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THE PSYCHOLOGY OF TIME

Tutorial

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The psychology of time: [tutorial].

The monograph outlines theoretical, methodological and practical foundations of the psychosomatic approach to the diagnosis, psychosomatic diseases correction and prevention, which is carried out on the chronopsychological prediction of these disorders course.

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1. The general meaning of the chronopsychological prognosing of the course of psychosomatic disorders

The urgency of the effective solution of the problem of prediction of psychosomatic diseases in Ukraine increases with each passing year [65], [113], [150], [152], [153], [155], [168], [174], [176], [253]. The warning of exacerbation of psychosomatic disorders is considered one of the most important tasks of medical psychology and, in particular, psychosomatics. [115], [329]. But, unfortunately, we can state that the content of prediction of the course of psychosomatic diseases is not established.

Analysis of relevant literature shows that in the most general sense, this concept is considered as a timely prevention of exacerbation of psychosomatic illness. At the same time, it can distinguish two aspects - "clinical" and "psychological". "Clinical" - is an objective assessment of the patient's condition at the level of functional diagnosis [129], [130]. "Psychological" is an analysis of the psychological factors that determine the health of a person, as well as the study of the influence of individual psychological peculiarities on the formation of psychosomatic pathology [75], [126], [129], [130], [276]. But such an understanding of the essence of prognosing psychosomatic illness, in our opinion, is limited, because in this case, for the most part, the time characteristics of the clinical and psychological levels, the influence of which can provide a timely diagnosis of the course of psychosomatic disorders, are largely overlooked. Thus, the application of a complex multilevel approach to the study of the course of psychosomatic illnesses, taking into account the "chronometric" aspect in the pathogenesis of these disorders, is a prerequisite for timely and effective preventive work aimed at overcoming the chronicization of psychosomatic disorders.

The *main principles of* chronopsychological prediction of the course of psychosomatic diseases include: "objectivity, complexity, continuity,

adequacy, saturation, intensity of use"; to the *main stages* - "primary link - clinical diagnosis; second link - psychological diagnostics; the third is the chronometric diagnosis "[174, p. 188].

The main task of the chronopsychological prognosing of the course of psychosomatic diseases is to increase the effectiveness of preventing these disorders [289]. Various authors refer to the *main measures of* prediction of the course of psychosomatic diseases aimed at solving this problem: development of the integrative concept of psychosomatic disorder, the algorithm for prognosing the course of the disease, the program of effective medical and psychological preventive work, etc. [9], [25], [32], [46], [53], [55], [61], [66]. At the same time one can not but agree with the opinion of S.Maksimenko [216, p. 15] that "... scientific researches - should give a holistic, not distinct-elemental knowledge and reflect the logic of the object, and not the logic of the researchers." We think that language must go about the integration of the subject of scientific medicine - it should become a chronopsychological approach in medical psychology.

As analysis of many papers shows, the application of the above measures to various studies largely lacks solidity and consistency. Therefore, we can state that the problem of prediction of the course of psychosomatic diseases is not sufficiently developed in the theoretical and methodological, and in practical-implementation aspects. In our opinion, this is due to the fact that studies on this problem were almost exclusively related to the study of the predominant influence of the emotional factors on the manifestation of somatic disorder [230], [231], [232], [233], [234]], [237], [238], [246], [250], [253], [255], [258], [264], [275], [281], [284], [317]. Only recently began to appear studies related to the study of the influence of time factors on the course of diseases [60], [200], [290], [394], [426], [439].

But developed on the example of chronic non-infectious diseases approaches to psychosomatic disorders are significantly different and in many cases are not suitable for prognosing the course of the relevant disorders, taking into account their specificity. For example, the diagnosis of chronic non-infectious diseases is an eclectic set of techniques and methods. In this form, the prognosing of the course of psychosomatic diseases for various reasons is ineffective or inefficient. Therefore, an integrative approach to reducing and preventing these disorders should be provided.

As I. Vitenko has rightly said, ensuring the prediction of the course of psychosomatic diseases should be carried out systematically and provide a single set of clinical and psychological procedures [90, p. 189]. Unfortunately, it has to be noted that this requirement is mostly not fulfilled and a general algorithm for prognosing the course of psychosomatic illnesses, principles and sequential stages which could be applied in various forms of the course of these disorders, does not exist yet. Although the principles and content of constructing a system of psychoprophylaxis measures for certain types of psychosomatic disorders, for example, cardiovascular, are somewhat worked out by some authors, but they still lack the necessary algorithmization (in terms of applying chronometric aspects of prediction, in combination with clinical and psychological warning prevention schemes exacerbation of chronic disorders). In particular, D. E. Yelkin [440], B. Tsukanov [416], S. Bondarevich [61] pointed out the absence of a holistic system for prognosing the course of psychosomatic disorders, its necessity and the considerable difficulties that exist in this sphere.

Thus, an important scientific task can be considered the development and development of a general algorithm of the chronopsychological prediction of the course of psychosomatic diseases, the consistent implementation of which would provide the opportunity to achieve the

maximum possible effect and which could relatively easily be adapted for application in medicine.

A similar algorithm was developed by us [311], [314] and successfully tested on an example of such psychosomatic diseases as cardiological, nephrology, gastroenterological, pulmonologic and adjacent neurotic and somatoform disorders (see Chapters 3-5). The basic principles and content of the developed algorithm are described in the next section.

2. Principles and contents of the psychosomatic disorders chronopsychological prognosing algorithm in people with special needs

The first principle is objectivity in the study of psychosomatic phenomena. Modern specialists put forward certain requirements for methods of study of psychosomatic phenomena:

- psychosomatic phenomena must be studied in their development, interconnection and interdependence;

- the method of psychosomatic research should be adequate to the subject of the study, reveal significant, and not accidental, main features of the psychosomatic process, condition or quality studied [183].

The second principle is the principle of a systematic approach to the mechanisms of the course of psychosomatic illness. After all, only on the basis of a systematic approach can most fully imagine, study, simulate all the peculiarities of such super-complicated systems as the person himself and his psychosomatic state. It is precisely the systemic representation that enables accurate prediction of the dynamics of the development of these systems in each particular case, the selection of reliable ways for their optimization and adjustment, which is an important prerequisite for the

solution of specific practical problems in prognosing the course of psychosomatic diseases.

The third principle is the principle of the objectivity of time, based on which it can be argued that time as a real object exists in the form of a directly experienced subject of duration. Every person is a bearer of his time as "a special kind of object" (Y.Molchanov) [235], and possesses a set of subjective temporal properties. Time is not opposed to the subject, as other objects that are beyond it, but directly given to him in the mechanism of the course of his biological clock. Man has his subjective individual time, which depends on her, on her brain (T. Dobrokhotova, N. Bragina) [131; 66]. This clock is started from the moment of the birth of the individual (Y. Ashoff [34], L. Kuprianovich [188], K. Pittendray [260], A. Emma [441]) and counts the course of time that he experiences throughout his life. The course of the clock is understood by the subject at a certain stage of ontogenesis as a flow of the directly experienced duration, and time acquires the features of objective reality.

The discrete counting of individual time leads to the fact that at the level of subjective experiences and behavioral manifestations of human life is uneven, that is, during the life clearly distinguished periods in which a person is in the optimal psychosomatic form in the middle, and at the beginning and at the end - at the minimum of their opportunities. Such periods are called *C-periods* [421]. Today, we are confidently talking about the fact that the scale of C-periods is the age-old development of the psyche, fluctuations in the success of activities, the exacerbation of chronic non-infectious diseases, as well as psychosomatic crisis of personality.

In this regard, further study of the psychological characteristics of such patients as "prevailing" in a certain chronotype, is promising in order

to predict their propensity to psychosomatic diseases, prevention of the studied diseases and help doctors in organizing their effective treatment.

The fourth principle is the need to take into account the different levels of *system* organization of human personality (physiological, bioenergetic, psychic, behavioral, personal, socio-psychological) in conjunction with significant aspects of the manifestation of psychosomatic illness.

As correctly noted by L. Dick and L. Grimak [129, p. 281], the emphasis in such an important aspect of ensuring the prevention of psychosomatic disorders, such as diagnosis and timely prevention of this disorder, largely shifts from purely medical positions to the psychological basis. This is due to the fact that system-forming factors often become mental factors - constituent, motivational, personal, etc. The close relationship that exists between the effectiveness of diagnosis and the mechanisms of the course of psychosomatic disorders was already discussed in detail in section 1.3. Therefore, we fully share the opinion of I.Vytenko [90] that the tendencies of the development of modern medical psychology consist in shifting the interests from the study of the clinical basis of the disorder of the somatic state to the study of psychological processes in the structure of the active, mentally mediated interaction of man with the world. It is from these positions that we consider the problem of prognosing the course of psychosomatic diseases.

The fifth principle is that the research and optimization methods used in solving problems prognosing the course of psychosomatic illnesses must meet such requirements as relative simplicity, informative, efficiency, convenience and cheapness in use. Only if these conditions are met can we really solve the problem of preventing exacerbation of psychosomatic

disorder. This is due to the lack of the required number of highly skilled specialists - medical psychologists.

The sixth principle is the principle of monitoring and choice of research methods.

To date, the nature of the interaction of pathogenic factors with the individual-psychological and chronometric features of the organism in the process of adapting a person to living conditions and activities, as well as processes that can lead to certain diseases, is not sufficiently studied.

An important scientific task of practical importance is the study and analysis of psychological factors that determine the state of human health, as well as the study of the impact of individual psychological peculiarities on the formation of psychosomatic pathology.

To solve these problems, first of all, it is necessary:

- have such a concept that could explain the development of socio-psychological and psychosomatic disorders of a person;

- to possess qualitative tools of the nosological diagnosis of the general psychosomatic state;

- have the necessary psychotherapeutic techniques to eliminate psychosomatic disorders.

In this regard, the following goals were set:

1. Create a conceptual framework for integrated monitoring of the health status of the groups under study.

2. To give a scientific substantiation of the clinical, psychological and chronometric diagnostic tools, adequate to the key characteristics of the condition and conditionality of mental and physical health.

3. Organize and monitor the psychosomatic and mental health of the groups under study.

4. Create a chronopsychological model of a multilevel and multisystem study of the features of the etiopathogenesis of psychosomatic abnormalities in the subjects.

The structure of the multi - level clinical-psychological-chronometric research has the following components:

1) clinical: study of anamnesis of the disease, clinical examination, analysis of laboratory and instrumental methods of examination, clinical diagnosis;

2) psychological: the study of premorbid personality traits, personality structure of people prone to psychosomatic disorders and psychodiagnostic examination of personality traits of patients with psychosomatic illness;

3) timekeeping: studying the characteristics of the subjective perception of the time of people with psychosomatic disorders;

4) syndromological: selection and study of leading syndromes of maladaptation, psychosomatic complaints and disorders;

5) therapeutic: the use of psychotherapeutic and medical therapeutic methods in the process of integrating therapy for people with psychosomatic disorders;

6) prophylactic: development of chronopsychological programs for the prevention and rehabilitation of psychosomatic patients.

In the framework of the integrative approach, more than 30 methods have been analyzed for the study of personality traits, the definition of mental states and emotional and personal maladaptation, the

level of psychic and psychosomatic states of the subjects under investigation. As a result of the analysis of methods of clinical, psychological and chronometric research, psychodiagnostic and chronopsychological instruments were developed in accordance with the stated purpose.

Next, we present the content of the stages of the general algorithm developed by us for the chronopsychological prognosing of the course of psychosomatic diseases.

And the stage. Anticipating the separation of psychological and temporal indicators of the course of psychosomatic diseases on the basis of determining the localization of symptoms of cardiological, pulmonological, gastroenterological, nephrology and somatoform disorders in a certain chronotype.

- At the preparatory part of the stage, an analysis of the literature was conducted to determine the specificity of the psychological and temporal criteria for the manifestation of psychosomatic illness; on this basis, preliminary determination of clinical, psychological and chronometric factors influencing the course of this disorder was conducted.
- The experimental-experimental part of the first stage involved the preparation and conduct of research aimed at the direct selection of both objective - clinical and chronometric ("the place of the least resistance") and subjective (manifestations of psychosymptomy) criteria for diagnosis of psychosomatic illnesses;

- prediction of the basic emotional background of the individual;

- assessment of the level of subjective control;

- determination of the propensity to develop certain forms of adjacent ones

neuropsychiatric disorders;

- manifestations of personality traits;

- the degree of subjective expression of pain.

At II stage, the construction of an individual chronotype of the course of psychosomatic diseases in an ontogenetic sweep and the calculation of possible periods of manifestation of exacerbation, reconvalescence (recovery) and remission (attenuation) of the disease were carried out.

At this stage, account was taken of the definition of the duration of the biological cycle of the individual's life and periods of its decline, and, according to the phase singularity, and the planning of comprehensive medical and psychological prevention *in the period of bifurcation*, that is, during the period of greatest probability of exacerbation of the disease, which was carried out by providing recommendations on the timing of preventive measures.

In the third stage, built *model "Chronopsychological personality profile"* of patients with psychosomatic diseases of the *cardiovascular system* (coronary heart disease and its clinical form - heart attack, hypertension, arrhythmia); *gastrointestinal tract* (peptic ulcer and duodenal ulcer, gastritis, cholecystitis, pancreatitis, dyskinesia, constipation, emotional diarrhea); *breathing* (bronchitis, bronchial asthma); *genitourinary system* (pyelonephritis, glomerulonephritis, dysmetabolic nephropathy, cystitis, chronic renal insufficiency, dysmenorrhea).

At I stage V, the main approaches to prognosing the course of psychosomatic illnesses and to increase the effectiveness of treatment by

differentiating time characteristics in subjects with somatic disorders were developed.

At this stage, measures were being developed to optimize the adaptive capacity of patients with cardiological, gastroenterological, pulmonologic, nephrology and somatoform disorders to physiotherapeutic treatment methods.

At V stage development of the system of psychological and organizational measures of medical and psychological and preventive and prognostic orientation on subjects with somatic disorders was carried out taking into account the existence of a system of interconnection, interdependence and their relations between individual typological peculiarities and time parameters (time characteristics, time factor, chronotype) as an example of chronic psychosomatic illness.

To this end, a systematic approach was used. On its basis, a model of correctional work was constructed, which contained four blocks: theoretical, methodological, organizational and executive.

Timely preventive maintenance of the disease provided the effectiveness of preventive measures, and accordingly warned the exacerbation of the chronic process.

In accordance with the above algorithm of the chronopsychological prognosing of the course of psychosomatic diseases in the following sections, we will outline the results of our own research on the practical use of this algorithm in the implementation of primary and secondary prevention of these disorders.

We consider it necessary to emphasize that the clinical and chronometric methods chosen by us, the batteries of psychological techniques and the proposed questionnaires do not claim to be

comprehensive and exhaustive. With their selection, we proceeded from the principle of the optimal number of the most, in our opinion, informative indicators. And the main task for us was to develop and test the technology of conducting all stages of such studies, using which another researcher could choose precisely those research methods and methods of prognosing the course of psychosomatic diseases, which, given the specific conditions and characteristics of the course of these disorders, would enable the achievement the best result in constructing a "psychological profile of a person" of patients with psychosomatic illness.

3. Clinical methods of researching the prognosing of the psychosomatic diseases course

Initially, under psychosomatic disorders in clinical practice meant impairment of the functions of organs and systems of the organism, in the emergence and course of which the leading role belonged to adverse factors, injuring the psyche, for example, stress, various conflicts, disasters, etc. The modern presentation of psychosomatic disorders significantly expanded and went beyond the classical psychosomatosis. Today, under psychosomatic disorders mean a group of painful states that arise when the interaction of somatic and psychological pathogenic factors. This emphasizes the unity of biological and socio-psychological mechanisms, the origin of both actual psychopathological and somatic disorders. Therefore, psychosomatic disorders are considered either as psychogenically conditioned (i.e., those having psychological causes) somatic disorders in the body, or as somatogenic mental disorders.

Proceeding from the roots of general medicine, psychosomatics is compelled to constantly expand its boundaries, and this inevitably leads to

the search for new ways of research. From the very beginning, clinical observations play a significant role. Now empirical studies of different specialists are involved in this, first of all, in the field of psychology and medicine, as well as in the field of psychology of development, psychobiology, studying the behavior of animals, and others. Today it is important that pluralism of the levels of experience is allowed and that research approaches compete with each other, remaining open to each other.

The clinical method obviously requires, on the one hand, socio-psychological characteristics, and on the other hand - methods that objectively assess the patient's state at the level of functional diagnosis, because even in the diagnosis of a somatic disorder, we do not have an integrated assessment of the somatic state in as a whole A similar system approach can be called biopsychosocial, it intensively begin to use in psychosomatic studies [44].

Recognizing the biopsychosocial essence of psychosomatic disorders, traditionally much attention was paid to the biological aspects of the pathogenesis of these diseases. With regard to the role of psychosocial factors in the emergence and course of these disorders, then, despite the large number of both foreign and domestic literature, this issue needs further research.

Clinical scholars point to three sources of information about the clinical condition of the psychosomatic patient. First, it is a collection of anamnesis of the disease, which the subject records and describes on the basis of complaints and subjective perception of the disease. The results of such knowledge are subjective and descriptive and are phenomenological. Secondly, it is an empirical objective-descriptive knowledge that is obtained through a clinical examination. When such

results are recorded using instruments and measurement methods, they receive the status of scientific facts. Third, it is an analysis of the results of laboratory and instrumental survey methods. This allows us to put the final clinical diagnosis of psychosomatic disorders.

4. Diagnostic conversation

In somatic diseases diagnostic interview aimed primarily at determining the external and internal condition of the patient (W. Zung [535]). What does the patient know about his illness? What significance does it have for him now and in his life as a whole? Does he have a look according to which he, his relatives, doctor or psychologist are responsible for his condition? Does his knowledge of the disease, its causes and course - is a clinical evaluation?

To understand how to proceed further, you need to understand the peculiarities of the personality of the patient and the history of his life before the development of the disease, that is, to collect the anamnesis of life. Have he had other diseases in the past? Has negative heredity occurred? How did he deal with this disease with the past and how did he deal with the present? Does he have his point of view on these and other similar situations that separated him from family and profession? Could he share with others his thoughts, fears or feelings, hopes or despair that they capture when he remains alone?

The more freely and less formally the conversation takes place, the better the patient reveals himself, the more the possibilities to reveal the "stage" nature of his behavior.

The first conversation is crucial for the further formation of the relationship between a psychologist and a patient. It is recommended that, before the first meeting, the installation of diagnostic-therapeutic use of

the patient's sensory reactions. An important indication of the existence of a conflict is that the patient uses his usual system of emotion transfer and protection in a relationship with a psychiatrist [393].

Conversation from the outset should pursue therapeutic goals. The patient should feel this, that is, he must be convinced that he will be cured.

It is recommended to use a research method that will assess both the needs and the freedom of the patient, which in his own imagination contradict each other, but allow the clinician to draw up a general picture of the disease.

1. At first, the question is raised about the complaints with which the patient contacted the hospital: "What brougChrT you here?" Often, when answering this question, the patient, who was previously informed about his physical condition, indicates the specific symptoms or reports the diagnosis already made: " stenocardia "," ulcer "," rheumatism ". These complaints oblige the patient to ask the patient about the content of his previous experiences. It is necessary to bring the patient to the person telling his own words about his condition. At the same time, it is necessary to pay attention to the language spells that he uses in describing the complaints and the picture of his illness.

2. The next question should relate to the timing of the appearance of painful experiences: "When did you feel it for the first time? When did they first contacted with a doctor for help? "The following periods of exacerbation of the disease are determined with the precision of the day and time, history of the disease within the general hospital setting, when the psychologist obtains both mental and somatic data, including somatic examination.

3. Decisive understanding of internal conflicts and external psychosocial connections is the question of life situations since the onset of the disease: "What happened in your life when it happened? What was new in your life and who left it? " In this case, the patient should call in memories in the form of free associations. These so-called "black periods" in human life coincide with the periods of the decline of the biological cycle of the individual's life (they are critical). In retrospective consideration, life situations that cause disease can occur in childhood, adolescence and adulthood. In the process of collecting anamnesis, there is talk of relationships with parents, childhood development, career and sexual development.

4. The final conclusion is to create a picture of the patient's personality in general. If you take into account his spiritual experiences and behavior, then you can evaluate the significance of the symptoms, the situation of the disease and the history of the anamnesis. "What does this mean for you? How did you survive? "- Such questions push the patient to understand their own responses.

It is clear that this method needs to be used flexibly. The purposeful direction from the symptom to the situation, anamnesis of life and personality will be useful as the main line of the conversation.

The patient should be open and critical of his memories, new associations and beliefs. A patient who has been associated with his symptoms for a long time, it is difficult to convince him that his suffering has an organic nature.

This form of resistance is especially characteristic of patients with functional pain syndromes. Their internal insecurity and lability, which were well defined as "existence between," allows them to seek a

psychologist who would confirm the presence of an organic disease in them and free them from it. However, they often change the doctor.

It has been repeatedly noted that psychosomatic patients try to withstand the illness in their labile and painful state of equilibrium. The somatic symptom is used by them in order to remove the load of unconscious conflicts by transferring part of its bioenergy process to the physical sphere.

A patient who has lived with symptoms for a long time, it is difficult to immediately convey that they may be related to interferences of emotional origin. Much more often, he can be convinced that his suffering has an organic cause.

This behavior is especially characteristic for patients with functional pain syndromes.

