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PSYCHOLOGICAL SEXUALITY FEATURES IN PEOPLE LIVING WITH HIV WITH THE PRESENCE AND THE LACK OF SUBSTANCE USE

© D.V. Antonova [1, 2], V.V. Bocharov [3, 1, 4], N.S. Chrustaleva [1]

[1] St. Petersburg State University, Saint Petersburg, Russia;

[2] Humanitarian Action Foundation, Saint Petersburg, Russia;

[3] St. Petersburg State Pediatric Medical University, Ministry of Healthcare of the Russian Federation, Russia;

[4] V.M. Bekhterev National Research Medical Center for Psychiatry and Neurology, Saint Petersburg, Russia

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Psychological sexuality features in people living with HIV with and without substance use as a determinant of the HIV epidemic growth were explored. The study involved 136 respondents (2 groups of 50 people with different infection routes: blood-borne infection route and heterosexual transmission; 36 individuals without HIV). The following research methods were used: a specially developed clinical map, an original author's questionnaire « Infection risk and the disease situation» (allows to register the main characteristics of the life situation of the disease), the incomplete sentences test of Sachs – Levy, Freiburgh Personality Inventory, I-structure Ammon test. Data processing included the Fisher criterion (Fisher angular transformation), ANOVA, content analysis. Significant negative effects in sexual sphere related to gender and the presence of HIV were revealed in the study. It has been established that people living with HIV with and without substance use differ in the frequency of concealment of HIV status and the presence of destructive type of sexuality. It has been established that people living with HIV and healthy respondents differ in the frequency of unrealistic way of thinking regarding opposite sex. A frequent occurrence of negatively colored attitude towards opposite sex and positively colored attitude towards sexual relations was noted in all groups. The results of the study determine the need for timely preventive measures in all population groups and psychocorrectional measures among people living with HIV, which will allow to prevent an increase in the number of children and adolescents with HIV. Psychological sexuality features in people living with HIV in the Russian sample were studied for the first time. The results are partially confirmed in foreign literature.

Keywords: HIV; psychological sexuality features; heterosexual transmission; blood-borne infection route.

ПСИХОЛОГИЧЕСКИЕ ОСОБЕННОСТИ СЕКСУАЛЬНОСТИ У ВИЧ-ПОЛОЖИТЕЛЬНЫХ ЛИЦ С НАЛИЧИЕМ И ОТСУТСТВИЕМ ЗАВИСИМОСТИ ОТ ПСИХОАКТИВНЫХ ВЕЩЕСТВ

© Д.В. Антонова [1, 2], В.В. Бочаров [3, 1, 4], Н.С. Хрусталева [1]

[1] Федеральное государственное бюджетное образовательное учреждение высшего образования «Санкт-Петербургский государственный университет», Санкт-Петербург;

[2] Санкт-Петербургский благотворительный фонд «Гуманитарное действие», Санкт-Петербург;

[3] Федеральное государственное бюджетное образовательное учреждение высшего образования «Санкт-Петербургский государственный педиатрический медицинский университет» Министерства здравоохранения Российской Федерации, Санкт-Петербург;

[4] Федеральное государственное бюджетное учреждение «Национальный медицинский исследовательский центр психиатрии и неврологии им. В.М. Бехтерева» Министерства здравоохранения Российской Федерации, Санкт-Петербург

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Исследовались психологические особенности сексуальности у ВИЧ-положительных лиц с зависимостью и без зависимости от психоактивных веществ как фактор, способствующий росту эпидемии ВИЧ-инфекции. Было обследовано 136 респондентов (2 группы по 50 человек с разными путями заражения ВИЧ-инфекцией: гемоконтактным и гетеросексуальным; 36 ВИЧ-отрицательных респондентов).

Были использованы следующие методики исследования: специально разработанная клиническая карта, авторская оригинальная анкета «Риск заражения и ситуации болезни» (регистрирует основные характеристики жизненной ситуации болезни), тест незаконченных предложений Сакса – Леви, Фрайбургский личностный опросник, Я-структурный тест Аммона.

Методы обработки данных представлены критерием Фишера (угловое преобразование Фишера), ANOVA, контент-анализом. Выявлены нарушения в сексуальной сфере, связанные с полом и наличием ВИЧ-инфекции. Установлено наличие различий между группами ВИЧ-положительных лиц с зависимостью и без зависимости от психоактивных веществ по частоте сокрытия ВИЧ-статуса и наличия деструктивной сексуальности. Установлено наличие различий между ВИЧ-положительными и ВИЧ-отрицательными респондентами по выраженности нереалистичности мышления в отношении лиц противоположного пола. Во всех группах респондентов отмечалась частая встречаемость негативной эмоциональной окрашенности отношения к лицам противоположного пола и положительной эмоциональной окрашенности сексуальных отношений.

Результаты исследования формируют необходимость проведения своевременных профилактических мероприятий во всех группах населения и психокоррекционных мероприятий среди ВИЧ-положительных лиц, что позволит предотвратить увеличение количества ВИЧ-положительных детей и подростков. Психологические особенности сексуальности у ВИЧ-положительных лиц на российской выборке исследованы впервые. Результаты находят частичное подтверждение в зарубежной литературе.

Ключевые слова: ВИЧ-инфекция; психологические особенности сексуальности; гетеросексуальный путь заражения; гемоконтактный путь заражения.

