- telephone, Internet (N_1=1357, N_2=556, N_3=789)	57.3	70.6	48.1
Injecting drugs in the last 12 months			
- have not injected (N_1=4511, N_2=2249, N_3=2233)	55.0	63.1	46.7
- have injected (N_1=419, N_2=316, N_3=102)	62.3	71.7	33.5

* N_1 – weighted number of all respondent female sex workers of a corresponding group, N_2 – weighted number of respondent clients of non-governmental organizations, N_3 – weighted number of respondent non-clients of non-governmental organizations.

Below in Table 5.3.4 there is the percentage of FSW who gave correct answers to each question separately. As it can be seen, in case of taking each separate question, no less than three fourths of FSW gave correct answer. Relatively the most problematic are statements that a person can get HIV by sharing bathroom, swimming pool, sauna ("only" 77% of FSW gave correct answer), HIV can be transmitted from HIV-positive mother to a child during breastfeeding (76%), HIV can be transmitted through mosquito bite (75%). As compared to 2008-2009, the most distinctive is the increase of the number of those, who know that a healthy-looking person can have HIV – from 78% to 88% ($p<0.01$). Still, in general there appeared to be no changes in the level of knowledge or there has been slight increase.

Table 5.3.4

Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission

	2008-2009 * (N=3264)	2011 (N=5015)
The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	80.9	81.3
The risk of HIV transmission can be reduced by using a condom correctly during every sexual contact	---	91.0
A healthy-looking person can have HIV	77.5	88.2
HIV can be transmitted through mosquito bite	76.6	75.0
A person can get HIV by drinking in turns from the same cup with an HIV-positive person	81.0	82.7
A person can get HIV by sharing bathroom, swimming pool, sauna with an HIV-positive person	76.2	77.3
A person can get HIV by sharing a needle for injections with another person	93.3	96.2
HIV can be transmitted from an HIV-positive mother to a child during pregnancy	77.8	80.0
HIV can be transmitted from an HIV-positive mother to a child during delivery	78.9	81.8
HIV can be transmitted from an HIV-positive mother to a child during breastfeeding	70.7	76.0
A person can get HIV by eating food from the same plate with an HIV-positive person	---	81.8

* «---» means that these questions were absent in the questionnaire of 2008-2009 (or were asked not in all cities).

Clients of non-governmental organizations (as shown below in Table 5.3.5) more often gave correct answers to separate questions.

Table 5.3.5

Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission (by clients and non-clients of non-governmental organizations)

	Clients (N=2622)	Non-clients (N=2353)

The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	82.0	81.1
The risk of HIV transmission can be reduced by using a condom correctly during every sexual contact	91.0	91.4
A healthy-looking person can have HIV	92.6	83.8
HIV can be transmitted through mosquito bite	80.2	69.7
A person can get HIV by drinking in turns from the same cup with an HIV-positive person	89.4	75.7
A person can get HIV by sharing bathroom, swimming pool, sauna with an HIV-positive person	84.7	69.4
A person can get HIV by sharing a needle for injections with another person	96.8	95.9
HIV can be transmitted from an HIV-positive mother to a child during pregnancy	83.1	77.1
HIV can be transmitted from an HIV-positive mother to a child during delivery	86.0	77.6
HIV can be transmitted from an HIV-positive mother to a child during breastfeeding	81.9	70.0
A person can get HIV by eating food from the same plate with an HIV-positive person	87.6	75.6

On the whole, a half of FSW (52%) gave correct answers to at least 10 questions on the knowledge (out of 11 possible) (see cumulative curve in Fig. 5.3.2). Every fourth FSW (28%) knows correct answers to 8-9 questions. Only 19% of FSW know correct answers to less than 8 questions.

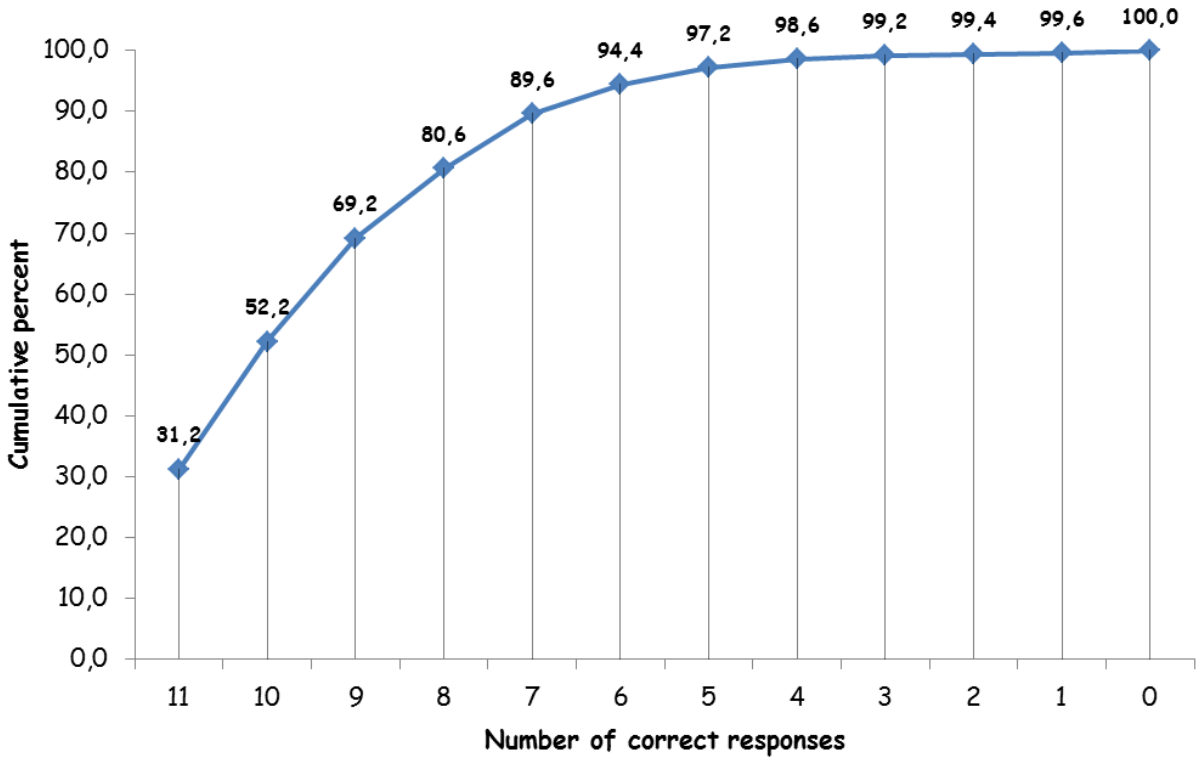


Fig. 5.3.2. **Cumulative percentage of FSW, who gave appropriate number of correct answers**

As it can be seen below on Figure 5.3.3, clients of non-governmental organizations are characterized by significantly better knowledge (as generally was mentioned above).

