

# The Relationship Between Personality Characteristics Hardiness and Resiliency with the Academic Success of Operating Room Students

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## To cite this article:

Imani Behzad, Mosavi Nilofar. The Relationship Between Personality Characteristics Hardiness and Resiliency with the Academic Success of Operating Room Students. *Higher Education Research*. Vol. 4, No. 6, 2019, pp. 83-86. doi: 10.11648/j.her.20190406.12

**Received:** September 17, 2019; **Accepted:** September 29, 2019; **Published:** December 16, 2019

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**Abstract:** Resiliency and hardiness can be mentioned in the characteristics of personality that psychologists have paid special attention to and which is referred to as indicators of mental health and quality of life. This is study cross-sectional descriptive-correlation study. The samples were undergraduate students in 2019. The findings showed a significant correlation between resilience and hardiness according to Pearson correlation coefficient. Also, there was a positive and significant relationship between hardiness and academic success. On the other hand, there was a positive and significant relationship between resilience and Academic Success and between resiliency and hardiness with There was a significant relationship between Academic Success.

**Keywords:** Hardiness, Resilience, Academic Success, Operating Room, Student

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## 1. Introduction

Resilience is in fact the ability to overcome difficulties and overcome living conditions [1], and provides adaptation to a high level of balance in the threatening conditions of successful adaptation. Positive can be both a consequence of resilience and, as a precursor, a higher level of resilience [2]. Normal is able to think creatively and flexibly about problem-solving, meaning that he or she needs help from others when it is needed and is capable of solving problems for himself or herself. Resilient show a degree of health and independence. They are able to think and practice it, they can pass on their critical views to others, they have good feelings for those around them, and they believe in their ability to change their environment [3].

Thus, resiliency also involves positive change or growth, in addition to adaptation or problem-solving. Although some resilience-related traits are biologically and genetically determined, resilience skills can be taught and strengthened [4]. Resilience capacity is essential to succeed in the job [5], and in order to deal with occupational problems and mental

health, individuals must skillfully develop resilience to overcome negative experiences and even bring those experiences into positive experiences [6, 7]. People with high levels of psychological stubbornness do not perceive stressful job situations as stressful, so these challenges do not necessarily lead to stress and depression [8].

Due to their high self-esteem, stubborn individuals tend to emphasize positive events rather than negative events and increased stubbornness increases social self-esteem [9]. Bonanno (2015) identifies ways to gain resilience through hardiness, self-healing, suppressive coping, temperament, and positive emotions [10]. Resilience is a sign of resilience, which means how productive people are in difficult situations. People with high resilience are able to struggle and cope effectively in the face of stressful adverse events and events. Continue to succeed by going through the difficult stages of life [11]. Factors affecting multidimensional academic success are closely related to students' social, political, cultural, cognitive, and emotional development. Many scholars emphasize the influence of mental and cognitive abilities on Academic Success, but it should be noted that not

only mental abilities affect Academic Success but also other factors [12].

On the other hand, students' academic success is one of the most important indicators in evaluating the higher education system, and all of its efforts and efforts are to cover it. In other words, society, and in particular higher education, is concerned and concerned about a person's destiny, successful development and position in society, and expects the individual in various aspects, including cognitive, skill, ability, and dimensions. His personality, emotions, and behavior, as they should, develop and excel [13]. Psychological capital is very important for college students, which can be considered as one of the most important elements of the higher education system, and if they have psychological capital, learning will be better and students will perform better [14].

## 2. Materials and Methods

This research was a descriptive-correlational cross-sectional study that the researcher after sampling the research by the university ethics committee and obtaining the code of ethics sampled and conducted the research. At the time of the study, they were attending the Paramedical Faculty of Hamadan University of Medical Sciences and teaching hospitals for an internship; Data were collected through two questionnaires of Ahvaz Psychological Hardiness Questionnaire and Conor and Davidson Resiliency. The Ahvaz Psychological Hardiness Questionnaire consisted of 27 items that were used to rate this questionnaire: (Never = 0 Rarely = 1 Sometimes = 2 Often = 3) Except for Articles 21, 17, 13, 10, 7, 6 were negative and scored in reverse. The range of scores ranged from 0 to 81. The high score on the Hardiness Questionnaire indicates high psychological hardiness in the individual. Conor & Davidson Resilience Scale consisted of 25 items that were used to score a 5-point

Likert scale (completely false = 0 rarely = 1 sometimes true = 2 often true = 3 always true = 4). To determine the validity of this scale, the first correlation of each score with the total score except for item 3 showed coefficients between 0.41-0.64 and Cronbach's alpha method was used to determine the reliability. The reliability coefficient was 0.89. The criterion of Academic Success in this study was based on the mean score of students in two groups with an average score of 17 and above (successful students) and under 17 (unsuccessful students). Data were analyzed using the Pearson correlation coefficient, linear regression analysis, and ANOVA and SPSS software version 23.

## 3. Findings

In this study, 103 undergraduate students of Hamadan University of Medical Sciences participated, 57 (55%) were female and 46 (45%) were male. Most of the subjects were 21-24 years (71%). 11 (11%) were married and 92 (89%) were single. Most of the respondents were Shiites (96%) and most of them had family members of 4 and less (53%). Most of the subjects were in a dormitory (45%). Also, most of the subjects were in the fifth semester (38%).

On the other hand, there was a significant relationship between hardiness with demographic information such as marital status, residence, and semester, but there was no significant relationship between hardiness with gender, age, religion and number of family members. Also, there was a significant relationship between resilience and demographic information (marital status, residence, and semester) but no significant relationship between resilience with gender, age, religion and number of family members. There was a significant relationship between residence and semester, but there was no significant relationship between Academic Success, religion, and the number of family members (Table 1).

