Investigating the Relationship between Personality Traits of Tenacity and Resiliency with Academic Success at the University of Medical Sciences

Ferdos Aminoroaya Karladani

Islamic Azad University of Isfahan Khorasgan Branch, Department of Education and Psychology

Abstract: The aim of this study was to investigate the relationship between ersonality traits of tenacity and resiliency with academic success at the University of Medical Sciences Methods: This descriptive cross-sectional research. In this research, academic success is as dependent variable and two resiliency and tenacity were predictor variables. Academic achievement based on grade point average of the students in both groups over 15 (student's) and under 15 (unsuccessful) was considered. The instrument used in this study consisted of three questionnaires, the first questionnaire included mographic questionnaire and two others were Ahvaz Hardiness Inventory (AHI) of Kobasa and Connor and Davidson Resiliency Scale (CD-RIS), respectively. Results: In total samples, positive and significant for the tenacity and resiliency predicted. In fact, for every unit change in mental toughness, resiliency score changes 0.39. The study also showed resilience in successful people is higher (P = 0.027 & t = 2.32). Among the successful students, tenacity could be a significant positive predict their resilience (P <0.0001 and β=0.39). Conclusion: The findings of this study, in line with other studies in this field, first hand both personality factors hardiness and resilience proved and also show that these two traits of character are aligned with the success of students. The selection feature can be corrected at an early stage to help military organizations to engage people in these organizations which is somewhat more in touch with their academic achievement.

Keywords: toughness, resilience, academic success.

1.   STATEMENT OF PROBLEM

Since the human resource is the most valuable asset of any country, progress and cultural development, economic and social country depends on the training of experts and increase awareness among the community's scientific development (1 and 2). The main responsibility of educational systems is training human resources that is necessary for this development and the University (as the most important scientific base of training experts, knowledgeable and experienced), plays a very important role in this regard. Better educational facilities, headlines scientific, experienced faculty members and rich environment only in the mind of a dynamic, enthusiastic young people to follow the progress and development of the country. Since the effectiveness of educational systems to academic achievement is dependent learners, if the school system does not do the job it properly will hinder the growth of (3-5).

One of the basic problems of education and the educational system of each country, the issue of academic failure and low academic performance of its students. Various factors affect educational performance that educators into four categories of factors: individual, school, family and social divides. In fact, academic performance as the dependent variable influenced not a factor, but many factors, including academic aptitude, cognitive factors such as general intelligence, academic self-efficacy, self-regulation strategies, classroom structure, motivation, ability learners, teachers and learners motivation on geographic (6 and 7). The truth is that these factors and variables that are intertwined and interact with that the role and contribution of each to the possible difficulty. However, these studies show that among the factors, cognitive

and social training and personal with nature, the greatest impact on academic achievement (8). He showed people who possess great tenacity, however, a high degree of stress experienced, but they are not sick. The people are different in terms of hardiness and the stress. Another moderating personality traits that psychologists have paid special attention to it is resiliency.

Resiliency is the ability to adapt successfully threatening conditions (20). Waller (21) knows resilience and positive adjustment in response to the conditions. Although the concept was originally developed by Werner (22) was introduced in the field of developmental psychology, but gradually to other areas such as psychology, social psychology and clinical psychology entered (23). Connor and Davidson (24), who has studied resilience in the social sphere, and that resilience, not only stable against damage or threatening situations, but also active participation and individual constructive environment. Their resilience and ability to balance a person's biological-psychological is in dangerous conditions. In addition, the researchers believe that a recovery with positive outcomes emotional resiliency, emotional and cognitive (25). Campfer believed that resilience is returning to the initial balance or equilibrium level (in terms of threat) and hence provides compatibility successful in life. At the same time, he points out that the positive adjustment to life, it can be considered a consequence of resiliency and as before, they cause a higher level of resiliency. The outcome of resiliency, a number of studies to increased mental health and life satisfaction in relation to the resiliency have pointed out (26). Thus, according to the relationship between personality traits of hardiness and resilience, mental health and stress management and also due to the stressful environment of the military, the researchers reviews the relationship of these features with academic success that is directly related to mental health and stress management. According to the record of past research on personality traits of tenacity and resiliency of the relationship of these features with different components including stress, burnout, physical health, etc., with a view to the unavailability of appropriate records on the relationship between these characteristics and students' academic achievement; in this study, the researcher tries to examine the relationship between personality traits of tenacity and resiliency with their academic success.

2. METHODOLOGY

The target population is students Military Medical University (N = 100). The study population from the students of the Faculty of Medicine (Anesthesiology, clinical laboratory, operating room and medical records) Military Medical University were selected in 1394.