In addition, this clinical picture is often difficult to recognize in psychosomatic illness. Unlike neuroses, where the symptoms are clearly fixed in the mental sphere, psychosomatic disorders, which are primarily related to organic functions, their connection with mental processes is often not entirely clear to medical psychologists, psychotherapists and patients.

The subjective attitude of the patient to his or her own illness is an essential factor in the beginning, course and completion of the illness. A medical psychologist must take into account verbal and non-verbal facial expressions, he must see and hear the patient. The conversation initiative is given to him. In this case, for example, the technique of "associative anamnesis" is used, which will allow the patient to be in a state of constant fluctuation between the two poles of the psychic and somatic spheres.

The patient should be regarded as a "subject", not as an "object". A medical psychologist who is able to listen allows the patient not only to talk about his symptoms, but also to express his attitude to the world, his close acquaintances, his hidden aggression and secret desires.

A very important way is to formulate questions by a medical psychologist. An incorrect question is the largest forum for associations and is the most prevalent. A more precise question limits the ability to answer and threatens the sincerity of conversation.

In the process of a diagnostic conversation, it often happens that problems and conflicts lose their intensity without any direct advice or rational understanding, often just because the patient understands them.

5. Psychological methods of researching the prediction of psychosomatic disorders

Psychological prediction of the course of psychosomatic illness involves the interconnected use of two main groups of methods:

1) methods for obtaining information and 2) prognosing methods. With the help of the first group of methods (research methods), they receive the information necessary for effective prognosing (about the forms and levels of anxiety, depression, aggression, assessment of neurotic states, the localization of control over significant events, types of behavior in conflict, the tendency or presence of a manifestation of the state of hypochondria, depression, hysteria, psychopathy, paranoyality, psychasthenia, schizoid and hypomania, expressiveness of the properties of temperament, self-esteem of pain, etc.). The second group of methods is used to predict the course of psychosomatic diseases in a broad sense

(including prognosing the influence of emotional factors and personality characteristics on the course of the disease, etc.).

In order to predict the form of manifestation of psychosomatic disorder, a method of reproduction of duration was used, which used the classical method of reproducing the intervals of duration (t_o = 2,3,4,5 s), which were set by the experimenter and reproduced by the electronic chronoscope with an accuracy of 0.001 sec

Conducting systematic definition of chronotype of psychosomatic patients suffering from psychosomatic diseases, we tested the assumption - localization dominant disease within their typological groups.

The next stage in prognosing the course of psychosomatic illnesses was the study of a prominent C-period during a psychosomatic disorder in different periods of the disease (exacerbation, convalescence, remission). Through the study, the assumption was tested - a manifestation of a dominant disease with a certain "C-periodicity."

An analysis of the age of patients from the date of birth to the onset of the disease makes it possible to determine when the "place of the least resistance" is the most pronounced, which will help predict the periodicity of aggravation of the psychosomatic illness.

Confirming the assumption that the dominant disease is localized mainly within its typological group, we tried to determine the psychological portrait of patients with psychosomatic illness.

The examination of individuals who suffer from various nosological forms of chronic psychosomatic illness will enable to predict the distribution of psychological symptoms of these diseases in the duration of the chronotype and to build a "psychological profile of the personality" of such patients. This will enable to distinguish the basic psychological

diagnostic criteria for the manifestation of each individual pathology and, taking into account them, develop appropriate medical and psychological rehabilitation measures to prevent the aggravation of the chronic psychosomatic process.

Thus, patients with a psychosomatic profile need a comprehensive psycho-somatic examination in order to predict the course of their psychosomatic illness. Therefore the research process we had been aimed at identifying interconnection ' communication and interdependence of individual typological characteristics in sub ' objects of somatic disorders from time parameters (time characteristics, the time factor, the unit of time), and relations between them.

Referring to F. Alexander's statement [9] that "psychological factors", affecting physiological processes, should be subject to the same detailed and thorough study as is customary in the study of physiological processes ", we investigated the" actual psychological state "of a psychosomatic disorder with the help of psychodiagnostic methods and determined the correlation between the obtained diagnostic indices and the value of the chronotype.

5.1. Principles of the choice and application of research methods and their classification

The main principle of psychological research is its objectivity [216, p. 49].

As noted by B. Ananiev, the general principles of the scientific study of psychic phenomena include the reflection of objective truth, the verification of the laws being studied in practice, strict objectivity in the study of the psyche, the study of psychic phenomena in the process of

human activity, the study of all psychological phenomena in development [20, p. 194].

In view of the postulates of many scholars, the need for comprehensive, comprehensive study of the sick person [9], [61], [66], [72], [292], [327], as well as the complexity, multiplicity of problems of the chronopsychological prediction of the course of psychosomatic diseases, as the most suitable for representing a system of research methods used to solve our problems, the classification scheme, proposed by B. Ananiev [20, p. 296 - 311].

This scheme includes four large groups of methods: organizational, empirical, data processing and interpretive methods. Each of these groups of methods can be considered as a separate stage of holistic psychological research. To solve the problems we used:

- from the group of organizational methods - comparative (comparison of different contingents (samples) studied), longitudinal (monitoring of the psychosomatic state) and complex (interdisciplinary nature of the research) methods.
- from the group of empirical - observational, experimental, psychodiagnostic, biographical methods, methods of analysis of processes and products of activity;
- from the group of methods of data processing - quantitative (mathematical-statistical analysis: the method of averages, percentile statistics, comparison of mean values by the student's t-criterion, correlation, regression and factor analysis) and qualitative (differentiation of the material by types, groups, variants, etc. etc.) methods;
- from the group of interpretive - genetic (interpretation of the research material in the characteristics of development) and structural

(interpretation of the research material in the characteristics of the systems and types of relationships between them).

Under the "psychosomatic" disorders, we mean changes in the functional systems of the organism, which are primarily related to the psycho-emotional factors. This definition corresponds to the ideas of the founders of psychosomatic medicine about the leading role of regulatory systems of the organism as an industry in which the greatest combination of mental and physical processes is observed [476]. Our representations also do not contradict the notions of psychosomatic disorders that are presented in most classifications. It should be noted that this approach is also used in modern trends in the diagnosis of mental and behavioral disorders, which are reflected in modern classifications [223].

One of the problems in finding psychosocial and behavioral risk factors for psychosomatic illness is that these disorders, in which the etiology plays a significant role in emotional stress, arises with some delay in relation to the situation, after a period that helps to overcome resistance and reduce the effectiveness of the protective reactions of the individual.

For the psychological diagnosis of psychosomatic and somatoform disorders the leading specialists in this field, above all, recommend using a variety of questionnaires. The most commonly used ones are: SOMS Screen Scale, Freiburg Personality Questionnaire (FPI-R), Somatic Distress Scale, Pshenisc Questionnaire for Somatic Complaint (GBB), Symptom Check List (SCL-90-R), MIHI Hypochondria scale, Sivik Psyho Somatik Test (SPS) based on MSI scales (hypochondria, depression, hysteria), and allexity scale, behavioral disorder questionnaire (IBQ), hysteria hypochondria (NII), Toronto Alexithymic Scale (TAS). Unfortunately, in addition to the SOMS Scale, no scale has been validated in accordance with the concept of somatoform disorders. Symptom Check

List (SCL-90-R), there was a certain correlation between the number of symptoms in accordance with DSM-III-R somatization symptoms and the level of somatization [2; 7; 9; 12; 17; 19; 45; 51; 373; 54; 55; 65; 382].

When using statistical methods, experts recommend that they be based on mathematical models that are used to calculate the probabilities in mathematical statistics. Checking the hypothesis about one or another regularity is usually done indirectly, and the differences or connections established at the acceptance of the null hypothesis are very unlikely.

The statistical methods used in psychology and medicine have reached such a complexity that they can grow into an independent type of research and deviate from the original purpose in such an extent that they will be an end in themselves. Statistical methods should be considered as an auxiliary means of systematic research, as "an assistant, but not a research leader" [318].

In somatized syndromes, comorbidity with other psychiatric disorders (e.g., depression, anxiety disorders) often occurs [319], and therefore this sphere is also necessarily studied and considered psychometrically.

Methods of mathematical statistics were used in this work: estimation of reliability of differences of average values for t-criterion, method of averages, percentile statistics, correlation analysis. Mathematical data processing and graphical presentation of the results were performed using the statistical software IBM SPSS Amos 20 and IBM SPSS Statistics 20 [240].

It is important that the diagnosis of psychosomatic disorders should not be an eclectic set of techniques and methods. Diagnosis of

psychosomatic disorders should provide an integrative approach in reducing and preventing these disorders.

Next in paragraph 2.5.2. we will directly consider those research methods that helped to solve the problems in our research.

5.2. Methods of empirical investigation of the mental state of people with special needs

Observation is one of the main methods of research in psychology [219]. When conducting research related to solving such complex tasks as studying and prognosing the course of psychosomatic disorders, it is difficult to do without using this method, since, as S.Maksimenko rightly states, "observation is the most direct way of obtaining experimental data, and in this is his extraordinary value as a method of scientific knowledge "[218].

In our studies, surveillance was an additional method. At different stages and with different groups studied by us, the following types of observation were used:

- direct and indirect;
- selective (fixing attention on certain parameters of complaints or types of behavioral acts of patients) and waiting;
- included and not included;
- unformalized

Conversation

The conversation is considered to be specific to psychology (as well as to related sciences - medicine, pedagogy, sociology) by the method of

studying human behavior, since in other natural sciences communication between subject and subject of research is impossible. A conversation is a dialogue between two people, in which one person discovers the psychological characteristics of another [120]. This method was used by us and included elements of such varieties as clinical discussion and interviews.

Expert evaluation

This method consists in obtaining information from competent people (experts) who are well aware of the evaluated phenomena [218]. In our studies, an expert evaluation was used to assess the patient's somatic status. Experts were doctors of narrow direction (cardiologists, nephrologists, urologists, gastroenterologists, pulmonologists, neurologists) who evaluated the clinical condition of the patient for the period of research. An expert evaluation was one of the criteria for assessing the effectiveness of prediction, or a "productive" criterion for the effectiveness of primary and secondary prevention of the disease.

Product activity analysis

In the conducted studies, the results obtained on the basis of the method of "analysis of product products", also made one of the criteria for evaluating the effectiveness of human activities with psychosomatic disorders. First of all, we analyzed the psychosomatic state of the patient in the stage of exacerbation, reconvalescence (recovery) and remission (attenuation) of the disease.

Experimental method

The experiment is a formal trial process, during which the experimenter under controlled conditions carries out systematic observation of the reactions of the subjects under study on the variables

being manipulated (manipulation of an independent variable) [65]. We have applied the following types of experiment: laboratory, search and confirmatory, individual and group.

Anxiety as a personality trait is associated with the genetically determined properties of the brain, which predetermine a constantly elevated level of emotional arousal, emotions of anxiety [7, p.67].

Personality anxiety characterizes the steady orientation of the individual to perceive a large number of situations as threatening and respond to them an increase in anxiety. Very high personal anxiety is closely correlated with the presence of neurotic conflict with emotional and neurotic breakdown. Reactive anxiety is characterized by anxiety, stress, nervousness. The consequence of very high reactive anxiety may be disturbance of attention and fine coordination of movements [7, p.55].

But anxiety can not always be considered as negative quality. A certain level of anxiety is a natural feature of an active person. In this case, there is an optimal individual level of "useful anxiety" [9, p.88].

Given the above, anxiety studies can provide very relevant information about the mental component of the patient's adaptive capacity. The method of self-assessment of anxiety level chosen by us is considered a reliable and informative means of self-assessment of the level of anxiety - reactive (situational) and personal (as a stable person's characteristics). It was developed by the American psychologist C. Spielberger, adapted by Y. Hanin and proved to be a reliable and effective method for investigating the mental state of man in various forms of manifestation of the psychosomatic state [55], [68], [83], [107], [219].

The research process is that the investigated WMD asked to answer 40 per Affairs (crossed out the corresponding number from 1 to 4), of which the first 20 describing reactive anxiety (RT), and the next 20 - personal (OT) [2 18, p. 68-73]. Time tested using a standard blank option usually is 3 - 5 minutes. The level of anxiety, depending on the results, is classified as low, medium or high.

RT and OT indicators are calculated according to the formulas:

$$RT = A - B + 50,$$

where A - the sum of the forged digits on the points of scale 3, 4, 6, 7, 9, 12, 13, 14, 17, 18;

B the sum of the other digits.

$$OT = B - T + 35,$$

where B is the sum of the forged digits on the points of scale 22, 23, 24, 25, 28, 29, 31, 32, 34,

35, 37, 38, 40; sum of the other digits.

These figures can vary from 20 to 80 and are classified: 30 or less points - low anxiety level; 31 - 45 points - average; Over 45 points are.

Questionnaire of Beck

The questionnaire is intended for the diagnosis of depressive states [218, p.53-56].

Despite the fact that the approval of the test and allow a direct lit and the experimenter hide their condition, using the questionnaire in clinical practice shows its high efficiency for screening and preliminary examinations.

Testing is done in group and individual variants.

The results of the questionnaire are highly correlated with personality situational anxiety, manifestations of which will be diagnosed in the previous stage of the study.

All Beck questionnaire statements are straightforward, so to calculate the total result you simply need to sum up all the points in accordance with the selected statements.

The questionnaire has thirteen groups (A-N) from four allegations (0-3). It is necessary to read each group of allegations in general. Then, from each group, choose from one statement that best matches how you feel today, that is, rigChrT now. Circle the number of the statement you have selected. If several statements from the same group are the same for you, then you need to cross all their numbers.

It is believed that the subject suffers from depression if he has scored more than 25 points. The result of less than 10 points suggests the absence of depressive trends and a satisfactory emotional state. The intermediate group consists of subjects with a mild depression of situational or neurotic genesis.

In any case, interpreting the results of the questionnaire, we take into account the fact that the state of depression is set by the specialists as a result of the survey and clinical interview, and the results of the questionnaire can only give a preliminary and approximate idea of the status of the subject.

Questionnaire on the level of subjective control of Rotter

The questionnaire diagnoses the localization of control over meaningful events. It is based on the distinction between two locus of control - the internal and external and, respectively, the two types of people - the internals and externalities [218, p.145-151].

Internal type. Man believes that the events that take place with her, depend first of all on her personal qualities (competence, purposefulness, level of abilities, etc.) and are the logical consequences of her own activities.

External type. Man is convinced that her successes and failures depend, first of all, on external circumstances - the conditions of the environment, the actions of other people, chance, good luck or failure, etc.

Any individual occupies a certain position on the continuum given by these polar control loci.

Analyze the quantitative and qualitative indicators of the level of subjective control (RSC) in seven scales, comparing the results (obtained profile) to the norm. The normal value is a wall equal to 5. A deviation to the rigChrT (6 or more walls) is an indication of the internal type of the level of subjective control in the corresponding situations, the deviation to the left (4 or fewer walls) is an external type test.

Studies of self-esteem of people with different types of subjective control have shown that people with low PCK characterize themselves as selfish, dependent, unfair, hostile, uncertain, insincere, self-irritant, annoying, consider health and illness as the result of an event, and hope that Recovery will come as a result of the actions of others, first of all, close people.

People with high IDUs consider themselves to be good, independent, determined, fair, capable, friendly, honest, independent, responsible for their own health: if a person is sick, he accuses in it himself and insists that recovery depends largely on her action.

Methodology of diagnostics of indicators and forms of aggression by

A. Bass and A. Darki

This questionnaire was proposed by the authors for the identification of important indicators and forms of aggression such as: physical, verbal, mediocre aggression, negativism, irritation, suspiciousness, image, autoaggression [218, pp. 98-104].

After reading the proposed statements, it is necessary to determine how relevant they are to your style of behavior, your lifestyle. It is necessary to answer one of four possible answers: "yes", "probably yes", "apparently no", "no".

If the question number and the answer type (yes / no) coincide, the indicator is given a value of 1, with a non-matching - 0.

1. Physical aggression - use of physical force against another person: 1+, 9-, 17-, 25+, 33+, 41+, 48+, 55+, 62+, 68+. K = 11.

2. Verbal aggression is the expressiveness of negative feelings both through form (quarrel, scream) and through the content of verbal appeals to others (threat): 7+, 15+, 23+, 31+, 39, 46+, 53+, 60+, 66-, 71+, 73+, 74-, 75-. K = 8.

3. Secondary aggression - use indirectly against gossip, jokes and manifestations of disorderly raging explosions directed against others: 2+, 10+, 18+, 26, 34+, 42+, 49-, 56+, 63+. K = 13

4. Negativism is an oppositional form of behavior directed against authority and leadership that can increase from passive resistance to active actions against requirements, rules, laws: 4+, 12+, 20+, 28+, 36-. K = 20.

5. Irritation - susceptibility to irritation, readiness for a sligChrT excitement to pass to infinity, coarse: 3+, 11-, 19+, 27+. 35, 43+, 50+. 57+, 64+, 69-, 72+. K = 9

6. Suspicion - Propensity for distrust and cautious attitude towards people, the belief that the surrounding people intend to cause harm: 6+, 14+, 22+. 30+, 38+, 45+, 52+. 59+, 65-, 70-. K = 11.

7. An image is a manifestation of envy and hatred of others, caused by feelings of anger, dissatisfaction with any or all of the world for real or imaginary suffering: 5+, 13+, 21+, 29+, 37+, 44+, 51+, 58+. K = 13

8. The feeling of guilt, or autoaggression, - the attitude and actions of oneself or others who are based on the belief that he is a bad person, does not do well: 8+, 16+, 24+, 32+. 40+, 47+, 54+, 61+, 67+. K = 11.

Total figures allow you to calculate the index of aggression and hostility:

("1" + "2" + "3"): 3 = IA - index of aggressiveness;

("6" + "7"): 2 = IV - the index of hostility.

When processing the data, the answer "yes" and "probably so" are combined - added as the answer "yes" (+); The answers "no" and "probably not" are appended as "no" (-). The sum of points multiplied by the coefficient K, indicated with each parameter of aggressiveness, allows us to obtain comparable - normalized - the value of each indicator and two aggregate indices.

Thomas's Test - Types of Behavior in the Conflict

To describe the types of behavior of people in conflicts, K.Tomas considers that it is possible to apply a two-dimensional model of conflict management, in which the cooperation is fundamental, connected with the

attention of the person to the interests of other people involved in the situation, and the persistence, which is characterized by the emphasis on own and interests [218, p.104-109].

There are five conflict resolution tools that are defined in accordance with two fundamental measures (co-operation and competition):

1. Competition (competition) - the desire to achieve their interests at the expense of another.

2. Adaptations - the sacrifice of their own interests for the sake of another.

3. Compromise - agreement on the basis of mutual concessions; proposal of a variant eliminating the contradiction.

4. Avoidance is the lack of a desire for cooperation and the lack of a tendency towards achieving their own goals.

5. Cooperation - the situation participants come to an alternative that fully satisfies the interests of both parties.

In his questionnaire on the identification of typical forms of behavior, Thomas Tomas describes each of the five possible variants listed by 12 judgments about the behavior of the individual in a conflict situation. In different variants, they are grouped by 30 pairs, each of which proposes to choose the judgments that are most typical for characterizing its behavior.

Answers to the questions are recorded in the form.

There are two variants of answers, from which one needs to choose one that mostly corresponds to your views, to your own opinion. The answer should be given quickly.

The key to the questionnaire is:

1. Competitions: 3A, 6B, 8A, 9B, 10A, 13B, 14B, 16B, 17A, 22B, 25A, 28A.

2. Cooperation: 2B, 5A, 8B, 11A, 14A, 19A, 20A, 21B, 23B, 26B,

28B, 30B.

3. Compromise: 2A, 4A, 7V, 10V, 12V, 13A, 18V, 22A, 23A, 24V, 26A,

29A.

4. Avoidance: 1A, 5V, 6A, 7A, 9A, 12A, 15V, 17V, 19V, 20V, 27A, 29V.

5. Adaptation: 1V, 3V, 4V, 11V, 15A, 16A, 18A, 21A, 24A, 25V,

27V, 30A.

In the key, every answer A or B gives an idea of quantitative expression: competition, cooperation, compromise, avoidance and adaptation. If the answer coincides with the key, then it is given a value of 1, and if it does not coincide, then the value of 0. The number of points scored by the individual on each scale gives an idea of how expressive his tendencies are to the appearance of appropriate forms of behavior in conflict situations. It is convenient to use the mask to process the results.

Questionnaire Mini-cartoon (short version of Minnesota multidimensional personal list of MRI)

Questionnaire Mini-cartoon is a shortened version of MRI, which contains 71 questions, 11 scales [218, p.122-124].

The first 3 scales - estimated - measure the sincerity of the subject, the degree of truth of the test results and the magnitude of the error, which is entered with great care.

On the scale of the proposed questionnaire, the tendency or presence of a state of hypochondria, depression, hysteria, psychopathy, paranoyality, psychosis, schizoid, and hypomania is diagnosed.

1. Scale of lies - evaluates the sincerity of the subject.

2. Scale of reliability - displays false answers: the higher the value on this scale, the less reliable results.

3. Correction scale - smoothes out distortions that are introduced with caution and control of the subject during testing. High scores on this scale indicate unconscious behavioral control.

The last 8 scales are basic and evaluate the properties of the personality:

4. Hypochondria - the proximity of the studied to astheno-neurotic type. Those who are highly evaluated are slow, passive, believers, humble, slowly adaptable, poorly tolerate change, easily lose their balance in social conflicts.

