Factor structure of value-semantic and emotional-volitional characteristics of personal success (on the example of students of the Murmansk State Technical University)

E Yu Korzhova¹, M Ya Dvoretskaya¹, E S Kuznetsova² and A B Loshchakova²

¹The Herzen State Pedagogical University of Russia, St. Petersburg, Russia
²Murmansk State Technical University, Murmansk, Russia

elenakorjova@herzen.spb.ru; mdvoretskaya@herzen.spb.ru; kuznetsovaes@mstu.edu.ru; loshchakovaab@mstu.edu.ru

Abstract. Personnel potential plays the key role in the effective development of the Russian sector of the Arctic. It is impossible to conduct the study of the personnel potential without reliance on the psychological science. This article discusses the phenomenon of personal success and its relationship with the model of vital activity chosen by a person. According to the results of the empirical study the publication presents the factor structure of the value-semantic and emotional-volitional characteristics of the personal success in students with different models of vital activity (vital, social and existential). The factor analysis carried out by the method of principal components with varimax-rotation showed that respondents with an ideal of vital model of vital activity (3 factors were highlighted) have pragmatic orientations - “high level of income”, “personal prestige”. Such manifestations as “spiritual satisfaction”, “creativity”, “self-development” get evaluation below average. The factor structure is dominated by indicators that reveal a disharmonious state, a low level of adaptability to people around them and changing situations. Respondents with an ideal of social model of vital activity (4 factors were identified in total) are oriented towards cooperation in professional and social spheres. They demonstrate high level of social adaptability and a tendency toward self-development and express self-efficiency. Respondents with an ideal of existential model of vital activity (3 factors are highlighted) choose the following priority areas: professional activities, training and education, public life. They are characterized by prosocial behavior, a manifestation of altruism and a desire to contribute to socially significant projects. At the same time, they express harmonious state and are prone to assist people around. The information presented in the article has practical value for teachers, students and graduates of higher schools, HR managers.

1. Introduction
In case of the northern regions of Russia, where the climate conditions are rather harsh, and sometimes extreme, the professional fitness to work, physical health and psychological well-being of an employee depends not only on the necessary qualifications, specific knowledge and skills, business competencies, but also on his personal potential and internal reserves. Therefore, in the educational environment of higher education, focused on training personnel for the Arctic region of Russia, the psychological characteristics of the future professionals, their opportunities and limitations become the object of a focused psychological and pedagogical study and impact.
In recent years we find the increasing interest in the humanities for the study of the effectiveness of a life organization by the person, where the personal success acts as a combination of certain manifestations and personality characteristics that allow person to be successful [1]. Therefore, today the personal success ceases to be only a social phenomenon and more and more goes into the field of the personality psychology. Scientists pay attention to personal qualities, features, traits, determinants that define personal success and contribute to the experience of success [2].

People interpret their personal success in different ways. Each one puts its own meaning in it, that, undoubtedly, affects both the life trajectory on the whole and the choice of behaviors for the achievement of the significant goals [3]. Therefore, the subject of our scientific interest is the value-semantic and emotional-volitional characteristics of a person that affect the personal success. The model of vital activity is considered as the psychological basis of a personal success. These model formations, combining value orientations, personal meanings and attitudes, form the image of the desired future and act as an external realization of a person’s intrapsychic organization. The semantic content of the chosen standard gives a person an impetus for goal setting, the choosing of means and methods to achieve the desired result, decision making in various life situations. A person can be aware of himself at one of the three levels of the model of vital activity: vital, social, existential. Orientation to a certain model also affects a person’s understanding of the phenomenon of “success”, the process of achieving it, the idea of the image of a successful person. The success can be felt as individual success, joint success or success - service [4].

Personal success in our study is presented as a complex of manifestations of the value-semantic and emotional-volitional characteristics of the personality, interconnected with the accepted model of life, reflecting the positive result of activities aimed at achieving the goal and the meaning, leading to a sense of harmony with the world and oneself.

2. Materials and methods
In order to study the value-semantic and emotional-volitional characteristics in the structure of personal success, a phased empirical study was conducted by the authors. At each stage of the study some specific tasks were solved.

The main sample at the ascertaining stage was 215 people. All subjects with incomplete higher education were the students of the Murmansk State Technical University aged 17-23 years. 53% were girls and 46% were boys. The study sample was drawn up according to the criteria of accessibility and equal representation. The distribution of the obtained data by gender and age of the subjects did not reveal statistically significant differences, therefore, they were further considered.