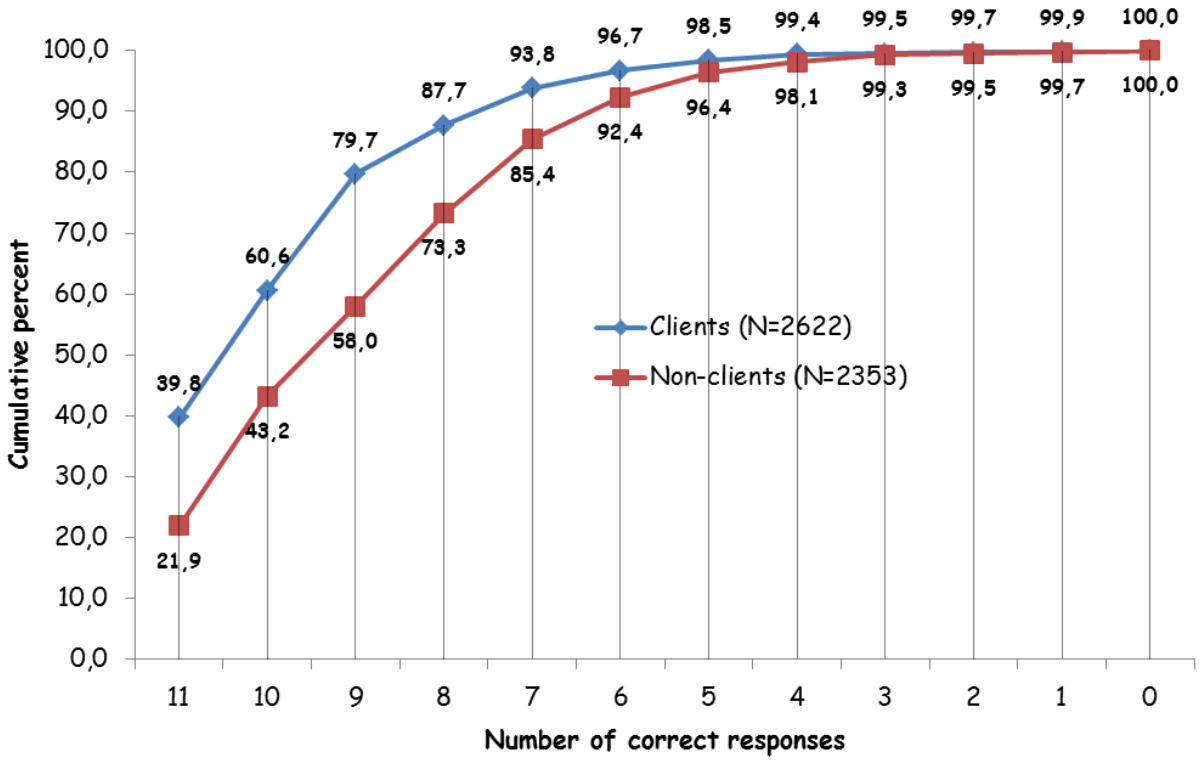


Fig. 5.3.3. **Cumulative percentage of FSW (separately for clients and non-clients), who gave appropriate number of correct answers**

The Table 5.3.6 below presents data regarding the percentage of correct answers among FSW from different cities. As it can be seen, there are significant differences in certain cases. For example, only 36% of FSW in Odesa and Ternopil know that HIV-infection cannot be transmitted through mosquito bite. Only a half of FSW in Kharkiv (50%) and Dnipropetrovsk (52%) know that the risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners. There are also other significant differences.

Table 5.3.6

Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission (by regions)

	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners
Vinnytsia (*N*=150)	69.6	93.0	83.0	82.7	74.8	75.8	95.4	83.5	90.8	94.6	72.9
Dnipropetrovsk (*N*=300)	51.7	94.3	92.9	55.1	69.3	47.7	99.6	94.3	90.0	45.5	80.1
Donetsk (*N*=302)	77.6	86.3	85.0	83.7	84.4	80.6	96.5	77.9	73.9	78.4	89.2
Zhytomyr (*N*=150)	83.8	100.0	90.5	85.8	93.3	87.7	100.0	55.8	84.9	85.0	94.4
Zaporizhzhia (*N*=200)	83.3	90.3	96.7	69.8	66.2	74.0	97.9	89.0	83.9	72.1	64.4
Ivano-Frankivsk (*N*=150)	97.0	94.5	82.3	80.5	78.0	58.8	99.4	93.7	93.3	90.9	75.9
Kyiv (*N*=300)	70.5	82.0	93.2	73.4	85.1	80.4	92.5	59.1	56.8	73.3	87.2
Kirovograd (*N*=150)	84.2	96.3	86.8	79.8	91.5	90.4	98.1	60.1	85.4	92.6	95.2
Lugansk (*N*=150)	94.6	94.8	64.0	96.8	88.8	78.4	96.9	97.5	100.0	100.0	35.9
Lutsk (*N*=150)	79.7	64.1	94.9	90.5	98.1	81.8	98.9	91.8	90.0	79.0	94.7
Lviv (*N*=200)	82.1	99.5	95.1	87.7	94.8	90.3	88.9	91.2	92.4	63.0	87.5
Mykolaiv (*N*=301)	100.0	100.0	95.7	99.3	99.3	99.7	97.0	67.2	73.8	97.7	98.3
Odesa (*N*=300)	64.9	90.9	85.4	35.8	60.0	49.1	97.8	89.4	84.9	63.9	55.1
Poltava (*N*=200)	95.0	93.5	88.0	86.0	84.0	85.5	83.5	68.5	74.0	90.0	83.5

	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners	The risk of HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners
Rivne (*N*=150)	95.6	93.9	69.7	75.9	87.7	84.1	98.4	75.0	62.5	65.9	87.9
Simferopol (*N*=300)	99.8	100.0	99.5	54.3	86.6	78.9	100.0	85.7	86.5	54.6	85.8
Sumy (*N*=150)	89.3	98.6	95.2	96.2	85.1	86.5	97.4	88.4	86.2	81.5	85.9
Ternopil (*N*=150)	79.3	96.7	75.3	36.0	73.3	68.0	99.3	56.0	78.0	62.7	76.0
Uzhgorod (*N*=150)	87.3	95.8	68.6	76.1	50.1	55.2	85.5	56.9	62.1	63.5	51.4
Kharkiv (*N*=300)	49.6	54.5	89.9	93.8	94.5	95.0	95.5	91.1	96.2	96.0	89.4
Kherson (*N*=202)	76.5	93.4	81.7	70.8	78.2	73.4	99.0	85.9	91.1	89.2	83.6
Khmelnytskiy (*N*=150)	95.5	96.2	87.6	79.3	83.2	77.2	96.2	78.5	61.2	49.9	90.2
Cherkasy (*N*=150)	100.0	98.9	94.1	83.1	95.7	98.2	97.5	89.0	90.9	82.7	96.8
Chernivtsi (*N*=150)	84.0	92.1	84.3	61.5	74.6	65.3	92.6	94.5	93.2	95.9	76.3
Chernigiv (*N*=150)	100.0	100.0	93.8	69.4	94.4	77.1	100.0	63.1	60.6	53.7	92.1

