Hardiness of inhabitants of the north: regional and generational factors

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Abstract. Stress factors are increasing in the modern world and the scientific community has to search for resources to ensure the effective functioning of the individual in all conditions. Numerous studies have shown that turning a traumatic situation into something positive improves physical health and well-being of the individual. They provided the foundations for the emergence of concepts which address global orientations that contribute to finding meaning and evoke positive emotions in difficult situations. Hardiness is an example of such an intrapersonal resource to cope with stress. The aim of the study was to assess the impact of regional and generational factors on the level of personality hardiness. This is a cross-sectional study comparing the level of hardiness in people grouped by the region of residence and identification with a certain generation. The type of generational identity was determined through the answers to the question “Which generation values are closer to you?”. The level of hardiness was assessed using the Russian version of the Hardiness Survey adapted by D.A. Leontiev. Multivariate analysis of variance was used for mathematical data processing. The study involved 128 participants (64 inhabitants of the Northwestern Federal district of Russia; 64 inhabitants of the Ural Federal district of Russia), of whom 64 were males and 64 were females, aged between 17 and 72. According to the generational identity, the respondents were divided into 4 groups of 32 each: post-war generation, Soviet generation, transitional generation, post-Soviet generation. The study showed that the level of personality hardiness depends on the region of residence. The joint influence of the regional and generational factors on the level of hardiness is significant. At the same time, in the Northwest Russia, the relationship between the studied variables is nonlinear (the lowest level of hardiness is observed in people identifying themselves as the post-war and post-Soviet generations), and in the Ural region it is linear (people identifying themselves as the post-war and Soviet generations have a higher level of hardiness than people identifying themselves as the transitional and Soviet generations). The results of the study have expanded the understanding of differences between generations and inhabitants of different regions of Russia.

Keywords — psychology of generations, generational identity, hardiness of generations, personality resources, the global personality attitudes.

I. INTRODUCTION

The urgency of studying the problem of stress resistance in the 21st century is explained by the growth of new threats: terrorism, economic and political crises, armed conflicts, information warfare, climate change, etc. Stress factors are increasing in the modern world and the scientific community has to search for resources to ensure the effective functioning of the individual in all conditions. Numerous studies have shown that turning a traumatic situation into something positive improves physical health and well-being of the individual [1]. They provided the foundations for the emergence of concepts which address global attitudes that contribute to finding positive meaning and evoke positive emotions in difficult situations.

In the framework of the theory of Salutogenese by A. Antonovsky, it is argued that the ability of a person to resist stress depends on the relationship between the power of stressors and resistance resources [2]. This suggests that 1) stressors are not necessarily pathogenic, 2) a person has the resources to manage stressors. In this theory, such resources include a sense of coherence (SOC) and its high level can protect a person against stress [3, 4]. It represents a global life orientation to view the world as comprehensible, manageable and meaningful. A person with a strong sense of coherence is able to manage and confront challenges both cognitively and emotionally. By contrast, a person with a low sense of coherence copes with life’s problems less effectively [4].

Nowadays, psychologists increasingly propose hardiness as a factor of stress resistance [5, 6, 7, 8]. Hardiness is defined as a system of beliefs about oneself and about the world, as well as the relationship between these beliefs. This phenomenon includes three autonomous components: dispositions of commitment, control and challenge [8]. Manifestation of the components of hardiness safeguards the body against internal pressure in stressful situations by means of hardly coping with stress and downplaying its significance [8].

The three elements of hardiness complement each other, together helping to reduce and manage the ontological anxiety associated with the future. Strong commitment means active participation in events. Manifestation of control is a conscious attitude that fighting allows one to exert influence upon the consequences of events. The challenge is
reflected in the effort to gain one’s own experience both positive or negative [5].

In the past 30 years, hardiness has been shown to provide existential courage and motivation to turn stressful circumstances from potential disasters into growth opportunities [7].

II. PROBLEM STATEMENT

The attention of researchers has always been drawn to the analysis of demographic factors that determine the level of hardiness. Despite the strikingly small number of generational studies in this context, there is empirical evidence on differences in hardiness in groups of different age, gender and region of residence.

S.R. Maddi and co-authors found that the level of hardiness was positively correlated with age. They note that hardiness as a personality characteristic is developed over time, therefore, its level may be slightly lower in younger people [9]. Studies of hardiness in adolescents have shown that age, religion, and the well-being of the family have strong correlations with hardiness [10]. Comparison of the hardiness level in groups of students and teachers proves that hardiness tends to develop with age [11]. On the other hand, in the studies of Russian psychologists the inverse relationship is established: at the age of 31-35, the level of hardiness is higher than in the older age groups [8, 12]. The authors could not reveal any differences in the level of hardiness between men and women.