Russia has one of the fastest-growing HIV epidemics in the world (hereinafter referred to as HIV) [23]. In terms of incidence, Russia ranks first among European countries [15, 23, 30]. People living with HIV make up 1.8% of the country's population, the epidemic is widespread and the pathological process of HIV causes 1% of deaths due to all diseases [3, 8, 10]. The World Health Organization 2018 statistics for Russia postulate that 1.2 million people have HIV and about 100,000 people become infected with HIV annually [30, 31]. The increase in morbidity is associated with an increase in mortality of people living with HIV, such as children and women of childbearing age [8, 30].

Currently, significant changes are noted in the ratio of HIV transmission routes. According to literature, heterosexual transmission is the predominant infection route [11, 13]. A similar situation has been noted since 2004 in many foreign countries [29, 30]. In 2018, heterosexual transmission in Russia accounted for 59% of all newly diagnosed infections [30]. Such changes in the ratio of HIV transmission routes entail a significant expansion of the risk group, which includes the entire sexually active population [25]. Therefore, the risk group includes, among others, adolescents who are hypersexual in nature [12]. An increase in the number of narcological diseases among adolescents, which are associated with a high probability of HIV transmission, is also currently registered [1, 12]. It should be noted that according to international literature, new cases of infection are currently detected mainly among women with one stable partner for a long time and without obvious risks of infection [22, 24, 25]. The World Health Organization 2018 statistics for Russia postulate that 0.5% of all newly diagnosed infections accounted for vertical transmission route of HIV (from mother to fetus) [30]. Nevertheless, the authors believe that changes in the ratio of HIV transmission routes can lead to an increase in the number of children with HIV. This may be due to the fact that women with one partner for a long time often do not identify themselves with a risk group for HIV, do not undergo regular HIV testing, and learn about HIV-positive status in the late stages of the disease or in late pregnancy [12, 17, 21].

It should be noted that the "traditional" risk groups for HIV retain their key importance in the epidemiological process, because the disease is also beyond the risk groups through heterosexual transmission route [21, 32]. Accordingly, preven-

tive activities must be conducted not only among heterosexual people. The "traditional" risk groups include people in detention facilities, injection drug users, people who have experience of engaging in commercial sex work, bisexual and homosexual males [21, 32].

According to the authors, the HIV epidemic growth and heterosexual transmission route coming to the fore can be associated to a large extent with psychological sexuality features in people living with HIV. There was no definition of psychological sexuality features in the available literature. Hence, the authors attempted to formulate their own definition of this concept. It is based on the psychosocial model of sexuality. According to the authors, this model most fully reflects the multidimensional concept of sexuality, one aspect of which is psychological aspect [9]. Definition of psychological sexuality features: it reflects how the sexual sphere, with its numerous aspects, is represented in the human psyche, as well as how the psychological characteristics of an individual affect the sexual sphere. In other words, the reflection of the described bilateral process determined the understanding of psychological sexuality features in this article.

Psychological sexuality features are associated with the prevalence of risky sexual behavior. It should be noted that concealment of HIV from a sexual partner, which may entail HIV transmission, also belongs to these features [18, 19].

The spread of HIV is also associated with the following factors: the lack of an effective HIV prevention system, frequent occurrence of risky sexual behavior among adolescents and youths, frequent occurrence of mythical beliefs about HIV, low level of awareness of the disease and sexual ignorance of the population [10].

Therefore, the study on psychological sexuality features becomes important in all studied groups. The study on these features in both people living with HIV and individuals without HIV seems relevant from both a scientific and a practical point of view. During the search for literature, no publications of Russian scientists on the topic of research were revealed. Accessible publications described risk factors for HIV transmission, characteristics of risky sexual behavior, psychological characteristics of drug users, stigmatization and self-stigmatization of people living with HIV [4–6, 12]. From a practical point of view, the study of psychological sexuality features in these groups enables to create adequate psychocorrectional programs for people living with HIV, programs for secondary HIV prevention and primary prevention of other socially significant diseases in people living with HIV. Therefore, this will prevent an increase in the number of children and adolescents with HIV.

This study aimed to identify psychological sexuality features in people living with HIV with and without substance use. Psychological sexuality features were also studied in a group of healthy respondents.

MATERIALS AND METHODS

This study was conducted in two medical institutions in St. Petersburg: the St. Petersburg City Narcological Hospital and the St. Petersburg Center for Prevention and Control of AIDS and Infectious Diseases Hospital. The clinical and psychological phase of the study was conducted from January to May 2019.

All respondents were made aware of the study conditions and signed the informed consent. The study was approved by the Ethics Committee of the St. Petersburg State University.

The hypothesis of the study: a deficient type of sexuality is more common for people living with HIV, at the same time a destructive type of sexuality is more common for people living with HIV who use drugs.

A total of 136 respondents aged 22 to 65 years were examined, $M = 37.13 \pm 7.89$, with 35.3% of men and 64.7% of women. The respondents were divided into three groups: two main groups and one control group. The respondents of the main groups have HIV and they were divided into groups by HIV transmission routes.

Group 1 ($n = 50$) included respondents with bloodborne infection route (injection drug users). The respondents were aged 22 to 59 years, $M = 38.26 \pm 5.79$, with 36% of men and 64% of women. At the time of examination, they stayed in the rehabilitation department no. 2 of the St. Petersburg City Narcological Hospital and in the hospital of the

St. Petersburg Center for the Prevention and Control of AIDS and Infectious Diseases. The inclusion criteria in this group were the presence of HIV, experience of injecting drug use, and confirmed remission lasting more than 1 month.