Random sampling was used in this study. Depending on the type of cross-sectional studies, which compare two means is analytical sample size calculation formula is as follows:

Σ value of about 2.6 has been using similar articles.

Based on this formula, the sample size for this study was 100 students.

$$n = \frac{2(z_{(1-\alpha/2)} + z_{(1+\beta)})^2 \times \sigma^2}{D^2}$$

$z_{(1-\alpha/2)} = 1.96$

$z_{(1+\beta)} = 0.85$

$d = 1$

$\sigma = 2.6$

3. INSTRUMENTS

The survey instrument in this study is three questionnaires, one consisted of demographic information and final mean scores of students in universities and 2 Questionnaires included Connor and Davidson resiliency, as well as the principle of Ahvaz hardiness scale (AHI) was owned by Kobasa.

Connor and Davidson Resilience Scale (CD-RIS): Connor and Davidson Resilience Scale for measuring resiliency (2003), (CD-RIS) was used. Connor and Davidson (CD-RIS): this questionnaire was prepared by reviewing research resources 1991-1979 in the field of resiliency. Evaluating the psychometric properties of this scale in six groups: general

population, referring to primary care, outpatient psychiatric problems in patients with generalized anxiety disorder, and two groups of patients with post-traumatic stress disorder has been done. The creators of this scale believe that the questionnaire can be resilient individuals from non-resilient well in clinical and nonclinical groups separate and can be used in research and clinical positions (Mohammadi, 2005). Connor-Davidson Resilience Scale and the 25 items on a Likert scale from zero (very bad) to five (always true) in the range of 25-125 scored. The scale in Iran by Mohammed (2005) is normalized. To determine the validity of the scale of correlation with the total score, except for items 3, coefficients between 0.41 and 0.64, respectively. The scale items were factor analyzed using principal component. Connor-Davidson Resilience Scale to determine the reliability and Cronbach's alpha was used and reliability coefficient of 0.89 (Mohammadi, 2005).

2. Hardiness Inventory: This scale developed and validated by Kiamarsi and 27 female. Accreditation criteria were used for the four tests. Cronbach's alpha coefficient for the questionnaire is 76/0. Each of the female test subjects includes never, rarely, sometimes. Scoring is based on 0,1,2,3 values which scored just the opposite. 6,7,10,13,17,27 except for articles that are negatively charged and vice versa scored for each of the four options. The principle of Ahvaz Hardiness Inventory (AHI) is owned Kobasa.

3-questionnaire-based researcher in this demographic questionnaire Students participating in this research, including name and address, place of birth, age, sex, education and GPA will be considered last. The criteria for academic achievement, academic achievement of students based on grade point average of the students in both groups over 15 (student's) and under 15 (unsuccessful) was considered (Qomri et al., 2010).

4.   DATA ANALYSIS

After a list of names, the purpose of the survey participants expressed, and then they will be put to the test research; and they will be asked to express their opinion carefully. Data are collected individually and in the Schools, the data obtained and analyzed using Pearson correlation coefficient and stepwise multiple regression analysis is placed.

Demographic Findings:

Table 1. Descriptive statistical analysis variables based on GPA

	Those with GPA higher than 15		Those with GPA lower than 15		Total	
Variables	Mean	SD	Mean	SD	Mean	SD
Resiliency	64/61	7/15	44/55	86/10	41/59	4/14
Tenacity	03/50	29/8	52/47	78/6	13/49	84/7

The findings in the framework of research hypotheses:

First hypothesis: tenacity, resiliency are able to predict, to answer this hypothesis, regression analysis method was used. The results showed that in the studied sample, a positive and significant for the tenacity and resiliency predicted. In fact, for every unit change in mental toughness, resiliency scores changes.

In order to test the hypothesis that the significance of the difference between success and failure in terms of resiliency, it distinguishes between two groups of successful and unsuccessful, by stubborn resilience in the forecast, there is a different pattern, the significant difference between successful and unsuccessful students was investigated. For this purpose, the t-test for independent samples was used. The results of this comparison is shown in Table 2. The second hypothesis: there is a significant difference between successful and unsuccessful students in the field of resilience.

Table 2. Comparison of two groups of successful and unsuccessful School of Allied Military Medical University in the field of resilience in 2016

Variables	Groups	Mean	SD	t	Sig.
Resilience	Successful students	64/61	7/15	32/12	001/0
	Unsuccessful students	44/55	86/10		

As can be seen in Table 2, resilience is more successful in patients (P = 0.027 & t = 12.32). After this comparison between the two groups to check whether the prediction by the tenacity and resiliency, there is a different pattern of relationships, two regression analyzes were performed separately for both groups. Table 3 shows the results of these analysis and regression analysis have been presented for the total sample.

