



A Study of Relationship between Locus of Control and Self-monitoring to Resilience in Students

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Abstract

A person experiences both positive and negative stress during his life, the influence of which is mainly associated with a wide range of negative consequences, such as a decrease in well-being, an increase in diseases, post-traumatic stress, anxiety and depression disorders. However, it should be noted that high stress in a person does not always develop these kinds of negative results. According to the latest researches and studies, most of the people are exposed to be stable to the stress, thus, the main factor in order to cope with the unpredictable environment, is to develop resilience (Troy&Mauss). Given that the ability to disengage from negative stimuli, including one's own negative feelings, is an important protective factor against long-term negative results, resilience represents the ability of a person to cope with life's difficulties. Resilience, as a multidimensional characteristic, varies by context, age, gender, culture, and individual life (Felicia et al. 2021). According to the contemporary approaches, resilience is a personal trait, that helps a person to adapt and cope with traumatic experience. Psychological component of resilience means that a person manages to maintain psychological health without any trauma and stressors, while, behavioral component of resilience means maintenance of self-

effectiveness and aspiration towards goals (Kamushadze, 2021). One of the components of resilience at the individual level is identified as self-control, which is an aspect of behavior control and is often viewed as willpower and the ability to control impulses. In a psychological sense, self-control refers to emotions and the initiation or modification of emotional reactions through cognitive processes. The locus of control is also considered to be a factor that has a significant influence on the formation of resilience. According to Rotter, people differ from each other according to the localization of control over events, of which 2 poles are differentiated - internal and external. Internal people believe that everything that happens in their lives depends only on their personal qualities - purposefulness, abilities and competence. While, external people strongly believe that their lives are controlled by outside forces, they think that their success or unsuccess is fault of randomness, other people and so on. Any person takes a special position on this locus of control continuum, which is created with these two poles. Considering abovementioned information, this paper aims at determining the relationship between Locus of control and self-monitoring, resilience among students. Internal-External Locus of Control Scale (I-E Scale), Self – Monitoring Scale, Brief Resilience Scale (BRS) – were used. Based on the analysis of the results, it was revealed that self-ownership is related to resilience and locus of control, and the latter is negatively related to resilience. Differences were analyzed by demographic characteristics.

Keywords: Hardiness of students; internal-external; locus of control; self-control; self-monitoring; resilience

Introduction

Self-monitoring, resilience and control of locus represents one of the significant conditions for preventing life difficulties/obstacles and problems related to psychological health. Positive reactions on changes can be connected with the skill of coping with problems, as well as level of self-monitoring, as far as they control and pay attention to their own expressive behaviors and self-presentation. Level of self-monitoring is very crucial for establishing whether the attitude defines behavior or not. Self-monitoring influences on the relationships differently. High level of self-monitoring is strongly connected with the attempt when a person tries to fit better his/her behavior with the situation (Sumbadze, et.al. 2012).

In the contemporary world, in the face of many difficult challenges, how resilient a person is becomes especially important. – how does he/she manage to adapt positively with the situation and cope with difficulties. Resilience is a human representational system about oneself, the world and the relationship with the world, which disposition comprises 3 relatively

independent components: involvement, control, taking risks (Chomakhidze, 2022).

The latest approaches comprise several directions while understanding resilience. Some of the authors consider this as a personal characteristic feature and as if it is – an “immunity” against traumatic experiences. Others see resilience as the result of overcoming a serious obstacle that acquires a functional character (Kamushadze, 2021).

Behavioral and psychological components of resilience are distinguished (Kamushadze, 2021). Psychological component implies that a person maintains psychic health and well-fare with the help of resilience; It is not necessary to have a trauma or illness to deal with difficulties and make them work. Behavioral component is directed to the person’s skill to maintain effectiveness and aspire towards goals (Kamushadze, 2021).

According to the researchers, there is a strong connection between resilience and control of locus perceived by a person. Thus, with the internal people, depression, anxiety and stress level can be much more lower. According to the researches, behaviors of the people who have internal locus, can be classified as a problem-oriented. Also, locus of control can be connected with employment and many other results, such as: satisfaction with a job, motivation and leadership. The coping process begins in response to a traumatic event, and a person's belief that their recovery process is within their control determines their readiness to begin the recovery process. Although a number of studies have described the relationship between locus control and resilience, and locus control has been found to be important in determining resilience, in-depth research in this area is still scarce (McGregor, 2018).

