

## **Representation of the disease, the motivational sphere and medical communication as an objective for HIV prevention and the treatment of HIV infection in substance users**

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The psychological aspect of treating HIV-infected substance users entails changing their behaviour, as their behaviour is what leads to the risk of them transmitting and spreading HIV. Psychological treatment must facilitate their adaptation so that they may be otherwise treated for substance abuse and HIV. We propose establishing the psychological objective of helping patients overcome substance addiction by addressing their internal representation of the disease (IRD), value-sense and motivational sphere, as well as their relationships with their physician, as this is the main person who interacts with the patient in the clinic. An IRD study of patients with an opioid dependency, complicated with infectious diseases, showed that the IPD emotional level of opioid patients, as inter-conditional for other levels, can be an indicator of the status and impact of the main objective. A comparative study of substance users who received psychotherapy with those not receiving psychotherapy showed that the value-sense and motivational sphere is also an important target for preventive action. A study of the physician's image of drug treatment clinics' patients revealed that increases in the communicative competence of drug treatment facilities' personnel represents a third course of preventing the transmission of HIV among substance dependent patients.

**Keywords:** HIV-infected substance users, internal representation of the disease (IRD), value-sense and motivational sphere, the physician's image

The HIV epidemic is a medical and social ill that has caused great damage to the global community; it has touched every country, and devastated the lives of the people it has directly affected.

According to Russia's Federal AIDS Centre, the evaluation of the epidemiological situation in Russia reflects an ongoing increase in the number of HIV-infected patients. The total number of reported cases of HIV infection among Russian citizens increased by 10.6% in 2011, while the number of identified cases per 100,000 people surveyed increased by 8.4%. By September 2012, Russia had 682,726 registered HIV-infected patients (Pokrovsky, Ladnaya, Sokolova et al., 2012).

The use of drugs continues to be the main risk factor. The number of new cases of infection among drug users has not decreased. In a 2011 study, 56.2% of all HIV-positive individuals who were in at-risk groups indicated that they were drug users.

According to the Russian Ministry of Health's National Centre for Drug Abuse, 15% of the total number of registered drug users in 2011 (those registered represented 71% of the total estimated number of drug users) were infected (Koshkina, Kirzhanova, Sidoryuk et al., 2012).

All epidemiological data indicate that users of psychoactive substances run the highest risk of HIV infection. This underscores the importance of HIV prevention and treatment in this population, because for the duration of the epidemic they have continued to be the main source of infection for other groups (Pokrovsky, Ladnaya, Sokolova et al., 2012).

HIV and substance dependency are socially significant diseases. Providing medical care to patients with a combination of severe disease is a complex and multifaceted problem. Patients that suffer from a severe disease are also commonly afflicted by psychological and social problems (Dolzhanskaya, Buzina, 2002; Maximova, 2008).

The level of prevention for this group of patients corresponds to tertiary prevention. Tertiary prevention is seen as a specialized set of measures for the rehabilitation of HIV patients who have lost their ability to function normally. Tertiary prevention has several rehabilitation objectives which can be described as social (forming confidence in their own social fitness), labour (the ability to recover work skills), psychological (recovery of behavioral activity of the individual) and medical (functional recovery of organs and systems). The most important component of preventive measures is to develop public health facilities and social activities in order to encourage a healthy lifestyle (Sirota, Yaltonsky, 2003).

The chief psychological problem at the tertiary level is altering the behaviour which leads to the risk of HIV transmission; psychological professionals must promote the formation of adaptive behaviour, thereby facilitating the treatment of substance dependence and HIV.

The complexity of the tertiary prevention of socially significant diseases such as drug abuse and HIV infection is due to a number of specific factors.

First of all, in most cases, the treatment of these diseases requires a strict adherence to medical appointments, and by varying from this regimen, the patient faces serious complications. It is therefore very important to maintain the patient's motivation for treatment and to ensure that he or she continues to attend therapy. Unfortunately, in most cases, patients are not motivated enough to treat addiction. If there is no setup for psychological treatment, pharmacological treatment is disrupted at an early stage, after which the patient resumes using drugs. A return to this "drug" lifestyle makes for ineffective HIV treatment. Therefore, in addition to pharmacological treatment, these patients need specific therapeutic and corrective treatment in order to alter their behaviour and allow them to sustainably abstain from substance use. This is possible only if the patient has an adequate understanding of the disease, its consequences and its impact on his or her life activity and quality of life. Taken together, these concepts are referred to as the patient's internal image of the disorder. Also, the rehabilitation process is often complicated by the

patient's need to overcome the social stigma of being HIV positive, which makes it difficult for them to access social support.

Prevention activities should be implemented not only among patients with HIV infections, but among intravenous drug users in general, as they are at a higher risk of infection and are most likely to spread the infection. Substance abuse treatment and commitment to this treatment is one of the most effective methods of preventing HIV infections among drug users.