Particular attention is drawn to the studies of hardiness formation in the process of professional development in law enforcement body employees. S. W. Hystad and others found no statistically significant effect of time on hardiness scores in students from 3 different Norwegian military academies [13]. The results of the study conducted by E. A. Kuasheva showed that the dynamics of hardiness in the process of professionalization is nonlinear and reaches maximum values in the second and final stages of service in the law-enforcement bodies [14].

Thus, research presents contradictory results on the relationship between hardiness and age. The nature of this relationship may be different in the period of personality formation (childhood, adolescence) and in the period of its development (youth and maturity).

It should be noted that the researchers attempt to interpret the differences found between different age groups from the perspective of the theory of generations [12]. It is necessary to recognize that age and generational groups are partly similar, though they may be significantly different since age and belonging to a generation are not always identical [15, 16, 17].

Few researchers compare the characteristics of hardiness in people living in different regions. There are studies indicating that inhabitants of Kemerovo, Petropavlovsk-Kamchatsky and Moscow do not demonstrate any differences in the level of hardiness [6]. At the same time, empirical evidence suggests that the level of control, as an element of hardiness, is lower in inhabitants of Petropavlovsk-Kamchatsky than in those of Kemerovo [6].

Comparison of the level of hardiness in groups of 30 Iranian and 30 English students revealed no significant differences [18].

Thus, previous studies suggest that hardiness in representatives of different generations will be different. In addition, these differences may be related to the region of residence. However, there is no empirical evidence for it. Comparison of different age groups leaves no confidence in the fact that hardiness is linked to a generation. The study of the relationship between hardiness and generational identity/region of residence would supplement the existing evidence and would be useful for studying the factors of hardiness formation.

III. RESEARCH METHODS

The purpose of the study is to assess the impact of regional and generational factors on the level of personality hardiness.

This is a cross-sectional study comparing the level of hardiness in people grouped by the region of residence and identification with a certain generation (Post-war generation, Soviet generation, Transitional generation, Post-Soviet generation). The type of generational identity was determined through the answers to the question "Which generation values are closer to you?". The level of hardiness assessed using the Russian version of the Hardiness Survey adapted by D.A. Leontiev. Multivariate analysis of variance is used for mathematical data processing.

The study involved 128 participants (64 inhabitants of the Northwestern Federal district of Russia; 64 inhabitants of the Ural Federal district of Russia), of whom 64 were males and 64 were females, aged between 17 and 72.

IV. FINDINGS

At the first stage of the research it was found out what generation respondents identify themselves with. Data collection continued until participants were grouped by gender, region of residence and generational identity (table 1).

<table>
<thead>
<tr>
<th>TABLE I. DISTRIBUTION OF STUDY PARTICIPANTS IDENTIFYING THEMSELVES WITH DIFFERENT GENERATIONS BY GENDER AND REGION OF RESIDENCE</th>
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<tbody>
<tr>
<td>Generation with which a person identifies himself/herself</td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td>Post-war generation</td>
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<tr>
<td>Soviet generation</td>
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<tr>
<td>Transitional generation</td>
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<tr>
<td>Post-Soviet generation</td>
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<tr>
<td>Total</td>
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</tbody>
</table>

When the equivalent groups were formed, we identified the characteristics of hardiness in the study participants who belonged to different generations and lived in different regions of Russia.

Figure 1 shows average trends for the level of commitment in participants identifying themselves with different generations and living in different regions.

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According to the data, inhabitants of the Northwest region of Russia, unlike those of the Ural region, are more convinced that involvement in the events gives the maximum chance to find something worthwhile and interesting for the individual. The results of the variance analysis (table 2) indicate that the level of respondents’ commitment is influenced by their region of residence ($F=97.2; p=0.0001$).

<table>
<thead>
<tr>
<th>Factors</th>
<th>Dependent variables</th>
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<tbody>
<tr>
<td></td>
<td>statistics</td>
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<tr>
<td>region</td>
<td>$F^*$</td>
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<td>$p^*$</td>
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<tr>
<td>generational identity</td>
<td>$F^*$</td>
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<td>joint influence of factors</td>
<td>$F^*$</td>
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<td></td>
<td>$p^*$</td>
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<tr>
<td>Levene’s Test for Equality of dispersions</td>
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<td>$p^*$</td>
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</table>

According to the data obtained, in all the studied groups the level of conviction that fighting allows to influence the events corresponds to the average norm (according to the approbation of the Russian version of the Hardiness survey [8]). Application of mathematical methods of statistics confirmed the existence of reliable interaction at a high level of statistical significance between independent variables: region of residence and generational identity ($F=4.36; p=0.006$). The differences between the groups formed in accordance with the values of these variables demonstrate the following regularity: in the Ural region, the level of control in people identifying themselves as the Transitional generation was the lowest, and in the Northwest region – the highest (figure 2).

