THE MODEL OF INTERACTION BETWEEN OPTIMISM, LOCUS OF CONTROL AND HARDINESS

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Abstract

This research aimed to study the correlation between the locus of control and hardiness in case of optimistic individuals and of pessimistic individuals. Hardiness is a construct that anticipates the resistance to stress and the control on the resources required to go through exceptional situations. Locus of control indicates the modes of perception of the causes of success or failure as being internal or external, resulting from their own resources or under the influence of others. The biunique connection between the two constructs suggests that the adaptive modification of locus of control may have an effect on hardiness. The results of this research demonstrated that such relationship may be established only in case of optimistic individuals. In case of pessimistic individuals, there were no proofs of a correlation between locus of control and hardiness. According to the theoretical model resulted, meant to obtain results on hardiness, therapeutic assistance should be performed sequentially, first for the reinforcement of the disposition to optimism and, secondly, for the locus of control adaptive modification.

Keywords: optimism, pessimism, locus of control, hardiness.

1. INTRODUCTION

The personality factors of social-cognitive theory have an important role in the development of coping mechanisms, especially in crisis or unstable situations, and influence decision-making processes. Therefore, it is necessary to maintain a stable balance between such factors through self-regulation or therapeutic assistance from a specialist.

Vasiliu (2016, 2017) investigated the connections between personality constructs of social-cognitive theory, such as locus of control and hardiness, leading to the conclusion that there are significant correlations between them. Lawler and Schmied, 1992) also revealed correlations between the two factors involved in sanogenesis and Robinson (2013) researched the health risks among African Americans. In 1995, Dave Clarke published an article on the vulnerability to stress depending on age, gender, locus of control, hardiness and personality in that he

revealed significant correlations among the analyzed constructs. Research was conducted on a sample consisting of 283 students at the Massey University Albany. In 2015, Sara Keyvan Ara and Dr. Susan Imamipour, published an article that showed the correlation between locus of control and hardiness on sports performance. Kooranian, Khosravi and Esmaeli (2008) approached the phenomenon of resignation of nurses depending on the locus of control presence and on the hardiness score and the conclusion was that the two constructs correlate and are predictors of the analyzed phenomenon.

1.1. Optimism

Seligman (1992) defined the concept of "learned optimism" and thereby initiated the researches on optimism. Scheier and Carver (1992) describe the disposition to optimism as a general trend, relatively stable, in having a positive vision on the future and life experiences. Optimistic individuals assess the social and physical environment in a positive manner, invest more effort to prevent problems or to transform them, enjoy life more and have a better behaviour under stress. In contrast with the optimism is described the pessimism defined by negative expectancies on the effect of actions taken. Pessimistic individuals react to problematic situation and disappointments by renunciation, avoidance and denial. Optimism is generally associated with favourable effects. However, unwanted consequences were observed, especially in case of unrealistic or naive optimism. Optimism may correlate with negative effects under two circumstances: when it determines a passive behaviour and the positive effect is expected from luck, divinity or from a friend and under the circumstances in which, even if such circumstances cannot be changed, an optimistic person persists tenaciously to change them.

1.2. Locus of control

Julian Rotter (1966) developed the concept of locus of control; the author argues that the attitudes and beliefs regarding the causal relationship between behaviour and effect take shape as a global personality trait and relatively stable. The concept defines the way a person explains the success or failure by internal or external causes, controllable or uncontrollable (Bandura, 2006). The internal locus of control is determined by the belief that the personal power and control can influence events and that the successes derive from the skills developed and from the work carried out by the person concerned. The external locus of control is shown by the belief that personal power influences events very little or not at all, being caused more by destiny, by the power of others or by luck. Experimental researches lead to the conclusion that, in the study of stress it is necessary to include locus of control. The internal locus of control might play the role of a protective factor. Externality may be defensive or passive. Furthermore, internality may take two forms: responsible and guilt-provoking. An individual oriented towards internal locus of control show resistance to stress.