Thus, the search for a target psychological level of tertiary prevention of HIV infection among substance users defines the following research objectives:

1. A study of the internal presentation of the disorder (IPD) of patients with a substance dependency and HIV.
2. The study of factors that determine the motivation for treatment.
3. The study of the social and psychological factors that affect one's commitment to a treatment programme.

In the study of the IPD of patients with substance dependencies, it seems appropriate to consider the four-level model of the IPD proposed by V. V. Nikolaeva (2009). This model is constructive: the IPD is considered not only as a set of experiences and relationships, but also includes the motivational factors that may be closely related to motivation for treatment and a desire to eliminate risky behaviour. Thus, the IPD is considered at several levels:

1. The level of direct-sense reflection of disease (disease caused by feelings and states),
2. The emotional level (immediate emotional reactions to the experience of illness and the emotional reactions to the illness in a person's life),
3. The intellectual or cognitive level (knowledge of the disease and a rational assessment of the disease),
4. The motivational level (an emergence of new motives and the restructuring of a premorbid motivational structure).

A comparative study of the IPD levels of 60 opioid-dependent patients who were infected with the Hepatitis C virus and HIV showed that the addition of infectious diseases did not introduce significant changes to their IPD (Buzina, Podosinova, 2010).

So, on a sensual level, there is no differentiation with respect to various diseases, patients did not produce specific symptoms of infectious disease, and almost all patients experienced introspective sensations that were attributable to the underlying disease - addiction. On an emotional level, drug abuse and infections are characterized mainly by negative feelings such as guilt, disgust, sorrow and fear, but the intensity of these emotions towards the drug is significantly higher: not only for Hepatitis C, but for HIV as well. In describing their emotional experiences to drug abuse, patients manifested an ambivalent attitude to the disease. So, besides the negative emotions, they observe also positive emotions, such as interest and joy.

Their cognitive level as a whole is characterized by a relatively high awareness of the harmful effects of drug use with respect to the transmission of HIV and Hepatitis C. At the same time, Hepatitis C is not perceived as a genuine health threat by the patients. Also, groups of patients with infectious pathologies had a

lower awareness of the dangers of drug use, as well as regarding the transmission of infectious diseases through drug use. With regard to their motivational IPD level, it can be said of patients with opioid dependence syndrome that it is characterized by reduced motivation among individuals as well as a failure to appreciate the overall comprehension of life. In assessing the temporal perspective, there is an indefinite relation to the “real”, unrelated to the prospect of life and the elements of self-conception. This leads to the fact that their current life situation is static and does not have a vector of further development in the form of a clear purpose and does not provide personal resources that contribute to this goal. Opioid-dependent patients with Hepatitis C revealed an anosognosic attitude to the disease as a whole, which they adequately expressed in their positive evaluation of their self-image in the past, in the future and of their health.

There are controversies with respect to the various levels of IPD.

In the analysis of significant correlations between the variables of different levels of IPD, a positive correlation was found between the total number of introspective descriptors for the term “addiction” and the emotions caused by the disease: “wine” (0.36), “sorrow” (0.38), “anger” (0.42), “surprise” (0.48).

An association was also discovered between the variable levels of patients’ emotional state and cognitive awareness. The variable “awareness of the harmful effects of substance use” has a negative correlation with the experience of “guilt” (-0.35) and a positive correlation with the experience of “aversion” (0.41).

The link between emotional and motivational level is reflected in the negative correlation between indexed negative emotional states experienced and the meaningfulness of life: “guilty” (-0.42), “mad” (-0.38) and “broken” (0.40).

One’s attention is drawn to the lack of correlation between the sensory and cognitive level, between the sensual and the motivational level, and between the cognitive and motivational levels, but these levels have a correlation, both positive and negative, on the emotional level.

Thus, the emotional level has some mediating link between the others. In this case, lack of differentiation at the sensual level is reflected in increasing the vocabulary of introspective sensations and leads to increased feelings of negative emotions in relation to the disease. A positive correlation of negative emotional experiences such as shame, grief, anger and the awareness of the harmful effects of substance use is quite natural, but we can see that the intensity of the experience of the same emotion reduces the motivational potential of the individual in the form of loss of vision and responsibility for their lives.

The study of the IPD of the patients with opioid dependencies complicated by infectious diseases showed that the emotional level the IPD of opioid users, as inter-conditional for other levels, can be an indicator of their condition and the main target for therapeutic activity.

At the same time, a comparative study of the IPD patients who are dependent on opioids and suffer from an infectious disease and uninfected opioid dependent patients showed that the presence of an infection does not introduce significant changes and distortions in the IPD. Therefore, in further studies, we did not distinguish between infected and uninfected patients as separate groups.

