Introduction

In recent years, the number of psychiatrists’, psychotherapists’ and psychologists’ patients and clients with psychosomatic illnesses has increased significantly. On the one hand, the enormous expansion of the public information space allows many people to suggest a connection between their existing somatic illness and personal problems, and thus it allows them to assess their illness as a psychosomatic one. On the other hand, more and more doctors are starting to pay attention to such connections and they send their patients to psychotherapists.

It should be noted that there is practically no statistics on the number of requests to psychotherapists and psychologists related to psychosomatic
diseases. Nevertheless, according to our own observations, approximately 10% of the requests over the past five years were about psychosomatic illnesses. But we should not forget that two other categories of clients are left without proper psychotherapeutic care:

- those who see a psychotherapist or a psychologist for any reason, except for their existing disease of psychosomatic origin;
- those who currently do not have such a disease, but due to the specifics of their personal problems have an expressed psychosomatic risk of any kind of nosology.

If a therapist has a coherent system of ideas about the mechanisms and types of different personality disorders, then he/she has the opportunity to assume the existence of psychosomatic risk in such clients. However, even in this case, additional interventions are required to introduce this risk in the cooperative psychotherapeutic work. This is due to the fact that any psychotherapeutic work can be successful only if it is sufficiently ensured by the energy of a client’s motivation to achieve the result (Timoshenko and Leonenko, 2011).

The theme of the article excludes the possibility to discuss the consistency of diagnostic and therapeutic approaches to such work, and the questions on creation of necessary motivation in a client. However, even the problem of diagnosing the presence of psychosomatic risk in a client with any other query is quite significant.

**Diagnostics of psychosomatic risk.** Currently, the tests, which indirectly identify the level and individual specifics of psychosomatic risk are generally used in psychological studies of psychosomatic diseases. The use of such tests is based on the idea about various personal characteristics, that are expected to cause a low resistance to stress, a tendency to re-evaluate the stress significance of life situations or their formation, etc. Therefore, the results of these tests require an additional interpretation for their application in the practice of working with psychosomatic risks and diseases.

Most of such personality tests has a questionnaire nature: for example, the test questionnaire of G. Eysenck (EPI) and the method of the multivariate study of personality of R. Cattell (16PF). The most widespread is the MPQ test - Multidimensional Personality Questionnaire, which contains 566 questions, trying to cover clinically defined personality traits (hypochondriacal, hysterical, psychopathic characteristics, masculinization-feminization tendencies, paranoid, psychasthenic, schizoid and manic traits, as well as social inversion). (Raigorodskii, 1999; Stolyarenko, 2000).

The test of differential self-evaluation of a functional state (SAN), built on the principles of polar profiles, is used to study the patients’ evaluation of their health, activeness and mood; the scale of personal and reactive anxiety of Spielberger, adapted by Yu.L. Khanin is used to determine the level of anxiety as a mental property and a state of patients; Eysenck Personality Questionnaire is used to determine the level of neuroticism and indicators of extra- and introversion (Raigorodskii, 1999; Stolyarenko, 2000).

Personality questionnaire of Behterevsky Institute - LOBY (Lichko, Ivanov, 1980; Wasserman and others, 1990) in conjunction with the questionnaire for studying the self-evaluation of social significance of a disease (Mikhailov and
others, 2002) are commonly used to determine the features of patients' responses to a disease.

Questionnaires, which are built in a pragmatic style, with no direct theoretical relation, occupy a special position in clinical-psychological and psychosomatic diagnostics. An example of this type of questionnaire is the Giessen Complaint Questionnaire, which consists of questions regarding the complaints on general well-being, pain, impaired emotionality and hysteria-formed complaints that are common in the ambulatory psychotherapy practice. All of these tests are standardized on a representative sample of the population and groups of patients, so that they can be used to assess the responses of individual patients.

The test of differential self-evaluation of the functional state (SAN) consists of 30 lines, each of which has two contradictory statements, 10 of those lines characterize the state of health of the subject, another 10 characterize the activeness and other 10 characterize the mood. Authors determine the level of activeness, mood and well-being by the questionnaires results.

