

## GENDER RELATED BARRIERS AMONG HIV INFECTED INDIVIDUALS

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Georgia is a low prevalence country of HIV infection, with concentrated HIV epidemics among high-risk groups. According to the Infectious Diseases, AIDS and Clinical Immunology Research Center data, by July 2, 2020, 8376 HIV cases were registered with 25.3% of females. AIDS developed in 4,340 patients and 1,704 died. Currently the main mode of HIV transmission in Georgia is through sexual contact (48.7%) [1].

Despite the low prevalence, HIV/AIDS is considered as a significant public health problem for Georgia. Late detection of cases still remains a serious problem in the country. During the last three years more than half of the cases (from 51% to 55%) were diagnosed late (CD4 cell count <350) and, therefore, started the treatment late; 35% already had a severe case of the infection (CD4 cell count <200). Individuals, who are not aware of their status, may continue to engage in a risky behavior and unintentionally transmit the infection. Late diagnosis is the main reason for HIV mortality in Georgia. Besides, in case of late diagnosis, treatment cost is much higher and less effective [2-4].

There is an increased vulnerability of females regarding late detection during the last years. Traditionally, for almost a decade, HIV prevention programs were focused on high-risk groups, such as PWID, MSM and commercial sex workers. Most of the representatives of these HIV target groups are males. However, during the last years the prevalence of HIV infection is increasing among females and therefore, attempts to implement services adapted to female needs have significantly increased. In part of the Georgian society still exists double standards for women and men that serve as barriers for individuals to receive HIV diagnostic and treatment services. Existing stigma and confidentiality breach in medical facilities create barriers to treatment enrollment and adherence. The situation is aggravated by self-stigma, which forces women to hide and makes them hard to reach for prevention and treatment programs.

National response to HIV/AIDS does not emphasize gender-based approaches. It is essential to conduct research to create a basis for country's national response of HIV infection to become more gender sensitive. The goal of our study was to conduct surveys among HIV-positive individuals to identify potential gender-based barriers and contributing factors that might influence the timely diagnosis and treatment of HIV infection.

**Material and methods.** Cross sectional study design was used for the survey. The target population included HIV-infected persons. The study subjects were selected by simple random sampling method by keeping the gender ratio (male: female – 1: 1). Infectious Diseases, AIDS and Clinical Immunology Research Center's registry of HIV infected patients were used as sampling frame. Sample size was calculated considering the following characteristics: effect size (ES, Cohen's W) =0.2; statistical reliability index (alpha) =0.05; power of a statistical test (power =1-beta) =0.8; degree of freedom (df) for dichotomous tables =1. The sampling size for the above characteristics was determined using the statistical package G \* Power, version 3.1.9.4, according to which the sample size for each target population was determined to be at least 197 study subjects.

Quantitative data were collected through individual, face-to-face interviews, using a questionnaire designed specifically for this study. Participation in the study was voluntary. Individuals who expressed readiness to participate in the survey, signed a specially designed consent form, after which they were included in the study. Prior to the study, the research protocol and tools were reviewed and approved by Institutional Review Board of Health Research Union (IRB00009520; IORG0005619).

Data entry, processing and statistical analysis were performed using SPSS v.23.0 statistical package. Descriptive statistical methods were used to evaluate the study variables in the target populations. Bivariate analysis was performed using t-test for quantitative data and chi-square test for categorical variables.

**Results and discussion.** In total 182 HIV-infected individuals participated in survey, of whom 74 (40.6%) were females and 108 (59.6) were males. Most female HIV-infected patients were in the 30-50 age group and were married; 40.5% of them had completed only high school. Majority of female HIV-positive respondents (87.8%) lived in urban areas; 55.4% of them were employed. Majority of female respondents (71%) did not answer the question about their family income (Table 1).

Two-third of male HIV-infected patients were in the 20-40 years age group and more than half of them (57.4%) had never been married. 51.9% of male respondents had university degree and 73.1% were employed. Similar to female respondents, majority of male study participants (84%) did not answer the question about family income (Table 1).

