Studying the relationship between Hardiness and Resilience Personality Traits and Academic Achievement among Students of Kashan University in 2014

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Abstract. Introduction: Mental health is regarded as a basic need and vital factor in order for enhancing the quality of life. On the basis of psychological studies, there are moderating factors among stressful events and psychological disorders that lead to the formation of different influences of stressful events on the individuals. Resilience is defined as capability of adapting to menacing situations and hardiness refers to the one of the personality traits which moderates the manner of dealing with stressful factors. These two components as an important index in the mental health of academic achievement of Kashan University students were asses and studied.

Method: The plot of this research is based on cross-sectional study. Academic achievement acts as a criterion variable and two other variables, resilience and hardiness are considered as predictor variables. The academic achievement of students is assessed based on their GPAs with 2 groups of students, with GPA above 15 (successful student) and GPA below 15 (unsuccessful student). The research instruments were 3 questionnaires, the first one was demographic survey and the latters were Kobasa's Ahvaz Hardiness Inventory and Connor- Davidson Resilience (CD-RIS).

Findings: The findings of this study are parallel with other studies in the same field, since of alignments of psychological hardiness and resilience. Furthermore, our findings proved an existence of relationship between these two personality traits and academic achievement rate of students which can contribute to selection of decent person at the initial phase of recruitment.

Keywords: Hardiness, resilience, Academic Achievement

1. INTRODUCTION

The cultural, economic and social development of every country depends on the training and nurturing of specialized human resource, scientific growth and awareness level of the people, since of the fact that, human resource is the most valuable capital of every nation (1, 2). The main prophecy of the educational system for achieving such developments is educating the required human resources and university (as a prominent scientific center for training expert, aware and experienced persons) plays an important role. The existence of proper educational facilities, valid scientific syllabus, experiences professors and enrich environment will lead to the developments of a country only if dynamic minds of active and enthusiastic youths is being utilized. Since, the performance of educational system depends on the academic achievement of learners, if educational system does not full fill its duties properly, development and growth process will be encountered with obstacles (3, 5). Academic failure and low performance of students are among the most essential issue of academic life and the educational system of every country. Those factors that affect students' performance are divided into 4 groups by education experts: individual factors, scholastic, parental and social. Indeed, education performance as a depended variable is not influenced merely by a single factor. Other factors such as academic

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talent, cognitive factors, including, general intelligence, academic self-efficacy, self-regulation strategy, classroom structure, academic motivation, capacity of learners, instructor training and leaners motivation can impact educational performance (6, 7).

In fact, those factors and variables are intertwined in a manner that it is so hard to determine their role and influence. However, related studies and reaches have proved that among mentioned factors, educational and individual factors with cognitive and social nature, have the most effect on the educational development (8). Studying any educational program in the University is replete with tension and anxious for some of male and female students. Items like new education environment and rules, different expectations from prior programs, the commence of independent life and the entrance to the adulthood which result in many new friendships and relations should be considered as a novel conditions that demands and necessitates the adoption of new strategies. Adaptability in psychology is defined as a dynamic process via which a person endeavors to establish equipoise between what he intends to do or will do and what is demanded by the society and the environment. Approaches such as positive-oriented psychological approach can impact the adaptability. During the recent years, the final objective of this approach has become mechanisms and practices. This objective is mostly focused on realization of welfare and happiness. Hence, factors that contribute a person to be more adaptable in the face of life needs and traits, are among the most fundamental research mechanisms of positive-oriented psychological approach (9). For Lotter and Chity (2000) and Masten (2001), resilience is one of these concepts and normal mechanisms. Seemingly, most of the researches that are linked to the resilience are done in the field of developmental psychology.(9-12)

The term resilience can be defined as the ability of a person to be adaptable in an effective manner to the environment, in spite of being exposed to dangerous factors. Dangerous factors are related to those situations and conditions that are associated with negative consequences and behavioral problems (Gnez and McLaren)(13,14).

In a study, it became clear that students who possess traits like seriousness and high conscience are also curious, development aspirant, diligent and assiduous in their educational activity. Such traits and characters are in comply with Kobas's definition of hardiness personality. It is worth noting that there is a positive relation between hardiness personality ad seriousness in tasks. Those persons who have high commitment, believes in the value and significance of who they are and what they do. On this basis, he/she is capable of giving a meaning to what he/she does and stimulate her/his curious feeling. Students who have high commitment, plunge into their training activities with an abundant enthusiasm and they consider this situation as the best method to achieve their training purposes. Such attitude will encourage students to educational program and consider it as an important setting and interesting situation. Therefore, they would be eager to spend much more time for it (15, 16 and 17). Mental health as a vital factor contributes to the improvement of human life. It has relation with inner empowerment and internal power sources. Any individual who possesses such internal sources will strengthen his/her ability to enhance adaptability in order to preserve his/her mental health, in spite of adverse conditions and negative events. A wide range of studies is focused on cognitive hardiness, since it operates as a mechanism of a personality traits and it plays an important role in moderating consequences that are due to the stress. Scientists of social sciences and philosophers based on their years of research upon many participants, have faced with persons who due to their certain personality traits were more successful in adapting to an unpleasant situation (8). The concept of hardiness personality was introduced by Kobasa and he has studied it as a confounding variable for moderating the connection between stress and illness (19).