5. Depression. High ratings have sensitive, sensitive individuals who are prone to anxiety, shy. In the case they are diligent, highly moral and obligatory, but they are not able to make decisions on their own, they have no confidence in themselves, with minor lesions, they are desperate.

6. Hysteria. Detects individuals who are prone to neurological protective reactions of conversion type. They use the symptoms of a somatic disease as a means to prevent accountability. All problems are solved by illness. The main feature of such people is the desire to appear more meaningful than they really are, the desire to attract attention in any case. The feelings of such people are superficial and the interests are not profound.

7. Psychopathy. High scores on this scale indicate social maladaptation, such people are aggressive, conflict, neglected by social norms and values. Their mood is unstable, they are easily offended, exciting and sensual.

8. Paranormal. The main feature of people with high rates on this scale is the tendency to form valuable ideas. These people are aggressive and ignorant. Who does not agree with them, who thinks otherwise, is either a stupid or an enemy. They are actively imposing their views, so they have conflicts with others. They always overestimate their own insignificant ways.

9. Psychotherapy. Diagnoses people with anxiety-suspicious type of character, which is characterized by anxiety, timidness, indecision, constant doubts.

10. Schizoid. A person with high rates on this scale is characterized by a schizoid type of behavior. They are able to feel and perceive abstract images, while everyday joy and sadness do not cause them emotional response. Thus, the common feature of the schizoid type is a combination of inflated sensitivity with emotional coolness and alienation in interpersonal relationships.

11. Hypomania. For people with high ratings, this scale is characterized by an overheard mood, regardless of circumstances. They are active, active, energetic and cheerful. They love to work with frequent breaks, they are willing to interact with people, while their interests are superficial and unstable, they lack perseverance and perseverance.

Methodology for determining the psychological characteristics of temperament

The temperamental questionnaire of D. Raigorodsky allows to diagnose the following polar properties: extraversion - introversion, rigidity - plasticity, emotional excitability - emotional balance, reaction rate (fast - slow), activity (high - low), as well as openness of the investigated ones in the answers to questions [278, pp. 70-74].

At the beginning of processing the results of the survey evaluate the frankness of responses using the scale: high - 13-20 points, average - 8-12 points, low - 0-7 points.

It is convenient to handle the results using masks.

Then, using the table "Average marks and zones of expressiveness of the properties of temperament", determine the degree of expressiveness of each property and record in writing.

Questionnaire Codes:

Characteristics of temperament	Answers "yes"	Mark	Answers no	Mark
1. Extroversion	1,2.23,19,25,31,37,4,43	3.2	2	1
2. Roughness	8.26,32,2,14,20,38,44	3	37.19.46	1.2
3. Emotion excitability	15,21,33,39,45,3,9,27	3,2,1		
4.Temp reactions	4,16,28,10,22,34,40,46,17,29,37	3,2,1		
5.Activity	5,11,17,23,29,35,41,47,10	3.1	38	1
6. Return	30,36,42,48,6,12,18,25,24	3,2,1	23	1

Table 1

Average marks and zones of expressiveness of properties of temperament

Extroversion	Rigidity	Emotional excitability	Rate of reactions	Activity
22-26 very high	16-23 very high	18-20 very high	20-22 very high	24-26 very high
17-21 very high	12-15 high	14-17 high	14-19 high	21-23 high
16-13 average	8-10 average	13 average	9-13 average	14-20 average
12-16 average	7-11 average	8-12 average	5-8 slow	9-13 low
7-11 high	3-6 high	4-7 high	0-4 very slow	0-8 very low
0-6 very high	0-2 very high	0-3 very high		
Introversion	Plasticity	Emotional equilibrium		

The self-assessment of pain is considered a recognized method for assessing the psychosomatic state of man [458], [469], [471], [472], [48 2], [483], [484]. A. Leonov [197, p.103-106] rightly points out that its value, first of all, is due to the fact that for a modern researcher, the analysis of subjective factors is a prerequisite for a full-fledged qualitative characteristic of the state; This is precisely what determines the importance of developing specialized subjective assessment methods for different human conditions.

We have developed a technique for *scaling self-assessment of* human psychosomatic pain. It makes it possible to quickly and accurately obtain the evaluation of the various components of their psychosomatic state [314]. The most important advantages of this technique are its convenience, versatility, informativeness, reliability, express character, the possibility of classification and comparison of the obtained indicators, making it one of the most suitable methods for solving the problems of monitoring the prediction of the course of psychosomatic illness. It should be noted that attempts to use with the psychodiagnostic aim of subjective scales were not before [46], [426].

The self-espoused self-assessment makes it possible not only to easily diagnose the parameters of the subjective expression of pain [310], [397], [400], but also to compare them with the indicators that characterize the psychosomatic state of a person according to the nosological form of the disease.

The developed method corresponds to the basic requirements that apply to the psychodiagnostic methodology: the use of the scale of intervals, validity, discriminates, the availability of normative data [65], [69], [137], [218]. It is intended for repeated fixation of the *dynamics* of state indicators, rather than stable characteristics, and each of its scale

measures relatively *independent* indicators, which can be included and excluded, depending on the specifics and objectives of the study.

For the same reason, the methods of validity are those which, in principle, can be applied to it: obvious, constructive, and competitive.

During numerous studies on different samples and in different types

We have established the coherence of the results obtained on the basis of this method with the results of subjective expression of pain with the results of psychodiagnostic techniques for assessing the "chronopsychological profile of the person" suffering from psychosomatic illness. Thus, different scales have reliable correlations with reactive personal anxiety and the level of aggression (r = 0,15-0,55; p 0,05 - 0,001), with many quantitative indicators of the chronometric test method, evaluation of neurotic states and other (r = 0.15 - 0.35; p 0.05 - 0.001). In more detail, these links will be highlighted in the analysis of research results by constructing a "chronopsychological profile of a person" of patients with psychosomatic illness.

The age of the subjects, among which the method was used, ranged from 17 to 65 years; Their total number was 2487 people. The research was conducted during the period of exacerbation, reconvalescence (recovery) and remission (fading illness) (7461 measurements were performed together).

The diagnostic procedure for this method is that the test is proposed to assess the degree of severity of subjective pain at the present moment drawing polygons around the numeric value of subjective pain severity, with view of what each quantitative value is qualitative characteristic expression of subjective pain and exactly:

0 scores - no pain;

1 point - "weak pain";

2 points - "dull pain";

3 points - "moderate pain";

4 -5 points - "acute pain";

6-7 points - "unbearable pain".

6. General characteristics of the subjective time perception study method

Since chronopsychological prediction concept requires the development of a method that can be used to study it at the level of experimental techniques in the laboratory.

Consequently, depending on the actual research problem, issues related to the immediate experience of the flow of time and the peculiarities of the functioning of the time mechanism should be studied.

To date, there are many different methods that are used in studies of psychological time. Most existing methods face the issue of validity. The problem of the validity of the method arises in the first place because there is still no real time definition. Methods that were developed on the basis of a physical understanding of time and its primacy, as a rule, demonstrate the obvious validity. Such methods reflect the way of understanding time according to logic "from physical time to psychological time."

In spite of a decade of fruitful experimental work based on this logic (research by P.Fress, D.Elkin, B. Tsukanov, etc.) today it is worth adding to the existing approaches to solving the problem of chronopsychological prediction of the course of psychosomatic diseases.

Thus, the need for a method that best meets the characteristics of experiencing the time of psychosomatic patients is outlined.

To determine the basis and essence of this method, we turn to the characteristics of the experience of time.

1. Because the experience of time is inherent in man and is one of the basic phenomena of the chronotype, the task of this method is to approach this phenomenon as close as possible and to join the experience of the flow of time given in the stream of consciousness.

2. The experience of the passage of time is a peculiar background for explaining the course of a psychosomatic illness. Therefore, this method should preserve this role of the background for experiencing the time patients with psychosomatic illness.

3. The new method should focus on the subjectivity of experiencing the time. In this case, the usual focus on the full responsibility of the measured intervals of the physical time intervals, which was predetermined to the subject, is taken into account. The results of measurement by this method should be considered exclusively from the position of exact correspondence to the given physical interval and through the concept of the error of the results.

4. Due to the fact that the experience of the passage of time requires some incentives, the new method should rely on a procedure that involves the direct use of incentives in the form of intervals of physical time.

In studies by G.Vudrow [97], D.Katz [496], T. Kolman [499], V. Lysenkov [260], P.Fress [394], G.Shlotin [428], D.Elkin [434] describes the nature and magnitude of the time error that arises as the difference between the given interval (t0) and the subjective response of the subject (t s). Data accumulated by different authors show that the magnitude and

sign of the time error depend on the duration of the given interval (t0) and on the applied method (reproduction, measurement, evaluation of duration). So by the method the reproduction of the duration of G.Vudrow revealed three zones that became classical: I) the zone of short intervals t0≤ 0,5 s; 2) zone of neutral intervals 0,5 s ≤ t0≤ 1,0 s; 3) zone of long intervals t0> 1.0 s [97, p.231].

In the zone of short intervals, the relative time error E ≠ const, and in the zone of long intervals E = const. According to G.Vudrow [97], the average error of reproduction of long intervals is 16 ~ 17%, according to T. Collman [499], - 15%, according to P.Fress [394], - 14-16%.

P.Fress [394, p.165] notes that such a magnitude of the error of reproduction of duration is found not only in adults, but also in children, from the age of six.

On two independent samples, by the method of reproduction of duration
(t o = 2,3,5 s), B. Tsukanov received the value E = 15 ~ 16% for "medium-group subjects" [4 1 5]. By magnitude, it completely coincides with the previously obtained values of the relative error in the studies of G.Vudrow [97], T. Collman [499], P.Fress [394], and others. If we take into account the fact that G.Vudrow [97] used intervals of up to 30 s, T. Collman [499] - up to 3 minutes, P.Fress [394] - up to 30s, and in B. Tsukanov's experiments [4 1 5] there were gaps up to 5s, and to take into account that the practical equality of errors was separated by several decades, then one can say that the *method of reproduction of duration is determined by the individual chronotype, which is a constant value, and you can set a central factor that determines the orientation of the individual, namely, extravagance- and mobiverty-introversion and predicts the course of psychosomatic illness.*

To determine the chronotype, the relation was used: ChrT = t s / t0[477] proposed by G. Ehrenwald. Calculations carried out on the results of the reproduction of the duration of "medium-entities" made it possible that in both "subjects" ChrT = const on different segments of the experienced time. In accordance with the value of X, the range of relative errors varies from 10% to 30%. Individuals of both samples were divided into two groups [4 1 6].

The first group includes individuals with ts ≤ t0that do not measure time. The range of their errors is in the range of 0 to 30%. In the second group there are individuals with ts> t0, which re-measure the time, the range of errors which is in the range from 1 to 10%. As you can see, we can talk about "hurrying", "exact" and "slow" individuals. Each individual that to Measure or re Measure time, called "chronotype."

The sample tested the stability of the individual "chronotype". Determining the "chronotype " in each subject for several months, it was found that the deviation of the mean values does not exceed the resolution of the 1st-class chronoscope [415]. The data gives a believe that *chronotype of* individual is characterized by high stability, and can therefore make a central factor capable to unite *psycho* and *somatotype* individual, and therefore predict psychosomatic disease.

7. Method of chronopsychological prediction of the cross-sectof psychosomatic disorders

Our task - to predict the course of psychosomatic diseases - was decided experimentally in the contingent of people aged between 17 and 67 who suffered from psychosomatic illness and undergo treatment at Pervomaisk hospital and its clinic department. In other words, the study

was conducted with patients during the period of exacerbation, and reconvalescence (recovery) and remission (attenuation) of the disease. At the same time, for the purpose of comparative analysis in the study involved healthy individuals who are prone to disorders of the cardiovascular and respiratory systems. Each questionnaire was filled with a questionnaire, which determined the following:

1) age of the person (indicating the number of years and months at the time of the survey);

2) number, month, year of birth;

3) the type of psychosomatic illness.

On the basis of the results of the timing, a table was constructed to determine the chronotype of the individual. Each patient who was examined using the method of chronometric test [114] determined the "chronotype ", which used the classic method of reproducing the intervals of duration t_o = 2, 3, 4, 5c, set by the experimenter and reproduced by the surveyed using an electronic chronoscope from Accuracy up to 0.001s. At the same time, each examinee was asked to recreate the duration he experienced and limited to two signals - "beginning" and "end" in the form of sound that occurs when turning on and stopping the chronoscope. The subjects reproduced the intervals that were asked on this chronoscope.

The individual meaning of the "chronotype" was calculated by the formula according to each proposed interval:

$$ChrT = \frac{\Sigma t_s}{\quad} \quad (2.1)$$

$$\Sigma$$

$$t_o$$

where t_o is the duration given by the experimenter, and t_s is the duration that the surveyed reproduces.

The reproduction of each time interval was repeated five times, and then the average statistical value of the chronotype of each subject was not calculated.

This relation was first proposed by G. Erenwald [477] to characterize the individual results of the reproduction method.

The choice of the method of psychodiagnosis of psychosomatic illness from the standpoint of the law of experiencing time is a leading issue in the analysis of the prediction of the course of psychosomatic illness. In addition to the playback method, the method of measuring and estimating duration is used to study the subjective relation to the time experienced by the individual. The results in these methods vary greatly, and the data of different authors is difficult to match or give an unambiguous interpretation [200], [394], [434].

But many researchers use measurements and estimates of duration and get results that are related to the peculiarities of methods and attempt to interpret them as new facts. But, from the standpoint of some researchers [200], [477], it is impossible to reconcile these results with the subjective experiences of time. And only due to a careful analysis of time errors in the works of B. Tsukanov [415], which are allowed by the subjects in experimental methods and on the basis of this analysis, the most appropriate method was chosen which allows revealing the patterns of the individual time experienced by the subject. In our study, the relative error of reproduction of duration was determined for the experimental group - 1 sample (individuals suffering from psychosomatic

illness) and control - 2 samples (healthy individuals), but calculated using the formula:

$$|\varepsilon| = \frac{\Delta t_s}{t_o} 100\%,$$

where $\Delta t = t_o - t_s$, t_o is the duration given by the experimenter, and t_s is the duration that the surveyed reproduces [116, p.35]. The results were matched with the chronotype and are presented in Tables 2. 2, 2. 3, 2. 4.

As can be seen from Tables 2. 2, 2. 3, 2. 4., practically the equality of relative errors was obtained on two independent samples from "extraverted", "amber-typed" and "introverted " subjects.

The results obtained in the studies of the relative error of reproduction of duration are subject to unambiguous interpretation, therefore the method of reproduction of duration is adequate for the purpose of studying the course of psychosomatic diseases in solving the problem of chronopsychological prediction of their course. In this respect, the specificity of the method of reproduction can reveal the peculiarities of the temporal mechanism of the individual with psychosomatic illness, which measures the duration of the duration experienced by the subject with the help of a chronotype.

Thus, the results of the relative error of reproduction of duration in the experimental group are equivalent to the results of the relative error of reproduction of duration in the control group and are subject to unambiguous interpretation, therefore the method of reproduction of duration can be considered adequate for prediction of the course of

psychosomatic diseases from the standpoint of the laws of the experience of time.

In this regard, the specificity of the reproduction method allows us to discover the peculiarities of the "time mechanism" of an individual who measures

Table 2

Relative error of reproduction of duration by "extravagant subject "

t_o (in s)	1 sample (50 ind.)			2 sample (60 ind.)		
	t_s (in s)	Ch rT	ε (in %)	t_s (in s)	Ch rT	ε (in %)
2	1.7	0.85	15	1.68	0.84	16
3	2.52	0.84	16	2.49	0.83	17
4	3.32	0.83	17	3.28	0.82	18
5	4.1	0.82	18	4.15	0.83	17
Average		0.84	16.5	-	0.83	17

the duration of time experienced by the subject, using his chronotype.

Two 375 patients with psychosomatic illnesses aged 27 to 60 years old and 1376 individuals at risk, including 976 men and women aged 19 to 26 years with hypertension, 269 children, participated in the research,

the results of which are described in the dissertation. From 7 to 14 years with a tendency to disturb the rhythm of the heart and 131 children aged 7 to 14 years with a tendency to disturb the rhythm of breathing. General characteristics of stages, scope and research methods are presented in Table. 2. 5.

Of the group of patients with syosomatic diseases: 129 patients with ischemic heart disease of the ardea walls and myocardial infarction; 262 patients

Table 2. 3

Relative runtime error "Ambitious subject"

t_o (in s)	1 sample (80 ind.)			2 sample (90 ind.)		
	t_s (in s)	ChrT	ε (in%)	t_s (in s)	ChrT	ε (in %)
2	1.8	0.9	10	1.78	0.89	11
3	2.67	0.89	11	2.64	0.88	12
4	3.52	0.88	12	3.48	0.87	13
5	4.35	0.87	13	4.4	0.88	12
Average		0.89	11.5	-	0.88	12

Table

2. 4

Relative error in the duration of the "introverted subject"

t_o (in s)	1 sample (70 ind.)			2 sample (80 ind.)		
	t_s (in s)	Ch rT	ε (in %)	t_s (in s)	Ch rT	ε (in %)
2	2.6	1.3	30	2.54	1.27	27
3	3.66	1.22	22	3.84	1.28	28
4	5	1.25	25	5.2	1.3	30
5	6.35	1.27	27	6.25	1.25	25
Average		1.26	26	-	1,275	27.5

on an arterial essential hypertension; 2 49 patients with functional disorders of heart rhythm; 1 98 patients with peptic ulcer and duodenal ulcer; 24 2 patients with cholecystitis, pancreatitis, dysentery of biliary tract; 1 6 2 patients with chronic constipation; 167 patients with emotional diarrhea; 1 34 patients with glomerulonephritis; 138 patients on

Table

2. 5

General characteristics of stages, scope and research methods

Stages of	Character	Key l	The	Basic research	Basic

the study	istics of research	b - bone	sum of res. is the number.	methods	prognosing methods
1	2	3	4	5	6
Determination of psychological and temporal indicators of the course of psychosomatic diseases.	Cardiovascular diseases: Coronary heart disease AEH FPSS Gastrointestinal problems: stomach ulcer and 12 stomach ulcers; cholecystitis, pancreatitis JVSH; constipate eyediatrician disease. genitourinary system: glomerulonephrine pyelonephritis dysmetabolic nephropathy	129 262 249 198 242 162 167 134 138 124 63 13	640 769 597 389	The observation diagnosis conversation, product analysis, Spielberger-Hanin anxiety self-esteem techniques, Beck's depression, Rotter's subjective control, forms of aggression Bass and Darks, Conflict Behavior Types (Thomas Test), questionnaire. Mini cartoon definition psycho. Har-ki temperament. scaled self-esteem pain.	A method of playing time on hearing using an electronic chronoscope
Construction of ind. chronotope of the course of psychosis in ontogenesis				Observed. Clinical method, diagnosis of conversation	The method of determining the duration of the biological cycle of life of the individual by law of experiencing. time
1					

	NN function enu resis Disease respiratory organs: bronchus. as thma tracheobron chitis Neurotic dis orders 2	8 1 2 5 19 4 50 3	50 4	5	
Construction of the model "Chronopsy chol. personality profile”				Methods samoots and nk y Spielberger-Khanin's anxiety level, Beck's depression, Rotter's subjective control, forms of aggression Bass and Darks.	Medical and psycholog ical correction
Developed basic a pproaches to Prognosing of the course of psychosomatic illnesses					Programpsych oprofile psychosomatic diseases.
The system of psychological organs. medical psychological organ and prognostic orientation to subjects from Somat broken				Expert evaluation of the clinical condition of the patient.	Recommendati ons regarding war ning of psychosomatic disease prevention.

pyelonephritis; 124 patients with dysmetabolic nephropathy; 63 min hormones on renal failure; 138 patients with enuresis; 1 25 patients with bronchial asthma

asthma 194 patients with relapsing tracheobronchitis; 50 patients with neurotic disorders.

8. Practical justification of the chronopsychological prognosing of psychosomatic disorders crossing concept in people with special needs

The methodological support of the psychodiagnosis of the chronotype is presented *by the chronometric method using the electronic chronoscope* as a psychological toolkit, which enables to record the values of the subjective time perception with an accuracy of 0,001. On this error it became possible to differentiate the individual-typological and somatic features of the individual.

The application of the chronometric test method allowed developing an *algorithm for the chronopsychological prediction of* psychosymptomy, the course, the effectiveness of treatment and psychoprophylaxis of psychosomatic diseases, taking into account the following steps:

1. Psychodiagnostics is the significance of the chronotype, and accordingly:

- identification as objective ("the place of the least resistance") and subjective (psychosymptomy) criteria for the diagnosis of psychosomatic illness;

- prediction of the basic emotional background of the individual;

- assessment of the level of subjective control;

- determination of the propensity to develop certain forms of adjacent nervous and psychological disorders;

- manifestation of neurotic disorders;

- prognostication of the degree of subjective expression of pain.

2. Determine the duration of C-periods, that is, taking into account the phases of the singularity and, accordingly, planning a comprehensive medical-psychological prophylaxis *in terms of the* decline of the biological cycle or its quarters, that is, during the period of greatest probability of exacerbation of the disease.

Timely prevention of the disease will ensure the effectiveness of preventive measures, and accordingly warns the exacerbation of the chronic process.