Scale of reactive and personal anxiety by Spielberger - Khanin is designed to measure the anxiety as the individual personality trait and as a state at any particular point in the past, the present and the future. The high rate of reactive anxiety, according to the authors of the questionnaire, indirectly shows an expressed psycho-emotional stress of a patient.

Serdyuk's questionnaire for studying self-evaluation of social significance of the disease has been developed based on a survey of two thousand patients with various chronic somatic diseases. According to the author, the questionnaire allows one to isolate and to quantitatively evaluate the impact of the disease on different spheres of social status of patients (Mikhailov et al., 2002).

In addition, many psychologists use the following tools for diagnostics of the level of risk on psychosomatic disorders:
- the method of unfinished sentences by Sachs - Sydney, modified for patients with psychosomatic illnesses;
- the method of determining the psychological characteristics of the temperament;
- the method of diagnostics of parameters and forms of aggression by A. Bass and A. Darky;
- the method of measuring the anxiety level by Taylor, adapted by Norakidze;
- the Thomas–Kilmann Conflict Mode Instrument, describing the types of behavior in a conflict, adapted by Grishina;
- the depression scale by Tsung et al.

However, the analysis of the diagnostic methods described above shows that neither of them is focused on the identification of specific psychosomatic risks. Thus, L.B. Tsvetkova, M.M. Mingalieva, D.A. Potashov showed the possibility of psychological diagnosing and detecting the group of risk on psychosomatic diseases, such as gastric ulcer and duodenal ulcer in the MIA institutions (Morenko, et. al., 2004). Highlighting the stress factors in the work of law enforcement officers as the reasons for psychosomatic disorders, the program for prevention and correction of negative emotional states has been developed and applied by S.F. Morenko, D.A. Potashov, M.M. Mingalimov, A.R. Mingalimov (1999). L.P. Velikanova and Yu.S. Shevchenko believe that the psychological...
express-diagnosis and the subsequent psycho-correctional work with the person is a promising way for early prevention of psychosomatic diseases (2006).

Besides, all the analyzed methods involve more or less long-term standardized procedures, requiring quite large subsequent processing. This makes them unsuitable for use in the psychological practice for detecting psychosomatic risks in clients. To be useful in the practice of psychotherapy, such diagnostic methods should be as simple and close to the verbal interventions as possible. This would allow the psychotherapeutic process not to move away from the client's request.

Therefore, the aim of the proposed study is to describe and verify the simplest diagnostic procedures, allowing to suggest a presence of psychosomatic risk in a client that is addressing a psychotherapist with any request.

**Substantiation and structure of the proposed study.** When planning the study we were relying on the following basic positions:

- the emotional stress, that is radically different from the normal physiological state of activation of the organism to adapt to a complex, stressful or a dangerous situation, is a risk factor for all diseases with a psychosomatic nature (Kamenetskiy, 2001; Shcherbatykh, 2008; Novikova, et. al. 2006; Sudakov, 1976; Topolyansky and Strukovskaya, 1986; Berezin, 1998; Efremova, et. al. 2015; The types of emotional experiences that are specific to the occurrence of psychosomatic risk, 2014);

- the tendency of a person to inadequate experiencing of certain emotions is the mechanism of formation of such stress (Efremova, et. al. 2015; The types of emotional experiences that are specific to the occurrence of psychosomatic risk, 2014);

- the human propensity to inadequate experiencing of certain emotions is determined by certain maladaptive personality patterns (The vertical position of a person in a social interaction as the factor of formation of psychosomatic risk, 2014).

The data of the physiological studies show that experience of emotions by humans and animals is accompanied by a variety of different sets of biochemical processes. First, it has been experimentally proved, that the sympathetic-adrenal system is excited with emotions. Later it turned out that with different emotions entirely different ratios of adrenaline rush or noradrenaline rush were observed. As a result, we began to talk about the specific attachment of the endocrine "component" to an each emotion (Bakhur, 1975; Gelgorn and Lufborrou, 1976; Colbert, 2009; Cannon, 2007). Other studies have shown that emotional experiences (anger, fear, joy) are associated with the limbic system and cerebral cortex (Golushko and Gilev, 1969).

