

Reproductive Attitudes and Sexual Behavior of Women and Men Living with HIV

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Abstract

An anonymous survey was conducted, covering the issues of reproductive attitudes and contraceptive behavior in 50 women (mean age of 30.9 ± 4.5 years) and 35 men (mean age of 31.1 ± 3.2 years) with HIV infection of stages 4B and 4C. The study was carried out using a structured questionnaire that included questions about age, marital status, methods of contraception, reproductive plans, and reproductive and medical history. An anonymous interview with 85 HIV-infected respondents revealed that most of the women (82.0%) had contracted HIV through heterosexual contact, while in the men, the parenteral route of HIV infection predominated (57.1%) ($P=0.0126$). Statistically significant differences were found between the rate of single women and men: 21(42%) women versus 2(5.7%) men ($P<0.001$). An analysis of contraceptive behavior revealed statistically significant differences: 26% of the women and 8.6% of men ($P<0.05$) did not use any methods of contraception with regular or irregular sexual life. The majority of respondents used a barrier method of contraception and coitus interruptus. The vast majority of women (80%) had a desire to have children in an indefinite future, as opposed to 37.1% of the men ($P<0.001$). About 11.4% of men and 10% of women ($P>0.05$) definitely did not plan pregnancy in the future, mainly because of their unsatisfactory financial situation and the presence of a current HIV infection. Forty-two percent of the women did not undergo periodic medical examinations by a gynecologist or other specialists, and 44% of them indicated the reason for the lack of visits to the doctor as an unsatisfactory attitude of medical personnel towards them. The results obtained are important for the development of optimal medical care that alleviates the burden of HIV infection. In addition to medical care, health care providers must consider social and psychological needs to help HIV patients improve their health, including their sexual and reproductive health. (**International Journal of Biomedicine. 2022;12(2):247-250.**)

Key Words: hyperpigmentation • melasma • diagnosis • dermoscopy • treatment

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Introduction

The HIV/AIDS epidemic is the leading cause of death among women of reproductive age worldwide, from the discovery of HIV in the early 1980s to the end of 2021. HIV infection is considered to be a chronic, rather than a fatal, disease in terms of life expectancy as a result of increased access to effective antiretroviral treatment.⁽¹⁾ In addition to medical care, health care providers must consider social and psychological needs to help HIV patients improve their health,

including sexual and reproductive health.^(2,3) Studies show that the majority of HIV-infected women are sexually active after diagnosis.^(4,5)

For HIV-serodiscordant couples who desire a child, there are several safe ways to achieve pregnancy safely: the antiretroviral therapy (ART) for a woman living with HIV to suppress viral load; pre-exposure prophylaxis (PrEP) for HIV-negative persons with partners living with HIV; identification and treatment of sexually transmitted infections (STIs) in both partners; behavioral strategies (timed vaginal insemination, timed intercourse without a condom around the most fertile period of the woman's menstrual cycle).^(2,6-9)

All couples with childbearing problems need to be screened for infertility and treated appropriately.^(3,10-12)

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Reproductive behavior, as an integral part of reproductive health, includes a system of actions and relationships that mediate the birth of, or refusal to have, a child in or out of wedlock. Thus, contraceptive behavior is a system of personality actions aimed at preventing the birth of a child, implemented through the use of contraceptive methods, artificial abortion, or abstinence.⁽¹³⁾ Sexual behavior is a form of interaction between individuals motivated by sexual need, as well as social behavior, in which a person pursues certain goals, and seeks to realize certain interests, based on the use of biological mechanisms. Thus, sexual behavior is determined by the reproductive, hedonic, and communicative functions of the human individual.⁽¹⁴⁾ The reproductive attitude is considered by researchers as a regulator of reproductive behavior and the psychological readiness of an individual to have a particular number of children under specific conditions and within certain periods of life. The reproductive attitude is often considered from the standpoint of three components: cognitive (cognitive), affective (emotional), and behavioral (motivational).⁽¹³⁾ Accordingly, sexual and reproductive health issues need to be considered in high-quality HIV services that can improve quality of life and improve HIV prevention.^(2,15)

Materials and Methods

This work was carried out at the Scientific Center for Family Health and Human Reproduction Problems as part of a clinical examination of women and men with HIV infection of stages 4B and 4C at the Irkutsk Regional Infectious Clinical Hospital. The study was conducted in accordance with ethical principles of the WMA Declaration of Helsinki (1964, ed. 2013). The study was approved by the Ethics Committee of the Scientific Center for Family Health and Human Reproduction Problems. Written informed consent was obtained from each participant.