Higher proportion of male study participants (82.4%) reported having heard of HIV infection before diagnosis compared to female respondents (69.9%) (p=0.04). The first source of information on HIV/AIDS for both men and women were television TV and the Internet. The majority of female and male respondents were equally aware of HIV infection (98.6% and 97.2%, respectively). Both female and male HIV patients were similarly informed about parenteral and sexual routes of HIV transmission. The difference was found in knowledge of mother-to-child HIV transmission, with women being better informed (74.6%) compared to men (53.8%). Equal proportions of respondents (>95%) from both gender groups agreed with the statement that the only way to detect HIV/AIDS is through laboratory diagnostics. HIV/AIDS was thought to be a curable disease by very low and almost equal proportion of female and male respondents (4.1% and 3.7%, respectively). Prior to their HIV diagnosis, female patients were more aware (67.6%) regarding the availability and access to free HIV/AIDS diagnostics and treatment in Georgia compared to male patients (57%) (p=0.1). In addition, 28.1% of female respondents and 21.1% of male respondents stated that if they knew that HIV/AIDS diagnosis and treatment was free, they would had done their HIV testing earlier (Table 2).

Majority of female study participants (75.7%) responded that any person can get infected with HIV. On the other hand, for 50% of male study subjects HIV/AIDS was associated with risky sexual behavior and for 47.2% with drug use. A higher proportion of men (39.8%) than women (29.7%) (p=0.1) hide their diagnosis from family members. Among the reasons for

Table 1. Socio-demographic characteristics of hiv-infected patients

Characteristic	Female		Male	
	n	%	n	%
<b>Age</b>				
20-30 Years	11	15.1	36	33.3
31-40 Years	26	35.6	35	32.4
41-50 Years	25	34.2	29	26.9
>50 Years	11	15.1	8	7.4
<i>Missing values</i>	1			
<b>Marital Status</b>				
Single	7	9.5	62	57.4
Married	46	62.2	31	28.7
Divorced	9	12.2	12	11.1
Widowed	12	16.2	3	2.8
<b>Education</b>				
Elementary school	1	1.4	4	3.7
High school	30	40.5	34	31.5
Professional college	7	9.5	14	13.0
University/Post-graduate	36	48.6	56	51.9
<b>Type of Residence</b>				
Urban	65	87.8	92	85.2
Rural	9	12.2	16	14.8
<b>Employment</b>				
Employed	41	55.4	79	73.1
Unemployed	33	44.6	29	26.9
<i>Missing values</i>	3		6	
<b>Family income (per month)</b>				
301-500 GEL		28.6	5	29.4
500-1000 GEL	12	57.1	8	47.1
>1000 GEL	3	14.3	4	23.5
<i>Refused to answer</i>	53		91	

concealing the diagnosis from family members, representatives of both target groups cited fear of being abandoned, isolated from the family and worrying/caring about family members. On the other hand, women (70.3%) were more likely to hide their diagnosis from other people compared to men (41.1%) ( $p < 0.001$ ). Among the reasons for hiding HIV diagnosis from others, both men and women named the shame and fear of being rejected by and isolated from the society. 5.6% of female study participants and 3.6% of male study subjects reported that other people's attitude toward them changed significantly negatively after the diagnosis of HIV infection ( $p = 0.5$ ). Female HIV-infected patients (33.3%) were more ashamed of the disease than male patients (24.5%) ( $p = 0.2$ ). Fear of being excluded from the community due to diagnosis was also higher among females (55.4%) than among males (35.2%) ( $p = 0.007$ ). 9.5% of female respondents and 6.7% of male study subjects ( $p = 0.4$ ) expressed fear of being abandoned by the family ( $p = 0.4$ ). Preference of isolation due to the disease was more prevalent among males (9.5%) compared to females (5.4%) ( $p = 0.3$ ). Fear of being rejected and abandoned by spouse or partner, or fear of being unable to get married

was higher in male (30.8%) than in female HIV positive patients (17.1%) ( $p = 0.04$ ) (Table 3).