The proposed algorithm of the chronopsychological forecast allowed to construct a *model of "psychological profile of the person" of* patients with psychosomatic diseases of the organs *of the cardiovascular system* (coronary heart disease and its clinical form - heart attack, hypertension, arrhythmia), *gastrointestinal tract* (ulcer stomach and duodenal ulcer, gastritis, cholecystitis, pancreatitis, dyskinesia of the biliary tract, constipation, emotional diarrhea), *respiration* (bronchitis, bronchial asthma), *genitourinary system* (pyelonephritis, glomeruloneph) digestion, dysmetabolic nephropathy, cystitis, chronic renal failure, dysmenorrhea).

Chronotype can perform not only predictive function, but also be used as *psycho-time indicator of* the effectiveness of physiotherapy impact in the treatment of patients with psychosomatic diseases.

In general, the problem of the effectiveness of physiotherapeutic treatment of psychosomatic diseases is very relevant in modern

medicine. In the proposed method, the frequency of electropulse action on the human body is determined by the sensitivity of the skin of the patient, that is, the feeling of "tingling". However, the procedure does not always achieve a positive effect, acting directly on the diseased organ. This may be due to the fact that the frequency of electropulse effects on the body is not consistent with the frequency of internal organs. To solve this problem, we turned to the law of the experience of time, one of the provisions of which states that "as the playback time of time depends on the structural and functional characteristics of the time mechanism, it is one of the indicators of progress as subjective individual clock and numerical value Consistency is a prohibitive rate of the internal systems of the body "[42 1]. Taking into account this provision, the *method of electric impulse action on the human body is* proposed, *taking into account the course of the biological clock of the individual*, which includes the action of the adaptive-dynamic current with a rectangular pulse shape of the corresponding frequency of alternation, which differs by the fact that the frequency agrees with the course of the individual biological clock of the individual, numeric value is determined by the formula:

$$V = 60 / X,$$

where V is the frequency of agreement with the course of the biological clock of the individual, ChrT - chronotype.

Such an individual approach greatly enhances the effectiveness of physiotherapeutic effects on the human body.

Thus, the key issues identified in the section on the identification of psycho-temporal indicators of psychosomatic diseases, on the one hand, serve as a methodological basis for the development and practical implementation of the system of chronopsychological prediction of the

course of these diseases, and on the other outline specific directions for further study of the outstanding issues in this area, necessitate their verification the most important criterion of truth-practice.

The development of a system of psychological and organizational measures for the medical and psychological and preventive and prognostic orientation of subjects with somatic disorders was needed, taking into account the existence of a system of interconnection, interdependence and their relationships between individual-typological peculiarities and time parameters (time characteristics, time factor, chronotype) on an example of psychosomatic illness.

With this purpose, a systematic approach was used, based on the model of corrective work, which contains four blocks: theoretical, methodical, organizational and executive.

The theoretical block contains a number of fundamental provisions of the psychological and related sciences on the effectiveness of coordinating various approaches based on accurate knowledge about the interconnections of constitutional, emotional and physiological factors in the causality of the disease.

The methodological block is represented by the method of chronometry of temporal characteristics; psychological diagnostics (definition of temperamental characteristics); curative method (physiotherapeutic) taking into account the course of the subjective biological clock of the individual; the author's course of psychological correction of psychosymptomatic psychosomatic diseases taking into account the course of the biological clock of the individual; author's method of express-diagnostics of self-assessment of the level of subjective expression of pain in patients with psychosomatic illness.

The organizational unit covers: the definition of the time of acute development of the disease; identification of individual-typological features; Planning of medical measures with the following prevention and prognosis with the help of the author's course of complex medical and psychological prevention of chronic psychosomatic illnesses taking into account the course of the biological clock of the individual; explanatory work on the need for measures to prevent exacerbation of the disease, implementation of recommendations for timely diagnostic examination.

The executive unit is represented by such psychological-organizational measures: definition and taking into account individual-typological features; determination and taking into account the age-old C-period of acute manifestation of the disease; psychological counseling, individual conversations; author's technique of the method of electropulse action on the human body taking into account the course of the biological clock of the individual.

At the same time, during the development of working schemes for the implementation of the system, the proposed model of the development of somatic disturbance was considered, which allowed to allocate the main nodal points - points of the phase singularity taking into account the age-old C-period; individual-typological peculiarities of the subject depending on the time parameters: temporal characteristics, time factor, chronotype.

The effectiveness of the proposed system was determined based on the results of a comparative analysis of the results of the primary psycho-somatic and control survey, which made it possible to analyze the changes in psychostimptomy due to the complex medical and

psychological correction work, taking into account the law of experiencing the time.

When planning the working patterns of observation, it was taken into account:

The c-metric of the disease, i.e. recommended repeated course of preventive measures aimed at the patient on the eve of his entry into the phase of singularity. Timely psychoprophylaxis of the disease in the subject up to the moment of exacerbation of the main somatic disorder has allowed in advance preventing the exacerbation of the chronic process by using appropriate preventive measures.

Conclusions to section 2

1. Based on the analysis carried out in the section on the problems, perspectives and tasks of research on the methods of prognosing the transversal of psychosomatic disorders, one can conclude that the study of an individual chronotype and the identification of the psycho-temporal indicators of psychosomatic disorders can be considered one of the most promising directions of the psychosomatic approach to prevention and the onsite prevention of these disorders in students with special needs.

2. The results of the relative error of the reproduction of the duration of the results obtained in the research are subject to unambiguous interpretation, therefore the method of reproduction of the duration is adequate for the purpose of prognosing the course of psychosomatic diseases in the problem of the individual time experienced by the subject. In this respect, the specificity of the method of reproduction can reveal the peculiarities of the time mechanism of the individual, which

measures the duration of the duration experienced by the subject through the chronotype.

Thus, by playing duration individual chronotype is determined which is constant and can act as factor that will determine the orientation of the individual, namely extraversion, ambiversion, and introversion prognosis interruptions psychosomatic disorders in people with special needs.

Since the results of the study suggest that the interval between two pulse strokes (the correlation between the "chronotype" and the period of Tr in both the direct and the reverse order is quite high: 1ChrT, Tr = 0.98 and Þ Tr, ChrT = 0.99) and respiratory cycle interval is consistent with the value chronotype individual(individuals in an extraversion group the general performance ratio were obtained following options respiratory cycle interval value and importance of chronotype: T s = 2ChrT, T s = 3ChrT, T s = 4h; individuals are moderately extroverted the group: T s = 4ChrT), on this basis in the work *the assumption is made that the coordination with the chronotype of the person impulse effects on his body will ensure their compliance with the physiological rhythms of the functioning organs and systems of the patient's body. It was also assumed that the proposed individual approach should significantly increase the effectiveness of physiotherapeutic effects on the body of a person with special needs*.

In order to develop a system of organizational measures for medical and psychoprophylaxis and prognostic orientation in patients with comative disorders, a psychosomatic approach was used which took into account the existence of a system of interconnection between individual- typological features and time parameters (chronotype) of patients on an example of psychosomatic disorders. On its basis,

a *program of rehabilitation work,* which contains four blocks: theoretical, methodical, organizational and executive, was constructed.

4. For effective prevention in medicine it is necessary to take full account of the psychological individual characteristics of each individual subject to psychosomatic illness. This will make it possible to predict the place of its least resistance, for the first time, such separate nosological forms of diseases as diseases of the cardiovascular system, the gastrointestinal tract, respiratory organs and secretions.

4. Taking into account the *individual chronotype of a* person's *psychosomatic illness* will allow for targeted psychosocial effects with the involvement of practitioners of different backgrounds, predict and anticipate possible disorders before they occur. Thus, the proposed approach will contribute to the formation of not only healthy individuals but also a healthy society among young people with special needs.

Psychosomatic disorders are the focus of medical psychology for more than a decade. In recent times, the urgent need was a comprehensive one approach to being studied psychosomatic diseases of the respiratory, cardiovascular, digestive and other systems of the body. The complexity of the studied phenomena has proved to be unimportant Commodity of simplified cause-effect explanatory models of psychosome tick they are frustrated virgins Objective study of mechanisms of etiology and pathogenesis of psychosis with ma tick their disorders possible only with taking into account multidimensionality of the subject's phenomena

The level of requirements that life now puts to a person with special needs has increased. Modern cultural, economic and social transformations require it to mobilize extraordinary cognitive, emotional

and personal resources, and constant readiness to solve life's problems. Chronic strain and internal psychological reactivity now are the everyday state of a modern person, experiencing constant pressure from the side of society. All this is the reason for a significant increase in the number of chronic diseases, whose etiology is closely related to the peculiarities of the psychological sphere of the individual. According to modern data, psychosocial Malformations in industrial countries are widespread among 50-70% of the population and this indicator is quite stable for people with special needs [136].

Modern medicine officially came to the recognition of the fact that all the causes of psychosomatic disorders should be sought not in the external, but in the internal processes of the individual, taking into account the manifestation of the latter in the behavior of the individual.

M. Nikolskaya, studying the factors that influence the formation of the response to the disease, emphasized the fact that individual psychological features are more informative for the prediction of personality reactions to the disease than the clinical evaluation of the severity of the disease [245, p.105-111]. It is the individual psychological characteristics of the person that determines, in our opinion, a certain symptom complex of somatic disorders, which include psychosomatic illnesses. We turned to the consideration of this issue, taking into account the individual peculiarities of the dynamic experience of time and the data of the generalized profiles of this category, and tried to determine the criteria of the typology of prevailing diseases.

Every individual exists in his subjective time and space. In turn, space and time are inseparable unity, which will turn attention O.Uhtomskyy, M.Bakhtin [39]. O. Uhtomsky highlighted the so-called *chronotope - time and space in unity*. M. Bakhtin did it on

the basis of the novels. We propose appropriate analysis on the basis of psychosomatic diseases and believe that in the chronotope the main role is given to the time component (*chronos*) (80%), while the space component (*topos*) only complements it (20%). This is explained by the fact that a person exists in space, differently notes it, but life measures time - rhythm, duration. Time and space exist in human consciousness, therefore, the personal asymmetry of the temporal perspective affects the psyche and somatics, as well as determines its *individual chronotop.*

We assume that the chronotope can be considered a "description of a psychosomatic illness", where there is a merger of time and spatial clinical features into a single chronotopic continuum. The space component can be represented in percentages (1%, 2%, 3%), but it will be a chronotop due to the correspondence with the theory of the chronotype M. Bakhtin [39, p.54-63]. To do this, it is enough to use, as indicators of belonging to an individual chronotope, *chronotype (ChrT) and S-period*, serving as psychological and time indicators of psychosomatic diseases.

Today, the understanding of psychosomatic disease, the adoption and implementation of a holistic approach to the personality of the patient are urgent tasks of modern medical psychology. According to the World Health Organization (WHO), in the first place among the psychosomatic diseases takes the cardiovascular disease (CVD).

In recent decades, according to scientists (F. Aleksander [9], S. Bondarevich [61], V. Browitigam [68], I.Vitenko [90], D.Isaev [146], M.Kabanov [149], O. Kvasenko [159], M. Korobitsin [174], I. Kurtsin [187], B. Mikhailov [232]) increased the incidence of cardiovascular morbidity, especially those of working age, including ischemic heart disease (CHD)) occupies a leading position. The economic damage to

these diseases in the United States alone is about $ 60 billion a year [135, p.9-10].

In general, ¼ of the adult population of the globe suffers from these diseases. They are the cause of every second death, every third disability. Therefore, the attention of doctors around the world is focused on the problem of cardiovascular disease. Together with psychologists, doctors are investigating the removal of "risk factors", which allegedly lead to cardiac catastrophes (myocardial infarction). Such "factors" is about thirty. Among them: constitutional differences (overweight, obesity), visceral differences (arterial hypertension), behavioral differences (smoking, competition, hasty) and typological differences (often concealed aggressiveness, increased or high anxiety). Despite a detailed study of "risk factors," scientists came to the conclusion that they can be explained only half of cases of diseases of coronary heart disease (CHD) or its clinical form - a heart attack.

In 30% of the total number of individuals suffering from coronary heart disease, there is an asymptomatic form that leads to an unexpected heart attack but is not accompanied by risk factors [135, p.3-4]. Today, cardiologists do not know who can have such a clinical form of CHD, as myocardial infarction [135, p.3].

As a result of the transfer of patients with coronary heart disease to myocardial infarction (MI), as well as relapses and exacerbations during the disease, the patient often loses the ability to motor activity, it reduces physical capacity, develops complex psychosocial maladaptation (R. Bayevsky [37], F. Berezin [44]). Detection of individual-typological peculiarities of the patient with coronary heart disease will develop adequate psychotherapeutic methods of timely psychological correction, but also include in this psychological process, especially important for the

patient aspects, which will facilitate their faster social rehabilitation and restoration of professional status.

At the same time, the problem of CHD is still far from its final solution. One of the reasons for the current situation is the inadequate study of two points relating to the very essence of the disease. First, the CHD is a non-infectious disease, which affects 25% of the adult population [135, p.67]. Secondly, CHD is a chronic disease, that is, the development and course of the disease has a time scan, and its clinical form is like a heart attack, manifested at a certain age. Since the number of individuals suffering from cardiovascular diseases in the human population, according to world statistics, remains relatively constant, it is likely to assume that there are individuals (or group of individuals) who have cardiovascular disease predominance. If such personalities and groups, "cardiovascular" predominant patients really exist, then the so-called risk factors of this disease in the initial forms can be easily detected in people of this psychotype long before their probable effect. It is believed that one of the main factors leading to CHD is arterial hypertension [100]. Based on theoretical analysis, it is logical to assume that arterial hypertension arises on the basis of hypertonic tendency, which should be observed in healthy individuals. The possibility of existence of hypertonic tendency was tested on a sample of 976 young people with special needs aged from 1 8 to 26 years old. Each individual, based on the duration of the reproduction, determined the chronotype and measured the systolic blood pressure (SAT) and diastolic blood pressure (DAT).The localization of the hypertonic trend in the " chronotype " spectrum is summarized in Table 3.1. The graphs of the function $\rho = f (ChrT)$ in the spectrum of the "chronotype" are constructed using the least squares method. From the charts it is clear that in the spectrum of the "chronotype", the functions of the SAT and DAT undergo a break up and change the direction at the same

critical points (ChrT = 0.8; ChrT = 0.9; ChrT = 1.0), in which its division into four typological groups.

Table 3.1

Localization of blood pressure indicators in the continuous spectrum of the chronotype

" Chronotype "	SAT (mmHg)	DAT (mmHg)	Quantitative distribution of the subjects (976 = 100%)	
			number people	%
0.7 ≤ ChrT <0.8	110-115	60-65	27	2.8
0.8 ≤ ChrT <0.86	135-140	85-90	569	58.3
0.86 ≤ ChrT ≤ 0.94	120-125	70-75	9	0.9
0.94 < ChrT ≤ 1.0	130-135	80-85	364	37.3
1.0 < ChrT ≤ 1.1	105-110	58-60	7	0.7

Individuals with a hypotonic tendency, and moderately extruded (0.8 ≤ ChrT <0.86) are very attractioned (0.7 ≤ ChrT <0.8) and very introvert (1.0 <ChrT ≤ 1.1) and in moderately introverted (0.94 <ChrT ≤ 1.0) - with a hypertonic tendency relative to the average norm (ρ = 120 / 70mmHg). If we add the values of the SAT and DAT to all sample individuals and divide them into their number, we obtain the average rate ρ = 120/70 mmHg, which corresponds to the ambitious individual (ChrT = 0,9). The presence of two groups of "chronotypes" with a hypertonic tendency suggests that it is likely that within these limits there should be individuals who are predominantly afflicted with coronary heart disease and its clinical form, such as myocardial infarction. The review of this assumption was

carried out at the Pervomaisky DMSB Therapeutic Department. In 1242 patients with coronary artery disease with angina pectoris and myocardial infarction before discharge from the hospital, the results of the reproduction of the duration were calculated by their "chronotype".

All the patients examined for the "chronotype" were divided into four groups but two groups became "predominant". In the range of 0.8 ≤ ChrT <0.86, there are 14% of patients with coronary artery disease and 23% of patients with coronary artery disease with myocardial infarction.

Table 3.2

Localization of clinical symptoms of CHD in the " chronotype " spectrum

Clinical diagnosis	"Chronotype"	Quantitative distribution of the subjects (124 2 = 100%)	
		number people	%
Coronary heart disease with angina	0.7 ≤ ChrT <0.8	99	8
	0.8 ≤ ChrT <0.86	174	14
	0.86 ≤ ChrT ≤ 0.94	2 3	2
	0.94 < ChrT ≤ 1.0	28 6	23
	1.0 < ChrT ≤ 1.1	37	3
CHD with heart attack myocardium	0.7 ≤ ChrT <0.8	101	8
	0.8 ≤ ChrT <0.86	285	23
	0.86 ≤ ChrT ≤ 0.94	24	2
	0.94 < ChrT ≤ 1.0	173	14
	1.0 < ChrT ≤ 1.1	37	3

And in the range of 0.94 <ChrT ≤ 1.0, on the contrary, 23% of patients with coronary artery disease and 14% of patients with coronary artery disease with myocardial infarction. By comparing this distribution, it's easy to make sure that patients with IBS are clearly in areas that have a hypertonic trend in healthy "chronotypes." Apparently, the patients themselves clearly outlined two boundaries (ChrT = 0.8 and ChrT = 1.0) in the spectrum of " chronotypes ", in which there is a jump-free transition from hypotonic tendency to hypertonic. That is, the results of the study suggest: CHD is localized mainly within the two types of groups of individuals for which it is "dominant", and beyond the limits of these groups is practically impossible. The disease itself outlined the limits of the two groups moderately attraction and moderately introverted, who suffered a heart attack of the myocardium.

Between the individuals of these groups there are a number of significant qualitative differences in the course of the clinical form of the disease. Thus, in individuals of the sanguine group, CHD with myocardial infarction is predominantly transmural and coarse-centered. Repeated heart attack threatens human life. The process of recovery in these patients proceeds slowly. In individuals of the melancholic group, on the contrary, the course of the disease has mainly manifestations of angina, and myocardial infarction is found in the minor-denominational form. Such patients can carry two or three or more heart attacks, but the process of their recovery is much faster.

Arterial Essential Hypertension (AEH) is one of the most common cardiovascular diseases. Despite the successes in the treatment and prevention of AEH in recent years, it remains the object of research on the part of medical psychology and medicine. This is due, above all, to the fact that hypertension is a factor reducing the population's working capacity, and sometimes - disability and mortality. In addition, hypertension is a risk

factor for a number of other cardiovascular diseases, in particular, atherosclerosis , ischemic heart disease, myocardial infarction, cerebrovascular accident. In the long-term study of arterial hypertension with the use of diagnostic methods in the conditions of the specialist it was established that patients with arterial essential hypertension make up more than 90% of all patients with arterial hypertension, and patients with symptomatic arterial hypertension have 5 - 10% [16, p.43].

The importance of psychological factors in the etiology and pathogenesis of AEH is indicated in the studies of domestic and foreign scientists (Y.Gubachev [118], M.Kabanova [149], V.Rothenberg [284], J. Engel [480] and others).

As a psychosomatic illness in the development of which a significant role belongs to psycho-traumatic factors, hypertension so far remains poorly understood in terms of understanding the psychological mechanisms of this disease, whose knowledge can provide access to specific methods of psychological intervention within the framework of prevention and rehabilitation. In particular, it is not enough it's roses the problem of the "chronopsychological profile of the personality" of the sick is yet to be done on AEG, the study of which would allow to substantively disclose the inductive settings of the personality of these patients, especially their psychological maladaptation in the system "personality - a disease".

Thus, relevance psychological study recognized The necessity for the medical psychology of the more detailed study of individual-typological features of patients with arterial hypertension, understanding of the specifics of the clinical manifestations of these typologies for the choice adequate forms treatment and about of the protest.

Based on the results of the previous study, it is logical to assume that arterial essential hypertension is consistent with the hypertonic trend in

healthy individuals by localization in the "chronotype" spectrum. The possibility of hypertension was tested on a sample of 1,013 men and women aged 45 to 65 who suffered from arterial hypertension. Each individual, based on the results of the reproduction of the duration, determined the " chronotype " and compared with the statistical data of healthy individuals with a hypertensive tendency. Localization of arterial essential hypertension in the " chronotype " spectrum is summarized in Table 3.3.

Table 3.3

Localization of arterial essential hypertension in the "chronotype" spectrum

Clinical diagnosis	Chronotype	Quantitative distribution of the subjects (76 2 = 100%)	
		number of people	%
AEH	0.7 ≤ ChrT <0.8	1 5	2
AEH	0.8 ≤ ChrT <0.86	455	60
AEH	0.86 ≤ ChrT ≤ 0.94	4	0, 5
AEH	0.94 <ChrT ≤ 1.0	280	3 6.5
AEH	1.0 <ChrT ≤ 1.1	8	1

Comparing the distributions, it is not difficult to make sure that patients with arterial essential hypertension are precisely located in areas where the hypertonic tendency is present in healthy "chronotypes".

It is necessary to note another significant difference in the psychological nature of patients with arterial essential hypertension of a moderately

attractioned group from moderately introverted, which is manifested in signs of "coronary behavior syndrome" [488].