Inclusion criteria were reproductive age (18–45 years), HIV infection stages 4B–4C, diagnosed on the basis of epidemiological, clinical data and confirmed by detection of specific antibodies by ELISA and immune blotting to HIV type 1 proteins.

An anonymous survey was conducted, covering the issues of reproductive attitudes and contraceptive behavior in 50 women (mean age of 30.9±4.5 years) and 35 men (mean age of 31.1±3.2 years). The study was carried out using a structured questionnaire that included questions about age, marital status, methods of contraception, reproductive plans, and reproductive and medical history. The questions were supplemented and combined into sections: personal data (age, nationality, education, social status, place of residence), complaints at the time of treatment, concomitant gynecological diseases, past somatic diseases, and infectious anamnesis, as well as socio-biological and family-domestic status.

The gynecological history included the following information: age of menarche, features of the formation of menstrual function (regularity, presence of pain, and blood volume loss), and rhythm of menstruation. Reproductive function analysis included the age of onset of sexual activity, the outcome of the first pregnancy, the number

of births, abortions, miscarriages, and missed and ectopic pregnancies. The presence of complications in the postpartum and post-abortion periods was analyzed. In the absence of pregnancies during the first year with regular sexual life without contraception, the duration of infertility, the fertility of the sexual partner, the results of previous examinations, and treatment of sexual partners were determined.

Statistical analysis was performed using STATISTICA 6.1 software package (Stat-Soft Inc., USA). The frequencies of categorical variables were compared using Pearson's chi-squared test or Fisher's exact test (2-tail), when appropriate. A value of $P < 0.05$ was considered significant.

Results

An anonymous interview with 85 HIV-infected respondents revealed that most of the women (82.0%) had contracted HIV through heterosexual contact, while in the men, the parenteral route of HIV infection predominated (57.1%) ($P = 0.0126$), which coincided with the all-Russian statistical data.⁽¹⁶⁾ Sexual contacts between men were reported in 2.5% of the respondents. History of parenteral drug use was reported by 18% of the women, and 5% reported that they had taken intravenous drugs in the last 6 months.

Eighteen percent of the women and 5.7% of the men did not drink alcohol ($P > 0.05$); 14% of the women and 77.1% of the men ($P < 0.0001$) used alcohol regularly and more often than 1–2 times a week; 68% of the women and 85.7% of the men ($P > 0.05$) smoked, and 18% and 37.1% of them, respectively, smoked more than 10 cigarettes per day; 36% of the women and 48.6% of the men ($P > 0.05$) reported regular drug use.

No significant differences were found when comparing the level of education: 70% of the women and 71.4% of the men had secondary or secondary specialized education, and 17% of the women and 14.3% of the men had higher education. The most common professions among both the women and men were employment in a private enterprise. The unemployed were 30% of the women and 17.1% of the men. According to all-Russian studies, in the general population of Russians aged 15 to 64, 88.7% had secondary education, 27.3% had incomplete higher education, 17% had higher education, and the level of education in women was higher than in men (21% and 13%, respectively; $P < 0.05$).⁽¹⁶⁾

The marital status of the interviewed women and men was as follows: single (women 42% and men 5.7%), divorced (18% and 5.7%), unregistered marriage (28% and 48.6%), and registered marriage (12% and 42%). Statistically significant differences were found between the rate of single women and men: 21(42%) women versus 2(5.7%) men ($P < 0.001$) (Table 1).

Among 50 women and 35 men, regular sex (≥ 4 times per month) was reported by 40% of the women and 60% of the men ($P > 0.05$). The main reasons for irregular sex were “lack of a permanent sexual partner” and “fear of revealing one's HIV-positive status.” About 41% of respondents did not know or did not indicate the HIV status of their regular sexual partner. Of the respondents who knew the HIV status of their

partner, 48.6% of the men and 38% of the women had an HIV-negative sexual partner at the time of the study.