Basing on these studies, we can make an assumption that emotions carry out an adaptive function - or rather, they in different ways ensure the implementation of a man's natural instincts (preservation and procreation). Then it is logical to assume that the experience of different emotions is intended to provide the organization of the person's life in accordance with the instinct of self-preservation.

The essence of self-preservation of the biological organism is in two tasks:

- obtaining all that is necessary for the continued functioning of the body;
- protecting the body from all that is harmful or dangerous for it.
Then the emotions that have their own specific biochemical correlates, can be considered as intended for humans to complete these tasks. From this perspective, one can imagine the following emotions’ functions (Figure 1):

<table>
<thead>
<tr>
<th>The fragment of reality that is necessary for the body</th>
<th>Emotion</th>
<th>Function</th>
<th>The body’s reaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>The fragment of reality that prevents the body from satisfying a particular need</td>
<td>Anger</td>
<td>Eliminating the unwanted fragment</td>
<td>The defensive reflex, that is causing the fight with the interference</td>
</tr>
<tr>
<td>The fragment of reality that is dangerous for the body</td>
<td>Fear</td>
<td>Avoiding the interaction</td>
<td>The defensive reflex, that is causing to freeze or to flee</td>
</tr>
<tr>
<td>The confusing fragment of reality</td>
<td>Curiosity</td>
<td>Studying</td>
<td>The orientating reflex</td>
</tr>
<tr>
<td>The lack of the fragment of reality that is necessary for the body</td>
<td>Longing</td>
<td>Expecting</td>
<td>The maximum limitation of activity in order to save resources</td>
</tr>
<tr>
<td>The fragment of reality that is unnecessary for the body</td>
<td>Apathy</td>
<td>Ignoring</td>
<td>The lack of reaction</td>
</tr>
</tbody>
</table>

Also, we have shown in our studies that the tendency to the predominant experience of any basic emotion is closely related to the person’s vertical position in social interaction (Timoshenko, 2013; Timoshenko, n. d.; Projective approach to studying the nosological differentiation of psychosomatic risk, 2014). The person occupying the bottom position perceives himself/herself as the object of someone else's influence, and therefore tends to feel fear in any social interaction. A person occupying the top position sees himself/herself as a subject that influences another person, and in situations with the presence of any interference is more inclined to feel anger. A person with a mixed position tends to experience both fear and anger in different social situations. The equal position can be indifferent in terms of the prospects of formation of psychosomatic risk as it suggests the initial person’s willingness to respond adequately to any changes in the current situation.

The principal essence of the vertical positions, that are the factors of formation of psychosomatic risk can be described the following way:

- the person with the top position sees himself/herself as the subject of impact, and the world around as the object of his/her impact, and therefore, he/she is basing on the priority of own opinions and desires, own significance for the other person, including the significance of his/her expectations; basing on the priority of own right to decide, to evaluate, to judge other people, etc.;

- the person with the bottom position perceives himself/herself as the object of impact, and the world around as the subject of impact, and, therefore, he/she is basing on the low priority of own opinions and desires, compared with the rights and desires of another person; considering his/her capabilities and rights to be of less importance than the rights and capabilities of another person, etc.

Therefore, we can highlight the following behavioral manifestations of a person for each of these positions (Figure 2):
Figure 2. The behavioral manifestations of the psychosomatogenic vertical positions

<table>
<thead>
<tr>
<th>Position</th>
<th>Speech manifestations related to the person itself</th>
<th>Speech manifestations related to another person</th>
</tr>
</thead>
</table>
| **Top**  | - words and expressions that exaggerate their own importance, values, opportunities, etc.;  
           - words and expressions that assume the superiority of significance, values, opportunities, rights, etc. of a person speaking over the other person;  
           - claims for attention to their statements (long speaking, interrupting the interlocutor to express their own opinions, etc.);  
           - speaking too loud, too quiet or too slow | - words and expressions containing any (even positive) assessment (as opposed to the description) of another person or of his actions;  
           - words and expressions that understate the importance, values, opportunities, etc. of another person;  
           - long speaking without a support (or a request) of the interlocutor;  
           - ignoring another person's manifestations |
| **Bottom** | - words and expressions that understate their own importance, values, opportunities, etc.;  
            - words and expressions that assume the superiority of another person's importance, values, opportunities, rights, etc.;  
            - a short, quiet and fast speaking | - words and expressions that exaggerate the importance, values, opportunity, etc. of another person;  
            - fast and unjustified agreement with any statement of the interlocutor;  
            - excessive attention to the manifestations of another person |

We should not forget that a mixed vertical position (when a person is taking either the top or the bottom position in different situations) is quite common. This may be due to the different spheres of interaction: interaction with the loved ones, business interaction and interaction with strangers. Another factor that is influencing the change of a person's vertical position is the theme of interaction: it can be more or less familiar, comfortable, dangerous, etc.