The method of clinical conversation in each patient with AEH was marked signs of a syndrome (competition, attraction to achievements, latent aggression, haste, impatience, anxiety, constant feeling of time, responsibility, hasty speech, tension of muscles of the face and hands). Statistical data processing showed that the degree of severity of symptoms of the syndrome is the same throughout the range of the "chronotype" of moderately attractioned and moderately intratunged groups of patients with AEH. However, one of them - a "constant sense of time-lapse" - in both groups there was a polar relationship. The vast majority of patients with moderately extrovert group (292 out of 305) complained about the constant shortage of time in their lives. In a moderately introverted group, on the contrary, the majority of patients (185 out of 190) claim that they do not experience a shortage of time. The opposite attitude to the time in patients with AEH of a moderately attractioned group ("hurried" subjects) and a moderately introverted group ("precise" subjects) are related to the size of the individual "chronotype".

Cardiovascular diseases are often accompanied by *heart rhythm disorders*. The psychological preconditions for the development of these disorders remain unclear. Particular attention deserves the study of personality traits of patients and the construction of a psychological portrait of patients with functional disorders of the heart rhythm.

From the point of view of medicine, heart rhythm disturbances are a change in the normal frequency or heart rate rhythm, as well as impulse impulses that manifests itself as a disturbance in the precision of atrial and ventricular abnormalities or the synchronization of their individual

contractions. In domestic and world medicine accepted distribution of arrhythmias on functional and organic. The first ones arise in people with a healthy heart, but under the influence of factors external to the heart, including psychoemotional and physical activity, alcohol, psychotropic substances, etc.; the second - in the case of damage to the myocardium or valvular apparatus, thus complicating the underlying disease. The latter group includes arrhythmias associated with endogenous and exogenous intoxication, toxic effects of drugs (cardiac glycosides, adrenaline, anesthetics, etc.) [100].

Functional disorders of the rhythm are associated with a disorder of autonomic regulation of the heart. That is why they are classified as somatoform vegetative dysfunctions and in the etiopathological category belong to the category of psychosomatic disorders. It should be noted that various cardiac rhythm disturbances are constantly recorded in almost healthy people. Such arrhythmias at a one-time examination are detected in a small percentage of cases (no more than 2%). However, during long-term monitoring, those or other cardiac rhythm disorders can be detected in almost every third of the healthy subjects (30 ± 2-3%) [295]. The last arrhythmia arises for a short period, mainly during physical, psycho-emotional stresses, when a person feels accelerated or, conversely, slow heart beat. Such arrhythmias do not require medical intervention. In return functional disturbances of heart rhythm speak when a person "is fixed" on an experience for his heart; as a result of the fear of the development of a serious heart disease without any existing causes; if necessary, need permanent medical care examination. Disorders of the specified rhythm thus continue for a long time or repeated periodically.

Non-harmful at the initial stages of functional disorders of the heart rhythm, however, under the influence of mental stresses, can lead to the development of its severe diseases. Moreover, according to WHO,

circulatory system diseases are ranked first in the structure of total mortality of the population of Ukraine. In addition, on this indicator, Ukraine is on the first place among the countries of Europe with a percentage of circulatory system diseases with a total mortality of 62.2%, while in Europe this figure is 50.5% [13 6] Therefore, the study of peculiarities of the personality of patients with functional disorders of the heart rhythm is important for the purpose of timely prediction of their manifestation, correction of their behavior and emotional state. At the same time, these studies will help specialists in the treatment and prevention of functional cardiac arrhythmias that are not related to its organic lesions and are psychogenic in nature.

The possibility of having psychotypes with heart rhythm disturbances was tested on a sample of 1,049 men and women aged 45 to 65 who had such disorders by the heart. Localization of functional disorders of the rhythm in the "chronotype" spectrum is summarized in Table 3.4.

By examining one of the "prevailing" forms of heart failure, we are convinced that functional disturbance of the heart rhythm is localized predominantly within its typological groups, namely: rhythm disorders with tachycardia predominate in a moderately attractioned spectrum of "chronotypes," and rhythm disorders with bradycardia prevail in moderately introverted spectrum of "chronotypes" (table 3.4).

At the same time, according to observations, patients with functional heart rhythm disorders, depending on the form, are characterized by specific manifestations of behavior. Thus, individuals who have functional rhythm disturbances accompanied by tachycardia, are persistent in their behavior, tend to assume responsibility for their actions, control events. They have little listening to the thoughts of others, in particular, of doctors, which is manifested in negativism. At the same

time, most of these patients do not perceive their illness as psychogenic, they insist on looking for help from doctors (say, the patient comes to the hospital several times and requires to be treated), but at the end of treatment it is typical that they do not help and they even began to feel worse.

Table 3.4

Localization of functional heart rhythm disturbances in the "chronotype" spectrum

Clinical diagnosis	chronotype	Quantitative distribution of the subjects (1150 = 100%)	
		Number people	%
Functional rhythm disorders with tachycardia	$0.7 \leq ChrT < 0.8$	109	9
	$0.8 \leq ChrT < 0.86$	275	24
	$0.86 \leq ChrT \leq 0.94$	62	5
	$0.94 < ChrT \leq 1.0$	68	6
	$1.0 < ChrT \leq 1.1$	57	5
Functional rhythm disorders with bradycardia	$0.7 \leq ChrT < 0.8$	63	5
	$0.8 \leq ChrT < 0.86$	69	7
	$0.86 \leq ChrT \leq 0.94$	62	5
	$0.94 < ChrT \leq 1.0$	273	23
	$1.0 < ChrT \leq 1.1$	112	10

Patients in whom functional impairment of rhythm is accompanied by bradycardia, are vulnerable, anxious, although they try

its "suppress", "overcome" in itself, which confirms the existence of dysfunctional thoughts in such patients. Moreover, the expectation of sad events in the future, their extremely pessimistic interpretations, the negative opinion about themselves in stressful situations give rise to

anxiety, despondency in the positive decision of life problems, distrust of others. And on the other hand

There are controlling judgments such as "needed", "necessary" and "traceable", which indicates a large number of pronounced social stereotypes.

Consequently, in patients with functional heart rhythm disturbances there is a conflict between the desire to be socially "correct" and taken by the surrounding, on the one hand, and distrust of the world and other people - on the other. This indicates the psychogenic nature of functional heart rhythm disorders.

If we compare the ratio of time to individuals with different forms of arrhythmias, it turns out that subjects *with a relative tachycardia* tend to re-evaluate and underestimate the proposed intervals of time. Subjects with *relative bradycardia* underestimate and re-measure the intervals of time. For comparison, we note that subjects with a *normal cardiac disease* (without rhythm disturbances) give approximately the same number of deviations both in the direction of re-measurement and underestimation, and in the direction of underscores and re-intervals. Thus, one can assume that there is a connection between the "chronotype" and the heart rate, both in the direct and in the reverse order. Therefore, it is promising to further study the psychological characteristics of such patients as "prevailing" in the spectrum of "chronotype", in order to predict their predisposition to disturbance of heart rate reduction, prevention of the studied diseases and assistance to doctors in the organization of their effective treatment.

Based on the results of the previous study, it is logical to assume that functional heart rhythm disorders arise on the basis of a tendency for heart rate abnormalities, which should also be observed in healthy

individuals, probably from childhood. The possibility of a heart rhythm disturbance trend was tested on a sample of 269 children aged 7 to 14 years. After measuring the "chronotype" in each individual, the temporal artery was calculated on the number of pulse strokes within a minute and the interval between two blows (Tr). The results are presented in Table 3.5.

In 148 subjects (heart rate indicators seen in Table 3.5 "star"), the period between two pulse strokes is practically the same as the duration of the "chronotype". The results of the study were subjected to a correlation analysis [227], which used to calculate the correlation between the "chronotype" and the period of Tr in both the direct and the reverse order. The connection was quite high:

1) π ChrT, Tr = 0.98;

2) π Tr, ChrT = 0.99.

The existence of high communication in general can be explained by the fact that the duration of the "true real" is discovered by means of a reproduction method, which, for execution, requires attention from the study of large voltages. As convinced by D. Lindsley and E. Khomsky, the arbitrariness of attention provides the general level of active vigor of the brain [410]. A special role in the regulation of arbitrary attention is played by the cerebral cortex, whose activity is more dependent on blood supply, that is, on the rhythm of the heart. Considering the principle of the mechanical clock, F. Zavelsky wrote that "the pendulum is the heart of the modern clock" [135]. With the help of the obtained connection, we can state the following. If the mechanism that measures the course of the individual experience of the time is in the brain, then the heart is the pendulum of this clock.

In the general structure of morbidity, a significant percentage belongs to so-called "diseases of civilization", one of which is gastric ulcer and

Table 3.5

Localization of heart rate in the spectrum of "chronotypes"

Age (years)	Number of people	ChrT aver. (immorality.)	Tr (in sec.)	Heart rate (in min.)
7	10	0.94	0.71	85
8	9	0.96	0.74	81
9	11	0.98	0.75	80
10	12	0.92	0.75	79
11	8	0.8	0.76 *	78
12	7	0.81	0.8 *	75
13	13	0.81	0.82 *	71
14	10	0.84	0.83 *	72
12	8	0.8	0.78 *	76
13	12	0.82	0.82 *	73
14	11	0.82	0.81 *	74
10	9	0.8	0.76 *	78
10	7	0.82	0.83 *	72
8	13	0.81	0.78 *	76
12	9	0.82	0.8 *	75
13	11	0.82	0.83 *	72
14	12	0.81	0.82 *	73
12	8	0.82	0.8 *	75
10	10	0.8	0.76 *	78
8	9	0.92	0.72	83

11	11	0.91	0.75	79
12	12	0.93	0.8	75
13	8	0.94	0.81	74
14	13	0.93	0.82	73
7	7	0.92	0.68	87
8	10	0.95	0.75	80
9	8	0.94	0.74	81
Average		0,89 s	0.81s	

12th-digestive tract. Its prevalence among the general population in Ukraine from 2015 to 2017 increased from 149.83 to 156.3 per 100 thousand people [136]. It is a chronic disease that periodically recurs, is prone to progression, characterized by the development of life-threatening complications and prolonged periods of decline in performance. The latter circumstance is extremely important, since peptic ulcer is diagnosed in 10-15% of the population, and affecting mainly working-age people, which is considered not only as a medical, but also as a social and economic, and above all, a psychological problem [136, p.64].

Several researchers note that perception of health as a psychological factor plays an important role in the course of chronic diseases of the digestive system [92], [116], [121]. With the adoption of patients by their health, its subjective evaluation is considered one of the most important for determining the effectiveness in the process of control and overcoming the disease (O.Melnichenko [224], B.Mihaylov [231], V.Nikolaenko [244], V. Symanenkiv [335], J. Birren [456], A. Craig [470]).

In connection with this study of the subjective reflection of health (internal picture of health), in particular, in peptic ulcer disease, further

development of methods for identifying his personality traits and optimization are assessed as important and necessary (V.Rotenberg [284], B.Symanenkov [335], O.Smulevich [346]).

But modern medicine prefers an infectious factor in the occurrence of ulcers in the stomach. That is, the Hp factor is a stick that has an aphasia (the ability to penetrate into the cell), which determines the course of the relapse process. In this way, the process of chronicing these diseases is explained. Among the aggressive factors that contribute to the diseases of the stomach, distinguish: hyperproduction of hydrochloric acid, the action of pepsin, disruption of the motor function of the stomach, the presence of nonsteroid and steroid hormones (corticosteroids), hyperproduction of bile. However, a critical analysis of these data shows that these risk factors can explain the cause of about half of the cases of the occurrence and development of stomach ailments in the human population. In 35% of the total number of individuals suffering from stomach diseases, there is the so-called asymptomatic form, which leads to the development of the ulcer, but is not accompanied by risk factors. At the present stage of the development of medicine, gastroenterologists can not predict propecially who can have such a clinical form of stomach disease, such as gastritis or peptic ulcer disease.

The problem of stomach diseases is still far from the final solution. One of the reasons for this is the inadequate study of two points relating to the very essence of the disease: firstly, stomach illness is a non-infectious process, which affects 20% of the world's population; and secondly, they act as chronic, that is, their development and flow has a temporary organization, and their clinical forms, such as gastritis and gastric ulcer, are manifested at a certain age. Since the number of individuals suffering from stomach diseases in the human population, according to world statistics, remains relatively constant, it is likely to assume that there are

individuals (or groups of individuals) who dominate the stomach diseases. If such people and groups of "surgeons" of gastric illness really exist, then so-called the risk factors of this disease in the initial forms can be easily detected in people of this psychotype long before their probable effect.

In 998 patients with peptic ulcer in the stomach and duodenum before discharge from the hospital, the duration of the reproduction was calculated based on their " chronotype ". The localization of clinical manifestations of the disease in the spectrum of "chronotypes" is summarized in Table 3.6.

The results of our study showed that the chronotype of the examined patients with ulcers in the stomach and duodenum is predominantly in the range of 1.0 <ChrT ≤ 1.1, which corresponds to a group of individuals dominated by stomach diseases of the typological array of one of the five segments of the spectrum "Chronotypes" [416, p.94].

Individuals with a chronotype (ChrT) in the range of 1.0 to 1.1 who suffer from chronic stomach diseases exhibit pronounced introversion and stability, high levels of excitation and inhibition, which balance each other, and mobility in them is twice lower than in "Chronotypes" of other individuals. That is why they are calm, productively working in a familiar situation, and typologically can refer them to "very introverted."

Table 3.6

Localization of gastric ulcer and duodenum in the "chronotype" spectrum

Clinical diagnosis	chronotype	Quantitative distribution of subjects (998 = 100%)	
		Number people	%
	0.7 ≤ ChrT <0.8	3 4	3.5

Stomach ulcer	0.8 ≤ ChrT <0.86	31	3.1
	0.86 ≤ ChrT ≤ 0.94	2 1	2.2
	0.94 < ChrT ≤ 1.0	18	1.8
	1.0 < ChrT ≤ 1.1	473	47.3
Peptic ulcer duodenal ulcer	0.7 ≤ ChrT <0.8	23	2.3
	0.8 ≤ ChrT <0.86	39	3.9
	0.86 ≤ ChrT ≤ 0.94	22	2.2
	0.94 < ChrT ≤ 1.0	27	2.7
	1.0 < ChrT ≤ 1.1	310	31

In particular, it has been established that a large group of chronic diseases consists of diseases of organs involved in the digestive process in the gastrointestinal tract. First of all, it is about cholecystitis, pancreatitis and dyskinesia of the biliary tract.

In medical practice, there is a tendency for individuals to be ill with diseases of the gall bladder, pancreas and biliary tract, although the means to predict this or that disease still do not exist.

In 1522 patients with cholecystitis, pancreatitis and dyskinesia of the biliary tract (ZHVSH), before discharge from the hospital, the duration of the reproduction was calculated based on their " chronotype ".

The localization of clinical manifestations of the disease involved in digestion of food in the spectrum of "chronotypes" is summarized in Table 3.7.

Table 3.7

Localization of cholecystitis, pancreatitis and dyskinesias of biliary tract in the spectrum of "chronotype"

Clinical diagnosis	chronotype	Quantitative distribution of subjects (1522 = 100%)	
		Number of people	%
cholecystitis	0.7 ≤ ChrT <0.8	381	25
	0.8 ≤ ChrT <0.86	61	4
	0.86 ≤ ChrT ≤ 0.94	61	4
	0.94 <ChrT ≤ 1.0	76	5
	1.0 <ChrT ≤ 1.1	45	3
pancreatitis	0.7 ≤ ChrT <0.8	304	20
	0.8 ≤ ChrT <0.86	46	3
	0.86 ≤ ChrT ≤ 0.94	61	4
	0.94 <ChrT ≤ 1.0	76	5
	1.0 <ChrT ≤ 1.1	30	2
JVSH	0.7 ≤ ChrT <0.8	228	15
	0.8 ≤ ChrT <0.86	46	3
	0.86 ≤ ChrT ≤ 0.94	46	3
	0.94 <ChrT ≤ 1.0	15	1
	1.0 <ChrT ≤ 1.1	46	3

There is agreement between the "chronotype" and the clinical manifestation of chronic liver and gall bladder disease in the contingent of patients, whose subjective perception time ranges from 0.7 to 0.8.

The results of our study showed that the chronotype of patients suffering from chronic cholecystitis is in the range

$0,7 \leq \tau \leq 0,72$, pancreatitis - $0,73 \leq \tau \leq 0,75$ and JWSH - $0,7 \leq \tau < 0,8$ corresponds to a group of individuals in which « dominated "diseases of the liver and gall bladder [421, p.94].

Such individuals are characterized by high extraversion, stability, and excitation in them 2 times prevails over braking. In addition, they are purposeful and aggressive in their behavior. Individuals with such a "chronotype" are approaching the category of "very attractioned".

Chronic constipation occurs predominantly in anxious and depressed, externally calm, and internally tense, non-communicative, and uncertain patients. F. Alexander defines their installation as follows: "I can not expect anything from others, and therefore I can not give them anything; I have to keep what I have "[9, p.78].

A specific picture of the personality of patients suffering from chronic constipation, presented in the writings of F. Alexander [9], F. Danbar [476], J. Haynrot [397], M. Jacobi [445] requires a detailed study of the individual typological features of such patients, with the purpose of constructing their "chronopsychological profile" and the ability to predict and prevent these disorders of the intestinal tract in humans [313].

In 562 patients suffering from chronic constipation, according to the results of the reproduction duration, their " chronotype " was counted. The localization of manifestations of chronic constipation in the spectrum of "chronotypes" is summarized in Table 3.8.

The results of our research make it possible to verify that the chronotype in patients suffering from chronic constipation is predominantly (53%) in the range $0.94 < ChrT \leq 1.0$ corresponding to the group of individuals, in which "predominate" diseases directly intestine [300, p.94].

A person suffering from *emotional diarrhea is* characterized by fear of authoritarian figures and a feeling of helplessness. In the sphere of personality, the desire to recognize their own significance and opportunities in the aggregate with the latent consciousness of redundancy of requirements and its weakness dominate [163].

F. Aleksander wrote about chronic diarrhea: "The psychological factor relating to the symptom of displacement is a strong need to give and do well. The patient can enter into a relationship of dependence on others, but at the same time he feels he has to do something to compensate for everything he received "[9, p.87].

Table 3.8

Localization of manifestations of chronic constipation in the spectrum of "chronotype"

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (562 = 100%)	
		number of people	%
Chronic constipation	0.7 ≤ ChrT <0.8	67	12
Chronic constipation	0.8 ≤ ChrT <0.86	48	8
Chronic constipation	0.86 ≤ ChrT ≤ 0.94	53	10
Chronic constipation	0.94 <ChrT ≤ 1.0	296	53
Chronic constipation	1.0 <ChrT ≤ 1.1	98	17

We will try to analyze the manifestations of individual-typological features of patients suffering from emotional diarrhea, from the position of "place of the least resistance". In 673 patients suffering from emotional diarrhea, their " chronotype " was calculated based on the duration of the reproduction. The localization of manifestations of emotional diarrhea in the spectrum of "chronotypes" is summarized in Table 3.9.

For subjects with somatic disturbances of the intestinal tract, a balanced level of excitation and inhibition is characteristic, that is, in terms of extraversion - introversion and neuroticism - stability is dominated by a

median or ambient type of orientation with moderately extravert manifestations [295].

Thus, taking into account the psychological individual characteristics of each individual inclined to diseases of the gastrointestinal tract, it is possible to predict the place of his least resistance, in particular, such

Table 3.9

Localization of manifestations of emotional diarrhea in the "chronotype" spectrum

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (673 = 100%)	
		number of people	%
Emotional diarrhea	0.7 ≤ ChrT <0.8	70	10
Emotional diarrhea	0.8 ≤ ChrT <0.86	66	10
Emotional diarrhea	0.86 ≤ ChrT ≤ 0.94	348	52
Emotional diarrhea	0.94 <ChrT ≤ 1.0	91	13
Emotional diarrhea	1.0 <ChrT ≤ 1.1	98	15

stomach illness, gastritis, stomach ulcer and duodenal ulcer, cholecystitis, pancreatitis, dyskinesia of biliary tract, constipation, emotional diarrhea.

The vast majority of patients (52%) suffering from emotional diarrhea according to the "chronotype" are located in the range: 0.86 ≤ ChrT ≤ 0.9. Typically, they relate to the ambient type.

We examined 1824 patients (young people with special needs) with chronic kidney and urinary tract infections aged 19 to 26 years. Of these, chronic glomerulonephritis suffered 234 patients, chronic pyelonephritis -

376 patients, dysmetabolic nephropathy - 124 patients, renal insufficiency - 252 patients, enuresis - 838 patients.

In general, 23% of the world's population suffers from kidney disease [41]. One of the most severe forms of kidney disease is glomerulonephritis (Grate's disease), because it is the immune form of glomerulopathy, which leads to the lesion of the smallest elements of the kidneys - glomeruli. Moreover, there is a division of this disease into the primary and secondary forms, that is, an independent disease or syndrome, which is a component of another disease. Often this form of the disease has a subacute malignant nature, which is the cause of the lethal end of the disease. Today, nephrologists do not know who can have such a clinical form of kidney disease as glomerulonephritis, that is, there is no clear definition of the etiology of the disease in medicine. Chronic form of glomerulonephritis can occur in three variants: nephritic with hypertension syndrome (increased blood pressure), nephrotic (with pronounced edema) and mixed form (subcutaneous or subcutaneous) or secondary nephritis [92].

Complex psycho-somatic examination requires patients with glomerulonephritis in order to study their psychological state. The research procedure should be aimed at identifying the relationship and interdependence of individual-typological peculiarities in subjects with somatic disturbances from time parameters (time characteristics, time factor, chronotype) and the correlation between them.