1.3. Hardiness

In 1979, Suzanne C. Kobasa introduced for the first time the concept of hardiness (Rizeanu, Vasiliu, 2016). This model refers to the resistance to stress; delimiting the individuals who remain healthy from those who develop health problems under the influence of this model. Individuals with high hardiness have better performances under stress conditions. Hardiness, as a personality trait, comprises three dispositions that operate as resources for the resistance to stress: *Commitment*, *Control* and *Challenge*. The hardiness construct was elaborated based on the results of a prospective study carried out over seven years. In more than 900 participants was noticed the dynamic of the relationship between the stress and disease incidence. Research data substantiate that certain participants remain healthy despite the intense stress due to those personality traits defined by the authors of the hardiness concept.

2. OBIECTIVES AND HYPOTHESES

2.1. OBIECTIVES

This research sought to emphasise the correlations between locus of control and hardiness on one hand and influence of optimism on them, on the other hand. The objective of the survey was to reveal a possible intervention model on the locus of control in an adaptive direction, depending on the optimism or pessimism manifested by an individual, in such a way as to obtain a hardiness improvement. The intervention model should be verified at a later stage in the experimental and clinical conditions.

2.2. HYPOTHESES

Work hypothesis: Correlation between locus of control and hardiness is influenced by the disposition to optimism.

A consequence of this hypothesis is that there is a theoretical model that explains the combined effect of optimism, locus of control and hardiness.

Verification of the practical validity of the model shall be the object of a further research.

3. METHOD

3.1. PARTICIPANTS

Data were collected from 357 participants of Bucharest and other 12 regions in Romania. The participants were selected from different social categories and aged between 18 and 80. 164 were male (46%) and 193 female (54%).

3.2. INSTRUMENTS

Locus of control was determined based on the Rotter's Locus of Control Scale (1966), a 29-item questionnaire, calibrated for the population of Romania by Băban (1998). For optimism we used the LOT-R Scale (Scheier, Carver, 1994) calibrated and validated in 1998 by Băban (1998). The scale consists of 10 items with five multiple choice answers rated from 0 to 4. For scoring are considered the following items: 1, 3, 4, 7, 9 and 10. Hardiness was assessed with DRS15 Scale, the variants with 15 items, developed by Bartone (2005), validated and calibrated for the population of Romania by Vasiliu & all. (2015).

3.3. PROCEDURE

After the training of the participants in research were applied the questionnaires in order to assess the investigated constructs (optimism, locus of control and hardiness). The participants to this research were trained to tick off only one option for each scale item and were informed that all the options are correct. The administration method for each scale was paper-and-pencil. The scales administration had no time limit. In order to determine the significant correlations (the Pearson correlation coefficient) we used the p=0.05 significance threshold.
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3.4. EXPERIMENTAL DESIGN

The experimental design chosen for this research was correlational study where „O" represents training stage, „O_1" represent the assessment of optimism, „O_2" the assessment of locus of control and „O_3" the assessment of hardiness.

R   O O_1 O_2 O_3

The questionnaires were applied to each person or to the entire group.

4. RESULTS

The processed data showed that 43 participants (12%) are pessimistic and 314 participants (88%) are optimistic. Moreover, 280 participants (78%) had an internal locus of control and 77 participants (22%) had an external locus of control. In terms of hardiness, 27 participants (7.6%) have obtained a very low score, 76 (18.8%) a low score, 143 (40%) a medium score, 96 (26.9%) a high score and 24 (6.7%) a very high score. The descriptive analysis of data showed that the distribution of the Hardiness variable is slightly asymmetrical and leptokurtic. The distribution of the Locus of control variable is almost symmetric and platykurtic. For both distributions, the symmetry and kurtosis values are very close to the values of the Gaussian normal curve (Table 1).

Table 1. Descriptive statistics of data

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Hardiness	357	14	45	31.90	5.613	-.346	.129	.070	.257
Locus of Control	357	0	22	9.29	4.016	.068	.129	-.157	.257
Level LOC	357	1	2	1.22	.412	1.388	.129	-.073	.257
Level Opt	357	1	2	1.88	.326	-2.342	.129	3.505	.257

The connection between the locus of control and hardiness has been confirmed only for the optimistic persons. The correlations were statistically significant and negative (r=-0.432, p=0.001). This means that the optimistic persons with an internal locus of control obtained higher scores for hardiness than those with an external locus of control. The association was moderate and the noticed effect was medium (r2 = 0.192), i.e. 19.2% of the hardiness variation is explained by the locus of control variation. There was no correlation found between locus of control and hardiness for the pessimistic participants (r=-0.202, p=0.195) (Table 2).