That is why we have highlighted the three vertical positions in the study of behavioral manifestations of clients in the psychotherapeutic process: the top position, the bottom position, and the mixed position. Mixed position was diagnosed when clients built their behavior either out of the top position, or out of the bottom position in the process of interaction with the therapist.

It is important that not every behavioral manifestation of a person can be attributed to one or another position: the majority of the manifestations can be neutral. Therefore, in our study, the speech manifestations of the top and the bottom positions were also divided according to the degree of their expression:

- a weak expression was diagnosed when informative behavioral manifestations were observed only in few fragments of the client's interaction with the psychotherapist;
- a strong expression was diagnosed when informative behavioral manifestations were observed in almost every fragment of this interaction.

Thus, we were testing the following hypothesis in our study: diagnosing the client's vertical position via its behavioral manifestations during the psychotherapeutic process will reveal the presence of its psychosomatic risk.
To test the hypothesis we have used a sample of 220 people seeking psychological help. During the psychotherapeutic process a particular vertical position was assigned to each of them by their verbal manifestations, allowing us to roughly delimit the nosology of psychosomatic risk in each case.

The results were tested using the method of subjective functionalization of the body (SFB), which allows to determine the expression level and the zone of psychosomatic risk (22-23).

The used method offers the test subject to relate the functioning of various physiological systems of his/her body with fundamentally different types of life tasks:
- providing their life with the necessary resources;
- maintaining the balance in their inner world;
- using of the world in their own interests;
- protecting themselves from the outside world (if necessary);
- transformation of the world in their own interests (if necessary);
- integration of all these activities and monitoring their implementation.

The results of the test were analyzed by six parameters:
- the functional adequacy of subjective correlation of the various parts of bodies of test subjects with solving various life tasks;
- the completeness of the correlation;
- geometric proportionality of the representation of various physiological systems of the body in the correlation;
- the selected style (realistic, schematic, symbolic) of representation of the results of the correlation;
- the adequacy of the spatial representation of the results of the subjective correlation;
- the proportionality of the subjective load on each of the physiological systems.

The calculation of the size of psychosomatic risk was carried out separately for each of the nine physiological systems: excretory, respiratory, circulatory, nervous, musculoskeletal, digestive, integumentary, reproductive and endocrine systems. However, counting of the total value of psychosomatic risk in all physiological systems was also carried out in our study. This value was also graded on the expression level of the total risk:
- a low level was diagnosed when the overall risk was not more than 25% of the maximum possible risk;
- an average level corresponded to the interval of 26 to 75% of the maximum possible risk;
- a high level was diagnosed if the total risk exceeded the level of 75% of the maximum possible risk.

21 of the 220 surveyed clients have initially asked for psychological help because of a psychosomatic disease, that was diagnosed in a medical facility. Almost half of the participants (103 people) have also participated in the follow-up study on health status for 3 to 5 years.

**Analysis of the results.**

The relation between the level of psychosomatic risk, obtained as a result of the study via the SFO method, and the degree of expression of a particular vertical position, diagnosed by the behavioral manifestations of the client in the process of interaction with the psychotherapist, is shown in Figure 3:
Figure 3. The ratio between the level of psychosomatic risk and the degree of expression of different vertical positions

