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**CORRELATION BETWEEN HARDINESS AND LOCUS OF  
CONTROL IN UNIVERSITY STUDENTS**

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**Abstract**

This research seeks to find correlation between hardiness and locus of control in university students. Hardiness is an important internal resource of a person and a mindset that determines further development of an individual. Hardiness incorporates the ability to cope with any hardships of life, to overcome stresses without compromising mental health, to be involved and take risks whilst maintaining full control over the situation, to act without delegating responsibilities, etc. The theory section of this paper defines such terms as hardiness, commitment, control, challenge, and locus of control; it describes personalities that have external and internal loci of control. To find the correlation between university students' hardiness and locus of control, the research team applied the following methods: J. Rotter's locus of control scale, a questionnaire designed to determine internal, external, and optimal locus of control and its indicators applicable to achievements, failures, family relationships, workplace, interpersonal relationships, health and illnesses; S. Maddi's hardiness test as adapted by D.A. Leontiev, which was used herein to determine the subjects' hardiness and its dispositions: commitment, control, and challenge. Most respondents involved in this experimental study showcased medium to high levels of hardiness or its dispositions, whilst 10% to 13% were low in hardiness. Students mostly had internal locus of control, and only a few were able to objectively evaluate what was going on, their own attitude to it, and their view of the outcomes. This research statistically proves that a student's locus of control is linked to their hardiness.

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*Keywords:* Hardiness, commitment, control, challenge, locus of control



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## 1. Introduction

Today, people live stressful lives due to political situations, the ever increasing information flow, socioeconomic change, the environment and its ecology, the spread of COVID-19, as all these factors affect people's emotional states and mental health. Hardships of life put people under stress that might be difficult to cope with on one's own. The ability to cope with hardships and thus to prove oneself resilient to stress factors is referred to as hardiness.

The concept of hardiness was proposed by Maddi (2002), who defined it as a unique constellation of qualities, attitudes, and beliefs about oneself and the world, which enabled the person to resist stress while preserving internal balance and harmony.

In his analysis of hardiness, Frankl (2016) mentioned the stubbornness of the spirit, believing the human spirit to be stubborn despite the suffering of the body and the discord of the soul. He noted that hardiness-gifted people would remain mentally healthy and perceived the hardships of life as an opportunity rather than an obstacle. He viewed hardiness as aspiration to perfection, the ability to behave and actualize oneself independently.

In Russian psychology, hardiness was studied by Leontiev (2006). He translated "hardiness" as "zhiznestoykost", which in Russian means literally "vital resilience", a concept he defined as the extent to which a human person can overcome oneself. According to him, it is the person's ability to overcome stresses, their openness to everything new that defined hardiness.

Alexandrova (2004) classifies the dispositions of hardiness into two categories: general abilities, including the core personal mindsets, self-awareness, intelligence, relevance, and responsibility; and special abilities, including the ability to interact with people and to cope with various difficulties.

Hardiness is the one trait that shapes a person into a strong personality able to further their skills and find meaningful life orientations. Abulkhanova-Slavskaya (2017) believes that it is the display of hardiness that transforms an individual into an actor.

Analysis of approaches to the definition of hardiness produces a generalized view of hardiness as a trait of people whose behavior is consistent and steady.

In his research of hardiness, Maddi (2002) specified its three dispositions: commitment, control, and challenge. Commitment is the person's courage to remain committed regardless of the situation, however difficult it is. Alienation is the opposite of commitment.

Commitment enables the person to feel valuable and important when a difficult situation must be resolved; it enables self-actualization, which itself is an internal goal, the attainment of which satisfies the person and helps to develop (Levkova et al., 2018).

Control is a concept that implies that the outcome of a situation can always be steered even if the situation itself cannot. The state of a person deprived of control is referred to as powerlessness.

Challenge is the certitude of stress being a natural and integral part of life, a belief that each situation can be a valuable lesson. People whose personalities lack challenge are exposed to persistent sense of hopelessness.

Despite plentiful and multifaceted research, hardiness is a truly inexhaustible subject, since defining control as a disposition of hardy people, we can trace it to the locus of control.

## 2. Problem Statement

Locus of control is a concept that was first introduced by Rotter and Mulry (1965), who defined it as a human person's ability to attribute their own achievement, whether success or failure, either to oneself (internal locus of control) or to the circumstances (external locus of control).

In Russia, locus of control was studied by Bazhin et al. (1984). Researchers used such categories as psychological situation, reinforcement, value of reinforcement, behavioral potential, and expectation to describe the locus of control.

In the LoC mechanism, Rotter and Mulry (1965) identified the following connections: reinforcement establishes a specific social behavior, which in turn provides reinforcement. Lack of further reinforcement nullifies the expectation of the "action-reinforcement" flow that resulted earlier from this or that action. The "action-consequence" combination is always individual, as every person has a subjective view of the outcome of their action, which affects further events.

In this research, locus of control is analyzed from the standpoint of responsibility for, and involvement in, activities (Maslova, 2020).

## 3. Research Questions

What distinguishes people is who or what they attribute the outcomes of their own or other people's actions to. This approach classifies people into externals and internals.

Externals and internals differ in their approach to interacting with the society around them. Studies have shown that externals are more prone to psychological and psychosomatic issues.

Sujadi (2020) found a correlation between the locus of control and academic performance: internals performed better than externals. Maadal (2020) showed that males were more prone to have internal locus of control, whilst females were more likely to be externals. Alfalahi (2016) states there is a connection between the locus of control and the person's values and self-esteem.

There is no purely internal or purely external LoC, as every person has and manifests both to a varying extent.

