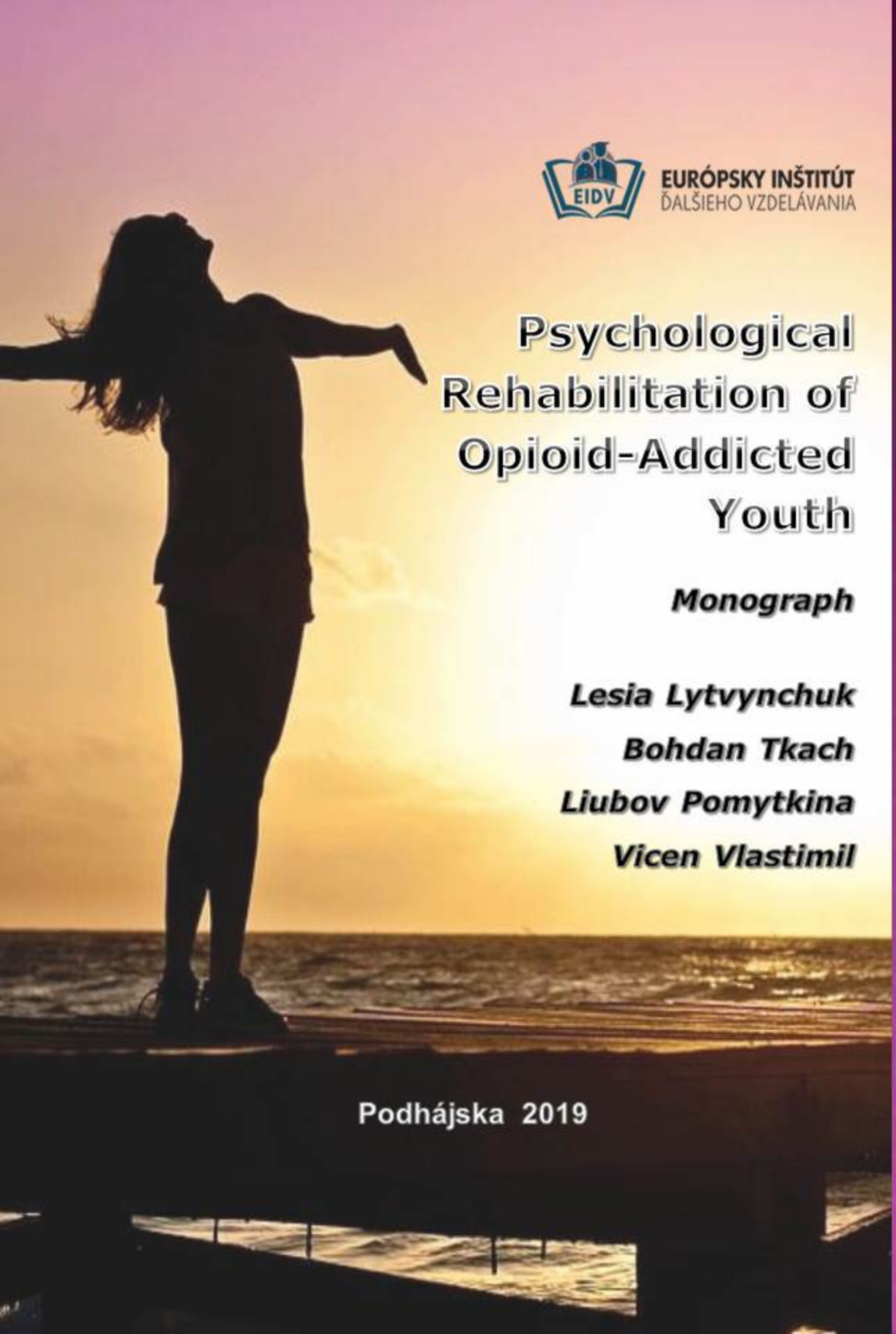

Psychological Rehabilitation of Opioid-Addicted Youth

Monograph

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Podhájska 2019

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The monograph is devoted to research of the problem of psychological rehabilitation of youth opioid dependence. At the present stage of development, understanding of the problem of prevention and use of psychoactive substances goes beyond the scope of medical and psychological focus, combining medical-biological, medical-social and other aspects. The conceptualization of psychological prevention, the theoretical and methodological basis of which served as a systematic approach, made it possible to construct an author's program of psychological rehabilitation of dependent youth.

Addressed to professionals in the field of rehabilitation psychology, scientists, medical psychologists, social workers, as well as anyone interested in the problems of psychological rehabilitation of drug addiction.

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CONTENT

Healthy person is not,
who is free from problems, but that,
who finds the strength to cope with them.

Nossrat Pezeshkian

PREFACE

Human health is one of the phenomena that most acutely determines the specifics of the modern socio-cultural environment, which is in a situation of global crisis and extremely high rates of transformation of all its structures. One of the consequences of the crisis is the worldwide increase in the number of drug addicts. Thus, in resolution 65/95, the United Nations recognizes that mental health issues are important for any society and are a significant indicator that increases the level of illness, reduces the quality of life, which in turn leads to enormous economic and social costs.

Mental health is considered not only as a component, but also as a basis for the general human health. Today the problem of psychological dependence is perhaps the most difficult of all the difficulties that humanity faces. The question of the psychological dependence was investigated by Lysenko I. P., Minko O. S, Korchagina A. A, Zejgarnik B. V, Linsky I. V, Dmitrieva T. B., Sosin I. K, Yuryeva L. N., Gros R. A. and others, who argued that drug dependence is a psychological phenomenon that embraces all the vital functions of an individual.

According to experts from the World Health Organization, mental and behavioral disorders should be considered as one of the major threats to the health and productivity of the nation in general. WHO predicts that by 2020 depression will be ranked second in the ranking of the assessment of the social status of various diseases in

the world after ischemic heart disease. In this case, in developed countries, depressive disorders can lead the rating. Depression and suicides, personality disorders, alcoholism and drug addiction remain high in the structure of mental illness.

Today addictive behavior is a problem for a significant number of developed countries. Millions of people in the world are using drugs, and Ukraine is no exception: every third person in Ukraine has experience in the use of potent drugs.

Giving the great social significance to the study of addictive behavior of the individual is an actual direction of psychological science, since it provides understanding of the multifaceted and multifactor of the most complex problems of dependent people. Within this direction a large number of contemporary authors are working, such as: Zolotova G.D, Lyuty P. V., Mints M. O., Berezin F. B., Bityan B.C, Vostroknutov N. V., Zikova Z. N., Kulakov S. A, Kurek N. S, Lisetskii K.S, Lichko A. E, Protsenko E. I, Minko O. S, Linsky I. V, Feinburg Z. I., Safuanov F. S., Khristoforova M. A, Burmaka N. P. etc.

Today, there is no general psychological addiction theory, since existing scientific concepts are insufficient for understanding of the person formation and determinants of his behavior, which, in turn, makes it impossible to distinguish the characterological features, types and forms of behavior by which one can clearly distinguish between the concept of "addicts – not addicts", "habitual use – abuse – dependence". At the same time, none of the existing addict models is quite satisfactory for explanations and studies of the polarity of the positions "healthy – not a healthy personality", "constructive – a destructive tendency of a particular person" etc.

Theoretical and methodological basis of the study are ideas, understanding of the psyche as a complex system of interrelated functions, processes and states (Vygotsky L. S, Luria A. R, Karpov A. V.), scientific ideas of socio-cultural (Rakitov A. I.) and

systemic (Bertalanfi L., Bogdanov A. A) approaches to the study of prevention; scientific notions about the adaptability of human behavior in the natural and social environment (Ananiev B. G., Lomov B. F), the position regarding the formation, functioning and development of the individual, the interconnection in these processes of various sources of determination, including subject activity (Maksimenko S. D., Vygotsky L. S., Leontiev O. M, Zhuravlev A. L, Lomov B. F, Ball G. O., Bozhovich L. I.), the main theoretical positions of medical psychology (Zeigarnik B. V., Luria O. R., Karvasarsky B. D., Kryshtal V. V., Shestopalova L. F., Kocharyan O. S); conceptual ideas, principles and principles of the cognitive-behavioral approach and the theory of motivational enhancement (Beck A., Ellis A., Prokhaza D., Rolnik S., Miller V.), the concept of prevention and treatment of persons with narcotic addiction (Zeigarnik B. V., Luria A. R., Rubinstein S. L.), biopsychosocial concept of dependence on psychoactive substances (Bratusy B. S, Kotsiubynsky A. P.).

SECTION 1
THE MODERN STATE OF THE PROCESS OF CHEMICAL DEVELOPMENT OF YOUTH

1.1 Basic principles, directions and approaches to studying of the addiction problem

In Ukraine there is a significant number of people who use narcotic substances and every year the number of drug addicts only increases. Fighting this phenomenon is a very important factor in our country. Because, firstly, the influence of drug abuse is experienced, in the vast majority, by young, energetic individuals who die within 4-10 years after the first use of narcotic substance. Secondly, drug addiction produces a large number of problems such as: crime, the prevalence of AIDS and other serious illnesses, as a result of physical and social degradation of the individual, drug addicts fall out of social life (labor, political, family), etc. But, in order for the struggle to be effective, it is necessary to determine the main causes of drug addiction occurrence and eliminate them.

In the situation of breakdown of social stereotypes, spiritual crisis and global restructuring of the modern socio-cultural environment, those aspects of the persons, who determine the mechanisms of forming the structures of his individual consciousness, are of special importance. There are terminological difficulties regarding the discovery of the concept of drug dependence, as there is no precise understanding of some aspects of this phenomenon, for example: how and why there is a drug addiction that promotes the use of narcotic substances. The presence of diverse approaches to the studing of the problem of

narcotic addiction, such as biomedical, psychological, social, makes a significant contribution to the explanation of addictive disorders [513; 526].

The question of narcotic dependence was considered in the research of V. B. Altshuler [90], N. N. Ivanets [124], O. Zh. Buzik [14]; Ye. A. Brun [37; 52]; S. V. Zinoviev [115], A. T. Safonov [115; 260], B. D. Karvasarsky [135; 136], L. M. Bardenenshtey [10], I. N. Pyatnitskay [242; 243], K. S. Friedman [211], L. Rohlina [144; 251; 252], L. A. Chistyakov [252], G. Corvin [387], C. B. Fischer [412], C. V. Luiz [452], M. N. Potenza [452], etc., which reveals peculiarities of the development of narcotic addiction and its psychological consequences. The analysis of scientific literature allows us to establish the existence of a terminological shift in the designation of opioids. Thus, drugs, which are used by young people in order to obtain euphoria and change their mental state, are often referred to as "psychoactive substances", and the term "narcotic" (from the Greek – narcoticous – immovable) is narrowly used in the situation of the spread of abuse of stimulants, since the effect of stimulants is exactly the opposite. Accordingly, drugs can be called only a small part of the substances and preparations.

Let’s analyze the concept of "addiction", which will allow us to look deeper into the problem under study. In the short psychological dictionary, addiction (dependence) is defined as "an obsessive need for a certain activity. The term is used for such phenomena as dependence on drugs, drug addiction and applied to non-chemical dependencies, such as gambling, shopogolism, psychogenic overeating, hyper religious, etc. [262, p.147]. In the encyclopaedic dictionary, "addiction" is a specific departure from reality as a result of intoxication from alcohol, drugs, music,

gambling (cards, roulette games, computer games, etc.). [311, p. 125]. In the medical explanatory dictionary, "addiction" is described as: "the state of dependence that is developed as a result of getting used to one or another medication..., the state of physical dependence, caused by the intake of substances such as morphine, heroin or alcohol, the state of psychological dependence that is the result of taking medicines like barbiturates. [242, p. 101]. Thus, the notion of "addiction" outlines the state of physical and psychological dependence, the departure from reality through the use of certain substances or specific activities.

However, in pharmacological studies [13; 45; 63; 64; 120; 159; 281; 387] drugs are called much more preparations than is usually considered in clinical practice. According to the WHO definition, drug addiction is a condition of periodic or chronic intoxication that is harmful to humans and society caused by drug use. Conditions under which an individual should be considered as a drug addict: a) an irresistible urge to a narcotic drug; b) gradually increasing tolerance; c) impossibility to abstain, since the person mentally and physically depends on this poison and its action so much, that the sudden termination (abstinence) causes a physically difficult and mentally intolerable condition. [273].

In the medical-psychological literature [10; 135; 136; 242; 243] are distinguished:

a) narcosis or periodic narcosis as sporadic or moderate use of narcotic or stimulant substances;

b) drug addiction as a disease, which manifests itself as an "attraction to a constant intake with a gradual increase in the number of narcotic drugs due to the emergence of persistent mental and physical dependence with the development of abstinence in the

event of use termination" [242; 243]. In the clinical sense, narcotization is a "kind of individual behavior aimed at achieving a state of intoxication through the use of drugs and other psychoactive substances. Narcotization can be a manifestation of both social and situational behavior and dependence "[300, p. 166-178].

As a manifestation of addiction, drug addiction acts as an axial symptom of the "drug addiction" disease. The disease is characterized by a certain set of symptoms and syndromes, as well as medical consequences, personal changes and antisocial behavior [10; 155; 156; 211; 242; 243; 244; 403; 412; 504; 527; 531]. Thus, drug addiction is a mental illness that results from the systematic drugs use.

In the scientific literature [11; 12; 187; 188; 306] devoted to the problems of drug addiction, various phenomena are indicated as risk factors and causes of drug addiction: the ideological and political crisis in society, loss of traditional ideals and values, economic difficulties, unemployment, moral and psychological crisis of the family, loss of intimacy and trust, mass culture in general and youth subculture in particular, which is characterized by heroization, deviant behavior, etc. All this can be combined into one phenomenon, such as the psychological, social and spiritual crises of modern society. To the sociological direction we can add the economic and legal direction of research on drug business as a whole. If the data of the sociological direction of research reveals the external causes of drug addiction, then the psychological direction focuses on the search for internal factors that provoke the beginning and development of dependence. It should be noted that today, the main risk factors differ a little bit from the "classical",

which include: hereditary burdens, negative family microclimate, teenage non-conformism, desire for self-affirmation.

Treatment attempts are always based on a model of disorder, its characteristics, and responses to specific interventions. Modern approaches to the treatment of drug addiction proceed from the point that the problem of drug use, abuse and addiction is a problem of an individual, its physiological or psychological characteristics.

Premorbid drug addicts characteristics are often evaluated as psychopathic, in particular, I. N. Pyatnitskaya notes that among drug addicts, psychopathy is diagnosed in 28.9% of cases. Researches by a number of authors [532] showed that even before drug abuse, many patients showed signs of psychopathy (36.8% of men and 68.8% of women), character accentuations (34.8% and 25.8% respectively), organic brain damage (10.4% of men), alcoholism (1.9% of men), schizophrenia (1.9% of men). In addition, it was noted that more often became addicted those who, because of the constitutional tendency to receive drugs, experienced subjective pleasant feelings [553]. Blackson and Goldstein argue that drug addicts have premorbid burden as neuroses and psychopathies, as well as affective disorders, latent forms of endogenous diseases [339; 573].

Researchers of MMPI profiles and other questionnaires also claim that drug addiction is a consequence of existing psychopathology. According to I. Maers and R. Brown, the drug addict seeks for drugs either for self-medication or for other reasons related to psychopathology. Frequent abnormal MMPI profiles and similar questionnaires from addicts are evidence of this pathology [425; 471]. Discussion of psychotic or borderline

drug addicts in the literature [464; 471] was held in parallel with discussions about drug addicts-neurotics and drug addicts with character disorders. So, in studies by I. Maers and R. Brown, it is noted that neurotics with drug addiction use drugs to reflect those feelings that are usually suppressed. Contrary to the assertion that individuals with an initial pathology are displaced to addicts, an alternative explanation relates to an increase in MMPI indices with the influence of drugs or addicts lifestyle [464; 471].

In the sociological, behavioral, psychoanalytic theory, gestalt, cognitive psychology, the problem of chemical addiction is explained as: the form of adaptation to complicated life realities, the result of childhood problems, in particular parental derivation, unproductive lifestyle etc. In the R. Merton's sociological concept, drug addiction is seen as a form of adaptation, manifested through the escape from reality, when a person denies the goals and means for achieving them that are socially endorsed. Such representatives of the "withdrawal" subculture R. Merton calls "double losers" [194]. There is an attempt to analyze socio-psychological mechanisms that are involved in the formation of pathological stereotypes of interpersonal behavior and personality changes [398; 537; 446]. A close position reflects the behaviourist theory about the emergence of dependence on surfactants. Consumption of surfactants gives a temporary supportive effect in cases of stress, nervous tension, lack of good mood, excessive fatigue, personal grief and pain. This theory is based on the possibility of forming certain forms of behavior in response to the action of specific incentives [155; 177; 178]. Thus, the use of narcotic substances can be a "paradoxical" form of adaptation to the social environment, a form of protection from life problems, a mean of overcoming stress, fatigue, etc.

From the point of view of psychoanalysis, a person is urged to use drugs by their often-expressed anxiolytic action, that is, the ability to reduce anxiety. The subject is not aware of the sources of anxiety and resorts to external means of leveling it. Denial as a mechanism of psychological protection plays an important role in the development of chemical dependence, in particular, a person who uses such substances, for a long time may not be aware of their harm. By denying the fact of dependence, the subject displaces negative feelings, replacing the emotional conflict by artificial means. [444; 577; 494]. The psychoanalytic approach (Z. Freud [290; 291], K. Horny [297], M. Klein [142], E. From [292] etc.) explains the formation of the dependence through the prism of an early violation of the child's mental development, caused by defective parental-child relationship. According to Z. Freud's followers, individuals have a strong need for such an addiction, the roots of which are traced in childhood. If the parents do not meet the needs of the child in care and attention, she grows overly dependent on other people. A child is looking for care and attention that has not been received before. When this search for external sources of support involves experimenting with surfactants, a person can get addicted to them. K. Horny notes that the child, in response to the deprivation of such opportunities, may form the characterological features which are inherent to the dependent person, namely: the tendency to impulsiveness, the search for novelty in life, self-sufficiency, isolation, and depression. In such cases, the intake of chemicals alters these character features, which, in turn, leads to an understanding of this substance as a mean of improving communication [297]. Thus, the use of narcotic substances has a deep psychological precondition, the determinant of which is the parental-infant relationship.

Violation of the relationship between the child and parents causes a feeling of basal anxiety that may eventually lead to oral fixation.

Representatives of Gestalt Psychology explain the behavior and lifestyle of the individual as processes driven by homeostasis, through which the body maintains its balance and a healthy state in a changing environment. Violation of such homeostasis causes the subject to seek means of finding such harmony. Often, these drugs may be external, such as drugs that create the illusion of harmony. The socio-psychological approach considers attachments in the context of health and healthy lifestyles as options of self-destructive behavior of the individual, along with suicidal actions. According to the theory of social education, the temporary solution to the existing conflict situations with a reduction of anxiety due to drug use is a motivating cause for further drug addiction. Reducing anxiety during the first drug intake is a source of reinforcement for drug addiction [33; 161; 472]. Consequently, the use of narcotic substances is associated with self-destructive behavior resulting from unresolved conflicts. Getting inner peace with the help of narcotic drugs is an illusory way of resolving the internal conflict.

Representatives of cognitive psychology W. Rogers, M. I. Rozenshot, a drug test is considered through the influence of the perceiver's costs and benefits. Within the framework of this approach, the most significant influence on the person's decision to take drugs is expectation and setting about drug use [37; 52; 81; 87; 150; 101; 283; 242; 243; 263; 287]. The humanistic direction considers the personal meaning of drug addiction, which is the access to psychological resources that facilitate interpersonal communication, self-actualization, the release of creative energy.

Representatives of the activity approach in psychology stressed that the use of narcotic substances depends on the cultural and social level of personality. So, R.A. Luria, emphasizing and substantiating the concept of "the internal disease picture," emphasized that the idea of it does not correspond to the understanding of the complaints of the patient, and its structure is sensitive and highly dependent on the patient personality, the general cultural level, social environment and education [184]. V. N Myasishchev considered the isolation of the concept of the internal disease picture as a practical and theoretical proof of the role of the consciousness of the disease, its course. The patient is not only the object of clinical observation, but also the subject who is one way or another aware of himself, his illness, his place in the system of social relations. [127; 209]. Consequently, the disease perception by the patient is subjective and depends on the psychological features of the subject, mental and cultural characteristics.

The results of the study of the human neurotransmitters exchange confirm the biological theory of the occurrence of surfactants. Frequent alcohol and benzodiazepines intake reduces levels of gamma-aminobutyric acid, opiates, cocaine and amphetamines. This mechanism is the basis of the gradual formation of abstinent syndrome. Psychoactive substances activate the center of brain satisfaction. K. A. Adilkhanova, S. E. Goldrin, R. A. Kardashian, V. L. Malygin [78; 97; 137] believe that some individuals experience a lack of satisfaction syndrome when the centers of satisfaction do not receive the necessary activation in the daily life and that makes them turn to drugs. Recent studies in molecular biology have identified the presence of a gene defect in

most people with alcohol dependence and 50% of cocaine-dependent.

Criticizing the psychological approaches described above, in our opinion, the specifics of the perception of the disease situation by the doctor and the patient remain out of the spot. A person can determine his condition as a disease and the subject of medical intervention, and the doctor may have an opposite point of view, and vice versa. At the same time doctors show a tendency to expand the state as a disease, and the patient – on the contrary. The belief in the illness presence in the patient and doctor can lead to the refusal of treatment, since both understand its negligence. What diseases will be chosen by a dependent person to determine their condition depends on her understanding, personal experience, general cultural level, social environment and education. In the case of an adequate choice of model, it becomes an obstacle to stop the destruction.

The attitude to the disease integrates all psychological categories, within which the concept of "internal disease picture" is analyzed. This is knowledge of the disease, its awareness by the person, understanding of the role and effect of the disease on social functioning, emotional and behavioral reactions associated with the disease. The strategy of adaptive and maladaptive behavior of patients reflects protective and adaptive mechanisms of personality. The attitude to the disease is always significant and in a certain way affects other personality relationships, so for the comprehensive study of the internal disease picture it is necessary to consider it in a broader context, taking into account also the attitude to those areas of the individual functioning which can be affected both by the fact of the disease and the attitude of the person and society to him.

So, it can be noted that none of the existing models of addictions is not quite satisfactory for explanations and studies of the polarity of the positions healthy – not a healthy person, constructive – a destructive tendency of a particular person.

Today, there is no general psychological theory of addiction, since existing scientific ideas are insufficient in considering the question of personality and determinants of its behavior, which in turn does not make it possible to distinguish the characterological features, types and forms of behavior by which one can clearly distinguish the notion of "adicts - not addicts","habitual use – abuse – dependence ".

Integrating to all psychological categories, within the framework of which the concept of "internal illness" is analyzed, the attitude towards drug addiction is analyzed, therefore, in order to study the internal illness picture comprehensively, it is necessary to consider it in a broader context, taking into account also the person's attitude to those areas of its functioning that may be affected both by the fact of the disease and the relation of society.

1.2 The psychological essence of the chemical dependence phenomenon

Systematic use of drugs causes biological changes in the body, when the psychoactive substance, becoming commonplace, actively participates in physiological processes. In addition, personality changes occur as a result of chronic intoxication and psychological adaptation of the individual, as well as violations of the social functioning of the patient with drug addiction, in which

society acts repressively. Trying to save their ideas about the world and themselves, the patients with drug addiction build a system of psychological protection. At the same time, their own experience is distorted or completely ignored, and the individual structure becomes rigorous. The main forms of psychological protection of patients with drug addiction are negation, regression and compensation. At the same time, in comparison with healthy people, the activity of psychological protections, which promote social adaptation, in patients with drug addiction is higher. This is confirmed by the fact that in some life situations, especially those related to drug use, the patients behave quite adequately, while showing increased energy and purposefulness.

Today the problem of psychological dependence was perhaps the most complicated and difficult of all the difficulties that face humanity. The question of the psychological dependence of the person is disclosed in the research: I. P. Lysenko [172; 173], O. S. Minko [228], A. A. Korchagina [151], B. V. Zeigarnik [113], I. V. Linsky [177; 178], T. B. Dmitrieva [98; 119], I. K. Sosina [277], L. N. Yuryeva [313], D. Neale [473; 474], S. Netleton [473; 474], L. Pickering [474], R. Grosse [421], and others. Scientists argue that drug addiction is a psychological phenomenon that covers all life activities of the individual.

The scientific literature identifies socio-psychological factors that contribute to the formation of addictive behavior [277; 313], revealed a relatively high severity of psychopathological symptoms in persons with opioid dependence in comparison with healthy respondents [43; 92; 141; 109; 193; 194; 202; 265], described affective and personality disorders in this category of patients [28; 287; 343; 382], highlighted the issue of attitude to the illness [37; 102; 127; 241; 299], pathogenesis and organic changes in the

central nervous system. Conditionally you can talk about normal and excessive dependence. All people feel "normal" dependence on such vital objects as air, water, electricity. Interpretative psychological dictionaries give such a definition of psychological dependence – "drug dependence, which is characterized by a rather strong attraction to certain substances" [221]; "psychological dependence on chemical substances arising from stress or primary abuse of these substances" [280]; "physical or psychological effects arising from the addiction to certain medicinal substances; are characterized by a compulsive incentive to continue receiving these drugs "[230]. In this way, the dependence is defined as the attraction, the need for the use of certain substances.

R. Gros and D. Young argue that any of the dependencies (Internet addiction, drug addiction, gambling, shopogolism) is an insurmountable obstacle to human happiness [421]. Dependencies are the psychological causes of all kinds of personal disasters, destruction and diseases. They represent the strongest chains that hold the human mind in a shameful captivity [421]. One can say that self-doubt, the inability to make decisions on their own, fear of responsibility leads to "slavery", that is, dependence, a kind of "departure from reality" [362; 394]. Close position is followed by A. V. Kotlyarov, who writes that "Dependence is a way to escape from internal distress, inner poverty to the external illusion of beauty, happiness and holidays" [152, p. 12]. Dependent behavior is characteristic for those who do not find within themselves a worthy goal, and therefore constantly feels a source of internal discomfort. Moreover, the burden of emotions increases during stressful critical situations. It is because of the fact that "within itself" is bad, a person makes a choice in favor of the mythical oasis of comfort, and such an oasis can become anything – both

"good" and "bad" [473; 474]. Thus, psychological dependence arises as a result of internal dissatisfaction, a personal "catastrophe", as an "illusory" solution to complicated life problems.

Formation of dependence is a process that has not only causes, forms, but also the rate of flow. Causes and rate of dependence flow may vary. The greatest risk of developing a form of dependence arises in a crisis situation. Behavior in this case is determined by personality traits, the way to respond to the crisis and the severity of the actual situation. The weak development or suppression of such properties as resistance to conflicts, frustration tolerance, satisfaction and social competence make the person unstable. The manner of behavior that contributes to the formation of dependent relations can be presented in the form of adherence, shyness, repression, aggressiveness, and others. The peculiarities of the life situation, such as dissatisfaction with relations in the family, school, neighbors, work, intimate relationships, etc., contribute to the acceleration of the dependence formation.

A person can change the state of his consciousness in a certain usual way, switch from one substance to another, or combine different forms of dependence. Such ease of switching, for example, from one substance to another, can indicate that an addict experiences the greatest need for emotions that are artificially created by different psychoactive substances or stereotyped actions.

Subjectively, the need for the consciousness state change can be explained by the need for development, in acquiring a new psychological or even spiritual development. Metropolitan Anthony Surozhsky pointed to the distinction between the spiritual

experiences of a mature person and the feelings caused by the psychoactive substances: "An attempt to get an experience through a drug is a volitional act that is intended to achieve an artificial experience, and spiritual experiences can be achieved or acquired only through internal growth. Second: the experience, given by drug, lasts as long as the drug lasts itself. It fades with it and leaves some memories, and one who has experienced mystical experience – comes out as a new person. As a result of narcotic experience, the desire to artificially repeat such an experience remains, because it is lost forever, the mystical experience does not create addiction and does not cause the need to repeat it, it always directs the person to his close person"[237].

Mental dependence on the drug [11; 12; 473; 474] is a mental urge to drug and the ability to achieve mental comfort in a state of intoxication. Such attraction is not always understood and occurs in the early stages of drug addiction and remains for life. When this, the psychological dependence extends to all types of narcotic substances, even those that do not have the expressed physical withdrawal symptoms, such as cocaine, because the physiological mechanisms of addiction are at the basis of psychic dependence.

Mental attraction to a drug is expressed by persistent thoughts about the use of the drug, which will cause a mood rise in anticipation of admission, in dissatisfaction with the absence of drugs. T.B Dmitrieva writes that the attraction to the drug determines the mood, the emotional background of the person, her view of the world. He is able to rebuild vital interests, relationships with other people, changes the social orientation of the individual. At the later stages of drug use, the state of mental comfort is formed, not so much as sense of satisfaction as escape from suffering. Often, attraction is accompanied by a struggle of motives

coupled with the obsession of thoughts about the drug. This gives grounds to call such attraction obsessive [98]. I. P. Lysenko, O. S. Minko, O. S. Samoilov, I. V. Lynsky point out that the formation of the urge for a drug, in particular opiates, passes through several stages. On the first of these, the drug is consumed, as a rule, to obtain pleasurable feelings of euphoria. However, at this stage, psychological dependence on the drug appears which is not peculiar for organism in normal conditions and it manifests itself through emotional and motivational disorders, as well as behavior aimed at the search and use of the drug [172; 173; 177; 178]. According to A. A. Korchagin, I. V. Lynsky syndrome of psychic dependence includes two symptoms – obsessive attraction to drug and the ability to achieve mental comfort during intoxication [151; 177; 178]. Obsessive attraction determines mood, emotional background and has a wave-like character. After all, only under the influence of a drug the person is able to identify the ability of attention, memory, thinking. All of these processes are much higher than in sober state. Consequently, drug becomes the only condition for a successful mental existence and functioning.

A large number of researchers [324; 528; 544; 578] came to the conclusion that drug addiction is determined by such factors:

- the need for aggression contention;
- passionate desire to satisfy the need for symbiotic relations with the mother figure;
- the desire to weaken the depressive state. [355].

Addicted persons are constantly fighting with a sense of shame and guilt, a sense of their insignificance and increased self-criticism. So, Ya. I. Vermeer in his works emphasizes that Super-

Ego becomes an intolerable, severe tormentor, from which it escapes into the world of drugs [66].

In the work "Pathopsychology" B. V. Zeigarnik noted that pathologically changed needs formed during the development of addiction, violated the hierarchy of motives. The needs of an addicted person become unmanaged and acquire signs of attraction. Since the interests, experiences and aspirations of a person are built depending on its motives, changes in the content of needs contribute to changes in the structure of the personality. One of the most striking manifestations of personality disorder is the violation of control, criticality of behavior [113]. Thus, individual personality traits increase under the influence of drug addiction, but the structural personality profile (the ratio of certain personality characteristics) can persist for many years. For example, a tendency to excitement grows into depression, sensitivity is aggravated and manifested as anxiety. If the person is active and sensitive, with the development of drug addiction, she becomes restless, annoying, disturbing. Such changes can not be considered irreversible.

Psychological dependence on drugs at the initial stage is supported by passion and does not cause physical suffering in case of a drug absence. But over time, it begins to act in such a way that only the taking of a certain dose of narcotic substance provides a comfortable state, and its absence "breaks" not only the body, but also consciousness. Here is a table of opioids effect as a therapy of the personality weaknesses, presented by D. Goels (See Table 1. Opioids effect as a therapy of the personality weaknesses by D. Goels.)

Table 1.2.1

Opioids effect as a therapy of the personality weaknesses by D. Goels

Effect	Mental Correlates
Anesthetics	– feeling intact
Euphoria	– correction of fear – Correction of a feeling of helplessness – correction of depression – elease from guilt feeling
Soothing	– correction of anger – correction of ambivalence – muffling the feeling of emptiness – restraining uncontrolled impulsive actions – protection from internal and external irritation – blinding of the accompanying vegetative signs of panic and feeling of stress

According to Dr. D. Goels, drug performs "psychotherapeutic" functions, and, by losing "medicine," a person is acutely suffering from pain, desolation, irritation and helplessness [502]. Thus, the table above shows the therapeutic properties of narcotic substances, in particular the suppression of a sense of loneliness, anxiety, guilt, fear, stress release, etc. Such properties of drugs, in some cases, alleviate depressive reactions and may simultaneously lead to their occurrence.

Persons with opioid addiction have a violation of the main processes and relatively preserved stage of emotionogenesis, the

essence of which is the emergence of severe anxiety, uncertainty in their actions, frequent mood swings, disbelief, lack of self-regulation of their emotional experience. Emotional reactions lose their breadth of representation by individual emotions.

In premorbid, opioid-addicted individuals often go for certain extreme sports, active recreation. However, in the debut of drug use, the emotional accompaniment of behavioral reactions becomes "dry". Higher emotions do not go beyond the limit of sadness, the experience of loneliness, depressive manifestations and do not undergo a certain level of awareness of their condition [414]. Helping the drug addicts you need to understand well that even if they deliberately refuse to use drugs, some patients, losing pathological compensatory mechanisms, can not hold irritability and even excessive aggressiveness back. If the abandonment of the drug coincides with acute somatic disease, for example, the exacerbation of chronic viral hepatitis, patients may exhibit hypochondria concentration on the work of the body, fix in their consciousness painful sensations.

The psychoanalytic direction states that in the conditions of modern market relations, a person forgets about the values of human relations, replaces them with artificial "illusory" means [292]. E. From notes: "Our civilization offers a lot of substitutes that help people not realize their loneliness: firstly, the strict template of bureaucratic, mechanized work that helps people stay beyond the realization of their basic human desires, the desire for transcendence and unity. Since one of these templates can not cope with the task, a person tries to overcome unconscious despair with the help of an entertainment template, the passive use of sounds and sights offered by the entertainment industry, and compensate by pleasure of buying new things and quickly replacing them with

others. It is necessary to understand this, ".... human relations do not have a certain value. Human relations (living) are replaced by relations to cars − computers, smartphones etc. (dead)" [292, p. 305]. Thus, drugs allow you to achieve the desired inner comfort by replacing a living contact, which requires from the person a certain effort, to the inanimate. Personality, which is full of internal conflicts, is able to find the passive ways of their solution, compensating internal devastation by artificial means.

In the concept of transactional analysis of E Bern, alcoholic behavior is presented in the context of psychological game [36]. It is emphasized that the use of alcoholic beverages allows person manipulate the feelings and actions of others. Alcohol use is important not as itself, but as a process leading to a hangover, in which patient gets the attention of others. Thus, the patient attracts attention, because of low self-esteem, fear of psychologically intimate, trusting relationships does not allow express their feelings directly.

E. Bern argues that addicted people wants to enjoy not only the use of alcohol, but also from a situation where he is immersed in a child's position [36].