The obstetric history of HIV-infected women was as follows: childbirth, miscarriage, medical abortion, and ectopic pregnancy. It was found that at the time of the study, 11(56%) women had infertility (lack of pregnancy for 1 year with regular sexual activity without contraception), while 8(20%) of them noted complications after a medical abortion.

An analysis of contraceptive behavior revealed statistically significant differences: 26% of the women did not use any methods of contraception with regular or irregular sexual life, citing the fact that “pregnancy still does not occur”; and in 8.6% of the men, their partners also did not use contraceptive methods ($P<0.05$). The majority of respondents used a barrier method of contraception. Hormonal contraceptives (HC) were used by 8% of the women and by 5.7% of the partners of the men surveyed. Intrauterine contraceptives (IUC) were used by 8% of the women and 5.7% of the female partners of the men surveyed. Coitus interruptus was used by 10% of the women and 17.1% of the men (Table 1).

Table 1.

Socio-demographic portrait of a patient living with HIV

Socio-demographic indicator	Men n=35	Women n=50
Family status		
Registered marriage	14 (40%)	6 (12%)
Unregistered marriage	17 (48.6%)	14 (28%)
Divorced	2 (5.7%)	9 (18%)
Single **	2 (5.7%)	21 (42%)
Contraceptive method		
None *	3 (8.6%)	13 (26%)
HC	2 (5.7%)	4 (8%)
IUC	2 (5.7%)	4 (8%)
Barrier contraception	22 (63%)	24 (48%)
Coitus interruptus	6 (17.1%)	5 (10%)
Pregnancy planning		
In the coming year	5 (14.3%)	2 (4%)
In future**	13 (37.1%)	40 (80%)
No, because there is a child**	13 (37.1%)	3 (6%)
Definitely not	4 (11.4%)	5 (10%)

*- $P<0.05$; **- $P<0.001$

Forty-two percent of the women did not undergo periodic medical examinations by a gynecologist or other specialists, and 44% of them indicated the reason for the lack of visits to the doctor as an unsatisfactory attitude of medical personnel towards them.

The questions regarding the intention to give birth showed that the vast majority of women (80%) had a desire to have children in an indefinite future, as opposed to 37.1%

of the men ($P<0.001$) The reasons for not wanting to have children were as follows: in 6% of the women and 37.1% of the men ($P<0.001$), “the presence of one child in the family”; 11.4% of men and 10% of women ($P>0.05$) definitely did not plan pregnancy in the future (Table 1), mainly because of their unsatisfactory financial situation and the presence of a current HIV infection.

Conclusion

Despite the fact that HIV is a barrier to pregnancy and childbirth, motherhood has most often been perceived as something positive. About 80% of the women expressed a strong desire to be pregnant and give birth, to feel like a “real woman,” to feel whole and complete. Motherhood and raising a child would mean a new chance in the lives of the women interviewed—the beginning of something new. The pregnancy itself and subsequent motherhood were even explained as salvation. Being a mother and meeting the needs of a child was associated with care and unconditional love, as well as hope for the women interviewed.

The need for social support was very strong among HIV-infected couples. Women stated that they needed professional support from health professionals for specific and objective information about family planning, medical risks, and preventive interventions during pregnancy. The need for practical information on how to take action to eliminate the transmission of HIV to a child was very important.

The results obtained are important for the development of optimal medical care that alleviates the burden of HIV infection. In addition to medical care, health care providers must consider social and psychological needs to help HIV patients improve their health, including their sexual and reproductive health.

Competing Interests

The authors declare that they have no competing interests.

References

- Lohse N, Gerstoft J, Kronborg G, Larsen CS, Pedersen C, Pedersen G, Nielsen L, Sørensen HT, Obel N. Comorbidity acquired before HIV diagnosis and mortality in persons infected and uninfected with HIV: a Danish population-based cohort study. *J Acquir Immune Defic Syndr*. 2011 Aug 1;57(4):334-9. doi: 10.1097/QAI.0b013e31821d34ed.
- NewsCAP: The WHO releases Consolidated Guideline on Sexual and Reproductive Health and Rights of Women Living with HIV. *Am J Nurs*. 2018 Jul;118(7):17. doi: 10.1097/01.NAJ.0000541425.43842.d0.
- Leshchenko O, Genich E. [Reproductive disorders and their pathogenetic mechanisms in women with HIV]. *HIV Infection and Immunosuppressive Disorders*. 2019;11(4):20-29. DOI:10.22328/2077-9828-2019-11-4-20-29. [Article in Russian].
- Hankins C, Gendron S, Tran T, Lamping D, Lapointe N. Sexuality in Montreal women living with HIV. *AIDS Care*. 1997 Jun;9(3):261-71. doi: 10.1080/713613156.