The Human being has always felt unsheltered and helpless in the face of unfavorable conditions, dangers and adversities and in the most of the cases he has attempted to tolerate such an

unpleasant situation and this measure has led to unexpected results. The ability of performing this common magic is known in the social sciences as a flexibility or resilience.

In social sciences, resilience is considered as action and reaction of persons against adversities (20). Resilience can be defined as a capability of successful adaptation to the menacing conditions (21). Waler pigeonhole resilience as a positive adaptability of a person to an unpleasant situation (22). Although, the concept of resilience was initially introduced by Werner in the field of developmental psychology, but it was used in other branches of psychology such as social psychology and clinical psychology (23). Connor and Davidson (24) has studied on resilience in social fields and they believe that resilience is not merely confined to the durability against damages or threatening conditions, but it also includes active and constructive engagement in an external environment. They define resilience as an individual ability for establishing mental-life balance in the hazardous situations and conditions.

In addition, it is deemed by scholars that resilience is an instance of self-restoration along with positive emotional and cognitive consequences (25). According to the Kampfer, resilience refers to the recursion to the primary balance or achieving a higher level (in threatening conditions), so it leads to the creation of successful adaptability in life. Moreover, he also points out that positive adaptability to life can be counted as a result of resilience and as a harbinger it leads to a higher level of resilience. A certain number of researches have focused on the output of resilience such as mental health augmentation and life satisfaction (26). With regard to the relation of the hardiness and resilience personality traits with mental health, stress control and stressful environment of universities, the author intends to investigate the relationship of these traits and mental health with academic achievement, as the academic achievement is directly linked to the mental health and stress management.

With reference to the literature review of prior studies in the field of resilience and hardiness personality traits and investigation of relationship between these traits and different elements like stress, burn out and physical and mental health etc. and unavailability of proper literature linked to the paper topic, author aims at studying the relationship of resilience and hardiness personality traits with academic achievement and filling the gap between the literature on this relationship.

2. METHODOLOGY

The method of this study is based on cross-sectional study principles and students of Kashan University in the academic year 2014/15 were statistical population of the research. Among the participants, 100 students were selected as the sample via simple random sampling method. The dependent variables were academic achievement, hardiness, and resilience and personality traits. The instruments for collecting data were as followings:

The first questionnaire included items on demographic information and the latest GPA of students. Their scale of achievement on the basis of their GPAs was divided into 2 groups. The first group of GPAs were higher than 15 (successful student) and the latter was lower than 15 (unsuccessful student) (26).

The second instrument was Connor and Davidson questionnaire on resilience. They developed this questionnaire by revising the research sources of the resilience (1979-199). The psychometrics evaluation of this scale is done among 6 categories, including: general population (GP), visitors of primary health care, psychological outpatients, patients suffering from Generalized Anxiety Disorders (GAD) and two groups of patients suffering from post-traumatic stress disorder (PTSD). The developers of this scale believe that the questionnaire is capable of identifying resilience and impatient within clinical and non-clinical groups and it can be utilized as research and clinical situations (23). This questionnaire is consisted of 25 items which are

graded on a Likert scale between 0 (absolutely incorrect) to 5 (always correct) with a domain of 25 to 125. The scales were normalized by Iranian scholar, called Mohammadi (2005). The validity of the scale was determined via correlation of each score with a total score except for item 3; coefficient was variable from 0.41 to 0.64. Then, factor analysis was applied on the items of scale via principal component analysis (PCA). The reliability of Connor-Davidson scale of hardiness was determined via Cronbach's Alpha and it was equal to 0.89 (27).

The third instrument of the research was Ahvaz Hardiness Inventory. This scale is provided and validated by Kiumarsi which includes 27 items. Its validity was evaluated via four criteria test. The value of Cronbach's Alpha coefficient for this instrument is equal to 0.76. Participants can answer the each item of the survey by choosing never, seldom, sometimes and often, these choices were scored with 0, 1, 2 and 3, respectively. The method of scoring for all items except for items of 6, 7, 10, 13, 17 and 22 which have negative load is inverse.

3. FINDINGS

This study was done in order to investigate the association of the hardiness and resilience personality traits with the academic achievement of Kashan University, our sample was 100 students of different faculties of the university. The 50 percent of the respondents were male and 50 percent were female. The average age of the participants was 20.56 with a standard deviation of 1.65. The GPA of 59 students was higher than 15 and these students were regarded as successful students and GPA of 41 students were lower than 15 and they were regarded as unsuccessful students (Diagram 1).