Control of locus is one of the integral features of self-consciousness, which connects the sense of responsibility, the willingness to be active and the sense of oneself. According to Rotter, people differ from each other with control localization on the events that are important and considerable for them. There are two poles of control localization – internal and external (Chomakhidze, 2022). In the first case, a person considers that, anything that happens in his/her life is depended on his/her personal traits – competence, purposefulness, opportunities and it is a legitimate result of his/her own activity (inner control). In the second case, a person strongly believes that his/her success or unsuccess is a result of the external forces, such as – fortune, randomness, other people and so on (external control). Any person takes a special position on a continuum of a control of locus created with these 2 poles. According to Rotter, control of locus is a special and a fundamental type of generalized hopes, as a level of understanding of the causal relationship between a person's own behavior and the achievement of the desired. A person tries to achieve and aspires towards goals and

objectives since hi/she has a generalized hope that his/her attempt will be successful. The behavior of a person who believes that he/she can control his/her own destiny is different from the behavior of a person with an external locus of control, who also believes that his/her fate depends on luck, chance, or other people (Chomakhidze, 2022).

1. Method

Research goal: To determine the relationship between locus of control and self-monitoring to resilience among students. According to the goal, Internal-External Locus of Control Scale (I-E Scale) (Sumbadze et.al.2012), Self – Monitoring Scale (Sumbadze et.al.2012), Brief Resilience Scale (BRS) (Kamushadze, 2021) – were used. Research participants evaluated statements with grades on the scales. SPSS 20 was used in order to work on the data.

Target group: Students.

Selection: Non-probability sampling methods - available sampling and snowball sampling - were used.

This research tried to answer those questions:

- Are there revealed differences on the self-monitoring research scale among students according to demographic variables (gender, age, marital status, level of education, year);
- Are there revealed differences on the research scale of locus of control with students according to demographic variables (gender, age, marital status, level of education, year);
- Are there revealed differences on the research scale of effectiveness with students according to demographic variables (gender, age, marital status, level of education, year);
- Is there a relationship between the research scales of self-monitoring, locus of control and resilience.

Hypothesis: while doing research, there were established following hypotheses

H1. Resilience rate among internal students will be higher compared to external ones;

H2. A high rate of self-monitoring among students will be associated with a high rate of resilience;

H3. Female respondents have a higher rate of externality compared to male respondents;

H4. The resilience rate for PhD students will be higher compared to undergraduate and graduate students;

H5. Female respondents will have a higher rate of self-monitoring compared to males;

H6. The resilience rate will be higher with male respondents compared to female respondents.

1.1. Participants

252 students of the higher education institution of Georgia participated in the study, 89.3% of whom were female and 10.7% were male. The average age of the respondents is 22 years ($M=22$, $SD=4.43$). 78.2% of the students involved in the study studied at the bachelor's level, 15.9% at the master's level, and 6% at the doctoral level. 14.7% of the respondents were first-year students, 40.1% were second-year students, 27.8% were third-year students, and 17.5% were fourth-year students. 88.1% of the participants were single, and 11.9% were married.

1.2. Data Collection Procedure

The survey was conducted using Google Forms platform. After introducing the main goals and objectives of the research, respondents took part in the survey voluntarily; Considering Ethical standards of the survey, anonymity was preserved. In order to avoid missing data and get complete information, it was compulsory to answer all of the questions.

1.3. Research Limitation

The main limitation of the research is the issue related to the selection of respondents. It would be better if the students of all universities in Georgia were involved in the research and it would be possible to generalize the results. The restriction is also related to the violation of the gender balance, according to which the absolute majority of the respondents were female representatives.

2. Measures

2.1. Internal-External Locus of Control Scale (I-E Scale)

The locus of control measurement scale was created by Julian Rotter (Rotter) in 1996. The scale is administered in a forced-choice format and requires respondents to select from each pair of statements A and B one statement representing an internal or external locus of control, the statement with which they agree more. The scale consists of 29 pairs of statements, of which 23 measure locus of control, and 6 pairs are supplementary statements (Sumbadze, et.al. 2012).

2.2. Self-monitoring Scale

Self-monitoring Scale was created by Mark Snyder in 1972. This scale comprises 18 statements, that are evaluated with dichotomic answers – Yes/No. According to the scale indicator, people differ from each other with

self-monitoring level – how much do they control and pay attention to their own expressive behaviors and self-presentation (Sumbadze, et.al. 2012).

