



Resilience, coping strategies, and social support: important predictors of students' vulnerability to stress

Reza Davarniya¹, Mohammad Shakarami², Kianoush ZahraKar¹

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Brief Article

1. Department of Counseling, Faculty of Psychology and Educational Sciences, Kharazmi University, Tehran, Iran
2. **Correspondence to:** Department of Counseling, Faculty of Psychology and Educational Sciences, University of Isfahan, Isfahan, Iran
Email: m_shakarami@yahoo.com

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Abstract

Stress is a type of person-environment relationship which is appraised by the individual as stressful or beyond one's own resources and, as a results, threatens the individual's wellbeing and welfare. The aim of the present study was to investigate the variables of resilience, coping strategies, and social support as predictors of vulnerability to stress among students. The participants consisted of 375 university students who were selected by multistage cluster sampling method. The stress syndrome scale, checklist of coping skills, adult resilience inventory, and social support Appraisal scale were used to collect data. Data analysis was performed in SPSS-18 using simultaneous multiple regression analysis. Results suggested that the variables of resilience, social support, and coping strategies could predict 50.3% of the variance of vulnerability to stress. The variables of resilience, social support, and coping strategies can predict vulnerability to stress, and making changes in these factors can be effective in reducing vulnerability of people in face of stress.

Keywords: Resilience, Stress, Social Support

Introduction

Stress is resulted from a specific event, condition or a transition/development period, which threatens the individual in an indirect or direct way and calls for coping responses [1]. It has been established that resilience has a positive considerable effect on adjustment with university and reducing stress, as the same as coping that is also related to adjustment with university [2]. Connor defines resilience as a method to measure ability to cope with stress, which extends over time and a method to measure emotional stamina [3]. Research on the relationships between stressful events and scales of adaptive status (for example physical health and psychological symptoms) reflects this idea that this relationship is mediated by coping strategies. These coping

processes are likely to be stable between different stressful events in a balanced manner, and they affect the adjustment consequences in long-term [4]. Strategies are generally viewed as mediator variables; they are summoned when experiencing a stressful event, and they partially or completely explain the relationship between a stressful event and its consequence [5]. In conceptualization of coping, Folkman and Lazarus have proposed a discrimination between problem-focused coping and emotion-focused coping. Problem-focused attempts are done towards changing the stressful situation, and they are in a way directed towards handling stressful factors for the purpose of decreasing or eliminating its distressful quality, while

emotion-focused attempts are directed towards changing emotional reactions to stressful factors; that is, they emphasize inhibiting the emotional responses and physiological arousal for the purpose of reducing the psychological pressure [6].

Another source available for individuals when coping with stressors is social support, which works by affecting the individual's evaluation of the stressor, awareness of coping strategies and the individual's self-concept. Social support is a protection and assistance, which is provided for the individual by other people. It can be physical, instrumental, material, or emotional and it is provided by social network [7]. The investigation of Langford clearly shows that increasing social support can provide a shield against psychological distresses and helps maintain physical/psychological well-being. It can also exert an immediate direct effect on the person's ability to cope with stressors through received control, positive control, positive emotion, sense of stability, and self-recognition, and it is accompanied by positive consequences in mental health through successful encountering with stress, low degrees of depression symptoms, milder temperament, lower stress, reduced loneliness, and more positive self-image [8].

Since stress is greatly effective in daily behaviors and functions and person's failure in its management leads to disturbance in these functions, and since no regression research has been conducted to investigate the relationships of these variables with each other concurrently, therefore, the present research was conducted aiming at investigating the variables of resilience, coping strategies and social support as predictive factors of stress vulnerability among university students.