In 234 patients suffering from chronic glomerulonephritis, the duration of the reproduction was calculated based on their " chronotype ". Localization of manifestations of chronic glomerulonephritis in the spectrum of "chronotype" is summarized in Table 3.10.

For subjects with somatic disorders of the nephrology profile, a balanced level of excitation and inhibition is characteristic, that is, according to the indicators "extraversion - introversion" and "neuroticism - stability" dominated by the median or ambient type. Ambirty type of temperament is a peculiar conditional critical point through which the boundary between two types of orientation passes: moderately extrovert and moderately introverted [420].

Among them 87 patients suffering from chronic glomerulonephritis suffered from a nephritic syndrome, which was accompanied by hypertensive symptoms (high blood pressure). Among these patients - 44 patients have a value of ChrT = 0,86 s and 14 patients with ChrT = 0,94 s. By comparing these distributions, it's easy to make sure that patients with chronic glomerulonephritis with nephritic syndrome have a meaning for the chronotype

Table 3. 10

Localization of manifestations of chronic glomerulonephritis in the spectrum of "chronotype"

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (234 = 100%)	
		number people	%
Chr.glomerulonephritis	0.7 ≤ ChrT <0.8	27	11
Chr.glomerulonephritis	0.8 ≤ ChrT <0.86	26	11
Chr.glomerulonephritis	0.86 ≤ ChrT ≤ 0.94	110	48
Chr.glomerulonephritis	0.94 <ChrT ≤ 1.0	58	25
Chr.glomerulonephritis	1.0 <ChrT ≤ 1.1	13	5

which is on the verge of those zones in which the healthy "chronotypes" have a hypertensive tendency [298, p.94].

Patients suffering from chronic glomerulonephritis with nephrotic syndrome were examined by 55 individuals, their chronotype was distributed in the range: $0.86 < ChrT \leq 0.89$.

Patients with chronic glomerulonephritis of mixed form were distributed in the range: $0.9 \leq ChrT \leq 0.94$.

The question arises: why is the disease of the kidneys predominant in the group of patients whose chronotype is in the range of $0.86 \leq ChrT \leq 0.94$? The answer to this question is given by the teachings of Hippocrates, according to which, in the psychological structure of the individual, his typology there is "locus minoris resistentiae ". As we can see, the urinary system itself is the "place of the least resistance" in people with the indicated indicators of the chronotype. It is also very revealing that here individuals of ambivert type of orientation (ChrT = 0.9), as well as with moderately attractioned and moderately introverted manifestations, are included [416, p.83].

Individuals with ChrT = 0,9 are at the conditional zero, they have an average level of excitation and inhibition, which balance each other, the distinguishing feature of their behavior is caution without fear [310].

The disease itself outlined the limits of glomerulonephritis prevalence in the range of $0.86 \leq ChrT \leq 0.94$. And such a differentiation of the values of the chronotype will enable not only to predict the type of disease, but also the form of its possible manifestation. Therefore, it can be argued that individuals with these values of the chronotype are at risk for glomerulonephritis. Moreover, individuals with a mean ChrT = 0,86 and

ChrT = 0,94 require preventive measures against glomerulonephritis with a nephritic syndrome; Individuals with the value of the chronotype in the range: $0.86 \leq ChrT \leq 0.89$ are in need of preventive measures for glomerulonephritis with nephrotic syndrome. And individuals with a value of the chronotype in the range: $0,9 \leq ChrT < 0,94$ need preventive measures for glomerulonephritis of mixed form, which often leads to chronic renal failure.

We will give individual data the significance of the chronotype of some patients from a group of patients suffering from chronic glomerulonephritis.

1. Sick N. (ChrT = 0.9). Date of birth: 3.01.1994. Diagnosis: chronic glomerulonephritis, mixed form.
2. Patient Ch (ChrT = 0.91). Date of birth: 1.12.1993. Diagnosis: chronic glomerulonephritis, mixed form.
3. Patient A. (ChrT = 0.89). Date of birth: 6.02.2000 Diagnosis: chronic glomerulonephritis, nephrotic syndrome.
4. Patient P. (ChrT = 0.9). Date of birth: 6.01.1997. Diagnosis: chronic glomerulonephritis, mixed form.

In 376 patients suffering from chronic pyelonephritis, their " chronotype " was calculated based on the duration of reproduction. Localization of manifestations of chronic pyelonephritis in the spectrum of "chronotype" is summarized in Table 3.1 1.

The results of our research show that chronotype indicators for patients with chronic pyelonephritis are predominantly distributed (49%) in the range: $0.86 \leq ChrT \leq 0.94$, which corresponds to the localization of the kidney disease in the typological groups of the " chronotype " spectrum.

Among patients with chronic pyelonephritis was at the stage of exacerbation of 218 patients, 94 - at the stage of reconvalescence (recovery), and 64 - at the stage of remission ("attenuation" of the disease).

In general, pyelonephritis is considered as a microbial-inflammatory process of tubulo-interstitial kidney tissue. In the classification of pyelonephritis are isolated primary and secondary pyelonephritis. The secondary is divided into obstructive and dysmetabolic [294]. But modern medicine can not explain and predict the development of a certain form of pyelonephritis. The fact that it lists a lot of etiological factors that cause the development of pyelonephritis without justifying the exact cause of a certain form

Table 3.11

Localization of manifestations of chronic pyelonephritis in the spectrum of "chronotype"

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (376 = 100%)	
		Number people	%
Chr. pyelonephritis	0.7 ≤ ChrT <0.8	22	6
Chr. pyelonephritis	0.8 ≤ ChrT <0.86	67	18
Chr. pyelonephritis	0.86 ≤ ChrT ≤ 0.94	185	49
Chr. pyelonephritis	0.94 <ChrT ≤ 1.0	86	23
Chr. pyelonephritis	1.0 <ChrT ≤ 1.1	16	4

the development of this disease, calls into question the ability of these factors.

And the answers to the question: why in a certain group of patients, any viral disease causes significant changes in the urine and the disease proceeds in an asymptomatic form and is detected by methods of laboratory examination, we do not find clinical diagnosis.

Modern medicine gives preference to the infectious factor in the occurrence of pyelonephritis. In other words, among the bacterial etiological factors of the development of this disease are Escherichia coli (intestinal), which provokes the development of pyelonephritis in 70% of cases. Also, among the aggressive factors that contribute to kidney diseases, distinguish another flora (proteins, staphylococci, chlamydia, etc.) [295].

What kind of diagnosis should a physician present when bacterial urine does not give a pathogenic amount of microflora, and changes in urine analysis exist? Therefore, an important point in diagnosing and preventing this disease is the psychological peculiarities of such patients.

We will give individual data the value of the chronotype of patients with pyelonephritis.

1 Patient T. (ChrT = 0.9). Date of birth: December 5, 1996

Diagnosis: chronic pyelonephritis, period of exacerbation.

2 Patient D. (ChrT = 0.87). Date of birth: 2.02.1997.

Diagnosis: chronic pyelonephritis, period of exacerbation.

3 Patient O. (ChrT = 0.91). Date of birth: 2.01.1998

Diagnosis: chronic pyelonephritis, period of exacerbation.

The examination of patients with chronic pyelonephritis confirmed the assumption that the urinary system is "the place of the least resistance" in patients with a chronotype in the range: $0.86 \leq ChrT \leq 0.94$, which includes individuals with an ambient type of orientation, as well as with moderately extruded and moderately introverted manifestations.

All surveyed patients with dysmetabolic nephropathy (124 patients aged 21 to 45 years) according to the "chronotypes" were located in the range of $0.86 \leq ChrT \leq 0.94$.

In this case, among patients who suffered from dysmetabolic nephropathy, 75 was at the stage of exacerbation of the disease, 25 - at the stage of reconvalescence, and 24 patients - at the stage of remission.

In general, 7.5% of people aged 18 to 60, according to the World Health Organization, suffer from dysmetabolic nephropathy [135]. This is a large group of diseases with different etiopathogenesis, which combines only the fact that these diseases are accompanied by metabolic disorders in the body. Common to these diseases is mainly an injury of interstitial tissue with salt deposition, which leads to the formation of infiltrates in the future. In urine tests, this is manifested by the accumulation of oxalates (oxalaturia), urates (uraturia), phosphates (phosphaturia) [135].

These forms of nephropathy are due to a disorder of the exchange of gluxyl and phosphoric acid respectively. But the reasons for the disorder of these exchanges have not been clarified and predict a particular form of nephropathy with the help of clinical data, medicine can not. We find the explanation taking into account the psychological peculiarities of the reproduction of time by subjects suffering from these diseases.

The localization of manifestations of dysmetabolic nephropathy in the spectrum of "chronotypes" is summarized in Table 3.12.

Surveyed patients with a form of dysmetabolic nephropathy as urate were predominantly (85% of the total sample of the subjects surveyed), the corresponding values of the chronotype in the spectrum of "chronotypes": $0.9 \leq ChrT \leq 0.92$.

We will give individual data the significance of the chronotype of some patients from a group of people who suffer from such a form of dysmetabolic nephropathy as urate.

Table 3.12

Localization of manifestations of dysmetabolic nephropathy in the "chronotype" spectrum

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (124 = 100%)	
		Number people	%
Dismanth nephropathy	$0.7 \leq ChrT < 0.8$	4	3
Dismanth nephropathy	$0.8 \leq ChrT < 0.86$	5	4
Dismanth nephropathy	$0.86 \leq ChrT \leq 0.94$	105	85
Dismanth nephropathy	$0.94 < ChrT \leq 1.0$	8	6
Dismanth nephropathy	$1.0 < ChrT \leq 1.1$	2	2

1. Patient S. (ChrT = 0.9). Date of birth: 20.12.1998

Diagnosis: Dysmetabolic nephropathy, urate.

2. Patient A. (ChrT= 0.92). Date of birth: December 21, 1909

Diagnosis: Dysmetabolic nephropathy, urate.

3. Patient P. (ChrT = 0.91). Date of birth: February 14, 1998

Diagnosis: Dysmetabolic nephropathy, urate.

The examined patients with such a form of dysmetabolic nephropathy as oxalaturia had predominantly (82% of the total sample of the subjects) the corresponding values of their subjective time unit in the spectrum of "chronotypes":

$0.87 \leq ChrT \leq 0.89$.

We give individual data the importance of the chronotype of some patients from a group of patients who suffer from a form of dysmetabolic nephropathy like oxalaturia.

1. Patient D. (ChrT = 0.87). Date of birth: 2.11.1999.
Diagnosis: Dysmetabolic nephropathy, oxalaturia.

2. Patient Zh. (ChrT = 0.88). Date of birth: 11.02.1997.
Diagnosis: Dysmetabolic nephropathy, oxalaturia.

The examined patients with such a form of dysmetabolic nephropathy as phosphaturia had predominantly (82% of the total sample of the subjects) the corresponding values of their subjective time unit in the "chronotype" spectrum:

$0.93 \leq ChrT \leq 0.94$.

We will give individual data the significance of the chronotype of some patients from a group of patients who suffer from a form of dysmetabolic nephropathy like phosphaturia.

1. Patient J. (ChrT = 0.93). Date of birth: February 4, 2000
Diagnosis: Dysmetabolic nephropathy, phosphaturia.

2. Patient F. (ChrT = 0.94). Date of birth: June 8, 1998

Diagnosis: Dysmetabolic nephropathy, phosphaturia.

3. Patient P. (ChrT= 0.93). Date of birth: April 9, 1997

Diagnosis: Dysmetabolic nephropathy, phosphaturia.

The examination of patients suffering from dysmetabolic nephropathy confirms the doctrine that the urinary system is the place of the least resistance in people with a chronotype in the range: $0.87 \leq ChrT \leq 0.94$, which includes individuals with an ambient type of orientation, as well as with moderately extruded and moderately introverted manifestations. Moreover, it is possible to predict the form of manifestation of the disease and timely prevention of the disease, taking into account the traditional schemes of medical prophylaxis.

Usually, the ability to control urination in the daytime, children acquire up to 2 years, at night - up to 4 years. Classification in nephrology secretes functional and organic incontinence of urine. Organic does not require attention from the part of medical psychology. Namely, in the mechanism of manifestation of functional disorders of urination there are many unclear questions, the answers to which modern nephrology is not able to find. To understand the genesis of these disorders, it is necessary to consider the neurogenic mechanism of regulation of the bladder. The process of filling and emptying the bladder is regulated by sympathetic, parasympathetic, extrapyramidal and spinal tracks. To a greater extent, the evacuation of urine is due to a cholinergic mechanism mediated by muscarinic receptors. In the body, there are several subtypes of muscarinic receptors, of which the M2 and M3 species are found mainly in the bladder. Activation of receptors leads to a reduction of detrusor - a muscle that empty the bladder [8]. In contrast, the blockade of M-cholinergic receptors by means of cholinolytic (choline blocking, antimuscarinic, antagonists of M-cholinoreceptors) drugs warns of the

stimulating effect of acetylcholine on detrusor. Clinically, this is manifested by a decrease in the tonus of the bladder, the elimination of involuntary traction to urination, decreasing their frequency, and increasing the volume of bladder filling.

Stress incontinence of urine arises at the expense of another mechanism. Serotonin (5-ChrT) and norepinephrine receptors regulate the closure of the neck of the bladder whose mechanism of disorder is still unclear. Therefore, unlike the hyperreflex urinary bladder with the urgency of stress urinary incontinence, the effectiveness of medical treatment, even on operative, is fairly low and amounts to about 2% [53].

In general, the pathology of the organs of the urinary system occupies a significant place among all the diseases in its frequency and severity of the prognosis. Despite the successes in diagnosing and treating various clinical forms of urinary incontinence, many issues remain unclear or insufficiently studied, taking into account the individual psychological characteristics of urological patients, which leads to a low effectiveness of their treatment and a rather high frequency of chronicity of the course of the pathological process.

In this regard, we turned to the solution of the problem of foreseeing the propensity to disorders of the bladder from the standpoint of the theory of experiencing time.

A total of 838 people with special needs who were suffering from functional incontinence urine from 18 to 25 years of age were examined. Of them: 619 boys and 219 girls. This distribution of this pathology among men and women, in our opinion, is explained by the WHO statistical data on the prevalence of manifestation of maladaptation [134].

The localization of manifestations of functional enuresis in the spectrum of "chronotypes" is summarized in Table 3.13.

As can be seen from the table, the manifestations of functional enuresis are mainly localized in the range of the spectrum of "chronotypes": 0.9 <ChrT ≤ 0.94 (67%), which corresponds to the location of individuals of the ambivert type with moderately introverted manifestations of orientation.

Chronic renal failure (HNN) is a consequence of chronic kidney disease. Depending on the age of the patients, there are abnormalities in the structure of causative diseases of renal failure. The most common causes of chronic renal insufficiency in patients (in order of decreasing specific gravity) are: microbial inflammatory diseases of the kidneys against anomalies of the urinary system development

Table 3.1 3

Localization of manifestations of functional enuresis in the spectrum of "chronotypes"

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (838 = 100%)	
		Number people	%
Functionality enuresis	0.7 ≤ ChrT <0.8 s	25	3
Functionality enuresis	0.8 s ≤ ChrT <0.86 s	45	5
Functionality enuresis	0,86 s ≤ ChrT ≤ 0,94 s	669	80
Functionality enuresis	0.94 s <ChrT ≤ 1.0 s	69	8

Functionality enuresis	1.0 s <ChrT ≤ 1.1 s	30	4

and obstructive uropathy, glomerulopathy (immunocompex, focal segmental glomerulosclerosis, nephropathy, Alport syndrome), tubulopathy. In adults, the most common causes of chronic renal function are diabetic nephropathy, hypertonic disease (hyperactivity of the sympathetic system), glomerulonephritis, kidney polycystic ovary [188]. At the same time, the only reason for the appearance of such complications from the kidneys was not revealed. Therefore, a detailed study of the chronotype of patients with chronic renal transplant requires a timely prediction.

A total of 252 people aged 18 to 25 years old suffering from CPR were examined. Of these: 122 men and 130 women.

The localization of CPR manifestations in the spectrum of "chronotypes" is summarized in Table 3.14.

The examined patients with HRN had predominantly the relevant values of the chronotype:

0,86 ≤ ChrT ≤ 0,9 (34% of the total number of subjects) and

0.9 <ChrT ≤ 0.94 (26% of the total number of subjects) (Table 3.14).

Table 3.1 4

Localization of CPR manifestations in the spectrum of "chronotypes"

		Quantitative distribution of subjects

Clinical diagnosis	Chronotype	(252 = 100%)	
		Number people	%
HNN	0.7 ≤ ChrT <0.8	25	10
HNN	0.8 ≤ ChrT <0.86	13	5
HNN	0.86 ≤ ChrT ≤ 0.94	151	60
HNN	0.94 <ChrT ≤ 1.0	32	13
HNN	1.0 <ChrT ≤ 1.1	31	10

Thus, the examination of patients with nephrologic diseases confirms the assumption that the urinary system is the place of the least resistance in people with a chronotype in the range: 0.86 ≤ ChrT ≤ 0.94, which includes individuals with a "purely" ambient type of orientation, as well as moderately extrovert and moderately introverted manifestations. The application of this method of psychodiagnostics of the individual's chronotype will enable to predict "the place of the least resistance" of individuals who are prone to nephrology disorders in the body.

As a result of the survey, the concept of ambient type of orientation has been specified. The ambient type of orientation is a peculiar conditional critical point through which the boundary between the two types passes: moderately attractioned and moderately introverted [42, 0].

With an insignificant tendency of rejection of the direction of the indicators of extravagance or introverts, in a person will be manifested one or another of their specific individual psychological features.

Thus, for subjects with somatic disorders of the nephrology profile, a balanced level of excitation and inhibition is characteristic, that is, the indicators of "extraversion-introversion" and "neuroticism-stability" are dominated by the median or *ambient type of* personality *orientation*. It is also established that among the above subjects there is a quantitative

advantage of individuals introverted directional types over extraversion. The analysis of the indicators of the chronotype, showed that most of the surveyed belongs to the ambivert type (from 0,86 to 0,94). The chronotype with parameters of 0.9 is a critical point that divides the two types of orientation - moderately attractioned and moderately introverted types, and it belongs to an ambient type of orientation. The time characteristic of the subject of the ambivert type is represented by the fact that he is in a hurry, but he lacks time, that is, he lives in the present, the behavior is characterized by "caution without fear." In general, these studies allowed to establish a system of interconnection and interdependence that directly depends on the psychological and physiological, psychological, individual-typological peculiarities of the organism of the subject, in particular, the trends of the direction of the type of temperament (the balance of excitation-inhibition processes), as well as the time parameters (temporal characteristics of the subject, time factor, chronotype) with somatic disorders.

939 young people with respiratory diseases were screened. Of these, 725 patients suffered from bronchial asthma, recurrent tracheobronchitis - 214 patients. At the same time among patients with bronchial asthma and non-infectious recurrent tracheobronchitis was at the stage of exacerbation of 510 patients and 215 - at the stage of remission. The chronotype of these patients is in the range: $0.7 \leq ChrT < 0.8$ (tab. 3.15).

Localization of manifestations of bronchial asthma in the spectrum of "chronotypes" is summarized in Table 3.15.

Table 3.15

Localization of manifestations of bronchial asthma in the spectrum Chronotypes

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (725 = 100%)	
		Number of people	%
Bronchial asthma	0.7 ≤ ChrT <0.8	479	65
Bronchial asthma	0.8 ≤ ChrT <0.86	119	15
Bronchial asthma	0,86 ≤ ChrT ≤ 0,9	64	8
Bronchial asthma	0.9 <ChrT ≤ 0.94	23	3
Bronchial asthma	0.94 <ChrT ≤ 1.0	15	2
Bronchial asthma	1.0 <ChrT ≤ 1.1	25	3

The localization of the manifestations of recurrent tracheobronchitis in the "chronotype" spectrum is summarized in Table 3.16.

We give individual data of some patients with bronchial asthma and recurrent tracheobronchitis.

1. Patient C. (ChrT = 0.7). Date of birth: 6.02.2000.

Diagnosis: Bronchial asthma.

2. Patient with U. (ChrT = 0.72). Date of birth: July 4, 1999

Diagnosis: Non-infectious tracheobronchitis.

In general, the epidemiological data of patients with bronchial asthma indicate a high prevalence of this disease among the adult population, that is, it affects 0.1-8% of the population of the entire globe.

Table 3.16

Localization of manifestations of recurrent tracheobronchitis in the spectrum of "chronotypes"

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (214 = 100%)	
		Number of people	%
Relapse. tracheobronchitis	0.7 ≤ ChrT <0.8	19th	10
Relapse. tracheobronchitis	0.8 ≤ ChrT <0.86	7	5
Relapse. tracheobronchitis	0,86 ≤ ChrT ≤ 0,9	80	34
Relapse. tracheobronchitis	0.9 <ChrT ≤ 0.94	58	26
Relapse. tracheobronchitis	0.94 <ChrT ≤ 1.0	26	13
Relapse. tracheobronchitis	1.0 <ChrT ≤ 1.1	24	10

The specific weight of bronchial asthma in the structure of bronchopulmonary pathology is 27.6-60%. Earlier, epidemiological data indicated a high prevalence of this disease in regions with wet climates, which contributes to the accumulation of significant concentrations of mold spores in the environment that contribute to fungal sensitization, as well as the practical absence of this disease in people of the Far North, since the cold climate prevents the accumulation of fungal allergens, then modern medicine can not explain the spread of this disease and in the Far North, based on epidemiological tributes.