2.3. Brief Resilience Scale

The six statement version of the resilience research scale (Brief Resilience Scale; Smith, Dalen, Wiggins, Tooley, Christopher & Bernard, 2008) evaluates skills of coping with difficulties. The answers are given on the 5 grade scale, where 1 = completely disagree, while 5 = completely agree (Kamushadze, 2021).

3. Data Analysis

In accordance with the purpose of the research, to determine the relationship between locus of control and self-monitoring to resilience among students, one-dimensional analysis, two-dimensional analysis, cross-tabulation analysis, one-factor ANOVA table, linear regression analysis were used to process the obtained data. Also, Pearson's correlation coefficient and X^2 were calculated.

Results

In order to establish differences on the self-monitoring research scale considering demographic features, based on the used statistic procedures, it was established that – female self-monitoring level was low – 74.7%, while – 25.3% was high level. Male ones – self-monitoring level – 33.3%, while 66.7% - high level ($X^2=.000$; $df=1$). Female self-monitoring level - $M=8.19$; $SD=3.202$; while, male - $M=11.85$; $SD=3.427$. Based on the variance analysis (ANOVA table) it was established that gender differences on the self-monitoring scale are statistically reliable ($df=1$; Mean square= 323.060; $F= 31.037$; $Sig=.000$).

On the self-monitoring research scale, 66.7% of married respondents and 70.7% of married respondents have a low level of self-ownership, while 33.3% of married respondents and 29.3% of single respondents have a high level of self-monitoring ($X^2=.407$; $df=1$). Based on variance analysis (ANOVA table) it was determined that the differences on the self-monitoring scale according to marital status are not statistically significant ($df=1$; Mean square= 1.520; $F= .130$; $Sig=.719$).

In the process of working on the data, it was found that the increasing trend of the self-monitoring index is revealed along with the increase in the level of education on the self-monitoring research scale. The average rate of self-monitoring among undergraduate students is $M=7.75$; with master level students $M=8.64$, and with PhD level students $M=10.07$. 82.5% of undergraduate students, 69.5% of master's students, and 46.7% of PhD students showed low self-monitoring. On the self-monitoring research scale,

17.5% of undergraduate students, 30.5% of master's students and 53.3% of PhD students have a high level of self-monitoring ($X^2=.032$; $df=2$).

Based on variance analysis (ANOVA table) it was determined that the differences according to the level of learning on the self-monitoring scale are statistically significant ($df=2$; Mean square=30.703; $F=2.669$; $Sig=.071$).

Based on crosstabulation analysis, it was determined that 75.7% of first-year students, 75.2% of second-year students, 67.1% of third-year students, and 59.1% of fourth-year students have a low level of self-monitoring. 24.3% of the first-year students, 24.8% of the second-year students, 32.9% of the third-year students and 40.9% of the fourth-year students who participated in the study had a high level of self-monitoring on the research scale ($X^2=.197$; $df=3$). Based on variance analysis (ANOVA table) it was revealed that the differences according to the year of study on the self-monitoring scale are not statistically significant ($df=3$; Mean square=3.375; $F=.287$; $Sig=.835$).

Based on the crosstabulation analysis, it was revealed that 63.6% of the female respondents have a low score on the locus of control scale, and 36.4% have a high score. On the mentioned scale, 74.1% of the male representatives had low and 25.9% high scores ($X^2=.280$; $df=1$). On the locus of control scale, the average score among female respondents is $M=10.67$; $SD=4.183$; while with male students, $M=9.85$; $SD=4.120$. Based on variance analysis (ANOVA table) it was determined that the differences between genders on the locus of control scale are not statistically significant ($df=1$; Mean square= 16.180; $F=.928$; $Sig=.336$). 66.7% of married respondents and 64.4% of married respondents had low locus of control. 33.3% of married students and 35.6% of single students had a high score on the mentioned scale ($X^2=.817$; $df=1$). Based on variance analysis (ANOVA table) it was determined that the differences on the locus of monitoring scale according to marital status are not statistically significant ($df=1$; Mean square=1.466 $F=.083$; $Sig=.773$). 62.4% of undergraduate students, 70.0% of master's students, and 80.0% of PhD students were found to have low scores on the locus of control scale based on crosstabulation analysis. Among the students of the same levels, 37.6% of undergraduate students, 30.0% of master's students and 20.0% of PhD students showed a high rate ($X^2=.291$; $df=2$). On the basis of variance analysis (ANOVA table) it was determined that the differences according to the learning level on the research scale of the locus of control are statistically significant ($df=2$; Mean square=56.385; $F=3.292$; $Sig=.039$). The average score on the locus of control scale with undergraduate students is $M=10.78$; $SD=4.143$; The average score for graduate students is $M=10.63$; $SD=4.068$; Meanwhile, the average score for PhD students is $M=7.73$; $SD=4.267$; 70.3% of first-year students, 60.4% of second-year students, 68.6% of third-year students, and 63.6% of fourth-year