Another explanation for the causes of psychological addiction was found in the work of the psychologist of the existential direction B. Frankl. In the work "Man in Search of Meaning" it is noted that the question about the meaning of life concerns everyone. This is evidenced by the tension between "who I am" and "who I should become", between reality and ideal, between being and vocation. The spiritual searches of man reflect the level of his consciousness in relation to life. A man who considers his life meaningless is not only unlucky, he is, in general, hardly fit for

life. If person can not give evidence in favor of life, sooner or later she will have thoughts about suicide. The meaning of life of each particular person is manifested, and not thought up. The meaning does not exist as itself, but as one or another situation for a particular person. It is unique. Doubts in the sense of life reflect true human experiences, they are a sign of person in the person itself, because only person thinks about the meaning of his existence, doubting it. The problem of the meaning of life can sometimes literally "seize" the whole person.

But life still puts forward its demands. If person forgets the purpose and is fond of means, he has a "neurosis of the day off" or, as V. Frankl writes, "semantic vacuum" – a feeling of one's own life emptiness. It is this state that forces a person to "escape from reality", leads to the emergence of addiction in order to escape from the horror of this emptiness [289, p. 306] Thus, drug addiction can act as a salvation from the fear of death and at the same time brings person closer to it. A subject that is addicted to drugs "psychologically dies", since it loses the meaning of life, its potential and prospects.

Scientific researches of the activity approach representatives O. M. Leontiev and S. L. Rubinstein gives reason to assert that the research of individual activity requires analysis of its internal system connections, that is, relations between needs, motives, as agents of activity and goals. Scientists define an addictive behavior as an unrealistically objectified need that develops under the mechanism of "shifting the motive to the goal". In this case, the subject is looking for an object of satisfaction, which gives a temporary feeling of internal tension weakening. Consequently, the cognitive sphere of the subject is rebuilting according to the purpose and object of satisfaction, and the object itself can be

included in the concept of the subject. Thus, B. S. Brother, O. B. Kholmogorova, D. O. Leontiev and others. argue that addicted behavior arises in the case of strains of the motivational and value-semantic spheres and can determine the meaning of the life as a whole. B.S. Bratus, studying the attraction to alcohol, created the concept of illusory-compensatory activity in alcoholism. According to his opinion, a healthy person meets her needs in the process of activity. A patient with alcoholism reaches the desired state in the process of illusory and compensatory activity, because in a state of intoxication he experiences an emotional state that can not be achieved by other means. B. S. Bratus notes that the state of alcohol intoxication gives an illusion of satisfaction of needs, at the same time, a person loses the opportunity to build her life constructively [48; 160; 253]. Thus, researchers highlight such a phenomenon as "shifting the motive to the goal", when certain activities gradually begin to be filled with a special other meaning, which induces the subject to immerse in it. The effect drug use is also associated with illusory internal calm, which can not be achieved in other ways, except for chemical.

In modern studies, the popular belief that the prediction of the length and quality of remissions should be done through a comprehensive analysis of many factors [426; 548]. In this case, relatively simple, linear schemes of detection and further accounting of the whole set of biological, social, psychological and other factors are used, or special technologies of complex diagnostics and risk assessment [47; 346; 353; 388].

Taking into account the individual model of the world for each addicted person, which explains the nature of its psychological addiction, it is possible to improve psychotherapeutic and psycho-

corrective measures in the conditions of the rehabilitation process, which will undoubtedly contribute to increasing its effectiveness.

Thus, the syndrome of mental addiction is characterized by the loss of possibility of a constructive perception of their own lives, the emergence of obsessive attraction to drugs and the ability to achieve mental comfort in intoxication. Illusion of meeting the needs that arises in this, causes the "shift of the motive to the goal," fills the life with an illusory inner calm which can not be achieved in other ways, except for chemical.

Stages of opioid addiction development.

The specificity of the disease lies in the irreversibility of the destruction of brain certain structures and pathological deformations of the psyche at all levels from simple processes to higher structures of self-consciousness. We are talking about narcotic thinking, narcotic vision of the world, about narcotic vision of ourselves. Chemically addicted persons see themselves in this world and their role in it in a different way, they see inconsistency with their internal "I", that is dissociation of the individual, there is a contradiction between the expected events and the real world. As a consequence of this, there is a gap between conscious attempts to normalize their livelihood and unconscious motivation for behavior based on distorted needs. From this, addicted person experiences a colossal emotional pain, which he avoids and reverts to drug use to heal the pain. Conflicts, contradictions, inconsistencies are aggravated, causing more and more suffering [141].

Stages of opioid dependence development process are considered by L. A. Kireevskaya [141], N. N. Ivants [124],

G. V. Zalevsky [111], I. P Lysenko [172; 173], A. D. Abraham [393], H. Koufner [448], B. Claude [369], and others.

N. N. Ivanets [124], G. V. Zalewski [111], I. M. Ziganshin, [114], I. P. Lysenko [172; 173] etc studied opioid drug abuse, which is a very common form of addiction. The study of the relationship between the effectiveness of rehabilitation of patients with opioid dependence and the peculiarities of their psychological, psychopathological characteristics is an important task both theoretical and practical.

In the diagnosis of drug addiction, there are great difficulties, since patients often conceal information about their drug abuse. Here, special attention should be paid to the search for objective criteria. These criteria include information from relatives about the regular use of a particular drug; presence of traces of multiple injections on the body or scars from small abscesses (such traces are most common for drug addicts using parenteral routes for drug taking, such as morphinists); rapid occurrence of abstinence when placing the examinee in conditions of termination of access to drugs; detecting traces of drugs or their metabolites in analyzes of biological fluids; the establishment of somatic and neurological disorders, which may be associated with long-term use of narcotics.

Thus, an assessment of the nature and characteristics of mental, somatic and neurological disorders in patients suspected of drug addiction is at the basis of differential diagnosis of various options of drug addiction syndrome.

Scientists argue that opioid dependence is relatively a rapid drug addiction, rapid formation of addiction syndrome, marked changes in the reactivity of the organism, mental and social

maladaptation. On the one hand, a drug addict is a patient suffering from a chronic illness and, as a result, has some behavior, setting up and carrying out actions, on the other hand, it is a deviant, a criminal person, a representative of a delinquent subculture, a person who deliberately chooses to exist in the world of illusions and at the same time unknowingly encroaches upon the danger people around them [114; 116; 172; 173; 216; 448].

In studies of M. V. Logash [179]; T. V. Agibalova [5]; Yu. P. Sivolap [92]; L K. Shaidukova [304]; S. I. Bogdanova [43]; T. B. Dmitrieva [98]; L. Amato [512]; R. A. Blake [332]; T. D. Sisero [366] it is stated that opioid drug addiction is one of the most common types of drug addiction, which includes: the addiction on natural alkaloids derived from opium poppy (opium, morphine, omnipon, pantopon, codeine), semisynthetic, extracted as a result of additional processing of natural raw materials (heroin, hydromorphine), and synthetic – promedol, methadone, tramadol.

Opioids are taken intraperitoneally, subcutaneously, intravenously and inhalationaly. The first use of opioids can cause signs of severe intoxication. Scientists point out that the neurochemical mechanism of opioids effects is associated with inhibition of hydrolysis of acetylcholine and its release from the nerve endings. Opioids suppress thalamic centers of pain sensitivity and block the transmission of pain impulses to the cerebral cortex. When taking, the opioids interact with the brain receptors and their endogenous ligands, which causes their analgesic and sedative effects. Such an effect causes a state of mental and physical comfort during intoxication. Immediately after the taking there is a feeling of a hot wave that passes through the body, and a feeling of tingling with needles, itching of the face,

chills, nausea, vomiting, in some cases, swelling of the face and corp [104; 179].

Pathogenetic mechanisms of the narcotic addiction development have not been studied. One can only assume that in the formation of this syndrome special condition reflex ligaments, some neurotransmitter and biochemical processes of the brain (in particular, the tropism of individual receptors in the brain to opioids is detected) are involved. However, the generally recognized pathogenetic concept is still not formulated and the study of drug addiction in this direction is only at the stage of accumulation of facts.

Thus, the influence of the drug on the body is a complex physiological process, so the consequences of its use leave a trace on the entire life of the individual.

A. M. Vievsky [68], I. V. Linsky [177; 178], identified the general stages of addiction development to psychoactive substances and their effects on the organism. Social use, during which there is no addiction (intoxication alternating with states of sobriety, clinical symptomatology of addiction is absent). At this stage, most people refuse to further use the PAS, taking into account the possible harmful effects, while others move to systematic use. Scientists [68; 177; 178;] argue that the main features of this phase are euphoria, giving preference to one PAS, regularity of taking, gradual leveling of the initial PAS effect.

Particular attention is deserved to be paid [79; 80; 216; 257] to the psycho-physiological state of the person who uses the drug: she feels heat, which is fixed in the area of the solar plexus, and then seems to be spilling like a wave, all over the body, up to the fingertips. The next stage is relaxation, during which there is no

desire to move in order not to disrupt the state of mental and physical bliss, and after 10-20 minutes a person is experiencing a "buzz". Enjoying the drug use or "buzz" is a feeling of unforgettable joy and happiness, without the need for activity and communication. During intoxication drug addicts are sedentary, euphoric, but in this state, sudden transitions from rest to aggression are possible. Then the state of intoxication goes into sleep, which can last for 3-4 hours. Scientists note that dependence on fentanyl is formed after 1-2 injections, the attraction to heroin occurs after 3-5 injections [79; 80; 177; 178].

Thus, the dependence on some drugs arises after several uses. As researchers point out, addiction arises from the feeling of the drug use itself, because the experience of "buzz" and euphoria is the goal of an aperson.

A. D. Abraham argues: "Adicts are forced to form special protective responses to various life events, further accelerating pathological changes in the social and spiritual spheres. Thus, the boundary of misunderstanding and hatred is formed, so two worlds of sick and healthy, with different norms, rules, representations are formed. Some can not convey their pain and suffering, others can not and do not want to understand them, especially since the behavior and actions of the first are really immoral and aggressive "[393, p. 375].

A. D. Abraham claims that at the initial stage person’s life and activities remain as before, normal, neither the parents nor teachers notice anything specific, intoxication alternates with the state of sobriety. The main psychic changes at this stage belong to the motivational sphere: the desire to experience the feeling of euphoria as a subjective sense of pleasure, and social interests

begin to be replaced by addicts. The scientist writes: "Drugs effectively help to feel such desirable shortage, the person feels joy, pleasure, happiness and other pleasant sensations, at the physiological level human brain produces the corresponding command and body produces certain chemicals. Drugs simplify the whole process, you do not have to do anything for yourself or for others, but as a result you only get positive feelings. They want to repeat and repeat it, because during that a person is herself. At all other times, she may have done what demanded from her environment, or punished by internal complexes "[393].

The synthesis of scientific literature (V. Cloud, R. Granfielde [369], N. L. Sohler, D. M. Tillie [377]) allowed us to define the steps (stages) of the opioid addiction development process. Let’s briefly outline these stages.

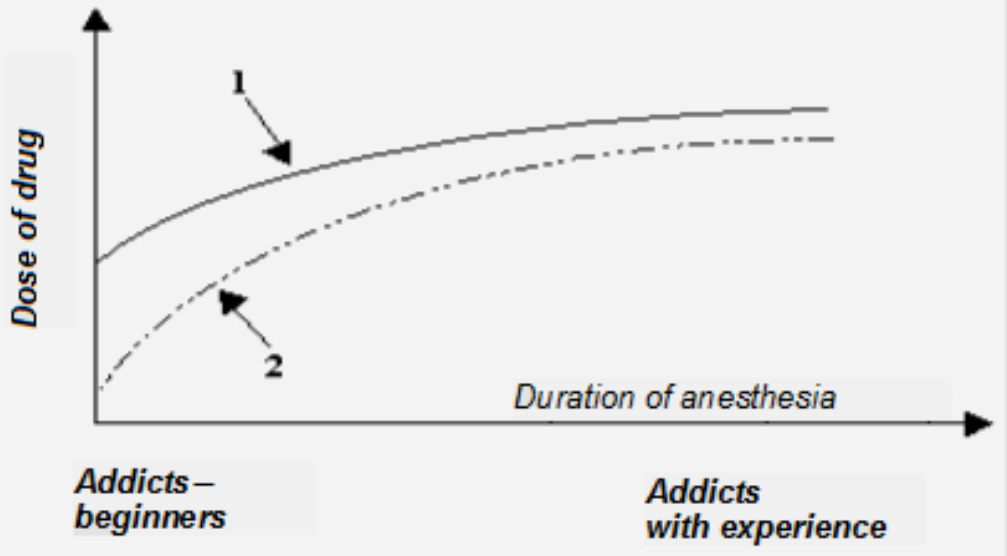
The first stage of the disease is the systematic or continuous use of psychoactive substances, manifested by the emergence of mental addiction, increasing tolerance, weakening of protective reactions, decreasing likelihood of toxic reactions, change in the use form. At this stage obsessive attraction to intoxication is observed, the ability to achieve mental comfort only in the state of intoxication. In humans is formed an individual chemical addiction, tolerance to drugs is gradually increasing. Despite the emergence of toxic manifestations that are observed when using opioids, the expectation of a special type of euphoria makes the drug addict re-use the drug. It is important to outline psychophysiological manifestations at this stage, the emergence of a depressive-hypochondriac syndrome with hysteroid reactions, somatovegetative diseases (running nose, sweating, minor tachycardia, some increase in blood pressure, drowsiness) in particular. At this stage, the condition is leveled with tea, coffee

and other stimulants, and the rejection of further use of PAS is possible.

According to O. S. Kocharyan [153; 154]; O. V. Kryvonogova [158]; V. Sloud, R. Granfield [369], N. L. Sohler, D. M. Thilliy [377] the second and third stages of the disease are characterized by three drug syndromes: 1) changed reactivity; 2) psychic addiction; 3) physical addiction. In this case, the disease stage is presented more advanced than at stage II. PAS perform a tonic role, only with the help of it an increase in the activity of the organism is achieved. An important manifestation of psychological addiction to PAS is addictive behavior – PAS abuse before the formation of addiction. This term is used in cases where there is only a violation of behavior.

At the second stage of opioid addiction, the physical addiction to the drug is formed, which leads to doses increase and regular drug use. The third stage of opioid addiction is characterized by total dementia, a large number of somato-neurological complications and some reduction in drug doses. Researchers note that a drug addict can safely treat a "breakthrough", believing that he can easily survive it. This attitude is a confirmation of patients' misunderstanding of gravity of the situation.

With prolonged influence of opioids, processes of desensitization and internalization of opioid receptors develop. A similar reaction can be considered within the framework of adaptive reorganization, which protects cells from excessive exposure of the pharmacological agent.



S. S. Harin [294], L. K. Shaidukova, M. V. Ovsyannikov [304] argue that at stage II the euphoria period gradually decreases. Addict feels the influx of forces, he has a better state of health and a desire to work and communicate, for this purpose, drugs are used 2-4 times a day. S. S. Harin [294], L. K. Shaydukova [304] outline the abstinent syndrome, which includes such disorders as psychopathological, somatic and vegetative and algetic [294; 304]. Pain syndrome forms the core of opioid abstinence, only in the case of heroin addiction it may be slightly expressed. S. S. Harin [294] notes: "The first signs of the opioid withdrawal syndrome are the deterioration of mood, irritability, cold sensation and tremor. Such signs are observed 6-8 hours after the last drug dose. During abstinence, chronic diseases, primarily of the cardiovascular system, become exacerbated. The significant phase of abstinence lasts 4-5 days, later there comes a period of symptoms weakening, but within the next 3-4 weeks there may be exacerbations with the actualization of the pathological urge to opioids, which has a compulsive nature"[294, p. 389]. Thus, after exiting this condition

asthenia, insomnia, and temporary conditions of "pseudoabsentination" may develop for some time.

Y. P. Syvolap [92; 265], T. Appantau-Olaide [327], T. V. Chavez [380], depending on the mental manifestations of the somato-neurological disorders, distinguish four clinical forms of opioid abstinence: explosive with dysphoric inclusions; asthenic with predominance of somato-neurological manifestations; dysthymic with anxiety-depressive component; "productive" – with productive disorders of consciousness (mainly delirium). Scientists say the majority of patients die at stage II due to overdose and concomitant illnesses. At the physical level, the following changes occur: asthenia, weight loss, muscle atrophy, skin is flabby and covered with boils, decreases immunity, affects the cardiovascular system, digestive organs, develops impotence with feminization, and changes menstrual cycle [327].

C. E. Grelle, C. Lovinger [419], argue: "the addicted subject is convinced of the need to use a drug for the fullest satisfaction of spiritual and physical needs; there is a disregard of the obvious facts, contradictory judgments about the current situation, the tendency to confuse the causes and consequences; the statement of traction to the drug "[419, p. 309]. Thus, the attraction to the drug may seem like a significant event, a strong experience, enthusiasm, a rise associated with creative activity.

In the context of our research we consider it expedient to analyze the work of S. S. Harin [294], L. K. Shaidukova, M. V. Ovsyannikov [304], C. E. Grela, C. Loininger [419]. Scientists have described the compulsive attraction, manifested in the irresistible pursuit of narcosis, which reaches a welcoming level and competes with the true blocked attractions. The

compulsive attraction differs from the obsessive one with much greater intensity, the ability to completely absorb the patient's mind without leaving room for other experiences and ideas. Compulsive attraction is accompanied by autonomic symptoms in the form of hyperhidrosis, mydriasis, hyperreflexia, tremor [419]. Syndrome of physical addiction – a state of organism adaptation to the conditions of chronic intoxication with narcotic substances, as well as products of impaired metabolism with the development of significant disorders of neurophysiological, psychophysiological and mental processes.

S. S. Harin [294], L. K. Shaidukova, M. V. Ovsyannikov [304] note that physical addiction arises on the background of rebuilding of the whole organism and includes: compulsive attraction, the ability to achieve physiological comfort in intoxication and abstinent syndrome that arises during abstinence. Researchers S. S. Harin [294], L. K. Shaidukova, M. V. Ovsyannikov [304]; N. Laimer [454] argue that abstinent syndrome is an indicator of the physical addiction. This syndrome is a process of aligning an impaired homeostasis, it is a defective body attempt to adjust homeostasis with its own forces, which could correspond to the functional level of already existing physical addiction. Thus, a compulsive attraction is accompanied by an autonomic symptomatology, capable of fully controlling the consciousness of the patient. Abstinent syndrome is a manifestation of already formed addiction with an already existing symptom complex.

Some authors emphasize that an adequate assessment of the basic symtomo-complex and the nature of the pathological urge to the PAS should be taken into account when determining the indications of the rehabilitation option [317; 320; 347; 438; 487; 507; 511].

Researchers emphasize that symptoms in this symptom complex can be divided into two groups: central (mental) and peripheral (vegetative, somato-neurologic). The relative weight of these two groups is different, it depends on the form of addiction [320; 317; 347; 438; 487; 507; 511]. For example, psychiatric disorders are more prevalent in the case of sleeping pills cancellation, vegetative disorders – in alcohol, opioid and hashish abstinence. Abstinent syndrome has common manifestations that are common to any form of addiction to PAS. These include: mental stress, affective disorders of the depressed spectrum, violations of vital needs such as appetite, sleep, libido and vegetative disorders – hyperhidrosis, chills, mydriasis, dyspepsia, cardiovascular regulation disorders and muscle tone. Y. P. Sivolap, [92; 265; 517] emphasized the fact that in assessing the severity of clinical manifestations of chemical addiction it is necessary, first of all, to take into account the existing level of central nervous system damage as a result of chronic intoxication [92; 265; 476]. Next it is necessary to take into account the type of course, the frequency and severity of all revealed psychopathological symptoms [511; 572].

Today, many researchers (V. Cold, R. Graniefeld, [369], N.L Sohler [377], etc.) recognize the leading role of socio-psychological factors in ensuring the length and quality of remission in drug addicts. Scientists note that for an addictive person a critical moment arises: the easy path (passivity, when the disease completely master a person) or hard (hard work on oneself, rehabilitation). In a state of remission at the background of relative somatic well-being, when the worst disease consequences are eliminated, it seems that the worst is behind, the most insidious component in the form of thoughts, memories about an easy way to solve all problems and all conflicts, is the most up-to-date. It is the

cause of the breakdown, the recidivism, by knocking down all the efforts of the therapists, the relatives and the patient himself [321].

In our point of view, precisely at this stage of rehabilitation, insufficient attention is paid to the psychological aspects of the disease, which is extremely important.

Thus, the researchers argue that the remission process is both physiologically and psychologically complicated. The psychological readiness of the individual to work on himself, the awareness of her addiction and its consequences is important.

Particular attention deserves the necessity of forming new effective strategies in drug addicts, in particular regarding emotional and stress situations [194; 327; 380]. Researchers note that the presence of a pathological attraction from the very beginning of the disease deforms the personality, causing loss of former interests, ignoring and dulling the sense of conscience, non-necessity, selfishness, parasitic tendencies and other signs of moral and ethical degradation. It is the emphasis on moral and ethical degradation, its disproportionately high severity in comparison with other psychological changes determine the specificity of chemical addiction.

Thus, deformation of the personality addicted to drugs is amplified and fixed in the process of the entire disease. During the illness, a psycho-organic syndrome is manifested through mental exhaustion, weakening of attention concentration, memory impairment, impatience, irritability, mood instability, various unpleasant sensations of vegetative nature, lack of creative search and a desire for newness.

O. Zh. Buzik, R. V. Vlasovsky [14] argues that in deepening and severe psycho-organic disorders, the pathology of the

emotional sphere in the form of the coarsening of emotions, the rudeness of the affection, the explosion, the suppression of the higher, social, emotions (sense of conscience, duty, etc.) and the breakdown of the primitive ones are the forefront of the emotional sphere pathology. All this is accompanied by a further weakening of memory, as well as a decrease in the mobility of thinking and productivity [14].

An important consideration in determining the treatment and rehabilitation is the assessment of the memory functions, attention, intelligence, and spheres of interest [270; 342; 344]. A. R. Safonov [115; 260] and several other authors draw attention to the need to take into account the educational level of the addicted person, his professional affiliation and mental health characteristics [115; 260; 391; 430; 483; 503; 537; 542; 557]. The lethargy of thinking becomes the basis for the emergence of an invaluable, usually quarantine entities, especially when the patient encounters obstacles in fulfilling of the intentions [279]. Strengthening of menses, memory impairment can occur at this level of pathological illness. Among them the most common is the clinical triad, which consists of a memory violation, false memories and amnestic disorientation. Many researchers recognize the importance of assessing the psychological sphere of an addicted person [5; 120; 155; 192; 193; 242; 243; 244; 403; 412; 452; 527].

Thus, drug addiction is characterized by a certain set of symptoms and syndromes, as well as medical consequences, personal changes and antisocial behavior. It is stated that in the process of chemical addiction development person degrades at all levels of life: organic, psychological, social-psychological, social. Addiction predetermines: the destruction of the psycho-physiological self-regulation system, the system of illusory-

compensatory perceptions of oneself, the disintegration of the "I-concepts"; weakening of the interpersonal connections system; asociality, rigid role structure of behavior; change in the system of ideas about values and the significance of the transpersonal experience; destruction of the needs-motivational-semantic structure. The stages of the opioid addiction development process, its influence on the organism and the psyche of the subject are determined, namely:

1. mental addiction stage – systematic or continuous use of opioids, manifested by the emergence of mental addiction, increased tolerance, weakening of protective reactions, decreasing likelihood of toxic reactions, etc.

2. the formation of the physical addiction to the drug – leads to an increasing of doses and regular drug use.

3. body fading – characterized by significant mental disorders, a large number of somato-neurological complications and some reduction of drug dose.

Conclusions to the first section

In this section the present state of the chemical addiction problem research is analyzed, the theoretical and methodological foundations of its research are substantiated, the main directions and approaches to the problem of chemical addiction are determined and reviewed, the factors contributing to the formation of addictive behavior are summarized, the understanding of the concepts "dependence and addiction", "addictive behavior", etc.,

the stages of the drug addiction development process are considered.

An analysis of modern research on the problem shows that there are various phenomena that contribute to narcosis: the ideological and political crisis in society, the loss of traditional ideals and values, economic difficulties, unemployment, the moral and psychological family crisis, loss of intimacy and trust, mass culture in general and youth subculture in particular. All this can be combined into one phenomenon, such as the psychological, social and spiritual crises of modern society. To the sociological direction you can add the economic and legal direction of research on drug business as a whole. If the data of the sociological direction of research reveals the external causes of narcosis, then the psychological direction focuses on the search for internal factors that provoke the beginning and development of addiction. In the sociological, behavioral, psychoanalytic theory, gestalt, cognitive psychology, the problem of chemical addiction is explained as: the form of adaptation to complicated life realities, the result of childhood problems, in particular parental derivation, unproductive individual lifestyle, etc.

At the same time, none of the existing addiction models is entirely satisfactory to explain the formation of chemical addiction. Existing scientific representations are insufficient to address the issue of personality and determinants of its behavior, which in turn does not make it possible to distinguish characterological features, types and forms of behavior that clearly differ addicts and not addicts, the notion of "habitual use - abuse - addiction", "Healthy - unhealthy personality", "constructive-destructive tendency of personality development".

The theoretical and methodological basis of the problem study of the drug addiction is the system-forming principle, since targets that require transformation lie in different planes: cognitive, emotional, behavioral, and others. And it is based on the principle of technology, which involves a clear delimitation of the elements of influence and a meaningful description of the process.

Prevention and rehabilitation of drug addicts is impossible without taking into account the psychological mechanisms of the addictive process, which are considered as a whole set of mental states and processes that predetermine the movement to a certain result in accordance with a standard sequence. The main motive for the behavior of individuals, prone to addictive forms of behavior, is the escape from the unbearable reality, but the mechanisms of such escape are different. The specificity of the disease lies in the irreversibility of the destruction of certain brain structures and pathological deformations of the psyche at all levels from simple processes to higher structures of self-consciousness. Neurophysiological mechanisms of drug addiction formation are emotion-positive reactions that are necessary for purposeful satisfaction of biological and social needs.

As a result of the research analysis, it became clear that the basis of any addiction is the negative attitude towards oneself, the rejection of the environment and people. Needs, emotions and motivations that are not dominant and unsatisfied are hampered by the overriding dominant need, creating an unconscious portion of mental activity, where there are simultaneously multi-directional associations, emotions and motivations.

It is established that drug addicts are characterized by inconsistency with their internal “I”, the dissociation of the individual, there is a contradiction between the expected events and

the real world. The consequence of this is the gap between conscious attempts to normalize their livelihoods and unconscious motivation of behavior, built on distorted needs and installations. From this, the addicted person experiences a colossal emotional pain, which she avoids and reverts to drug use to heal the pain. Conflicts, contradictions, inconsistencies are aggravated, causing more and more suffering.

The stages of the drug addiction development process are considered: "insight", "understanding", "training", "appropriation". In the process of psychotherapeutic stationary treatment, addict usually passes the first two stages of personality-emotional change – "insight" and "understanding". As a rule, this is manifested in the recognition of the client's own problem and the need to support a sober lifestyle. "Training" and "appropriation" are implemented with the subsequent restoration of the client, through visits to groups of anonymous drug addicts (further AD).

SECTION 2
PSYCHOLOGICAL APPROACHES, PRINCIPLES AND TECHNOLOGIES OF PROPHYLAXIS AND TREATMENT OF ADDICTED INDIVIDUALS

2.1 The stage of personality-emotional changes of opioid addicted in the process of rehabilitation

Destruction of the natural organism ability to maintain harmony and substitution of its psychoactive substances indicates the existence of psychological dependence of the individual. As evidenced in the preceding paragraphs, the psychological addiction on PAS has the so-called "false circle", in which the main role is played by the presence of unresolved psychological problems. Narcotic substances "illusory" can solve psychological problems of the individual by temporarily removing anxiety, guilt, shame, lack of interest in life, repression, etc. The subject does not think over the ephemeral problem solution, but reduces the internal discomfort by artificial means.

Yu.Yu. Komlev [147], H.A. Maruta [148], A. Loughlin [509], H. Clusonov [445], while studying the psychological characteristics of PAS addicted, note that such individuals have an important prognostic value. Chronic opioid admission to the body leads to changes that determine the formation of drug addiction [148; 147; 445; 509].

According to some researchers (G.M Entin [445], D. Povel [255], S. Vricht, N. Kle [580]), for the resistant course of drug addiction manifestations are as follows: susceptibility to suspicion and insults, distrust, inadequate world perception, inflexibility,

malice, rigorous views on external influences, overstrain of mental processes, closure, alienation, expressed anosognosia [255; 580].

Studying the symptoms of addiction in teenagers, S. P Kosarev notes the following manifestations: secondary psychopathisation, pseudo-autistic reactions with alienation, apathy, isolation, violations of motivation, emotional response, volitional regulation, degradation [106].

Yu. P. Syvolap [92; 265], H. H. Ivanets [124; 126], M. L. Rokhlin [144; 251; 252] argue that in persons with opioid addiction, the following disorders are observed: 1) disorders of the neurotic spectrum; 2) motivational and personal violations; 3) affective disorders; 4) violation of eating behavior [92; 265]. These are typical for sleep disruption syndrome, irritability, lethargy, anxious-phobic, anxious-hypochondria, astheno-depressive disorders [124; 126]. In the early post-abstinent period, the most frequent dysphoric disorders are observed; depression may be observed with a longer period of abstinence from narcosis [144; 251; 252]. In drug addicts, the period of remission is often accompanied by syndrome of anhedonia with affective and behavioral components. Among personal violations there are character accentuations, less often − personality disorders [144; 251; 252]. With the formation of addiction there is an aggravation of characterological features, which then changes their leveling. Opioid addiction is characterized by neurotic disorders (excessive anxiety, emotional explosion, aggressiveness, neurasthenia, etc.), lack of social motivation, difficulties in maintaining social connections, emotional relationships, bulimia, anorexia, loss of sleep, irritability, apathy, etc.

A. N. Landa, I.P. Lysenko [172; 173], M. L. Rokhlin [144; 251; 252], A. A. Kozlov [53], R. Leibov [449] believe that the degree of severity and the rate of negative disorders growth depend on the type of narcotic substance. In this sense, phenylpropanolamine addiction is especially malignant [449]. Addiction formation changes the social orientation of the individual, reduces the productivity of cognitive processes [172; 173], causes emotional and volitional abnormalities and pathological personality changes, which, in turn, impose an imprint on the clinical features of the disease, determine the specifics of the therapeutic and psychotherapeutic approaches, affect the remissions quality [144; 172; 173; 251; 252].

G. V. Kuznetsova [33], V. M. Aklin [518] explains the anosognology of opioid addicts by a significant deformation of personality and believes that the reduction or absence of criticism of their illness and their own personality is the most characteristic feature of this patients [33; 518]. A. N. Landa [172; 173] finds more serious violations of the cognitive sphere under opioid addiction: low level of knowledge, low degree of intellectual interests (except for persons with an initially high level of intelligence), distraction, lack of failure experience, visual impairment and visual-spatial coordination violation, difficulties in assimilating new material [283]. Persons with opioid addiction describe difficulties in planning and predicting the outcome of their actions, violation of executive functions [411], control over the execution of tasks [92]. Also, among personal changes, there are changes of hypochondria type, which are manifested by anxiety, fixation in its somatic state, which drug addicts seek to improve with the help of psychoactive substances.[286].

Consequently, opioid addiction affects the emotional and cognitive spheres of the individual, causing rigid thinking, memory impairment, difficulties in planning the future, etc.

A number of authors point to asthenia, the intellectual sphere [37; 92; 213; 265] and the fact that prolonged use of morphine drugs is reflected in mental performance. Memory becomes inaccurate, productivity decreases, fatigue increases, systematic mental activity becomes difficult [37; 52; 79; 80]. Other authors [19; 242] deny the decline of intellectual abilities and quality of thinking, noting that drug addicts have no significant difficulties in performing analysis, synthesis, and comparison operations [250]. Most Soviet researchers believed that opioid-addicted individuals had reduced intellectual capacity, their dementia phenomena were unclear [56; 205]. During prolonged remission, some lesions are observed, but distraction persists, and the visual-spatial functions remain lower if compared with healthy individuals [516]. In the course of the disease there are elements of intellectual-mnemonic decline, as well as asthenia. In the course of the study of these patients, it was discovered that signs of intellectual-mnetic disorders were noted in all opioid-addicted patients and in 62 out of 80 patients with heroin addiction. At the same time, the severity of intellectual decline was the highest among opioid patients, and the smaller – addicted to heroin [200; 550].

In the context of our study it is important to note that even during the remission some physiological functions remain inhibited, and the psychological state is also characterized by instability.

S. S. Korsakov, describing psyche changes in opioid-addicted persons, wrote that "in the psychic sphere, frivolity, predisposition

to falsity, especially in relation to the magnitude of the morphine dose, moral degeneration, reduction of energy and restriction of interests become noticeable. At the end, addicted people become incapable of any work, mentally weaken; often there are epileptic seizures in the end, in which life ends "[150; 251]. At the same time, almost all researchers noted that continued chronic intoxication with opioids leads to a personality change, mainly in the emotional-volitional field [512]. Consequently, personality change occurs in the direction of reducing self-control, moral qualities (falsehood, depravity, aggressiveness), changes in interests, their narrowing to the sphere of drugs and those who share this interest.

Studying the psychological types of opioid-addicted individuals can help optimize the therapeutic process at the stage of antirecurrent and supportive therapy. Thus, V.O Rusakov allocated 7 specific psychological types, each of which corresponds to the neurotransmitter exchange features, which implies an appropriate differentiation of therapeutic programs [551]. It is proved that the temperamental peculiarities of PAS-addicted – cycloid, emotional and hypertensive – facilitated the process of adequate disease experience and related changes in physical and mental spheres [118]. An important consideration for our study is the statement about interdependence between personality temperament and PAS addiction.

Yu. A. Russian [13], T. V. Pak [224; 225; 226], Zh. K. Musabekova [208] insist on the importance of studying the clinical-personological structure of personality types of patients with drug addiction. In particular, the following personological types are considered:

1) pathological addicted personality;

2) dissociated addicted personality;

3) normative addicted personality.

It is indicated that for successful rehabilitation it is necessary to determine the dominant type of personality and construct communication accordingly [338; 460].

Despite the types specifics, drug addicts acquire common features – egocentrism, the tendency to avoid discomfort, lie, conflict, inclination to exaggerate their own merits, accusations of others in their problems, lack of criticism to themselves [118; 198; 217]. By Yu. P. Syvolap "Personality deformation by addictive type" includes: 1) behavior aimed at receiving pleasure; 2) decreased ability to overcome psychophysical discomfort; 3) reduction of thresholds for the psychogenic irritants perception; 4) a steady tendency to modulate their own state with the help of PAS; 5) motivational collapse [92; 265].

As it has been already noted, the peculiarity of some patients is hypochondria. Some researchers have fixed the alarming fears of opioid drug addicts that they can get incurable illnesses as a result of narcosis. They tended to listen to their somatic feelings and often exaggerated them, asked to consult with other specialists, and asked a doctor for additional medications. At the same time, there was no criticism regarding the opioids use. Their hypochondria did not respond to the behavior and attitude to narcosis in general [78; 177; 178].

