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**CORRELATION OF PERSONAL VITALITY WITH MATURITY  
AND LEVELS OF INDIVIDUAL LIFE SUPPORT**

*SUMMARY.* In this study the ratio of concepts such as life-support, hardiness and personal maturity is considered. Empirical research reveals interrelations between them.

*KEY WORDS.* Personality life-support system, hardiness, commitment, control, challenge, personal maturity, life-support's locus.

At present the demands of society to find ways to create favorable conditions for the best development of a personality, personal success and effectiveness are growing. The issue of building one's own life, its handling or depending on the circumstances has always been important to people, and now with the increase of the personality role, this question is the most relevant. The way of life of an individual and one's maturity have the same "dimensions", but a way of solving life problems, building a life, its satisfaction is deeply individual [1], [2]. Personal hardiness becomes particularly important for it in the periods of social changes, economic and other crises. The conditions of modern life are extreme and they stimulate stress. It deals with many political, informational, social, economic, environmental and natural factors and threats. Therefore, modern social psychology takes a particular interest in the study of personal hardiness.

The concept of "**hardiness**" was introduced by Kobey and S. Muddy and developed at the crossroads of existential psychology, psychology, psychology of stress and coping behavior [3]. Based on the multidisciplinary approach to the phenomenon of human hardiness D.A. Leontiev considers [3] that this personality quality characterizes *the measure of the individual ability to deal with stressful situations, preserving the internal balance and not decreasing the success of the activities*. The definition of hardiness deals with personal maturity. Hardiness in some cases can become a criterion of personal maturity because the characteristics of hardiness and personal maturity are partially interrelated: a man is the author of his life who is able to make choices and take actions, who is responsible and who has a highly developed subjectivity.

Personal maturity is considered to be a certain point in the period of personality development. **Personal maturity** is "*such a level of personality development, when a person is able to solve problems independently of any complexity from those that*

he encounters in life" [4, 76]. Personal maturity is shown in the way a person reacts to life's challenges. A personally immature individual is prone to the reactions of fear, anxiety, aggression, guilt and offence. But a personally mature individual copes with the situation either changing the situation or the attitude towards it.

Personal maturity and hardiness are also interrelated with the concept of personality life-support. **Personality life-support system** (further PLSS) is a concept introduced by us to identify hierarchies, a complex growing system of protective-adaptive mechanisms. There are four basic levels: the level of psychosomatic response, psychological protection, coping and higher personal resources (further HPR). HPR denotes late-developing level, it is directly connected with personal development. These resources not only perform a protective function (preserving what one has), but also have a constructive function. A person using these resources in a crisis situation acquires something qualitatively new, useful, which can increase the chances of survival and further development. An example of such hardiness, personal maturity and actualization of higher personal resources is the following situation.

*A young man is experiencing an internal conflict dealing with the situation at work: he expected a promotion, but his supervisor did not promote him. The employee takes the situation as a challenge, he should make a choice: to accept it or talk with the supervisor to show that he deserves the promotion. His feelings and thoughts are: "Am I strong or weak, am I generous or self-seeking, competent or incompetent in negotiations?". His self-esteem is unstable; he feels psychological discomfort in his workplace. The situation is complicated by the fact that his boss left for a long trip and he ought to have this difficult conversation about the promotion by phone. The old fear of "petition" by phone is revived to the employee. He is in the specific state of looking for an the answer and searching for help. Watching movies, he paid attention to the scene where the main hero copes with difficulties using such strategy as, "even if I cannot cope with the biggest problems, but I can deal with small difficulties." The employee experiences an insight, he realizes his main problem—to control everything, which often leads to excessive stress. He makes a decision: "I will try to do everything I can, even though I doubt it will work; at least I will cope with some small difficulties". As a result, he successfully solves the problem at work, promoting his personal development (a control release), finds good coping for releasing anxiety by phone, and increases his self-esteem and the level of competence in the negotiations.*

This example demonstrates that hardiness also can be regarded as a resource of HPR level in personality life-support system.

The research in this sphere could not clarify the nature of the relation of such concepts as personal maturity, hardiness and personality life-support system, studying only parts of this problem. The comprehensive study of these psychological phenomena would clarify their nature, both individually and generally.