Group 2 (n = 50) included respondents with heterosexual transmission (people without injecting drug use experience). The respondents were aged 29 to 65 years, $M = 40.64 \pm 8.74$, with 38% of men and 62% of women. At the time of the examination, they stayed in the hospital of the Saint Petersburg Center for the Prevention and Control of AIDS and Infectious Diseases. The inclusion criteria in this group were the presence HIV and no experience of injecting drug use.

The group of regulatory control (n = 36) included respondents without HIV aged 25 to 45 years, $M = 30.69 \pm 4.76$, with 30.6% of men and 69.4% of women. Healthy respondents were invited to take part in the study to the Department of Psychology of St. Petersburg State University. The number of respondents did not include university students. Absence of HIV was determined on the basis of the respondent's voluntary report. The inclusion criteria in this group were the absence of HIV, absence of other sexually transmitted diseases, and absence of the experience of injecting drug use.

The exclusion criteria in the study were the age under 18 years, the presence of gross cognitive impairments or mental disorders in medical history or at the time of the examination, severe somatic pathologies in the acute stage, and the presence of homosexual or bisexual orientation in men (recorded on the basis of the respondent's self-report).

Enrollment of respondents was performed by continuous method; that is, all people living with HIV who wanted to participate in the study and met the inclusion criteria were examined. The study sample was homogeneous by gender, age, and marital status.

The study used various methods:

1. A specially developed clinical map was used to collect respondents' medical history. It was completed jointly with a psychiatrist–narcologist and clinical psychologists. Based on the data obtained, respondents of main groups were divided; respondents were determined to meet the inclusion criteria, and the map data was compared with the respondent's self-report. In other words, objective data about the respondent was collected on the basis of a clinical map. The map recorded the characteristics, namely, the presence of HIV, immune status, viral load, experience of taking antiretroviral therapy, degree of adherence to treatment (interruptions in taking medications, their quantity, and total duration), experience of injecting drug use and its duration, lack of drugs in the body at the time of examination, the term of remission, the absence of cognitive impairment or mental disorders in medical history or at the time of examination, and severe somatic pathologies in the acute stage.
2. The author's original questionnaire "Infection risk and the disease situation" was used (there are no analogues in the available literature). Based on the questionnaire, the respondent's self-report data were collected and compared with the clinical map data. Testing was conducted in 50 injecting drug users who were not in remission (aged 19 to 52 years, $M = 35.1 \pm 6.74$, 42% of men and 58% of women). The questionnaire enables to register the socio-demographic characteristics of respondents, experience of risky behavior in relation to HIV infection (experience of injecting drug use, sexual behavior peculiarities), and the main characteristics of the life situation of the disease. The questionnaire was based on a situational approach developed in Russian psychology [2]. The life situation of the disease was understood as a complex concept of its context. Characteristics such as self-condemnation of infection, concealment of HIV status and the degree of ease of its disclosure, awareness of HIV status of the last partner and the source of this knowledge, and motives for not using barrier methods of protection (condoms) were analyzed.In this study, methods widely presented in the literature were also used.
3. The incomplete sentences test of Sachs-Levy (SSCT) enables to identify significant areas of personality relations and the degree of their violation [14]. The scales "attitude towards opposite sex" and "attitude towards sexual relations" were used.

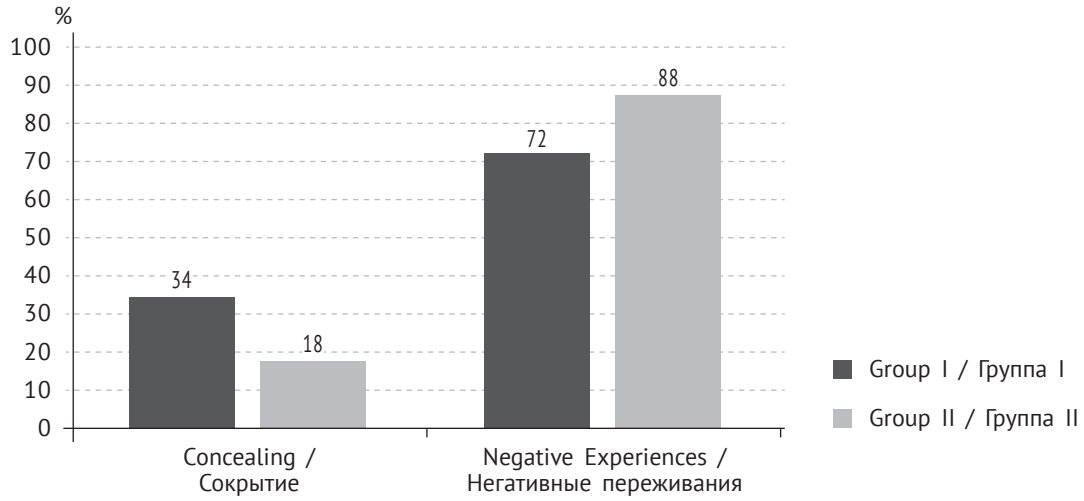
4. Freiburg personality inventory (FPI) enables to diagnose the properties and states of personality, which are the determinants of successful social adaptation [28].
5. I-structure Ammon test (Ich-Struktur-Test nach Ammon–ISTA) enables to identify the type of organization of the personality structure [9]. This study used the sexuality scale divided into three subscales: constructive, destructive, and deficient. Constructive type of sexuality implies complete acceptance of self and the partner, preservation of own identity in partner relationships, ability to communicate, and openness to a new sexual experience [9]. Destructive type of sexuality is characterized by sexual function deformation, when the sexual aim is replaced by expression of aggression, and sexual contacts are impersonal, anonymous, perceived as traumatic, contacts do not involve an integral personality, but its individual fragments participate in them [9]. Deficient type of sexuality is characterized by impossibility of accepting own manifestations of sexuality, prohibition on them and it's condemnation, rejection of sexual contacts, and preference of fictitious partners for real ones [9].