Figure 3 shows the values that characterize the level of conviction of the study participants that any human experience contributes to the development (challenge).

According to the data obtained, this attitude at a higher rate than average is observed in people living in the Urals and identifying themselves as the Postwar and Soviet generations, as well as in representatives of the transitional generation living in the Northwest region of Russia. The results of the variance analysis showed that the variable “region of residence” has a statistically significant impact on the level of challenge ($F=13.31; p=0.0004$). The joint influence of the regional and generational factors was significant ($F=8.71; p=0.00003$) too. In general, we can say that the inhabitants of the Ural region increasingly tend to perceive the events of their lives as an opportunity to gain experience, unlike the inhabitants of the Northwest Russia.
...environment interactions [10, 19]. Result of the impact of more severe weather conditions or the...it is impossible to determine whether this regularity is the...mainly due to commitment). Inhabitants of the Northwest Russia were more hardy. Among the inhabitants of the Arkhangelsk Oblast, people who identify themselves as the Transitional generation were the most hardy. And among the inhabitants of the Ural region, representatives of the Transitional generation were the least hardy.

V. DISCUSSION

The results of the study showed that the level of hardiness and some of its elements depend on the region of residence. Inhabitants of the Northwest Russia were the most hardy (mainly due to commitment). Inhabitants of the Urals are more focused on challenge. However, according to the study, it is impossible to determine whether this regularity is the result of the impact of more severe weather conditions or the result of natural selection.

Researchers recognize that hardiness develops over time in the context of person-environment interactions [10, 19]. Some say that the roots of hardiness lie in youngsters’ early experiences and discuss the ideal conditions for its development [10]. They believe that people with a high level of hardiness frequently experienced stress and conflict in childhood [7, 10]. They make a hypothesis that stressful circumstances are linked to the response of the family and the individual [10]. Other researchers show convincing empirical evidence that hardy persons are more likely to maintain health and build a career in stressful conditions [6, 7, 20, 21]. The results of some studies confirm the idea that less hardy people tend to use exit strategies when faced with difficulties in life [22, 23].

Thus, the reason for the differences found in this study can be both more difficult living conditions of the inhabitants of the North of Russia, and the processes of natural selection of less hardy people in these conditions.

The second regularity that was found in the study relates to differences in the level of hardiness in representatives of different generations living in different regions. At the same time, the greatest differences are found between people who identify themselves as the Transitional generation. Attitudes of control and challenge in representatives of this generation in the compared regions were diametrically opposed (the maximum level was determined in this group in the representatives of the Northwest region, and the minimum level in the representatives of the Ural region). It might be the specific historical conditions of the period of Perestroika and the collapse of the USSR that were perceived differently by inhabitants of different regions of our country. The results indirectly support the idea that not only stressful circumstances in early life (such as loss, social and economic changes, war, etc.) contribute to the development of hardiness, but rather the response of the inner circle (primarily the family) and the individual to such circumstances [10].

Thus, it should be noted that the interpretation of the data has a number of limitations associated with the study design. At first, the study did not raise the question of whether the respondents were native people of the region or displaced. Secondly, the selection of samples was based on self-reports of respondents about what generation they belong to, but it does not guarantee that the individual belongs to this generation. Thirdly, the need to set equal sized groups led to a selection of respondents and a decrease in their number, which could affect the results of the study.

Despite the limitations, the study has expanded the understanding of the differences between generations and inhabitants of different regions of Russia. They are of interest to practicing psychologists and generation researchers.

VI. CONCLUSION

The results of the study allow us to draw the following conclusions:

The level of hardiness depends on the region of residence. Inhabitants of the Northwest Russia have a higher level of commitment and control over life events and a lower level of challenge in comparison with inhabitants of the Ural region. In general, the inhabitants of the Northwest region of Russia tend to be more hardy.

Regional and generational factors jointly affect the level of hardiness. At the same time, in the Northwest region, the relationship between hardiness and generational identity is nonlinear (the lowest level of hardiness is observed in people identifying themselves as the Post-war and Post-Soviet generations), and in the Ural region it is linear (people identifying themselves as the Post-war and Soviet generations have a higher level of hardiness than people identifying themselves as the Transitional and Soviet generations).

V. FUNDING

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