

# Modern Technologies of Developing Mental Hardiness: Professional Training of the Military

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## ABSTRACT

The paper dwells upon modern technologies used to develop mental hardiness in cadets of the military higher school. The research suggests that case study, computer games, virtual and augmented reality glasses and helmets, learning topography and digital maps of the possible battlefields should be effective pedagogical technologies for developing hardiness as the attitudes of commitment, control and challenge. To prevent stress-related problems, it is important to use technologies in the context of cognitive and integrated approaches through creating awareness and understanding of different scenarios of future events for developing mental hardiness of the cadets during their professional training. We also tried to investigate the level of hardiness of adjuncts and post-graduates in comparison with cadets of the military higher school. We used S. Maddi's Personal View Survey, adopted by D.A. Leontiev and E.I. Rasskazova, and measured commitment, control and challenge in the adjuncts and post-graduate students who had an online survey and the cadets who had their paper forms. 53 respondents took part in the survey. The results of the survey analysis showed that the adjuncts and post-graduate students who had a practical experience of military service in airborne troops were significantly higher in hardiness than compared to non-graduates of the higher military school. In the research, we offer to use a complex of modern technologies for developing mental hardiness in the cadets of the military school.

**Keywords:** *Modern technologies, Case study, Digital technologies, Mental hardiness, Professional training, Cadets of the military school.*

## 1. INTRODUCTION

The military occupation is highly stressed and highly risked because of the dangerous combat environment, possible death and injury, uncertainty and heavy training activities. It is true that military specialists need hardiness more than any other people do. Officers of airborne troops represent a high-reliability occupation and must possess all of the three C-s of commitment, control and challenge. Hardy attitudes motivate the military to react to stresses with effective coping. Surely, it is important to develop psychological hardiness in

cadets so that in the future they could fulfil their professional tasks effectively and remain healthy under stress. Mental hardiness makes people understand and foresee possible dangers.

The hardy approach to professional training of the military has been developing for decades. At first, it was individual differences research to stress reactions in the military context representing commitment, control and challenge [1]. Later researchers started to investigate hardy skills concerning coping, social interaction and self-care [2]. P.T. Barton, S.A. Snook, & T.R. Tremble

identified hardiness as a predictor of leadership in cadets of West Point [3]. Clarifying major stressful dimensions in modern military operations, P. T. Bartone, Ch. L. Barry, and R. E. Armstrong gave recommendations for developing mental hardiness of the military mainly through leader influence [4]. Scandinavian researches Å. G. Thomassen, S. W. Hystad, B. H. Johnsen, G. E. Johnsen, J. C. Laberg, and J. Eid investigated the influence of hardiness on mental health [5]. However, technologies of developing mental hardiness in cadets of the military school are not widely enough discussed in the research literature.

*Research question 1: Are cadets of the military school equal to officers in their level of psychological hardiness?*

*Research question 2: What modern technologies can be used for developing mental hardiness in cadets?*

## **2. METHODS AND MATERIALS**

In this research first, we used a cognitive methodological approach in investigating pathways of developing mental hardiness in future officers of the airborne troops; second, an integrative approach, suggested by I.A. Fedoseeva, L.N. Berezhnova, & R.A. Guscha for developing professional qualities in cadets of the military university [6].

### **2.1 The Theoretical Methods**

The theoretical methods include analysis, systematization and generalization of the ideas of Russian and foreign scientists on the military psychology and behavioral health, concerning issues of hardiness and reaction to stress in the military environment. We analysed the relation of attachment style to hardiness in active duty military personnel [7]; hardiness and as predictor of military enlistment among young people [8], adaptability [9] and success in military service [10]. We also studied methods of training hardiness for stress resilience [11] and methods to enhance hardiness of soldiers [12]. N.V. Volynkina, V.V. Gladkikh, & T.V. Larina describe intellectual and creative development of university cadets [13].