The psycho-diagnostic complex was selected on the basis of the theoretical analysis in accordance with the value-semantic and emotional-volitional characteristics included in its structure. The following methods were used: Psychological culture of personality (O.I. Motkov) [5], Self-efficacy test questionnaire (J. Madduks and M. Scheer, adaptation by A. V. Boyarintseva) [6], Model of vital activity (M. Ya. Dvoretskaya) [7], Self-actualization test (SAT) (E. Shostrom; adaptation by Yu.E. Aleshina, L.Ya. Gozman and M.V. Kroz) [8], Volitional self-control test questionnaire - VSK (A.G. Zverkov and E.V. Eidman) [9], Questionnaire of terminal values (OTEC) (I.G. Senin) [10], Methodology for the diagnosis of socio-psychological personality attitudes (O.F. Potemkina) [11].

Using the “Model of vital activity” methodology (M. Ya. Dvoretskaya), the respondents’ leading type of model of vital activity was determined as a model of their desired future, the direction of their personality development in accordance with dominant needs and values, including the chosen model of success. According to the diagnostic results, the sample of subjects was distributed into three groups according to the dominant ideal of the model of vital activity: existential (80 people), social (83 people) and vital (52 people). Further, according to the research program, statistically significant differences between these groups were examined in terms of the selected methods.

To identify the content structure that reflects the deep correlations between the value-semantic and emotional-volitional characteristics of personal success in each group of subjects we carried out the
factor analysis procedure using the "main components" method with G. Kaiser varimax-rotation. 52 variables were subjected to the factorization process.

Statistical processing of empirical data was conducted using the software Statistica 10.0 for Windows.

3. Results

The final tables 1-3 contain only those factors that exceed the threshold value (0.45) in absolute quantity and in descending order for facilitating the interpretation of the obtained diagnostic data.

3.1. The discussion of the results in a group with the ideal of vital model of vital activity.

During the factorization three independent factors were identified that determine the relationships between the variables and contribute 52% of the total variance: "Disharmonious state" (the percentage of explained variance is 28%); "Pragmatic orientations" (12%), “Low adaptability” (12%) (table 1).

| Factor / Percent of the Explained variance | Value-semantic and emotional-volitional characteristics | Factor loadings |
|-------------------------------------------|------------------------------------------------------|----------------|
| **Factor 1 «Disharmonious state» (28 %)**  | The level of harmony in the implementation of the needs of psychological culture | 0.96 |
|                                            | The final level of harmony in psychological culture  | 0.95 |
|                                            | Strong-willed self-control                           | 0.88 |
|                                            | Professional sphere                                  | 0.88 |
|                                            | Realization of the need for self-knowledge and deep introspection | 0.83 |
|                                            | Realization of the need for constructive communication | 0.82 |
|                                            | Education and training sphere                        | 0.78 |
|                                            | Real existential standard                            | 0.76 |
|                                            | Realization of the need for constructive self-management | 0.73 |
|                                            | Realization of the need for harmonizing self-development | 0.73 |
|                                            | Realization of the need for creativity               | 0.72 |
|                                            | Ideal existential standard                           | 0.65 |
|                                            | Real social standard                                 | 0.61 |
|                                            | Self-efficiency in the field of subject activity      | 0.59 |
|                                            | Ideal social standard                                | 0.58 |
|                                            | Achievements                                        | 0.45 |
| **Factor 2 «Pragmatic orientations» (12 %)** | Personal prestige                                     | -0.70 |
|                                            | Creativity                                           | 0.68 |
|                                            | Ideal vital standard                                 | -0.58 |
|                                            | Family life                                          | 0.57 |
|                                            | Self-development                                     | 0.56 |
|                                            | Hobbies                                              | -0.54 |
|                                            | Perceptions of the nature of man                     | 0.53 |
|                                            | Orientation for the result                           | 0.53 |
|                                            | Orientation for the altruism                         | 0.52 |
|                                            | Public life                                          | 0.51 |
|                                            | High level of income                                 | -0.49 |
|                                            | Active social contacts                               | 0.48 |
The results show high significance of the vital model of vital activity for the subjects as an ideal of the future at least in the short term conditions. They also show the desire to remain in this niche of life’s self-determination, to be satisfied with the existing situation, not striving for personal semantic transformations. Some significant changes for these respondents are possible only within the framework of even greater satisfaction of vital needs, receiving pleasure from their implementation. The basic values are the value of one’s self, achievement, prestige, status, financial interest. There is a clear desire to do only those things which are interesting or fashionable (while hobbies can be unstable). Active life-building and creative forms of social interaction are deliberately rejected. We find also insufficient volitional self-control, poor self-organization, lack of realistic goals, lack of understanding of one’s capabilities, self-doubt which are associated with unreasonable ambitions, instability to life difficulties, and lack of independence in decision-making and dependence on other people's opinions, rash waste of their own resources.