The third hypothesis: there is a different pattern of relations between the two groups by the tenacity and resiliency predicted.

Table 3. Regression resilience and hardiness in total sample of successful and unsuccessful groups paramedical students Military Medical University in 2016

Groups	F	R	R2	β	t	P
Total	82/150	52/0	27/0	52/0	28/12	0001/0
Successful students	47/36	39/0	15/0	39/0	04/6	0001/0
Unsuccessful students	45/4	15/0	01/0	15/0	13/2	03/0

The above table shows that among students succeed, tenacity could positively and significantly predict their resilience (P <0.0001 and β=0.39). That for a unit change in mental toughness, resiliency score changes 0.39. About the situation on this form is unsuccessful, Positive and significant for their tenacity and resiliency predicted (P = 0.03 and β=0.15). That for a unit change in mental toughness, 0.15, the score resiliency occur. In the two groups, tenacity could predict resiliency, but the amount of indicators such as the coefficient of determination (R2) and standardized regression coefficient (ß), in two analyzes demonstrated that in successful, self-efficacy, for a stronger resilience to predict.

5. DISCUSSION

Continuous evaluation and review students' academic achievement in higher education related factors as the indispensable pillars of improving the quality of education in universities. This program better education, improve education quality and ultimately improve the efficiency of relevant authorities have great impact (68 and 69).

In this regard all over the world is what is considered the head of training and development programs, in order to predict students' academic achievement, determination of the criteria and the appropriate variables, including the major research areas that are active researchers Psychological and Educational Sciences. Many studies have been carried out in the context of predicting academic performance socioeconomic level of education, training and intelligence scores and including indicators of achievement tests. The researchers used for prediction of the future (69).

Pay special attention to students' psychological state, is not new. Mental health is essential to improve the quality of human life, is vital (WHO, 2001). Mental health characteristics of internal resources enabling internal or power connections. The ability of a person's enjoyment of these internal resources, despite the adverse conditions and negative events, to develop their adaptive increases to maintain your mental health (70). The aim of this study was to investigate the relationship between personality traits of tenacity and resiliency with the Military Medical University students' educational success. The following findings were presenting questions on introduction checked.

The results showed that toughness, resilience is a significant positive predict. This finding is consistent with existing theories and previous studies. Numerous studies have found that people with expectations of more stubbornly than those with lower efficiency, are more likely to seek appropriate solutions to problems and issues. The present research findings on the relationship between hardiness and resilience in researches by, Hajmdal, Freiburg, Stilz, Roznoing, Martinosen, Yesly, Thompson and Davidson (71), Haqiqi, Attari, Rahimi and Soleimani Nia (72), Freiburg, Barlog, Martinosen, and Roznoing (73).

These studies indicate a positive relationship between hardiness and mental health, as a source of internal resistance, reduces the negative effects of stress and physical and mental disorder prevention does. It can be said that tenacious people to deal with problems of mental stress problem solving, the way to make the experience safe, benefit and therefore the level of concern in tenacious people is low (Lowe, 74). Han (75) also believes that tenacious people succeed in the face of stress, despite the unfortunate circumstances of hope, the ability to find meaning in the experiences are disturbed by construction and his role as a valuable and important.

Among the factors that the relationship between self-efficacy and resilience can be deduced from it, the relationship between these two constructs is with coping strategies. Research has shown that high levels of resilience, with more power to deal with health risk behaviors associated (76). In this respect it is important that the relationship between tenacity and resiliency. Believe person capable of being, knowledge, attitude, behavior and function in order to use all the capacity for resilience in difficult conditions forms. Further analysis shows that both successful and unsuccessful) separately), toughness, resilience can be predicted. However, compared to the above-mentioned analysis showed that in successful students, there is a stronger relationship between hardiness and resilience. Discussions with the means to achieve this finding was not unexpected. Analysis showed that successful people are more resilient than unsuccessful people.

It is noteworthy that in the study of Besharat and colleagues (77) resiliency is considered as independent variables that explain success. The question is in research related to sports, whether this scientific activity is to strengthen the resilience and consequently leads to success in education or that resilience is influenced by other factors in academic success. These findings reveal the role of scientific activity in resiliency.

It seems to be in the areas of academic achievement, created beds that could be underlying and reinforcing components of resilience. One of resilient resources can be out networking and support.