Almost equal proportion female and male respondents didn't face any problem related to HIV/AIDS (50% and 57.4%, respectively). In rest of the cases, more women believed that HIV is linked to the loss of social status, and health problems compared to men. Men are more likely to have the fear of employment problems than women. A higher proportion of male study participants (9.3%) compared to female study subjects (5.4%) reported that the disease had an impact on their employment status ( $p = 0.3$ ). In the case of female respondents, this was due to length of treatment and side effects of antiretroviral drugs, while the men stated the reason was avoidance from employees due to the fear of the disease. Majority of respondents positively evaluated the attitude of medical staff towards them (98.6% women and 97.2% men) ( $p = 0.5$ ). Equal proportions of female and male HIV patients (98%) were satisfied with the services at the clinic where they receive the treatment. Equal proportions of female and male respondents think that their privacy is well protected by the aforementioned medical facilities (Table 4).

Table 2. Knowledge about hiv/aids among hiv-infected patients by gender

Characteristic	Female		Male		p value	
	n	%	n	%		
<b>Have you heard of HIV/AIDS prior to diagnosis</b>						
Yes	51	69.9	89	82.4	0.048	
No	22	30.1	19	17.6		
<b>How have you first learnt about HIV/AIDS</b>						
HIV/AIDS diagnosis	12	19.0	13	13.3	0.527	
HIV/AIDS diagnosis of family/acquaintances	7	11.1	4	4.1		
Talking with family/acquaintances	4	6.3	8	8.2		
Medical literature	2	3.2	8	8.2		
Newspapers/Journals	5	7.9	6	6.1		
Radio	5	7.9	6	6.1		
Television	16	25.4	23	23.5		
Internet	9	14.3	23	23.5		
Printed informational materials	0	0.0	1	1.0		
Healthcare worker	3	4.8	2	2.0		
Don't know/Don't remember	0	0.0	4	4.1		
<b>Is HIV/AIDS contagious?</b>						
Yes	72	98.6	105	97.2		0.527
No/Don't know	1	1.4	3	2.8		
<b>HIV/AIDS transmission ways</b>						
Blood	69	97.2	106	100.0		
Sexual contacts	68	95.8	104	98.1		
From mother to child (during pregnancy, birth, or breastfeeding)	53	74.6	57	53.8		
<b>The only way to know your HIV status is to get tested, as it has no specific symptoms. Do you agree with this statement?</b>						
Yes, agree	70	97.2	101	96.2	0.709	
No/Don't know	2	2.8	4	3.8		
<b>Is HIV curable?</b>						
Yes	3	4.1	4	3.7	0.476	
No/Don't know	71	95.9	104	96.3		
<b>Did you know prior to diagnosis that HIV/AIDS diagnostic and treatment are free in Georgia?</b>						
Yes	48	67.6	61	57.0	0.155	
No	23	32.4	46	43.0		
<b>If you knew that HIV/AIDS diagnosis and treatment were free, would you get tested on HIV?</b>						
Yes	16	28.1	15	21.1	0.362	
No	41	71.9	56	78.9		

An equal proportion of female and male HIV patients reported having consulted a physician when they found that they were HIV infected (94.6% and 98.1%, respectively). There was no difference found between women and men in the length of time from HIV diagnosis to medical checkup. Majority of respondents contacted a doctor on the same day when they received their HIV test result (Table 5).

Higher proportion of female respondents (23.3%) than the males (5.2%), said that they informed their family members about visit to doctor for HIV infection ( $p=0.001$ ). Significant-

ly higher proportion of female respondents (68.9%) were accompanied by a family member on their first visit to doctor for HIV treatment compared to male study participants (32.3%), ( $p<0.001$ ). The study revealed no difference between female and male study subjects regarding receiving sufficient information and explanations about HIV test result from healthcare worker, as well as about the treatment options and side effects. There were no differences between female and male respondents in length of time needed to get from home to clinic where they receive HIV treatment (Table 5).