Fisher angular transformation or the φ-criterion (comparison of percentage data) and ANOVA (comparison of differences in statistical indicators) were used for statistical data analysis. In particular, qualitative data were analyzed using a content analysis method. SPSS Statistics 17.0 was used for mathematical data processing.

RESULTS AND DISCUSSION

1. Concealment of HIV status from a sexual partner. Between the main groups, differences were found in the percentage of cases of HIV status concealment (Figure), which was more often reported among injecting drug users, but the result was not statistically significant. At the same time, significant differences were found in the percentage of cases of negative experiences in revealing HIV status, and more pronounced negative feelings were noted in group 2 ($\varphi = 2.02$, $p = 0.05$).

The relatively high frequency of concealment of HIV status among injecting drug users may be due to the low level of trust in others, high rates of suspicion, and stigmatization in this group [6, 7]. The results in group 2 may be associated with higher rates of trauma during HIV diagnosis and self-stigmatization; it is due to common social stereotypes about risk groups [4, 12, 21]. Probably the severity of negative experiences in people living with HIV who do not use drugs is associated with the following factors. Such individuals have a greater decrease in self-esteem and acceptance of their own manifestations of sexuality than injecting drug users [20, 26, 27].



Distribution of respondents of the main groups depending on the frequency of concealing HIV status from a partner and the severity degree of negative experiences in revealing HIV status
Распределение респондентов основных групп в зависимости от частоты сокрытия от партнера ВИЧ-статуса и степени выраженности негативных переживаний при его раскрытии

2. Awareness of HIV status of the last partner. No statistically significant differences between the main groups were found for this characteristic; 71% of people living with HIV (56.7% in group 1 and 53% in group 2) knew the HIV status of their last sexual partner. It should be noted that differences in the source of knowledge about HIV status between the main groups were not found. In all cases, there was either joint diagnostics or the partner disclosed his HIV status independently.

Only a little more than half of the respondents knew the HIV status of their last partner. Therefore, in partnerships with people living with HIV, the level of confidence is quite low, which is consistent with the literature [27].

3. Confidence in partner relationships. We noted that the main reason for not using condoms in all groups of respondents was trust in a partner (42.4% of respondents in groups 1 and 2, 61.1% of healthy respondents).

There is a contradiction in the data obtained. People living with HIV have a low level of confidence in partner relationships. This does not preclude the refusal of using condoms due to trust in a partner, though it is supposedly not enough. The level of confidence is not always enough to disclose HIV status to the partner. In other words, a low level of confidence is not a factor conducive to the use of condoms, but at the same time, it is a deterrent to the disclosure of HIV status. The complexity of disclosing HIV status for an individual should be noted, especially in light of the widespread stigmatization of this group [6, 17]. Possibly, the level of confidence in the decision to disclose HIV status should be more pronounced than the level of confidence sufficient to refuse the use of condoms. Nevertheless, results indicate that people with and without HIV do not understand the risks of infection through unprotected sexual intercourse.

4. Self-condemnation regarding HIV infection. Statistically significant differences were found between the main groups. Self-condemnation was more often noted in terms of infection in 62% of cases in group 1 than 40% in group 2 ($\varphi = 2.22$, $p = 0.01$). In other words, people living with HIV without injecting drug use experience are more likely to shift the responsibility of infection to others. These results may be associated with distorted (mythical) beliefs about HIV, as people who do not belong to the traditional risk groups do not see the risk of infection in their behavior [4, 21]. Such beliefs play a significant role in the epidemic growth [4, 21].

5. Types of sexuality. Significant differences were found between the main and control groups according to the average value of the scales of destructive and deficient types of sexuality (Table 1). A more pronounced level of destructive type of sexuality was noted in group 1 than in group 2. This result may be associated with a pronounced personality deformation, which is characteristic of injecting drug users; therefore, deformation of sexual function seems predictable [7].

Table 1 / Таблица 1

Differences between the main and control groups by type of sexuality ($p < 0.05$)
Различия между основными и контрольной группами по типам сексуальности ($p < 0,05$)

Feature / Признак	Group 1 ($M \pm SD$) / Группа 1 ($M \pm SD$)	Group 2 ($M \pm SD$) / Группа 2 ($M \pm SD$)	Control ($M \pm SD$) / Контроль ($M \pm SD$)	Relevance / Значимость
Destructive type of sexuality, T-points (standardized grading scale) / Деструктивная сексуальность, Т-баллы (шкала стандартизированных оценок)	51.526 ± 10.49	46.584 ± 10.32	46.46 ± 8.76	1–2 ($p = 0.020$)
Deficient type of sexuality, T-points (standardized grading scale) / Дефицитарная сексуальность, Т-баллы (шкала стандартизированных оценок)	52.91 ± 10.76	51.036 ± 8.97	47.71 ± 8.12	1.2–3 ($p = 0.022$)

There were gender differences found in group 2. The level of destructive type of sexuality was higher in men than in women ($p = 0.004$). The result may be associated with greater reactive aggressiveness ($p = 0.018$) and masculinity ($p = 0.013$), which reflects some acceptable forms of aggressive manifestation. Men also had a higher level of constructive type of sexuality ($p = 0.001$), which may be associated with a more pronounced openness ($p = 0.003$) and extraversion ($p = 0.030$) in them. High rates of constructive type of sexuality in men may indicate a more significant negative effect in sexual sphere of women with HIV [27].