The results of the examination of patients with non-infectious bronchial asthma suggest that the chronotype of these patients is in the range: 0.7 ≤ ChrT <0.8, indicating the presence of bronchial asthma and non-infectious recurrent tracheobronchitis as a "predominant" disease in the spectrum of "chronotypes" and typological groups.

Participation respiratory cycles in the experience of time is studied R. Melzack [518]. The scientist discovered that the intervals, the beginning and end of which coincide with the beginning and end of the respiratory cycle, are reproduced more precisely than the intervals for which there is no such coincidence. D.Elkin considered the respiratory cycle as one of the main periodic processes that simulate the perception of small durations [441]. V. Lysenkova [200] found the connection of the respiration rate with the peculiarities of measurement and evaluation of the intervals, as well as the frequency of heart rate. On a large sample of subjects, she received a range of frequencies from 12 to 21 respiratory cycles per minute. According to these data, B. Tsukanov calculated the duration of the respiratory cycle for the "medium group entity" and obtained the value of T s= 3.64s. On the other hand, the duration of one respiratory cycle can be obtained as a function of the number of values of the time of the "medium group entity":

T s = 4 * 0.9 s = 3.6 s [415].

Proceeding from the average group data obtained by different authors in different years, it is logical to assume that the duration of the respiratory cycle of an individual who is prone to pulmonary disorders is determined by the whole number of "true present" units since childhood.

To check this assumption, we chronographed the duration of respiratory cycles in the studied children aged from 17 to 24 years in a resting state, weighed the period of one cycle of T s and compared with the "chronotype". The results are summarized in Table 3.17.

For "hurrying" subjects who make up an experimental sample, the ratio of the value of "actual present" to the period of the respiratory cycle is 1: 2; 1: 3; 1: 4. That is, they are clearly traced

Table 3.17

Localization of the frequency of breathing in the spectrum of "chronotypes"

Age the patient in years	Diagnosis	ChrT	T s in sec	Norm BH by age	BD aver. the patient	K
7	Bronchus. asthma	0.70	2.73	22-25	22	3.9
8	Bronchus. asthma	0.71	2.4	22-25	25	3.4
9	Bronchus. asthma	0.72	2.6	22-25	23	3.6
10	Tracheobronchitis	0.79	2	20-22	30	2.5
11	Tracheobronchitis	0.75	3	20-22	20	4
12	Bronchus. asthma	0.74	2.9	20-22	21	3.9
13	Bronchus. asthma	0.73	3.3	18-20	18	4.5
14	Bronchus. asthma	0.76	3.2	18-20	19	4.2
7	Tracheobronchitis	0.77	2.6	22-25	23	3.4
8	Tracheobronchitis	0.78	1.7	22-25	35	2.1
9	Bronchus. asthma	0.76	2.4	22-25	25	3.2
10	Bronchus. asthma	0.72	2.9	20-22	21	4.0
11	Tracheobronchitis	0.74	2.7	20-22	22	3.7
12	Tracheobronchitis	0.78	2	20-22	30	2.6
13	Bronchus. asthma	0.72	3	18-20	20	4.2
14	Bronchus. asthma	0.78	3.3	18-20	18	4.2
7	Tracheobronchitis	0.77	1.9	22-25	32	2.5
8	Bronchus. asthma	0.78	2.7	22-25	22	3.5
9	Tracheobronchitis	0.73	2.6	22-25	23	3.6
10	Bronchus. asthma	0.79	2.9	20-22	21	3.7
11	Tracheobronchitis	0.8	2.7	20-22	22	3.4
12	Tracheobronchitis	0.82	3	20-22	20	3.7
13	Tracheobronchitis	0.84	3	18-20	18	3.6

14	Tracheobronchitis	0.86	3	18-20	19	3.5
13	Tracheobronchitis	0.85	3	18-20	20	3.5
12	Tracheobronchitis	0.83	2.9	20-22	21	3.5

differences in relation to typological groups. Thus, individuals in a group extraverted the general performance ratio were obtained the following options: T s = 2ChrT, T s = 3ChrT, T s = 4ChrT. In individuals of moderately attractioned group T s = 4ChrT. Our assumption is confirmed. The duration of the respiratory cycle of the individual consists of an entire number of units of the chronotype of his "present".

These findings suggest that the duration of the respiratory cycle in patients with pulmonary disorders is consistent with the duration of the individual's chronotype.

In medical institutions of any kind, in everyday work, one has to come into contact with patients, in which mental disorders have a functional, transient nature. For the most part, such mental disorders are non-psychotic. According to the current International Classification of Diseases (10th revision), they are included in the heading "Neurotic, stress-related, and somatoform disorders (F 4)" [223]. These are neurotic psychogenic reactions (situational psychogenic reaction, anxiety neurosis, panic disorder), neurosis in the form of neurasthenia, dissociative or conversion actions (neurosis of obsessive compulsive states), somatized and somatoform disorders (psychosomatic illnesses).

In general, modern medicine treats neuroses as a disorder of higher nervous activity and neurovergetative functions, which develop mainly in the emotional sphere, under the influence of mental trauma or prolonged

emotional stress, when changes in thinking and general behavior are caused by the state of affection [15].

Disorder of higher nervous activity arises as a result of the changing state and the relationship between the main nervous processes, namely, between their strength and mobility, if they are placed too high requirements.

Modern psychiatry suggests that neuroses mostly suffer from individuals with melancholy and choleric temperament, whereas in sanguine and phlegmatic temperament, ruptures are rare. Also, psychiatrists point out that the development of neuroses is promoted by social conditions, somatic and mental state at the moment of a psychological trauma, general fatigue [486, p.76].

That is, the psychogenic nature of the emergence of neurotic disorders can not be ruled out. Moreover, it is associated with a type of higher nervous activity.

The main types of these disorders are neurasthenia, conversion hysteria and obsessive-compulsive disorder. Turning to these types of disorders, psychiatry states that the development of a certain type of neurosis largely depends on the type of higher nervous activity. So, for people with an artistic type, in which the first signaling system (subcortical processes) prevails over the second (the cerebral cortex), the hysterical neurosis is developing in the majority. To the neurosis of the obsessive states, individuals with a mental type of higher nervous activity tend to dominate the second signaling system.

Most people have a mixed type of nerve process, most often neurasthenia develops in them [18]. Sometimes psychogenic mental disorders manifest themselves by dissociative and conversion (hysterical) psychosis, acute response to stress and post-traumatic stress disorder (acute and prolonged reactive psychosis).

The term "psychological disorders" formed the unit for a logo time. The term "neurosis" was introduced by the Scottish physician Galen. He substantiated the "nerve principle" as the main regulator of all life processes, which were divided into two main groups, either related to the stress of the nervous system, or, conversely, with its relaxation. The term "neurosis" Galen denotes nerve disorders that are not accompanied by a fever and are not related to the local lesion of one of the organs, but are conditioned by "the general suffering, from which motion and thought depend on" [citation. for 180, p.35].

With time, the definition of "neurosis" has changed. Despite the fact that in the second half of the XIX century systematics of clinical forms of neuroses remained very variegated, their quality was discovered: in contrast to organic disorders, neurosis is a disease that is reversible in its flow and does not cause persistent infertility [180, p.87]. The origin of all forms of neurosis began to be associated with peculiarities of the psyche and psychogenic influences. Proceeding from the fact that the psychic component is most significant in the genesis of neuroses, P. Dubois proposed to replace this traditional term by the name "psychoneurosis" [citation. for 472, p.97].

The English doctor R.Carter in his work "On the Pathology and Treatment of Hysteria" considered as the leading three etiological factors of neurosis: the peculiarities of the individual's temperament, the life situation that triggers the "initial attack" of the disease, and the intensity of the patient's efforts to eliminate or conceal the cause [156, p.45].

By the middle of the XX century, the same problems in the field of adjacent neuropsychiatric disorders persisted, as in its first decades. But despite the diversity of viewpoints of researchers, they all, in fact, take

three broad circles: asthenic (including neurasthenic and obsessive-phobic), hysterical and explosive.

The development of the doctrine of neuroses was determined by many teachings and concepts: this is the psychoanalysis of Z. Freud [393], and the teachings of I. Pavlov [252] on the physiology of the VND, and the behavioral psychology of J. Watson (behaviorism) [cit. for 140]. The development of clinical psychiatry was also of great importance thanks to the activities of S. Sukhanov, P. Gannushkin [377] and other prominent clinicians [376; 380; 403].

The problem related neuropsychiatric disorders underwent trans-known formation of narrowly wide problem in clinical studies of regularities formation of normal and abnormal individuals, i.e. the problem of studying temperament, character and personality in general. Existing classification related pathologies so fragmented and diverse that none of them can be the basis for a common taxonomy of all forms of neighboring states.

It should be noted that the time factor of related neuropsychiatric diseases has always been considered very roughly.

Our approach to the study of etiology, pathogenesis and clinical manifestations of the disease is carried out from a new position that fully takes into account the laws of the experience of the time (D.Elkin [434], B. Tsukanov [420]).

On the basis of the "chronotype", which determines the type of orientation of each individual, one can precisely attribute a particular subject to a group with its dominant disease (primarily chronic non-infectious diseases) [292]. Issues of the coordination of manifestations of neurotic disorders with the significance of the subject's chronotype in the

typological spectrum of the "directivity of subjects" are open in the outlined problem field [294, p.78].

According to G. Ushakov [390], adjacent disorder has a fairly clear age-frequency. Neurosis can not only result in a mental injury. Its formation occurs when the mental trauma is preceded by the phenomena of over-voltage, fatigue, and the exhaustion of the psyche [390, p.56].

In recent years, a number of studies have been carried out to prove that the same type of psychological trauma causes various forms of reactive states, depending on the individuality of the patient. In this case, the main trauma can either directly precede the disorder, and have a place in the past. In this case the new circumstances weaken nervous system, and then at least drive can be reduced to neurosis, the contents of which shows the relationship of the previously relive traumatic situation. In one, a psychological trauma never leads to a reactive state, in others - the same trauma in similar conditions causes a paranoid, then depression, then neurasthenia, a neurosis of intrusive states, then hysterical disorders, then, finally, neurasthenic development or other variants development.

E. Krasnushkin wrote, that of neurosis necessary to the existing trauma was strong enough and caused dysfunction of the vegetative nervous system or the latest in a given individual was particularly vulnerable premorbid [169, p.63]. M. Kabanov argued that the psychic life of man is formed "... under the influence of the environment, gender, age and temperament" [149, p.45]. According O.Kerbikova [158], age subjects as the right lo, affects the degree of neurotic patients. The middle age, in which pathological development ended, for inhibited individuals - 13.3 ± 1.4 years, for hysterical - 14.7 ± 1.9 years, for excitations - 22, ± 1.9 years [41 5, p.45]. In this case, the frequency and severity of reactions, as a rule, are greater than the older age of the subjects. Especially pronounced

phenomena of accentuateness, and consequently, the risk of occurrence of adjacent disorders occurs at the age of 21 years old, and even more - after 31 years, that is, the factor of time significantly affects the emergence, formation and development of related neuropsychiatric diseases.

It has long been known that the innate mechanism of the central clock of the individual starts from the moment of birth and continuously measures the course of the experienced time throughout his life [420]. According to B. Tsukanov [421], the life of an individual from birth to death can be divided into a number of periods. He also identified in individuals the turning points, that is, a certain age in which "psychological evil" occurs, and called them nodal points. Many researchers refer to the age-old periodization of human ontogenetic development and distinguish phases of somatic, sexual, neuro-psychological, intellectual maturation. These cycles and phases of development are time characteristics and not may be independent of the course of the central clock of the individual. In the concept of time psychology heterogeneity of ontogenetic development is described by cycloid model of time"[416, p.67].

Given that the "chronotype" is the basic basis of the individual, as well as the fact that the related neuropsychiatric disorders have age-frequency [415; 418], we hypothesized that it is possible to isolate the zone of localization of adjacent disorders in accordance with existing typological groups (and to determine the time frame of their occurrence in terms of their specificity of the experienced time).

Our research was conducted on the basis of the department of neurology and psychotherapy of Pervomaisky central city multidisciplinary hospital. The patients under study, who were in day care and were treated at psychiatrists and psychotherapists, were examined. Total

number - 46 people. Age range from 20 to 26 years. By gender: 13 men and 37 women.

This is in full agreement with the data of G. Ushakov that the female contingent prevails in patients with neuroses [390], which is characterized by increased sensitivity of response and emotionality, due to the sexual characteristics of the physiology of women.

In studying anamnesis of a patient and diagnosing his condition, we used the diagnosis that was delivered by doctors of the department on the basis of ICD-10 [223].

In our study, a chronometric test method was used to determine the individual chronotype for each patient (Table 3.18).

In the spectrum of chronotypes $0.7 \leq ChrT \leq 1.1$, as a result, a certain zone, which is within the range of localization of neuroses was allocated.

The highest point clearly visible, whose value ChrT = 0.96. The vertical scale on the graph means the number of repetitions of the values of ChrT, and on the horizontal axis, the values of ChrT of our allocated zone.

Next, we have calculated the distribution parameters - its numerical characteristics, indicating where the "average" values of the sign are, in order to see how these values change, and whether there is a predominance of certain values of the sign [4].

Table

3.1 8

Characteristics of the contingent of patients with neurotic disorders

No.	SEX	AGE	DIAGNOSIS	ChrT	TYPE
1	F	25	Conversion hysteria	0.7	Where.

2	M	24	Conversion hysteria	0.7	Where.
3	F	28	Conversion hysteria	0.7	Where.
4	F	40	Conversion hysteria	0.7	Where.
5	F	38	Conversion hysteria	0.72	Where.
6	M	37	Conversion hysteria	0.72	Where.
7	F	36	Conversion hysteria	0.72	Where.
8	M	35	Conversion hysteria	0.72	Where.
9	F	38	Conversion hysteria	0.72	Where.
1 0	F	39	Conversion hysteria	0.74	Where.
1 1	F	40	Conversion hysteria	0.74	Where.
1 2	F	40	Conversion hysteria	0.74	Where.
1 3	M	38	Conversion hysteria	0.74	Where.
1 4	F	40	Conversion hysteria	0.75	Where.
1 5	F	39	Conversion hysteria	0.75	Where.
1 6	M	38	Conversion hysteria	0.75	Where.
1 7	F	39	Conversion hysteria	0.75	Where.
1 8	M	40	Conversion hysteria	0.75	Where.
1 9	F	40	Conversion hysteria	0.75	Where.
2 0	F	38	Neurasthenia	0.91	P.I.
2 1	F	37	Neurasthenia	0.91	P.I.
2 2	F	21	Neurasthenia	0.91	P.I.
2 3	F	38	Neurasthenia	0.92	P.I.

2 4	M	37	Neurasthenia	0.92	P.I.
2 5	F	20	Neurasthenia	0.92	P.I.
2 6	M	39	Neurasthenia	0.92	P.I.
2 7	F	40	Neurasthenia	0.92	P.I.
2 8	F	37	Neurasthenia	0.94	P.I.
2 9	F	36	Neurasthenia	0.94	P.I.
3 0	F	35	Neurasthenia	0.94	P.I.
3 1	M	39	Neurasthenia	0.94	P.I.
3 2	F	40	Neurasthenia	0.94	P.I.
3 3	F	24	Neurasthenia	0.94	P.I.
3 4	F	26	Neurasthenia	0.96	P.I.
3 5	F	40	Neurasthenia	0.96	P.I.
3 6	F	38	Neurasthenia	0.96	P.I.
3 7	M	37	Neurasthenia	0.96	P.I.
3 8	F	36	Neurasthenia	0.96	P.I.
3 9	F	35	Neurasthenia	0.96	P.I.
4 0	F	40	Neurasthenia	0.96	P.I.
4 1	F	40	Neurasthenia	0.96	P.I.
4 2	F	40	Neurasthenia	0.99	P.I.
4 3	F	38	Neurasthenia	0.99	P.I.
4 4	M	39	Neurasthenia	0.99	P.I.
4 5	F	40	Neurasthenia	0.99	P.I.

4 6	M	40	Obsessive-Compulsive Dis.	1.01	D.I.
4 7	F	35	Obsessive-Compulsive Dis.	1.01	D.I.
4 8	M	34	Obsessive-Compulsive Dis.	1.02	D.I.
4 9	F	37	Obsessive-Compulsive Dis.	1.02	D.I.
5 0	M	38	Obsessive-Compulsive Dis.	1.03	D.I.

The quadratic deviation is 0.05. This is a fairly high result that proves the accuracy of our research. Thus, our average individual has ChrT = 0,96c ± 0,05.

The zone of localization of the conversion hysteria is in the range:

0.7 <ChrT <0.75. In the range: 0.91 <ChrT <0.99 - neurasthenia. And in the range: 1.0 <ChrT <1.0 - obsessive-compulsive disorder.

So, the study of the positions chronopsychological prognosis psychosomatic diseases we were able to identify the area of least resistance in individuals suffering from neurasthenic disorders. This indicates their belonging to the typological group. Thus, neurasthenia is the place of the least resistance in moderately introverted. So long known that moderate introvert - a person with a weak nervous system that has increased sensitivity to even weak stimuli. He has expressed introversion and high neuroticism, and braking twice exceeds the excitement. Strong stress in a moderate introspection can provoke a neurotic disorder.

The conversion hysteria is localized within a very extrovert group. Indeed, a pronounced extrovert is a person who has an unbalanced nervous system in which excitation prevails over braking, explicit pronounced extroversion.

It is quite possible to explain why in the zone of localization obsessive-to- impulsive disorders were representatives of a very introverted group. In the "pure" introvert, the nervous system is stable, inert, excitation and inhibition counterbalance each other, a pronounced introversion, and the mood is usually even. But the "net" introvert does not fall into this zone. It includes individuals from ChrT from 1.01 to 1.03. These are no longer moderate introverts, but are not very introverted, and hence their strong nervous system can not be called strong.

Such differentiation of neurotic disorders is necessary both in medicine and in psychology because it answers the question: who and in what form may develop neurasthenic disorders.

The disorders of the neuro-vegetative regulation of the body include *somatoform dysfunction of the autonomic nervous system* (VSD). The course of this disease may be hypotonic or hypertonic type. Patients with VIST for hypotonic type were examined 223 individuals.

The results of our study showed that the chronotype in these patients is predominantly two ranges of intervals:

$0.7 \leq ChrT < 0.8$ (95 patients) and $1.0 < ChrT \leq 1.1$ (90 patients), which corresponds to very attractioned and very introverted groups of individuals in the typological groups of the spectrum of "chronotypes" (Table 3.18).

We give individual data of some patients from a group of patients suffering from vegeto-vascular dystonia for a hypotonic type.

1 Patient L. (ChrT = 0.73). Date of birth: July 12, 1995

Diagnosis: Vegetative-vascular dystonia for hypotonic type.

2 Patient R. (X = 0.76). Date of birth: 1.09.1997

Diagnosis: Vegetative-vascular dystonia for hypotonic type.

3 Patient O. (ChrT = 1.1). Date of birth: November 4, 1996

Diagnosis: Vegetative-vascular dystonia for hypotonic type.

In the range: $0.8 \leq ChrT \leq 0.86$ (210 individuals) and $0.94 \leq ChrT \leq 1.0$ (180 patients) there is a chronotype of patients suffering from VSD for hypertensive type (Table 3.18).

We will give individual data of some patients from a group of patients suffering from VSD for a hypertensive type.

Table 3.1 9

Localization of the VSD in the spectrum of "chronotypes"

Clinical diagnosis	Chronotype	Quantitative distribution of subjects (754 = 100%)	
		number of people	%
VSD for hypotonic type	$0.7 \leq ChrT < 0.8$	95	13
	$0.8 \leq ChrT \leq 1.0$	38	5
	$1.0 < ChrT \leq 1.0$	90	12
VSD for hypertensive type	$0.7 \leq ChrT < 0.8$	56	7
	$0.8 \leq ChrT \leq 1.0$	210	28
	$0.86 < ChrT < 0.94$	48	6

	$0.94 \leq ChrT \leq 1.0$	180	24
	$1.0 < ChrT \leq 1.0$	37	5

1. Patient D. (ChrT = 0.8). Date of birth: 10.08.1997

Diagnosis: Vegetative-vascular dystonia of hypertonic type.

2. Patient A. (ChrT = 0.81). Date of birth: 2.07.1995.

Diagnosis: Vegetative-vascular dystonia of hypertonic type.

3. Patient K. (ChrT = 1.0). Date of birth: 4.10.1996.

Diagnosis: Vegetative-vascular dystonia of hypertonic type.

Comparing these distributions, it is easy to make sure that patients with hypertension have a predominantly chronotype value in those areas where hypertonic disease is present in healthy "chronotypes" [421, p.94]. The most sick patients with VSD clearly identified two boundaries (ChrT = 0.8 and ChrT = 1.0), in the spectrum of "chronotypes", in which there is a jump-free transition from hypotonic tendency to hypertonic.

VSD for the hypertonic type has defined the borders of both groups moderately attractioned and moderately introverted. Therefore, patients who have the same form of "predominant" disease have differences in their psychological characteristics. The method of a clinical conversation revealed that one group of patients complained of a constant shortage of time in the performance of any work. These are the individuals with a chronotype in the range: $0,8 \leq ChrT \leq 0,86$, that is, it is a moderately attractioned group of individuals. Another group of patients with a chronotype in the range: $0.94 \leq ChrT \leq 1.0$ does not feel a shortage of time while doing things, that is a moderately introspectively group of patients. This again confirms the correspondence of typological groups

and dominant diseases in the spectrum of chronotypes [412, p.94] on the contingency of patients with VSD.