**The purpose of the research:** to reveal the nature of the interconnectedness between hardiness and personal maturity, and also the levels of PLSS.

**The hypotheses:**

1. There is a statistically significant correlation between the level of hardiness and the characteristics of personal maturity.
2. The characteristics of personal maturity differ from the level of hardiness.
3. There are differences at the levels of expression of protective and adaptive mechanisms of personality life-support system of the participants with the different levels of hardiness.

**The research methods**

Psychodiagnostic methods: The test of hardiness by S. Maddi (adaptation by D.A. Leontiev) [3]; the California Psychological Inventory CPI (adaptation by N.V. Tarabrina, N.A. Grafina) [5]; Test “life-support’s locus” (M.V. Bogdanova, V.A. Dudina) [6]; Questionnaire for the collecting of socio-demographic data (age, level of education, marital status, etc.). Methods of mathematical and statistical data: correlation analysis using Pearson’s correlation coefficient (Pearson-r); authenticity of differences was tested by Mann-Whitney’s criterion.

95 people took part in this research (from different regions of the Russian Federation), at the age of 20 and 60. Age and sex selection was made according to National Population Census data of 2010.

**The results**

Correlation analysis was made for checking the hypothesis of statistically significant interrelations between the degree of components of hardiness and components of personal maturity using Pearson’s correlation coefficient (Pearson-r). The results of the correlation analysis are shown in Table 1. Statistically significant correlations ( $p < 0,01$ ) are marked in bold.

*Table 1***The results of correlation analysis according to test of hardiness and CPI test**

Scales CPI	Attitudes of hardiness			Hardiness (general characteristics)
	Commitment	Control	Challenge	
Do	<b>0,57</b>	<b>0,48</b>	<b>0,41</b>	<b>0,57</b>
Cs	<b>0,44</b>	<b>0,33</b>	<b>0,36</b>	<b>0,43</b>
Sy	<b>0,60</b>	<b>0,59</b>	<b>0,49</b>	<b>0,65</b>
Sp	<b>0,47</b>	<b>0,44</b>	<b>0,49</b>	<b>0,53</b>
Sa	<b>0,44</b>	<b>0,41</b>	<b>0,42</b>	<b>0,48</b>
In	<b>0,56</b>	<b>0,47</b>	<b>0,46</b>	<b>0,57</b>
Em	<b>0,31</b>	<b>0,34</b>	<b>0,43</b>	<b>0,40</b>
Re	0,23	0,04	0,01	0,12
So	0,17	0,19	0,25	0,22
Sc	0,18	0,15	0,09	0,17
Gi	<b>0,44</b>	<b>0,40</b>	0,13	<b>0,39</b>
Cm	0,12	0,03	-0,07	0,05
Wb	<b>0,56</b>	<b>0,45</b>	<b>0,53</b>	<b>0,58</b>
To	0,23	0,11	<b>0,37</b>	0,25

Scales CPI	Attitudes of hardiness			Hardiness (general characteristics)
	Commitment	Control	Challenge	
Ac	0,35	0,25	-0,04	0,25
Ai	0,25	0,21	0,43	0,32
Ie	0,45	0,33	0,51	0,48
Py	0,29	0,20	0,45	0,34
Fx	-0,26	-0,28	0,26	-0,16
F/m	-0,22	-0,29	-0,23	-0,28

### The interpretations of the results of correlation analysis

The researchers made the correlation between the meanings of scales of CPI questionnaire and test of hardiness. They found statistically significant correlations between all the components of test of hardiness and such CPI scales such as: *Dominance, Status Ability, Sociability, Social presence, Self-acceptance, Independence, Empathy, Good impression, Sense of well being, and Intellectual efficiency*. The largest number of significant correlations is revealed between the characteristics of hardiness and the first group of the questionnaire scales CPI, which characterizes general social experience, formation of social skills, self-confidence, balance, influence and ability to communicate. It can predict the effectiveness of interpersonal interaction, styles and peculiarities of interpersonal interaction. It could be supposed that people with high levels of hardiness also show a high level of socially important characteristics—essentially those characteristics that admittedly influence other people, as well as also the fact that hardiness is connected deals with those scales that determine the individual's successful social interaction.