In order to assess the real tenacity and resilience successful students, it is suggested one of the tools used in future studies of these two variables associated with progression during the study as a student. Since the study was done in the community allied health students, it is recommended that studies of this kind on students from other disciplines, especially in the medical field also done. Due to the variable being studied and tenacity in the field of psychology. To determine the effect of advances in scientific activities on tenacity, it is recommended that other research at a larger sample of students is necessary. Further research concerning the interaction between exercise and psychological factors will be helpful to each other.

Among the limitations of this study, it can be noted that control to eliminate the effects of individual differences (such as introversion / extraversion) or other possible confounding variables in studies of this study is not possible to directly and only the methods of sampling and sample matched normal population is sufficient. Therefore, it is suggested that two building resilience and tenacity in terms of academic achievement, research and experimental design to control for confounding variables studied. In addition, the absence of female students in this study, researchers' closer examination and more accurate conclusions for educational planning has partially annulled. The findings rely on self-report data from existing variables, is another limitation. Due to limitations caution in generalizing the findings and conclusions of the Report on the Results imposed is essential.

6. CONCLUSION

The findings, in line with other studies in this field, firstly to align the two personality hardiness and resilience proved and also show that these two traits of character are aligned with the success of students. The selection feature can be corrected at an early stage to help military organizations to engage people in these organizations which is somewhat more in touch with their academic achievement can be predicted.

REFERENCES

[1] Beyers W & Goossens L. Psychological separation and adjustment to university: Moderating effects of gender, age, and perceived parenting style. Journal of adolescent research.2003:18;363-382.

[2] Maddi R S, Wadha P & Haier J R. Relationship of hardiness to alcohol and drug use in adolescents.American Journal of Drug and Alcohol Abuse.2002; 22: 247–257.

[3] Masten, A. S. Ordinary magic: Resilience processes in development. American Psychologist.2001;56: 227-238.

[4] Tartasky, D. S. Hardiness: Conceptual and methodological issues. Image.2002; 25: 225-229.

[5] Werner E & Smith R S. Overcoming the odds.High risk children from birth to adulthood. Ithaca, NY: Cornell University.2001.

[6] Werner, E. Vulnerable but invincible: High risk children from birth to adulthood. Acta Paediatrica Supplement.2002; 4(22) 103-105.

[7] Kobasa S. C. Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology2000; 37: 1-11.

[8] Maddi R. S, Wadha P, & Haier J. R.. Relationship of hardiness to alcohol and drug use in adolescents. American Journal of Drug and Alcohol Abuse.1999;22: 247–257.

[9] Kobasa S. C & Puccetti M. C. Personality and social resources in stress resistance. Journal of Personality and Social Psychology.2002; 45: 839-850.

[10] Kobasa S. C. Stressful life events: An inquiry into hardiness. Journal of Personality and Social Psychology.1998;37: 1-11.

[11] Florian V, Mikulincer M & Yaubman O. Does hardiness contribute to mental health during a stressful real-life situation? The roles of appraisal and coping. Journal of Personality and Social Psychology.2005;68: 687-695.

[12] Brooks M. V. Health-related hardiness and chronic illness. Nursing Forum, 2003;38: 11-20.

[13] Inzlicht M, Aronson J, Good C & McKay L. A particular resiliency to threatening environments. Journal of Experimental Social Psychology.2006; 42: 323-336.

[14] Masten A. S.Ordinary magic: Resilience processes in development. American Psychologist.2001;56; 227-238.

[15] Florian V Mikulincer, M & Yaubman O. Does hardiness contribute to mental health during a stressful real-life situation? The roles of appraisal and coping. Journal of Personality and Social Psychology.2004; 68: 687-695.

[16] Inzlicht, M. Aronson, J. Good, C. & McKay L. A particular resiliency to threatening environments. Journal of Experimental Social Psychology.2006; 4(2): 323-336.

[17] Furnham, A & Chamoro-Premuzic, T. Personality and intelligence as predictors of statistics examination grades. Personality and Individual Differences.2008; 37: 943-955.

[18] Gange F & St Pere F. When IQ is controlled, does motivation still predict achievement? Intelligence. 2000;30: 71-100.

[19] Lubinski, D. Introduction to the special on cognitive abilities: 100 years after Spearmans (1904) 'General intelligence', objectively determined and measured. Journal of Personality and social psychology.2004;86(1): 96-111.

[20] Petrides K. V, Chamoro-Premuzic T, Frederickson N . Explaining individual differences in scholastic behavior and achievement. British Journal of Educational Psychology.2006; 75: 239-255.

[21] Vigil-Colet A & Morales-Vives F. How impulsivity is related to intelligence and academic achievement? The Spanish Journal of Psychology.2005; 8(6):199-204.