Table 3. Hiv stigma and discrimination among hiv-infected patients by gender

Characteristic	Female		Male		p value
	n	%	n	%	
<b>HIV/AIDS is associated with:</b>					
Poverty	0	0.0	2	1.9	
Poor hygiene	2	2.7	6	5.6	
Unprotected sex	22	29.7	54	50.0	
Drug use	24	32.4	51	47.2	
Alcohol	0	0.0	2	1.9	
Smoking	0	0.0	1	0.9	
Genetics	0	0.0	3	2.8	
Homosexuality	18	24.3	28	25.9	
HIV/AIDS is not associated any of above; any person can be infected	56	75.7	58	53.7	
Other	2	2.7	0	0.0	
<b>Hide his/her diagnosis from family members</b>					
Yes	22	29.7	43	39.8	0.163
No	52	70.3	65	60.2	
<b>Hide his/her diagnosis from other people</b>					
Yes	52	70.3	44	41.1	<0.001
No	22	29.7	63	58.9	
<b>Disease negatively affected his/her relationship with other people</b>					
Yes	3	5.6	3	3.6	0.587
No	51	94.4	80	96.4	
<b>Felt ashamed for having HIV/AIDS</b>					
Yes	24	33.3	24	24.5	0.206
No	48	66.7	74	75.5	
<b>Fear of rejection due to your diagnosis (HIV/AIDS)</b>					
Yes	41	55.4	38	35.2	0.007
No	33	44.6	70	64.8	
<b>Fear of rejection from family due to your diagnosis (HIV/AIDS)</b>					
Yes	7	9.5	7	6.7	0.493
No	67	90.5	98	93.3	
<b>Preferred to live isolated</b>					
Yes	4	5.4	10	9.5	0.312
No	70	94.6	95	90.5	
<b>Fear of breaking up with spouse / partner or can not marry due to the diagnosis(HIV/AIDS)</b>					
Yes	12	17.1	32	30.8	0.043
No	58	82.9	72	69.2	

Table 4. HIV/AIDS impact and attitude among HIV infected patients by gender

Characteristic	Female		Male		p value
	n	%	n	%	
<b>The problems of People living with HIV/AIDS</b>					
Does not cause any problems	37	50.0	62	57.4	
Health problems	20	27.0	21	19.4	
Loss of job	2	2.7	8	7.4	
Financial problems	2	2.7	3	2.8	
Loss of reputation	21	28.4	16	14.8	
Other	2	2.7	7	6.5	
<b>Felt he/she couldn't find a job/lost a job because of HIV/AIDS</b>					
Yes	4	5.4	10	9.3	0.338
No	70	94.6	98	90.7	
<b>Why couldn't find a job/lost a job?</b>					
Staff avoid because of the disease	0	0.0	7	70.0	
Due to the treatment duration	2	50.0	0	0.0	
Side effects of antiretroviral therapy negatively affected my work	2	50.0	3	30.0	
<b>HCWs' attitude</b>					
Good/Very good	73	98.6	105	97.2	0.519
Other/Don't know	1	1.4	3	2.8	
<b>Satisfaction with the clinic / center where you receive antiretroviral therapy</b>					
Satisfactory/Very satisfactory	73	98.6	106	98.1	0.794
Other/Don't know	1	1.4	2	1.9	
<b>The confidentiality is fully protected at the medical facility where you receive treatment</b>					
Yes	64	86.5	91	84.3	0.678
No/Don't know/Don't sure	10	13.5	17	15.7	

Table 5. Barriers of HIV treatment among HIV infected patients by gender

Characteristic	Female		Male		p value
	n	%	n	%	
<b>What was your action when you learned about your HIV status?</b>					
Went to health facility	70	94.6	106	98.1	
Self-treatment	2	2.7	0	0.0	
Didn't do anything	2	2.7	2	1.9	
<b>How long did it take to visit the doctor once you learned your HIV test result?</b>					
1 day/same day	47	67.1	62	61.4	
1 week	17	24.3	30	29.7	
1-3 months	6	8.6	9	8.9	
<b>Did you notify family members when you first visited doctor because of HIV diagnosis?</b>					
Yes	17	23.3	5	5.2	0.001
No/Don't know	56	76.7	91	94.8	
<b>Did your family member accompany you during your first visit to doctor because of HIV diagnosis?</b>					
Yes	51	68.9	31	32.3	<0.001
No/Don't know	23	31.1	65	67.7	