Comparison with the control group revealed a more pronounced level of deficient type of sexuality in the main groups. The result seems to indicate the presence of significant negative effect in sexual sphere and pronounced psychological distress in people living with HIV [5, 17, 27].

6. Realistic thinking regarding opposite sex. The following significant differences were revealed. There was a relatively high frequency of cases of unrealistic thinking regarding opposite sex at 74% in group 1 than 52.4% in group 2 ($\varphi = 2.11$, $p = 0.05$). This result may be due to psychological immaturity and desire to escape from reality, which are characteristic of injecting drug users [7].

In the main groups, differences by gender were found. In group 1, the presence of unrealistic thinking regarding opposite sex was more often observed at 88.9% in men than at 64.3% in women ($\varphi = 1.98$, $p = 0.05$). However, in group 2, this type of thinking was more common in women, namely, 66.7% compared with 33.3% of men ($\varphi = 2.18$, $p = 0.05$). These results are not confirmed in the available literature.

Comparison with the control group revealed the following. In the main groups, the presence of unrealistic thinking regarding opposite sex was more common (63.6% compared with 47.2% in healthy respondents) ($\varphi = 1.67$, $p = 0.05$). Therefore, people without HIV have a lower level of irrational thinking, which can be explained by the presence of injecting drug users in the sample of people living with HIV in 50% of cases.

7. Emotional attitude towards opposite sex. No significant differences between the groups were revealed. In all groups of respondents, there was a greater manifestation of negatively colored attitude towards opposite sex, in 71.9% of healthy respondents and in 72.5% of respondents with HIV (78.6% in group 1 and 65.8% in group 2). Negatively colored attitude suggested the existence of a conflict sphere; the significance of the sphere was determined on the basis of the presence of conflict. In other words, in all groups of respondents, often there was a conflict of this sphere.

In the main groups, differences by gender were revealed. Negatively colored attitude in them was more pronounced in women. In group 1, such emotional attitude was revealed in 89.3% of women compared with 57.1% of men ($\varphi = 3.05$, $p = 0.01$). In group 2, negatively colored attitude was noted in 82.6% of women compared with 40% of men ($\varphi = 2.745$, $p = 0.01$).

The results obtained in the group of people living with HIV can be associated with the general negative impact of HIV on the emotional sphere of respondents, including possible ideas of accusing the opposite sex (i. e., partners) of infection [5]. It should be noted that the result may also be due to the fact that the processes necessary for the occurrence of sexual contact can be perceived as traumatic by people living with HIV (in particular, discussing the need to use condoms, making a decision on disclosing or concealing HIV status) [27]. A more pronounced negatively colored attitude towards opposite sex in women may indicate that HIV has a more significant negative effect in sexual sphere of women compared to men [27].

8. Emotional attitude towards sexual relations. No significant differences, including gender differences, were found between the groups. In all groups of respondents, there was a greater manifestation of positively colored attitude towards sexual relations, namely, in 74.2% of healthy respondents and in 64.4% of respondents with HIV (64.4% in group 1, 64.3% in group 2). Therefore, the conflict of the sphere was often absent. In other words, sexual intercourse in itself was regarded as something positive. The results are somewhat inconsistent with the

literature, according to which the significance of the sexual sphere in people living with HIV should be low [27].

A pronounced negatively colored attitude towards sexual relations was noted only in the group of women with experience of engaging in commercial sex work, which accounted for 16% of the group of injecting drug users ($p = 0.042$). This result confirms the presence of greater psychological distress and perception of sex as a traumatic situation for these women [16]. Such a perception is caused not only by the impact of HIV, but also by other factors, such as frequent cases of sexual and physical violence, low quality of life in this population group [16].

Significant differences were found when comparison of the main groups with the conflict areas of "attitude towards opposite sex", "attitude towards sexual relations" on the average value of the scales of constructive and deficient types of sexuality (Table 2).

In group 2, persons with a conflict area of "attitude towards opposite sex" had a relatively lower level of constructive type of sexuality than persons without a conflict in this sphere. The result seems logical due to the fact that conflict in the indicated sphere implies incomplete acceptance of the partner. As indicated earlier, constructive type of sexuality, on the contrary, is characterized by complete acceptance of the partner [9].

In group 1, a relatively higher level of deficient type of sexuality was noted in individuals with a conflict area of "attitude towards sexual relations", which seems logical due to the presence of prohibition of any sexual manifestations in case of deficient type of sexuality [9].

The results of the study determine the need for timely preventive measures among people living with HIV and also among people without HIV. Significant negative effects in sexual sphere of people living with HIV can cause an increase in HIV incidence. Consequently, psychocorrective measures in this group are important components of prevention programs. Such activities can be performed as individual, group, or family counseling. Psychocorrectional measures can focus on a traumatic experience of establishing HIV diagnosis, accepting a new identity as a person with HIV, accepting own and partner's sexual manifestations, increasing confidence in partner relationships, correcting attitudes toward opposite sex, and correcting distorted beliefs about HIV and about the opposite sex.