Diagram 1. The frequency of successful and unsuccessful student.

Table 1. Descriptive index of research variables according to GPA.

Variables	Students with GPA above 15	Students with GPA below 15	Total			
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Resilience	63.70	13.2	54.33	11.72	59.015	12.46
Hardiness	53.05	6.39	45.36	6.94	49.43	6.66

Results showed that hardiness is able to predict resilience in positive and significant manner. Indeed, one unit change of the score value of hardiness leads to change of resilience score.

In order to test the hypothesis of *if the difference between two groups of successful and unsuccessful on resiliency is significant, then is there a different pattern for predicting resilience via hardiness with categorizing two groups in terms of their success,* we initially checked the existence of significant difference between successful and unsuccessful students. So that, t test (hypothesis test) was used for independent groups. The results of this comparison are presented in table 2.

Table 2. Comparing two groups of Kashan University students in terms of their success from a resilience perspective in 2014.

Variables	Groups	Mean	Standard Deviation	T value	Significance Level
Resilience	Successful Students	63.70	13.2	11.41	0.001
	Unsuccessful Students	54.33	11.72		

According to the table 2, it is clear that the resiliency rate of successful students is more than unsuccessful students (P= 0.02 and t=11.41). After this comparison, regression analysis for two groups was performed separately, in order to investigate the existence of different pattern of prediction of resiliency via hardiness between two groups.

With regard to the results, it can be inferred that among successful students hardiness can predict resilience of students in a positive and significant manner (p<0.0001 and β=0.34). That is, one unit change of hardiness score leads to 0.34 change o resiliency. For successful students, hardiness predicts resiliency in positive and significant manner (P=0.02, β=0.14). To put it simply, one nit change of hardiness score causes 0.14 change of resilience score. To wrap it up, in both groups of students, hardiness is capable of predicting resilience. However, our studies on the values of determination coefficient (R^2) and regression standard coefficient (ß) in both analyses imply the high capability of self-efficacy in successful student in the prediction of resilience.

4. DISCUSSION

Continuous evaluation of education status of students during the educational program and investigation of associated factors to it, are regarded as an important and inevitable pillar of educational system quality enhancement and these factors have considerable effect on the better codification and finally on the modification of authorities performance betterment (28, 29). A Bulky amount of research has been done in the field of predicting educational performance and indexes of economic, social status, educational level, training and scores of development test and intelligence are used by scholars to prognosticate the status of a person in the future (30).

Mental health should be counted as a vital and basic requirement for life quality enhancement (2001WHO). There is a relationship between mental health and inner empowerment features or internal power sources. Having these internal resources can increase the individual ability in order for constructive personal growth, which leads to preserve and protection of personal mental health despite traumatic conditions. The purpose of this paper is to investigate the relationship of the hardiness and resilience personality traits with the academic achievement of Kashan University students.

In line with the results of analyses, the hardiness is the significant and positive predictor of resilience. These findings are in the same direction with the theories and studies. In the most of the researches, it becomes clear that the individual high in hardiness and tenacity in comparison to persons low in efficiency are more avid to find the solution of problems. The findings of this article about the relationship between cognitive hardiness and resilience were in accordance with the research results of Hajmadal, Friberg, Setilez, Rozning, Mattinsun, Yesly, Thampson, Davidson (32), Haghighi, Atari, Soleimani nia and Barlog (34).

These scholars and their researches indicate that there is a positive relation between hardiness and mental health and as a resistance source, it decreases the negative effects of stress and prevents the outbreak of mental and physical disorders.

It can be said that a tough person utilizes an active problem solving method in dealing with problems. That is, the alteration of stress into safe experience. Therefore, the level of anxiety in a tough person within stressful condition is so low (35). Laver and Hung state that a tough person can identify meaning in a chaotic experiences when facing successfully with stress

despite the possibility of adversities. Such a person believes in his roles as a valuable person (36).

One of the factors from which the relationship between self-efficacy and resilience can be derived is the association of these two mechanisms with coping strategies. Previous researches have shown that high levels of hardiness are associated with high ability of coping with dangerous behaviors for health (37). Their analyses indicate that in both successful and unsuccessful groups hardiness has the capacity of predicting the resilience. But, the comparison of these analyses implies the existence of a powerful relation between hardiness and resilience in successful students. So, a successful person is more resilience than unsuccessful person. It is worth stating that Besharat et al (38) has considered resilience as an independent variable which explains the success. Finding of current research revealed the scientific role of resilience.

It seems that authorities and experts can create beds which provide grounds and amplification for resilience. Communicative and supportive networks can be the sources of resilience.

The findings of this survey were in the same line as the other studies, first in terms of proving alignment of cognitive hardiness and resilience personality traits, second in terms of correlation between these two traits and achievement rate of students which can be used as a metric during the initial phase of recruitment.

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