The study focuses on the importance of taking into account disorders in determining the therapeutic strategy at the stages of antirecordic and supportive therapy. In recent years, considerable attention has been paid to the diagnosis, description of the structure

and typology of negative psychopathological disorders with drug addiction. The diagnosis complexity of negative opioid addiction disorders, according to A. A. Kusainova, due to the fact that deficiency refers to such aspects of mental activity as ethical norms, volitional activity, functions of purpose-setting and forecasting [168]. Basic mental functions such as memory, thinking, and others change less [17; 206; 334]. In patients with personality disorders are noted elements of senseless behavior, significantly more often than in those without signs of personality disorder: doubt, suspicion, distrust, unmotivated unreasonable refusal from supportive therapy, absurd opposition, aggression and autoaggression [52; 219].

A. R. Kuznetsov and V. V. Bilocriles offer to evaluate the potential of personality disorders according to the following parameters:

1) the degree of severity of affective lability;

2) the presence of impulsive behavior;

3) levels of self-esteem and general criticality distortion [33].

According to E. A. Lavrentyeva, an extremely important factor is the structure of the disease internal picture, which is formed in addicted to PAS in the process of rehabilitation. It is necessary to analyze the following components:

1) the structure of the internal representation of the disease / health phenomena;

2) levels of disease awareness;

3) types of reactions to the disease [118; 169; 198].

The concept of "internal illness" involves a combination of not only emotional disorders, but also certain intellectual and volitional

processes associated with consciousness, experience and attitude to the disease. Significant is the emotional response of an addicted person to his illness, its recognition or ousting of this fact. Failure to recognize the fact of addiction complicates the situation due to lack of information and its rejection of the environment. In the case of recognition and treatment patient's thinking is based not on logical laws, but on the emotional significance of events. Problems occupy a disproportionate place, pushing the main thing – health. Often, the recognition of harm from the drug use comes much later than the treatment itself. The conviction of relatives and friends of the need for treatment is often carried out under pressure and it is lacking effectiveness.

K. G. Jung singled out several stages of personality-emotional changes through which the person passes during the process of psychotherapy until the moment of complete recovery from one or another mental (psychological) problem: enlightenment, understanding, learning, appropriation [124]. In the process of psychotherapeutic in-patient treatment, addicted person usually passes the first two stages – "enlightenment" and "understanding". As a rule, this is manifested in the recognition of the patient's own problem and the need to support a sober lifestyle. "Learning" and "appropriation" are realized with the subsequent restoration of the patient, through attending groups, mastering new ways of solving problems. Since the processes of "enlightenment" and "understanding" are often quite painful for the person psyche, while progressing through the rehab program, the patient undergoes a series of phases related to emotional experiences [124]. It must be accepted that the structural and dynamic features of the social and emotional intelligence of the addicted person can play an essential role [16; 188; 284], which result in escape from

social reality, increased aggressiveness, the use of inadequate psychological protection [336; 424; 462; 468; 554].

In the process of group and individual psychotherapy, it is important to monitor the dynamics of change, since the lack of such control can lead to results worsening. Insufficient analysis of internal contradictions may lead to the remission period reduction or refusal from treatment. Aggravation of internal contradictions and the impossibility of their solution in the process of psychotherapy can lead to the regressive behavior, aggression, deviant inclinations, etc.

E Kubler-Ross, C. Rogers, D. Freiberg, K. Fopel outlined the stages or phases of emotional experience, which differ little from the reaction stages to a particular restriction or loss [248; 249; 288; 447]. Phases (stages) of the patient's emotional reactions that arise in the rehabilitation process until they are fully aware of the need to refuse from drug use: negation; aggression; compromise search; depression; adaptation, that is acceptance of the fact of illness and readiness to change the life. E. Kubler-Ross outlines such a psychological defense as a denial – the first mechanism of psychological protection, which is used in the event of serious life problems or losses. The negation is most characteristic of the first addicted person contacts with the reality that is formed around it with the progression of the disease.

Patient’s denial may occur due to misunderstanding of what other people (specialists) say; due to the appearance of severe drowsiness or falling asleep during the conversations mentioned above; because of the psychosomatic illnesses that appear in the initial period of psychotherapeutic treatment and because of the failure to recognize the problems that arose after the PAS abuse,

despite the fact that they are obvious, etc. [372; 508]. Mechanisms of psychological protection are formed from an early childhood and clearly occur during psychological traumas received by a person during his lifetime. The more person is traumatized, the more her psychological protection system is rigid and the more process of healing is complex. Persons who are addicted to PAS have developed such psychological protection as displacement, negation, regression, rationalization, etc.

Some authors (R. D.Ilyuk [125], Yu. A. Bubeev [53], V. Ya. Gindinkin [75]) believe that for drug addicts, typical neurotic states and reactions, when pathological addiction is replaced by neurotic protective mechanisms. The transition from denial to aggression is often characterized by the fact that an addict begins to apply a number of other psychological protections in this period, in particular:

- rationalization. This kind of protection manifests itself in attempts to prove that any subject acts are the only true, and therefore – not subject to criticism. As a rule, rationalization is used to explain their actions, for example, drugs use. Man does not acknowledge his guilt, despite the fact that the consequences of these actions do not correspond to the good words that he says;
- intellectualization. Involvement of the patient in justifying his abuse of "scientific knowledge about the benefits of drugs, often without correlation with his system of consumption, the use of psychotherapeutic work in order to avoid open discussion about their problems associated with psychoactive substances use;
- identification (comparison) as a form of protection that is opposite to the projection. Under the identification understand the unconscious transfer of the character features and behavior of

another person by subject to himself, which is an example for her. Identification increases the sense of self-importance. Due to this mechanism of protection the person overcomes the feeling of loneliness.

The system of psychological protection formed during the narcosis process distorts objective information about drugs, while the criticality of patients to their disease is sharply reduced during exacerbation of the pathological addiction to the psychoactive substance [75].

Consequently, different ways of psychological protection are actualized in different situations, but professional psychologist who works with opioid addicted people should take into account the peculiarities of the origin and functioning of such mechanisms. Since addicted persons are more psychologically protected than others, their treatment should provide a thorough analysis of existing problems. The exhausting experiences lead to the emergence of regressive behavior, and with that different identifications. Such a person is more inclined to go for authority, which at the unconscious level is identified with his father. Therefore, the development of unconscious conflicts is necessary, since they contain the largest amount of destructive energy.

According to R. D. Elyacus, increased aggressiveness – is almost inevitable and deeply rooted characteristic of the personal reaction of PAS addicted in the state of remission, since there is a constant threat of failure. If psychological protection does not bring the person the expected result, the next stage comes – the phase of aggression [125]. The aggression of opioid-assicted individuals is most often manifested through the search for those responsible for their consumption among others and accusing them of this. Also

aggression can be directed to itself; it usually manifests itself in self-indulgence and self-hypnosis. At the stages of denial and aggression, the most effective and appropriate is the inclusion in the rehabilitation program of psychotherapeutic work, aimed at overcoming psychological protections, working on the resistance of rehabilitation and aggression [159].

Finding a compromise may be one of the ways to improve an unpleasant emotional state that arose as a result of a patient's real understanding of his own illness. At this stage, addicted person is trying to find a way to solve the above-mentioned problems without stopping drug use. In order to retain the opportunity to use drugs, patient is looking for options for controlled consumption and, as a consequence, begins to justify his unwillingness to treat in various ways. One option for finding a compromise is an attempt to "negotiate" with a psychotherapist or counselor, that is, to establish a special relationship with him in order to avoid treatment [125].

Aggressive or auto-aggressive behavior is an indicator of actualization of person’s negative emotions, which are projected onto himself or others. Aggression as a resistance to rehabilitation, treatment, interaction with a psychotherapist is a widespread phenomenon, since psychological protections are aimed at maintaining stability and rest, albeit illusory. Addicted person is difficult to get out of the comfort zone, because drugs create a feeling of rest, euphoria, associated with childhood experiences. Therefore, aggression is an answer to the desire of others to get rid the subject of a pleasing state, which unknowingly unite them with their parents.

The next stage – depression is the most difficult to understand and diagnose, because depression often "disguises" other diseases

or mental manifestations. As a rule, depression in the case of addiction is not really expressed and may well be leveled by psychotherapeutic measures. The drugs use at a depression stage, for example, from a group of antidepressants, is not desirable: even if they do not cause cross-accretion during the period of psychotherapeutic treatment, it may play a negative role, namely, not allowing the patient to fully complete the stage associated with the experience of refusal from drug use.

Usually hidden forms that depression may have appear on the 3-4th week of rehabilitation, or later. Often, the following hidden forms are: sleep disturbance, exacerbation of chronic diseases, pain in the internal organs without confirmation of violation of their work by laboratory techniques, frequent headaches, anxiety without any particular external causes and increased care for other people in the absence of attention to themselves and their rehabilitation [125].

If, with the help of specialists, the stages of "denial", aggression and compromise are well worked out, then the appearance of depression stage can be, practically, leveled or overcome by the patient without deterioration of health. The most widespread in this situation is a feeling of a little emotional fatigue from medical treatment [125]. Despite the authors' belief in the insignificant influence of this stage, we note that ignoring it by a psychotherapist can lead to devastating consequences for the individual. It is in depression addicted begins to return to the use of remedies that will deprive him of his sense of loneliness, uselessness, indifference, rejection of others, anxiety, etc. Low self-esteem, inability to withstand problems, depressive manifestations can lead to reversal of addiction. The consequences

of drugs use for the psyche, as claimed above, may be different, therefore, depressive manifestations are also of a different nature.

The stage of adaptation is characterized by complete recognition of presence of the disease by the patient, the construction of further life through the practical start of actions to implement its own recovery program. According to G. S. Abdulina, B. T. Zoldaspaeva, A. Z. Nurgaszin [2], T. V. Agibalova [5], P. V. Tuchin, D. I.Shustova [120], B. A. Azanova [8], D. M. Buffalari researches, drug addicts who are in a state of remission, characterized by the presence of various mental disorders of the borderline and more severe levels. Thus, L. A. Dubinina, E. M. Krupitsky [159] believe that after completion of the inpatient treatment course in patients with narcological profile, as a rule, there are: a sense of chronic emotional dissatisfaction, a negative assessment of the level of socio-psychophysical well-being. The most typical deterioration parameters are:

1) deterioration in the emotional sphere;
2) deterioration of personal relations with the usual environment;
3) decrease of cognitive functions;
4) decrease of sexual activity;
5) decrease in vital activity, energy [2; 5; 8].

Not all patients completely pass the described stages in the process of psychotherapeutic treatment. Some stop at denial, others – on aggression, compromise, or depression. "Stuck" at one of these stages of emotional problem development in the future, most likely, will again return patient to drug use [125].

The content of the psychologist's work at different stages of the patient's emotional reaction that arises during the rehabilitation process is important, namely:

Table 2.1.1

Stage	Psychological problems that are actualized	The value of psychological rehabilitation	Psychological strategies or work focus
Denial	Denial in drug addicts may be manifested through: - misunderstanding of what others are saying; (the information is not understood by the client or is perceived as distorted; - drowsiness during the rehabilitation process; - emergence of psychosomatic disorders appearing at the initial stage of rehabilitation as a response to interference with the addicted person's psyche; - refusal from communication and meetings with people discussing the topic of alcoholism, drug abuse, which promotes the rejection of the AA, AN group and its members by the client or the provocation of the Rehabilitation Program administration; - the failure to recognize the problems that have arisen through the drugs use, despite the fact that they are obvious.	Support	Application of motivational dialogue
Aggression	- The prosecution, the search for the culprit. The transition from denial to aggression is often characterized by the use of mechanisms, psychological protection. The most common types are psychological protection such as rationalization, intellectualization; identification.	The most effective is the inclusion of psychotherapeutic techniques in the rehabilitation.	Aggression containing, responsibility returning.

Search for a compromise	- Contract. Search for a compromise or "agreement" with a consuelor; - Establishing "special" relationships in order to avoid treatment as one of the ways to level the unpleasant emotional state that arises as a result of realizing the problems associated with drug use.	Inclusion of psychotherapeutic techniques in the rehabilitation.	It is important not to miss similar manifestations of this stage in behavior and thinking.
Depression	Often "disguises" other diseases or mental manifestations. As a rule, depression is not really expressed, the most commonly hidden forms of depression may be: - sleep disturbance; - aggravation of chronic diseases without confirmation of violation of their work by laboratory methods; - frequent headaches, anxiety without any particular external causes; - increased care for other people in the absence of attention to themselves and their rehab.	Under conditions of effective processing of stages of negation, aggression, the search for a compromise. of Depression stage can be practically leveled or overcome without a health deterioration.	Give the client the opportunity to completely end this stage of refusing to use drugs.
Adaptation	Acceptance of the disease and readiness to change their lives.		Making plans for the further life, the beginning of actions to implement their own recovery programs.

Successful passing of all of the above-mentioned stages is undoubtedly important for the rehabilitation of addicted person. Psychological support is needed at all stages of the process, in particular the identification of the underlying (unconscious) factors that led to the drug use and the activation of life, productive energy. Actualization of organism internal forces is possible under the condition of solving internal problems of the sddicted perdon, which predetermine the tendency of reversal to the past. Therefore, successful psychological work allows to mitigate the protection mechanisms, level depressive manifestations and increase adaptive reserves of the psyche to social life. Even if all stages are covered in the process of treatment, if in the adaptation stage patient does not change his lifestyle, then, like patients who are "stuck" at other stages, he will return to the drugs again. Therefore, further post-rehabilitation changes are no less important for recovery than the treatment itself.

2.2 Model of psychological rehabilitation of opioid-addicted individuals

Help to persons who are addicted to alcohol and drugs is provided mainly by drug addiction institutions, which are mostly communal facilities and financed by local budgets. In general, there are 24 regional, 1 republican drug dispensary and 4 urban institutions in Ukraine. The drug service has about 5,000 professionals: doctors, psychologists, social workers and nurses, most of whom are united in the All-Ukrainian Narcological Association.

The modern rehabilitation system is based on these normative documents, the best examples of international experience and the understanding of the fact that "drug addiction is a complicated state that requires long-term treatment, care and support" [141, p. 49]. The main task of the treatment and rehabilitation is not only to help the patient to stop the drug use, but also to ensure stable lifestyle changes. The general requirements are applied to this program, namely, the need for scientific substantiation of the process concept and the possibility of the result measuring.

In the scientific literature it is noted [370; 378; 418; 451; 465] that in order to continue the accelerated development of the psychological stability properties to re-engage in chemical addiction and achieve the optimal level of adaptability and comfort, the most important resource of the person – his ability to learn and master new for himself – is used. The advantage here should be given to developing technologies.

As shown in Section 2, the rehabilitation of drug addicts involves several stages, including detoxification and reversal of withdrawal syndrome, the period of remission, the beginning of remission and the final stage. At the same time, insufficient attention to the psychological rehabilitation factors requires the development of a model that would allow patients to be involved in social activity, and envisaged a solution to tasks aimed at actualizing their own resources within the non-stationary rehabilitation assistance.

Modeling is effectively used in various fields of science, in particular in psychology, where psychological processes or phenomena are reflected.

There are a number of differences between the understanding of the modeling process distinguished by different authors. For example, E. G. Judin under the modeling understands the method of scientific knowledge using the model [1, p. 46]. G. V. Sukhodolsky means modeling "as a process of creating a

hierarchy of models, in which some really existing system is modeled in various aspects and by various means" [2].

In the context of our research under the modeling, we will understand the representation of objects using their models.

The word "model" comes from the Latin word "modus, modulus", which means "measure, image, method," etc. In the philosophical dictionary "model" (lat. modulus – measure, sample) is an object substitute, which in certain conditions can replace the original object, reproducing the properties and characteristics of the original. The reproduction is carried out both in visual (layout, device, sample), and in sign forms (graph, scheme, program, theory) [218]. In a large psychological dictionary, the model is defined as "a simplified imaginary or sign image of an object or system of objects used as their "substitute" and "operation tool" [46].

In general, the models will be considered as special artificially created objects that reproduce a finite set of properties inherent in real objects, meaningful in the context of our study.

The need for modeling occurs when the study of the actual object itself is impossible or difficult due to its inaccessibility, multidimensionality, ethical constraints or excessive costs (temporary, labor, financial, etc.).

However, it should be noted that the concept of "modeling" has at least three meanings: 1) the method of knowing objects through their models; 2) the process of constructing these models; 3) the form of cognitive activity (first of all, thinking and imagination). Obviously, we will mainly use the first meaning.

However, modeling as a research method is inevitably accompanied by references to its other aspects, since the method procedure is impossible without the creation of appropriate models, and the research process using this method is based on the ability of the person to abstract.

So, of course, one can agree with the statement that "modeling to a certain extent is a kind of abstract-logical knowledge" [3, p. 244].

Mathematical modeling in psychology in recent decades is developing rapidly. Generally, mathematical methods in psychology are used during [4]:

- statistical processing of data obtained as a result of observations;
- determination of regularities describing the relationship between variables that are studied in the experiment;
- creation and testing of mathematical models.

If the first two forms are universally applied in psychological research, then the development of the third form faces a number of difficulties associated with the model specificity.

As B. F. Lomov, V. I. Mykolaiv, V. F. Rubahin [4] note, the psychic does not represent a closed system, which exists isolated from other systems of the material world (physical, biological, social). All this creates great difficulties in the application of mathematical modeling methods. In addition, in mathematical models in psychology, as a rule, only one particular aspect of the consideration of those phenomena, processes, etc., is taken.

As a rule, the construction of a mathematical model is based on a significant simplification of the studied situation. Consequently, the findings derived from it should be treated with caution. At the same time, even a very rough idea of idealization allows you to get deeper into the essence of the problem. Choosing and managing the parameters of the model allows a deeper analysis of the phenomenon.

In the process of psychological modeling, as V. V. Nikandrov [5] notes, the researcher, depending on the subject and objectives of the study, creates a specific psychogenic situation for the object,

which results in its behavior being modeled (for a person in the form of activity and communication).

Comparison of the initial conditions of the psychogenic situation with the behavior parameters of the object allows, firstly, to receive indirect data on the organization and psyche work, which can be used for its study and modeling; and secondly, to find correlation, cause-effect, and sometimes functional relationships between psychogenic influences and behavior peculiarities, which gives grounds for the psychological patterns; thirdly, to develop effective methods of influencing people in order to provide them with psychological help.

V. V. Nikandrov defines the following main features of psychological modeling.

1. Natural object and research subject − people (animals) and their psyche.

2. Artificial research conditions (e.g. experimental laboratory, diagnostic center, psychotherapeutic office).

3. Application of modeling means − methodical manuals (instructions, questionnaires), technical devices (measuring equipment) or pharmacological agents.

4. Purposeful effects on the object.

5. Humanization of influences.

6. Programming of the procedure of influences (from the minimum of regulation during a free conversation to a maximum during testing or a laboratory experiment).

7. Registration of influences (situational and procedural) factors and answers of the object.

You can form a psychogenic situation by any empirical method of psychology: experiment, psychodiagnostic methods, psychophysiological and psychotherapeutic methods.

Psychological modeling is an integral form of all types of psychological work: research, diagnosis, counseling, correction. A specific type of psychological modeling is psychological training.

The method of modeling in psychological research develops in two directions: 1) sign, or technical, imitation of mechanisms, processes and results of mental activity – psyche modeling; 2) the organization, reproduction of one or another type of human activity by artificially constructing the environment of this activity – modeling situations that connect the processes being studied, which is called psychological modeling.

Psyche modeling is a method of studying mental states, properties and processes, which lies in constructing models of psychic phenomena, in studying the functioning of these models and using the obtained results to predict and explain empirical facts.

For completeness of the object image in the model distinguishes the following classes and subclasses of the psyche models: sign (similar, verbal, mathematical) software (rigidly algorithmic, heuristic, block diagram) material (bionic). Such a sequence of models reflects the gradual transition from a descriptive simulation of the results and functions of mental activity to a real simulation of its structure and mechanisms [71, p. 200].

There are a number of general requirements for the construction of models: adequacy − a fairly accurate reflection of the object properties; completeness − providing all necessary information about the object; flexibility – the ability to reproduce different situations throughout the range of changing conditions and parameters; the complexity of development should be acceptable for the available time and software. So, modeling is a process of constructing an object model and exploring its properties by analyzing phenomena or processes. The modeling

involves two main stages: the development of a model, its research and conclusions.

The methodological basis of the developed model of psychological rehabilitation is the idea of personology: the personality of a person is diverse, it is embodied in the body shell, world outlook and a system of values, desires, motives, aspirations, activities and communication with other people, world and themselves. We adhere to the views of such authors as D. Copeland [378], A. Goodman [418], M. Ledjoy [451], A. Mehrabian [465], E. F. Pace-Schott [370], W. Chaley [534], which emphasize that human functioning as a system is provided by the energy potential of the psychophysiological level of the human body, that is, the source of activity that supports the variability and adaptability of human behavior by internalizing the properties of the environment. Proposed model of psychological rehabilitation is based on the system-generating principle.

The main idea of our model is the thesis that the therapeutic process should be based on the system-forming principle, since the targets of influence, that require transformation, lie in different planes: cognitive, emotional, behavioral, and others. Another feature is technology – a clear separation of elements of influence and a meaningful description of the process of the necessary changes.

An important component of the suggested model is the psychocorrection of drug addicts using music. The methodology of therapy with the music is an idea of the psycho-emotional stress, namely, it has problems with drug addicts, as a form of displaying the unfinishedness of a certain internal action: stopping in motion towards the goal, fixing the obstacle and finding the best ways of responding and adapting the personality. Psychoemotional stress is a point of psycho-correction and a working target that drives the rehabilitation process, and is based on an approach that provides for a well-founded stage, systemic approach used to work with

drug addicts. Let's schematically depict the model of psychological rehabilitation of opioid-addicted individuals (Figure 2.2.1).

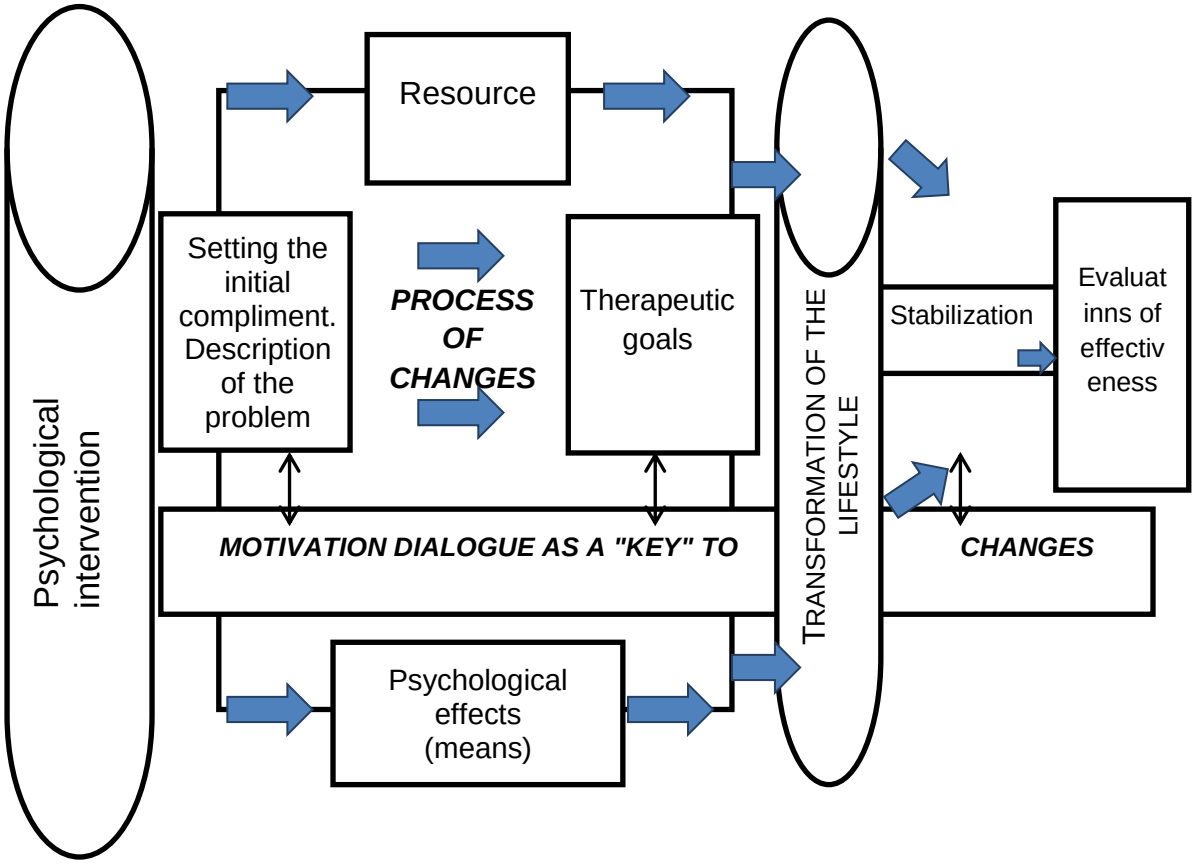


Figure 2.2.1. *Model of psychological rehabilitation of opioid-addicted individuals.*

1st component. Setting the initial compliment.

The main condition for the implementation of the program of psychological rehabilitation is the medical treatment of patients: detoxification therapy, vitamin therapy, symptomatic, other pharmaco-correction of pathological conditions within the framework of withdrawal syndrome and individual general-clinical

and laboratory examination in the first days. Detoxification and medicines are used that stop the pathological urge for PAS such as atropine, pyroxane, clonidine, butyroxane, some tranquilizers, anesthetics, antidepressants and antipsychotics.

Detoxification can be reduced to 7-14 days in the event that the manifestations of withdrawal syndrome are completely corrupted, there is no actual pathology and the patient is highly motivated to undergo a rehab program. After completing the detoxification course, addicted person faces at least 3 problems:

1. Postabstainment syndrome, manifested by persistent insomnia, decreased mood, irritability, weakness, headache, and others.

2. Periodically arises for drugs or alcohol.

3. Meet the factors and problems that caused addiction. Any of them can lead to a break.

Before the beginning of medical actions, measures are taken to establish a compliance, that is, the voluntary undergo of the treatment regimen [148].

Problem description.

At this stage, it is necessary to identify and describe the problem. In our opinion, the main problem of a drug addict is organic, psychological, socio-psychological and social degradation.

In the process of psychological rehabilitation, the task is to identify the installations that support addiction, and to influence them, which is impossible without taking into account personality features of patients [19; 222].

Great difficulties create relatively autonomous but interrelated individual personality features of the drug addict, namely:

- destroyed system of psycho-physiological self-regulation;

- disintegrated "I-concept", a system of illusory-compensatory notions about himself;
- destroyed system of interpersonal connections;
- asocial, rigid role structure of behavior;
- a system of representations of values and the significance of the transpersonal experience;
- pathological needs-motivational-sensory structure;
- actual emotional state – anxiety, depression, frustration, etc.;
- reduced or absent criticism of your illness (the notion of a disease).

Some authors explain the anozognosis of opioid addicts by a significant individual deformation and believe that the reduction or absence of criticism regarding their disease and their own personality is the most characteristic feature of this contingent of patients [266; 267; 268].

The notion of the disease is manifested in the process of collecting diagnostic information and determining the psychological diagnosis. At the beginning and at the end of the rehab program there is a diagnostic consultation.

Mandatory methods are:

- tests for self-study;
- research of psycho-emotional condition;
- diagnosis of interpersonal relationships.

Auxiliary methods:

- psychodiagnostics of personality traits (method of SMDO);
- examination of cognitive functions (Schulte tables, classifications, exclusions and generalizations of concepts, thinking diagnostics).

The quality indicator is the presence of a conclusion of a psycho-diagnostic examination.

The problem description includes: the analysis of structural features, the level of motivation, intelligence, emotional development and taking into account the severity of violations, the spectrum and duration of chronic disease, the ability of the opioid addicted person to adequately assess the social situation, its ability to reflect and autonomous work on their own problems.

Revealing the second component of our model of psychological rehabilitation of drug addicts – *Problem description* – it is necessary to emphasize the problem description of not only the most addicted on opioid individuals, but also her family. Since chemical addiction is a family illness, the whole family is ill, physically, mentally and spiritually, and accordingly, the recovery should begin with each member.

2nd components. Motivational dialogue as a "key" to change.

It is difficult to correct such a characteristic of drug addicts as a low motivation for treatment. The first appeal for help in most cases occurs under the pressure of relatives, and the patient himself, as a rule, is currently in a state of intoxication or is experiencing withdrawal syndrome. After improving his condition, the patient may ask about discharge. Therefore, it is important to establish contact with the client from the very beginning of the rehabilitation course, in the process of normalizing the general condition [5].

Motivation for change is a new direction in the psychological rehabilitation of drug addicts. Motivational dialogue was developed by V. R. Miller. It is based on the theory of cognitive dissonance and is intended to stimulate a supportive attitude to change. His goal is to create, support and strengthen the motivation to completely refuse from drug use. Informing patients about problems related to psychoactive substances and the benefits of

sobriety causes them to desire counterarguments to be refuted by a psychotherapist [467].

During the motivational dialogue, clients are prompted to independently indicate the reasons why they should observe sobriety and list the problems that cause their illness. Formation of motivation depends on the style of the psychologist's work, both in the individual format, and group work. Scientists have developed the basic principles of a motivational interview with examples of what a psychologist should use in the process of motivational dialogue [172; 173; 178; 177].

Motivational dialogue is a non-confrontational way of conducting a conversation and interaction with the patient, which allows the transmission of information in a form that avoids or reduces the patient's resistance. Motivational dialogue is a special counseling technique where the counselor becomes an assistant in the process of change and expresses acceptance of the patient [298].

It is important that the psychologist strives to ensure that his questions do not contribute to the client’s resistance. That’s why, hanging labels and "threatening" issues should be avoided. Setting questions in the non-confrontational style allows the client to be engaged in discussion of the problem of drug addiction and increase the motivation for his positive decision [298].

The basis for success when discussing with the patient his drug-related problems is the empathic style, which is the main component of the motivational dialogue [467; 524].

The essence of the motivational dialogue is the provision that the impulse to change the behavior arises from the patient's own motives, and he himself begins to talk about the need for change. Circumstances can not force him to change, if he himself does not want it.

In the process of motivational dialogue, it is recommended:

1. Express empathy and support.
2. Ask open questions.
3. Show the patient's condition.
4. Ask questions in a non-threatening way to avoid resistance and motivate the patient to change.
5. "Call" a conversation about the changes, allowing the patient to present arguments in favor of these changes.

The first stage of personality changes in a drug addict is a rethinking of the problem.

Studies of drug addicts have shown that the use of motivational dialogue is more effective if compared to the traditional confrontational approach. Today has been proved the effectiveness of its use with other addictions (gambling, smoking) and health problems [546].

3rd component. Therapeutic goals.

The perspective of the desirable, possible and necessary changes that can be achieved by the chosen means is the "therapeutic goal". The purpose of psychological rehabilitation of drug addicts is to maximize the restoration of mental health.

The optimal awareness of the disease depends on the availability of an estimated need for a drug addict, that is, his complete knowledge of the disease development mechanisms, its consequences, the features of psychological rehabilitation, and the causes of possible failures. In the process of psychological rehabilitation, it is necessary to create a clear system of representations about themselves, about the immediate environment, the specifics of the disease and the features of psychological rehabilitation. Therefore, one of the most important accents is work aimed at introspection, which promotes the development of reflective personality capabilities, the formation of an optimal motivational strategy to achieve the success of psychological rehabilitation and adequate self-esteem.

This component of the model of psychological rehabilitation involves the second stage of personality changes in drug addict – reflection. At this stage, the person may stay for a long time. Understanding of the problem is relevant, considering the positive and negative sides of drug use.

Aware of the problem at the cognitive and emotional levels, the drug addict decides either in favor of the illness or in favor of recovery. In this process, motivation plays an important role. It determines the form of decision-making, the type of decision, that is, in essence, the follow-up actions.

The purpose of individual psychological work with drug addicts is to overcome objections, develop awareness of their personal problems and find ways to solve them. The purpose of individual and group counseling or psychotherapeutic work with patients' relatives is to help the drug addicts and their family members:

- get skills to define their own feelings; adequately express them;
- to work out ways of constructive change of the pathological family system of relations, especially with regard to personal participation in it.

4th component. Resource.

Rehabilitation is the most optimal way to solve the problem of chemical addiction. The task of specialists working in this field is the development, creation and improvement of therapeutic programs that include a comprehensive study of the drug addict personality in order to ensure the effectiveness of psycho-correcting measures and the entire rehabilitation process in general.

The strategy of resource enhancement helps determine the optimal means of psychotherapeutic influence. It lies in the fact that at the stage of problem description and psychological diagnosis of a psychologist, it is important to clearly imagine by

what method, on what basis and at the expense of which resources rehabilitation can be held.

Instead of the traditional attempt to study the weak sides that complicate the subject's socialization, the risk factors for drug addiction, to identify problems and seek ways to resolve them, it is necessary, first of all, to develop the strengths of both the individual and his family. Mobilizing these strengths will enable individuals and families to overcome their own problems.

The resource is called uninhabited in solving problems natural or acquired in the process of development opportunities. The most important psychological human resource is its ability to learn and master the new. In the suggested model of psychological rehabilitation, the following personal resources are activated:

- Development of thinking;
- Training.

The model of psychological rehabilitation includes the components of education on addiction to psychoactive substances and co-dependence; gives an idea of the family as a system; teach ways to respond to feelings, expressing love for children and other family members. Developing methods aimed at mobilizing resources and patient development are addressed to standard-compensatory personal processes. They are characterized by non-direct, affiliate style of communication, appeal to dialogue, mind, understanding, critical analysis, maximizing the effects of group and interpersonal interaction. The client is considered as a subject of positive changes, the purpose of which is the individual and social growth of the individual.

In our opinion, because of this there is a major problem associated with the nature of chemical addiction. It is about changing the essence of human consciousness, about narcotic thinking, about the vision of others and himself.

Addicts feel in this world differently than other people, otherwise they see themselves, their role in it, there is an internal

conflict, the destruction of the individual, there are contradictions between the expected events and the real world. From this, drug addicts experience enormous emotional pain that they are almost unaware of and do not want to realize, and drugs are used to eliminate it and protect themselves from all the problems [507].

Clients should learn to recognize manifestations of addiction at different levels: psycho-biological – as a process occurring "inside" the body; psychological – as a process that makes up "I"; socio-psychological – as a process in which "I" participates. With the help of emotional response, deactualization and discreditation of narcotic "I" at all levels it becomes possible to recognize the disease.

The process of psychological rehabilitation is considered by us as a learning process and the process of thinking. The application of different methods of thinking development will promote the development of adaptive behavior forms and reduction of behavior patterns that support addiction.

The resource of a person has a direct proportionality with the volume and content of psychotherapeutic influences: under the condition of a high psychological resource, psychological intervention has the most massive character, which decreases with the decrease of the psychological resource due to insufficient resource base and low motivation to change. The development of existing psychological resources makes it possible to shape and consolidate new behavioral patterns. With sufficient abilities for analysis, a drug addict in his thoughts can establish deeper subjective causes of PAS abuse – personal unrealization of important needs, undervalued self-esteem, interdependent relationships with his mother and/or his wife, etc.

5th component. Psychological effects. (Means).