CONCLUSIONS AND RECOMMENDATIONS

Typical FSW is a young person with quite mediocre education and without permanent employment. Because of the difficult economic situation in Ukraine one can hardly hope that most of FSW will soon be able to change the sphere of their work and provide their living conditions by the means not connected with the sphere of commercial sex. It should not be forgotten that payments for the other kinds of accessible labour is quite miserable comparing to the payments in the sphere of commercial sex services. As a result, the absolute majority of FSW completely rely on the profits from providing sex services. In such conditions it is appropriate for NGOs to work first of all focusing on prevention of dangerous practices. It is understood that motivating FSW to leave the sex industry should also be continued but in today's socially-economic conditions the prevention of specific practices seems to be more useful, effective and realistic.

Situationally-moderate model of minimizing the risks is: a) permanent condom use with all the partners including commercial, permanent and casual ones; b) regular monitoring of state of health (first of all systematical testing for HIV); c) adequate knowledge about HIV-infection and the other STIs; d) non-use of drugs and alcohol; e) making safer working conditions (paying attention to where the clients are found, who the clients are); f) cooperation with NGOs. These are the patterns of safe behaviour which should be emphasized by the HIV-service organizations.

One of the main preventive practices is the regular condom use. In this context we can talk about general availability of condoms as well as about psychological readiness to use them. According to the survey results, the problem of lack of condoms' availability practically does not exist. Thus, for example, non-availability of a condom as a reason of not using it in sex is in fact the "reason-outsider" regarding partners of all types. More serious problems refer to the psychological readiness to regular condom use. Thus, only half of FSW are set to regular condom use, however, some of them still use dangerous practices. Mainly, FSW agree for unprotected sex with commercial partners because of the insistence of clients and particularly because of the better compensations. Concerning permanent partners, the main part of FSW does not at all see the necessity in regular condom use. Concerning casual partners, FSW mainly see the necessity in regular condom use, but less frequently observe such practices comparing to contacts with commercial partners.

So, there is the urgent need in outgoing from "quantitative" approach which is grounded on the simple distribution of condoms and respective reporting of the results of the conducted activities. Instead, there is a need in transition to the "qualitative" approach based on the fact that FSW have already had condoms. So, the main activities should be focused on the bringing up the psychological stability and convincing FSW to regular condom use.

The urgent intervention is needed in the segment of HIV-infected FSW, particularly those who already know their status. According to the results of the survey, many of

them do not always use condoms. It should be mentioned as well that even among the clients of NGOs who know that they are HIV-infected only 70% always use condoms during vaginal sex and 75% during anal sex.

Monitoring of the state of health is also a preventive practice for FSW. According to the data of the survey, about the third part of FSW have not made any tests for HIV during the last year (and the quarter of FSW have never made any tests in their life at all). That's why there is a need to spread the services of VCT among FSW, particularly, to reach the new segments targeting on the most population of the FSW. At the same time, special attention should be paid to qualitative pre- and post-test counseling.

Knowledge about the ways of HIV transmission is a necessary background for the safe behaviour and respectively for the minimization of the risks. However, only slightly more than half of FSW can be qualified as those who have adequate knowledge. Therefore, it is appropriate to proceed with informative-educational consultations and campaigns.

Drug and alcohol abuse is one of the factors which increase the risk of HIV-infection. As far as HIV epidemics is concentrated first of all among FSW who use injective drugs, the risks should be minimized among the group of FSW-IDU. Particularly, it is necessary to conduct activities focused on promotion of the usage of sterile instruments and permanent condom use. It is appropriate to pay less attention to "quantitative" indicators, for example, the amount of the distributed syringes and instead to approach qualitatively the convincing of FSW who are injecting drug users to realize the necessity to use them safer.

Evidently, FSW who work in the streets, highways, railway stations etc. are in the most dangerous situation. NGOs can hardly motivate FSW "relocate" the place of their work in safer conditions. In this context it is more appropriate to work on bringing up resistance concerning the choice of commercial partners, to reject the cases when the client insists on the non-use of condoms (we should remind the fact that almost half of FSW consider the possibility of non-use of condoms).

The significant part of FSW can't unambiguously realize all their actions, therefore NGOs should be actually the active subjects of setting up the cooperation. To a greater extent the activity of NGOs is spread over older FSW, "street" FSW, injecting drug users and HIV-positive FSW. Besides, providing services usually "is limited" on the clients of the NGOs, leaving behind other FSW who are non-clients. Observing clients of non-governmental organizations, it seems that despite great important conducted activities nowadays NGOs mainly provide services to those who are already in trouble rather than focus on actually the prevention. In this context it is necessary to spread the range of preventive services, particularly of great importance is more active work with the involvement of younger FSW and "non-street" FSW (it should be reminded that the distribution of HIV among those who mainly find clients via telephone, Internet is not weaker than among the "street" FSW). Considering a significant decrease in the age of FSW providing commercial sexual services, special attention should be paid to the youngest categories when conducting interventions.

Attention should be also paid to the common component of the listed above considerations concerning the urgency of transition to “qualitative” practices of work and respective reporting grounded on the results of the conducted programs. The availability of condoms or sterile syringes is a necessary condition of safer practices but is not a sufficient one. There is a lack of subjective realization of the necessity to observe the “correct” behaviour. Therefore, there is need to work on more active development and implementation of, first of all, “qualitative” programs which will enable bringing up conscious attitude towards their own behaviour and, secondly, the respective system of indicators for further reporting.

In conclusions we can’t omit the fact of significant regional variety. Indeed, every region of Ukraine is unique according to the social and demographic profile of FSW, typical behavioral practices and epidemiologic situation as well as according to the activity of NGOs in the regions. Therefore, there is practically no use to talk about specific steps. Based on the results of the bio-behavioral survey, we can only note the perspective areas of work. The specific solutions and steps should be made with the common participation of donors, NGOs, local AIDS centres and other specific governmental bodies with the consideration of peculiarities of their regional situation. To achieve this, there should be organized special meetings particularly to discuss the received results of the survey.

Finally, there is a need to numerously emphasize that preventive activities should include not only passive providing of services in the usual places of work of FSW (for example, distribution of condoms and HIV testing), but instead such activities should be focused on the active work aimed at prevention.