### **2.2 The Empirical Methods**

The empirical methods are observation of the adjuncts' and cadets educational activity in the

military school; systematization of the authors' personal practical experience in airborne troops; informal talks and interviews; questionnaire; comparative data analysis. An online survey was based on S.A. Maddi's Hardiness Survey, adapted by the Russian psychologists D.A. Leontiev and E.I. Rasskazova [14]. Quantitative data were collected through the analysis of the scores of self-assessment received from respondents, including 23 adjuncts and post-graduate students, being officers, aged 26-45 years and 30 cadets of the military school, aged 21-24 years. This sample was all male, because there are very few women in airborne troops. The research was organized by the adjuncts of Ryazan Guard Higher Airborne Command School, all having their own experience of serving in the airborne troops of Russia. The data provide the material for comparative analysis of hardiness self-assessment. The respondents had to assess different issues of hardiness.

The analysis of practical use of modern technologies in the education process of the military school made it possible to find out most effective ways for developing psychological hardiness in the cadets. We paid special attention to the technologies, which develop cognitive sphere, awareness of the situation, seeing the perspective of the mission. Among them are: case study, computer games, virtual and augmented reality glasses and helmets, and digital maps of the possible battlefield.

## **3. RESULTS AND DISCUSSION**

*Research question 1: Are cadets of the military school equal to officers in their level of psychological hardiness?*

This study used a 43-item scale for measuring personality hardiness among adjuncts, post-graduate students and cadets of the higher military school. It included items covering the three facets of commitment, control and challenge. Adjuncts and post-graduate students demonstrated excellent psychometric properties, including measures of internal consistency with respect to health and performance under stress conditions. There were participants of different age: most of the adjuncts and post-graduate students 43.5 % were of 36-40 years old, 26.1 % were of 41-45 years old and 13% were at the age of 26-30 years old ("Figure 1").

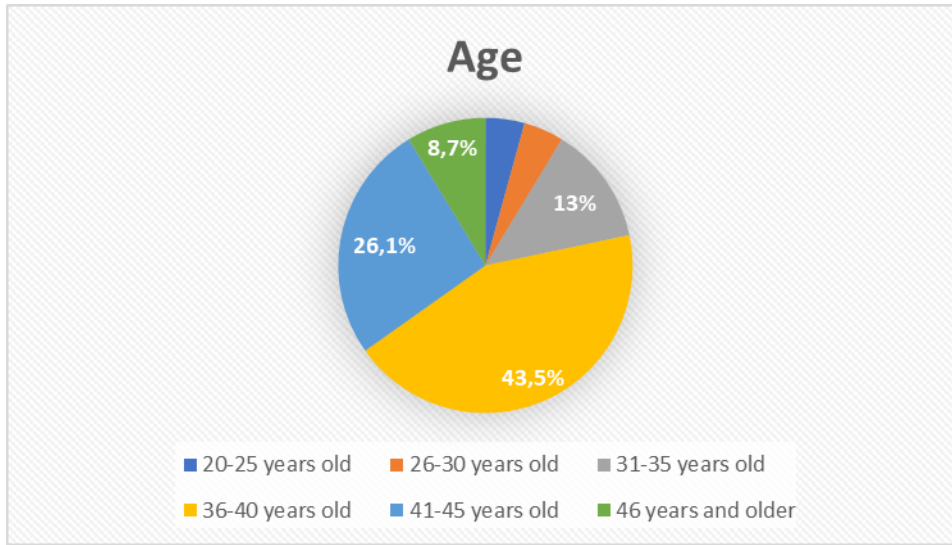


Figure 1 Age of the adjuncts and post-graduate students.

Among adjuncts there were 39.1 % (9 persons) in the rank of lieutenant colonel, 26.1 % (6 persons) - major and 8.7 % (2 persons) were captains. 26.1 % (6 persons) answered that they didn't have

any military rank at all, they were civilians teaching at the military school, being post-graduate students at the same time ("Figure 2").