For medical practice, in connection with the "signal" value of pain, the characteristic of pain is very important. At the same time, the difficulties of the objective characteristics of pain are due to the fact that in nature pain is a subjective feeling, which depends not only on the active stimulus, but also on the psychic reaction of the individual to the pain. Moreover, there are still no objective methods for assessing the intensity of pain in a person. In patient practice, subjective evaluation of pain is not given due attention due to its subjectivity. Therefore, in the clinic oral reports are compared with the data of the medical examination and supplement some techniques that allow you to control the degree of subjectivity in patient pain assessment. But these techniques do not give a positive result without assessing the pain of the patient himself. There was no success in evaluating the quantitative and qualitative aspects of the pain sensation of the experimentally caused pain, using them in combination with psychophysical pain measurements and communication of patients about the effect on analgesic pain [167,196].

Thus, electrical potentials for the study of sensory processes in the cerebral cortex were used to assess the subjective intensity of pain [171]. This method is also used to study the analgesic effect. However, the induced potentials give different amplitudes to each individual, as well as subject subjective factors (waiting and attention) that are difficult to eliminate [171]. Therefore, modern methods of investigating objective physiological correlates of quality and intensity of human pain are not effective and valid. The advantage is given to a subjective assessment of the severity of pain in each individual. After all, each individual patient, as it finds out medical practice, reacts differently to one and the same pain, estimates it differently and differently estimates the influence of

analgesic drugs on his body. This indicates that the individual sub 'An objective assessment is a leading in the assessment of pain and requires differentiation to evaluate each patient.

Regarding chronic pain, then, compared to acute, it has features in its mechanism, physiology, and also a subjective assessment of this symptom. This is due to the fact that prolonged pain causes additional neurophysiological reactions in the human nervous system, as well as the increase in the influence of psychological factors on the neurophysiological mechanisms of pain. Therefore, differential diagnosis of chronic pain, as well as treatment to remove this symptom - is one of the main problems of the struggle for human health, which needs to be addressed within the psychosomatic approach.

However, the questions of the degree of severity of the pain syndrome remain open in the outlined problem field. It is known that the pain that comes from the internal organs cannot be precisely localized. Very often the disease of any of the internal organs gives a reflected or incorrectly localized pain. Therefore, in our studies, we found out the degree of subjective expression of pain and its form of manifestation in certain psychosomatic diseases.

The degree of subjective severity of pain was assessed by the patients themselves on a seven-point scale, and these data were compared with the definition of the chronotype of the individual.

Our task is to investigate the patients' degree of subjective acuteness of pain in disorders such as "psychosomatic illnesses" - taking into account the study of the dependence of the degree of subjective severity of pain on the individual peculiarities of the psyche of each individual individual.

The purpose of the study: to determine the degree of subjective severity of pain in disorders such as "psychosomatic illness" in the typological groups of the spectrum of "chronotypes".

The results of the study showed that the chronotype in people who suffer from vegeto-vascular dystonia by hypertonic type, consisted of two interval ranges:

$0.8 \leq ChrT \leq 0.86$ and $0.94 \leq ChrT \leq 1.0$.

But among the individuals of these groups there is also a number of qualitative differences in the degree of subjective expression of pain. Subjective expressiveness of pain in patients with a chronotype in the range: $0.8 \leq ChrT \leq 0.86$ indicates the sharp nature of the course of the disease. The site of pain localization is the area of the heart with irradiation in the left arm.

Subjective expressiveness of pain in patients with chronotype in the range: $0.94 \leq ChrT \leq 1.0$ from 1 to 3 points, that is, the course of the disease is characterized by less pronounced subjective assessment of pain. Patients with vegeto-vascular dystonia of hypertonic type are distinguished by their typological groups of personality orientation.

In the range: $0.8 \leq ChrT \leq 0.86$ there are individuals with a moderately attractioned type of orientation.

In the range: $0.94 \leq ChrT \leq 1.0$ there are individuals with an introvert type of orientation.

It should be noted another qualitative difference in the psychological nature of patients with vegetative-vascular dystonia moderately attractioned and moderately introverted group, which is revealed in signs of "syndrome of coronary behavior" [415, p.123]. The method of clinical conversation in each patient revealed the severity of signs of the

syndrome (competition, latent aggressiveness, hurriedness, impatience, constant sense of timing, responsibility, tension of the muscles of the face and hands). Statistical data processing showed that the degree of manifestation of symptoms of the syndrome is the same throughout the range of "chronotypes" of a moderately attractioned and moderately introverted group. But to one of them - a "constant sense of time-lapse" - in both groups there was a polar relationship. Most patients of a moderately attractioned group complained of a constant acute shortage time during school and homework. On the contrary, in a moderately introverted group, most patients claimed that they did not experience a shortage of time during work. Different attitude to the time in patients with vegeto-vascular dystonia by hypertonic type is associated with the magnitude of the individual "chronotype".

The distribution of subjective severity of pain of patients with vegeto-vascular dystonia under the hypotonic type in the spectrum of "chronotypes" shows that the patients of these two orientation ranges: 1.0 <ChrT ≤ 1.1 and 0.7 ≤ ChrT <0.8 differ by indicators the degree of subjective expression of pain. Subjective evaluation of pain in patients with chronotype in the range: 0,7 ≤ ChrT <0,8 from 4 to 7 points (115 patients). And in individuals with "ChrT" in the range: 1.0 <ChrT ≤ 1.1 from 1 to 3 points (108 patients). These two groups of patients differ in their typological groups. In the range: 0.7 ≤ ChrT <0.8 there are patients with a very extrovert type of orientation.

In the range 1.0 <ChrT ≤ 1.1 there are individuals with a very introvert type of orientation.

We give individual data of some patients suffering from psychosomatic diseases of the organs of the cardiovascular system.

1. Patient F. (ChrT = 0.8). Diagnosis: vegetative-vascular dystonia for

hypertonic type. Degree of expressiveness of pain: 4 points - sharp.

2. Patient R. (CHRT= 0.81). Diagnosis: vegetative-vascular dystonia for

hypertonic type. Degree of Expression of Pain: 6 points -

unbearable.

3. Sick Z. (ChrT = 0.85). Diagnosis: vegetative-vascular dystonia for

hypertonic type. Degree of expressiveness of pain: 7 points -

unbearable.

The chronotype of people who were affected by bronchial asthma and recurrent tracheobronchitis was determined in the range: $0.7 \leq ChrT < 0.8$, which corresponds to a very attractioned type of orientation in the typological group of "chronotypes". The subjective expression of pain in these patients is from 4 to 7 points (acute and unbearable pain). Place of localization of pain - the area of the chest.

We give the individual data of patients with chronic psychosomatic diseases of the respiratory organs.

1. Patient R. (ChrT = 0.7). Diagnosis: bronchial asthma.

Degree of expressiveness of pain: 7 points - unbearable.

2. Patient F. (ChrT = 0.8). Diagnosis: recurrent tracheobronchitis.

Degree of expressiveness of pain: 4 points - sharp.

3. Patient W. (ChrT = 0.81). Diagnosis: bronchial asthma.

Degree of expressiveness of pain: 6 points - unbearable.

Assessment of the subjective severity of pain in individuals with chronic respiratory diseases convinces us that the degree of subjective expression of pain is consistent with the value of the chronotype.

We examined 298 patients suffering from chronic kidney and urinary tract infections during exacerbation. Of these: 144 patients with chronic glomerulonephritis, 22 - patients with chronic cystitis, 72 - patients with dysmetabolic nephropathy.

All examined patients with the "chronotype" were distributed in the group with the range: $0.86 \leq ChrT \leq 0.94$, which corresponds to the localization of kidney disease in typological groups of the spectrum of "chronotypes" [414, p.94]. Subjective expression of pain patients in this group are estimated from 4 to 5 points (dull, moderate, acute and unbearable pain) with localization in the lumbar region and irradiation in the abdominal area of the body. This range of chronotype takes into account the ambient type of orientation.

We give the individual data of patients with chronic diseases of the kidneys and urinary tract.

1. Patient F. (ChrT = 0.86). Diagnosis: chronic pyelonephritis.

Degree of expressiveness of pain: 4 points - sharp.

2. Patient L. (ChrT = 0.89). Diagnosis: chronic glomerulonephritis.

Degree of expressiveness of pain: 6 points - unbearable.

Assessment of the severity of pain in patients suffering from psychosomatic diseases of the kidneys and urinary tract shows that this pain score is consistent with the value of the chronotype in the spectrum of "chronotypes".

Among the diseases of the gastrointestinal tract were examined in different periods of the disease: 139 patients - with chronic gastritis, 92 patients - with ulcerous disease, 112 patients with chronic cholecystitis, 111 patients with chronic pancreatitis, 69 patients with biliary dyskinesia.

The degree of subjective expression of pain in the range from

0,7 ≤ ChrT <0,8 - from 4 to 7 points (acute and unbearable pain). The degree of subjective severity of pain in the range: 1 ≤ ChrT ≤ 1,1 - from 1 to 3 points (weak, dull, moderate pain).

Here is an individual data of some patients with chronic diseases of the digestive system.

1. Patient L. (ChrT = 0.7). Diagnosis: chronic gastritis.

Subjective expressiveness of pain: 4 points - sharp.

2. Patient K. (CHRT= 0.72). Diagnosis: Pulmonary stomach disease.

Subjective expression of pain: 5 points - acute.

3. Patient R. (ChrT = 0.73). Diagnosis: Pulmonary stomach disease.

Subjective expression of pain: 5 points - acute.

4. Patient M. (ChrT = 0.74). Diagnosis: chronic gastritis.

Subjective expression of pain: 6 points.

5. Patient P. (ChrT = 0,76). Diagnosis: Pulmonary stomach disease.

Subjective expression of pain: 6 points.

Summing up on the basis of the results of the study, it can be argued that the degree of subjective severity of pain in disorders such as "psychosomatic illness" is consistent with the chronotype of the individual in the typological group of orientation, that is, has a clear typological localization.

Conclusions to section 3

1. By systematically determining the chronotype of people with special needs aged 17 to 27 who suffer from psychosomatic diseases of the respiratory system, the cardiovascular system, digestion, isolation, we have confirmed the assumption that the dominant disease is localized within its typological group.

2. The results of the research convinces: CHD is localized within the limits of mainly two types of groups of individuals for which it is "predominant", and beyond the limits of these groups practically does not work out. The disease itself outlined the boundaries of the two groups with "pure" extroverts and "pure" introverts who suffered a heart attack of the myocardium. Between the individuals of these groups there are a number of significant qualitative differences in the course of the clinical form of the disease. Thus, in individuals of moderately attractioned group predominates coronary artery disease with myocardial infarction, mostly transmural and crumotal. Repeated heart attack threatens human life. The process of recovery in these patients proceeds slowly. Individuals are moderately introverted groups, on the contrary, the course of the disease is predominantly manifestation of angina, and myocardial infarction is found in the small-throat form. Such patients can carry two or three or more heart attacks, but the process of their recovery is much faster.

3. The arterial essential hypertension is consistent with the hypertonic tendency of healthy individuals by localization in the "chronotype" spectrum. It was revealed a significant difference in the psychological nature of patients with arterial essential hypertension of a moderately attractioned group from introverted, which manifests itself in the signs of "coronary behavior syndrome". The method of clinical conversation in each patient with AEH was marked signs of a syndrome (competition, attraction to achievements, latent aggression, haste, impatience, anxiety,

constant feeling of time, responsibility, hasty speech, tension of muscles of the face and hands). Statistical data processing showed that the degree of severity of symptoms of the syndrome is the same throughout the range of "chronotypes" of moderately extrovert and moderately introverted groups of patients with AEH. However, one of them - "a constant sense of time" - was observed in both groups polar relation. The overwhelming majority of patients of a moderately attractioned group complained of the constant shortage of time in their lives. On the contrary, in a moderately introverted group, almost all patients report that they do not experience a shortage of time. The opposite attitude to the time in patients with AEH of a moderately attractioned group ("hurried" subjects) and a moderately introverted group ("precise" subjects) are related to the size of the individual "chronotype".

4. When investigating one of the "prevailing" forms of heart failure, we are convinced that functional disturbance of the heart rhythm is localized predominantly within its typological groups, namely: rhythm disorders with tachycardia predominate in a moderately extruded spectrum of "chronotypes," and disorders of rhythm with bradycardia dominated by a moderately introverted spectrum of "chronotypes".

At the same time, according to observations, patients with functional heart rhythm disorders, depending on the form, are characterized by specific manifestations of behavior. Thus, individuals who have functional rhythm disturbances accompanied by tachycardia, are persistent in their behavior, tend to assume responsibility for their actions, control events. They have little listening to the thoughts of others, in particular, of doctors, which is manifested in negativism. At the same time, most of these patients do not perceive their illness as psychogenic, they insist on looking for help from doctors (say, the patient comes to the hospital several times and requires to be treated), but at the end of

treatment it is typical that they do not help and they even began to feel worse.

Patients in whom functional rhythm disturbances are accompanied by bradycardia are vulnerable, anxious, although they try to "suppress" it, "to overcome" in themselves, which confirms the existence of dysfunctional thoughts in such patients. Moreover, the expectation of sad events in the future, their extremely pessimistic interpretations, the negative opinion about themselves in stressful situations give rise to anxiety, despondency in the positive decision of life problems, distrust of others. On the other hand, there are controlling judgments such as "necessary", "necessary" and "traceable", indicating a large number of pronounced social stereotypes.

Consequently, in patients with functional heart rhythm disturbances there is a conflict between the desire to be socially "correct" and taken by the surrounding, on the one hand, and distrust of the world and other people - on the other. This indicates the psychogenic nature of functional heart rhythm disorders.

If we compare the ratio of time to individuals with different forms of arrhythmias, it turns out that subjects *with a* relative tachycardia tend to re-evaluate and underestimate the proposed intervals of time. Subjects with relative bradycardia underestimate and re-measure the intervals of time. For comparison, we note that subjects with a normal heart disease (without rhythm disturbances) give approximately the same number of deviations both in the direction of re-measurement and underestimation, and in the direction of undervaluing and re-estimation of intervals.

5. The chronotype of the examined patients with peptic ulcer in the stomach and duodenum is preferably in the range

1,0 s $<\tau \leq$ 1,1 s corresponding to the group of individuals dominated by stomach diseases of the typological array of one of the five segments of the "time orientation" spectrum.

Individuals with a chronotype (ChrT) in the range of 1.0 to 1.1 who suffer from chronic stomach diseases exhibit pronounced introversion and stability, high levels of excitation and inhibition, which balance each other, and mobility in them is twice lower than in "Chronotypes" of other individuals. That is why they are calm, productively working in a familiar situation, and typologically can refer them to "purely introverts".

6. There is agreement between the "chronotype" and the clinical manifestation of chronic liver and gallbladder disease in the contingent of patients whose chronotype is in the range of 0.7 to 0.8.

The results of our study showed that the chronotype of patients suffering from chronic cholecystitis is in the range $0.7 \leq$ ChrT ≤ 0.72, pancreatitis - $0.73 \leq$ ChrT ≤ 0.75 and biliary dyskinesia - $0.7 \leq$ ChrT <0.8, which corresponds to a group of individuals in which "dominated" diseases of the liver and gall bladder.

Such individuals are characterized by high extraversion, stability, and excitation in them 2 times prevails over braking. In addition, they are purposeful and aggressive in their behavior. Individuals with such a "chronotype" approaching the category of "purely extrovert".

7. Chronic constipation occurs predominantly in anxious and depressed, externally calm, and internally tense, noncompany, and unsure of the patients.

The results of our study make it possible to verify that the chronotype in patients with chronic constipation is predominantly (53%) in the range of

0.94 <ChrT ≤ 1.0, which corresponds to a group of individuals who "predominate" directly into the intestines.

8. A person suffering from emotional diarrhea is characterized by fear of authoritarian figures and a sense of helplessness. In the sphere of personality, the desire to recognize their own significance and opportunities in the aggregate with the latent consciousness of redundancy of requirements and its weakness dominate.

For subjects with somatic disturbances of the intestinal tract, a balanced level of excitation and inhibition is characteristic, that is, in terms of extraversion - introversion and neuroticism - stability is dominated by a median or ambient type of orientation with moderately extraterrestrial manifestations.

Thus, taking into account the psychological individual characteristics of each individual inclined to diseases of the gastrointestinal tract, it is possible to predict the place of his least resistance, in particular, such diseases of the stomach as gastritis, peptic ulcer of the stomach and duodenum, cholecystitis, pancreatitis, dyskinesia of the biliary tract, constipation, emotional diarrhea.

9. The examination of patients with nephrological diseases confirms the assumption that the urinary system is the place of the least resistance in people with a chronotype in the range: 0.86 ≤ ChrT ≤ 0.94, which includes individuals with a "purely" ambient type of orientation, as well as with moderately extravert and moderately introverted manifestations. The application of this method of psychodiagnostics of the individual's chronotype will make it possible to predict the "place of the least resistance" of individuals who are prone to nephrology disorders in the body.

As a result of the survey, the concept of ambient type of orientation has been specified. The ambient type of orientation is a peculiar conditional critical point through which the boundary between two types of orientation passes: moderately extrovert and moderately introverted.

With an insignificant tendency of rejection of the direction of the indicators of extravagance or introverts, in a person will be manifested one or another of their specific individual psychological features.

Thus, for subjects with somatic disorders of the nephrology profile, a balanced level of excitation and inhibition is characteristic, that is, in terms of "extraversion-introversion" and "neuroticism-stability" dominated by the median or ambient type of orientation. It is also established that among the above subjects there is a quantitative advantage of individuals introverteddirectional types of temperament over extrovert. The analysis of the indicators of the chronotype, as it also refers to the properties of the nervous system, has shown that the majority of the surveyed belongs to the ambient type of orientation (from 0,86 to 0,94). Chronotype with parameters of 0.9 - is a critical point that divides the two types of personality orientation for clock - moderately attractioned and moderately introverted types, and it belongs to an ambient type of orientation. The time characteristic of the subject of the ambient type of direction is represented by the fact that it is in a hurry, but the time it lacks, that is, it lives in the present, the behavior is characterized by "caution without fear." In general, these studies allowed to establish a system of interconnection and interdependence that directly depends on the psychological and physiological, psychological, individual-typological peculiarities of the organism of the subject, in particular, the trends of the direction of the type of temperament (the balance of excitation-inhibition processes), as well as the time parameters (temporal

characteristics of the subject, time factor, chronotype) with somatic disorders.

10. In the study of the position of the relational concept of time, we were able to isolate the zone of least resistance in individuals suffering from neurasthenic disorders. This indicates their belonging to the typological group. Thus, neurasthenia is the place of the least resistance in moderately introverted. So, it has long been known that a moderate introvert is a person with a weak nervous system that has an increased sensitivity, even to weak stimuli. He has expressed introversion and high neuroticism, and braking twice exceeds the excitement. Strong stress in a moderate introvert can provoke a neurotic disorder.

Hysterical neurosis is localized within a very attractioned group. Indeed, the "pure" extrovert is a person who has an unbalanced nervous system in which excitation prevails over braking, explicit pronounced extroversion.

It is quite possible to explain why in the zone of localization of neuroses of obsessive-compulsive states there were representatives of a very introverted group. In introvert, the nervous system is stable, inert, excitation and inhibition counterbalance each other, a pronounced introversion, and the mood is usually even. But the "net" introvert does not fall into this zone. It includes individuals from ChrT from 1.01 to 1.03. These are no longer moderate introverts, but not yet "pure" introverts, and therefore, their strong nervous system can not be called strong. Such differentiation of neurasthenic disorders is necessary both in medicine and in psychology because it answers the question: who and in what form may develop neurasthenic disorders.

11. The X- rays on the VSD for the hypertonic type are predominantly chronotyped in those areas where hypertonic disease occurs in healthy "chronotypes". The sickest patients with VSD clearly identified two

boundaries (ChrT = 0.8 and ChrT = 1.0) in the spectrum "Chronotypes", in which there is a jump-free transition from hypotonic tendency to hypertonic. The vegetative-vascular dystonia of the hypertonic type has defined the boundaries of both groups "purely" by moderate extraverts and "purely" by moderate introverts. Therefore, patients who have the same form of "predominant" disease have differences in their psychological characteristics. The method of a clinical conversation revealed that one group of patients complained of a constant shortage of time in the performance of any work. These are the individuals with a chronotype in the range: $0,8 \leq ChrT \leq 0,86$, that is, it is a moderately attractioned group of individuals. Another group of patients with a chronotype in the range: $0.94 \leq ChrT \leq 1.0$ does not feel a shortage of time while doing things, that is a moderately introspectively group of patients. This again confirms the correspondence of typological groups and dominant diseases in the spectrum of chronotypes in the contingent of patients with vegetative-vascular dystonia.

12. The degree of subjective severity of pain in disorders such as "psychosomatic illness" is consistent with the chronotype of the individual in the typological group of the spectrum "focus on time," i.e., has a clear typological localization.

The affiliation of the individual to the typological group, which defines the "place of the least resistance," does not mean that it is precisely this illness that it is doomed to fall ill. It only indicates that in the organism of this individual there is a system in which a disease can begin at a certain period of life. Such a period of life is called a period of risk and it is at this time necessary to strengthen the prevention of the disease.

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