ANNEXES

Table 1-1

Share of FSW who provide commercial sex services and are HIV-infected according to the results of rapid tests (among all FSW, including active injecting drug users)

	All FSW**		FSW under 25 years of age		FSW of 25+ years of age		Homophily	
	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	HIV-positive	HIV-negative
Kyiv (N_1=300, N_2=88, N_3=208)**	27.0	24.2 (18.1-30.6)	12.5	7.7 (2.7-13.7)	33.7	33.5 (24.1-41.7)	0.158	0.000
Donetsk (N_1=302, N_2=63, N_3=239)	39.4	42.7 (33.9-53.2)	14.3	9.5 (2.8-18)	46.0	51.9 (41.7-63.6)	0.335	0.359
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	7.0	4.8 (1.9-9.1)	4.0	5.6 (0.0-15.0)	8.0	4.2 (1.2-8.7)	0.212	-0.002
Lugansk (N_1=150, N_2=71, N_3=79)	0.0	0.0 (---)	0.0	0.0 (---)	0.0	0.0 (---)	---	---
Sumy (N_1=150, N_2=61, N_3=89)	1.3	0.9 (0.0-2.7)	0.0	0.0 (---)	2.2	1.7 (0.0-4.5)	-1.000	-0.005
Cherkasy (N_1=150, N_2=43, N_3=107)	16.0	14.4 (6.5-24)	2.3	0.9 (0.0-3.2)	21.5	20.5 (9.1-33)	0.390	0.291
Chernigiv (N_1=150, N_2=89, N_3=61)	1.3	1.0 (0.0-4.6)	1.1	0.9 (0.0-3.3)	1.6	0.7 (0.0-2.5)	0.495	0.350
Simferopol (N_1=300, N_2=99, N_3=201)	4.3	3.6 (1.5-5.6)	5.3	4.8 (0.6-9.0)	3.9	2.9 (0.6-5.3)	---	---
Vinnytsia (N_1=150, N_2=76, N_3=74)	1.3	1.5 (0.0-3.5)	1.3	1.8 (0.0-4.7)	1.4	1.3 (0.0-3.9)	---	---
Lutsk (N_1=150, N_2=63, N_3=87)	6.0	5.2 (1.6-8.7)	1.6	1.4 (0.0-4.2)	9.1	7.9 (2.3-13.6)	---	---
Dnipropetrovsk (N1=300, N_2=141, N_3=159)	9.0	9.6 (6.2-12.9)	5.8	5.5 (1.8-9.3)	11.8	13.1 (7.9-18.4)	---	---
Zhytomyr (N_1=150, N_2=31, N_3=119)	5.3	5.3 (1.7-8.9)	3.1	3.0 (0.0-9.0)	5.9	5.9 (1.7-10.2)	---	---
Uzhgorod (N_1=150, N_2=102, N_3=48)	0.0	0.0 (---)	0.0	0.0 (---)	0.0	0.0 (---)	---	---
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	10.7	9.8 (5.0-14.5)	6.3	5.5 (0.0-13.2)	11.9	11.0 (5.3-16.7)	---	---
Kirovograd (N_1=150, N_2=45, N_3=105)	13.3	13.7 (8.2-19.2)	4.5	6.5 (0.0-13.7)	17.0	16.7 (9.6-23.8)	---	---
Lviv (N_1=200, N_2=65, N_3=135)	5.5	5.7 (2.5-8.9)	1.5	1.5 (0.0-4.5)	7.5	7.7 (3.2-12.2)	---	---
Mykolaiv (N_1=301, N_2=101, N_3=200)	7.0	7.1 (4.2-10.0)	0.0	0.0 (---)	10.5	10.6 (6.4-14.9)	---	---
Odesa (N_1=300, N_2=135, N_3=165)	15.0	13.5 (9.7-17.4)	8.6	7.2 (2.8-11.5)	19.8	18.8 (12.8-24.7)	---	---
Poltava (N_1=200, N_2=19, N_3=181)	26.5	26.5 (20.4-32.6)	5.3	5.3 (0.0-15.3)	28.7	28.7 (22.1-35.3)	---	---
Rivne (N_1=150, N_2=36, N_3=114)	5.3	4.8 (1.4-8.2)	8.3	7.4 (0.0-16)	4.4	3.9 (0.4-7.5)	---	---
Ternopil (N_1=150, N_2=109, N_3=41)	2.0	2.0 (0.0-4.2)	1.8	1.8 (0-4.4)	2.4	2.4 (0-7.2)	---	---
Kharkiv (N_1=300, N_2=132, N_3=168)	0.0	0.0 (---)	0.0	0.0 (---)	0.0	0.0 (---)	---	---

Kherson (N_1=202, N_2=109, N_3=93)	7.9	9.3 (5.3-13.3)	4.5	4.2 (0.4-8.0)	12.0	15.3 (8.0-22.6)	---	---
Khmelnytskiy (N_1=150, N_2=65, N_3=85)	18.7	18.7 (12.4-24.9)	1.5	1.5 (0.0-4.4)	31.8	31.9 (21.9-41.8)	---	---
Chernivtsi (N_1=150, N_2=55, N_3=95)	2.7	2.0 (0.0-4.3)	0.0	0.0 (---)	4.2	3.2 (0.0-6.8)	---	---
Ukraine (N_1=5005, N_2=1881, N_3=3120)	**10.5**	**10.3 (9.4-11.1)**	**3.6**	**3.1 (2.3-3.9)**	**14.6**	**14.8 (13.5-16.0)**	**---**	**---**

* «---» means that it is impossible to calculate confidence intervals.

** N_1 – number of all respondent FSWs, N_2 – number of respondent FSWs under 25 years of age, N_3 – number of respondent FSWs of 25+ years of age.

Table 1-2

Share of FSW who provide commercial sex services and are HIV-infected according to the results of rapid tests (among FSW who are not active injecting drug users)