For the second group of scales CPI hardiness is connected with such scales as *Good impression (Gi)* as interest in creating a favorable impression about oneself in the eyes of other people (a control scale); *Sense of well being (Wb)* as general satisfaction in oneself and one's life situation (a control scale). This suggests that people with high levels of hardiness also possess a high level of satisfaction with life and themselves, either for themselves or in the perception of others, that is, they are personally mature people.

In the third group of scales CPI hardiness is significantly associated with such scale as *intellectual efficiency (Ie)* as preference for intellectual activity and striving for it. It allows suggesting that an interest to intellectual activity will be typical for people with a high level of hardiness.

It is interesting to note that there is no significant correlation of hardiness and mostly in the second group of scales (*Responsibility (Re)*; *Socialization (So)*; *Self-control (Sc)*; *Common (Cm)*; *Tolerance (To)*). These scales, showing the degree of acceptance or, on the contrary, resistance to social norms, evaluate social maturity, aspiration to obey laws and rules. It could be supposed that the level of hardiness is hardly connected with willingness to accept the existing social norms.

There were no statistically significant interrelations between hardiness and the fourth group of scales (*Psychological mentality (Py)*; *Flexibility (Fx)*; *Femininity*—

*Masculinity* (F/m)), which is aimed to assess the interests, lifestyle or life style of personality how they match to sex-role characteristics of the individual.

The hypothesis was proved about the difference in the characteristics of personal maturity, according to the level of hardiness. To test it, the participants were divided into two groups—with a high level of hardiness and with low one. The participants with average hardiness were excluded. The checking of reliability of differences between the groups was done using the Mann-Whitney test. The results are shown in Table 2. The indicators of personal maturity, according to which statistically significant differences ( $p < 0,05$ ) were revealed, are marked in bold.

Table 2

**Mann-Whitney's criterion according to CPI  
for groups of participants with different levels of hardiness**

Scales CPI	Rank Sum High level of hardiness	Rank Sum Low level of hardiness	U	Z	P-level
<b>Do</b>	<b>477,50</b>	<b>152,50</b>	<b>32,50</b>	<b>3,92</b>	<b>0,00</b>
<b>Cs</b>	<b>435,50</b>	<b>194,50</b>	<b>74,50</b>	<b>2,52</b>	<b>0,01</b>
Sy	484,00	146,00	26,00	4,13	0,00
Sp	474,00	156,00	36,00	3,80	0,00
Sa	454,50	175,50	55,50	3,15	0,00
<b>In</b>	<b>462,00</b>	<b>168,00</b>	<b>48,00</b>	<b>3,40</b>	<b>0,00</b>
<b>Em</b>	<b>446,00</b>	<b>184,00</b>	<b>64,00</b>	<b>2,87</b>	<b>0,00</b>
Re	369,00	261,00	141,00	0,30	0,76
So	377,00	253,00	133,00	0,57	0,57
Sc	382,50	247,50	127,50	0,75	0,45
Gi	417,00	213,00	93,00	1,90	0,06
Cm	382,00	248,00	128,00	0,73	0,46
<b>Wb</b>	<b>453,50</b>	<b>176,50</b>	<b>56,50</b>	<b>3,12</b>	<b>0,00</b>
To	379,00	251,00	131,00	0,63	0,53
Ac	387,00	243,00	123,00	0,90	0,37
Ai	415,00	215,00	95,00	1,83	0,07
<b>Ie</b>	<b>445,00</b>	<b>185,00</b>	<b>65,00</b>	<b>2,83</b>	<b>0,00</b>
<b>Py</b>	<b>430,00</b>	<b>200,00</b>	<b>80,00</b>	<b>2,33</b>	<b>0,02</b>
Fx	336,50	293,50	126,50	-0,78	0,43
<b>F/m</b>	<b>287,00</b>	<b>343,00</b>	<b>77,00</b>	<b>-2,43</b>	<b>0,02</b>

As a result the groups with high and low levels of hardiness differ most of all according to the first group of CPI scales: *Dominance, Status Ability, Sociability, Social presence, Self-acceptance, Independence, and Empathy*. As it was mentioned above, this group of scales characterizes the general social experience, the formation of social skills, confidence, balance, influence. This shows that the level of these characteristics was significantly higher for those people who have a high level of hardiness.