students have a low score on the locus of control scale. 29.7% of first-year students, 39.6% of second-year students, 31.4% of third-year students and 36.4% of fourth-year students ($X^2=.614$; $df=3$) showed a high rate on the mentioned scale. The average rate of locus of control among first-year students is $M=9.03$; $SD=4.40$; with second-year students $M=10.87$; $SD=3.98$; With third year students $M=10.43$; $SD=4.44$; with fourth year students $M=11.48$; $SD=3.74$. Based on variance analysis (ANOVA table) it was determined that the differences according to the year of study on the locus of control scale are statistically significant ($df=3$; Mean square= 44.943 ; $F=2.627$; $Sig=.051$).

Based on the use of crosstabulation analysis, it was determined that 44.0% of female representatives have a low and 56.0% high rate of success, while 14.8% of male representatives have a low rate and 85.2% have a high rate ($X^2=.004$; $df=1$). On the basis of variance analysis (ANOVA table) it was determined that the gender differences on the research scale of resilience are statistically significant ($df=1$; Mean square= $.210$; $F=4.814$; $Sig=.029$).

40.7% of married students and 41.0% of single students participating in the study had a low rate of success, and 59.3% of married students and 59.0% of single students had a high rate of success ($X^2=.980$; $df=1$). Based on variance analysis (ANOVA table) it was determined that the differences on the research scale of the outcome according to the marital status are not statistically reliable ($df=1$; Mean square= $.048$; $F=1.086$; $Sig=.298$).

In the process of working on data, it was revealed that 45.2% of undergraduate students, 32.5% of master's students, and 6.7% of PhD students had a low rate of success, while 54.8% of bachelors, 67.5% of master's students, and 93.3% of doctoral students involved in the study had a high success rate ($X^2=.007$; $df=2$). On the basis of variance analysis (ANOVA table) it was determined that the differences according to the study level on the research scale of resilience are statistically significant ($df=2$; Mean square= $.252$; $F=5.905$; $Sig=.003$).

40.5% of the first-year students, 38.6% of the second-year students, 35.7% of the third-year students and 54.5% of the fourth-year students had a low rate of success, while 59.5% of the first-year students showed a high rate, 61.4% of second-year students, 64.3% of third-year students and 45.5% of fourth-year students ($X^2=.222$; $df=3$). Based on variance analysis (ANOVA table) it was determined that the differences based on the year of study on the resilience research scale are not statistically reliable ($df=3$; Mean square= $.031$; $F=.698$; $Sig=.554$).

3.1. Regression analysis

Linear regression analysis revealed that the locus of control scale explained 29% of the data variability ($R^2 = .087$; $R^2 \text{ Adj}=.064$; $B=14.663$;

$\beta=.031$; $SE=1.772$; $t=8.256$; $P=.000$). On the locus of control scale, the most important predictors were age and year of study. Locus of control has a negative relationship with self-monitoring ($B=-.038$; $P=.031$), assertiveness ($B=-4.135$; $P=.001$). The resilience research scale explains 38% of the data variability ($R^2 =.151$; $R^2 \text{ Adj}=.130$; $B=.412$; $SE=.094$; $t=4.388$; $Sig=.000$). The most important predictors on the resilience scale are self-monitoring ($B=.015$; $\beta=.242$; $SE=.004$; $t=3.857$; $Sig=.000$) and locus of control ($B= -.010$; $\beta= -.194$; $SE=.003$; $t= -3.214$; $Sig=.000$). The self-monitoring scale explained 41% of the data variability ($R^2 =.174$; $R^2 \text{ Adj}=.154$; $B=4.223$; $\beta=.031$; $SE=3.139$; $t=8.256$; $P=.006$). The most important predictors on the self-monitoring scale are resilience ($B=3.823$; $\beta=.236$; $SE=.991$; $t=3.857$; $Sig=.000$) and gender ($B=3.527$; $\beta=.320$; $SE=.662$; $t=5.324$; $Sig=.000$).