The study of the specific features of the motivational sphere in such socially significant diseases as substance dependence may point to the psychological deter-

minants of motivation for treatment. Numerous studies indicate that a prominent feature of the motivational sphere of drug users is “sensation seeking”. There is evidence that the need for the experience of acute and unusual sensations, combined with diffuse and lack of differentiation of bodily experiences, makes it difficult to engage in the signing and symbolic processing of their domestic experiences. There is also evidence that they possess insufficiently developed mechanisms for the voluntary regulation of behaviour and lack the motivation to achieve an overall comprehension of life. All this complicates the implementation of their “sensation-seeking” drive in socially acceptable activities like extreme sports or professions associated with risk (firefighting, the military, law enforcement, etc.), and increases the likelihood that they will directly satisfy their sensational needs through the use of psychoactive substances (Buzina, 2010). The results of these studies show that the combination of a high demand for stimulation, a low degree of willpower, the lack of motivation to achieve and the inability to perceive the overall meaningfulness of life present significant risk factors for drug-related behaviour. They underscore the important psychological impact of the objective of altering behaviour among those in the target at-risk group - intravenous drug users. A comparative study of patients with substance dependencies who receive and do not receive psychotherapy can be also used as proof. This study showed that patients who undergo prolonged psychotherapy and rehabilitation programs experience reduced rates of “sensation-seeking behaviour”, are more motivated to achieve, and have a greater appreciation for the meaning of life (Buzina, 2011).

Also in this cohort of patients, there are changes in the value-sense field. While researching women with alcoholism, a trend was discovered: the women favoured values that ensured comfortable interaction with others, whereas healthy women are more focused on the value of individual self-actualization. A value structure which is dependent on psychoactive substances has a lower motivating force; it is more focused on the internal personality and passive interaction with the surrounding reality, whereas healthy people possess more present values which reflect outside activity and independence from the social assessment of their peers (Buzina, Podosinova, 2010). Another study also showed that the hierarchy of values of patients treated through counselling who had had a long remission period underscored their focus on constructive engagement and results, whereas in patients who did not receive therapy, there is a greater focus on interpersonal interaction and personal comfort. (Buzina, Shatalov, 2011)

Therefore, the process of identifying the formal and substantive features of the dynamic motivational sphere in psychoactive substance dependency suggests that motivation is a key target area of preventive action.

The third area of research in the definition of target preventive activity is associated with the efficiency of a patient’s interaction with medical staff. The patient’s participation in treatment depends on his or her expectations and on his or her representations of the doctor. The effectiveness of health care and rehabilitation depends on the degree of trust between doctor and patient.

Patients almost always evaluate the doctor and his or her activity from two standpoints. They first assess the doctor as a professional. However, they evaluate the doctor as a person at the same time. When dealing the doctor at the human level, the patient compares him or her with an ideal image. The patient’s compari-

son is based on society's cultural beliefs about doctors, their past experience with the medical staff and the expected pattern of care. The coincidence of the image with a particular doctor ideal promotes closer cooperation in the doctor-patient relationship.

The difficulties of communication between a doctor and a patient with a drug addiction are usually caused by the fact that the setting for the treatment is uncomfortable for the patients; they feel the burden of being in a hospital, so the figure of the doctor is often repressive for them.

We have carried out a comparative study of the physician's image in 30 patients who were hospitalized in drug clinics and 30 patients with somatic pathology receiving inpatient treatment in a therapeutic department. All of the participants in the study were male, average age 23.5. The physician's image was studied using T. Leary's "Diagnosis of interpersonal relations" technique, as it was adapted by L. N. Sobchik (1990).

The participants in the study were presented with the same form, with two lists of traits. In one form, they noted the features that, in their opinion, were consistent with the image of a real doctor, and the other form mentioned character traits that corresponded to their image of an ideal physician.

All of the patients who participated in the study gave informed consent with respect to the study and were informed that the results are confidential and would not affect the treatment designee.

The results of the study are given in Table 1.

The overall assessment of the actual image of the patient's physician is within the range of adaptive (range 0-4 points) and moderately adaptive behaviour (range 5-8 points). The image of a real doctor, both among somatic patients and patients with substance dependencies, is characterized by selfishness and obedience. However, substance abuse patients also perceive the doctor as more aggressive and suspicious. The real doctor was thought to have been least likely to communicate in a way that was thought of as manifesting traits such as authoritarianism, friendliness and altruism.

Both groups note friendship and altruism as the main qualities of an ideal physician, although altruistic traits were more important for patients with somatic diseases than among the psychoactive substance-dependent patients.