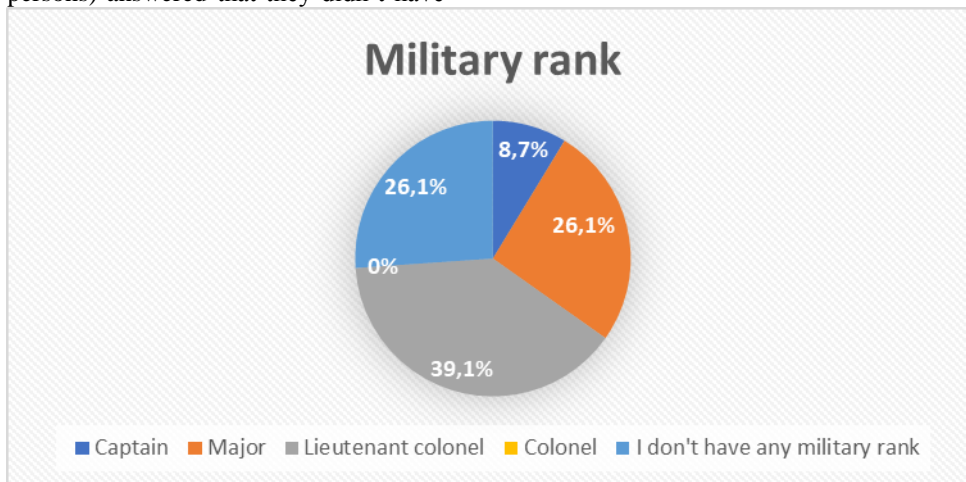


Figure 2 Military rank of the adjuncts and post-graduate students.

All of the adjuncts and post-graduate students demonstrated high interest for life ("Figure 3").

Whereas 10% (3 persons) of the cadets said that 'Life seems boring to them sometimes'.

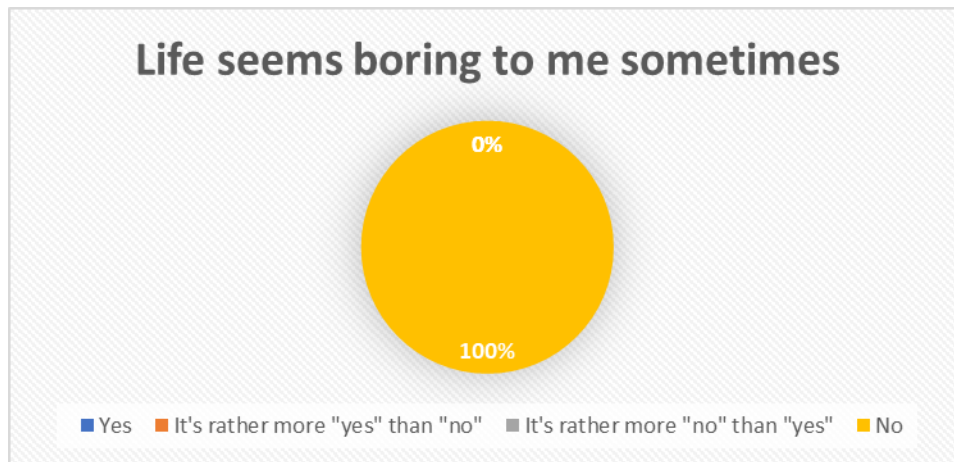


Figure 3 Interest for life among adjuncts and post-graduate students.

Practically all of the adjuncts and post-graduate students can control their situation in life as much

as they need it. 50% of the cadets (15 persons) said that they couldn't very often control their life.