<b>Have you received enough information from your doctor about antiretroviral therapy and its side effects?</b>					
Yes	71	95.9	105	97.2	0.636
No/Don't know	3	4.1	3	2.8	
<b>Do you receive enough information on your HIV treatment monitoring tests?</b>					
Yes	70	94.6	107	99.1	0.069
No/Don't know	4	5.4	1	0.9	
<b>Time needed to reach the nearest health care facility providing HIV/AIDS care?</b>					
< 30 minutes	8	10.8	18	16.7	
1-3 hours	44	59.5	69	63.9	
>3 hours	10	13.5	10	9.3	
Other	12	16.2	11	10.2	

Table 6. Attitude and practices about HIV treatment among HIV infected patients by gender

Characteristic	Female		Male		p value
	n	%	n	%	
<b>In your opinion was your HIV/AIDS diagnosis delayed?</b>					
Yes	8	10.8	17	15.7	0.343
No/Don't Know	66	89.2	91	84.3	
<b>How long did it take to start HIV/AIDS treatment after diagnosis?</b>					
1 day	29	40.3	35	35.0	
1 week	20	27.8	21	21.0	
2 week	5	6.9	20	20.0	
1-3 month	2	2.8	12	12.0	
3 month-1 year	1	1.4	3	3.0	
>1 year	15	20.8	9	9.0	
<b>Which aspect of HIV/AIDS treatment causes the major discomfort?</b>					
Don't cause discomfort	51	68.9	68	63.6	
Side affects	8	10.8	11	10.3	
Treatment duration	14	18.9	24	22.4	
Keeping confidentiality by the clinic	0	0.0	1	0.9	
Other	1	1.4	3	2.8	
<b>Did you have episodes of non-compliance to antiretroviral therapy prescribed by your doctor?</b>					
Yes	9	12.3	21	19.6	0.197
No/Don't Know	64	87.7	86	80.4	
<b>Was the information about your HIV status spread against your will?</b>					
Yes	3	4.1	3	2.8	0.636
No/Don't Know	71	95.9	105	97.2	
<b>Have you ever paid out of pocket for HIV diagnostics and treatment?</b>					
Yes	1	1.4	0	0.0	0.226
No/Don't Know	73	98.6	108	100.0	
<b>Would you change anything about HIV diagnostics and treatment program?</b>					
Yes	25	34.2	40	37.0	0.701
No/Don't Know	48	65.8	68	63.0	

Most of the male and female respondents think that their diagnosis was not late. There was no difference between male and female respondents in the time of diagnosis and the initiation of treatment. A higher proportion of men (19.6%) than women (12.3%) reported interruption of treatment regimen ( $p=0.1$ ). As of the reasons of interruption/discontinuation of treatment, female respondents reported side effects, while male respondents reported incompatibility of antiretroviral medications with alcohol. 4.1% of female and 2.8% of male HIV infected respondents reported breach of confidentiality - information regarding their HIV status was disclosed against their will. ( $p=0.6$ ). On question if they would change anything about HIV/AIDS diagnosis and treatment program, about one-third of male and female respondents reported that they would incorporate changes. The change proposed by most of the male and female respondents mainly concerned the extension of the period between the visits to receive medications (Table 6).

Our study revealed that the level of awareness and knowledge on HIV/AIDS was similar in both male and female HIV positive individuals, although a higher proportion of men than women have heard of HIV/AIDS before their diagnosis. HIV/AIDS is more stigmatizing for women than men. Specifically, female patients with HIV were feeling more ashamed than male patients for their diagnosis. Fear of being abandoned by both community and family due to HIV/AIDS diagnosis was higher among female respondents. Similar to our study, significantly higher stigma scores were found among women compared to men living with HIV in Ontario, Canada by the study conducted by Loutly et al (5). gender related internalized stigma was also found in China among HIV infected persons with females stigmatized more compared to males (6). In our study higher proportion of male respondents than women reported an illness-related job issues (unable to get or lost a job because of HIV). Women participating in our survey were more likely to hide their diagnosis from other people compared to men. This finding is not comparable to the results of the study conducted by Derbibe et al where no significant difference was revealed in HIV status disclosure between male and female HIV infected individuals (7). Similar to the study conducted Serovich et al (8) higher proportion of female compared to male respondents in our survey reported notifying their family members about their HIV status. Significantly higher proportion of female HIV-infected individuals have been accompanied by a family member on visit to physician due to HIV/AIDS compared to male HIV-infected respondents. A higher proportion of men than women reported an interruption/discontinuation of treatment regimen.

