*«Original Articles »*

# Design and test a model of the relationship between negative life events and mental health with resiliency and social support mediation in female medical sciences students at jundishapour university of Ahvaz

**Fatemeh Nadi Najafabadi[1*], Akram Nazari Chegeni[1], Soodabeh Bassaknejad[2]**

*1-Educational Psychology M.A, School of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz, Iran.*
*2-Assistant Professor of Psychology, Department of Clinical Psychology, School of Educational Sciences and Psychology, Shahid Chamran of Ahvaz, Iran.*

⋆*Corresponding author:*
*Fatemeh Nadi Najafabadi; Educational Psychology M.A, School of Educational Sciences and Psychology, Shahid Chamran University of Ahvaz, Iran.*
*Tel: 09139313964*
*Email: Fatemehnadi913@yahoo.com*

## Abstract

**Background:** The purpose of this study examined the relationship between negative life events and mental health with social support and resiliency mediation in female medical sciences students at Jundishapour University of Ahvaz.

**Material and methods:** The study consisted of Ahvaz Jundishapour University, female students, among which, 188 persons were selected by random sampling. Variable measuring instruments were General Health Questionnaire (GHQ), Social Support Scale (SS-A), Connor & Davidson Resiliency questionnaire (CD-RISC) and Life Events Scale (LES).

**Results:** The results indicated that the level of resiliency and social support ($p \leq 0/001$) mediator between negative life events and mental health. Also, no relationship was found between resiliency and mental health.

**Conclusions:** Social support, negative life events and stressful events in a person's support, reduce stress and lead to a mental health of the individual. Also, due to decrease negative emotions and increase resiliency and mental health as a resource to facilitate overcoming the stress of negative life events and eliminate the psychological effects are known.

**Keywords:** resiliency, social events, negative life events, mental health.

►*Please cite this paper as:*
*Nadi Najafabadi F, Nazari Chegeni A, Bassaknejad S, Design and test a model of the relationship between negative life events and mental health with resiliency and social support mediation in female medical sciences students at jundishapour university of Ahvaz. Jentashapir J Health Res* 2014; 5(1):483-494

**Received: 03.01.2013** **Accepted: 11.09.2013**

## Introduction

Medical students are faced with a variety of stresses due to long curriculum, facing patients' mortality and clinical activity that may affect their physical and mental health (1) and endanger their academic success, personal and professional growth (2). Research findings on Esfahan and Shahid Beheshti university of medical students indicate that lack of proper educational environment, issues related to educational facilities and equipment's and university officials treatment, university professors failure of duties, lack of communication of students with supervisors, lack or shortage of knowledge of supervisors about terms and conditions, lack of educational motivation in students are the most important educational problems and issues such as habitat (dormitory and other than dormitory), personal and family problems, the disappointment about future career and non-conformity of some of the courses with content of exams as academic major problems, are the non-educational problems have been reported by students (3, 4). In a similar study at the Shahid Beheshti University of Medical Science, inappropriate space of classes and study halls, university professors failure of duties, lack of communication of students with supervisors, lack or shortage of knowledge of supervisors about terms and conditions, non-conformity of some of the courses with content of exams are listed as educational major problems of students (4). In survey of educational problems of Shahrekord University of medical science students; family and financial problems, illness and lack of knowledge of students and supervisors about educational rules were the most important factors in creating academic problems for students (5).

Stress in academic, career and family environments can be a threat to the mental health of students (6, 7). Mental health is a state of well-being that one can flow with the tide and social characteristics and personal positions is satisfactory for him or her (8). Factor such as social support and resiliency is related to mental health. Psychology experts assign resilience as people's ability to stay healthy against negative life events and confront with life challenges (2, 9, 10, 11, and 12). Resilient people are usually identified by features such as optimism, positive coping and hardiness that are can better handle the challenges of life (13). People with high levels of resilience more likely cope with internal conflicts, behavioral disorders and poor academic performance (14). Therefore, it seems that increasing resilience level can be predictor of mental health (15).

Social support is a psychological structure that is considered as a mental and material resource of social network which refers to one's ability to cope with stress (16) can help students in reducing mental problems. Peng at el (2) showed that mental health problems have a high negative correlation with social support. Teoh and Tam (17) research has shown that healthy people have better social support and mental health. Mcdowell and Serovich (18) in surveying relationship between social support and mental health among AIDS patients founded a significant relationship between mental health and perceived social support. Azadi and Azad (9) were found coefficient of correlation 0.33 between social support and mental health. Also, in their study using structural equations model, direct effect of social support on mental health and its indirect effect were obtained 0.41 and 0.42 respectively. More the social support rate increases, the level of health also increases (19). Social support predicted the mental health significantly and is able to mitigate the adverse effects of stress through five methods: 1) Emotional attention: Including listening to people's problems and expression of feelings of empathy, caring, understanding and reassurance. 2) Assistance: Provide support and assistance that leads to adaptive behavior. 3) Information: Provide tips and advice to

improve their coping abilities. 4) Evaluation: Provide feedback from others in terms of performance quality that leads to correct the performance. 5) Socialization: Receiving social support usually arises through socialization and as a result has the beneficial effects (20, 21).