	All FSW**		FSW under 25 years of age		FSW of 25+ years of age	
	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)
Kyiv (N_1=274, N_2=86, N_3=184)**	25.5	23.7 (16.9-30.5)	11.6	7.6 (2.4-13.5)	32.6	34 (23.2-42.3)
Donetsk (N_1=283, N_2=61, N_3=222)	36.0	38.2 (29.8-48.2)	13.1	9.7 (2.6-19)	42.3	46.6 (35.6-57.8)
Zaporizhzhia (N_1=193, N_2=50, N_3=143)	6.2	4.5 (1.7-8.4)	4.0	5.5 (0-15.1)	7.0	3.7 (1.0-7.5)
Lugansk (N_1=150, N_2=71, N_3=79)	0.0	0.0 (---)	0.0	0.0 (---)	0.0	0.0 (---)
Sumy (N_1=147, N_2=59, N_3=88)	1.4	0.9 (0.0-2.7)	0.0	0.3 (---)	2.3	1.9 (0.0-4.6)
Cherkasy (N_1=136, N_2=43, N_3=93)	11.8	12.6 (4.4-20.6)	2.3	0.9 (0.0-3.1)	16.1	18.5 (6.2-30.3)
Chernigiv (N_1=150, N_2=89, N_3=61)	1.3	1.0 (0.0-4.6)	1.1	0.9 (0.0-3.3)	1.6	0.7 (0.0-2.5)
Simferopol (N_1=298, N_2=98, N_3=200)	4.0	3.3 (1.3-5.4)	5.3	4.8 (0.6-9.1)	3.4	2.6 (0.4-4.8)
Vinnytsia (N_1=148, N_2=75, N_3=73)	1.4	1.6 (0.0-3.6)	1.3	1.8 (0.0-4.8)	1.4	1.3 (0.0-4.0)
Lutsk (N_1=136, N_2=57, N_3=79)	2.9	2.5 (0.0-5.2)	1.8	1.5 (0.0-4.7)	3.8	3.3 (0.0-7.2)
Dnipropetrovsk (N_1=276, N_2=139, N_3=137)	6.1	6.5 (3.6-9.4)	5.1	5.1 (1.4-8.7)	7.1	8 (3.4-12.5)
Zhytomyr (N_1=150, N_2=31, N_3=119)	5.3	5.3 (1.7-8.9)	3.1	3.0 (0.0-9.0)	5.9	5.9 (1.7-10.2)
Uzhgorod (N_1=148, N_2=102, N_3=47)	0.0	0.0 (---)	0.0	0.0 (---)	0.0	0.0 (---)
Ivano-Frankivsk (N_1=149, N_2=33, N_3=116)	10.1	9.2 (4.6-13.8)	6.3	5.5 (0.0-13.2)	11.1	10.3 (4.7-15.8)
Kirovograd (N_1=147, N_2=45, N_3=103)	12.9	13.3 (7.8-18.8)	4.5	6.5 (0.0-13.7)	16.5	16.3 (9.2-23.4)
Lviv (N_1=196, N_2=64, N_3=132)	5.6	5.8 (2.5-9.1)	1.5	1.6 (0.0-4.6)	7.6	7.9 (3.3-12.5)
Mykolaiv (N_1=294, N_2=101, N_3=193)	6.1	6.2 (3.0.5-9)	0.0	0.0 (---)	9.3	9.5 (5.3-13.6)
Odesa (N_1=297, N_2=135, N_3=162)	14.5	13.1 (9.2-16.9)	8.6	7.2 (2.8-11.5)	18.9	18 (12.1-23.9)
Poltava (N_1=152, N_2=19, N_3=133)	23.0	23 (16.3-29.7)	5.3	5.3 (0.0-15.3)	25.6	25.6 (18.2-33.0)
Rivne (N_1=149, N_2=36, N_3=113)	5.4	4.8 (1.4-8.2)	8.3	7.4 (0.0-16)	4.4	4.0 (0.4-7.6)
Ternopil (N_1=150, N_2=109, N_3=41)	2.0	2.0 (0.0-4.2)	1.8	1.8 (0.0-4.4)	2.4	2.4 (0.0-7.2)
Kharkiv (N_1=300, N_2=132, N_3=168)	0.0	0.0 (---)	0.0	0.0 (---)	0.0	0.0 (---)
Kherson (N_1=199, N_2=108, N_3=91)	8.0	9.4 (5.4-13.5)	4.6	4.2 (0.4-8.0)	12.2	15.6 (8.1-23.0)

Khmelnytskiy (N_1=147, N_2=65, N_3=82)	17.0	17.1 (11.0-23.2)	1.5	1.5 (0.0-4.4)	29.3	29.5 (19.6-39.3)
Chernivtsi(N_1=145, N_2=55, N_3=90)	0.7	0.5 (0.0-1.7)	0.0	0.0 (---)	1.1	0.8 (0.0-2.7)
Ukraine (N_1=5005, N_2=1881, N_3=3120)	**9.2**	**9.0 (8.2-9.8)**	**3.5**	**3.1 (2.3-3.9)**	**12.7**	**13.0 (11.8-14.2)**

* «---» means that it is impossible to calculate confidence intervals.

** N_1 – number of all respondent FSWs, N_2 – number of respondent FSWs under 25 years of age, N_3 – number of respondent FSWs of 25+ years of age.

Table 2

National indicator "Percentage of FSW, who both correctly identify ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission"

	All FSW**		FSW under 25 years of age		FSW of 25+ years of age		Homophily	
	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Do not know	Know
Kyiv (N_1=300, N_2=88, N_3=208)**	50.0	47.3 (40.6-54.0)	42.0	41.2 (28.5-53.2)	54.3	50.7 (42.8-59.8)	-0.070	0.032
Donetsk(N_1=302, N_2=63, N_3=239)	52.3	52.2 (44.2-59.5)	44.4	55.8 (40.0-69.2)	54.4	51.1 (42.3-59.7)	0.057	0.053
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	51.5	50.8 (44.7-59.2)	44.0	37.8 (25.5-54.2)	54.0	55.8 (48.2-66.3)	-0.101	-0.030
Lugansk (N_1=150, N_2=71, N_3=79)	55.3	54.7 (45.8-63.0)	49.3	52.0 (37.0-66.5)	60.8	58.2 (47.3-69.0)	0.011	0.067
Sumy (N_1=150, N_2=61, N_3=89)	80.7	73.3 (64.5-82.1)	82.0	77.9 (64.2-91.0)	79.8	71.1 (55.6-82.2)	-0.400	0.251
Cherkasy (N_1=150, N_2=43, N_3=107)	91.3	89.7 (82.1-95.8)	86.0	83.9 (66.2-96.6)	93.5	93.7 (88.0-98.3)	0.164	0.295
Chernigiv (N_1=150, N_2=89, N_3=61)	78.7	75.6 (67.6-82.4)	84.3	80.9 (70.8-88.6)	70.5	66.6 (55.0-78.7)	-0.333	0.043
Simferopol (N_1=300, N_2=99, N_3=201)	70.3	73.9 (68.9-78.8)	68.4	71.1 (62.1-80.0)	71.2	75.2 (69.3-81.2)	---	---
Vinnytsia (N_1=150, N_2=76, N_3=74)	52.7	51.7 (43.7-59.7)	48.7	47.6 (36.3-58.8)	56.8	56.0 (44.7-67.3)	---	---
Lutsk (N_1=150, N_2=63, N_3=87)	52.0	52.9 (44.9-60.9)	30.6	32.7 (21.1-44.2)	67.0	67.6 (57.8-77.5)	---	---
Dnipropetrovsk (N1=300, N_2=141, N_3=159)	23.0	22.6 (17.9-27.4)	18.0	19.9 (13.3-26.4)	27.3	25.1 (18.4-31.9)	---	---
Zhytomyr (N_1=150, N_2=31, N_3=119)	65.3	65.6 (58.0-73.2)	75.0	75.2 (60.0-90.4)	62.7	63.1 (54.4-71.7)	---	---
Uzhgorod (N_1=150, N_2=102, N_3=48)	30.0	27.7 (20.5-34.9)	23.8	21.2 (13.3-29.1)	42.9	41.8 (27.8-55.8)	---	---
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	36.0	38.7 (30.9-46.5)	40.6	47.9 (31.0-64.9)	34.7	36.1 (27.4-44.8)	---	---
Kirovograd (N_1=150, N_2=45, N_3=105)	76.7	74.6 (67.6-81.5)	79.5	80.5 (68.8-92.1)	75.5	72.1 (63.5-80.7)	---	---
Lviv (N_1=200, N_2=65, N_3=135)	70.5	71.1 (64.8-77.3)	69.7	69.6 (58.4-80.8)	70.9	71.8 (64.2-79.4)	---	---
Mykolaiv (N_1=301, N_2=101, N_3=200)	95.0	95.0 (92.6-97.5)	96.0	96.1 (92.3-99.9)	94.5	94.5 (91.4-97.7)	---	---
Odesa (N_1=300, N_2=135, N_3=165)	31.7	31.3 (26.1-36.6)	28.9	29.4 (21.7-37.1)	33.7	32.9 (25.7-40.1)	---	---
Poltava (N_1=200, N_2=19, N_3=181)	77.5	77.5 (71.7-83.3)	52.6	52.6 (30.2-75.1)	80.1	80.1 (74.3-85.9)	---	---
Rivne (N_1=150, N_2=36, N_3=114)	52.7	55.1 (47.2-63.1)	50.0	51.0 (34.6-67.4)	53.5	56.5 (47.4-65.5)	---	---
Ternopil (N_1=150, N_2=109, N_3=41)	30.7	30.7 (23.3-38.0)	35.8	35.8 (26.8-44.8)	17.1	17.1 (5.6-28.6)	---	---
Kharkiv (N_1=300, N_2=132, N_3=168)	40.7	41.6 (36.0-47.2)	44.3	46.3 (37.8-54.8)	37.9	37.9 (30.6-45.3)	---	---
Kherson (N_1=202, N_2=109, N_3=93)	44.1	41.8 (35.0-48.7)	46.4	43.8 (34.5-53.1)	41.3	39.5 (29.6-49.5)	---	---