In this group the most significant by weight and content was factor 1 "disharmonious state." The variables included in it indicate a low level of realization of the needs of psychological culture, a reduction in the vital model of vital activity through the replacement of its semantic content with social and existential (at ideal and real levels). This is a sign of uncertainty, an internal conflict between the level of desires and the level of their implementation in the formation of a personal orientation. The desire to get "all at once", the lack of a clear understanding of where to put one’s efforts hinders the prioritization.

3.2. The discussion of the results in a group with the ideal of social model of vital activity.

During factorization four factors were identified that determine the relationship between the variables and contribute 58% of the total variance: “Social adaptability” (the percentage of explained variance is 18%), “Self-efficiency” (14%), “Focus on results” (14%) , “Focus on self-development” (12%) (table 2).

| Factor / Percent of the Explained variance | Value-semantic and emotional-volitional characteristics | Factor loadings |
|------------------------------------------|-------------------------------------------------------|-----------------|
| Factor 1 «Social adaptability» (18 %)    | The level of harmony in the implementation of the needs of psychological culture | 0.91            |
|                                          | The final level of harmony in psychological culture   | 0.91            |
|                                          | Strong-willed self-control                            | 0.72            |
|                                          | Professional sphere                                   | 0.66            |
|                                          | Realization of the need for mental self-regulation    | 0.65            |
|                                          | Realization of the need for constructive communication| 0.62            |
|                                          | Education and training sphere                         | 0.57            |
|                                          | Realization of the need for creativity                | 0.53            |
The revealed factors made it possible to clarify the essential value-semantic and emotional-volitional characteristics in a group with the model of a social model of vital activity. In this group all the indicators of the needs of psychological culture and the level of their harmony are higher than in a group with a vital model of vital activity. The psychic self-regulation is the most relevant motivator. The representatives of this group are active in realizing the most significant needs of psychological culture, especially those related to social interaction.

The combination of indicators of the social model of vital activity and the existential model of vital activity (at the ideal and real levels) reinforce the importance of forming the ideal of the future in the social and existential direction through active social contacts and self-development in the field of public life. All this is not for the sake of obtaining status and recognition from others, but in order to find place in life, to participate in solving the problems of society, the possibility of realization and further development of the personal potential. The altruistic orientation, which is reinforced by the value of creativity, is demonstrated but some egoistic manifestations still persist.

Social Adaptability is the most significant factor by weight and content in this group. This factor is determined by the average level of harmony of psychological culture and volitional self-control, the realization of significant needs for mental self-regulation, constructive communication, and creativity in the field of professional life and in the field of education and learning. All this leads to successful integration and adaptation of the individual in society. The fulfillment of the need for self-regulation is manifested in the focus of actions, in the flexibility and mobility of behavior in changing or uncertain conditions, and the willingness to understand and support the positive transformations of the surroundings. High level of income does not have a significant impact on the experience of inner harmony.

3.3. The discussion of the results in a group with the ideal of existential model of vital activity.
During factorization three key factors were identified that determine the relationship between the variables and contribute 58% of the total variance: “Prosocial behavior” (the percentage of explained variance is of 33%), “Orientation to assistance” (12%), “Harmonious state” (13%) (table 3).

Table 3. Factor structure of the relationship between value-semantic and emotional-volitional characteristics in a group with the ideal of the existential model of vital activity