Gender-power imbalance in Georgia, limited social autonomy for female including economic autonomy, public attitude towards gender-based violence significantly increases vulnerability to HIV. The most alarming thing is that these harmful stereotypes are accepted not only by men but also by women. Some women normalize discriminatory behavior toward them, perceive violence and infringement of their rights as ordinary, and do not seek help from existing services. To enhance women's empowerment and their ability to defend themselves, it is important that HIV programs in collaboration with gender-focused programs, engage in information-education activities specifically targeting vulnerable populations (with a particular focus on transgender women, CSWs and female IDUs). In order to break harmful stereotypes about men's role, it is of the vital importance for men to engage in these activities. Their involvement and active participation will help to increase their social

responsibility, and promote positive engagement in the fight against gender inequality.

Georgia has ensured free and unrestricted access to HIV-related services for all HIV infected individuals in the country. However, the stigma related to HIV still creates barriers to service utilization. Therefore, HIV national program should continue implementation of focused and concerted interventions to improve HIV awareness among gender populations. In addition, the knowledge and attitude of healthcare providers should improve that presumably will contribute to the reduction of HIV related stigma and discrimination in healthcare settings. HIV programs should continue to combat disease-related stigma and discrimination as it is planned in the national strategic plans. In addition, measures aimed at raising public awareness, education of professional communities, and empowering vulnerable groups is strongly recommended.

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## SUMMARY

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Late detection of HIV infection still remains serious problem for Georgia. During the last years prevalence and late detection of HIV infection is increasing among females and therefore, attempts to implement services adapted to female needs have significantly increased. It is essential to conduct research to cre-

ate a basis for country's national response of HIV infection to become more gender sensitive. The goal of our study was to conduct survey among HIV-positive individuals to identify potential gender-based barriers and contributing factors that might influence timely diagnosis and treatment of HIV infection.

Cross sectional study design was used. Target population included HIV-infected persons. Study subjects were selected by simple random sampling. Study participants were sampled from the registry of HIV infected patients. Quantitative data were collected through individual, face-to-face interviews, using specially designed questionnaire for this study.

In total 182 HIV-infected individuals participated in survey, of whom 74 (40.6%) were females and 108 (59.6%) were males. The level of awareness and knowledge on HIV/AIDS was similar in both male and female HIV positive individuals, although a higher proportion of men than women have heard of HIV/AIDS before their diagnosis. HIV infection is more stigmatizing for women than men. Fear of being abandoned by both community and family due to HIV/AIDS diagnosis was higher among female respondents. Higher proportion of male respondents than women reported an illness-related unemployment. Women were more likely to hide their diagnosis from other people compared to men. Higher proportion of female compared to male respondents reported notifying family members about their HIV status. Significantly higher proportion of female HIV-infected individuals have been accompanied by a family member on visit to physician due to HIV/AIDS compared to male HIV-infected respondents. A higher proportion of men than women reported an interruption/discontinuation of treatment regimen.

Georgia has ensured free and unrestricted access to HIV service for all HIV infected individuals in the country. However, the stigma related to HIV still creates barriers to service utilization. Therefore, HIV national program should continue implementation of focused and concerted interventions to improve HIV awareness among gender populations.

**Keywords:** HIV, gender, barrier.

## РЕЗЮМЕ

### ГЕНДЕРНЫЕ БАРЬЕРЫ СРЕДИ ЛИЦ, ИНФИЦИРОВАННЫХ ВИЧ

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Позднее выявление ВИЧ-инфекции по сей день остается серьезной проблемой для Грузии. В последние годы рост распространенности ВИЧ-инфекции среди женщин диктует необходимость в увеличении числа служб, адаптированных к их потребностям.

Целью исследования явился анализ результатов опроса среди ВИЧ-инфицированных для выявления потенциальных гендерных факторов, способствующих своевременной диагностике и лечению ВИЧ-инфекции.