Khmelnytskiy (N_1=150, N_2=65, N_3=85)	71.3	71.9 (64.7-79.1)	75.4	75.5 (65.1-86.0)	68.2	69.1 (59.2-78.9)	---	---
Chernivtsi (N_1=150, N_2=55, N_3=95)	47.3	48.3 (40.3-56.3)	42.6	45.1 (32.0-58.2)	50.0	50.1 (40.1-60.2)	---	---
Ukraine (N_1=5005, N_2=1881, N_3=3120)	**56.1**	**55.8 (54.4-57.2)**	**51.2**	**51.4 (49.1-53.6)**	**59.2**	**58.6 (56.9-60.4)**	**---**	**---**

* «---» means that it is impossible to calculate confidence intervals.

** N_1 – number of all respondent FSWs, N_2 – number of respondent FSWs under 25 years of age, N_3 – number of respondent FSWs of 25+ years of age.

Table 3

National indicator "Percentage of FSW who have been tested for HIV-infection in the last 12 months and received the result"

	All FSW**		FSW under 25 years of age		FSW of 25+ years of age		Homophily	
	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Not tested	Tested
Kyiv (N_1=300, N_2=88, N_3=208)**	40.7	37.3 (30.4-44.2)	38.6	38.5 (26.6-50.2)	42.3	37.7 (29.2-46.6)	-0.067	0.035
Donetsk (N_1=302, N_2=63, N_3=239)	44.0	46.1 (37.0-54.4)	27.0	40.0 (23.0-55.4)	48.5	47.7 (37.1-57.1)	0.324	0.210
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	30.0	26.0 (19.8-33.5)	38.0	38.6 (24.9-54.1)	27.3	20.8 (14.1-29.2)	-0.043	0.071
Lugansk (N_1=150, N_2=71, N_3=79)	47.3	45.5 (36.8-54.1)	39.4	37.5 (22.8-52.2)	54.4	52.6 (42.2-63.1)	0.002	0.069
Sumy (N_1=150, N_2=61, N_3=89)	44.7	31.4 (21.8-41.0)	37.7	32.8 (17.6-46.0)	49.4	32.0 (20.9-45.2)	-0.052	0.297
Cherkasy (N_1=150, N_2=43, N_3=107)	50.0	45.3 (34.2-56.9)	34.9	39.6 (19.7-61.1)	56.1	50.2 (38.1-62.6)	0.242	0.338
Chernigiv (N_1=150, N_2=89, N_3=61)	21.3	24.6 (17.7-32.6)	22.5	27.3 (18.0-39.3)	19.7	22.7 (11.5-35.3)	0.076	-0.399
Simferopol (N_1=300, N_2=99, N_3=201)	77.0	78.7 (74.0-83.3)	85.3	87.6 (81.1-94.1)	73.2	74.3 (68.2-80.3)	---	---
Vinnytsia (N_1=150, N_2=76, N_3=74)	73.3	72.1 (64.9-79.3)	68.4	67.0 (56.5-77.6)	78.4	77.3 (67.7-86.8)	---	---
Lutsk (N_1=150, N_2=63, N_3=87)	56.0	58.3 (50.4-66.2)	46.8	47.5 (35.2-59.9)	62.5	66.2 (56.2-76.1)	---	---
Dnipropetrovsk (N1=300, N_2=141, N_3=159)	50.7	49.9 (44.2-55.5)	43.9	44.6 (36.4-52.8)	56.5	54.5 (46.7-62.2)	---	---
Zhytomyr (N_1=150, N_2=31, N_3=119)	23.3	23.7 (16.9-30.5)	15.6	15.8 (3.0-28.6)	25.4	25.7 (17.9-33.6)	---	---
Uzhgorod (N_1=150, N_2=102, N_3=48)	62.7	64.1 (56.5-71.8)	60.4	62.5 (53.1-71.9)	67.3	67.7 (54.4-81.0)	---	---
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	42.7	41.3 (33.4-49.2)	25.0	21.9 (7.9-36.0)	47.5	46.9 (37.8-55.9)	---	---
Kirovograd (N_1=150, N_2=45, N_3=105)	66.0	66.7 (59.2-74.2)	72.7	77.1 (64.7-89.4)	63.2	62.3 (53.1-71.6)	---	---
Lviv (N_1=200, N_2=65, N_3=135)	92.5	93.1 (89.5-96.6)	95.5	95.6 (90.6-100)	91.0	91.8 (87.2-96.5)	---	---
Mykolaiv (N_1=301, N_2=101, N_3=200)	98.0	98.0 (96.4-99.6)	98.0	98.0 (95.3-100)	98.0	98.0 (96.1-99.9)	---	---
Odesa (N_1=300, N_2=135, N_3=165)	71.3	72.2 (67.1-77.3)	67.2	67.4 (59.4-75.3)	74.4	76.2 (69.7-82.7)	---	---
Poltava (N_1=200, N_2=19, N_3=181)	45.0	45.0 (38.1-51.9)	21.1	21.1 (2.7-39.4)	47.5	47.5 (40.2-54.8)	---	---
Rivne (N_1=150, N_2=36, N_3=114)	76.0	78.6 (72.1-85.2)	61.1	65.8 (50.2-81.4)	80.7	82.6 (75.7-89.6)	---	---
Ternopil (N_1=150, N_2=109, N_3=41)	72.0	72.0 (64.8-79.2)	78.0	78.0 (70.2-85.8)	56.1	56.1 (40.9-71.3)	---	---
Kharkiv (N_1=300, N_2=132, N_3=168)	83.7	84.8 (80.7-88.8)	74.0	76.0 (68.7-83.3)	91.1	91.6 (87.5-95.8)	---	---
Kherson (N_1=202, N_2=109, N_3=93)	47.5	48.5 (41.6-55.4)	35.5	36.2 (27.2-45.3)	62.0	62.9 (53.1-72.7)	---	---
Khmelnytskiy (N_1=150, N_2=65, N_3=85)	47.3	46.9 (38.9-54.9)	30.8	30.7 (19.5-41.9)	60.0	59.3 (48.9-69.8)	---	---