Table 2 / Таблица 2

Comparison of the main groups with the conflict areas of "attitude towards opposite sex", "attitude towards sexual relations" ($p < 0.05$)

Сравнение основных групп с конфликтностью сфер «отношение к лицам противоположного пола», «сексуальное отношение» ($p < 0,05$)

Feature / Признак	With conflict ($M \pm SD$) / С конфликтностью ($M \pm SD$)	No conflict ($M \pm SD$) / Без конфликтности ($M \pm SD$)	Relevance / Значимость
Group 2, the conflict area of "attitude towards opposite sex" / Группа 2, конфликтность сферы «отношение к лицам противоположного пола»			
Constructive type of sexuality, T-points (standardized grading scale) / Конструктивная сексуальность, Т-баллы (шкала стандартизированных оценок)	42.22 ± 12.37	50.088 ± 7.60	$p = 0.025$
Group 1, the conflict area of "attitude towards sexual relations" / Группа 1, конфликтность сферы «сексуальное отношение»			
Deficient type of sexuality, T-points (standardized grading scale) / Дефицитарная сексуальность, Т-баллы (шкала стандартизированных оценок)	60.012 ± 8.76	49.567 ± 10.05	$p = 0.001$

CONCLUSION

This is a study of psychological sexuality features in people living with HIV as a factor determining the HIV epidemic growth. Also these features were studied in a group of healthy respondents.

The hypothesis of the study was confirmed. Deficient type of sexuality was noted significantly more often in the group of people living with HIV than in the group of healthy respondents. The destructive type of sexuality was revealed significantly more often in the group of people with HIV and with injecting drug use experience than those without.

The data obtained in this study determine the need for timely preventive measures in all population groups and psychocorrectional measures among people living with HIV. This will prevent an increase in the number of children and adolescents with HIV.

Psychological sexuality features in people living with HIV in the Russian sample were studied for the first time. The study results are partially confirmed in the international literature.

Conflict of interest: The authors report no conflict of interest.

REFERENCES

1. Виндорф С.А. Особенности психологической работы с подростками группы риска по возникновению наркозависимости // Педиатр. – 2013. – Т. 4. – № 4. – С. 116–119. [Vindorf SA. Features of psychological work with teenagers of group of risk on drug addiction emergenced. *Pediatrician (St. Petersburg)*. 2013;4(4):116-119. (In Russ.)]. https://doi.org/10.17816/PED44116-119.
2. Гришина Н.В. Ситуационный подход: исследовательские задачи и практические возможности // Вестник Санкт-Петербургского университета. Серия 16. Психология. Педагогика. – 2016. – № 1. – С. 58–68. [Grishina NV. Situational approach: research tasks and applicability. *Vestnik Sankt-Peterburgskogo universiteta. Seriya 16. Psikhologiya. Pedagogika*. 2016;(1):58-68. (In Russ.)]
3. Гусова А.Д., Цаликова А.А. Психологическое состояние и приверженность к лечению у больных ВИЧ-инфекцией // Азимут научных исследований: педагогика и психология. – 2016. – Т. 5. – № 3. – С. 249–251. [Gusova AD, Tsalikova AA. Psychological condition and adherence to treatment in patients with hiv infection. *Azimut nauchnykh issledovaniy: pedagogika i psikhologiya*. 2016;5(3):249-251. (In Russ.)]
4. Емельянова Т.П., Дробышева Т.В., Иванова Д.В., и др. Типы социальных представлений о ВИЧ-инфицировании и СПИДе // Психологический журнал. – 2011. – Т. 32. – № 4. – С. 57–69. [Emel'yanova TP, Drobysheva TV, Ivanova DV, et al. Types of social representations of HIV-infection and AIDS. *Psikholog Zh*. 2011;32(4):57-69. (In Russ.)]
5. Зинченко А.И. Сравнение психологических особенностей ВИЧ-инфицированных с разным уровнем иммунитета // Известия Российского педагогического университета им. А.И. Герцена. – 2008. – № 76–2. – С. 107–113. [Zinchenko AI. Sravnenie psikhologicheskikh osobennostey VICh-infitsirovannykh s raznym urovnem immuniteta. *Izvestiya Rossiyskogo pedagogicheskogo universiteta im. A.I. Gertsena*. 2008;(76-2):107-113. (In Russ.)]
6. Илюк Р.Д., Ильюшкина Е.В., Святенко В.С., и др. Сравнительное исследование социально-психологических, поведенческих и клинических характеристик опиоидзависимых с ВИЧ-позитивным и ВИЧ-негативным статусами. Сообщение 2: сравнительный анализ личностных характеристик, показателей агрессии и гнева, копинг-стратегий, смысложизненных ориентаций, стигматизации, качества жизни // Обозрение психиатрии и медицинской психологии имени В.М. Бехтерева. – 2016. – № 4. – С. 25–41. [Ilyuk RD, Il'yushkina EV, Svyatenko VS, et al. A comparative study of the psychosocial, behavioral, and clinical characteristics of HIV-positive and HIV-negative opioid users Part 2 Comparative analysis of personal characteristics, indicators of aggression, anger, coping strategies, stigma, quality and purpose of life. *Obozrenie psikhiatrii i meditsinskoy psikhologii imeni V.M. Bekhtereva*. 2016;(4):25-41. (In Russ.)]
7. Клиническая психотерапия в наркологии (Руководство для врачей-психотерапевтов) / Под. ред. Р.К. Назырова, Д.А. Федоряка, С.В. Ляшковской. – СПб.: НИПНИ им. В.М. Бехтерева, 2012. – 456 с. [Klinicheskaya psikhoterapiya v narkologii (Rukovodstvo dlya vrachey-psikhoterapevtov). Ed. by R.K. Nazyrov, D.A. Fedoryak, S.V. Lyashkovskaya. Saint Petersburg: NIPNI im. V.M. Bekhtereva; 2012. 456 p. (In Russ.)]