We refer psychological influences to various techniques of interviewing, analysis of experiences, influence, response, etc. According to the model, in the psychological rehabilitation the

following types of activities should be used: mini-lectures carried out by specialists and recovering persons; group discussions in small groups; watching videos and discussing them further; psychological training of constructive communication on the basis of respect for others; individual counseling; work with literature; participate in testing; keeping a diary of feelings.

In addition, for the greater effectiveness of rehabilitation, it is necessary to apply homework, recommended literature reading. These means are appropriately combined with the program of group psychotherapy, with sessions of individual psychotherapy, visiting groups of the Academy of Sciences.

Of great importance for effective rehabilitation is awareness of internal reserves, unrealized potential and positive dynamics of self-esteem of a drug addict and co-addicted family members.

An important indicator of the motivation changing process effectiveness is the change in self-esteem. Adequate self-esteem can be achieved through participation in sports, competitions. Self-esteem in group work is well stabilized.

In the parents' families of drug addicts and alcoholics there are many pathogenic factors: mental illness, destructiveness in relationships, lack of atmosphere of trust and security, etc. Parents can not provide adequate needs satisfaction of the child, contact between them is often violated. This leads to distortions in the perception of the image of meaningful figures and the process of internalization of parental claims and prohibitions. In PAS addicted persons the inadequately integrated Super-Ego is formed due to the lack of consistent education in childhood, and in adulthood, it is manifested in the inability to adhere to social norms and regulate behavior in accordance with moral principles and value orientations [140].

These components of the model of psychological rehabilitation relate to the stages of personality changes of the drug addict. Such stage of personal change as readiness for the process of change is

also important. At this stage of rehab, the question of determining how important and difficult the problem is arising, what prevents it from changing. A change in client's attitude towards the problem and self-confidence is relevant.

In the process of successful correction, positive changes occur both in the adictic, and in the addicted family member who becomes more independent, gets rid of various fears, especially from the fear of being left behind by a drug addict in case of his recovery.

6. Stabilization.

Changes made in life are being implemented. The person is clearly aware of how these changes are implemented. It is important that the individual independently adopts such a decision and implements it in actions. This includes the testing of changed relationships with the family, the process of changing the environment, maintaining relationships with the family, managing circumstances, gaining skills to help people.

7. Evaluating efficiency.

The most important criteria, is not only the length of remission, but also the achievement of the highest possible level of psychosocial adaptation by the drug addict.

Table 2.2.1

The main components of the psychological model structure of rehabilitation of opioid-addicted individuals.

No	Problem description	Psychological resource	Therapeutic goals	Psychological influences (means)
1.	Low motivation for treatment.	Development of thinking; learning.	Increase of therapeutic setting	Creating a personal space to change the therapeutic setting using the

				technique of motivational dialogue.
2.	Violation of self-awareness: - predominance of primitive mechanisms of psychological protection (negation, splitting, regression); - diffuse "I" – concept (blurred "I" identity); - violation of the "I" borders; - crisis of moral and ethical values.	Development of thinking; learning.	Reintegration of the psyche by overcoming the anosognosy, harmonization of self-esteem, strengthening the "I" concept, strengthening the behavior value regulation.	1. The main factor – long-lasting stable relationships. 2. Creating clear conditions for psychotherapy. 3. Focus on the nearest, most relevant goals. 4. Methods of psychotherapy, which are aimed at the reconstruction of in-depth personality structures.
3.	Emotional violation: - low affective (frustration) tolerance; - the predominance of negative feelings and emotions in the post-toxication period (anger, shame, guilt, anxiety); - Alexithymia.	Development of thinking; learning.	Achievement of emotional expressiveness, stability through overcoming alexithymia, normalization of emotional state and increase of self-control ability.	1. Supportive therapeutic tactics, which allows to ease the manifastation and awareness of the client of actual emotions (feelings). 2. Methods of gestalt therapy, music therapy, creative expression.
4.	Cognitive violations:	Development of thinking;	Correction of inadequate	1. Explaining disorders and

	- maladaptive, that support addiction; - development of ability to self-knowledge and introspection.	learning.	judgments. Informing about mechanisms of disease development and ways to overcome it.	interpretation of understanding the mechanisms of addictive behavior. 2. Methods of rational and cognitive-behavioral psychotherapy.
5.	Behavioral violations: - lack of healthy lifestyle skills; - ineffective coping strategies.	Development of thinking; learning.	Filling the shortage of necessary skills.	Training effective coping strategies with methods of behavioral therapy.
	Violation in interpersonal interactions: - lack of close trust; - lack of communication skills.	Development of thinking; learning	Correction of disharmonious stereotypes, interpersonal relationships.	1. Development of alternative interests and constructive methods of solving problems in contrast to pathological models. 2. The most effective mean is group psychotherapy, training.
	Relationships of coexistence.	Development of thinking; learning	Correction of destructive family relationships.	Detection of disharmonious stereotypes and their reorganization through the development of

				new communication rules.
	Violation of the motivational-necessary sphere.	Development of thinking; learning	Assistance in realization of own needs and motives, search of adequate, socially acceptable ways of their satisfaction.	Methods of gestalt therapy, training methods of direct emotion expression, awareness of personal responsibility for behavior.
	Social disadaptation.	Development of thinking; learning	Development of adaptive capabilities.	Supportive form of psychotherapy.

Let's characterize psychological interventions at different stages of work.

The first block of psychological intervention contains massive versatile psychotherapeutic effects that are applied in a parallel-sequential mode: the formation of active motivation for change, elements of group, individual, cognitive-behavioral therapy, etc. The choice of the psychotherapeutic interventions type is made due to the available evidence based on the effectiveness of some psycho-technicians in comparison with others when working with addictions [437; 541], as well as based on the results of psychological diagnosis, their individual psychological characteristics and the vision of the perspective development.

The second block conventionally consists of stabilization and efficiency evaluation. The purpose of this stage – the transformation of patient lifestyle – determines its duration and content. At the stage of stabilization, the first 3 months of psychotherapy meetings occur at a frequency of once every 2 weeks and tend to decrease to once a month.

Thus, the model of psychological rehabilitation of opioid-addicted patients has four stages, which are united in two integral blocks. The construction of the model is based on the principle of systemicity, which implies the integrity and unity of the psychotherapeutic process. Psychological rehabilitation occurs with the use of music, which reduces the psycho-emotional stress of drug addicts and allows you to stay free from obstacles, and move further towards recovery.

Conclusions to second section

The second section examines the priorities of the state policy on treatment and rehabilitation of people with drug addiction. In particular, it is determined that Ukraine has developed National Drug Policy Strategies for the period up to 2020, which states that there is an urgent need for new approaches to the treatment and rehabilitation of drug addicts, namely: integrated, complex application of all components of the medical system, their interaction with the support evidence-based methodology, ensuring availability of medical care, expanding treatment options, alternative punishment. Increased attention should be given to the protection of human rights and respect for the patients' dignity, since only if stigma and discrimination are overcome, significant increase in the effectiveness of treatment can be achieved

The theoretical and methodological foundations of rehabilitation of drug addiction are systematized, modern approaches to the rehabilitation of drug addicts are analyzed, the stages of personality-emotional changes of opioid addicted in the process of rehabilitation are described, general approaches to assessing the results quality of rehabilitation of drug addicts are presented, the model of psychological rehabilitation of opioid addicts is presented.

It is established that at present scientists are at the stage of searching for various methods of assistance to drug addicts. It is revealed that the success of rehabilitation is largely determined by the process and content of personality-emotional changes in individuals in the course of rehabilitation. One of the most important factors of rehabilitation is the active participation of the patient in the rehabilitation process, the installation of disease prevention and the implementation of doctors and psychologists' recommendations. One of the main tasks in working with drug addicts is to form their motivation for seeking professional assistance.

The following stages of personality-emotional changes, through which the person passes during the process of psychotherapy are distinguished: "enlightenment", "understanding", "learning", "appropriation". In the process of psychotherapeutic inpatient treatment, addicted person usually passes the first two stages of personality-emotional change – "enlightenment" and "understanding". As a rule, this is manifested in the recognition of the patient's own problem and the need to support a sober lifestyle. "Learning" and "appropriation" are realized with the subsequent restoration of the patient, through visiting the groups of the Academy of Sciences, mastering new ways of solving problems.

It is proved that the evaluation of the effectiveness of rehabilitation influences, including psychological ones, should be complex and contain signs that allow to record the changes of both behavioral reactions and their internal preconditions.

It is established that psychological modeling is an integral form of all types of psychological work: research, diagnosis, counseling, correction. Simulation helps to reproduce the integrity of the investigated object, its structure, functioning, to preserve this integrity at all stages of the study. The use of modeling enables measurement of many characteristics of the research object.

The model of psychological rehabilitation was substantiated, the methodological basis of which was the provision that the therapeutic process should be based on 1) a system approach, which allows to consider the problem of formation of drug addiction and rehabilitation of drug addicts in a complex way, taking into account various factors, its manifestations and consequences lie in different planes – cognitive, emotional, behavioral, and determine the appropriate target of influence that needs transformation; 2) the principle of technology, which provides a clear separation of influence elements and meaningful description of the process of the necessary changes.

The model of psychological rehabilitation of opioid-afflicted patients encompasses four stages, which are united in two integral blocks. The first block of "psychological intervention" involves a variety of psychotherapeutic effects that are applied in parallel-sequential mode: the formation of active motivation for change, elements of group, individual, cognitive-behavioral therapy, etc. The choice of the psychotherapeutic interventions type is based on the results of the psychological diagnosis of the subjects, their individual psychological characteristics and vision of the perspective person's development line. The second block conventionally consists of stabilization and evaluation of effectiveness, its purpose – transformation of the patient's lifestyle – determines its duration and content.

SECTION 3
TECHNOLOGIES OF PSYCHOLOGICAL REHABILITATION OF OPIOID-ADDICTED INDIVIDUALS

3.1 Psychological content and technologies of rehabilitation of youth opioid addiction

The problem of psychological rehabilitation of opioid-addicted individuals to living conditions in a society is one of the most urgent. It is due to the difficult situation with the use of narcotic substances in Ukraine. Today, data on drug use are inadequate, as by 2010 the study on the prevalence of drug use in Ukraine has not been conducted. According to statistics, on average, every 10 thousand of population accounts 35 drug users [6].

A person who regularly takes drugs is gradually losing touch with the real world. Before treatment, it spent most of the time among such sick people, and the interests were reduced to the extraction of a dose and a short period of "kaif" after it was consumed. To acquire new healthy interests and goals in life isolation in a special institution and the termination of lobes is not enough. Social and medical rehabilitation should be inseparable.

Therefore, rehabilitation period after discharge from the narcological clinic is very important. After all, it depends on it whether the person returns to normal life or again starts using drugs, finding himself without a round-the-clock medical observation.

Recently, this issue has become important and acute, as attitude of addicted persons varies considerably. It is known that addiction creates a special situation in the development of personality, because the person changes the conditions of existence and lifestyle. The rehabilitation of such individuals should be based on the enhancement of internal resources in order to adapt the individual to life changes not only physically, but also psychologically. Adaptation reserves in many respects do not depend on the functioning of individual organs or systems, but on the individual as a whole. Actuality becomes the principle of a holistic approach to the person: to his treatment and psychological rehabilitation.

N. N. Ivanets [124], V. A. Zhmurov [107], L. S. Kobzeva, O. S. Kovshova [143], N. A. Sirota [64], V. M. Yalta [270] argue that one of the most important factors determining the effectiveness of therapy is the active participation of the patient in the rehabilitation process, the installation of disease prevention and the implementation of medical recommendations. The consent of the patient for treatment, his readiness to follow the treatment and rehabilitation regime and to cooperate with the doctor are characterized by the notion of "compliance" [124]. V. A. Zhmurov notes that the problem in timely and effective treatment of persons addicted to PAS begins with the delay of treatment and its inclusion in the therapeutic process. As a rule, patients of the narcological profile seek professional assistance by force. This happens most often under the influence and pressure of the family, micro-social environment, employees, law enforcement officers. The reason for this phenomenon lies in the incorrect formation of the disease internal picture, violation of nosognogy – the ability to

understand their own illness and a critical attitude to their own state and behavior.

Awareness of the disease may have different severity [107]. At one pole there is a nosognosia, when the disease is fully understood and clearly distinguished between the healthy and unhealthy sides of the person, on the contrary – anosognosia, which is characterized by a complete lack of awareness of the disease and its manifestations. Awareness of the disease occurs under the influence of the sensory, intellectual and social spheres and is an extremely complex, multilevel phenomenon [64; 143; 270]. Therefore, one of the main tasks in working with drug addicts is to form their motivation for applying for professional help [64; 382; 270; 486; 558]. Today, specialists in the field of psychotherapy actively develop methods for the primary motivation formation for treatment [94; 134; 319] and note that in the early stages it is important to establish therapeutic contact and form motivation to participate in the rehab program [460; 562]. Thus, the formation of the correct disease image in an addicted person is the goal of psychotherapy. A complete awareness of the person's own addiction and its consequences is a step to overcome it, but not a guarantee of the treatment success. The internal disease image is a representation of the subject of his illness, the result of the activity that the person carries on the path of this awareness.

Psychotherapy goals at the primary care stage may be: depression, low self-esteem, feelings of fault, poor life quality and the presence of numerous social problems associated with lack of skills for confident behavior and support [64; 270; 359; 460; 484; 514; 515; 539; 582].

In the process of psychological rehabilitation, a patient with opioid addiction is offered to find a support point and restore important areas of life [162; 163; 164; 165].

These spheres complement each other on the path of recovery:

1. *biological*: complex restoration of the functioning of the organism at the physical level;

2. *psychological*: necessary for the restoration of psycho-emotional stability and the adoption of sound, balanced decisions;

3. *social*: helps gain recognition and become a full member of society;

4. *spiritual*: contributes to the formation of world perception, based on certain spiritual principles – honesty, impartiality and readiness for action.

Many researchers emphasize the importance and necessity of using positive and negative motivations for therapeutic purposes, as well as motivations derived from the dominant pathological status of drug addicts – motivation to achieve a comfortable state used in substitution therapy [61; 303; 314].

It is known that in psychotherapy there are different methods of purposeful psychological impact on the patient, starting with the word, emotional relationships, joint activities aimed at health improving and increasing the stress tolerance. As domestic researchers point out, today's psychotherapy is the least presented and, at the same time, a sought-after type of specialized services [222]. Adaptation of proven psychotherapeutic directions and technologies in other countries to Ukrainian realities is not an easy task, because mental and cultural peculiarities play a significant role. When providing psychotherapeutic care, it is important to take

into account the readiness of the subject to its adoption. A person, who for a long time suffered from addiction, being in a limited social environment with low social skills, has a fairly small chance for a long remission. The therapist in this case should direct efforts to find various methods and techniques of motivation, development of the will, etc.

In the special literature (V. Ababkov [1], G. Ya. Avrutsky [4], Ye. G. Eidemiller, V. Yusetskis [308; 309], I. S Yalom [314], A. A. Aleksandrov [9], R. G. Garifulin [72], N. P. Zakharov [112], M. Yu. Isaev [126]) a large number of variants of psychotherapy is presented, described the content and technology of each of them, but it is important from the practical point of view to distinguish some basic features that distinguish one type of psychotherapy from another. This is necessary, first of all, in order to more accurately determine the feasibility of using one method or another in the work with opioid-addicted. Psychotherapy, and thus counseling, is based on the assertion that, as in the case of other somatic diseases, addiction is pathological in nature, which largely controls the behavior of the individual. Emphasis is put on the fact that each person has an internal resource for addiction treatment, and the achievement of abstinence is the first step, not the ultimate goal. Consequently, psychologist task is to teach the patient an adaptive behavior that minimizes the probability of recurrence and prevents the development of pathological consequences of the narcotic substances use.

Directive and non-directive methods are used in work with opioid-addicted. The directive methods lie in the fact that physician actively imposes to addicted way out of the situation and does not allow to express his opinion. Directivity is seen as a disadvantage of psychotherapy, because it removes the patient from

responsibility, submits to the doctor's will, it may ignore actual needs. Non-directive methods of working with addicted are based on the study of his thoughts, involving him in an independent search for an exit from the situation.

In the context of work with opioid-addicted, the following methods of psychotherapy are defined as expressive and supportive. Expressive methods can reveal subconscious mechanisms that underlie the destructive behavior of the addicted, which causes the internal conflict. Supportive methods, by contrast, support the patient's existing illusion, in order to preserve inner harmony.

Among assistance methods to drug addicts activating and sedative are described, where activating are aimed at increasing the desire for action, and sedative – to remove internal tension, anxiety. Sedative is useful in the acute period of experiencing stress in a drug addict. In particular, getting into a hospital for addicted person is already a huge stress [84; 92; 109; 265].

Work can be carried out both individually and in groups, while paying attention to the need to take into account sexual differences as general models of work with PAS-addicted [392; 520], as well as in the implementation of specific technologies at the stage of primary narcological care [271; 397; 580].

Individual drug treatment has its own model, goals and objectives. It allows to analyze deep problems of the patient and pay attention to a separate symptom; is aimed at overcoming the system of denial, at awareness of personal problems.

Psycho-therapeutic work with opioid-addocted is direct and indirect (through the environment of the medical institution, the form of drugs administration, etc.). The condition for successful

psychotherapy is the choice of methods that are appropriate to the existing disorders, peculiarities of the personality, his ideas about his illness and ways to overcome it.

In the scientific literature A. V. Gruzman, K. E. Sultanov [84], A. Ellis, C. McLaren [310; 327] S. C. Zioninger [367], G. L. Brace [345] notes that methods of psychotherapy, which are based on interpretation and explanation – rational therapy, paradoxical methods – should be used for people with a rational-logical type of thinking, with an inclination to self-examination. Vulnerable patients, prone to suggestion, with the features of infantilism, are more suitable for methods of emotional influence, such as suggestion, hypnosis, psychodrama.

Work methods with addicted can be divided into several groups.

A group of cognitive methods involves addressing the logic of addicted patient, activating processes of thinking as opposed to uncontrolled emotions. Treatment is usually carried out individually, and all doctor’s statements must meet the requirements of certainty, sequence, evidence. This group includes rational psychotherapy [74] and cognitive psychotherapy [32]. Interesting in the context of our study is the technique of P. A. Dubois. A psychologist acts as an arbiter who explains and logically proves to the patient his mistakes. The method of Beck A., on the contrary, implies that the patient himself must think about his statements, find inaccuracies in them, "decompose everything in the shelves."

In the struggle against addiction to opioids, a group of suggestive methods is used, which includes various methods of suggestion, that is, verbal and non-verbal, emotionally colored

influence, in which information is perceived without critical processing, passing through logic. Close to suggestion is the method of hypnosis, which involves the emergence of a special state of consciousness. Typically, a hypnosis session is performed individually, but the methods of group hypnosis are used [6]. Suggestive methods are effective in hysteria, alcoholism, but are used quite rarely.

They showed their effectiveness in the treatment of addictive disorders methods of cognitive-behavioral psychotherapy, which aims to develop the patient's awareness of his own non-adaptive cognitive patterns. In the process of therapy, learning the skills of changing these patterns takes place, which, in turn, leads to positive emotional and behavioral consequences [319]. Today cognitive-behavioral therapy is one of the most effective forms of psychological correction. This is an important reason for its use in the rehabilitation process of PAS – addicted [159; 278; 256; 432]. Thus, cognitive-behavioral technologies (CBT) are the most widely used in narcological practice.

Cognitive-behavioral technologies explain psychological problems as a consequence of incorrect nformation processing that enters the brain. As a result, person makes false conclusions and ineffectively controls his behavior. The basis of the CBT is the correction of false conclusions, which allows you to change the attitude to problems and correct behavioral errors.

CBT suggests that the patient's problems arise out of distortion of the reality perception, based on misperceptions, which, in turn, arose as a result of improper learning in the development of the individual. The therapy meaning is to find false thinking strategies,

as well as in the development of an alternative, more realistic way of perceiving the environment.

Cognitive psychotherapy is interconnected with behavioral psychology. CBT works when it is necessary to find new forms of behavior, to build plans for the future, to consolidate the result. A cognitive approach to emotional disorders changes the person's perspective on oneself and his problems. By refusing to perceive oneself as a helpless victim of circumstances, a person gets an opportunity to see in himself a person who can both generate false ideas and correct them. Recognizing and correcting the mistakes of thinking make possible to live at a higher level of self-realization.

The main thesis is that if the addictive beliefs change, the patient can make decisions in favor of retention. With the help of CBT, experts help patients find out their core beliefs and automatic thoughts, as much as possible, focusing on changing and overcoming the destructive addictive beliefs.

CBT is a short-term, concise method that includes structured activity and adaptive expectations. At individual CBT, the patient can freely express and change his thoughts, form self-efficacy and establish appropriate boundaries in the process of therapeutic relationships. Expecting this means that each task will be worked out with family members, friends, employees and other people from the patient's environment.

The result of cognitive behavioral therapy is to reduce the level of anxiety and improve the quality of life, as noted by V. B. Smičić [274; 401], L. A. Saut [259], T. B. Pak [224; 225; 226], O. Mowbray [576]; this method is aimed at the formation of constructive behavior strategies, adequate representations of illness

and psychological settings for the active overcoming of illness, teaching methods that promote psychological re-adaptation.

At the motivational level, treatment motives for narcological help are found, the subjective and objective anamnesis is collected, the disease internal image is studied, an explanatory-informative conversation is conducted, the aim of therapy is formulated and the psychotherapeutic contract is concluded with the patient ultimately. At the stage of learning, patient receives an idea of the therapy principles in an accessible form, develops techniques for performing psychotherapeutic exercises and tasks.

The cognitive component of treatment lies in conducting self-reports, detecting and challenging irrational facilities, which, according to A. Ellis, is called the technique of "filling gaps". The next step is to create new, more adaptive cognitive designs. The affective therapy component is to train patients to identify and differentiate their emotions, overcome the alexithymia. Behavioral therapy component includes the development of skills that support the maintenance of sobriety: setting and realizing goals, planning their lives, assertive behavior, solving conflicts in the microsocial environment, relaxation, etc. At the stage of training, the patient has a written diary, which lists safety rules, a list of provocative situations and algorithms of behavior in them and the results of performing psychotherapeutic tasks. The training phase goes into the stage of support, when the patient is able to identify his own irrational settings and differentiately apply different behaviors in situations that provoke the appearance of pathological addiction [310; 370; 534].

According to researchers, addicted personality can not always adequately reflect his own emotions. Cognitive therapy can direct a

person to rethinking one's own life, analyzing emotional states, attitudes to life, etc.

V. B. Smičić [274; 401], W. Chaley [534], M. Mallywood [401], M. Fishnebin [411; 475] emphasize that there are many ways to "get to" the patient's emotions. In communicating with a psychotherapist, patients often use emotional samples that have developed in communication with meaningful people in the past. The psychotherapist analyzes the material that comes from the client, in particular: thoughts, way of thinking, behavior, social interaction. Researchers emphasize that the formation of addictive cognitive constructs is a way of interpreting their behavior. Adicts should not perceive their true state as inextricably linked to the past. U. Chaley [534] asserts that people interpret their feelings and behavior in accordance with the images by which they were once inspired. Self-identification with the images displayed earlier, runs the simulation of the programmed behavior model. In cognitive-behavioral therapy, the patient's understanding of what is happening is evaluated not in terms of its correctness, but in terms of its suitability in certain circumstances [534].

Consequently, cognitive behavioral therapy allows addicted persons to understand behavioral degradation, programmed communication models, unconscious sources of their own problems, etc. The basic principles of cognitive-behavioral therapy, which must be observed when working with addicted persons, are: constructive and interactive position of the psychologist, the importance of occupational schemes; attention to emotions; analysis of psychotherapeutic relationships; patient’s past analysis; development of skills for preventing recurrence, etc.

According to the research data, when comparing the effectiveness of cognitive-behavioral psychotherapy, psychological counseling and 12-step programs, patients who have received individual and group courses of cognitive-behavioral psychotherapy have an advantage over the length and quality of remissions [461; 513]. It is proved that the most effective combination of individual and group forms of this therapy with a course of not less than 4 weeks [207].

There are technologies developed by representatives of the behavioral direction of psychotherapy, which is based on the formation of protective conditional reflexes or inhibition of pathological reflexes. (A. Lazarus, R. Eisenck, etc.). Behavioral psychotherapy with opioid addicted is carried out by means of teaching, that is, multiple repetition or confrontation – collision with an unpleasant situation. In the process of conditioned-reflex therapy of alcoholism, an emetic reflex in response to alcohol intake is obtained by the multiple combination of alcohol intake with the apomorphine [229]. All of these methods include direct involvement of the therapist and strict control from the side.

There are also behavioral methods that the patient carries on his own, without the participation of a psychologist, for the purpose of relaxation by self-observation and self-hypnosis with further conditional-reflex suppression. The deep causes of internal conflict thus remain hidden, thus, the relaxation supports the established system of protection. One of the most popular relaxation techniques is autogenous training. This technique proposes to form the ability to regulate involuntary functions such as muscle tone, breathing, palpitation through passive contemplation and concentration of attention. [530]. Thus, behavioral psychotherapy is also effective in working with opioid-

addicted, since it promotes the formation of behavior adaptive forms, productive forms of reactions to conflict situations, and so on. The use of autogenous training is also effective as a method of relaxation, relief from negative experiences, etc.

There are also devices that help to relax, based on the biofeedback method. The principle of the device is based on the conversion of a certain physiological parameter – ECG, electromyogram, respiratory motion curve, electrical conductivity of the skin – into a clear signal or sound of a different tone or screen color. Thus, a person can fix the moment of the body relaxation and form the necessary conditional reflex [340; 449].

Existential psychotherapy proceeds from the drug addiction understanding as the cause of personality changes, because it leads the patient to adopt a new way of behavior [289]. In the process of analyzing the existential problems, the emphasis is put on the fact that "existence can not be postponed, and life satisfaction is inversely proportional to the fear of death" [314]. The idea basis is the intelligence of life, along with the intellectual, moral, physical and material improvement, the concept of involvement in life [352; 384].

Gestalt therapy combines the principles of interpersonal interaction, that is, the group method, and active self-observation and self-analysis. The purpose of treatment is to realize their most important needs – gestalt – and to isolate them from the mass of non-essential goals and objectives – the background. As R. D. Ilyuk [125], I. V. Berno Bellucci [126] note, relief from tension associated with unrealized gestalt, therefore, the use of techniques of gestalt therapy can teach a person with addiction,

observe oneself, distinguish between the main and the secondary, develop emotionality, willful qualities.

Application of the body-oriented psychotherapy technique helps to stabilize the emotional state of a person addicted to PAS and is recommended at all stages of drug treatment, which is provided in the post-abstinent period [2; 281]. For such therapy a focus on the removal of muscle clamps, the release of negative energy through the exercise are characteristic. Persons suffering from different types of addictions are more likely to experience bodily stiffness, anxiety, aggressiveness, which diminishes in the course of therapy.

The importance of family psychotherapy in the rehabilitation of drug addicts is emphasized by many researchers, indicating the need for full participation of the family in the rehabilitation process [401; 442; 508; 577]. In this case, the constructive interaction with the family and the immediate environment of drug addicts, according to many authors, is a priority factor that determines overall success – the ability to achieve short-term, medium-term and long-term results [90; 208; 362; 463]. Of great importance is the need for the formation of adequate skills in the field of interpersonal, family relationships, self-control in difficult situations, and work skills [325; 364]. In our opinion, it would be appropriate to use family psychotherapy, which would include an independent program with lectures and practical classes.

Psychological rehabilitation of drug addicts is widely used by technologies that help creative self-expression, including therapy in fine arts, methods of ART therapy. Self-study offers homework with elements of art therapy. Such direction is a mean of free expression and self-knowledge. Art therapy has an insight-oriented

character, involves an atmosphere of trust, high tolerance and attention to the inner world of human. It is based on the mobilization of human creative potential, internal mechanisms of self-regulation and healing. In addition, it corresponds to the fundamental need for self-actualization – the disclosure of a wide range of human possibilities and the affirmation of her individually-unique way of life. In order to ensure future achievements, it is important to correlate the objectives with real resources and capabilities.

Therapy with creative self-expression was suggested by M.E. Moreno (2009) for the purpose of preventive work with risk groups with alcohol and drug addiction [31; 54; 58; 59]. Methods of creative self-expression are actively used in Ukraine in the process of treating different types of addictions. Methods of art therapy allow person to see the origins of an internal conflict and give it an acceptable expression. Such methods are effective both in accompanying therapy and in more detailed analysis of psychological mechanisms.

Psychodramatic methods of group psychotherapy lie in the spontaneous improvisation of the interaction, in the process of which there is an emotional response, internal purification – catharsis. Catharsis involves the sudden acquisition of a new problem understanding, an insight that is sometimes an emotional salvation for the addicted one. Playing roles allows an addicted person to see himself from the position of decentration and to experience the reactions of relatives and others. The analysis of the psychodrama process opens the possibility for the patient to test another adaptive behavior in a safe, invaluable environment. Addicted person during psychodrama feels protected, which

facilitates the release of internal tension, removal of prohibitions, disclosure of internal potential.

Psychodynamic therapy (psychoanalysis) is used quite rarely. Such therapy is performed 4-5 times a week for 3-4 years, which is inconvenient and long-lasting. At the present stage of science development, elements of psychoanalytic psychotherapy are used in conjunction with techniques and methods of other areas. The essence of therapy is the release of consciousness and suppressed unconscious experiences and their integration into the overall structure of the individual. Some authors emphasize the successful application, not enough common psychotherapeutic modalities that have a promising goal: psychodrama [197; 224; 225; 226], existential psychotherapy [215], psychoanalysis [19; 142; 290; 291; 236]. Close to the psychoanalytic approach is the transactional analysis of E. Bern, who drew attention to the fact that in the process of communication, a person often pursues hidden goals that differ sharply from the principles declared by it. The researcher paid attention to the problem of addictions and even revealed the features of the game "Alcoholic", which described the general mechanisms of the functioning of the addicted person psychic. He stressed that the subject's addiction is the result of his unresolved problems of childhood, therefore there is always a need for the victim and the lifeguard.

Interesting in our study are paradoxical techniques that lie in the fact that the patient is being imposed on the behavior from which he wants to get rid of. As a result, it turns out that acts that were previously performed automatically no longer fulfill their role, because they do not bring the desired emotional discharging, and the person is forced to look for another, more productive way of resolving the internal conflict. Attention is drawn to the need for

differentiated social support for patients, depending on the peculiarities of life and family situations. At the same time, auxiliary relationships and encouragement for the achieved results should be constantly present in these programs [67; 455].

3.2 Method of musical influence in psychological rehabilitation of opioid addicts

As noted by researchers, such as N. I. Yevstigneeva [105], A. Polyakova [233], S. L. Brusilovsky [51], N. Ivanova [129], P. Thorgard [563], C. Brooks [349], N. M. Harmon, L. Krawitz [431], S. B. Hanser, L. V. Thompson [428], musical acoustic effects are the basis for a number of corrective techniques used in health and clinical practice. The properties of the musical rhythm are used in receptive and active forms of musical therapy [323; 443; 478; 556; 578].

The interaction of music and human is a special kind of communication.

The process of perception and psychological influence of music is mediated by the following factors: the semantic assessment of music and its own state after its listening; musical associations representing a language of musical images; unconscious significance and intensity of experience of perceived musical work.

Choosing music for listening in accordance with unconscious human needs has a positive effect on his mental state (alleviation of anxiety, increased activity and sociability, the effectiveness of associative processes, actualization of resource states) causes

significant and intense experiences, contributes to the emergence of catharsis phenomenon.

Objective properties of music create only general preconditions for changing the mental state of a person on a certain side. Classical and modern music differ in the direction of musical influence: classical music appeals to the emotional sphere, and modern music stimulates motor activity and functional state of the listener. Classical music is much appreciated by listeners, described in mood epithets, increases the intensity of associative processes. Modern music is mainly described in the epithets of health and activity state, reduces the level of situational anxiety [8].

We believe that the application of musical influence methods in psychological rehab is perspective and relevant both in theoretical and practical aspects. An analysis of modern approaches and technologies for the rehabilitation of drug addicts shows that in foreign practice the use of means of art as treatment methods has significant potential and even advantages in comparison with other psychotherapeutic approaches [363; 487; 525; 579]. Thus, in 1970 I. V. Fokl, T. V. Keller pointed to the lack of effectiveness of some traditional forms of psychotherapy, and especially those that suggest increased confrontation, linking it with excessive vulnerability of such patients in interpersonal contacts and risky forms of protection. These researchers have highlighted the value of art methods as those that can make the treatment process milder [540].

It is believed that under certain conditions, such as a deficit of positive emotions, emotional stress, brain organic defect, etc., the brain's system of positive reinforcement can be a matrix on which the pathological integration of the attraction is based. The

processes of disintegration of endocrine systems lead to the formation of maladaptation states, increasing symptoms. The transition from one psycho-emotional state to another in the deformation of value orientations and orientation to social norms can be one of the central mechanisms in the process of drug addiction formation. It is revealed that opioid addicts differ in their emotional sphere. The specificity of the emotional sphere of such persons is in the following manifestations: "pendulum of emotions", undifferentiation of emotions, impaired empathy, underdevelopment of moral feelings. The forced adjustment of emotions and feelings for a long time causes fear of real feelings.

The formation of a drug addiction, in particular opioids, goes through several stages. On the first of these, the drug is consumed, as a rule, to get pleasurable sensations (euphoria). However, at this stage, appears a mental addiction at drug, which is manifested through emotional and motivational disorders, as well as behavior aimed at the search and use of drug [172; 173; 175; 200].

In deepening and severe psycho-organic disorders, the pathology of emotional sphere in the form of emotions coarsening, rudeness of emotion, explosion, blunting of higher, social, emotions (sense of conscience, duty, etc.) and breakdown of primitive acts on the forefront. In this case, it is the means of art, according to Kentator T., help to overcome protective mechanisms in the form of negation, intellectualization and suppression of difficult experiences [175].

N. Albert-Puleo also points to the difficulty of controlling drug addicts over complex emotions and the tendency to impulsive response. He believes that art, music therapy can help such

individuals gradually distance themselves from these feelings and learn to control them [42; 175].

E. Adelman and L. Castrikov point out one of the features of drug addicts − social isolation and emphasize the value of music therapy as a mean of overcoming it, since it gives patients the opportunity to use symbolic means of communication as more psychologically safe in comparison with the language. [175]. Based on the experience of symbolic communication, participants in group activities can further develop other forms of contact with each other. We agree with E. Adelman and L. Castricon and believe that symbolic communication can be an alternative form of communication in cases where verbal interaction is difficult or when the patient is prevented from expressing the psychological barriers that are characteristic for persons addicted to psychoactive substances.

On the basis of the analysis of scientific research R. V. Moore concludes that art therapy can be one of the most effective methods of treating narcotic addiction, since it provides an opportunity to overcome the emotional, cognitive, behavioral abnormalities typical for addicts such as loneliness, low self-esteem, inability to openly and sincerely express feelings, their impulsive responding to different situations, problems.