Analysis of theory has led us to the following definition of hardiness: the ability to successfully overcome hardships and remain resilient to stress factors; locus of control was then defined as a personality trait that emerges in the process of socialization and affects the responsibility for the outcomes of one's actions.

## 4. Purpose of the Study

The goal hereof was to theoretically and experimentally establish a correlation between students' hardiness and locus of control.

## 5. Research Methods

The research sample consisted of 80 students of Sholom-Aleichem Priamursky State University, Birobidzhan. To make the sample representative, all the students were freshmen or sophomores, as their age is deemed optimal for conscious development and transformation of the discussed personality traits.

The subject matter of this research comprises such psychological categories as hardiness and locus of control.

The experimental studies were based on Julian Rotter's locus of control scale (1954) as retrieved from O.P. Eliseev's *Practicum on Personality Psychology* (Eliseev, 2017); and S. Maddi's hardiness test as adapted by Leontiev (2006).

## 6. Findings

Once the sample was found representative, and the methods were picked, we proceeded to finding the correlation between hardiness and locus of control in university students. For results, see the table 1,2, and 3 below.

**Table 1.** University students' hardiness

Dispositions	Level		
	High, %	Medium, %	Low, %
Hardiness	42.5	43.8	13.7
Commitment	38.7	48.8	12.5
Control	35.0	51.3	13.7
Challenge	33.8	50.0	16.2

Analysis of these results showed that the respondents mainly had medium commitment (48.8%) and would remain committed in any situation, always aware of what was happening while not showing much zeal in communication. 38.7% were highly committed, i.e., able to dedicate as much time and attention as they had to other people. Low commitment was found in 12.5%; these respondents felt like they were 'outsiders' and were reserved in their communications.

51.3% of the students were found to have medium level of control; they are convinced that fight and struggle would help them guide the course of action, and they would always try to take control of the situation as much as they could. 35.0% displayed high level of control; these students would always accept the situation as is and adjust their attitude towards it instead. 13.7% were powerless and unable to take the initiative, thus showing low control.

50.0% of the respondents were rated medium on the challenge scale; they were able to take risks whilst being fully aware of the advantages and disadvantages. 33.8% were high-challenge students, convinced that whatever happens, one can always take lessons from it. 16.2% were, on the other hand, low-challenge people, always anxious about external threats.

Therefore, 43.8% of the students had medium hardiness, 42.5% were high in hardiness, and 13.7% were non-hardy.

The next step was to find the locus of control, see Table 02.

**Table 2.** Loci of control in students

Locus of control metric	Level		
	Internal, %	Optimal, %	External, %
Total internality	37.5	12.5	50.0
Achievements	58.8	7.5	33.7
Failures	57.5	6.3	36.2
Family relationships	72.5	10.0	17.5
Workplace relationships	30.0	6.3	63.7
Interpersonal relationships	53.7	16.3	30.0
Health and illness	38.9	12.5	48.6

50.0% students were externals on the scale of total internality; they were unable to see the connection between their own actions and the events affecting their lives, therefore unable to control the course of events; 37.5% were internals who believed that most of the milestones of their life were the product of their own deeds, thus feeling fully responsible for it.

Internal locus of control was predominant (58.5%) with respect to achievements: these students believed whatever success they (had) had was theirs and theirs alone; 33.7% were externals, attributing their successes and achievements to luck, fate, or other external circumstances.

Internal locus of control was found in 57.5% of the respondents with respect to failures; these students tended to blame their failures, troubles, and sufferings upon themselves; external LoC was diagnosed in 36.2% of the students who would attribute the negativities and failures in their life to others.

Internal LoC prevailed in the context of family relationships, as 72.5% of the students said they were responsible for their family lives; 17.5% had external LoC, blaming every important family situation on their partners or parents; and 10.0% were able to adequately assess their family relationships.

As for workplace relationships, 63.7% were externals, attributing too much to the circumstances: the manager, the colleagues, luck or bad luck; they'd blame their own mistakes and failures upon others. On the other hand, 30% had internal locus, as they considered their own actions to be the most important factor of their work, workplace relationships, and promotion; 6.3% had optimal LoC.

As for interpersonal relationships, 53.7% were internals, as they were in control of their informal relationships with others, were able to earn respect and sympathy; external locus of control was found in 30.0% of the respondents, them being unable to actively build their own communication circles; finally, 16.3% believed they were able to influence their interpersonal relationships and control contacts with other people.

As for health and illness, most of the respondents had external locus of control (48.6%), who considered their medical status to be an element of luck and relied on other people for recovery; 38.9% were internals, as they deemed themselves responsible for their own health; 12.5% were aware of their responsibility for health but would always consult a doctor if need be.

Thus, the hardiness and LoC tests revealed correlation, see Table 03.

**Table 3.** Correlation between hardiness and locus of control

Hardiness	Locus of control metric		
	Internal	Optimal	External
High	22.9	3.7	16.3
Medium	11.3	8.7	23.8
Low	3.7	0.0	10.0

22.9% of the hardy students were internals, and 16.3% were externals.

Medium-hardiness students were mainly externals (3.8%), and 11.3% were internals.

Low-hardiness students were mainly externals (10.0%), and 3.7% were internals.

Therefore, external locus of control prevailed regardless of hardiness.

To find whether hardiness and locus of control correlated, these results were tested by factor analysis. To that end, data was processed in SPSS 17.2, and Pearson's coefficient of correlation was applied.

The returned coefficient was 0.53, showing a correlation between hardiness and locus of control in the respondents.

## 7. Conclusion

Student age is the time when many psychological traits emerge and consolidate, including hardiness and locus of control. This research also showed that hardiness test methods adapted to Russian culture were virtually non-existent, which jeopardized the research opportunities. It is also imperative to expand the concept of hardiness, to study the connection between hardiness and locus of control in depth.

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