8. Покровский В.В., Ладная Н.Н., Покровская А.В. ВИЧ/СПИД сокращает число Россиян и продолжительность их жизни // Демографическое обозрение. – 2017. – Т. 4. – № 1. – С. 65–82. [Pokrovskiy VV, Ladnaya NN, Pokrovskaya AV. VICh/SPID sokrashchaet chislo Rossiyan i prodolzhitel'nost' ikh zhizni. *Demograficheskoe obozrenie*. 2017;4(1):65-82.(In Russ.)]
9. Тупицын Ю.Я., Бочаров В.В., Алхазова Т.В., Бродская Е.В. Я-структурный тест Аммона: опросник для оценки центральных личностных функций на структурном уровне: пособие для психологов и врачей. – СПб.: НИПНИ им. В.М. Бехтерева, 1998. – 70 с. [Tupitsyn YuYa, Bocharov VV, Alkhazova TV, Brodskaya EV. Ya-strukturnyy test Ammona: oprosnik dlya otsenki tsentral'nykh lichnostnykh funktsiy na strukturnom urovne: posobie dlya psikhologov i vrachey. Saint Petersburg: NIPNI im. V.M.Bekhtereva; 1998. 70 p. (In Russ.)]
10. Турсунов Р.А. Влияние ВИЧ-инфекции на качество жизни людей, живущих с ВИЧ/СПИД // Вестник Авиценны. – 2013. – № 1. – С. 138–148. [Tursunov RA. The impact of HIV infection on the quality of life of people living with HIV/AIDS. *Vestnik Avitsenny*. 2013;(1):138-148. (In Russ.)]
11. Хеймер Р., Миллс Х.Л., Уайт Э., и др. Моделирование эпидемии вируса иммунодефицита человека в Санкт-Петербурге // ВИЧ-инфекция и иммуносупрессии. – 2014. – Т. 6. – № 1. – С. 59–65. [Kheymer R, Mills KhL, Uayt E, et al. Modeling the expansion of the HIV epidemic in St. Petersburg, RF. *Vichinfektsiia Immunosuppr*. 2014;6 (1):59-65. (In Russ.)]
12. Шаболтас А.В. Психологические основы превенции ВИЧ-инфекции. – СПб.: Скифия-принт, 2015. – 694 с. [Shaboltas AV. Psikhologicheskie osnovy preventsii VICh-infektsii. – Saint Petersburg: Skifiya-print; 2015. 694 p. (In Russ.)]
13. Штейман А.А. Медико-социальный портрет ВИЧ-инфицированных беременных женщин // Успехи современной науки. – 2016. – Т. 1. – № 4. – С. 131–135. [Shteyman AA. Mediko-sotsial'nyy portret VICh-infitsirovannykh beremennykh zhenshchin. *Uspekhi sovremennoy nauki*. 2016;1(4):131-135. (In Russ.)]
14. Яньшин П.В. Практикум по клинической психологии. Методы исследования личности. – СПб.: Питер, 2004. – 336 с. [Yan'shin PV. Praktikum po klinicheskoy psikhologii. Metody issledovaniya lichnosti. Saint Petersburg: Piter; 2004. 336 p. (In Russ.)]
15. Beyrer C, Wirtz AL, O'Hara G, et al. The expanding epidemic of HIV-1 in the Russian Federation. *PLoS Med*. 2017;14(11): e1002462. https://doi.org/10.1371/journal.pmed.1002462.
16. Carter A, Greene S, Money D, et al. The Importance of Sex in the Lives of Women Living with HIV: A Critical Quantitative Analysis. *Int J Sex Health*. 2018;30(1): 92-110. https://doi.org/10.1080/19317611.2018.1447527.
17. Davtyan M, Olshansky EF, Brown B, Lakon C. A Grounded Theory Study of HIV-Related Stigma in U.S. – Based Health Care Settings. *J Assoc Nurses AIDS Care*. 2017;28(6):907-922. https://doi.org/10.1016/j.jana.2017.07.007.
18. Dolan K, Wirtz AL, Moazen B, et al. Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees. *Lancet*. 2016;388(10049): 1089-1102. https://doi.org/10.1016/S0140-6736(16)30466-4.
19. George MS, Lambert H. 'I am doing fine only because I have not told anyone': the necessity of concealment in the lives of people living with HIV in India. *Cult Health Sex*. 2015;17(8):933-946. https://doi.org/10.1080/13691058.2015.1009947.
20. Gurevich M, Mathieson CM, Bower J, Dhayanandhan B. Disciplining Bodies, Desires and Subjectivities: Sexuality and HIV-Positive Women. *Fem Psychol*. 2016; 17(1):9-38. https://doi.org/10.1177/0959353507072910.
21. Hirshfield S, Schrimshaw EW, Stall RD, et al. Drug Use, Sexual Risk, and Syndemic Production Among Men Who Have Sex With Men Who Engage in Group Sexual Encounters. *Am J Public Health*. 2015;105(9):1849-1858. https://doi.org/10.2105/AJPH.2014.302346.
22. Jarman M, Walsh S, De Lacey G. Keeping safe, keeping connected: A qualitative study of HIV-positive women's experiences of partner relationships. *Psychol Health*. 2005;20(4):533-551. https://doi.org/10.1080/14768320500083667.
23. Lunze K, Lioznov D, Cheng DM, et al. HIV Stigma and Unhealthy Alcohol Use Among People Living with HIV in Russia. *AIDS Behav*. 2017;21(9):2609-2617. https://doi.org/10.1007/s10461-017-1820-8.
24. Nguyen NT, Keithly SC. A qualitative study on the sexual behaviour of people living with HIV in Vietnam. *AIDS Care*. 2012;24(7):921-928. https://doi.org/10.1080/09540121.2011.644230.