The study by D. Meoni showed that methods of using art to optimize the mental state and prevent drug addiction can be represented as three main categories: 1) art as a form of artistic action, aimed at changing motivation, interests, development of creative principle, education, formation of social skills; 2) art as a practice that heals, when in the process of creative activity a response to emotions, catharsis is provided; 3) art therapy as an

option of psychotherapy, which determines the construction of psychotherapeutic relationships, as well as the creation of artistic products, which acts as a means of a symbolic transaction between a client and a psychotherapist; such products are being analyzed and discussed [175].

We consider it expedient to form in a drug addict psychological skills and abilities inherent in an adult. Therefore, it would be advisable to have complexes of musical exercises in order to formulate a targeted correction program.

The selection of musical works – the most important and mandatory condition for the useful music use – is that musical works are liked by the customers, because the more music is liked, the more likely the tendency to its positive influence on the mental state and functional activity of the organism, respectively, and higher working activity. This assertion can work and vice versa: bad music will cause an increase of negative emotions, additional fatigue, and decreased activity.

The melody is the main tool of influence because of its unusual, peculiarity of intonational expressiveness. However, one and the same melody, for example in major and minor tones, may cause a different impression. Thus, it is established that there is a stable connection between the tone of the performance of the musical work and the themes of emotions [82].

Over the years of drug abuse, addicted person moves towards those habits, situations, forms of behavior that contributed to abusing or supporting it. If the patient begins to recover, it is very important for him to change the painful habits, to refuse from those situations, people, things, forms of behavior that can lead to the disease again. But the rejection of old habits will only work when

they are replaced by new ones. Therefore, the purpose of art is to help the patient to understand the risk factors that represent the threat of returning to drug abuse and to find alternative forms of behavior.

The generalization of the available theoretical and empirical material allows us to conclude that the study of psycho-correctional effects of music on persons with opioid addiction requires consideration of the mechanisms of its influence and personality. An analysis of the research suggests an increase in scientific interest in the use of music in psychological work with drug addicts.

When selecting a musical composition, it is necessary to take into account a number of musical influences:

1. Sound element. The melody is the main tool of influence because of its unusual, peculiarity of intonational expressiveness. The melody, as well as the verbal expression of the composition, is a perceptive form of expression. Harmony is a consistent pattern of chord construction, (the formula of classical harmony in the language of musicians is T-S-D-T) that accompany melody and help to clearly highlight the meaning and context of music. One and the same melody, for example, in the major and minor tones can cause a different impression.

A) It is established that there is a stable connection between the tone of the performance of the musical composition and the emotions themes. For example, D-Dur is more often associated with the joy, the exalted feelings ("Ode to joy" of Bach), and Des-Dur – with emotions of love ("Consolation" of List) [422].

B) Sonorica – psychoacoustic properties of timbre. Thus, the sound of stringed instruments is consistently associated with a

person with a "warm affection" and other themes of intimate-personal character, the clarinet's sound – with the themes of spiritual affinity, peace, brotherhood.

C) Frequency range. In our Ph.D. study using a psychophysiological hardware complex "Ability", a joint work of the Institute of Psychology named after G.S Kostiuk, the Academy of Pedagogical Sciences of Ukraine, the Department of Acoustics and Acoustoelectronics of the National Technical University "KPI" and the State Enterprise "Telecom-pneumatic", we proved that human personality features are manifested in the perception speed of acoustic signals of various frequency ranges. By experimental way we have confirmed that acoustic signals with a frequency of 3-6 kHz have a stimulating effect on a person.

D) Volume. Less than 40 dB.

2. Dynamics. In our case, when selecting a musical composition, "dynamics" means not just any technical aspects of performance, such as, pianno, forte, etc., but also parallel, divergent, struggling, etc. movement of themes, motifs, drama of the melody.

If we rely on the formula of M. Bakhtin, that in the musical work "human or more of his destiny or less of his humanity" [31].

Impossible, for example, a sense of happiness, liberation from oppression addiction, can be a certain special and valuable reality. Hence – a person becoming more of his destiny, its potential is embodied in the musical experience as a special form of embodiment. Psychodynamics of musical experience is an irresistible mix of reality with opportunities.

3. Form. The principle of placing, within which the rhythm, sound and dynamics of a musical composition develop under certain laws. In dealing with addicted persons, it is worthwhile using Ostinatho – simple repetitive melodies.

4. Time element – rhythm and tempo, as an expression of motion. In our case, in researches with opioid-addicted individuals, syncope rhythms seem to be of interest, which are even more helping to get rid of stereotypes in thinking, emotions, in making decisions. We will use the rhythm constant, without sharp jumps and without solid denomination.

In order to relax the compressed muscular system, it is necessary to use rhythmic structures that correspond to biorhythms of a specific drug addict. Correlation of the biorhythm of the brain with the rhythmic pulsation in music gives us the opportunity to select the corresponding musical samples according to the four basic biorhythms recorded in the human brain's cerebral cortex (the number of vibrations per second).

Conclusion to the third section

Thus, there are various approaches and directions of psychotherapy, among which we have identified the most effective. The above analysis of approaches and technologies suggests that the most optimal are approaches that do not take much time and allow the patient to form adaptive behavioral patterns. Such techniques are also aimed at leveling anxiety, aggressiveness caused by intrapersonal conflict. The objectification of the

underlying assumptions of the internal conflict of addicted person will make it possible to understand the origins of the problems and to choose the methods of therapy. It should be noted that the condition for the effectiveness of the use of psychotherapeutic methods and techniques is the high level of training a psychologist.

Thus, the objective properties of music create the general preconditions for changing the mental state in a certain direction. Genres of classical and contemporary music differ in the direction of musical influence: classical music appeals to the emotional sphere, and modern music stimulates motor activity and functional state of the listener. Modern studies suggest that the study of the psycho-correction of music influence on persons with opioid addiction requires consideration of the influence mechanisms.

SECTION 4
PRINCIPLES AND SYSTEM OF CONSTRUCTION OF PSYCHOLOGICAL REHABILITATION OF DRUG ADDICTION

4.1. Substantiation of methodical research tools.

Psychoemotional, individual psychological, behavioral and value-motivational factors in the structure and genesis of drug addiction were determined with the help of clinical-biographical, psychodiagnostic and psychophysiological methods using the following tools:

1. Clinical and Biographical Method. This method was intended to study the features of the PAS use beggining, the dynamics of addiction development at the clinical and biographic level.

The application of this method involves establishing contact with the patients, ascertaining such data as the name, age, level of education, specialty, social and family status. At the second stage of the conversation, the attitude of these individuals towards alcohol / drugs was clarified, the main moments in their abuse. The problems specificity in the field of social interaction was clarified.

2. Experimental-psychological research methods. The study used the following methods:

In order to identify targets for further **psycho-corrective work**, an author's questionnaire was developed for opioid addicted persons (Appendix S).

This questionnaire allows you to analyze the socio-demographic characteristics of the surveyed, to carefully examine family history, the general characteristics of the family, the peculiarities of the relationship between its members, the presence of intra-family conflict, types of education, social status, etc.

Modified questionnaire "Diagnostics of personality motivational structure" V. Ye. Millman

According to V. Ye. Millman, in the structure of the personality there are two types of motivation: productive and consumptive. Productive motivation (values) determines the creative development of personality and promotes adaptation of human into society. This type of values guides the person for the future, in them the preconditions of objective, meaningful development of both individual and society in general are laid. Productive motivation is creative, as it contributes to the creation of socially significant material and spiritual values [196]. Consumptive motivation is aimed at supporting the life of the subject due to his needs.

To assess stable motivational tendencies V. Ye. Milman [196] proposes a technique that includes 14 items with 8 sub-items, each of the sub-items to be evaluated by subjects under the 4-level scale. In this technique, each respondent's answer is estimated from 0 to 2 points, the points are summed according to the methods and as a result we get grades in 7 scales:

1. Life support.
2. Comfort.
3. Social status.
4. Communication.
5. General activity.

6. Creative activity.
7. Social utility.

The first four scales characterize the vital orientation of the individual, the scale of "general activity", "creative activity", "social utility" – production orientation.

With this method it is possible to trace the types of emotional profiles that are included in the study. Inclusion of emotional profiles in the general motivational component is motivated scientifically with the continuity of motivation and emotionality. In an experimental study, such a combination provides us with essential diagnostic information.

Methodology "Level of subjective control".

The method is intended to assess the level of subjective control in different life situations, that is, the determination of the person's inclination to attribute responsibility for the results of their activities to external circumstances or their own abilities and efforts. The questionnaire was created by E. F. Bazhinim, E. A. Golinkina, A. M. Etkind.

The method "Level of subjective control" implies that the direction of subjective control of the same person in different situations may vary. Therefore, the questionnaire includes a number of indicators (scales) that measure the locus of control in various spheres of life [103]: *Scale of general internality (Io).* The high indicator on this scale corresponds to a high level of subjective control in significant situations. Such individuals believe that most of the important events in life were the result of their own actions, that they can manage them, and therefore feel their own responsibility for the events and for how life as a whole is formed. The low Io scale corresponds to a low level of subjective control.

Such individuals do not see the connection between their actions and the significant life events, do not consider themselves capable of controlling their development and believe that most of these events are the result of the case or other people's actions.

The scale of internationalization in the field of achievements (Id). High indicators on this scale correspond to a high level of subjective control over emotionally positive events and situations. Such people believe that they have achieved all good in their lives, that they can successfully achieve their goals in the future. Low Indicators on the Id scale indicate that a person attributes his successes to achieve external circumstances – luck, happiness, fate or other people's help.

International scale of failure (Iн). High indicators on this scale indicate a developed sense of subjective control to negative events and situations, which manifests itself in the tendency to blame himself in various failures. Low Indicators on the *Iн scale* indicate that the subject is inclined to attribute responsibility for such events to other people or consider them as a result of failure.

The scale of internality in family relationships (Ic). High indicators mean that people consider themselves responsible for events in their family life. The low indicator on the Ic scale indicates that the subject is self-conscious, and family members are the cause of significant situations.

The scale of internality in work relationship (In). The high level on the *In scale* indicates that a person considers his actions as an important factor in the organization of his own business activities, complex relationships in the team, etc. The low level on the *In* scale indicates that the subject is inclined to attribute more

importance to external circumstances – leadership, comrades in work, luck, failures.

The scale of internality in the field of interpersonal relations (Ім). A high indicator shows that a person believes that he is in a position to control their informal relationships with other people, lead to self respect and sympathy, etc. On the contrary, the low indicator on the *Ім scale* indicates that a person can actively form his circle of communication and tends to regard his interpersonal relationships as a result of the partners' activity.

The scale of internality in the field of health and illness (Із). High indicators on the *Із scale* show that person considers himself to be responsible for his or her health. A person with a low indicator considers health and illness as a result of the case, and hopes that recovery will come as a result of the other people's action, especially doctors.

Assessment of individual features of transpersonal behavior (T. Leary's methodology).

Methodology (Leary Interpersonal Diagnosis) was created by T. Leary, G. Leforgem, R. Sazek in 1954 and is used in studies of personality traits when interacting with other people, as well as for studying relationships in small groups. With the help of this technique, the dominant type of relations with people with self-esteem ("I-real", "I-the ideal") [240] is revealed.

In developing the methodology, T. Leary proceeded from the concept of G. Sullivan (1953), according to which personification, that is, the formation of personality, occurs under the influence of evaluations and thoughts. In the process of interaction with the environment, the person creates a certain style of interpersonal behavior. Realizing the need for communication, person agrees her

behavior with the assessments of meaningful to her people at the level of conscious self-control, as well as conscious symbolic identification.

The questionnaire contains 128 laconic evaluative judgments. From these judgments in each of the 8 types of relations, 16 points are arranged in ascending intensity. Assessing themselves by the points of the methodology, patient should mark the characteristics that fit him exactly. When interpreting the results, the number of key responses that correspond to a particular type of interpersonal relationships is counted.

The maximum possible rating – 16 points. The whole range of possible values is divided into four degrees of severity:

0-4 points – low;

5-8 points – moderate (adaptive behavior);

9-12 points – high (extreme behavior);

13-16 points – extreme to pathology.

The points obtained on each of the 8 basic scales are transferred to the curriculum, with the distance from the circle center corresponds to the number of points for this octant, that is, from 0 to 16. The vectors ends are connected and form a personal profile.

Each of the 8 octaves corresponds to the following type of interpersonal relationship:

1. Authoritarian.
2. Selfish.
3. Aggressive.
4. Incredulous.
5. Submissive.

6. Dependent.
7. Friendly
8. Altruistic.

The first four types of interpersonal behavior, corresponding to 1 to 4 octants, are characterized by inconsistent tendencies and inclination to conflict (3,4), expressed independence of thoughts, persistence in defending own point of view, tendency toward leadership and dominance (1,2).

The other four octants (5-8) are characterized by the presence of conformal settings, congruency (flexibility) in contacts with others (7,8), self-doubt, propensity to compromise (5,6).

According to L. N. Sobchik, interpretation of the received data should be guided by the predominance of some indicators over others and, to a lesser extent, on absolute values.

The patients, in which the ***authoritarian type*** of interpersonal relations (I octant) prevails, are characterized by optimism, reaction rate, high activity, strong motivation for achievement, tendency to domination, increased level of aspirations, ease and speed in making decisions, extraversion. They have a pronounced tendency toward spontaneous self-realization, active influence on the environment, an aggressive attitude, a desire to lead and subordinate to the will of others.

The second octant, corresponding to the ***selfish type*** of interpersonal relations, is combined with such features as self-satisfaction, egocentricity, excessive level of appetites, expressed sense of rivalry, which manifests itself in the quest to take a separate position in the group. The style of thinking is unconventional, creative. The opinion of others is perceived critically, own opinion is reduced to a rank of dogma or strongly

categorically defended. Emotions lack heat, actions – conformance. High search activity is combined with prudence. Low subordination.

The ***aggressive type*** of interpersonal relations (the predominance of the III octant indicators) is characterized by the rigidity of the installations, which is combined with high spontaneity, perseverance in achieving the goals. The increased sense of justice is combined with the conviction of own rightness, it is easy to experience a sense of hostility in opposing and criticizing its address, directness and straightforwardness in statements and actions, and increased vulnerability.

IV octant is an ***incredulous type*** of interpersonal relations. It manifests itself in such personal characteristics as isolation, closure, rigidity of installations, the critical perception of any thoughts, dissatisfaction with their position in the microgroup, suspicion, supersensitivity to critical remarks, incomprehensibility of judgments and deeds, a tendency to rigorous and over-priced ideas, associated with the belief in the detractors of others. Such persons inherent in system thinking, based on specific experience, practicality, realism, tendency to irony; high conflict, and accumulating creates increased tension.

V octant is a ***submissive type*** of interpersonal relationships. It prevails in the introvert, passive, pedantic in the issues of morality people, unsure of oneself, with a high inclination to reflection, with a marked predominance of motivation for avoiding failure and low motivation for achievement, undervalued self-esteem, anxiety, with a raised sense of responsibility, dissatisfied with oneself, inclined to blame onrself in all failures. Such individuals are easily exposed to sorrow, pessimistic about their prospects, neat at work, avoid

wide contacts and social roles that could attract the attention of others.

IV octant – ***dependent type*** of interpersonal relations. Individuals with predominance of VI octane indices exhibit high anxiety, increased sensitivity to surrounding changes. The need for affection and warm relations is leading. Insecurity in itself is closely linked to unsustainable self-esteem. Diligence and responsibility in the work make them a good reputation in the team, but the inertia in making decisions and the uncertainty in themselves do not promote them as leaders. Increased distrust, sensitivity to inattention and rudeness of others, increased self-criticism, fears of failure as the basis of motivational orientation form a canvas of conformal behavior.

V octant is a ***friendly type*** of interpersonal relationships – it has such individual and personality characteristics as emotional instability, high level of anxiety, aspiration for cooperation. Exaltation, search for recognition in the eyes of the most authoritative personalities. The desire to find fellowship with others. Enthusiasm, susceptibility to emotional mood of the group. A wide range of interests.

VI octant is an ***altruistic type*** of interpersonal interaction. – is determined by such personality features as the expressed need to meet social norms of behavior, the tendency to idealize interpersonal relationships, exaltation in the manifestation of their beliefs, artistic type of perception and analysis of information, the style of thinking is holistic, figurative. Flexibility in contacts, sociability, sacrifice, desire for action, useful for all people, manifestation of mercy, charity, missionary composition of personality. Artistry.

Normally, there are no significant differences between the "I" relevant and the "I" ideal. Moderate divergence or incomplete coincidence should be considered as a necessary condition for the further growth of personality, its self-improvement. Dissatisfaction is more often observed in people with low self-esteem (V, VI, VII octants), as well as in persons who are in a situation of prolonged conflict (IV octant). The predominance of both I and V octant is characteristic for individuals with a problem of excessive self-esteem, authoritarianism; IV and VIII – a conflict between the desire to recognize the group and hostility, that is, the problem of suppressed hostility; III and VII – fighting the motives of self-affirmation and affiliation; II and VI – the problem of independence – subjugation that arises in a difficult situation and forces to obey to internal protest.

Test of sensory orientations in the adaptation of D.O. Leontiev (1992).

Sensory orientations is an integral system of conscious and selective connections, which reflects the orientation of the individual, the existence of life goals, meaningfulness of elections and assessments, life satisfaction. As D. O. Leontiev noted: "the problem of sense ... – this is the last analytical concept, which crouches the general doctrine of the psyche, as well as the concept of personality crouches the whole system of psychology" [171]. The system of human values is a conscious part of the personal senses system. The result of awareness of the goals and meaning of their own lives is the sensory orientation of human.

The purpose of sensory orientations method application (hereinafter referred to as SO) is the study of the meaningful orientations of the individual, which form the basis of the I image.

Sensory orientation method allows us to assess the "source" of life meaning, which can be found by the individual either in the future (goals), or in the present (process) or past (result), or in all three components of life. The SO test includes, along with the general indicator of the life consciousness, five subscales, which reflect three specific content orientations and two aspects of the control locus – the quality that characterizes the person's tendency to attribute responsibility for events occurring in life and the results of their activities to external forces (external control locus) or your own abilities and efforts (internal control locus) *:

- goals in life;
- process of life or interest and emotional richness of life;
- efficiency of life or satisfaction with self-realization;
- control-I locus (I am the owner of life);
- control-life locus or manageable life.

The SO test contains 20 pairs of opposite statements that reflect the perceptions of the factors of consciousness. In the SO method it is considered meaningful in the presence of goals, satisfaction from their achievement, confidence in their own ability to set goals, to choose tasks and achieve results. Important is the clear correlation of goals – with the future, emotional saturation – with the present, pleasure – with the achieved result, the past. The situation gives each person the opportunity to make a choice in the form of act, action or inactivity. The basis of this choice is the prevailing view of the life meaning.

Questionnaire by A. I. Serdiuk to study the self-esteem of the disease social significance.

The purpose of this questionnaire is to determine the level of the disease impact on various areas of social functioning and those areas that are most affected by the disease.

Self-esteem impact on its social status is an essential part of the "internal disease image," and therefore an important lever in the development of psychotherapeutic effects in the process of rehabilitation. Changing the attitude of the patient to his suffering along with the relief of neurotic symptomatology and the influence on the pathogenetic mechanisms is one of the main tasks of psychotherapy. At the same time, clinical observations suggest that patients contribute different meanings to the understanding of such self-esteem [282].

The patient is offered 10 statements and 5 options of answers. One of the last two options of the answers is interpreted as having a high or very high significance in relation to the disease effect on one or another conditionally allocated area of the *person social status*, namely:

1. Limited sense of strength and energy;
2. Deterioration of the attitude towards the patient in the family;
3. Restrictions in satisfaction;
4. Deterioration of the attitude to the patient at work;
5. Reduced duration of free time;
6. Low career growth;
7. Reduced physical attractiveness;
8. Formation of feeling of defect;
9. Restrictions in communication;
10. Material damage.

The location of conditionally selected areas of social status in the form of vectors in the diagram allows us to clearly identify the degree of social significance of the disease for a person, as well as select the directions that should be considered as "targets" of psychotherapeutic influence in the process of rehabilitation.

Methodology of SMPR ("Standardized method of personality research").

The SMPR method was used in our research as a psychodiagnostic tool, which gives the opportunity to get a multilateral portrait of the subject, includes a wide range of such structural components as: motivational orientation, self-esteem, style of interpersonal behavior, intimate status, character quality, type of response to stress, protective mechanisms, cognitive style, leading needs, mood background, degree of adaptability of the individual and possible type of maladaptation, the presence of mental deviations, the severity of leadership qualities, presence of sexual problems, predisposition to suicide, etc. Significant advantage of the method is the availability of reliability scales, which allows you to determine not only the reliability of the results, but also the study installation of. This enables the interpretation of the data obtained through the prism of the trends identified by the reliability scales to exaggerate existing problems or to simplify them. The results of the study are obtained in raw scales, after their correction, the scales are expressed in standardized scores **"T".** In connection with methodology readaptation and expansion of its scope, most basic scales of the method are given the main names that correspond to their psychological essence:

1 scale – "super control". Increase within **70 T** – index of sluggishness, excessive control, increased orientation to normativity as a stable property of the individual. Low indicators - below **50 T** – have the opposite meaning, they reflect the absence of these personality features and state. The main problem of the personality of the given type is suppression of spontaneity, self-realization restraint, excessive control over aggression, hypersocial orientation of interests, orientation to rules, instructions, inertia in decision-making, avoidance of serious responsibility from fear. In interpersonal relations – high moral demanding both to themselves, and to others.

Scale 2 – "Pessimistic." The leading rise in this scale is typical for the gipostenic type of response, and indicators above **70 T** reflect the level of depression. For people of this type, there is a high level of awareness of existing problems through the prism of dissatisfaction and pessimistic assessment of their prospects; tendency to reflection, inertia in decision-making, skepticism, analytical mind. They are able to refuse to meet the urgent needs for the remote plans' sake.

Scale 3 – "emotional lability". The indicators increase on the given scale speaks of the emotion's instability and the conflict of combinations of different trends: the high level of harassment is combined with the need for involvement in the group interests, selfishness – with altruistic declarations, aggressiveness – with the desire to like others. The artistic type of perception with demonstration, the brightness of emotional manifestations at a certain surface of emotions, the instability of self-esteem prevails. A person easily gets imvolved in various social roles, artistic.

Scale 4 – ***"impulsivity"*** – reflects the stenhic type of response within the limits of an increase to **70 T**. Impressions, propensity to risk, high level of aspirations is shown. Behavior of liberation, immediacy in expressing feelings, attitudes and actions. Prone to carry out ill-considered actions, to resist external pressure; incompleteness, such individuals tend to rely on their own opinion.

Scale 5 – ***"masculinity / femininity"*** – increased indicators on the 5th scale indicate deviations from the typical behavioral pattern and sexual complication for this gender. In another, the interpretation is determined by the gender identity. In the male profile, the increased indicators on the scale 5 indicate the passivity of a personal position, humanistic orientation of interests, sentimentality, sophistication of taste, artistic and aesthetic orientation, the need for a friendly, harmonious relationship. In interpersonal relations, such individuals have a tendency to anticipate conflicts, to hold back aggressive or anti-social tendencies. In women, high indicators of scale 5 reflect the features of courage, independence, desire for emancipation, and autonomy in decision-making.

Scale 6 – ***"rigidity"*** High indicators show affective saturation of experiences, hostility. At increased indicators, the firmness of interests, persistence in defending own thought, the stenchiness of the installations, the activity of the position, which increases with the counteraction of external forces, practicality, the desire to rely on their own experience; a synthetic mindset with an inclination to exact sciences. Individuals on a given scale show love for accuracy, are faithful to their principles, straightforward and persistent in their advocacy. Inventiveness and rationality of the mentality are combined with insufficient flexibility. The patients are impressed with precision and specificity, irritated by the

uncertainty of the task, negligence and inaccuracy of others. They are stable to stress, in interpersonal contacts there is a sense of rivalry.

Scale 7 – ***"anxiety"*****.** Finds increased anxiety, uncertainty, conformality, distrust with an increase of **70 T**. Higher indicators reflect the problem of psychasthenic accentuation, the prevalence of gipostenic rice, anxiety state within neurotic disorders. The increase of the scale indicators within the norm reveals a predominance of a passive position, self-doubt and stability of the situation. The motivation for avoiding failure, sensitivity, setting on incongruent relations with others, predominant dependence on the opinion of the majority. People of this type are distinguished by a developed sense of responsibility, conscientiousness, compassion, modesty, increased anxiety about small life problems, anxiety for the fate of loved ones.

Scale 8 – ***"individualism"*** – has increased indicators in individuals who are characterized by a marked independence on judgments and actions, non-standard thinking, unpredictability of actions, an irrational approach to solving problems, separation from reality. A common feature of this type is the combination of increased sensitivity with emotional coldness and alienation in interpersonal relationships. These individuals are poorly adapted to the usual forms and prosaic aspects of life.

Scale 9 – ***"optimism"*** – reveals a high level of liveliness, self-confidence, positive self-esteem, pride, high motivation for achievement (more in the motor and speech sphere than in achieving specific goals) and reflects the wall type of response. Indicators of the scale 9, which do not exceed **50 T**, indicate a decline in general activity. Those with high indicators on this scale

are characterized by elevated mood, regardless of circumstances. They are active, energetic and cheerful. They like to work with frequent changes, contact with people willingly, but the interests are superficial and unstable, they lack perseverance. The mood is elevated, in response to the counteraction lightly flares and as quickly fading an angry reaction. Success brings forth exaltation, a sense of pride. Life difficulties are perceived easily. There is no tendency to seriously deepen into complicated problems, safety prevails, confidence in the future, joyful perception of the surrounding. A similar characteristic in an adult is a sign of certain infantilism or hypertensional accentuation. In situations of stress activity can be infected with their enthusiasm, they can "infect" others, often becoming leaders.

Reliability scales.

The scale "L" (hereinafter L) contains statements that show the tendency of the subject to present himself in the "best possible light", demonstrating the strict observance of social norms. High scores on the **L scale** (70T and above) indicate an intentional desire to show themselves as positively as possible, to show themselves in a "better light", denying the presence of the weaknesses in his behavior – the ability, though sometimes, or at least slightly angry, to lazily, neglect diligence, truthfulness. Low indicators on the L scale (0-2 points) indicate a lack of tendency to decorate your character. A profile is considered unreliable if the scale L is 70 T and higher. Repeated testing is required after an additional conversation with the test subject.

Another scale, which suggests the reliability of the results.

Reliability scale F (hereinafter F).

High indicators on this scale may call into question the reliability of the survey if the F indicators are above 70 T. The reasons may be different: the excessive excitement at the time of the survey, which affected the ability to work and correct understanding of the statements; negligence in registering responses; the desire to speak for yourself, to strangle the psychologist with the peculiarity of his personality, to emphasize the defects of his character; the tendency to dramatize the circumstances and their attitude toward them; an attempt to portray another fictitious person, and not their own features; reduced performance due to overwork or painful condition. It should also be born in mind that high indicators on a given scale may be the result of the negligence of the experimenter himself in processing the test results.

Some increase in the given scale F may result from excessive diligence, self-criticism and openness. Individuals with disharmony, who are in a state of discomfort, may have scores on the F scale at the 65-75 T level, reflecting emotional instability. Indicators higher than 70 T usually reflect a high level of emotional tension or are a sign of personal disintegration, which may be due both to severe stress and neuropsychiatric disorders.

Indicators of the correction scale K (hereinafter K) are moderately elevated (55 – 60 T) with a natural protective response to an attempt to invade the world of intimate experiences. Significant increase (above 65 T) indicates the lack of openness, the desire to hide the defects of nature and the presence of any problems and conflicts. High indicators of the correction scale K positively correlate with the presence of protective reactions by the

type of displacement. Low indicators on the K scale are usually observed with an elevated and high F indicator and reflect openness, self-criticism. Reduced K indicator is characteristic for people with low intelligence, but this can be explained by a decrease in self-control with excessive emotional tension and personal disintegration.

A good sign for assessing the reliability and identifying the test facility for the testing procedure, in addition to these criteria, is the "F-K" indicator, that is, the difference between the raw results of these scales. High indicators of F-K scales question the reliability of the received data.

Hospital Anxiety and Depression Scale (HADS) was used to diagnose comorbid anxiety and depressive disorders. It was developed by A. S. Zigmond and R. P. Snaith in 1983. The advantages of this technique are simplicity of application and processing (filling the scale usually lasts 2-5 minutes), which allows it to be recommended for use in general somatic practice for the initial detection of anxiety and depression. The questionnaire contains 14 points, each of which corresponds to 4 variants of answers, reflecting the degree of the symptom's growth. When forming the scale, the authors eliminated the symptoms of anxiety and depression that could be interpreted as a manifestation of somatic disease (for example, dizziness, headache, etc.). Subclass depressions are selected from the list of complaints that are most commonly encountered in patients and reflect the predominantly anhedonic component of depressive disorder. The scale has high discriminant validity for two disorders: anxiety and depression. The scale sheet was issued for self-filling with a prior written instruction from the patient.

*A **Symptomatic Questionnaire (SCL-90-R)*** was used to determine the current status of the subjects. The instruction for the method and its internal essence involves studying the discomfort degree caused by one or another symptom, regardless of how they are expressed in reality. The method includes 90 statements, grouped in the scale: "Somatization"; "Obsessive-compulsive disorder"; "Interpersonal Sensitivity"; "Depression"; "Anxiety"; "Aggressiveness"; "Obsessive fears (phobia)"; Paranoidity; "Psychotheism"; "General index of symptoms severity". Each of 90 questions is evaluated on a five-point scale (from 0 to 4), where 0 corresponds to the "absolutely not" position and 4 is "very strong".

3. Psychophysiological research method.

In the arsenal of narcologists in recent years, new opportunities have emerged in solving one of the most complex tasks of overcoming addiction – psychological correction of client behavior.

Biofeedback (BFB) is a technology that includes a set of research, non-medical, physiological, prophylactic and therapeutic procedures, in which to a person through an external feedback circuit, organized mainly by microprocessor or computer technology, information on the state and changes of physiological processes is presented. The visual, auditory, tactile and other signals-stimuli are used, which allow developing self-regulation skills with the help of training and regulatory mechanisms. BFB-procedure is the continuous real-time monitoring of certain physiological parameters by means of multimedia, game and other techniques in a given region of values. In other words, the BFB-interface is a "physiological mirror", which displays internal processes.

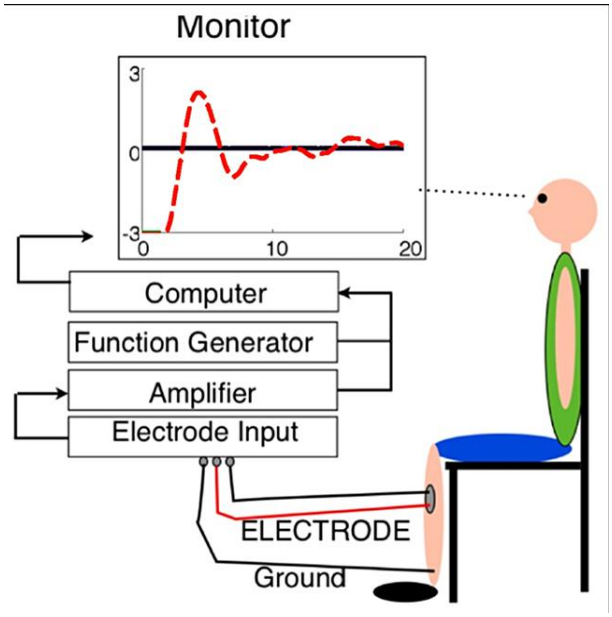


Fig. 4.2.1. Using EMG to create artificial feedback

During the course of BFB sessions it is possible to strengthen or weaken this physiological index, and hence the level of tonic activation of the regulatory system. For example, learning with the help of BFB-method raise the temperature of the fingertips and it leads to a decrease in sympathetic tone and relief of spasm of peripheral vessels.

The basis for the BFB method creation was a fundamental study of mechanisms for the regulation and development of physiological and pathological processes, as well as the results of the applied study of rational methods of adaptive brain systems activation of a healthy and sick person. In this regard, we should mention the scientific results of physiologists I. M. Sechenova and I.P Pavlova in the twentieth century, these ideas were developed by scientists K. M. Bykov, P. K. Anokhin, N. P. Bekhterev. An active study of the method began in the late 50's of the XX century [351]. Approximately from the middle of the XX century, developed and

used methods in which the biologically inverse relationship with the body was established on the basis of changes in various parameters (pulse wave, muscle strength, blood pressure). In the 1970s, much attention was paid to the study of so-called alpha-learning and alpha-states due to increased alpha rhythms in human EEG. In the late 1980s and early 1990s, their experiments were conducted by Peniston and Koolsky [351; 492; 493] on the study of the possibility of treating patients with alcohol through the technology of biological feedback. They set up a protocol for conducting a session that is now classical: first, temperature training (pre-therapy), and then alpha-theta training with the EEG.

From the clinical point of view, with the help of BFB, a person learns to arbitrarily adjust some functions, such as heart rate and respiration, skeletal muscle tension, blood vessel tone etc. During the course of BFB sessions it is possible to strengthen or weaken this physiological index, and hence the level of tonic activation of the regulatory system. There is an experience of using it to change body temperature, deep muscle relaxation, lower blood pressure, changes in the acidity of gastric juice, etc. [340; 523; 547].

In the BFB procedures patient with the help of special technical devices demonstrates the current state of this or that function. Numerous papers show that they are successful in managing those functions that are not regulated under normal conditions. Among such functions are КГР and skin temperature, heart rate and vasomotor reactions, amplitude and frequency of EEG rhythms, coherence of waves, and many others [333; 351; 492; 493; 479]

Many papers highlight the effectiveness of BFB in comparison with psychotherapeutic methods and placebo [351], as well as the dependence of the effect of a positive psychological setting on

treatment [40; 43; 301; 340]. The use of a biochemical method and drugs for increasing the treatment effectiveness is discussed [441; 457]. Chronic headache can neuroticize the patient, and headache, in turn, is a frequent symptom in patients with neurosis.

The positive effect of treatment by BFB can be obtained when it is possible to establish a good contact with the patient and the anamnestic data indicate a positive reaction of the patient to suggestion and self-direction [40; 301; 340; 479; 492; 493]. The barrier to treatment by BFB may be neurotic depression [351], as well as drug addiction, which was formed during long-term treatment [329; 333; 479; 351].

Thus, the BFB method is a set of procedures in which a person through the chain of external feedback sends information about the state of a particular function of his own organism. Based on the received information, the client, under the guidance of the instructor, uses special techniques and equipment to develop self-control and self-regulation skills, that is, the ability to arbitrarily change any physiological function of the body and to correct pathological disorders (Figure 4.2.2).

From the point of view of cybernetics, the human body as a whole can be compared with an open information system that includes the following elements:

1. Source of information.
2. Registrar (transmitter) of information.
3. Channel of transmission (conductor) of information.
4. Receiver of information.
5. Consumer of information.
6. Source of obstacles.