Использовался поперечный дизайн исследования. Целевую группу составили ВИЧ-инфицированные, которые отобраны путем простой случайной выборки из реестра ВИЧ-инфицированных пациентов. Количественные данные

собраны методом индивидуального интервьюирования с помощью специально разработанного для данного исследования вопросника.

В опросе приняли участие 182 ВИЧ-инфицированных, из них 74 (40,6%) женщины и 108 (59,6%) мужчин. Уровень осведомленности и знаний о ВИЧ/СПИДе был одинаковым как у мужчин, так и у женщин, инфицированных ВИЧ, хотя более высокая доля мужчин, чем женщин, знала о ВИЧ/СПИДе до постановки диагноза. ВИЧ-инфекция более стигматизирует женщин, чем мужчин. Страх быть отвергнутым обществом и семьей из-за диагноза ВИЧ/СПИД был выше среди женщин, а доля мужчин, сообщивших о безработице, связанной с болезнью, была выше, чем женщин. Женщины чаще чем мужчины скрывали свой диагноз. Среди ВИЧ-инфицированных, сообщивших членам семьи о своей болезни, было больше респондентов-женщин, чем мужчин. При посещении врача члены семьи чаще сопровождают женщин, чем мужчин. Мужчины чаще прерывают/прекращают режим лечения чем женщины.

В Грузии обеспечен бесплатный и неограниченный доступ к услугам по ВИЧ заболеванию. Однако стигма, связанная с ВИЧ, по сей день создает препятствия для использования услуг. Результаты проведенного исследования позволяют заключить, что национальная программа по ВИЧ должна продолжить реализацию целенаправленных и согласованных мероприятий по повышению осведомленности о ВИЧ среди населения.

## რეზიუმე

აივ ინფექციით დაავადებულ პირთა შორის არსებული გენდერული ბარიერები

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აივ ინფექციის გვიანი გამოვლენა წარმოადგენს სერიოზულ პრობლემას საქართველოსთვის. ბოლო წლების განმავლობაში აივ ინფექციის პრევალენტობა და გვიანი გამოვლენა მატულობს ქალებში, შესაბამისად, მნიშვნელოვნად გაიზარდა ქალებზე ადაპტირებული სერვისების საჭიროება.

კვლევის მიზანს წარმოადგენდა აივ-დადებით პირთა შორის გამოკითხვის შედეგების ანალიზი, გენდერული ფაქტორების გამოვლენა, რომლებიც გავლენას ახდენდნენ აივ ინფექციის დროულ დიაგნოსტიკასა და მკურნალობაზე.

გამოყენებულია ჯვარედინ-სექციური კვლევის დიზაინი. სამიზნე პოპულაციას წარმოადგენდნენ აივ-ინფიცირებული პირები, რომლებიც შეირჩეული იყო მარტივი შემთხვევითი შერჩევის მეთოდით აივ-ინფიცირებულ პაციენტთა რეესტრიდან. რაოდენობრივი მონაცემები შეგროვდა ინდივიდუალური, პირისპირ ინტერვიუებით, ამ კვლევისთვის სპეციალურად შემუშავებული კითხვარის გამოყენებით.

კვლევაში მონაწილეობდა 182 აივ-ინფიცირებული პირი, რომელთაგან 74 (40,6%) იყო ქალი, ხოლო 108 (59,6%) მამაკაცი. აივ/შიდს-ის შესახებ ინფორმირებუ-

ლობის და ცოდნის დონე ქალებსა და მამაკაცებს შორის იყო მსგავსი, თუმცა მამაკაცების უფრო მაღალ პროცენტს სმენია აივ-ინფექცია/შიდს-ის შესახებ საკუთარ დიაგნოზად. აივ-ინფექცია ქალებისთვის უფრო მეტად მასტიგმატიზირებულია, ვიდრე მამაკაცებისთვის. აივ/შიდს-ის დიაგნოზის გამო საზოგადოებისგან და ოჯახისგან გარიყვის შიში უფრო მაღალი იყო ქალებში. გამოკითხული მამაკაცების მეტი წილი, ქალებთან შედარებით, აღნიშნავდა აივ-ინფექციასთან ასოცირებული უმუშევრობის პრობლემას. ქალები უფრო ხშირად არ ამჟღავნებდნენ თავიანთ დიაგნოზს, ვიდრე მამაკაცები. მამაკაცებთან შედარებით, ქალები უფრო ხშირად უმხელდნენ საკუთარ აივ-სტატუსს ოჯახის წევრებს. აივ-ინფიცირებულ ქა-

ლებს ხშირად ახლდა ოჯახის წევრი ექიმთან დაავადების გამო ვიზიტის დროს. მამაკაცებს, ქალებთან შედარებით, უფრო ხშირად ჰქონდათ დაარღვეული ან შეწყვეტილი მკურნალობის კურსი.