Methods

The present research was a descriptive-correlational study. The research population included all the students of Kharazmi, Azad, and Payam-e-Noor universities of Karaj, North of Iran, in the academic year 2012-2013, which includes over 50000 individuals. The sample

size, based on sample size estimation formula with a precision level of $d=0.05$, confidence level of 95%, and population size of $N=50000$, was calculated to be 382 participants. The sampling was conducted based on multi-stage cluster sampling method. In this method, three faculties from each university were selected by random sampling and among the students of the faculties, 50 participants were given 50 questionnaires to complete (totally 450 questionnaires). Some questionnaires, which were not completed fully or were defaced, were excluded and totally 375 questionnaires remained to be analyzed. In the present research, the data analysis was conducted through Pearson correlation analysis and multiple concurrent regression method (in <0.01 significance level) in SPSS-18. Adult Resilience Scale (ARS) was used for assessing resilience levels. This scale, which was developed by Fryberg and colleagues [9], consists of 43 items with 5 subscales including personal component or individual abilities, social component or social abilities, social support, family cohesion, and personality structure. In the present research, the Cronbach's alpha coefficients for subscales of personal component or individual abilities, social component or social abilities, social support, family cohesion, and personality structure and the whole scale were 87%, 75.5%, 86.8%, 86.7%, 65%, and 92.8%, respectively.

Social Support Appraisals (SS-A) was used for evaluating the level of social support. This test was developed by Vaux, Phillips, Holly, Thomson, Williams, and Stewart [10]; its theoretical structure is based on the definition of Chob for social support. This scale has 23 items, which cover 3 areas of family, friends, and others. In the current research, internal consistency of questions was calculated by Cronbach's alpha, which is as follows: the family's subscale 51.2%, the friends' subscale 78%, the subscale of others 60.4%, and the whole scale 77.7%. Checklist of Coping Skills-Revised (CS-R) was employed for assessing coping strategies levels. This tool is

a multi-dimensional instrument that investigates the ways by which people deal with stress. This tool was developed by Carver, Scheier, and Weintraub [11] based on Lazarus' model of stress and the model of behavioral self-regulation; this tool has been translated and normalized in Iran by Zolfaghari, Mohammad Khani, and Ebrahimi [12]. This tool includes 72 questions and 4 subscales, including active coping or problem-focused coping, affection/emotion-focused coping, low-impact coping, and ineffective coping. In the current research, Cronbach's alpha for active coping was 88.5%, for emotion-focused coping was 76%, for low-impact coping was 72.7%, and for ineffective coping was 82.5%. Stress Syndrome Inventory (SSI) was used for assessing the individuals' vulnerability to stress. This scale was developed by Seyed Khorasani and Sedighani [6], which includes 71 items and measures 4 groups

of stress syndromes: cognitive syndromes (7 items), emotional syndromes (9 items), behavioral syndromes (12 items), and physical syndromes (33 items). Cronbach's alpha coefficients for this inventory are as follows: 81.9% for cognitive syndrome, 84.5% for emotional syndrome, 77.4% for behavioral syndrome, 87.2% for physical syndrome, and 94.2% for the whole scale.

Results

Mean and standard deviation of the research variables are as follows: vulnerability to stress 77.42±36.14, resilience 160.52±23.73, social support 67.78±6.32, coping strategies 136.91±20.89, and participants' age 22.89±3.51.

In Table 1, results of correlation between predictive and criterion variables are presented.

Table 1 Results of correlation between predictive and criterion variables

Variables	Vulnerability to stress	
Resilience	-0.39**	
Social support	-0.68**	
Coping strategies	Problem-focused	-0.23**
	Emotion-focused	-0.13**
	Low-impact coping	0.39**
	Ineffective coping	0.46**

** p<0.01

Table 2 Results of multiple concurrent regression analysis on factors effective on vulnerability to stress

Variables	B	SD	β	t	p	Tolerance
Constant	308.81	19.21	-	16.07	p<0.001	-
Social support	-3.45	0.263	-0.6	-13.11	p<0.001	0.77
Coping strategies	0.29	0.073	0.17	4.07	p<0.001	0.93
Resilience	-0.23	0.071	-0.15	-3.28	p<0.001	0.75