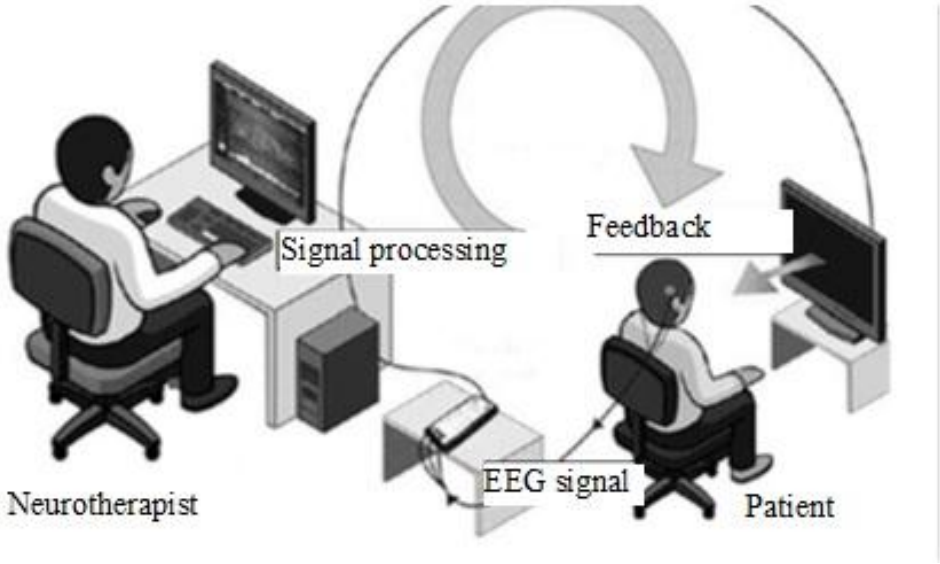


Fig. 4.2.2. Method of BFB method application

Information sources are external or internal stimuli, the visual, auditory, tactile or any other receptor acts as the information logger.

The transmission channel is a nerve fiber, a receiver of information, a neuron that processes and transmits information to other neurons.

Consumer of information – structures (groups of functionally related neurons) of the nervous system (the brain and spinal cord), assessing the information that comes in and ensures that the action is taken. In this system there is a source of obstacles in the role of which can act injuries, diseases of the human nervous system.

On the principles of feedback, all homeostatic mechanisms that ensure the constancy of the internal environment of the organism: the depth and frequency of respiration depend on the content of carbon dioxide and oxygen in the blood, cardiac output

is closely related to the intensity of physical activity, the inflow of insulin is controlled by the level of glucose in blood, etc.

The hardware complex of computer bio-management consists of:

1. Apparatus-registrar of various physiological parameters of the human body – EEG, ECG, EMG, LNG, PPG, KDR, TKP;

2. Computer with patented software, which converts physiological signals into digital;

3. Peripheral device in the form of monitors for visual feedback and musical systems for audio feedback.

Different forms of BFB therapy have shown their effectiveness in cases where the structure of violations includes changes in the general level of activation, as well as sympathetic and parasympathetic balance. Thus, the formation of skills of involuntary increase in the temperature of hands by means of BFB-procedures, reducing the conductivity of the palms, relaxation of certain muscle groups can effectively fight headaches, tension, reduce high blood pressure. The effect of each of these components is aimed at reducing the level of sympathetic activation caused by chronic stress.

In our study, based on the ATOS clinic, we used the Nexus-10 Mark II device (manufactured by Mindmedia, The Netherlands). The device allows to carry out not only complete functional body diagnostics, but also computer bioregulation of various functional systems of the body on the basis of visual and sound biological feedback on the standard parameters of EEG, EMG, ECG, CNG, blood pulse vessels, skin thermometry and skin resistance.

The applied dual monitors system allows during the sessions of computer bio-management to display on the monitor of the doctor-operator the data of the current functional state of the patient's body, and on the patient's monitor a bioregulatory demonstration of the dynamics of his physiological functions.

With the aid of the Nexus-10 Mark II, the consultant provides 10-channel monitoring of various physiological parameters of the human body and biological feedback, using Bluetooth wireless technology (10-15 meters distance from the sensors to the patient to the doctor's computer), and Memory Flash (24-hour monitoring of any body parameters by the Holter's type) with stand-alone power from batteries.

The device is completed by sensors: ECG – electrocardiogram, SEM – surface electromyogram, EEP – electroencephalogram, oximetry (blood oxygen control), accelerometer (velocity), pulse blood vessel filling, breathing sensor (frequency and depth), temperature sensor, skin resistance sensor.

At the beginning of the course of bio control, a functional or stress-testing of the organism is performed in different modes of functioning, that is, in a state of rest, in mental stresses, in psychological tension with computer diagnostics of all systems of an organism:

- Cardiovascular system according to PPG and ECG with HRV analysis;
- Central nervous system – according to SEM;
- Muscular system – according to the surface EEP;
- Respiratory system – according to LNG data;
- The autonomic nervous system – according to TCE and RAG.

After testing the above-mentioned physiological parameters of the organism and studying the individual characteristics, an assessment of the organism's ability to recover and the set of computer-aided bio-management trainings is being implemented.

Computer bio-management is a non-drug method of diagnosis and treatment, which allows taking into account individual features of an organism, to select adequate physiological and psychotherapeutic influences and control their implementation. Watching on the computer screen objective data of their psychological state, the patient under the guidance of the instructor with the help of special techniques and equipment develops the skills of self-control and self-regulation.

The capabilities of the Nexus-10 hardware are significantly expanded for narcology purposes using models developed jointly with the Institute of Cybernetics of the National Academy of Sciences of Ukraine. The duration of each training is from 15 to 30 minutes. The total number of trainings can vary from 5 to 10.

The training program is prepared by the doctor individually for each patient, taking into account the specifics of the disease and the tasks of medical rehabilitation.

The basic scheme of BFB-therapy organization includes:

1) a polygraphic registration of physiological functions of the organism;

2) selection of parameters of bioelectric or biomechanical processes chosen for management;

3) signaling system, depending on the nature of the change of parameters;

4) registration of biological processes and their system analysis. The main attributes of BFB therapy are: a) continuous

monitoring of regulated functions; b) providing the client with a sensory feedback of a regulated function in real time in the form of sound and image; c) instructions that would motivate the patient for any changes in their functions.

The procedure for BFB therapy is divided into two parts.

Part I – introductory (educational), includes analysis of personality characteristics, explanation of the role of the psychological factor in the development of psychological addiction to drugs, demonstration of interdependence of thoughts, images, feelings and physiological reactions with the help of the hardware and software complex, the possibilities of volitional control by the method of bio-management.

Part II – basic (therapeutic).

Each of the procedures containes one or more scenarios in which the following sequence of stages of BFB therapy was implemented: 1) a start screen saver (the name of the scenario); 2) registration of the background; 3) instruction; 4) training; 5) registration of the final background after the training; 6) finishing screen saver.

Duration of the second stage of registration of the initial background varied from 2 to 5 minutes. During this period, the parameters were analyzed by the BFB program, but with their stabilization, it was possible to move to the third stage, which lasted 30 seconds. It contained instructions for the client and provided time for solving training issues. The main, fourth stage lasted no less than 3 minutes. The repetition of this stage was allowed several times with rest in 1-2 minutes. During the study, the video was used as an incentive with additional language prompts-messages and specially designed musical samples. The instructions offered to the client vary according to the type of

procedure and the registration of the parameters. The fifth and sixth stages were final and recorded the achievements of the client.

We believe that it is expedient to use the possibilities of music in the psychological correction of personality states that arise after the abandonment of drugs – depression, panic and anxiety disorders, emotional instability, etc. The effectiveness of music use in the psychological rehabilitation of drug addicts is largely determined by the right choice of rehabilitation tactics, the professionalism of the therapist, the use of modern means of objective control, management of the musical process and the rational combination of psychotherapeutic and medical rehabilitation techniques.

Given that the nature of the rhythm is universal, in musical works it is usually perceived more easily than melody and harmony. Most musical rhythms are based on the natural foundation of the rhythms of the human body. This, above all, rhythms of breathing, heart rate, walking and running. It is established that wave activity corresponds to different functions of human consciousness. There is a relationship between the musical rhythmic pulsation and the biocurrents of the human brain [128].

Our daily routine is largely determined by what rhythms are functioning in the cerebral cortex. "There is evidence that – according to Walter G. – that the conditions of electrical activity of the alpha, delta or theta are closely linked with the maturity of the individual. It is appropriate to assume that in cases of impaired behavior it is possible to detect signs of immaturity of electric rhythms. Observing the disappearance and development of the brain rhythms in children, one can observe the process of forming a

character and establish the necessity and form of external interference in this process" [82, p. 220].

By the nature of the wave, its frequency, magnitude of amplitude, psychophysiologists can establish certain features of human behavior. So, individuals with high amplitude of alpha rhythm are characterized as calm, balanced and self-confident. In people with low amplitude of alpha rhythm, psychologists find the opposite qualities – tension, anxiety, inadequacy of behavior in a difficult situation. We assume that if a device that feeds sound and light pulsations is tuned to the predominant biorhythm of a given subject, then there is a resonance phenomenon – the dominant rhythm will be amplified due to the response of the rhythm imposition. In the process of perceiving the musical rhythm, human biorhythms spontaneously adjust to its frequency. At the same time, the most powerful experiences can arise at the moment of resonance – the coincidence of the dominant biorhythm with the frequency of musical-rhythmic pulsations.

A reaction to impose a rhythm through which physiologists investigate brain activity has a very important feature. It depends on the properties of the human nervous system, in particular, on such leading indicator as the "strength-weakness" parameter [77].

New powerful impulse music therapy received in connection with the advent of the equipment Biological Feedback (BFB, in the English version – Biofeedback, Neirofeedback). BFB gives an opportunity to register "on-line" the client's state and its correction [329; 568].

Modern means of neurophysiological control allow determining the level of conscious and subconscious state of the brain that generates rhythmic waves that can be registered with the

encephalograph. The complex rhythmic pattern of bioelectric activity of the brain (electroencephalogram) is the result of the interaction of numerous regulatory systems that provide a higher level of integration and management in the body.

The equipment of the Biological Feedback (BFB) registers the state of the brain wave activity, which allows us to move from the empirical subjective assessment of the depth and direction of musical-rhythmic effects to a controlled process with clearly defined quantitative parameters of the client's state. This allows you to accurately correct and direct the psychotherapeutic settings.

Using the BFB equipment, the therapist on the computer screen can observe the corresponding activity of the subconscious and conscious activity of the brain (alpha, beta, theta and delta waves). One of the main axes, reflecting the peculiarities of rhythmic EEG activity in the norm, is related to the vector of behavioral activation. With the ability to modify the nature of the rhythmic activity of the brain through specially selected musical samples, we thereby gain access to the levers on which the functioning of the regulatory systems depends.

In a somewhat simplified form, the functional features of the main EEG rhythms registered on the basis of the ATOS clinic with the Nexus-10 Mark II device are presented in the following way:

Delta waves.

Frequency range is from 0 to 4 cycles per second.

Slow waves (delta rhythm, 0.5-4 Hz) are associated with restorative processes, especially during sleep and low activation. With many neurological and other violations of the delta wave, markedly strengthened. Conversely, the excess of enhanced delta

waves in the EEG practically guarantees the presence of disturbances of attention and other cognitive dysfunctions.

Theta-waves.

Frequency range is from 4 to 8 cycles per second.

The increase of the theta-rhythm (4-8 Hz) is often observed in psychotic disorders, confusion states of brain consciousness. At the same time, in the norm theta-waves are associated with altered states of consciousness, as well as emotional response. If conditions associated with alpha rhythm were relaxing and enjoyable, then theta states, which are characterized by an enhanced theta rhythm in the EEG, were evaluated primarily in terms of enhancing creative abilities. Important is the social significance of one of the clinical variants of the alpha / theta protocol in the treatment of alcohol and drug addiction.

Alpha waves.

The frequency range is from 8 to 14 cycles per second.

They are considered manifestations of the subconscious state – during sleep, daytime dreams. Meditation also basically refers to the area of alpha waves, although sometimes there is a deepening to the level of theta waves. The feelings of fear, anger, anxiety cause depression of alpha rhythm.

The study of the properties of the EEG alpha-rhythm and the use of alpha-state capabilities is probably the starting point in the development of the BFB-methodology. In addition to repeated self-reports about "comfortable", "pleasant", "relaxing" and "soothing" character of alpha waves, it was shown a significant decrease of personal anxiety after passing the course of BFB-alpha therapy. Currently, the alpha protocol is used in the treatment of psychosomatic, neurotic, depressive and other disorders that are, to some extent, associated with changes in the activating systems of

the brain and, consequently, with increased levels of activation of the autonomic and central nervous systems [37; 212].

Beta waves.

Frequency range is from 14 to 34 cycles per second.

These waves are considered to be a manifestation of wakefulness and mental activity. Beta-rhythm (14-20 Hz) is normally associated with higher cognitive processes and focusing attention. It is believed that the normal rhythm of wakefulness is about 20 cycles per second. Operative enhancement of the beta EEG (16-20 Hz) has a positive therapeutic effect in various neurological disorders. Thus, the strengthening of the beta-component and the simultaneous weakening of theta component is effective in various epileptic syndromes, with attention to deficit disorder, hyperactivity, post-stroke disorders, post-traumatic syndromes, comatose states, and others. Properties such as reliability, non-toxicity in recent years increase the demand for BFB-technologies in pedagogy and pediatrics. So, today in the USA BFB-therapy is widely practiced in more than 700 clinical centers.

Gamma waves.

Frequency range is over 34 cycles per second. To level of 60 cycles per second characterize emotional excitement or especially active creative uplift; the frequency of more than 60 cycles per second indicates an excess of wakefulness, maybe a state of illusion or an approach of hysteria.

4.2 Psychological features of opioid addicted individuals

The sample of the study was presented by drug addicts, among whom 65.5% of men and 34.5% of women, the median age – 24 years. The median age of the opioid use beginning was 16 years. At the time of admission to the rehabilitation center, 69.8% of the subjects did not have their own family, 20% were married, 10.2% were divorced.

A survey of opioid-addicted individuals for the subjective evaluation of the drug's impact showed that 77.9% of those surveyed consider the use of opioids as a problem. 68.1% of rehabilitation workers reported that the circumstances contributed to drug use, 59.3% indicated that there were problems with the law, 97.7% believed that the use of opioids influenced their social life.

A significant proportion of rehabilitants (72.4%) are looking for someone to talk about their problem. 45% of the respondents said they continue to be in contact with the previous round of communication and are confident in their ability to counteract the negative impact of friends taking PAS.

Such research methods were used: modified questionnaire "Diagnostics of the person's motivational structure" by V. Ye. Milman, methodology "The level of subjective control" by J. Rotter, method of diagnosis of interpersonal relations by T. Leary, test of sense-orientations in adaptation by D. O. Leontiev, A. I. Serdyuk technique for the study of the self-assessment of the social disease significance, the method of SMPR ("Standardized method of personality research" in the modification by L. M. Sobchik), Hospital Anxiety and Depression Scale (HADS)

for the diagnosis of comorbid anxiety and depressive disorders, Symptomatic questionnaire (SCL-90-R) to assess the patterns of psychological symptoms of psychiatric patients and healthy individuals by L. Deerogathis.

Statistical processing of the obtained data was carried out using statistical methods using the computer program "SPSS for Windows". Methods of descriptive statistics included an estimate of the mean arithmetic (M), standard deviation (σ). For the data processing and the quantitative characteristics of the severity of the relationship between psychological indicators, a correlation analysis was used using Spierman correlation rank coefficient, a comparative analysis of Student's t-criterion and cluster analysis. Cluster analysis was carried out using the k-medium method. The critical level of reliability of the zero statistical hypothesis was taken to be 0.05.

Our survey showed that most of the subjects (68.9%) had clean periods, almost a quarter (26.1%) - tried to go through rehab.

The study of empathy of rehabilitants revealed that the average value of the indicator was 55.7 ± 11.2 points.

The obtained indicators were compared with the Mann-Whitney U-criterion, it is proved that virtually all data do not correspond to the law of normal distribution. We compared the results of the study with the control group (n = 48).

Since the sample exceeds 20 respondents, the Z-value was calculated. The P-level for U was calculated using the approximation to the normal distribution, that is, using the following formula:

$$z_U = \frac{\left| U_{obt} - \left(n_1 n_2 / 2 \right) \right|}{\sqrt{\frac{n_1 n_2 (n_1 + n_2 + 1)}{12}}}$$

Where **n1** is the number of people in the first group;

n2 is the number of people in the second group;

$\mathbf{U_{obt}}$ is the least of two empirical U. For example, if $U_x = 5$, a $U_y = 10$, then U_{obt} takes the value U_x. The obtained Z-value was analyzed by a table of critical values for the T-student criterion.

The following significant differences were identified:

o self-control (U = 794, Z = -1.981 at p = 0.004);

o acceptance of responsibility (U = 790, Z = -1.992 at p = 0.004);

o escape-avoidance (U = 802, Z = -1.990 at p = 0.006);

o general health − assessment of the patient's state of health at the moment and prospects of treatment (U = 683, Z = -2.071 at p = 0.003);

o social functioning (U = 502, Z = -2.224 at p = 0.001);

o self-esteem of mental health, presence of depression, anxiety, general index of positive emotions (U = 500, Z = -2.204 at p = 0.001);

o control locus-I (U = 785, Z = -2.096 at p = 0.01);

o control-life locus (U = 614, Z = -1.599 at p = 0.009);

o self-control (U = 619, Z = -1.604 at p = 0.0009);

o persistence (U = 750, Z = -1.953 at p = 0.003);

o domination (U = 632, Z = -1.880 at p = 0.008);

o friendliness (U = 789, Z = -2.073 at p = 0.01);
o authoritarian (U = 501, Z = -2.220 at p = 0.0001);
o selfish (U = 499, Z = -2.230 at p = 0.0001);
o aggressive (U = 501, Z = -2.223 at p = 0.0001);
o suspicious (U = 501, Z = -2.200 at p = 0.0001);
o subjugation (U = 750, Z = -1.899 at p = 0.003);
o dependent (U = 500, Z = -2.210 at p = 0.0001);
o benevolent (U = 711, Z = -1.332 at p = 0.03);
o orientation towards the future (U = 790, Z = -2.098 at p = 0.01);

The significance level (p) indicates the probability that the results do not represent the population. In psychological calculations it is assumed that the results reliably reflect the general picture, when the value of p is less than 0.05 (that is 5%). However, this conclusion may turn out to be incorrect. The significance of 0.05 in 5 out of 100 cases is likely to be incorrect. This can lead to a mistake of the first kind – an error that occurs when researchers believe that they have found real results in their absence. The opposite errors, which are that researchers believe that they did not find a result, but actually it is available, are called mistakes of the second kind. These errors arise because it is impossible to exclude the possibility of incorrect statistical analysis. Since the probability of an error depends on the level of statistical significance of the results, the smaller the value of p, the greater the confidence in the results correctness.

In table 4.3.1 the traditional interpretation of the significance levels used in psychology is given.

Table 4.3.1

Traditional interpretation of the significance levels used in psychology

Significance level	Possible statistical conclusion
$p > 0.1$	No statistically significant differences are found
$p < 0.1$	Differences are found at the level of the statistical trend
$p < 0.05$	Statistically significant differences are found
$p < 0.01$	The differences are found on a high level of statistical significance
$p < 0.001$	The differences are almost at the absolute level of statistical significance

Practical studies indicate that in order to avoid errors of the first and second types, decisions should be made on the existence of differences (links), based on the level p <0.01 or on the calculated statistical criterion for a smaller number of values (n) of the attribute.

The statistical criterion is a tool for determining the level of statistical significance, which ensures the acceptance of the true hypothesis and the rejection of the false with high probability.

The obtained results indicate that the indicator significantly reduced the quality of life in the subjects, underestimated the state of health, which reduced the indicator of vital activity, observed the restriction of social contacts, the level of communication in connection with the deterioration of physical and emotional state,

the presence of depression, anxiety experiences, which is consistent with the data of other researchers [358]. To a greater

extent, the subjects are prone to regulating their feelings and behavioral efforts aimed at escaping or avoiding failures, as well as having an underestimate of the physical and psychological components of health relative to the control group. The results of the comparison of sensory-life orientations of the control and experimental groups are presented in Table 4.3.2.

Table 4.3.2

Results of comparison of sensory-life orientations of the control and experimental groups (n = 208)

Sensory-life orientations	U criterion	Z coefficient	Significance level (p)
Life vagueness	745	4.2	0.00003
Purposes	891	3.4	0.00058
Process	993	2.9	0.00327
Result	750.5	4.1	0.00004
Control-I locus	825.5	3.8	0.00017
Control-life locus	927.5	3.3	0.00111

From Table 4.3.2 it follows that the components of sensory orientations: goals, process, result, control-I locus, control-life locus, and general comprehension are generally less manifested in the experimental group. Thus, the researchers observe much more often: lack of goals in life in the future, which give meaning to life; direction and temporal perspective; dissatisfaction with the present life; the notion of self as a very weak personality, low self-control; disbelief in the ability to influence their future.

Along with the low indicators of sensory orientations, lower indicators on the empathy scale (U = 815, Z = 2.4 at p = 0.01) are observed, indicating that the representatives of the experimental group are in interpersonal relations, in comparison with the control group, who experience more difficulties in establishing contacts with others, feel uncomfortable in a large company, do not understand emotional manifestations and actions, often do not find an understanding with others.

Comparison of levels of voluntary self-control showed that in the control group the level of self-control development (U = 682, Z = 2.3 at p = 0.002), persistence (U = 505, Z = 3.4 at p = 0.0007) and general the value of voluntary self-control (U = 692, Z = 2.2 at p = 0.03) is significantly higher than that of the experimental group, i.e the opioid-addicted ones exhibit spontaneity, abusiveness, uncertainty, which can lead to a reduced background of activity and disability, inconsistency of behavior, and also contribute to the tendency towards free interpretation of social moral norms. Moreover, they are more likely to be more sensitive, emotionally unstable, uncertain in themselves and have low reflexivity and understated self-control more often than the control group's representatives.

As a result of the parameters comparison of the interpersonal relations of the control group and the experimental one, it was found that in the experimental group, higher selfishness indicators (U = 1074,5, Z = -2.1 at p = 0.04), aggressiveness (U = 1085,5, Z = -2 at p = 0.04), suspicion (U = 988, Z = -2.6 at p = 0.01), as well as a tendency towards a higher level of dominance (p = 0.08). The results of the features comparison of interpersonal relationships in the control and experimental groups are presented in Table 4.3.3.

Table 4.3.3

Results of comparison of peculiarities of interpersonal relations in control and experimental groups

Parameters of interpersonal relationship	U criterion	Z coefficient	P Significance level
Domination	1147.5	-1.7	0.08514
Friendliness	1293.5	1.0	0.33884
Authoritarian	1289.5	1.0	0.32836
Selfish	1074.5*	-2.1	0.03536
Aggressive	1085.5*	-2	0.04217
Suspect	988*	-2.6	0.01054
Subordination	1196.5	-1.5	0.14297
Dependent	1279	-1.0	0.30186
Benevolent	1405	0.4	0.70982
Altruistic	1083.5*	-2.1	0.03968

Thus, patients addicted to opioids more often than representatives of the control group show self-satisfaction, hostility towards others, stiffness, aggressiveness, suspicion, abusiveness, tendency to doubt everything, malice, tendency to shift responsibility to others. Such individual characteristics, which are

* **Note: *** Significant U-criteria are marked

manifested in the first time on the emotional-behavioral level, can be explained by the vulnerability of the CNS limbic system [4].

To study the self-esteem of the disease social significance, Serdyuk A.I questionnaire was used, which purpose is to determine the level of the disease's impact on different areas of social functioning and those areas that are most affected by the disease.

The response to the disease is a powerful factor affecting the course of pathological processes. In addition, the response to the disease, its relation to a large extent determine the rehabilitation potential of the patient. It is well known that with two identical violations, one patient "escapes into a disease", the other continues the former way of life, despite the recommendations of physicians, the third realistically assesses his capabilities and tries to maximize their use.

The location of conditionally selected areas of social status in the form of vectors in the diagram allows us to clearly identify the degree of disease social significance for a particular person, as well as select the directions that should be considered as "targets" of psychotherapeutic influence in the process of rehabilitation. Further social adaptation depends on the disease internal picture. During the empirical study it was found that the level of self-esteem of the social significance of the disease affects the motivational and emotional components of the disease internal picture. Assessment of the disease social significance according to Serdyuk L. I. method is presented in figure (Figure 4.3.2).

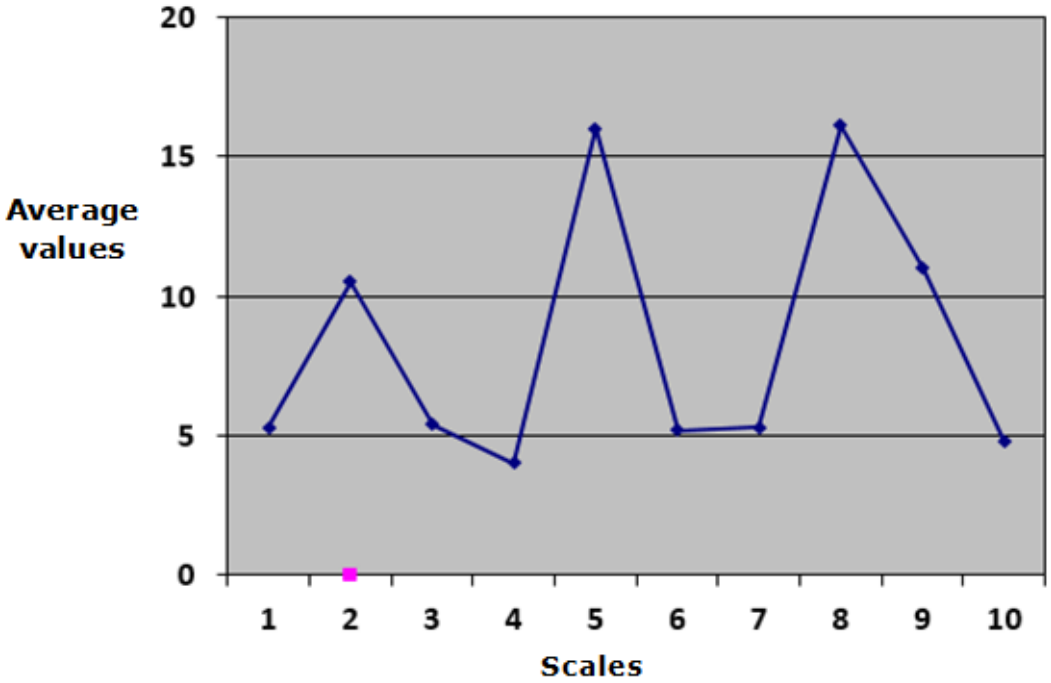


Fig. 4.3.2. Assessment of the disease social significance according to Serdyuk L.I method

The presented diagram clearly demonstrates high indicators on the following scales:

2. The deterioration of the attitude of the patient in the family.
4. The deterioration of the attitude of the patient at work.
8. Formation of feeling of defect.
9. Limitation of communication.

The deterioration of the attitude of the patient in the family, at work, as well as the limitations in communication are the consequences of the disease. The main and primary component of the structure of the subject internal picture is the emotional response of the subject for addiction. Over time, these emotional disorders are complicated by the lack of information, as well as the interactions of the subjects. There may be a state of fear, anxiety, depression. Thinking, based not on logical laws, but on the

emotional significance of certain facts. Addiction problems occupy a disproportionately large place in it, ousting other problems (work, family, social activities). Some of the provisions and conclusions are worthy of valuable ideas that are difficult to be corrected.

The emotional scope of opioid addicts is characterized by lability, which manifests itself in fluctuations from apathy to irritability. Dominant motivational profile is the profile, according to which the subjects have narrowed one-sided interests, acts.

An important psychological moment is maintaining hope for the success of treatment. Emotional reassurance should be combined with an explanation of the client's main types of addiction. This will prevent the client from frustration in the treatment with possible deterioration of his condition. The client will know that some exacerbation of the disease is natural, predicted by the doctor and that it will not become an obstacle to the favorable course of the disease.

We believe that people with a weak will can be lead to a state of passivity, depression. In order to determine the specifics of the current psycho-emotional state, the HADS scale was chosen. Hospital scale of anxiety and depression (HADS) is subjective, contains 7 questions-signs of anxiety and / or depression, and gives the following asseaments: 0-7 points - the norm, the absence of symptoms of anxiety and depression; 8-10 points - subclinically expressed anxiety / depression; 11 and above points – clinically outlined anxiety and depression. Results of diagnosis are presented in the table. 4.3.4.

Table 4.3.4

Results of diagnosis of opiate-dependent individuals using the HADS technique

Sub-scales	Average Values	Standard deviation
Anxiety	16.071	0.912
Sepression	12.206	0.583

Consequently, the subjects are characterized by a severe form of anxiety (more than 15 points) and moderate depression (the result is in the range of 11-15 points). For a detailed analysis of the severity of anxiety and depression on the HADS scale, we conducted a frequency analysis, the results of which are presented in Table. 4.3.5.

Table 4.3.5

Frequency distribution of diagnostic results of opioid-addicted individuals using the HADS method (data are given in percentages)

Expression level	Anxiety	Depression
Norm	5.1%	9.2%
Subclinically expressed anxiety / depression	11.4%	4.1%
Moderately expressed anxiety / depression	23.3%	67.5%
Severe form of anxiety / depression	60.2%	19.2%

According to the results of the diagnosis, it was found that most of the subjects had severe anxiety (60.2%) and moderate depression (67.2%), 5.1% had anxiety disorder, and 9.2% had depression in the HADS scale. That is, in subjects with more

severe anxiety than depression, the statistical analysis according to Mana-Whitney's criterion showed that these differences are statistically significant (U = 373.0, Z = -4.633, at p = 0.003). We allocated a group of drug addicts with expressed indicators of anxiety and depression, which turned out to be 71.7% of the total number of studied subjects.

It should be noted that people with clinically expressed anxiety and depression had the highest average daily dose of the drug, in addition, high indicators of anxiety and depression are characteristic for the initial stages of abstaining from the opioids use.

To evaluate patterns of psychological symptoms in opioid-addicted individuals, we used the **Symptomatic Questionnaire (SCL-90-R).** Studies of the current status of the subjects with SCL-90-R are given in Table. 4.3.6.

Table 4.3.6

Results of diagnostics of drug users by the Symptomatic questionnaire method (SCL-90-R, n = 228)

No.	Subclasses	Average values	
		Normative indicators	Results of the study
1.	Somatization	0.69	0.99
2.	Obsessive-compulsive disorders	0.76	1.35**
3.	Interpersonal sensitivity	0.83	1.11
4.	Depression	0.68	1.50**
5.	Anxiety	0.62	1.69**
6.	Aggressiveness	0.71	1.31**
7.	Phobias	0.35	0.68

8.	Paranoidity	0.67	1.12*
9.	Psychotics	0.42	0.93*
10.	General index of severity of symptoms	0.64	1.18**

Note (**) The differences between the results of the study and the normative indicators are statistically significant at p = 0.001; (*) the differences are statistically significant at p <0.05.

Consequently, among drug users, almost all indicators are higher than normative ones, with the most expressed symptoms such as anxiety (1.69), depression (1.50), obsessive-compulsive disorders (1.35) and aggressiveness (1.31). According to the results of statistical analysis using t-criterion for single statistics, significant differences in the results and normative data were revealed on the following scales: Obsessive-compulsive disorders (t = 10.811, p = 0.001), Depression (t = 9.290, p = 0.002) , Anxiety (t = 9.381, p = 0.001), Aggressiveness (t = 10.003, p = 0.001), Paranoidity (t = 3.420, p = 0.05), Psychotism (t = 3.395, p = 0.05) and General index of severity of symptoms (t = 8.731, p = 0.003).

We studied the personal properties of the subjects with the help of the Standardized Multi-Factor Method of Personality Research (hereinafter SMPR), which is a modification of the MMRI test. This method reveals the features of a normal person, not overloaded pathologically acute or altered disease individual characteristics [203]. Accordingly, the interpretation of the results has psychological rather than psychiatric orientation.

It is believed that SMPR is incorrectly used to study drug addiction due to the unreliability of the results of the study. Note

that in the conditions of psychological rehabilitation, especially at its later stages, this technique allows to find out the psychological problems of clients, to construct an algorithm of individual and group counseling and to adequately choose psycho-corrective measures.

According to the results of empirical research, we identified three main types of personality: psychopathological (34.52%), psychasthenic (34.01%) and depressive (31.47%).

Let’s analyze each of the profiles in detail. The psychopathological profile is represented by the following combinations of scales: 4'9268-/; 46928'-/0; 482'9-/ (we used the Hatway encoding method). That is, there is a significant increase in indicators (more than 70 T) on the scale of impulsivity, rigidity, individualism and, in some cases, optimism. The depressive profile is represented by combinations of scales: 2748'9-/; 2'480-/; 28'49-/, high indicators are found on pessimistic, impulsive and individualistic scales. The psychedelic profile is expressed in such combinations of scales as 68'42 '/; 6'482- /; 684'29- /, where the most marked are rigorous, impulsive, individualistic and pessimistic scales. This profile is considered to be the most controversial, since it combines multidirectional trends: optimism and pessimism; rigidity and impulsiveness.

The largest number of subjects has a psychopathological profile (according to the MRI, they express the Scale of Psychology (Pd), which characterizes the sociopathic type of personality). Dominant scale 4 in the method of SMPR is called "impulsiveness", respectively, this type of personality can be considered psychopathological-impulsive. The profile is presented in figure (Figure 4.3.3).

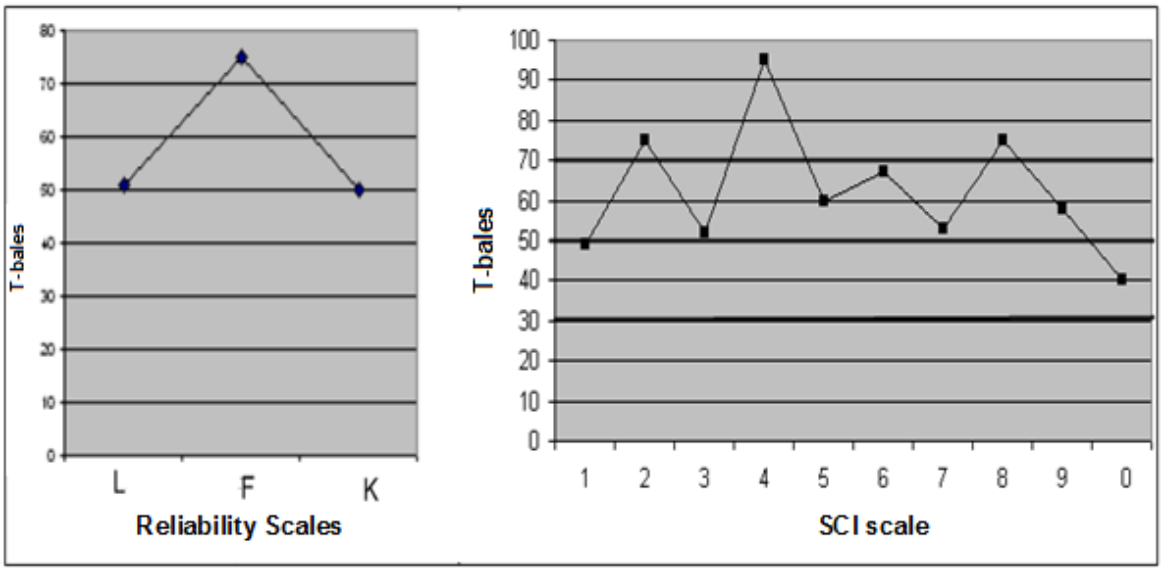


Fig. 4.3.3. The profile of the psychopathological (impulsive) type of personality

General characteristics of the profile. Hastefulness in responses, non-critical attitude to their own state, indulgence to their character and behavior are revealed.