The significant differences between the groups of participants with different levels of hardiness were found in the second group of CPI scales for the scale *Sense of well being* (Wb)—general satisfaction with oneself and one’s life situation (a control scale). Probably general life satisfaction of people with high levels of hardiness is higher.

For the third group of CPI scales the significant differences between the participants were revealed for the scale *Intellectual efficiency* (Ie)—preference for intellectual activity and striving for it. This shows that people with higher level of hardiness are characterized by striving to intellectual activity that is also common for people with high personal maturity.

Statistically significant differences were found for the fourth group of CPI scales, which aimed to assess the interests, lifestyle or life-style personality, how they correspond to sex-role characteristics of an individual. Differences were found for the scales of psychological *mentality* (Py)—insight, desire to understand the general principles and the causes of human behavior, and *femininity—masculinity* (f/m)—the closeness of the individual behaviors of the traditional “female” (or “male”) type . According to the scale of f/m the participants with the high levels of hardiness have lower rates than the participants with low levels of hardiness. Probably people with high levels of hardiness will be characterized, most of all, by showing common behavior for the masculine type and expressing more rational traits, self-sufficiency and emotional independence than people with low hardiness. People with low hardiness are more affiliated and prone to merge and dependence, i.e. it shows the traits of an immature infantile personality.

Mann-Whitney’s criterion is used to check the hypothesis that there are differences in the levels of expression of the protective mechanisms of personality life-support among the participants with different levels of hardiness (psychosomatic level, the level of psychological defenses, coping, higher personal resources—which can also be an indicator of personal maturity). The results are shown in Table 3. The indicators, for which statistically significant differences were found, are highlighted in bold ( $p < 0,01$ ).

Table 3

**Mann-Whitney’s criterion for groups with high and low hardiness according to the test “Life-support’s locus”**

	Group 1 “Low level of hardiness”		Group 2 “High level of hardiness”		U	Z	P-level
	Rank Sum	median	Rank Sum	median			
Psychosomatic reaction	515,50	15	474,50	4	9,50	5,05	0,00000
Psychological defenses	514,50	15,5	475,50	3,5	10,50	5,03	0,00000
Coping	487,50	17	502,50	8	37,50	4,35	0,00001
Higher personal resources	373,00	13,5	617,00	13	152,0	1,46	0,14388

It was found that the indicators of psychosomatic level, the level of defenses and the level of psychological coping are significantly different. As a result the indicators

of these levels are significantly higher among the participants with low hardiness than the participants with a high level. The indicators for higher level of personal resources are not significantly different for the participants with different levels of hardiness.

People with a high level of hardiness seldom use protective and adaptive mechanisms of low levels and higher level mechanisms more often (coping and HPR). Thus, it is possible once more to observe rather the interrelation between hardiness and personal maturity. A mature personality has HPR more often than a psychosomatic response. Infantilism of personality development is shown in people who demonstrate primitive unconscious protected-adapted mechanisms.

### **Conclusion**

1. The interrelation between hardiness, personal maturity and personality life-support is complex and controversial: hardiness can be a criterion of personal maturity or a resource of life-support system, yet not equal to them.

2. The empirical research reveals the interrelation between hardiness and the characteristics of personal maturity. According to the results of correlation analysis the interrelation between hardiness and such characteristics of personal maturity are as follows: the ability to dominate and control others, sociability, empathy and striving to set goals and succeed, positive self-esteem and sense of well-being, self-acceptance, independence, intellectual efficiency.

3. There were the differences in the characteristics of personal maturity in the groups of the respondents with different levels of hardiness, which point out the interrelations between hardiness and maturity. The differences were revealed at the following CPI scales: Dominance, Status Ability, Sociability, Social presence, Self-acceptance, Independence, Empathy, Sense of well being, Intellectual efficiency, Psychological mentality, Masculinity—Femininity.

4. The differences were revealed between the groups of respondents with different levels of hardiness according to which they often have such protective and adaptive characteristics as follows: psychosomatic reaction, psychological defenses and coping. The individuals with a low level of hardiness have higher level of these defenses.

5. There were no statistically significant differences in using higher personal resources among the participants with high and low levels of hardiness.

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