**Table 1.** Pearson's correlation coefficient test between demographic information with hardiness, resilience, and Academic Success.

Variable statistics	Academic Success	resilience	hardiness
Gender	r=-0/751 p= 0/029	r= 0/103 p= 0/973	r=-0/123 p= 0/817
Age	r=-0/118 p= 0/237	r= 0/088 p= 0/379	r=0/145 p= 0/654
Marital status	r= 0/732 p=0/045	r= 0/743 p= 0/038	r=0/759 p=0/046
Religion	r=-0/743 p= 0/149	r=-0/119 p= 0/851	r= 0/571 p= 0/447
Number of family members	r=-0/143 p= 0/148	r=-0/123 p= 0/979	r= 0/119 p=0/928
semester	r=-0/708 p= 0/027	r= 0/830 p= 0/019	r= 0/748 p= 0/027

The results also showed a significant positive relationship between students' hardiness and Academic Success ( $r = 0.864$ ,  $p < 0.001$ ) (Table 2).

**Table 2.** Pearson correlation coefficient test between hardiness and Academic Success.

Variable statistics	Pearson correlation coefficient	The significance level
Academic Success Hardiness	r=0/864	P< 0/001

On the one hand, there is a positive and significant relationship between resiliency of students with their Academic Success ( $r = 0.78$ ,  $p < 0.001$ ) (Table 3).

**Table 3.** Pearson correlation coefficient test between resilience and Academic Success.

Variable statistics	Pearson correlation coefficient	The significance level
Academic Success Resilience	$r=0/78$	$P< 0/001$

According to the findings, there was a significant relationship between hardiness and resilience of students with their Academic Success ( $p = 0.001$ ) (Table 4).

**Table 4.** Linear Regression Coefficient Test and ANOVA Test for Hardiness and Resilience with Academic Success.

Variable statistics	Linear Regression Coefficient (ANOVA)	The significance level
Hardiness Resilience Academic Success	$F=28/8$	$P=0/001$

Results also showed a significant relationship between students' hardiness and their resilience ( $p = 0.001$ ) (Table 5).

**Table 5.** Pearson correlation coefficient test between hardiness and resilience.

Variable statistics	Pearson correlation coefficient	The significance level
Hardiness Resilience	$r=0/845$	$P=0/001$

## 4. Discussion

The average student resilience score was 63.66, which indicates high student resilience. Also, the mean score of the stubbornness of the students was 50.49, which is also a factor for students. Similarly, in the study of Abrishamkesh et al. (2016), which is the relationship between psychological hardiness and resilience with mental health in pre-hospital emergency technicians in Guilan province, the mean resilience score was 27.55 and the mean resilience score was 78.15. This has been shown to reflect the high resilience and low hardiness of pre-hospital emergency technicians, which is inconsistent with the results of this study [15]. In Yazdani's (2012) study, which examines the relationship between hardiness and fitness characteristics with Academic Success in Army Medical University students in 2012, the mean resiliency score was 41.59 and the mean toughness score was 13.49. There is a high degree of resilience and hardiness of the students that are in line with the results of this study [16]. There was a significant relationship between resilience and hardiness according to Pearson correlation coefficient ( $p=0.001$ ). In this regard, Mirzamohammadi et al. (2016) in their study, which is related to parenting styles and psychological hardiness with resilience in students, showed that the relationship between resilience rate of Kermanshah girls' high schools and students Their psychological hardiness is direct and significant ( $p$ -value  $<0/01$  which is consistent with the results of this study [17]. Also in the study of Georgoulas-Sherry and Kelly (2019), Resilience, Resistance and Hardiness: Define the relationships between these structures through structural equation modeling techniques based on a sample of 1205 from the US Military Academy. Show the resilience, strength, and hardiness was positively

correlated ( $p < 0/001$ ), which is consistent with the results of this study [18].

According to Pearson correlation test, there is a positive and significant relationship between hardiness and Academic Success ( $r = 0.64$ ) ( $p < 0/001$  in the Norouzi et al. (2016) study, which was predicted by head perception difficulty). Success and emotion regulation in martial athletes is good. Results show that there is a relationship between hardiness with perception of success ( $r = 0.22$ ), reappraisal ( $r = -0.44$ ) and depression ( $r = -0/50$ ). There is a significant and increasing perception of athletic success that increases athletes' stubbornness [19]. Also, according to Pearson correlation test, there is a positive and significant relationship between resilience and Academic Success ( $r = 0.78$ ),  $p < 0/001$  (in the study of Akbarilakeh et al. (2017), which is the relation of resilience to Academic Success in dental students of Shahid Beheshti University of Medical Sciences, 2015-95, between resilience score and basic science score as a criterion for Academic Success. A significant positive and direct correlation was observed ( $P < 0/001$ ,  $OR = 14$ ), which is in agreement with the results of this study [20]. There is a significant relationship ( $p = 0.001$ ) with Academic Success that Rostami et al. (2015) in their research titled the relationship between hardiness, resilience, and burnout among network health workers. There is no significant relationship between resilience and stubbornness with lack of personal success ( $r = 0.087$ ), which is in agreement with the results of this study [21].

## 5. Conclusion

The two personality traits of hardiness and resilience in enhancing students' academic achievement in this study are quite evident. The greater the resilience and tenacity of the

students, the greater the academic success of the students. So what's important is that by increasing resiliency skills, you can increase students' academic success. At the same time, by enhancing the hardiness of the features, the educational capabilities can be increased.

## Conflict of Interest

There is no conflict of interest among the authors.

## Acknowledgements

We are grateful to the Vice-Chancellor for Research and Technology of Hamadan University of Medical Sciences, which supported the research project of this study with the Code of Ethics (IR.UMSHA.REC.1397.442).

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