There is an increase in the indicators on the scales 4 (95T), 2 (75T) and 8 (70T), that is, the psychopathological type of personality is characterized by impulsiveness, individualism and cyclothymia. An existing internal conflict based on a controversial type of response: high search activity and dynamics of excitation processes (scale 4) combined with expressed inertia and instability (scale 2), manifested in expressive motivation of achievements with uncertainty and rapid fatigue, characteristic of neurasthenic pattern of maladaptation.

Leading need: for independence, for success.

Individual response type: countering external pressure, incompleteness, impulsivity, conflict.

Reaction to stress: protest, aggression.

Protective mechanisms: crowding out of consciousness reducing self-esteem information.

Type of perception: verbal-analytical cognitive style, instability of the level of active attention, tendency to concentrate on trifles.

Emotional state: the tendency to frequent mood change, which depends mainly on the favorable or unfavorable external circumstances.

Characteristic features: impulsivity, excitability, demonstration of their independence, impatience, risk aversion, low self-control behavior.

Example. Vadim B., 22 years old, experience of using opioids – 3 years. The psychopathological (impulsive) type of personality is revealed. It is characterized by ambition, high search activity, expressed tendency toward domination, countering the pressure of external factors, the tendency to make decisions on hid own, entrepreneurial and initiative. These characteristics are reinforced by self-confidence, an offensive tactic of interaction, the expressed features of independence. Vadim is characterized by stenchiness, volitional activity, stress resistance, opposition to circumstances that impede the free self-realization of the individual, developed sense of rivalry, enthusiasm and desire to overcome obstacles on the way to the realization of his intentions. The stressed state is caused by the spontaneity blocking in behavior, the inability to realize the need for joyful and comfortable communication,

carefree life. Own insecurity, anxious alertness. Painfully experiencing dissatisfied vanity, the need to like others. Refusal of compromises, high motivation for achievements and stress associated with the inability to perform the desired activity. Anxiety, which violates the productive concentration of attention.

In 31.47% of the subjects, depressive personality profile was detected. According to MMRI, scale 2, expressed in this profile, is a depression scale (D) – aimed at detecting the degree of depression and moral discomfort; this is a pessimistic scale for the SMPR; therefore, this type of personality is appropriate to be called depressive-pessimistic. The profile is presented figure (Figure 4.3.4).

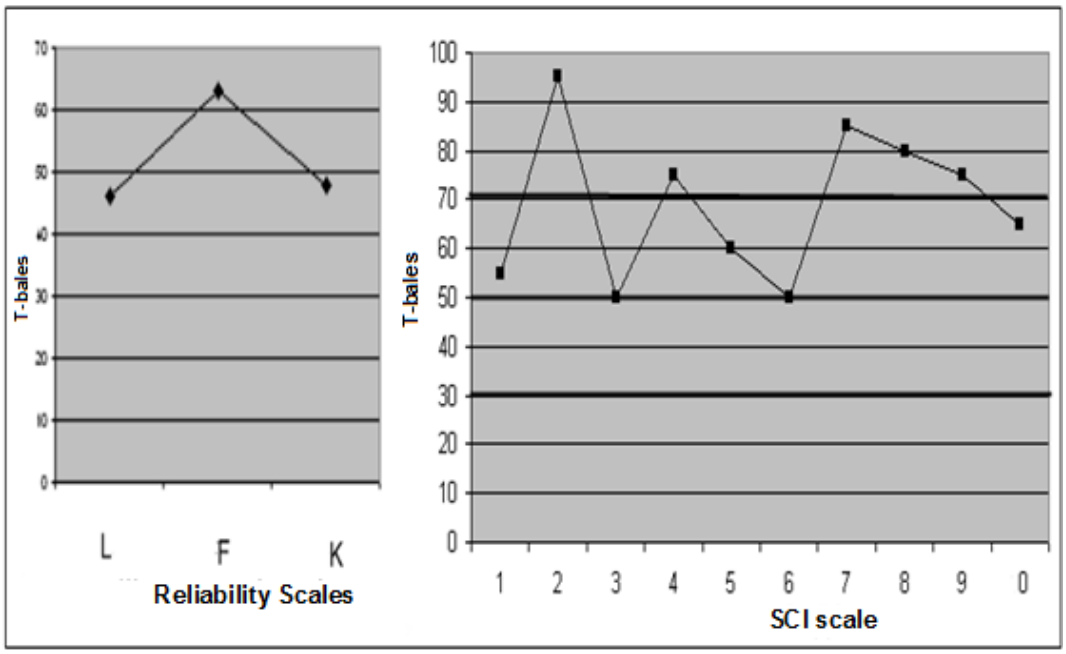


Fig.4.3.4. A profile of a depressive (pessimistic) personality type

General profile characteristics. An attempt was made to be too frank, the profile of reliability scales within the limits of permissible disagreement, a profile characteristic for the state of severe maladaptation, which is expressed in strong emotional stress.

There is an increase in the indicators on the scales 2 (98T), 72 (85T), 8 (80T), 4 (75T) and 9 (72T), the depressive personality type is characterized by pessimism, individualism and internal conflict, due to controversial type of response, when depression and pessimism on the one hand, combined with optimism and exaltation - on the other, testifying to the so-called cyclotymic version of the individual; In addition, a high level of impulsivity (scale 4 – 75T) was revealed, which gives grounds for assuming the presence of suicidal tendencies.

Leading need: affiliated, that is, understanding, support and friendly attitude of other people.

Individual response type: Dependency with increased self-esteem.

Reaction to stress: blocking activity, subordination to the leader, propensity to autoaggression.

Protective mechanisms: refusal of self-realization and strengthening control of consciousness.

Type of perception: verbal visual and figurative and intuitive.

Emotional state: tendency to frequent mood change, cyclothymia, anxiety, and numerous fears.

Characteristic features: anxiety, refusal of self-realization, asthenia.

Example. Ruslan L., 37 years old, the experience of using opioids is 7 years. It is characterized by expressed protective tendencies with a tendency to accusations of other people and

circumstances of life that leads to difficulties of social adaptation and problems in effective interpersonal relations formation. Along with rationalism, there are elements of subjectivity, supersensitivity to critical remarks, distrust, and a sense of danger due to the detriment of others. Thinking is synthetic, inventive, with artistic orientation and susceptibility to aesthetics. The desire to attract attention, win the sympathy of others and recognize his originality. The tendency to attach particular importance to his judgments and statements of other people, alertness, and vulnerability. The will of defending his independence, the desire for independence and strengthening his positions. Refusal of relaxation and concessions, the desire to preserve activity, to master emotions. There is no opportunity to realize the need for love, understanding, benevolent relationships, restless dissatisfaction, associated with the awareness of his addiction. Distraction and difficulty to concentrate attention. The need for independence is blocked. The situation is alarming and dissatisfied. Increased self-control helps hide vulnerability.

In 34.01% of subjects, psychasthenic personality type was detected. A typical profile is shown in figure (Figure 4.3.5).

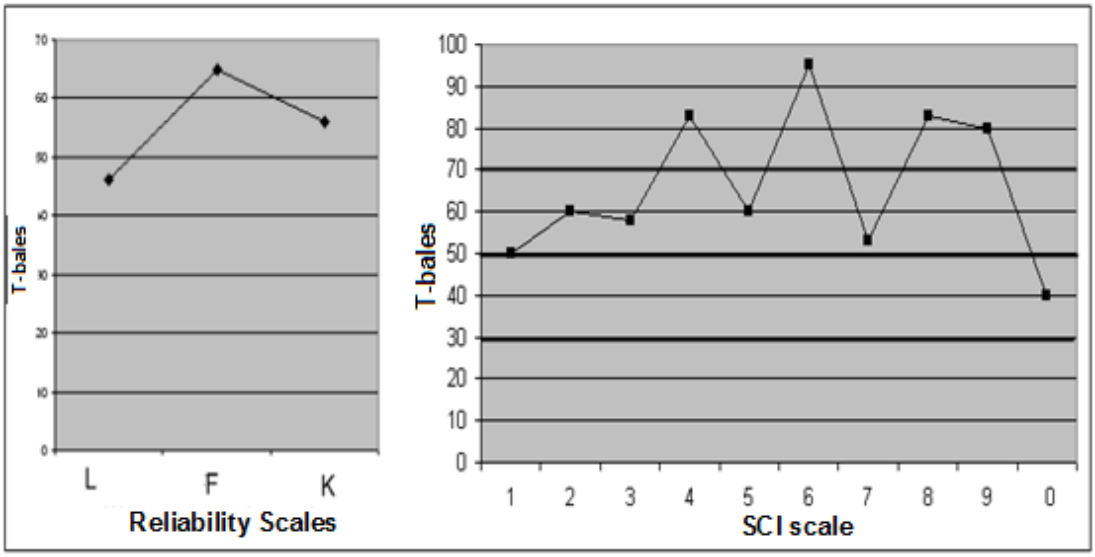


Fig.4.3.5. Profile of psychoactive (rigid) personality type

According to MMRI, scale 6 is a paranoid scale (Pa) − allows you to determine the extent of suspicion, according to the SMPR, this scale is a rigidity scale, therefore, this personality type is advisable to be called psychasthenic-rigorous.

General profile characteristics. The results of the diagnosis are reliable. The prevalence of hypersthetic tendencies, active-protective position, with motivation aimed at self-realization is revealed. There is an increase in the indicators on the scales 6 (98T), 8 (85T), 9 (83T), 4 (83 T), the psychosthenic personality type is characterized by rigidity, individualism, optimism and impulsivity. On the path to self-affirmation often conflict with other people and social norms, they are characterized by affective enthusiasm, which often takes on the form of valuable ideas about the object, with the tendency to construct a subjective logic scheme that can not be adjusted from the outside. Often there is an excessive speech and motor activity, self-esteem is inadequately overstated.

Leading need: self-assertion.

Individual response type: ingenuity and rationality with insufficient flexibility, it is a realistic rational type of person with expressed stench and rigidity.

Reaction to stress: activity based on the accumulated experience.

Protective mechanisms: projection of distrust and hostility, rationalization.

Type of perception: intuitive and pragmatic system types of thinking.

Emotional state: the desire not to show your vulnerability.

Characteristic features: suspicion, obstinacy, incompleteness, conflict, excitability.

Example. Sergiy S., 40 years old, experience of using opioids – 4 years. Characterized by sociability, incompleteness of installations, closeness, selectivity in contacts, analytical composition of mind, thoughtful approach to solving problems, inertia in decision-making. The predominance of the rest, loneliness, and spikes of activity is rapidly changed by the passivity phase. The desire for an independent position, the originality of judgments, the peculiarity of interests, enthusiasm, the need for "special" experiences and relationships, which are preferred to specific real goals (protection from life difficulties through escape into dreams). The tendency to hide uncertainty. The need for approval and encouragement to preserve the hope of improving the situation in the future. Decency in interpersonal contacts to avoid disappointments. The skepticism about the opinions of others, the need to defend own installations, perseverance, opposition to circumstances that are protective. Practicality, rationalism, the tendency towards a system approach in solving problems. Rely on the accumulated experience.

Orientation to own opinion, against the influence of the external environment. A sense of rivalry. The significance of own social position. Tendency to specific activities, the field of precise knowledge and the position of the leader in a social environment.

Table 4.3.7 summarizes the characteristics of the personality types of the opioid-addicted subjects.

Table 4.3.7

Characteristics of the main personality types of opioid addicts (by SMPR method, n = 228)

Type	Scale	Leading need	Stress Source	Reactions to stress	Features of behavior and character
Psychopathological (impulsive)	49’ 46’	Independence and satisfaction	Obstacles in achieving goals, monotony	Protest, aggressiveness	Impulsiveness, excitability, demonstration of independence, impatience, risk aversion
Depressive (pessimistic)	27’	Affiliation (in the understanding, friendly attitude)	Loneliness, quarrels with meaningful people	Auto agression	Anxiety, refusal of self-realization, cyclothymia
Psychasthenic (rigid)	68’, 64’	In self-affirmation	Disrespect for personality, betrayal of loved ones	Projection of distrust and hostility, rationalization	Suspicion, obstinacy, incompleteness, conflict, excitability

It should be noted that all subjects showed low indicators on scales 1 (Scale of "neurotic overcontrol") and 0 (Scale of "introversion"), indicating inattention to their state of health, neglection of physical well-being, negation of disease symptoms as well as about the expressed communicative, extravagance, the tendency to get pleasure from life without applying the least efforts for this.

Based on the identified psychological characteristics of opioid-addicted individuals and significant indicators, different in

the control group, the following conclusion can be drawn regarding the psychological portrait of drug addicts:

1. Reduced socio-psychological functioning

Key Indicators:

- decrease in vital activity.

-restriction of social contacts, decrease of communication level due to deterioration of physical condition.

- deterioration of the emotional state.

2. Psychological disadaptation

Key Indicators:

- low control of impulsiveness, misadaptation, protection, weak "I-concept".

- orientation towards satisfaction, lack of caring for consequences.

- distancing, that is, expressed cognitive efforts to separate from the situation and reduce its significance.

- high tension

- search for social support, that is, effective emotional support in an unadapted form.

- acceptance of responsibility, that is, recognition of its role in the problem, attempts to resolve it in a maladaptive form.

- escape-avoidance in a maladaptive variant.

- high tension in the effort to create a positive value with a focus on the growth of one's own personality.

3. Violation of sensory orientations sphere

Key Indicators:

- lack of life goals.

- dissatisfaction with the present life.

- dissatisfaction with the past.

- low self-control.

- Fatalism (disbelief in the ability to influence its future).

4. Violation of meaningful personality relationships (to oneself, to others, to illness and treatment)

Key Indicators:

- selfishness.
- aggressiveness
- suspicion

5. Violation of empathy relations

Key Indicators:

- difficulty in establishing contacts with others.
- discomfort in a big company.
- emotional indifference.
- lack of mutual understanding with others.
- emotional dependence on others, that is hypertrophied version of empathy.

6. Distortion of the perception of the disease internal picture

Key Indicators:

- lack of motivation to overcome the disease.
- lack of successful positive changes.

7. Violation of volitional self-control

Key Indicators:

- emotional instability, vulnerability, insecurity, low reflexivity, impulsiveness and instability of intentions.
- Increased lability, inconsistency in behavior.

4.3 Substantiation of methods and technologies of psychological rehabilitation programs for opioid addicted

1. Cognitive-behavioral therapy.

These and other psychotherapeutic work techniques with opioid-addicted were used under the direction of KBT-intern, Corresponding Member, candidate of psychological sciences, senior researcher of the Department of Social and Clinical Drug Addiction of the Ukrainian Research Institute of Social and Forensic Psychiatry and Narcology of the Ministry of Health of Ukraine T. V. Sinitskaya

Techniques of cognitive behavioral therapy (hereinafter referred to as CBT) are used in all four stages of the Program in combination with other approaches.

An individual treatment method provides a wide opportunity to focus on specific problems and characteristics of the patient, and also allows the therapist to adapt the intervention in accordance with the readiness of the patient to change and its goals in the development of specific skills. CBT requires careful study of the behavior patterns associated with the use of surfactants, to this process is given a lot of attention during individual sessions.

Features of Behavioral Therapy:

- aimed at maladaptive behavior, and not for predictable reasons;

- works on the principle "here and now";

- uses specific, well-formulated treatment goals;

- choice of treatment method that corresponds to specific identified problems;

- submits its methods to empirical verification

(for example, methods should cause the desired changes);

- uses the training principles to change the maladaptive behavior.

Advantages of the CBT use in addiction to opioids:

- Encourages cooperation in the "patient-therapist" relationship;

- requires the participation of patients (activity, not passivity);

- high level of structuring and purposefulness.

2. Gestalt therapy.

A particular advantage of this method is a holistic approach to a person who takes into account his psychological, physical, spiritual and social aspects. Gestalt therapy instead of focusing on the question "Why is this happening to a person?" replaces it with the following: "What does a person feel now and how can this be changed?" The main purpose of using this method in the rehab program is to focus the patient's attention on the awareness of the processes that take place with him "here and now." Thus, the patient learns to be responsible for his or her life and for everything that is going on in it, and, consequently, for making the desired changes [227].

3. Art therapy.

This method is based on the therapeutic use of art and other forms of creative expression. Experience has shown that this technique has significant potential in the rehabilitation of addicted.

Each art-therapeutic session, within the framework of the Program, consists of the following stages:

1) introduction – "heating up". Graphic techniques and exercises were used to free up hidden feelings and unconscious energy through visual work, stimulation of spontaneity, imagination and creative abilities;

2) fine work – "theme performance". Exercises and themes were used that allowed participants to reflect their own life experiences and relationships with others, including attitudes toward oneself, which allowed them to explore, correct behavior in different critical situations, and express their feelings. Such work is accompanied by self-reflection in the context of life, against the background of the feelings and needs reflection.

3) discussion – "end of the session". There was a disclosure of feelings, associations, thoughts associated with the visual product and its content. Each participant had the opportunity to invent their own representations, and this "... usually leads to acquaintance with possible alternatives ..." [42, p. 104]. During the discussion, each participant shared his feelings and thoughts about what was happening during the session, what were his impressions of the general atmosphere in the group, the nature of verbal / nonverbal communication, the role of the leader, other participants, their attitude to the topic of the session.

4. Methods of psychological correction of emotional states of opioid addicted persons by the means of music.

In the development of the methodology of psychological correction of the emotional states of opioid-addicted individuals, we used the means of music to simultaneously engage the three most important channels of perception: auditory, visual, and motor

(kinestetic), since ancient Chinese wisdom states: "Tell me – and I'll forget, show me – and I will remember, let me act myself – and I will understand." The basis of our methodology is the simultaneous combination of speech, movement and music in the Carl Orff system [258]. Under this system, the simultaneous combination of speech, movement and music is an inextricable link and the main content of Orf's musical correction. Musical education, speech exercises are very important, because the musical rhythm develops in close connection with the speech.

We used the therapeutic music influence in psychological work with opioid-addicted not only during musical exercises or, but as a structured system that can include the following forms of work:

1. Dance therapy – one of the types of motor therapy, which, in particular, provides an opportunity for self-expression, self-realization, transfer of emotions and feelings. The use of musical compositions deepens emotional perception, frees up the feelings that opioid-addict passes in motion, which in turn contributes to personal development and a better understanding of his own self. Expressive movements are a compulsory component of emotions. There is no such emotion or experience that would not be transmitted in the movements, and not only in facial expressions, but also in hand gestures, movements of the legs, head, body, tension or relaxation of the muscles, the nature and tempo of the breath, etc. Through distinct movements, drug addicts can realize their inner state. Modern dance therapy is aimed at reducing muscle tension. It promotes the increase of human mobility. We used this type of dance-rhythmic gymnastics as an igrhythmics.

2. Drama therapy is one of the innovative directions of art therapy, which is intensively developed and includes elements of music, fine arts and dance. One of the reasons for the widespread use and effectiveness of drama therapy is the lack of demand in the modern world of human gaming potential, "malnourishment" in childhood. We consider it expedient to use such kind of drama therapy as singing.

The method of psychological correction of the emotional states of opioid addicts developed by us includes the following stages:

1. Preliminary training.

2. The main process.

3. Post-correctional training.

At the stage of preliminary training, the stages are:

1. Interview.

2. The patient's training of the muscular relaxation, creates the installation and readiness of the patient to feel "musical experience".

3. Music is selected.

The most important resource of man is its ability to learn. The task of the stage is to show the ways of realizing musical thinking: to demonstrate to the person that he is able to recognize and memorize melodies, to feel the difference between the major and the minor ("fluent feeling"), the dissonance and the consonance ("dissonance" from the Latin dissono – sound is a consonant that is perceived as anharmonic and invisible to the ear, dissonances include large and small seconds and septa), distinguish the timbre of musical instruments, and so on. Musical-rhythmic movements include musical-rhythmic exercises, round dances and games that help to better understand, feel, love music, to understand its mood,

learn to distinguish the means of musical expression. It is advisable to use these games and exercises not only in musical lessons, but also in everyday activities. Musical-rhythmic learning is better done at the first stages of psychological rehabilitation, because emotions under the influence of music create the need for motor activity, which gradually acquires a more arbitrary nature.

The program should consist of melodies, with a clear rhythmic pattern corresponding to the rhythmic features of the performed exercises. Such music will subconsciously "conclude" certain structural elements of exercises limited by musical motive, musical phrase or musical proposition.

Dynamic shades of purposeful music selection (increase or decrease of volume, smoothness or intermittence of sounding, etc.) involuntarily regulate the degree of tension and relaxation of working muscles, the nature of the increase or weakening of muscle effort, smoothness or impulse in this motor action.

To more effectively solve typical activation problems, musical material should be selected to stimulate the emotional state, which should be characterized by the brightness and logic of structural constructions, occasionally slow, and often more moderate and livelier, mainly short musical phrases, with a clear division of motives. During the development of scientific literature on this problem (L. G. Dmitrieva, I. V. Dubrovin, A. M. Zimin, I. V. Lifits, J. K. Kholodov) were determined the main content, problem, method of studying the material. Speech exercises are very important for musical education, because musical rhythm develops in close connection with the speech. At all stages of the psychological rehabilitation program, the beginnings of musical-relaxation psychotherapy are carried out. Such sessions with the

simultaneous combination of speech, movement and music will allow socially-disadapted symbolically (metaphorically), at the level of feelings or imagery, to create a model of output from the state of stress and to experience "discharge" directly, as a real process, such as is felt physically. Music in this case serves as an "invitation" to enter into the new psychological space (musical experience) and "navigator" – means of orientation and the choice of the optimal course of passage through restrictions, stereotypes of thinking that prevent drug addicts from new experiences.

4. Role playing with elements of psychodrama.

The main purpose of applying this method in the Rehabilitation Program is to determine the attitude to a particular life situation, to facilitate the acquisition of experience by the patient. Sometimes patients may experience situations they have already been. A role-playing game is, to a certain extent, an "open" technique that allows you to develop your skills, your own experience and the specific situation in the group.

One of the key means of group psycho-correction work in the Rehabilitation Program is a role-playing game using elements of psychodrama. The themes of role-playing games are defined by the "bank" of addictive (critical) situations that are modeled during an experimental study, or asked by participants during group work. The correction mechanism is the simulation of critical situations in the specially created conditions of group work, search and learning of the optimal ways of behavior in them, the assimilation of new social roles and behavior forms.

Using role-playing games allows you to build a spatial-temporal construct in the operating system "here and now." Placing their past, present and future into the system "here and now", based

on personal experience, participants can directly interact with the unfinished situations of the past (the effect of psychodrama) and construct the future. Thus, they change the perception of the addictive (critical) situation, behave more consciously and flexibly in them.

The tasks for using role-playing games are:

- reaction outside the experiences (drama) of the inner world;

- mastering his past, his comprehension and "farewell" with him;

- increasing self-confidence, self-esteem and strengthening the belief in the ability to change oneself and their behavior;

- search of the optimal ways of experiencing-overcoming of critical situations; mastering new, more adaptive social roles and behavioral patterns.

In the process of implementing the suggested Program, each role-play contained three phases.

1. Warm up. The purpose is to prepare for psychodrama action. For this you can use group discussion, non-verbal exercises.

2. Psychodrama Action. In this phase, an insight from a problem presented to a participant is phenomenologically achieved through a concrete situation description without interpretation and reasoning. The participant, as a protagonist, is invited to play a scene in which the individual situation is impossible. To play the scene, it is necessary to determine: a) the space of action to create reality with its time, conditions and norms of life (this helps the participant to get into the situation); b) people meaningful for action, and select other members of the group as "Auxiliary I" for these roles. After playing the situation, if there is no integration of

experience, you need to "replay" the situation by changing your life scenario and ways of responding. When a participant (protagonist) is experimenting with new ways of responding, it is important to realize the feelings and emotions that accompany the actions in order to assimilate the results of the changes.

3. Discussion. Here is an expression of feelings, discussion and analysis of the session. To consolidate the results, "playing out critical situations in the future" is used. During this phase, feedback is required, participants share the feelings they encountered while playing roles. Due to this, the protagonist is better aware of his feelings and needs, the feelings of other people; sees the interconnection and the logic of fulfilling vital roles [197; 296].

5. Family therapy.

Family therapy in the program that is presented by work with relatives of patients, as well as family education.

Mandatory Family Education Topics (Relatives Information Groups):

1. Alcoholism and drug addiction – a family illness.

2. Dysfunctional Families: Key Features.

3. Co-dependence: signs and symptoms.

The purpose of individual and group counseling or psycho-corrective work with relatives of patients is to help addict and his family members:

- to get skills to define their own feelings, to adequately express them;

- to work out ways of constructive change of the pathological family system of mutual relations, especially with regard to personal participation in it [308; 309; 312; 50; 38].

4.4 Forms of psychocorrective work

he Program uses the following forms of psycho-corrective work:

Individual psycho-corrective work.

As the basic technologies of psycho-corrective work, elements of cognitive-behavioral psychotherapy were used. Auxiliary techniques were: role-playing game, art therapy, gestalt-therapy.

Group psycho-corrective work – a method that uses the influence of the group as a primary social organism. It has many therapeutic factors that are aimed at internal changes in humans, changes in reactions, various forms of behavior, etc. The main tool is the recovery group itself, which provides feedback for all participants [86].

The motivation to work in a group may be increased by the following factors:

1. Providing a positive "feedback" (acceptance and understanding of patient's problems).

2. Discussion of the distribution of responsibility, stimulation of personal responsibility of the patient for solving his problem.

3. Creating confidence that the manager will continue supporting the participant in case of difficulties.

4. Agreement on forms of communication during the period of preparation for the group work.

Scheme of classes on group psycho-corrective work is determined by the following stages.

a) Introduction:

- announcement of the training topic;

- Adoption of the "Rules" for conducting the training (to appreciate the time (to speak in turn, briefly and infrequently, on the topic of the class); speak only on your own behalf, to be friendly and positive towards oneself and to others, to respect your and opposite sex, to volunteer to be active; to ensure absolute confidentiality of what is happening at the training.

Rules are reminded at the beginning of each class, they should be written on a large sheet of paper and attached in a prominent place.

b) Greeting – clarifying the state of health of everyone, which creates atmosphere "here and now". By revealing the peculiarities of the emotional state, the participants tell what they expect from the class, and the changes that have occurred as a result of the previous class.

c) The main part. Exercises of passive character are performed alternately with mobile games. Both the first and the second stages necessarily culminate in discussion and self-report of the participants regarding their feelings and thoughts.

d) Exercise for emotional warm-up – aimed at creating internal freedom of group members.

e) Summing up the classes – thoughts of the participants in relation to their feelings and impressions about the work, the wishes of the trainer and group.

e) Classes ending – final exercises, after which - an assessment-analysis of a class, which can be done in the form of questionnaires or statements.

g) Farewell – a ritual action, which may have different forms.

Measures used in group psycho-corrective work:

- *Presentation and "icebreakers".*

Short exercises are used to get started: they help to create an atmosphere of trust in the group, encourage participation and mutual support.

- *"Brain storm".*

Collect as many ideas as possible about a particular problem from all participants during a limited amount of time.

- *Discussion by a large group.*

The whole group discusses ideas or events that relate to any planned or improvised topic.

Most tasks are performed in small groups or pairs. This is explained by the fact that it is easier for a patient to speak in a small group because he feels safer there. Work in small groups also gives you the opportunity to save time, because there is no need to listen to everyone in a large group.

- *Discussion by small group.*

A group of 3 to 6 people discusses certain issues and develops solutions to them, and then the discussions are held by all members of the group.

- *Group discussion.*

Allows you to compare the opposite position, see the problem from different sides, clarify the mutual positions, which reduces the resistance to the perception of new information, eliminates emotional bias. It also helps to train participants in real-world analysis, instills listening skills and interact with others, demonstrates the multi-vector of a possible solution to most problems. To activate the participants in the group discussion, you can use the statements in a circle: relay method – each passes the word to someone who thinks fit; utterance for a certain period of time (for example, each one is given 10 to 15 seconds), and so on.

- *Mini lectures - 10 - 20 min.*

Provide an opportunity to convey a new, necessary for further work information, which should help patients to understand the problem more deeply and make the necessary conclusions. End with collective discussion or exercise, which will allow you to use the gained knowledge practically. It is desirable, after the end of the mini-lecture, to distribute the listened information to the audience in a printed form.

- *Role playing.*

It imitates the reality of what is happening, and allows participants to act as if they are.

- *Questionnaire.*

Used to test knowledge and evaluate the learning process.

- *Investigation of cases.*

Based on real cases that are the own experience of group members. Stimulates the search for achievements and mistakes in their own behavior.

- *Psycho-gymnastics.*

Patients communicate without words. The themes of psychogymnastic exercises are diverse, but the main ones can be distinguished: daily life situations; problems of individual members of the group; typical human conflicts; relationships in the group; fantasy and fairy tales; attitude to the training itself. After playing, you can use different analysis options, most importantly, to express your feelings both as game participants and members of the group that watched it. It is desirable to combine psychogymnastics with music.

Psycho-gymnastic exercises are quite effective in order to intensify, "warm" group members, create a positive emotional mood in them, eliminate the tension that may arise in the initial stages of the group's work.

Psycho-gymnastics also contributes to the progress of the phases of the group formation. So, in the initial phase of the group formation there are exercises: "Snake", "Geometric Figures", "Zoo", "Penguins", "Clock", "Poster", "Typography", "The club of threads", "Draw-pull", "Song" (see Appendix A). Recommended psycho-gymnastic exercises are listed in Appendix A.

The above-mentioned exercises affect the process of group dynamics, contribute to the group strengthening. The next exercise unit is also focused on the development of the group, but, in addition, has a diagnostic direction. The exercises "Hand", "Fingers", "Movement", "Separating by Symbol", "Choosing a Leader" are offered (see Appendix B). Recommended exercises are listed in Appendix B.

Rituals occupy an important place in the group work. Firstly, due to their specific stability, semantic frame (for example,

meeting and farewell, after which the group work begins, whether it ends and it is possible to go over to other issues, as if not directly related to what happened on employment) Secondly, rituals carry a large functional load, contribute to the formation of group cohesion.

Typically, rituals can begin to form already in the first class. The process of developing ritual actions, carried out in the form of group discussion, becomes a catalyst for group dynamics.

The rituals include: the rituals of the meetings, the ritual of entering the party, the rituals of farewell (see Appendix C)

Each class begins with the ritual of greetings developed by the group. Depending on the mood in the group it is expedient to offer its members several psychogimnastic exercises (for example, psycho-gymnastic exercises like "Hi ...")

Exercises for warm-up.

The purpose of exercises for warm-up is to create the appropriate emotional mood of the training. Exercises "Greetings" "Hello, can you imagine ...", "Hi, I'm glad to see you ...", "Conveyor" are used for this purpose (see Appendix D).

The bulk of the psycho-corrective group exercise is planned on goals and objectives set by his supervisor. You should not convert classes into a kaleidoscope, where exercises change one another. It is necessary to stimulate the group to discuss what is happening when performing these tasks, analyze the existing problems. It should also be remembered that each new group is not similar to the previous one, each new class will be different from the previous one. Therefore, the superviser should not follow the script too accurate, but it is advisable to focus on the mood and desire of

the group, always have a range of exercises in stock and use them creatively.

A useful moment in the organization of classes is **homework**, which is selected in such a way in order to consolidate the effect of this occupation, prolong its action. A homework check should not cause the slightest association with school life. The time of the check is determined by the coach based on the nature of the task (why it was devoted, on what directed, etc.), as well as the mood of the group. Very useful procedure is the reflection of the previous class, which is advisable to conduct at its first stages. The group usually sits in a circle, and all participants alternate express their impressions of the past class, answering the question of the coach: "What did you like? What did not? What would you like to do differently? What are the claims to the group, to the superviser? "

At the end of the class, a homework is given and a farewell ritual is performed.

Psycho-corrective group work is carried out in an **open-type** groups [22] during the four stages of psychological rehabilitation. The following thematic blocks are required for processing: [277]:

1. Effective communication.

Goals: Formation of effective communication skills.

Activities: In order to develop effective communication skills, a mini-lecture, exercises "Tete-a-tete", "Gears", "My Relations with Parents", "Sea Walk", "I Hear You", "The Blind and Guide," "Manipulation Warm Up"," Marionette", "Penguins, "The proposal to take a drug is a goodwill or benefit?" (see Appendix E).

Forms of work: Game and imitation. Brain storm. Discussion by a large group.

Expected results: Developed effective communication skills with the patient.

2. Assertiveness and independence.

Goal: Formation of assertiveness and independence skills.

Activities: In order to develop the consistency and independence skills, a mini lecture, exercises "Complex Sitiations", "Why do people sometimes insist on their rights and do not express their own feelings?", "I am an assertive person" (see Appendix D).

Forms of work: Game and imitation. Discussion by a large group. Brain storm. Role playing game. Situational analysis and specific situations.

Expected Results: Assertiveness and Independence Skills. Skills of constructive communication.

3. Negotiating.

Goal: Formation of negotiation skills.

Activities: In order to develop negotiation skills, a mini lecture, homework and exercises "Conflicts", "My Problem in Communication", "Ability to Convince", "We Speak Abuse", "Self Defense" are offered (see Appendix F).

Forms of work: mini-lecture, brainstorm, discussion by a large group, homework, game and imitation.

Expected Results: Developed Negotiation Skills.

4. Refusal skills.

Goal: Formation of refusal skills.

Activities: In order to form refusal skills exercises "Polite Refusal", "How to say "no", when you are offered to drink alcohol or drugs?" are offered (See Appendix G).

Forms of work: Game and imitation. Discussion by a large group. Brain storm. Role playing game. Situational analysis and specific situations.

Expected results: Formed refusal skills.

5. Formation of empathy skills.

Goals:

1) Formation of empathy skills.

2) Development of understanding the emotional state of another person.

Activities: In order to develop empathy skills, it is suggested: mini-lecture, the filling of a diary of feelings, exercises "Shadow", "My portrait", "Concorded actions", "Express in one word", "Feelings and Intonations", "The most unpleasant person", "Mirror" "I Feel", "Yes", "Teeth of a given horse" (see Appendix H).

- *Exercises:* "Why do people use drugs and alcohol? What are they doing? Why do they refuse to use drugs? "

The coach formulates the problem and among the members of the group determines the leader and secretary, and then proposes to put forward any idea that comes to mind. These offers are fixed on the board. After the brainstorming, the coach analyzes the ideas, complements them or analyzes the false, distributes them according to the categories.