25. Pinho AA, Barbosa RM, Brignol S, et al. Drivers of Sexual Inactivity Among Women Living with HIV and AIDS: Findings of the GENIH Study in Sao Paulo, Brazil. *Arch Sex Behav*. 2018;47(7):1983-1993. https://doi.org/10.1007/s10508-017-1110-6.
26. Psaros C, Barinas J, Robbins GK, et al. Intimacy and sexual decision making: exploring the perspective of HIV positive women over 50. *AIDS Patient Care STDS*. 2012;26(12):755-760. https://doi.org/10.1089/apc.2012.0256.
27. Siegel K, Schrimshaw EW, Lekas HM. Diminished sexual activity, interest, and feelings of attractiveness among HIV-infected women in two eras of the AIDS epidemic. *Arch Sex Behav*. 2006;35(4):437-449. https://doi.org/10.1007/s10508-006-9043-5.
28. Soares I, Machado PP, Dias P, et al. Freiburgh Personality Inventory-Revised (FPI-R): Validation study with a Portuguese sample of university students. *Int J Clin Health Psychol*. 2005;5(2):319-333.
29. UNAIDS. Report on the global HIV/AIDS epidemic: 4th global report. Geneva; 2004. 236 p.
30. World Health Organization. HIV/AIDS surveillance in Europe 2018–2017 data. Copenhagen; 2018. 122 p.
31. World Health Organization. World health statistics 2018: monitoring health for the SDGs, sustainable development goals. Copenhagen; 2018. 86 p.
32. Zhang L, Chow EP, Su S, et al. A systematic review and meta-analysis of the prevalence, trends, and geographical distribution of HIV among Chinese female sex workers (2000-2011): implications for preventing sexually transmitted HIV. *Int J Infect Dis*. 2015;39:76-86. https://doi.org/10.1016/j.ijid.2015.08.014.

◆ Information about the authors

Darya V. Antonova — Senior Laboratory Assistant, Department of Psychology of Crisis and Extreme Situations, Faculty of Psychology, Saint Petersburg State University, Saint Petersburg, Russia; Psychologist; Humanitarian Action Foundation, Saint Petersburg, Russia. E-mail: peaceineverybody@gmail.com.

Victor V. Bocharov — PhD, Psychol Sci, Associate Professor, Head of Department of Clinical Psychology, St. Petersburg State Pediatric Medical University, Ministry of Healthcare of the Russian Federation, Saint Petersburg, Russia; Head of the Laboratory of Clinical Psychology and Psychodiagnostics, V.M. Bekhterev National Research Medical Center for Psychiatry and Neurology, Saint Petersburg, Russia; Associate Professor, Department of Psychology of Crisis and Extreme Situations, Faculty of Psychology, Saint Petersburg State University, Saint Petersburg, Russia. E-mail: bochvikvik@gmail.com.

Nelli S. Chrustaleva — Dr Psychol Sci, Professor, Head of Department of Psychology of Crisis and Extreme Situations, Faculty of psychology. Saint Petersburg State University, Saint Petersburg, Russia. E-mail: hns@mail.ru.

◆ Информация об авторах

Дарья Владимировна Антонова — старший лаборант, кафедра психологии кризисных и экстремальных ситуаций, факультет психологии, ФГБОУ ВО СПбГУ, Санкт-Петербург; психолог, Санкт-Петербургский благотворительный фонд «Гуманитарное действие», Санкт-Петербург. E-mail: peaceineverybody@gmail.com.

Виктор Викторович Бочаров — канд. психол. наук, заведующий кафедрой клинической психологии, ФГБОУ ВО СПбГПМУ Минздрава России, Санкт-Петербург; руководитель лаборатории клинической психологии и психодиагностики, ФГБУ НМИЦПН им. В.М. Бехтерева Минздрава России, Санкт-Петербург; доцент кафедры психологии кризисных и экстремальных ситуаций, факультет психологии, ФГБОУ ВО СПбГУ, Санкт-Петербург. E-mail: bochvikvik@gmail.com.

Нелли Сергеевна Хрусталева — д-р психол. наук, профессор, заведующая кафедрой психологии кризисных и экстремальных ситуаций, факультет психологии. ФГБОУ ВО СПбГУ, Санкт-Петербург. E-mail: hns@mail.ru.