[22] Jacelon, C. S. The trait and process of resilience. Journal of Advanced Nursing.1999; 2(5): 123-129.

[23] Hilgard, E.R. and Atkinson, R.C.Introduction to psychology (13th ed.). New York: Harcourt.

[24] Goldberg D. P & Williams P. The user guide to General Health Questionnaire. Windsor: Nelson.2003.

[25] Hjemdal O ,Friborg O ,Stiles T. C,Rosenvinge J. H & Martinussen M. Resilience predicting psychiatric symptoms: A prospective study of protective factors and their role in adjustment to negative life events.Clinical Psychology and Psychotherapy.2006: 13;, 194-201.

[26] Huang, C. Hardiness and stress: A critical review. Maternal Child Nursing Journal.2007;2(3): 82-89.

[27] Inzlich M, Aronson J, Good C & McKay L. A particular resiliency to threatening environments. Journal of Experimental Social Psychology.2006:4(2); 323-336.

[28] Shkerinia I. [The role of women to develop of Islamic Iran, with focus on employed women's problems(Persian)]. Paper presented in national congress of the role of women in consistent development. Ministry of Education. Province of Yazd 2004; 47-8.

[29] Conner KM, Davidson JRT. Development of a new resilience scale: The Conner-Davidson resilience scale(CD-RISC). Depression and Anxiety 2003; 18: 76-82.

[30] Joudy C, Job Burnout. New Directions in Research andIntervention. (Psychology Department, University of California. merican psychological Society).1999.

[31] American Psychological Assosiation. (A.P.A.). Teaching Resilience, sense of purpose in schools can prevent Depression, Anxiety and Improve Grades, According to Research. University of Pennsylvania. A.P.A.2009.

[32] Beyers W & Goossens L. Psychological separation and adjustment to university: Moderating effects of gender, age, and perceived parenting style. Journal of adolescent research.2003;18:363-382.

[33] Bitsika V. Sharply C. F, Peters K. How is resilience associated with anxiety and depression? Analysis of factor score interactions within a homogeneous sample. The German Journal of Psychiatry.2010: 1(3): 9-16.

[34] Feder A, Alonso A, Tang M., Liriano W ,Warner V, Pilowsky .D., Barranco E and et al. Children of low-income depressed mothers: Psychiatric disorders and social adjustment. Depression and Anxiety. 2007:26; 513-520.

[35] Gerdes H & Mallinckrodt B. Emotional, social, and academic adjustment of college students: A longitudinal study of retention[Electronic version]. Journal of counseling development.2005: 72(3);281-288.

[36] Gomes R. Mc Laren S0. The association of avoidance coping style, and perceived Mather and farther support with anxiety/Depression among late adolescents. Applicability of resiliency models personality and Individual Differences.2006: 40; 1165-1176.

[37] Pascarella E.T & Terensini P.T.The impact of college on students: myths. Rational myths, and some other things that may not be true.Nacada journal.2005; 15:26-33.

[38] Weiten W& Lloyd MA.psycology applied to modern life. Blemont:Wadsworth-Thomson learning Inc.2003.

[39] Wolfson J. fields J H. Rose, S. A. Symptoms, temperament, Resiliency and control in Anxiety-Disordered preschool children. Journal of the American Academy of child & Adolescent psychiatry.2006: 26: 18-2.

[40] Joudy C. Job Burnout: New Directions in Research andIntervention. (Psychology Department, University of California. merican psychological Society).1999.

[41] Ali, P. A. & Naylor, P. B. Association between academic and non-academic variables and academic success of diploma nursing students in Pakistan. Nurse Education Today. In press.2009.

[42] Astin, A. W. Preventing student from dropping out. Journal of College Student. 1999;40 (3): 518-529.

[43] Friborg O, Hjemdal O, Rosenvinge O. H, Martinussen M, Aslaksen M & Flaten M. A. esilience as a moderator of pain and stress. Journal of Psychosomatic Research, 61, 213-219.

[44] Friborg O, Barlaug D, Martinussen M, Rosenvinge J. H, & Hjemdal O. Resilience in relation to personality and intelligence. International Journal of Methods in Psychiatry Research.2005; 14: 29-42.

[45] Low J. The concept of hardiness: A brief but.1999. critical commentary. Journal of Advanced Nursing, 24, 588-590.

[46] Huang, C. Hardiness and stress: A critical review.Maternal Child Nursing Journal.2001; 23: 82-89.

[47] Tugade M. M, & Fredrickson B. L. Resilient.Individuals use Positive Emotions to Bounce back from negative emotional experiences. Journal of Personality and Social Psychology.2004 ;86: 320-333.