Examples of ideas that relate to the first attempt and use of PAS: to improve your mental state; bad luck to friends; to experience new feelings, states (kicks); out of boredom, curiosity; for a company; to look cool; to have fun or to elevate the mood; to

increase concentration; for stimulation in learning; to save your beloved person; it's fashionable; to relieve pain.

The following questions should also be discussed: "What are the consequences of drug use?", "What are the advantages and disadvantages of refusing to take drugs?", "What is addiction to PAS?", "What substances do cause addiction?", "Why addiction to PAS is a chronic, incurable lethal disease?".

To summarize, it is important to conclude that in almost all cases person chooses whether to take a drug or not.

- *Exercises:* "Life with drug addiction, HIV/AIDS"; "Feeling".

- *Exercise:* "What to do if my friend is addicted to drugs".

The coach offers brief information to the group about the content of co-addicted behavior and its consequences (up to 10 minutes). Then during the discussion, the coach encourages the participants to form different behavior strategies that allow them not to enter into a relationship of co-affiction, preserve personal security and thus help the friend. Participants' speeches are discussed and may be non-aggressively criticized. Exercise is aimed at forming an optimal strategy of relations with a close drug addicted person.

Measures for the development of emotional openness: exercises “Questions-Answer", "Talk through the glass", "Without a mask" (see Appendix L).

Measures to understand the emotional state of another person: exercises «Understand the Other», «Emotional portrait», «Telepathy», «Emotional mirror», «Enemies» (see Appendix M).

Forms of work: Group discussion. Situational Analysis and Specific Sitations. Game and imitation. Discussion by a large group. Homework.

Expected results: Emotion and empathy skills. Ability to emotional openness. Understanding the emotional state of another person.

6. Formation of decision-making skills.

Goal: to form participants' decision-making skills.

Activities: for the elaboration of the decision-making algorithm, the exercises are used: "Find an Effective Solution", "Sacrifice Altar", mini-lecture (see Appendix O).

Mini-lecture.

Main conclusions of the **mini-lecture #1**: complex, stressful situations are always subject to an assessment that generates relevant emotions and is built on experience. There is an algorithm of decision making, which consists of 6 steps:

1 - definition of the problem ("stop");

2 - definition of own goal ("think");

3 - generate solution options ("think twice again");

4 - assessment of the consequences ("think about the consequences");

5 - comprehensive analysis of the decision ("weigh all "for" and "agains");

6 - decision making ("decide what to do");

7 - choosing another solution ("evaluating options").

Important components should be noted that reflect the effective solution of problems; the content of these technologies is disclosed in the informational materials for the participants (see Appendix R.), and work on them occurs in the process of group discussion:

- *Orientation in the problem.* A positive, realistic approach to problems in life gives them the opportunity to solve it.

- *Definition and formulation of the problem.* Once you have determined that there is a problem, you should use a way that makes it easier to understand.

- *Generation of alternatives*. After carefully describing your problems and goals, spit out as many alternative solutions as possible.

- *Decision making.* After generating the maximum number of alternative solutions, you need to evaluate them according to the following criteria:

1. Approaching to the goal;

2. Possibility to implement the decision.

Make the decisions that seem to be better (more positive than negative expectations), choose as a tool for further work.

- *Personal effects.* Time, effort, emotional expenditures or winnings, compliance with moral and ethical values, physical condition, other specific effects.

- *Social consequences.* Influence on family, on friends (group, team), other social consequences.

- *Short-term effects:* "How will this decision affect me now?"

- *Long-term effects:* "How will this decision affect me in the future?"

- *Confirmation of decisions.* After choosing the best and most effective alternatives, try turn each one into the best solution.

- *Harmonization of the conflict.* If there is a discrepancy between the goal and the observed result, try to determine what is the difficulty source: in solving problems or in implementing solutions. In the first case, you can go through all stages (algorithm for problem solving). In the second case, you should think about how to improve the way to implement the solution.

Forms of work: Mini-lecture, game and imitation. Discussion by a large group. Situational analysis and specific situations. Role playing game. Brain storm.

Expected results: patient decision-making skills.

7. Formation of self-control and self-confidence

Goal: Formation of self-control and self-confidence

Activities:

- Mini lecture.

Main conclusions of the mini-lecture: the "I" image is all our settings; the "I" image is formed on the basis of the expectations of others and their own life experience; people usually behave according to what they think of themselves; each person has one generalized "I"image, but it can have as many images as the kinds of activities it performs; their weaknesses and strengths should be assessed in accordance with the situations in which they were manifested, not endorse or generalize these features to all activities; a positive "I" image is formed in the context of the

attitude and achievement of various goals; self-esteem is the ability to respect and accept oneself and own actions.

Exercises: "My Strengths"; "Stairs"; "I am a hero"; "Twin from afar"; "Who am I?"; "Ladies and Cavalry"; "Suitcase"; "I am strong, I am weak"; "Compliment"; "Mirror"; "Adopting oneself".

Forms of work: Mini-lecture. Game and imitation. Discussion by a large group. Situational analysis and specific situations. Role playing game. Brain storm.

Expected results: formed self-confidence and self-control.

8. Emotional self-regulation

Goal: to develop skills to overcome stress and anxiety.

1) Development of the ability to regulate your feelings.

Activities to develop skills to overcome stress and anxiety:

- Mini lecture.

The main content of the mini-lecture: stress and anxiety – is the adaptive processes of the organism to life; stress and anxiety are compounded by various physiological changes in the body that can be excessive (palpitation, sweating, muscle tension, etc.); intensive stress and anxiety can be reduced by various means (food, smoking, sleep, deep breathing, physical culture, listening to music, meditation, physical labor, watching an interesting film); preventing disturbing situations hinders the disclosure and realization of your own capabilities and potential; there are special relaxation techniques and stress relief.

In order to develop self-regulation, the exercises "Butterfly wings", "Magic pitcher", "Mood", "Physical well-being", "Magnetic tape", "Solitude" are used (see Appendix R).

Forms of work: Mini-lecture. Game and imitation. Discussion by a large group. Situational analysis and specific situations. Role playing game. Brain storm.

Expected results:

1) Ability to overcome stress and anxiety.

2) Ability to self-regulate your feelings.

I. Information Group

These are lectures on informing patients about the manifestations of illness that are conducted by psychologists, consultants on chemical addiction. Basically, they include information on addictions, overcoming the various manifestations of addicted thinking, family relationships [22; 52].

The educational program includes:

1. Information sessions on the concept of illness and recovery.

2. Family education.

3. Prevention of infectious diseases (hepatitis, HIV, etc.).

The purpose of conducting educational programs is to change the patient's attitude to PAS and formulate an idea of use as a pathological trait that one can learn to manage.

Implementation of the educational program is possible in the form of individual and group counseling.

Topics of individual and group counseling:

- Concept of treatment and appropriate addiction symptoms.

- People, places, things that cause the client's desire to use PAS.

- The structure of personal time.

- Abuse.

- High-risk situations.

- Social pressure to use.

- Acute symptoms that arise after the abandonment of the use, ways to overcome them.

- Use of other narcotic substances (alcohol, drugs not prescribed by the doctor, etc.).

The main topics of information sessions related to the illness concept and recovery:

1. Addiction, alcoholism - a disease.

2. Nature of addiction.

3. Behavioral signs of drug addicts.

4. Medical symptoms of opioid addiction.

5. Forms of psychological protection in drug addicts.

6. Psychology of behavior of PAS addicted.

7. Neurobiological Dependence Theory.

8. Recovery program of AA and NA.

9. Negative personality characteristics and manifestations of opioid addiction.

10. Relapses (failures) and strategies for their prevention.

11. Psychological factors of addiction formation.

12. Shame and guilt.

The model of psychological rehabilitation includes the components of education on PAS addiction and co-addiction; gives

an idea of the family as a system; teach ways of expressing feelings, expressing love for children and other family members.

II. Individual work

Written assignments.

Written tasks fulfill two functions - diagnostic and motivational. Firstly, the patient recounts his social problems and, together with the specialists, determines the methods and timing of solving the problems. Secondly, one must come to the understanding that in order to solve social problems, you need to remain sober.

By working on a written task, the patient essentially restores concreteness and sincerity - two qualities that were lost in the use process. Formed sincerity and concreteness are the main criteria for the success of the first stage of recovery.

Written works are read out, with the consent of the participants, during a group session in the presence of other participants. This technique is useful, because it provides an opportunity for feedback and allows patients to overcome their fears and increase self-confidence [264].

Consequently, the main activities and technologies of the psychological rehabilitation program of opioid-addicted persons, due to the consistency, systemicity, and complexity of application, in many cases allow to achieve the complete refusal from taking drugs, qualitative changes in personality, changes in the attitude of their family members, and changes in relations with the outside world.

4.5 The use of musical works in the Biological Feedback procedure

The only difference between the complexes of rehabilitation activities carried out with experimental groups was the individualized application of music therapy. 20 respondents had the opportunity to access the device "Nexus-10 Mark II" (production of company Mindmedia, the Netherlands) - a device for 10-channel monitoring of various physiological parameters of the human body and biological feedback, using Bluetooth wireless technology (distance 10-15 meters from sensors to a doctor's computer) and Memory Flash Cards (24-hour monitoring of any body parameters) with stand-alone power from batteries.

The Nexus-10 Mark II is a biological feedback device that allows not only a full functional body diagnostic, but also computer bioregulation of various functional systems of the body based on visual and sound biological feedback on the standard parameters of the EEG, EMG, ECG, LNG, pulse blood vessel filling, skin thermometry and skin resistance.

This device was used for round-the-clock monitoring of participants' biorhythms of the of the second experimental group for the optimal use of the musical complex, which would correlate with objective indicators of the functional state of the subjects.

In the first experimental group (n_1 = 171 persons) it was not possible to receive monitoring of biological rhythms; therefore, the complex of musical works was used without taking into account individual characteristics during group sessions and individual relaxation.

Selected musical compositions within the framework of the psychological rehabilitation of opioid-addicted individuals need to track objective psychophysiological and medical indicators so that they can be used uniquely in this study, as well as in other practices that work with individuals, addicted to opioids. The use of specially selected musical samples, based on the use of clinical and psychological diagnostics, allows to organize the process of psychological rehabilitation not only on the basis of revealed violations, but also taking into account the surviving spheres of mental activity of the person and its resources, in particular the natural development of emotional and volitional self-regulation.

The purpose of our specially selected musical samples is to achieve a state of muscle relaxation, mental reassurance and activation of various functional systems of the body by means of computer bioregulation on the basis of visual and sound biological feedback on the standard parameters of EEG, EMG, ECG, LNG, pulse blood vessel filling, skin thermometry and skin resistance. As a sound signal-stimulus, we use specially selected musical samples.

The ultimate goal of the developed technology of using musical samples in connection with computer "on line" with bio-management, by assessing the psychological state of the client, is to develop self-regulation and self-control skills, in particular the ability to manage your emotional reactions that arise during the period of refusal to use drugs.

With the participation of the expert group of the Clinic of Active Therapy of Special Conditions, the medical-psychophysiological examination of the second experimental group (n_2 = 20 persons) was carried out, which resulted in the following generalizations.

As noted in section 3.2. it is important to take into account the combination of the above-mentioned musical rhythm, tempo, sound element, dynamics and form in the selection of musical influences. Under the direction of associate professor of the National Musical Academy of Ukraine named after. P.I. Chaikovsky we have selected the following musical samples:

1. Delta rhythm 2-3.

- Sonata for piano № 14 to the minor minority, op. 27, No. 2 ("Moonlight") by Ludwig van Beethoven.

- Nocturne Op. 9 b-moll, Es-dur, H-dur (1829-1830) Frederic François Chopin.

- Nocturne Op. 15 F major, Fis-dur (1830-1831), g-moll (1833) Frederic François Chopin.

- Nocturne Op. 27 cis-moll, Des-dur (1834-1835) Frederic François Chopin.

- Nocturne Op. 32 H-dur, As-dur (1836-1837) Frederic François Chopin.

- Nocturne Op. 37 g-moll, G-dur (1839) Frederic François Chopin.

- Nocturne Op. 48 c-moll, fis-moll (1841) Frederic François Chopin.

- Nocturne Op. 55 f-moll, Es-dur (1843) Frederic François Chopin.

- Nocturne Op. 62 No. 1 in H-dur, No. 2 in E-dur (1846) Frederic François Chopin.

- Nocturne Op. 72 e-moll (1827) Frederic François Chopin.

- Reverberi G. P. Touching Rondo Veneziano.

- La Serenissima fis - moll 2 18.

- Frank Duval Vision. 1994.

- David Arkenstone “Valley in the clouds”.

- Frank Duval “Vision|, 1994.

- Adrian Marcator. “Eiderland Suite”, 1993.

- Reverberi G. P. Skaramusse. Rondo Veneziano.

- Laguna incantata Fis – Dur.

- Nocturne Op. posth cis-moll (1830), c-moll Frederic Francois Chopin.

- "Moonlight Night" is a Ukrainian song, written by Mikhail Staritsky, although in most sources it is referred to as a "folk song".

Theta-rhythm 4-8.

- Concert for piano and orchestra No. 3 c-moll Ludwig van Beethoven.

2. Alpha rhythm 8-12.

- German Military March by S.S Luftwaffe “Was wollen wir trinken” (hymn Luftwaffe).

- "Military March" from musical illustrations to the story of A. Pushkin "Metelitsa" by G. Sviridov.

- Concerto for piano with orchestra No. 2 Op. 19, c-moll, 3rd part by Ludwig van Beethoven.

- Mykola Hnatyuk "Oh, the smereko".

- Anatoliy Hnatyuk and Valentina Stepova "Kachechka".

3. Beta-rhythm 13 - 30.

- Etude of Or. 25th a-moll, Frederic Francois Chopin.

- Paganini-Leaf – “Campanella” - Grandes Etudes de Paganini, No. 3, La Campanella - Transfiguration by F. Buzzone.

- Etude Or. 25 No. 2 f-moll Frederic François Chopin.

- Etude Or. 10 No. 12 c-moll "Revolutionary Etude" Frederick Francois Chopin.

- Etude Or. 25 No. 11 c-moll Frederick Francois Chopin.

- Etude Or. 25 No. 12 c-moll Frederick Francois Chopin.

- Etude Or. 10 No. 4 cis-moll Frederic François Chopin.

So, due to the requirements for modification of the bio control unit "Nexus-10 Mark II", the course of bio control correction with specially selected musical compositions was developed and tested.

According to it, the first week was devoted to familiarizing the participants with the program. During this time, the main task of the consultant was to create a positive motivation for the client to use this method and to train him to work on the technology.

The 2nd and the following weeks were the main, therapeutic part of the BFB method. The task of the therapist, above all, was to identify the incentives suitable for a particular client and additional protocols that most closely correspond to therapeutic goals. Our research used protocols based on multi-parameter data.

Persons who at adulthood at some stage of life do not meet the requirements of life, the impact of crisis situations, especially in the experiences of difficult states of loneliness, misunderstanding and alienation from others, often resort to the search for accessible surrogates of the missing emotions, feelings and conditions.

Functional body diagnostics of 20 subjects was conducted on the basis of the ATOS clinic with the Nexus-10 Mark II device (the

Netherlands). The results of the medical-psycho-physiological examination on the apparatus "NEXUS-10" are presented in a multi-parametric figure (Figure 5.5.1).

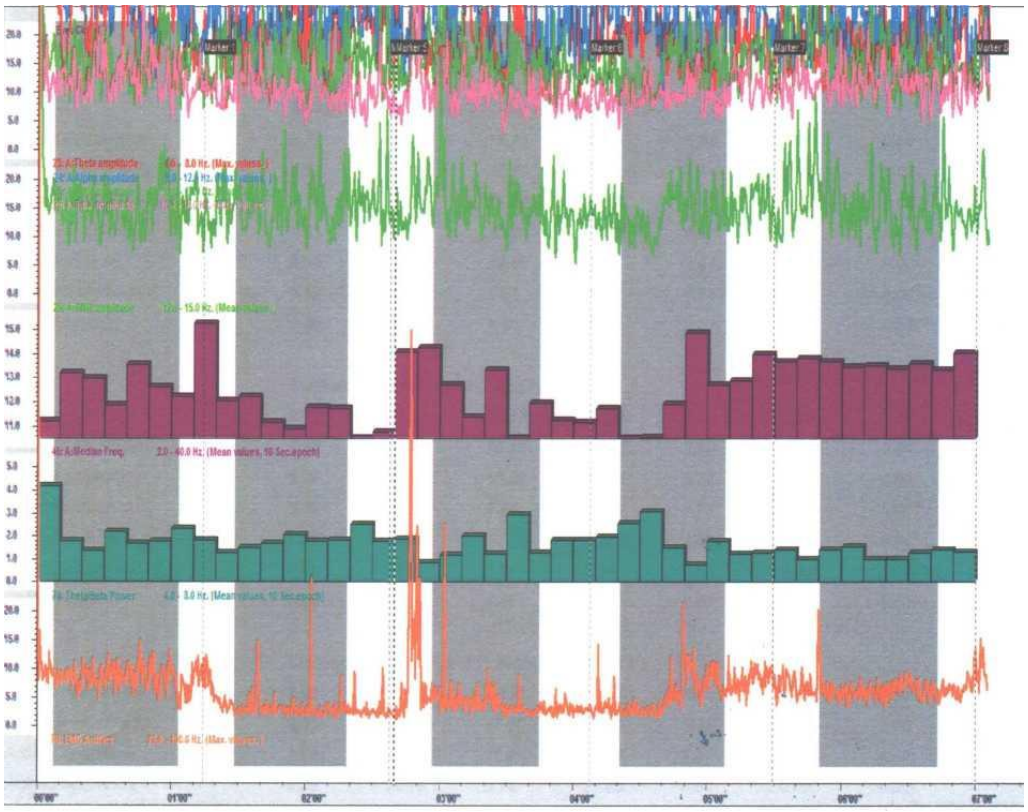


*Fig. 5.5.1. Multi-parametric figure of medical-psychological examination indicators of subjects *.*

This survey highlights three laboratory-created psychic states, consistently labeled with a gray color. The general consular opinion on the psycho-physiological state of the subjects indicates a moderate recovery potential – "NF" = 567 ms^2; moderate level of mobilizing potential, "LF" = 326 ms^2; moderate level of hormone modulation of regulatory mechanisms – "VLF" = 189 ms^2; stress index – 75 units - within the norm; adaptive capacity of the

organism above the average level – "TR" = 1239 ms^2; heart rate (HR) = 78 per minute – norm; frequency of respiratory movements (FRM) = 17.2 per minute - the norm; cardiac respiratory arrhythmia with diaphragmatic respiration (CRA) = 10 – below the age standard, indicating a low level of intersystem relationships between the respiratory and cardiovascular system; skin conductivity (SS) = 3.9 μSm (microsymensy, that is, millionths of Siemens) – moderately uplifted, indicating predominance of the tone of the sympathetic nervous system; fingers temperature (T) = 27.71 °C, corresponding to the norm; alpha rhythm amplitude – 23.8 n/V (nanoworks, that is, milliards of volts); beta-rhythm - 10.97 n/V, teta-rhythm – 23.07.5 n/V, dominant frequency – 12.2 Hertz; sample with closed eyes is negative. In any case, an objective survey on the "NEXUS-10" device revealed the predominance of the tone of the sympathetic nervous system, the impossibility of relaxation and chronic CNS stress.

The use of the musical relaxation class developed by us is appropriate.

Class goal: aimed at the ability to relax without special training. Music is used that is called to cause body relaxation, the association of gentle relaxation, rest. The program helps to recreate the nature of the prototype (archetypes) in the psyche.

On what the class is directed: emotional tension associated with the accumulation of unreacted feelings.

Key Expected Effects:

• discharge due to the strengthening of the dynamics of feelings;

• calming down;

• relaxation, positive world image;

• spontaneous solving of psychological problems.

Musical compositions: La serenissima fis – moll

General scheme:

1. Setting for decisive changes (sounds of thunder, clearing rain).

2. The transition model is the desire to change an internal action.

3. Understanding your own existence, an honest "look" on yourself.

4. Inner peace.

5. As a result of work - peace of mind, catharsis.

Mechanisms of therapeutic effect:

1. Communicative effect. Pain and various disorders, especially "emotional", do not just express and accurately say about them. Music in such cases creates a communicative illusion of "divided suffering", or "disease transmission”:

a) socialization of suffering; listening to music is associated with social action, which will force a person to tolerate the illness ("neurosis can not withstand two");

b) rejoicing; the emotional calming, the disappearance of the anxiety symptoms, an illusion of verbalization arises - the sound-body structure of melodic syntagms is perceived as a language, but another.

2. Focus control offset.

Distraction of attention - a mechanism for relieving pain and other "fixations" that prevent the person naturally relax the muscles.

3. Psychophysiological effects. Deep breathing, change the feeling of time.

Means of "musical language" are more expressed in words, so one and the same characteristic melody can cause different experiences of one and the same person, depending on the situation of listening.

In the course of the medical-psychophysiological examination of the subjects with "NEKSUS-10" device, the modeling of three laborotory created mental states was carried out:

1) state of rest, the subject is relaxed sitting without presenting any cognitive tasks;

2) solving the cognitive task, which is a distinction and classification of seven images by color and form (stress test);

3) singing of a couplet song with positive visual and acoustic accompaniment.

The results of the medical-psycho-physiological examination are presented in the table. 5.3.1.

As can be seen from **Table 5.3.1** mental mood of the subjects who are in a relaxed state without presenting any cognitive tasks is noted in ***Table. 2***. It is obvious that the highest among the three samples of the theta and alpha rhythm variability are 84.21 and 173.98 respectively, indicating excessive internal tension, inability to relax, transition to an intermediate state between cheerfulness and sleep that slows down in the brain waves range from 4 to 8 Hz.

Table 5.3.1

Mental mood in a relaxed state

No	Channel	Value of statistical indicators				
		minimal	**maximal**	**average**	**variability**	**standard deviation**
1	Theta rhythm (Theta amplitude)	3.72	42.25	20.88	84.21	7.63
2	Alpha rhythm (Alpha amplitude)	3.26	70.72	24.24	173.98	13.06
3	Sensor rhythm (SMR amplitude)	1.0	32.75	12.12	37.12	6.01
4	Beta rhythm (beta amplitude)	0.28	45.07	7.64	18.98	5.82
5	Prevailing Brain Frequency	4.00	18.00	11.52	2.46	2.66
6	Muscle artifacts (EMG Artifakt)	1.12	19.08	7.38	2.66	2.61

By transferring this individual state from the clinical laboratory to the conditions of the social environment, one can safely predict that the hardware-fixed internal stress of the subjects will be logically out of excessive excitement. This behavior will lead to misunderstandings, conflicts and the formation of inadequate image of the social environment and its place in the established system of relations. The notion of a particular specificity of figurative and logical thinking, in psycho-physiological measurement, does not have meaningful differences. In this case, the transition to a logical way of thinking does not increase, but on the contrary reduces the internal situational strain. The results of the mental state study in the process of solving the cognitive problem are given in *Table. 5.3.2.*

Table 5.3.2

Results of the mental state study in the process of solving cognitive problem

No	Channel	Value of statistical indicators				
		minimal	maximal	average	variability	standard deviation
1	Theta rhythm (Theta amplitude)	2.32	42.46	16.88	60.08	6.93
2	Alpha rhythm (Alpha amplitude)	2.97	72.77	20.53	119.76	10.47
3	Sensor rhythm (SMR amplitude)	1.08	50.97	11.89	45.42	6.87
4	Beta rhythm (beta amplitude)	1.05	28.69	7.71	18.28	4.27
5	Prevailing brain Frequency	6.05	24.00	12.03	6.01	2.44
6	Muscle artifacts (EMG Artifakt)	0.75	36.35	3.10	5.33	2.31

The obtained indicators testify that the solving of the cognitive task led to further decrease of the variability of brain functioning as a process of harmonization of the state of psychophysiological functioning. Thus, Theta amplitude variability decreased from 84.21 to 60.08, or 21%, Alpha amplitude - from 173.98 to 119.76, or 11% with a natural increase in the sensory motor rhythm (SMR amplitude) from 37.12 to 45.42, or by 16% and the prevailing brain frequency from 2.76 to 6.01, or by 55%. The remaining indicators have not undergone significant changes.

At the primary diagnostic stage of psychological intervention - the implementation of the late-stress test received a corrective value, since it helped to identify the ability of the subjects to focus.

The results of the measurement of the psycho-physiological state in the process of singing are given in *Table 5.3.4.*

Table 5.3.4

Results of the study of mental condition during singing

No	Channel	Value of statistical indicators				
		minimal	maximal	average	variability	standard deviation
1	Theta rhythm (Theta amplitude)	2.49	41.22	16.52	62.78	7.27
2	Alpha rhythm (Alpha amplitude)	2.45	57.71	19.29	98.06	9.86
3	Sensor rhythm (SMR amplitude)	1.29	27.84	10.86	29.40	5.32
4	Beta rhythm (beta amplitude)	0.56	21.99	7.54	14.04	3.73
5	Prevailing Brain Frequency	7.00	22.00	12.13	7.12	2.69
6	Muscle artifacts (EMG Artifakt)	0.62	21.56	4.46	8.87	2.98

From the table, it follows that the harmonization indicator of the functioning is to reduce the variability of most of the brain rhythms during singing. Increasing theta amplitude from 60.08 to 62.78 indicates a tendency towards calm vivacity, which co-modifies the prevailing cerebral frequency (Median Freq.) - from 6.01 to 7.12. At the same time, the Alpha amplitude decreases from 119.76 to 98.06, or the sensory motor rhythm (SMR amplitude)

from 45.42 to 29.40, Beta-rhythm (Beta amplitude) - the fastest waves, the frequency of which varies from 14 to 42 Hz, connected with cheerfulness – from 18.28 to 14.04. Such proportionality in the improvement of psycho-physiological functioning is caused by singing, has an expressed self-regulatory significance, although it has considerable reserves in achieving its optimum. We present the results of the psycho-physiological examination of the subjects who sang with a positive visual and acoustic accompaniment *(Table 5.3.5).*

Table 5.3.5

Singing of the subjects with positive visual and acoustic accompaniment

No	Channel	Value of statistical indicators				
		minimal	maximal	average	variability	standard deviation
1	Theta rhythm (Theta amplitude)	2.26	41.45	15.96	51.24	6.41
2	Alpha rhythm (Alpha amplitude)	2.01	54.67	17.98	88.10	9.34
3	Sensor rhythm (SMR amplitude)	1.88	37.32	11.69	32.36	5.87
4	Beta rhythm (beta amplitude)	0.39	26.13	9.19	20.39	4.64
5	Prevailing Btain Frequency (Median Freq.)	7.00	22.00	13.46	6.07	2.27
6	Muscle artifacts (EMG Artifakt)	1.41	11.20	5.10	1.99	1.41

The obtained indicators point to the optimal trajectory of harmonization of the psychophysiological state, as there is the

slightest variability of indicators, therefore, the feeling of comfort is the most stable. Thus, the lowest level of theta amplitude, in particular, the decrease from 62.78 to 51.44, indicates its transition to the rhythm of calm reflection, concentration. The decrease of the Alpha-rhythm (Alpha amplitude) from 98.06 to 88.10, or 10%, of the prevailing brain frequency from 7.12 to 6.07, or 18%, fixes the relaxation of the whole body, a pleasant harmony of well-being. The realization of consciousness concentration on the perception of positive visual and acoustic accompaniment with simultaneous singing is revealed in the increase of the activity of the fastest waves of the brain - the beta-rhythm (Beta amplitude) increased from 14.04 to 20.39, or 33%, the SMR amplitude of the sensory motor rhythm - from 29.40 to 32.36, or by 17%. The development of emotional response and musical hearing help to intensify mental activity.

So, the use of musical influence method in the psychological rehabilitation of opioid-addicted individuals is due to the harmonization of higher nervous activity. The use of musical influence in psychological work with drug addicts can become the key to solving many social, psychological and medical problems, since it allows simultaneously to teach, develop creative abilities and the spiritual world. The uniqueness of the application of musical influence lies in the comfortable psycho-physiological training, which originates from the personal resources, activates and harmonizes the brain activity, improves attention and memory. The creative mode of learning, the harmonization of personality and interpersonal relationships are the components of the most effective modern counter-narcotic approaches. The results obtained during the empirical study of the dynamics of the psychological state after the application of music indicate the optimal trajectory

of harmonizing the psychophysiological state of the subjects, which confirms the effectiveness of this method in the formation of a holistic worldview, the prevention of neuroses, its significant role in personal development and a better understanding of the person's "I".

Thus, the study of the listening to music influence within the program of psychological rehabilitation of opioid-addicted individuals has shown a significant effect of this method. As a result of music therapy in opioid-addicted individuals, brain wave of biological feedback was somewhat balanced, the psychophysiological indices, obtained during the empirical study, indicate a shift from beta-waves towards the alpha-waves, that is, an increase in general well-being and carefulness.

Conclusion to the fourth section

In the fourth section, based on the positions of systemic and personality-oriented approaches, the purpose of experimental work, which consists of developing and verifying the expediency of implementing a model of psychological rehabilitation of opioid-addicted individuals, is determined. Also, methods and means of its achievement are indicated.

Also, the object of the study was determined - the psycho-physiological state of persons undergoing rehabilitation from opioid addiction, and the subject is harmonization of the psycho-physiological state of persons undergoing rehabilitation from opioid addiction.

A study program was developed that included the study and analysis of literary sources on the under-study problem, the choice

of experimental techniques, including theoretical, experimental, final-general stages, quantitative and qualitative processing of experimental data, testing of research results and their use in practice, medical and psychological counseling.

Application of clinical-biographical, psychodiagnostic and psychophysiological methods allowed to distinguish psycho-emotional, individual-psychological, behavioral and value-motivational factors in the structure and genesis of narcotic addiction.

The peculiarities of the method of biological feedback as a set of procedures were determined, during which a person with the help of an external feedback circuit transmitted information about the state of a particular function of his own organism. On the basis of which the rehabilitant gets the opportunity to develop self-control skills and self-regulation, that is, the ability to change any physiological function of the body for pathological disorders correction.

The obtained results indicate that such indicators as quality of life, underestimation of health state, vital activity are significantly lowered. There is a restriction of social contacts, level of communication in connection with the deterioration of physical and emotional state, the presence of depression, anxiety experiences, which is consistent with the data of other researchers. Subjects are prone to regulating their feelings and behavioral efforts aimed at escaping or avoiding failures, as well as having an underestimate of the physical and psychological components of health relative to the control group.

It is determined that the consequences of the illness are the deterioration of the attitude towards the patient in the family, at work, as well as the restrictions on communication.

CONCLUSIONS

Significant prevalence of drug addiction is associated with changes in the socio-economic situation in Ukraine, an increase in criminal import and drug production, including the area of servicemen.

In this article, are described the principles and a system of psychological rehabilitation construction of opioid addiction, implemented in the specialized program. The purpose of the program of psychological rehabilitation involves individual, group work, a block of theoretical training, psycho-corrective work both with the person himself and with his relatives.

The study does not exhaust all aspects of the problem solution. The prospect of further research is seen in expanding the range of activities aimed at mastering psychological knowledge, forming the general psychological culture of drug addicts, improving personal development training, self-knowledge, and improving own lives.

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PSYCHOLOGICAL REHABILITATION OF OPIOID-ADDICTED YOUTH

Monograph

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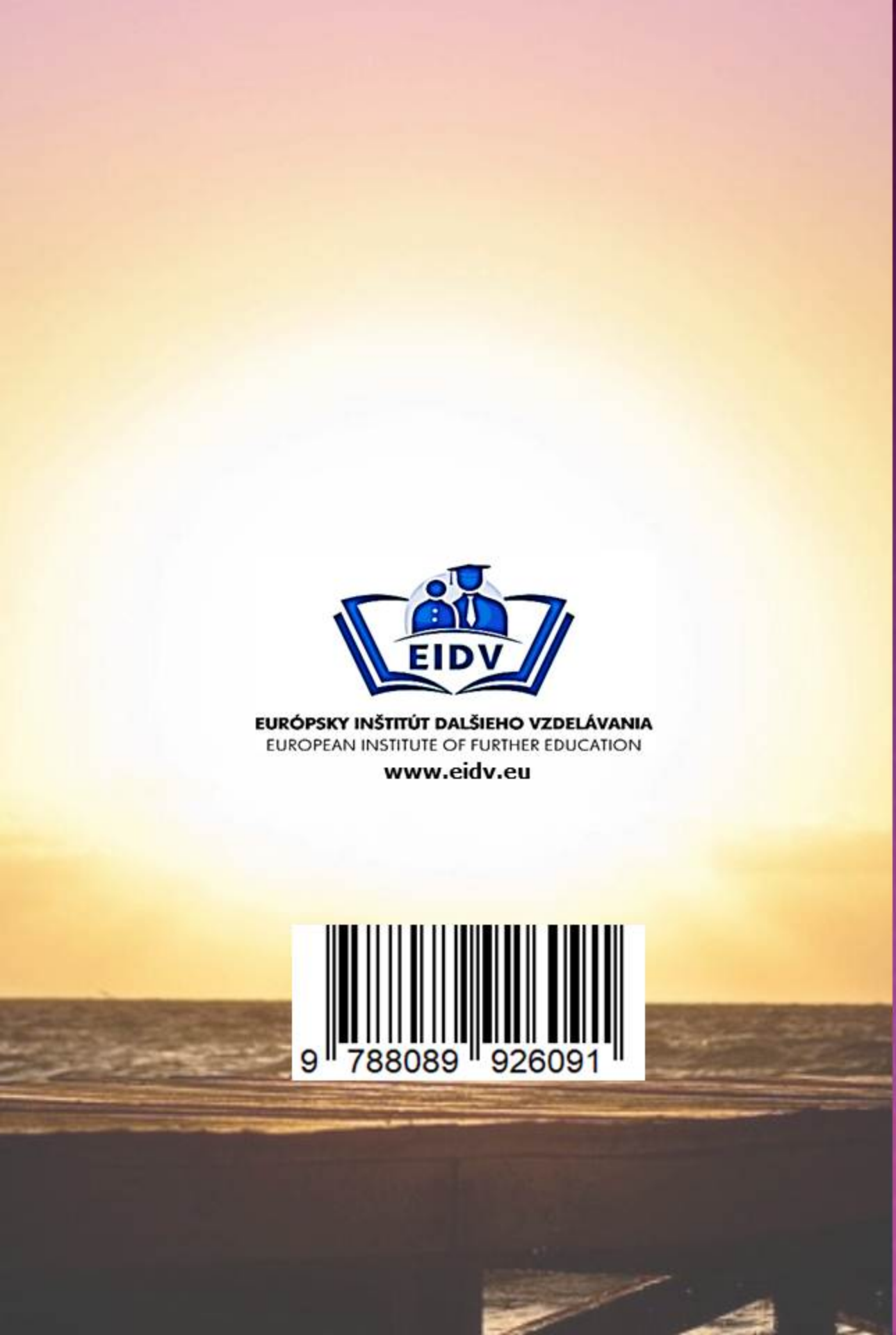

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