Chernivtsi (N_1=150, N_2=55, N_3=95)	62.7	62.8 (55.1-70.5)	68.5	67.9 (55.6-80.2)	59.4	59.8 (49.9-69.7)	---	---
Ukraine (N_1=5005, N_2=1881, N_3=3120)	**58.9**	**58.5 (57.2-59.9)**	**55.6**	**56.8 (54.6-59.1)**	**60.9**	**59.7 (58-61.5)**	**---**	**---**

* «---» means that it is impossible to calculate confidence intervals.

** N_1 – number of all respondent FSWs, N_2 – number of respondent FSWs under 25 years of age, N_3 – number of respondent FSWs of 25+ years of age.

Table 4

National indicator "Percentage of FSW covered by prevention programmes"

	All FSW**		FSW under 25 years of age		FSW of 25+ years of age		Homophily	
	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Not covered	Covered
Kyiv (N_1=300, N_2=88, N_3=208)**	59.0	45.0 (37.1-52.6)	48.9	43.3 (29.6-56.0)	64.4	46.4 (36.3-55.8)	-0.123	0.332
Donetsk (N_1=302, N_2=63, N_3=239)	37.1	36.9 (28.9-44.7)	19.0	15.5 (3.8-27.3)	41.8	42.8 (33.9-51.7)	0.170	0.136
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	27.0	19.5 (13.0-26.4)	20.0	23.5 (10.2-36.5)	29.3	17.6 (11.2-25.2)	-0.030	0.193
Lugansk (N_1=150, N_2=71, N_3=79)	32.0	37.3 (27.9-47.1)	29.6	37.1 (23.1-49.9)	34.2	35.0 (23.6-47.9)	0.202	0.161
Sumy (N_1=150, N_2=61, N_3=89)	48.0	27.3 (16.6-37.9)	49.2	37.7 (19.2-52.6)	47.2	23.4 (13.1-37.1)	0.099	0.483
Cherkasy (N_1=150, N_2=43, N_3=107)	46.7	36.3 (19.9-52.9)	30.2	27.9 (10.5-51.1)	53.3	43.2 (24.6-62)	0.585	0.633
Chernigiv (N_1=150, N_2=89, N_3=61)	3.3	4.6 (1.2-9.2)	3.4	6.8 (0.0-14.8)	3.3	2.4 (0.0-6.7)	0.241	-1.000
Simferopol (N_1=300, N_2=99, N_3=201)	99.7	99.8 (99.3-100.0)	100.0	100.0(---)	99.5	99.7 (98.9-100.0)	---	---
Vinnytsia (N_1=150, N_2=76, N_3=74)	82.7	82.1 (75.9-88.2)	77.6	77.4 (68.0-86.8)	87.8	86.9 (79.2-94.6)	---	---
Lutsk (N_1=150, N_2=63, N_3=87)	92.7	92.5 (88.3-96.7)	90.3	89.1 (81.4-96.8)	94.3	95.0 (90.5-99.6)	---	---
Dnipropetrovsk (N1=300, N_2=141, N_3=159)	43.0	43.4 (37.8-49)	36.0	39.1 (31-47.1)	49.1	47.2 (39.5-55)	---	---
Zhytomyr (N_1=150, N_2=31, N_3=119)	27.3	27.5 (20.4-34.7)	15.6	15.8 (3.0-28.6)	30.5	30.6 (22.3-38.9)	---	---
Uzhgorod (N_1=150, N_2=102, N_3=48)	52.0	53.1 (45.2-61.1)	52.5	54.2 (44.6-63.9)	51.0	50.8 (36.6-65.0)	---	---
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	41.3	43.6 (35.7-51.5)	31.3	39.7 (23.1-56.3)	44.1	44.7 (35.7-53.7)	---	---
Kirovograd (N_1=150, N_2=45, N_3=105)	74.0	75.0 (68.1-81.9)	68.2	72.7 (59.6-85.8)	76.4	76.0 (67.8-84.1)	---	---
Lviv (N_1=200, N_2=65, N_3=135)	99.5	99.5 (98.5-100.0)	100.0	100.0(---)	99.3	99.2 (97.7-100.0)	---	---
Mykolaiv (N_1=301, N_2=101, N_3=200)	100.0	100.0(---)	100.0	100.0(---)	100.0	100.0(---)	---	---
Odesa (N_1=300, N_2=135, N_3=165)	75.7	74.2 (69.3-79.2)	67.2	63.2 (55.1-71.4)	82.0	83.2 (77.5-88.9)	---	---
Poltava (N_1=200, N_2=19, N_3=181)	72.5	72.5 (66.3-78.7)	36.8	36.8 (15.2-58.5)	76.2	76.2 (70-82.4)	---	---
Rivne (N_1=150, N_2=36, N_3=114)	82.7	82.1 (76-88.3)	77.8	74.9 (60.7-89.1)	84.2	84.4 (77.7-91)	---	---
Ternopil (N_1=150, N_2=109, N_3=41)	2.0	2.0 (0-4.2)	0.9	0.9 (0-2.7)	4.9	4.9 (0.0-11.5)	---	---
Kharkiv (N_1=300, N_2=132, N_3=168)	99.0	98.9 (97.7-100.0)	98.5	98.5 (96.4-100.0)	99.4	99.2 (97.9-100.0)	---	---
Kherson (N_1=202, N_2=109, N_3=93)	56.9	57.1 (50.3-64)	41.8	41.6 (32.3-50.8)	75.0	75.4 (66.7-84.2)	---	---

Khmelnytskiy (N_1=150, N_2=65, N_3=85)	66.0	66.0 (58.4-73.6)	46.2	45.6 (33.5-57.7)	81.2	81.6 (73.3-89.8)	---	---
Chernivtsi (N_1=150, N_2=55, N_3=95)	80.0	81.2 (75-87.5)	79.6	80.9 (70.5-91.2)	80.2	81.5 (73.6-89.3)	---	---
Ukraine (N_1=5005, N_2=1881, N_3=3120)	**63.0**	**61.2 (59.8-62.5)**	**55.1**	**55.1 (52.9-57.4)**	**67.7**	**65 (63.3-66.7)**	**---**	**---**

* «---» means that it is impossible to calculate confidence intervals.