5. Leschenko OY, Genich EV. [The reproductive health and sexual behavior of HIV-infected women: the review]. *Probl Sotsialnoi Gig Zdravookhranennii Istor Med.* 2020 Mar;28(2):294-302. Russian. doi: 10.32687/0869-866X-2020-28-2-294-302.
 6. Heffron R, Davies N, Cooke I, Kaida A, Mergler R, van der Poel S, Cohen CR, Mmeje O. A discussion of key values to inform the design and delivery of services for HIV-affected women and couples attempting pregnancy in resource-constrained settings. *J Int AIDS Soc.* 2015 Dec 1;18(Suppl 5):20272. doi: 10.7448/IAS.18.6.20272.
 7. Saleem HT, Narasimhan M, Denison JA, Kennedy CE. Achieving pregnancy safely for HIV-serodiscordant couples: a social ecological approach. *J Int AIDS Soc.* 2017 Mar 8;20(Suppl 1):21331. doi: 10.7448/IAS.20.2.21331.
 8. Mmeje O, van der Poel S, Workneh M, Njoroge B, Bukusi E, Cohen CR. Achieving pregnancy safely: perspectives on timed vaginal insemination among HIV-serodiscordant couples and health-care providers in Kisumu, Kenya. *AIDS Care.* 2015;27(1):10–6.
 9. Mmeje O, Njoroge B, Akama E, Leddy A, Breitnauer B, Darbes L, et al. Perspectives of healthcare providers and HIV-affected individuals and couples during the development of a safer conception counseling toolkit in Kenya: stigma, fears, and recommendations for the delivery of services. *AIDS Care.* 2016;28(6):750–7.
 10. Kolesnikova L, Kolesnikov S, Darenskaya M, Grebenkina L, Timofeeva E, Leshenko O. Menstrual and reproductive function in women with HIV-infection and antioxidant vitamins deficiency. *J AIDS Clin Res.* 2014;5:12:1-5. doi: 10.4172/2155-6113.1000382.
 11. Belyaeva E, Genich E, Leshchenko O. The Genotype Distribution of Human Papillomavirus among HIV-Infected Women Planning Pregnancy in Irkutsk, Russia. *International Journal of Biomedicine.* 2021;11(3):346-350. doi:10.21103/Article11(3)_OA11.
 12. Darenskaya M, Kolesnikov S, Grebenkina L, Timofeeva E, Leshenko O. The correlation between antioxidant deficiency and reproductive disorders in women with HIV-infection. *Free Radical Biology & Medicine.* 2017;112:129. doi: 10.1016/j.freeradbiomed.2017.10.194.
 13. Kalachikova O, Shabunova A. Reproductive behavior as a factor of population reproduction: trends and prospects. *Vologda; 2015:169.* 0[In Russian].
 14. Ovcharova L. Determinants of population reproductive behavior and factors of family distress: the results of panel studies. Moscow Public Science Foundation; Independent Institute for Social Policy. Moscow; 2010: 247. [In Russian].
 15. Brickley DB, Almers L, Kennedy CE, Spaulding AB, Mirjahangir J, Kennedy GE, Packel L, Osborne K, Mbizvo M, Collins L. Sexual and reproductive health services for people living with HIV: a systematic review. *AIDS Care.* 2011 Mar;23(3):303-14. doi: 10.1080/09540121.2010.507746.
 16. Pokrovskaya AV, Kozyrina NV, Gushchina YS, Yurin OG, Suvorova ZK, Pokrovsky VV. [The sociodemographic portrait of a patient living with HIV and visiting AIDS centers in Russia]. *Ter Arkh.* 2016;88(11):12-16. doi: 10.17116/terarkh2016881112-16. [Article in Russian].
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