Table 2. Correlations between locus of control and hardiness

	Hardiness	Locus of Control		Hardiness	Locus of control
Hardiness	1		Hardiness	1	
Locus of Control	-.432** .000	1	Locus of Control	-.202 .195	1
Optimistic participants			Pessimistic participants		

In order to study the combined effect of the optimism and locus of control over the hardness we used the factorial variance analysis. Levene's test for homogeneity proved to be insignificant (F(3.353)=1.462, p=0.225) reason for which we used the statistical method. We found that the main effect of optimism on the hardiness (F(1.356)=55.088, p=0.001) was significant. Moreover, the main effect of the locus of control on the hardiness (F(1.356)=5.840, p=0.016) was significant. We found that between the two variables, optimism and locus of control, there is a significant interaction effect (F(1.356)=5.174, p=0.024) (Table 3).

Table 3. Effect of optimism and locus of control on hardiness

Dependent Variable: Hardiness

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2803.412[a]	3	934.471	39.219	.000
Intercept	110357.774	1	110357.774	4631.612	.000
Level_Opt	1312.594	1	1312.594	55.088	.000
Level_LOC	139.148	1	139.148	5.840	.016
Level_Opt * Level_LOC	123.292	1	123.292	5.174	.024
Error	8410.957	353	23.827		
Total	374482.000	357			
Corrected Total	11214.370	356			

a. R Squared = .250 (Adjusted R Squared = .244)

The analysis of the contrast matrices showed that the optimistic persons have obtained significantly higher scores for hardiness (M dif=6.196, p=0.001) than the pessimistic persons. Furthermore, the persons with internal locus of control have obtained significantly higher scores for hardiness (M dif=-2.017, p=0.016) than the persons with external locus of control. In all the analyzed cases, the limits of the confidence interval of 95% did not include the zero value.

We have made the graphical representation (Fig. 1) of the theoretical model we found. According to this model, for the pessimistic participants the effect that the locus of control had on the hardiness scores was almost inexistent unlike the optimistic participants where we found that the effect was statistically significant and negative.
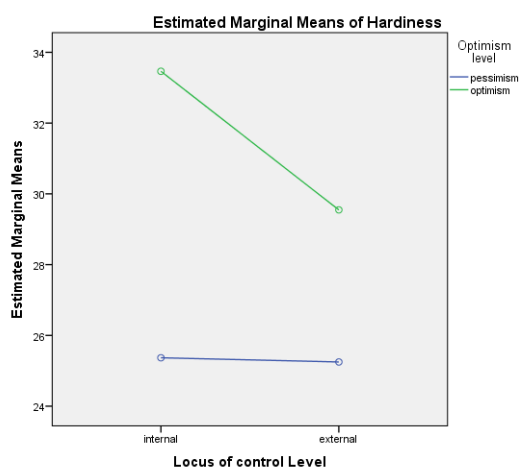

Figure 1. Combined effect of optimism and locus of control on hardiness

5. CONCLUSIONS

The statistical outcomes invalidated the null hypothesis and proved the existence of correlation between the locus of control and hardiness moderated by optimism. We have noticed that, for the pessimistic participants, the modification of the locus of control did not affect the level of hardiness. Pessimistic persons are characterized by negative expectations on the effect of the actions taken. Pessimistic persons react to problematic situations and disappointments by resignation, avoidance and negation. Changing their beliefs, in case of the external locus of control, i.e. the personal power is influencing just a little bit or not at all the events and such events are usually caused by the fortune, by the power of other people or by chance, will not lead to the modification of their attitude as regards their involvement in new actions or the acceptance of certain challenges generating new experiences. Pessimistic people will remain indifferent to the situation even if they feel that they can control it. These three general provisions which constitute the resources for an increased hardness will thus remain stable maladaptive.

As a consequence, the theoretical model suggests that the psychological intervention to change the locus of control has positive effects on hardiness only if we act in advance to strengthen the disposition to optimism. The more optimistic the person will be, the more significant will be the effect of the locus of control on the hardiness.

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