** N_1 – number of all respondent FSWs, N_2 – number of respondent FSWs under 25 years of age, N_3 – number of respondent FSWs of 25+ years of age.

Table 5

National indicator "Percentage of FSW, who have provided commercial sex services in the past 12 months and reported the use of condom during their most recent commercial sex contact "

	All FSW**		FSW under 25 years of age		FSW of 25+ years of age		Homophily	
	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Share in sample	Estimated share for RDS or TLS (confidence intervals)	Did not use	Used
Kyiv (N_1=300, N_2=88, N_3=208)**	73.0	71.6 (64.6-78.0)	73.9	72.8 (60.0-83.8)	74.0	71.0 (62.0-79.3)	-0.011	0.065
Donetsk (N_1=302, N_2=63, N_3=239)	86.8	87.9 (81.6-92.6)	92.1	96.3 (92.2-99.2)	85.4	84.9 (77.3-91.1)	0.230	0.109
Zaporizhzhia (N_1=200, N_2=50, N_3=150)	86.5	84.1 (77.8-90.1)	88.0	89.1 (76.1-98.9)	86.0	83.2 (75.7-90.4)	-0.160	0.148
Lugansk (N_1=150, N_2=71, N_3=79)	98.7	99.2 (97.9-100.0)	100.0	100.0 (---)	97.5	98.3 (95.7-100.0)	-0.999	-0.005
Sumy (N_1=150, N_2=61, N_3=89)	98.0	97.1 (96.4-100.0)	96.7	94.6 (91.5-100.0)	98.9	97.9 (97.4-100.0)	0.485	0.315
Cherkasy (N_1=150, N_2=43, N_3=107)	97.3	96.8 (93.1-99.5)	100.0	100.0 (---)	96.3	95.4 (90.1-99.2)	-1.000	0.154
Chernigiv (N_1=150, N_2=89, N_3=61)	82.7	78.9 (69.9-85.9)	85.4	83.5 (71.9-91.8)	78.7	74.2 (61.2-85.4)	0.094	0.266
Simferopol (N_1=300, N_2=99, N_3=201)	98.7	98.7 (97.5-100.0)	98.9	99.2 (97.5-100.0)	98.5	98.5 (96.8-100.0)	---	---
Vinnytsia (N_1=150, N_2=76, N_3=74)	84.7	83.9 (78.0-89.8)	80.3	79.6 (70.5-88.6)	89.2	88.4 (81.1-95.7)	---	---
Lutsk (N_1=150, N_2=63, N_3=87)	92.0	91.6 (87.1-96.0)	95.2	94.1 (88.3-99.9)	89.8	89.7 (83.3-96.1)	---	---
Dnipropetrovsk (N1=300, N_2=141, N_3=159)	100.0	100.0 (---)	100.0	100.0 (---)	100.0	100.0 (---)	---	---
Zhytomyr (N_1=150, N_2=31, N_3=119)	99.3	99.4 (98.1-100.0)	96.9	97.0 (91.0-100.0)	100.0	100.0 (---)	---	---
Uzhgorod (N_1=150, N_2=102, N_3=48)	92.0	91.9 (87.5-96.3)	94.1	94.4 (90.0-98.9)	87.8	86.5 (76.8-96.2)	---	---
Ivano-Frankivsk (N_1=150, N_2=33, N_3=117)	86.0	84.5 (78.7-90.3)	65.6	57.5 (40.8-74.3)	91.5	92.2 (87.3-97.0)	---	---
Kirovograd (N_1=150, N_2=45, N_3=105)	92.0	91.3 (86.8-95.8)	90.9	92.5 (84.8-100)	92.5	90.8 (85.3-96.3)	---	---
Lviv (N_1=200, N_2=65, N_3=135)	97.5	97.5 (95.3-99.7)	100.0	100.0 (---)	96.3	96.3 (93.1-99.5)	---	---
Mykolaiv (N_1=301, N_2=101, N_3=200)	97.7	97.7 (96-99.4)	99.0	99.0 (97.1-100)	97.0	97 (94.6-99.4)	---	---
Odesa (N_1=300, N_2=135, N_3=165)	99.3	99.5 (98.6-100)	100.0	100.0 (---)	98.8	99.0 (97.5-100.0)	---	---
Poltava (N_1=200, N_2=19, N_3=181)	79.0	79 (73.4-84.6)	89.5	89.5 (75.7-100)	77.9	77.9 (71.9-83.9)	---	---
Rivne (N_1=150, N_2=36, N_3=114)	91.3	91.5 (87.1-96)	88.9	88.8 (78.5-99.2)	92.1	92.4 (87.5-97.2)	---	---
Ternopil (N_1=150, N_2=109, N_3=41)	94.7	94.7 (91.1-98.3)	95.4	95.4 (91.5-99.3)	92.7	92.7 (84.7-100)	---	---
Kharkiv (N_1=300, N_2=132, N_3=168)	100.0	100.0 (---)	100.0	100.0 (---)	100.0	100.0 (---)	---	---
Kherson (N_1=202, N_2=109, N_3=93)	95.0	94.4 (91.2-97.5)	96.4	96.6 (93.1-100.0)	93.5	91.8 (86.2-97.4)	---	---

Khmelnytskiy (N_1=150, N_2=65, N_3=85)	87.3	87.4 (82.1-92.7)	89.2	88.9 (81.3-96.5)	85.9	86.3 (78.9-93.6)	---	---
Chernivtsi (N_1=150, N_2=55, N_3=95)	93.3	93.2 (89.2-97.2)	96.3	94.8 (89-100.0)	91.7	92.2 (86.9-97.6)	---	---
Ukraine (N_1=5005, N_2=1881, N_3=3120)	**92.3**	**92.0 (91.2-92.7)**	**93.8**	**93.6 (92.5-94.7)**	**91.5**	**91.0 (89.9-92)**	**---**	**---**

* «---» means that it is impossible to calculate confidence intervals.

** N_1 – number of all respondent FSWs, N_2 – number of respondent FSWs under 25 years of age, N_3 – number of respondent FSWs of 25+ years of age.