The assessed features of the real doctor by patients with substance dependencies were on average closer to the zone of moderate adaptive behaviour (4.7), and the average of those of the ideal physician are generally in the range of adaptive behaviour (3.1). The ideal doctor as opposed to the real has expressed enough friendliness and was much less suspicious or subjective when compared to the real doctor. An analysis of the ideal image of the doctor reveals that patients want to see a doctor who manifests a high level of friendliness and selflessness and is less authoritarian and aggressive.

Thus, substance-dependent patients had predominant representations of the doctor as aggressive and suspicious on the one hand, and submissive and dependent on the other. This perception of the doctor prevents the establishment of trust between doctor and patient and connotes a manipulative type of relationship from the standpoint of both parties. Such relationships are a major obstacle to the formation of motivation in treatment and effective compliance.



**Table 1.** Comparative study of the doctor's image among drug treatment clinic patients and patients with somatic diseases

Group	Image of the doctor	Type of relationship, using the DIR method (average scores)							
		Authoritarian	Egoistic	Aggressive	Suspicious	Submissive	Dependent	Friendly	Altruistic
Drug dependent patients	Real image 1	2.8	7.9	3.2	7.8	7	2.9	2.9	2.8
	Ideal image 2	2.4	2.9	2.8	2.6	2.5	2.5	6.4	3
Patients with somatic diseases	Real image 3	2.3	6.7	2.4	2.5	5.3	3.7	2.6	2.3
	Ideal image 4	2.3	2.4	2.1	2.3	2.6	2.3	6.4	5.5
The level of differences significance $p_1-p_2$		-	$\leq 0.01$	$\leq 0.01$	$\leq 0.01$	$\leq 0.01$	$\leq 0.01$	$\leq 0.01$	-
The level of differences significance $p_3-p_4$		-	$\leq 0.01$	-	-	-	-	$\leq 0.01$	$\leq 0.01$
The level of differences significance $p_1-p_3$		-	$\leq 0.01$	$\leq 0.01$	$\leq 0.01$	$\leq 0.01$	-	-	-
The level of differences significance $p_2-p_4$		-		$\leq 0.01$	-	-	-	-	$\leq 0.01$

## Conclusion

Summarizing this article, it should be noted that it reflects a number of studies of the IPD of HIV patients who were addicted to drugs which emphasized a need for an understanding of their drug dependency. Conducting an emotional assessment mediates the evaluation of the disease at the sensory and cognitive level and affects the motivational potential of the individual. Therefore, attempts to motivate behavioural changes in treatment-dependent patients with infectious complications should primarily reflect a focus on treating the underlying disease - addiction. Their emotional attitude towards disease can be considered as a target for the psychologist's attempt to improve patient activity in understanding their illness and to promote advances in treatment.

A comparative study between drug-addicted patients who received psychotherapeutic and rehabilitative care and those that didn't shows changes in their structure of values, and increases in motivation to achieve and self-control. These

may be on the one hand, indicators of the effectiveness of psychological help, and on the other hand, can be targeted exposure.

The results indicate another area of psychological work in the prevention and treatment of drug addicts. This area is connected with the need to improve the communicative competence of drug treatment facility personnel.

In order to implement this goal, it is necessary to introduce clinical psychology training in providing drug treatment, which will lead not only to a better understanding of individual patients, but also lead to the use of modern psychological technologies which are designed to promote the motivation to abandon self-destructive behaviour and adapt. The implementation of clinical and psychological approaches will not only improve the effectiveness of psychotherapeutic rehabilitation programmes for patients, but will also aid in the development of a client-centred model of health communication; this model is becoming more and more popular in the medical service market.

### Limitations

This article is an attempt to summarize the results of three areas of research in the study of HIV-dependent patients in the context of HIV prevention. We have identified three areas of research: 1) the presentation of patients with knowledge about their disease (internal representation of disease - IRD); 2) a study of the motivational and semantic sphere of patients in order to identify effective target effects; 3) the submission of a patient attending physician - the image of a doctor, as an important factor in increasing motivation for treatment. The article provides links to articles detailing the following areas: 1) IRD research on drug dependent patients with an HIV infection and drug addicts without an HIV infection, and 2) a comparative study of patients with drug dependencies who received psychotherapeutic and rehabilitative care with those not receiving psychotherapy and describes in more detail the results of the third area - the study of the physician's image in patients with drug addictions and without them.

Not all studies highlighted a group of HIV-infected patients, but the studied patients are at risk of HIV infection. In addition, patients do not always disclose their HIV-positive status, so there is always the risk of getting mixed groups on this parameter. Perhaps this is why we found no differences between the IRD of HIV-positive and HIV-negative patients. In this regard, we admit the possibility of a study of the psychological targets of HIV in this group and how it does not compare directly to the comparison group on the basis of the presence of infection.

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*Original manuscript received June 16, 2013*

*Revised manuscript accepted April 9, 2014*

*First published online June 30, 2014*