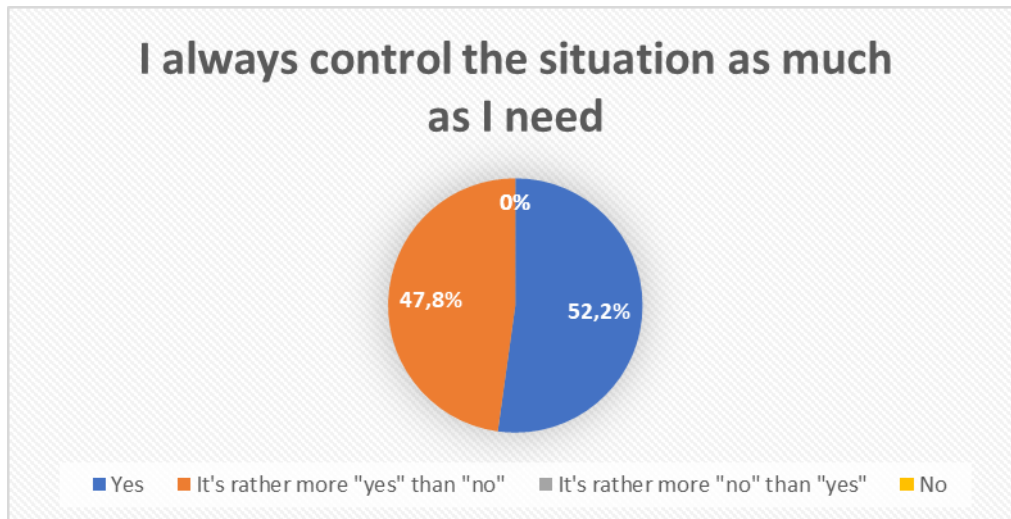


Figure 4 Self-control of the situation in life.

As for the cadets, they do not have as high sense of life as officers do, they do not always work with commitment, very often, they should have had a better feeling of control and they were more open to change and challenges in life. That is why we should use certain educational technologies to develop better psychological hardiness in the cadets of the higher military school, which are going to become officers of the airborne troops in the future.

*Research question 2:* What modern technologies can be used for developing mental hardiness in cadets?

This study found that a key point of increasing psychological hardiness involves the interpretation and the meaning of a stressful or demanding environment. To develop resilient and hardy responding to stress there should be organized

direct training by means of active and interactive educational technologies. Case study is a good example for developing mental hardiness in education process of the military higher school.

Analysing a case to develop the 3 C-s of commitment, control and challenge, cadets can work in small groups of four or five. The leader of the group may influence other members of the group to think or behave in a more hardy or resilient way. Leaders can directly influence meaning-making process. While discussing stressful situations in the military setting it is important to involve all members of the group to develop a sense of competence and self-worth for commitment; to focus the discussion on difficult cases; to break them into manageable pieces so that you could control them. The cadets are taught to

remember that challenge is a positive perspective in life, an optimistic view into the future.

While analysing a case, cadets high in the commitment attitude are willing to seek support from their groupmates and try to find different resources to deal with stress. Cadets high in control can positively influence the circumstances to fulfil the professional task. Cadets high in the challenge attitude view difficulties as good, and are willing to learn from any experience whether it is positive or negative.

In the educational space of the modern military higher school, new digital technologies are very widely used. Among them are: computer games, virtual and augmented reality glasses and helmets, simulation training systems and exercise devices for paratroopers and digital maps for learning topography. All of these modern technologies build resilience and mental hardiness in future officers of airborne troops. Due to this very valuable work, many paratroopers remain healthy and continue to perform well even in the face of stressful situations.

#### **4. CONCLUSION**

In airborne troops, demands are high and failure can be catastrophic. The data suggest that mental hardiness in the face of a long demanding military and educational experience is a key factor in successful adjustment of future officers to the difficulties of the military service. Officers high in hardiness cope better with stress and have lower rates of illness. Mental hardiness of the cadets can be trained and increased through teaching and learning in a military school. Case study, computer games and digital technologies reproducing future settings of the possible battlefields are good modern technologies for discussing the task and the content of the future military actions. Training mental hardiness is possible, but is neither quick nor easy. It emphasizes not only the necessity of discussing the content but involves shaping and structuring military leadership and organizational environment as well.

#### **AUTHORS' CONTRIBUTIONS**

V.O. Dorodnov and A.G. Ignatiev analysed, summarized and generalized ideas of Russian and foreign authors on the problem of research. P.A. Filippov conducted a survey among adjuncts and post graduate students, V.Yu. Zaprudnov organized a questionnaire for cadets, A.N. Senyukovich and A.V. Kalygin made an analysis of the received data.

L.P. Kostikova characterized modern technologies for developing mental hardiness in cadets of the military higher school.

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