<table>
<thead>
<tr>
<th>Position</th>
<th>Expression degree</th>
<th>Low level of the total risk</th>
<th>Average level of the total risk</th>
<th>High level of the total risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top (126 people)</td>
<td>Weak (95 people)</td>
<td>65.26 %</td>
<td>21.05 %</td>
<td>13.68 %</td>
</tr>
<tr>
<td></td>
<td>Strong (31 people)</td>
<td>19.35 %</td>
<td>29.03 %</td>
<td>51.61 %</td>
</tr>
<tr>
<td>Bottom (18 people)</td>
<td>Weak (14 people)</td>
<td>57.14 %</td>
<td>28.57 %</td>
<td>14.28 %</td>
</tr>
<tr>
<td></td>
<td>Strong (4 people)</td>
<td>0 %</td>
<td>25.00 %</td>
<td>75.00 %</td>
</tr>
<tr>
<td>Mixed (76 people)</td>
<td></td>
<td>11.84 %</td>
<td>36.84 %</td>
<td>51.31 %</td>
</tr>
</tbody>
</table>

The obtained data have led to the following conclusions:

1. The consistent bottom position is extremely rare among the clients of a psychotherapist. Perhaps this is due to the fact that this attitude of a person towards themselves initially involves the idea of its own fundamental inability to change their life for the better. This is indirectly confirmed by the absence of a strong degree of expression of such vertical position among the surveyed clients: it can be assumed that the mere visit to a psychotherapist is completely impossible and pointless for people with a strong representation of their own lack of rights and insignificance.

2. For all the above vertical positions the level of the total psychosomatic risk is directly dependent on the degree of expression of these positions: the more any kind of position is expressed, the higher is the level of risk. This is easily explained by the greater tendency of a person with an expressed position to the preferential response via a particular emotion to any unexpected changes in the current situation. For example, a person who considers their opportunities and rights to be exclusive, believes that any of their expectations regarding the outside world are obliged to come true. Therefore, they are more likely to be angry with unexpected events, actions of other people, etc. In this case, a quite defined biochemical background, which is different from the physiologically normal one, will be constantly registered. In turn, this will inevitably lead to specific abnormalities in the functioning of various physiological systems of the body.

3. The level of psychosomatic risk is the highest if the bottom position is strongly expressed. It also seems quite understandable. In fact, such an attitude towards the world causes a person to respond to any changes in the situation with fear: because his/her assessment of own rights and opportunities is such that any such change seems to be very dangerous.

The cases of the initial presence of the already diagnosed psychosomatic disease in clients (21 people) were evaluated in the study as follows (Figure 4):
Thus, we can conclude that the diagnosed psychosomatic risk corresponds to a high level of the total psychosomatic risk diseases in the majority of cases (19 of 21). On the other hand, such diseases were more present in clients with a strong degree of expression of a particular vertical position, than in clients with a weak degree (12 of 13 - for top and bottom positions). This means that in terms of diagnosing psychosomatic risk and introducing it into the field of psychotherapeutic work we can only consider a strong expression of a vertical position of the client to be significant.

It should be noted that the expected nosology of psychosomatic risk obtained via the SFO method was fully confirmed in all the studied cases: the physiological systems that suffered in the diagnosed psychosomatic illnesses, showed the highest level of psychosomatic risk.

Equally high reliability was demonstrated by the method of the SFO in relation to the clients, which participated in the follow-up study (Figure 5):

This data suggests that the SFO method is a sufficiently reliable tool for diagnostics of psychosomatic risk. On the other hand, comparing the results of the analytical diagnostics of the vertical position of a client by its behavioral manifestations with the results of the SFO test gives us the reason to believe such analytical diagnostics to be a reliable tool for studying the level of psychosomatic risk.

Main conclusions:
1. Vertical position that is occupied by a person in social interaction, is directly related to the presence or absence of risk of formation of psychosomatic diseases in him/her.

2. Analytical diagnostics of the vertical position of a person via behavioral manifestations is a fairly reliable tool of predicting the probability of the presence of psychosomatic risk and therefore can completely replace the use of psychotherapeutic practice tools and test diagnostic methods.

3. The level of psychosomatic risk is directly dependent on the degree of expression of the vertical position of the person.

This article on execution of research work in the framework of the project of the state assignment in the field of scientific activity was prepared as a part of the Task #25.1679.2014/K.

References
The types of emotional experiences that are specific to the occurrence of psychosomatic risk. (2014). Vestnik SKFU, 6 (45): 256-260.
Timoshenko G.V. (n. d.). The metaphorical model of a personality as a way to study the vertical position of a person in a social interaction. Author. diss.