| Factor / Percent of the Explained variance | Value-semantic and emotional-volitional characteristics | Factor loadings |
|-------------------------------------------|-------------------------------------------------------|-----------------|
| Factor 1 «Prosocial behavior» (33 %)      | High level of income                                  | -0.88           |
|                                            | Orientation for the altruism                          | 0.82            |
|                                            | Creativity                                            | 0.81            |
|                                            | Hobbies                                               | -0.81           |
|                                            | Education and training sphere                         | 0.80            |
|                                            | Preserving the personality                            | 0.72            |
|                                            | Orientation for the process                           | -0.72           |
|                                            | Orientation for the result                            | 0.71            |
|                                            | Achievements                                          | -0.70           |
|                                            | Orientation for the work                              | 0.69            |
|                                            | Personal prestige                                     | -0.69           |
|                                            | Orientation for the egoism                            | -0.68           |
|                                            | The level of harmony in the implementation of the     | 0.65            |
|                                            | needs of psychological culture                        |                 |
|                                            | The final level of harmony in psychological culture   | 0.65            |
|                                            | Support scale                                         | 0.65            |
|                                            | Ideal vital standard                                  | -0.61           |
|                                            | Orientation for the money                             | -0.60           |
|                                            | Spontaneity scale                                     | -0.54           |
|                                            | Spiritual satisfaction                                | 0.51            |
| Factor 2 «Orientation to assistance» (12 %)| Real social standard                                  | -0.80           |
|                                            | Ideal social standard                                 | -0.72           |
|                                            | Active social communications                          | -0.71           |
|                                            | Real vital standard                                   | -0.63           |
|                                            | Self-development                                      | -0.59           |
|                                            | The need for constructive self-management             | 0.56            |
|                                            | Ideal vital standard                                  | -0.51           |
| Factor 3 «Harmonious state» (13 %)        | Ideal existential standard                            | 0.68            |
|                                            | The level of harmony in the implementation of the     | 0.65            |
|                                            | needs of psychological culture                        |                 |
|                                            | The final level of harmony in psychological culture   | 0.65            |
|                                            | Real existential standard                             | 0.62            |
|                                            | The need for constructive self-management             | 0.62            |
|                                            | The need for harmonizing self-development             | 0.61            |
|                                            | The need for self-knowledge, deep introspection       | 0.55            |
|                                            | Strong-willed self-control                            | 0.55            |
|                                            | Realization of the need for mental self-regulation    | 0.51            |

"Prosocial behavior" is the most capacious factor in the group with the model of the existential model of vital activity (includes 19 indicators) as well as among all the empirical data identified in the process of factorization.
It reflects the close relationship between the realization of altruistic needs and the harmony of psychological culture, creativity, attitude to work, spiritual satisfaction, and moderate expression of one’s emotions and feelings. Vital values and attitudes are rejected. The main desire is to be an independent person who relies on its own efforts and does not succumb to the influence of mass trends.

The high importance (but not the cultivation) of the need for constructive self-management indicates the desire to allocate the main goal, save resources, behave in a logic way, achieve a specific result, and be realistic about life. Other dominant features are the restraint in the perception of assessments from others, lack of conformity to someone else’s opinion in the situation of decision-making.

The harmony of the personality functioning process in the system of its aspirations and the degree of their realization is associated with the realization of the need for constructive self-management, harmonizing self-development, self-knowledge and deep introspection, mental self-regulation (reinforced by volitional self-control).

The presence of the variable “existential real standard” in factor 3 indicates that the movement to the ideal of the existential model of vital activity does not end even in a situation when the feeling of the reality is associated with the achievement of a certain internal harmony.

4. Conclusion

Thus, the general conclusion on factor analysis is the following: value-semantic and emotional-volitional characteristics of the representatives of the groups with different ideals of the model of vital activity as the basis of personal success have their own characteristics. All detected factors have their own integral characteristics that combine some factors. The resulting factor structure has practical significance and may be useful in the educational practice. It can help students in realizing their own life priorities and building self-development plans as well as employers of the Arctic to formulate the psychological requirements correctly in the process of employment and development of personnel.

References

[1] Bicheva I B and Nureyeva M A 2015 Success of a person in sustainable personal and professional development Humanitarian Research 10(50) 76-78
[2] Dvoretskaya M Ya and Loshchakova A B 2016 Image of successfulness in modern psychological research World of Science 4(2) Available from: https://mirnauki.com/PDF/09PSMN216.pdf [Accessed 20 March 2020]
[3] Levchenko V V 2014 Secrets of success and successfulness of a modern person (Moscow: Flinta) 259
[4] Vostrikova O A 2014 Reference image of success Psychology and Psychotechnics 5 538-545
[5] Motkov O I 1999 Psychological culture of personality School psychologist 15 8-10
[6] Mogilevkin E A 2007 Career growth: diagnosis, technology, training (St. Petersburg: Speech) p 336
[7] 2016 Workshop on the psychology of life situations: a training manual (St. Petersburg: LLC “Firm Styx”) 149-157
[8] Gozman L Ya et al 1995 Self-actualizing test (Moscow: Russian Pedagogical Agency) p 44
[9] Zverkov A G and Aidman E V 1990 Diagnosis of volitional self-control Workshop on psychodiagnosics. Psychodiagnosics of motivation and self-regulation (Moscow: Moscow State University) 116-124
[10] Senin I G 1998 Development of a modified version of the “Questionnaire of terminal values” Psychology and Practice. RPO Yearbook (Yaroslavl) 4(1) 287-288
[11] Methodology for the diagnosis of socio-psychological personality attitudes in the motivational-need sphere O F Potemkina 2001 Practical psychodiagnosics. Methods and tests (Samara) 641-648