3.2. Correlation

Based on data correlation analysis (Pearson's r correlation coefficient), it was found that the relationships between the overall indicators of locus of control, self-ownership and resilience are significant (see Table N1).

1. There is a strong negative correlation between locus of control and self-monitoring ($r = -0.780$; $p < .01$)
2. There is a negative correlation between resilience and locus of control ($r = -0.242$; $p < .01$)
3. There is a positive correlation between self-monitoring and resilience ($r = 0.262$; $p < .01$).

Table 1. Correlations between locus of control, self-monitoring, and resilience

Monitoring	Locus of Control	Self-Resilience
Locus of Control	1	-,780
Self-Monitoring	-,242	1
Resilience	,262	,262
	1	

** $p \leq .01$; * $p \leq .05$; *** $p \leq .001$

Conclusion

In accordance with the aim of the paper, to determine the connection between locus of control and self-monitoring, to resilience among students, based on the processing of the received data, it was revealed that:

- The rate of self-monitoring is higher among male respondents than among female respondents, the differences are statistically reliable. Research hypothesis N5 was not confirmed.
- According to age and marital status, no statistically important differences were found on the self-monitoring research scale.
- Statistically important differences were revealed on the self-monitoring research scale according to the level of study. In the process of working on the data, it was found that the increasing trend of the self-monitoring index is revealed along with the increase in the level of education on the self-monitoring research scale. Particularly, compared to bachelors, master's students have a higher rate of self-monitoring, and PhD students have a higher rate than master's students.
- Students in the first year of study have a lower level of self-monitoring compared to the fourth year. The differences are not reliable.
- 63.6% of female respondents included in the study are internal, 36.4% are external, and 74.1% of male respondents are internal, and 25.9% are external. The differences are not statistically reliable. Hypothesis N3 of the paper, although the gender balance is violated, it can be noticed that it has been partially confirmed.
- According to marital status, a statistically unimportant difference was revealed on the locus of control scale. It should be noted that the externality with single students was revealed with a very small rate. Also, internalization with married people is slightly high.
- Level of learning is in a negative correlation with locus of control. The higher the level of learning, the lower the locus of control. 62.4% of undergraduate students, 70.0% of master's students, and 80.0% of PhD students have low locus of control - internal. The differences are statistically reliable.
- 70.3% of first year students, 60.4% of second year students, 68.6% of third year students and 63.6% of fourth year students are internal. 29.7% of first-year students, 39.6% of second-year students, 31.4% of third-year students and 36.4% of fourth-year students are external. The differences are statistically reliable.
- 56.0% of the female representatives and 85.2% of the male representatives are more resilient on the resiliency research scale. The differences are statistically reliable. Research hypothesis N6 was confirmed.
 - Statistically reliable differences were revealed on the resilience research scale according to educational level. The higher is the

educational level, the higher is the resilience level. Particularly, 54.8% of the undergraduates who were involved in the survey, 67.5% of masters and 93.3% of PhD, show high level of resilience. Research hypothesis N4 was confirmed.

- Statistically unimportant differences were revealed on the resilience research scale according to educational year. 59.5% of first-year students, 61.4% of second-year students, 64.3% of third-year students and 45.5% of fourth-year students show high level of resilience.
- A linear regression analysis revealed that the locus of control scale explained 29% of the data variability (significant predictors were resilience and an academic year); the research scale explained 38% of the data variability (significant predictors were self-monitoring; locus of control), and the self-monitoring scale explained 41% of the data variability (significant predictors – resilience and gender).
- Based on the correlative analysis, it was revealed that locus of control is negatively connected with resilience. Particularly, the less the locus of control (internality) is, the higher is resilience level; and the higher is the locus of control (externality), the lower is resilience level; As a result of processing these results, it was revealed that internal students are more resilient than external students; Hypothesis N1 was confirmed.
- Based on the correlative analysis it was revealed that students with high level of self-monitoring, also show high resilience level on the resilience research scale. Hypothesis N2 was confirmed.

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