As seen in Table 2, the adjusted coefficient of determination (0.503) suggests that social support, coping strategies, and resilience could explain 50.3% of the variance of vulnerability to stress, and this value is significant based on the results of the regression variance table (F=102.88 and p<0.001). This means that around 50% of the dispersion in the vulnerability to stress variable is determined by these three variables; in other words, the presence or lack of these variables can be highly predictive of vulnerability to stress. Therefore, the research

hypothesis, which said social support, coping strategies, and resilience predict vulnerability to stress, is confirmed. Moreover, values of B and β respectively show the non-standardized coefficient and standard coefficient of regression that indicate the effect size of every variable in the regression equation. According to t values, it is observed that the effect of all variables is significant in the regression equation (p<0.001). Since the value of the regression coefficient is affected by variance of the predictive variable, in case of equality/

balance in other conditions, if variances of independent variables show a high difference, the regression coefficient of a variable with the highest variance will be higher which can lead to bias in interpretations. To prevent this issue, a standardized regression coefficient is used, which is calculated by standard scores of variables. In addition, the Tolerance factor, which shows the co-linearity of dependent variables, indicates that the level of co-linearity between dependent variables is low and the result of regression analysis would not be affected.

Discussion

The findings of the present research indicated that resilience, coping strategies, and social support are good predictors of vulnerability to stress, and the research variables explain more than half of the variance of vulnerability to stress, and this finding is consistent with the following investigations: Friberg and colleagues [9] which indicated that individuals with high resilience use support sources in order to have a more effective coping in face of stress; Dunkley and colleagues [13] which showed that the use of problem-focused strategies (focused on problem solving) by university students leads to an increase in their adjustment; and Awasthi that suggests that family relationships and social support can lead to more use of adaptive coping strategies by university students and reduced stress among them.

In explaining the perceived stress, it can be said that individuals with resilience use more support sources to increase their coping ability, and this might reduce their experience of perceived stress [9]. The mechanism of this relationship might be partly due to coping strategies. In addition, using problem-focused strategies by university students is accompanied by better health and less negative consequences. On the other hand, the use of emotion-focused strategies, especially avoidance strategy, by university students is accompanied by negative consequences such as poorer health and increased negative consequences [13]. Gagné [14] argues that both problem-focused and emotion-focused strategies can be useful in coping with stress. Meanwhile,

positive coping mechanisms are of most importance due to avoidance from negative effects of stress. In explaining the relationship of social support and vulnerability to stress, it should be said that coping mechanisms such as using social support have been established to be effective in managing stress effects. Prior research shows that the ability of university students to establish effective relationships and regulate their emotions is effective in maintaining relationships and reducing stress. In addition, it has been shown that positive interaction in family relationships, such as social support and creating opportunity for autonomy, increases the ability of university students to cope with stress.

Results of the present research indicate the importance of resilience, social support, and coping strategies for predicting vulnerability to stress, which shows that these factors are significant predictors for vulnerability to stress, and this result can be helpful for psychotherapists to treat individuals. Among the limitations of the current research were lack of cooperation of some university students in completing the questionnaires and incomplete filling of some questionnaires. Moreover, since the present research was conducted among students of three different universities in Iran, generalization of the findings of the present research to other individuals and students should be done with caution. It can be said that another limitation was using a self-report method for assessing the psychological variables in the university students.

Conclusion

Results of the present research indicate the importance of resilience, social support, and coping strategies for predicting vulnerability to stress, which shows that these factors are significant predictors for vulnerability to stress, and this result can be helpful for psychotherapists to treat individuals. It is recommended that clinical interviews would be used along with self-report measures for the purpose of examining the individuals'

stress levels. Furthermore, the role of other factors affecting vulnerability to stress among the university students would be investigated. Finally, counseling centers in Universities are recommended to offer stress management and coping training workshops for the purpose of enhancing mental health among students.

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Study design: RD, KZ, MSH

Data collection and Analysis: RD, KZ, MSH

Manuscript preparation: RD, KZ, MSH

Conflict of Interest

"The authors declare that they have no competing interests."

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