საქართველოში აივ-ინფექციასთან დაკავშირებული სერვისები უნივერსალურად ხელმისაწვდომია ყველა აივ-ინფიცირებული პირისთვის. თუმცა, აივ-თან დაკავშირებული სტიგმა კვლავ ქმნის ბარიერებს აღნიშნული სერვისების უტილიზაციის მხრივ. ყოველივე ზემოაღნიშნულიდან გამომდინარე, აივ-ინფექციის ეროვნულმა პროგრამამ აუცილებელია განახორციელოს ფოკუსირებული ინტერვენციები აივ-ინფექციის შესახებ ცნობიერების ასამაღლებლად გენდერულ პოპულაციებში.

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## KNOWLEDGE, ATTITUDE AND PRACTICE SURVEY AMONG GEORGIAN HEALTH CARE WORKERS TOWARDS BLOOD BORNE INFECTIONS

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Blood-borne pathogens are important cause of illness and death [1]. The most frequent blood-borne pathogens are human immunodeficiency virus (HIV), hepatitis B (HBV) and hepatitis C (HCV) [2]. The knowledge of blood borne pathogens is essential to reduce occupational exposure among HCW's [3].

Globally, there are more than 38 million people living with HIV/AIDS [4]. In Georgia, HIV prevalence rates among adults aged 15 to 49 is 0.4% [5]. Meanwhile, Georgia is considered among countries with highest prevalence of hepatitis B and hepatitis C. The prevalence of hepatitis B surface antigen (HBsAg) is 2.9%, anti-HBc is 25.5% and anti-HCV is 7.7% in general population of Georgia [6,7].

Since 2015, Georgia launched a multi-year program of HCV elimination, including treatment of infected individuals with Direct Acting Antivirals (DAAs) and implementation of prevention programs, including infection control in health care facilities [7]. Studies showed that Georgian HCWs have insufficient knowledge of universal safety precautions [8]. The objective of this study was to evaluate the attitude and knowledge of blood borne infections (BBI- HIV, HCV, HBV) among Georgian HCWs and comparison of knowledge level with Dental health care workers (DHCWs).

**Material and methods.** The survey was conducted in ten private and governmental hospitals: two from Tbilisi (the capital), three from Eastern Georgian city (Rustavi) and six from West-

ern Georgia (Kobuleti and Batumi). The study was conducted to evaluate knowledge, attitude and practice of HCWs about the prevention of blood borne infection and methods for reducing occupational exposure among HCWs in Georgia. The selection of HCWs was done through simple random sampling from the list of staff as a sampling frame. A self-administered questionnaire was used to obtain information on HCWs demographics, professional characteristics, personal risk factors, awareness of blood-borne infections and knowledge of effective risk reduction precautions to prevent transmission of pathogens. Study participation was voluntary. The study was approved by the Institutional review board (IRB) of the Health Research Union, Tbilisi, Georgia (IRB#: 00009520; IORG#: 0005619).

Data were analyzed in statistical software SPSS v.23 (IBM Corp. Released 2015). Descriptive statistics was used to describe socio-demographic data. Prevalence ratios (PRs) and 95% confidence intervals (CIs) were computed for each study variable.

**Results and discussion.** 442 HCWs were enrolled in the study. Among them, 246 (55.6%) were HCWs (physicians, nurses, physician assistants and residents) from different departments, including family medicine (38.6 %), surgery (21.7%), gynecology (23.4%) and intensive care (13.9%) and 196 dental HCWs (44.6%). Most of the study participants were older than 41 years (49.4%). Demographic characteristics of surveyed individuals are given in Table 1.