Negative life events such as traumas and changes in the around environment can have long-term consequences on mental health acutely and chronically (22, 23). Research findings suggest that negative life events are positively associated with mental health problems (2, 24 and 8). Negative life events could lead to mental health problems such as anxiety, depression, but people with high levels of resilience can more efficiently deal with the problems and survive (2).

Peng at el (2) research findings showed that resilience is a mediator between negative life events and mental health problems. They found that the negative life events lead to mental health problems like depression or anxiety; but people with high levels of resilience can overcome the problems more efficiently and stay healthy. Research results show that the resilience is a supportive factor in people who have had negative experiences in childhood and may reduce risk of suicide for them (25). Longitudinal study of a sample of students shows that resiliency mediated traumatic life events and suicidal thoughts (26).

Social support is also a mediator variable which could play a role of the dependent variable for negative events and the independent variable for mental health. When students are confronted with negative life events, social supports could defend them as a shield to protect against life events (27, 28). Lack of social support in dealing with negative life events is associated with mental various problems such as depression, loneliness and anxiety (29). Results indicated that negative life events have negative relation with social support. In most studies, the relationship between mental health and social support were examined (30). In our study we tried to answer the question whether the designed model could fit the relationship between negative life events and mental health with resilience and social support mediation? Because of the importance of mental health of students, especially girls, who are more sensitive and immediately affected by the events around them and meanwhile today's girls are the future mothers and when girls have mental health, followed by that in role of a successful mother in future they will breed children who are physically and mentally healthy, This study considered female students as axis of survey. Also, in Iran no research has been done by sorting psychological structures in order to further identify the factors related to mental health, this study seeks to answer the question whether the resiliency and social support would mediate the relationship between negative life events and mental health?

## Material and methods

The population of this study included all female students of Ahvaz Jundi Shapour University of Medical Sciences were enrolled in 2011-2012. The research subjects were 200 students whom selected by sequential random sampling from three faculties of medicine, dentistry and pharmacy, which 188 people responded to the questionnaires and with the permission of different faculties and satisfying them and explaining the purpose of the study, students were asked to respond to the survey questionnaire. In this study, the SPSS and AMOS software was used for data analysis. Tools used in this study were:

**General Health Questionnaire Goldberg (GHQ):** 28-item General Health Questionnaire introduced by Goldberg and Hillier (31) were used that has four sub-scales, each scale has seven items that include: 1- physical syndrome, 2) anxiety syndrome, 3) social functioning, 4) depressive syndrome, which is designed as a four-item (0, 1, 2 and 3) Likert scale. In

all options Low levels indicate health and high levels indicates distress in individuals. Reliability of the questionnaire has been reported by Cranach's alpha 0.82 and retest method 0.86 (32). In an investigation, Cranach's alpha and Split-half of this scale were obtained 0.95 and 0.89 respectively (9). In the present study the Cranach's alpha method was used to assess the reliability of general health questionnaire. The Cranach's alpha coefficient for the General Health Questionnaire was obtained 0.72, indicating a relatively good reliability of the questionnaire. The validity of this scale using structure validity was 0.62 which was obtained from the correlation between General Health subscales.

**Life Experiences Survey (LES):** LES is a 60-item questionnaire (57 specified items and 3 vacant space that if the person has experienced an event and is not listed, he/she would note it) that measures the occurrence, severity and positive or negative effects of life events during the past year (33). During the execution of LES the subject is asked to determine which of events he/she has been experienced during the past year and then determine whether each experienced event had a positive or negative effect on him or her and rate the intensity of the effect from -3 to +3. +3 absolutely positive effect, +2 moderate positive, +1 somewhat positive, 0 no effect, -1 somewhat negative, -2 moderate negative and -3 absolutely negative. Events have had a negative effect on the individual, are considered as negative events and the total score is the perceived stress experienced during last year (34). In the present study, in order to evaluate the reliability of negative life events questionnaire, Cranach's alpha method was used. Cranach's alpha coefficients for the questionnaire were obtained 0.82, indicating a relatively good reliability of the questionnaire. The validity of this scale using structure validity was 0.64.

**Social Support Philips (SS-A):** The scale has 23 items and three subscales and evaluates social support from family, friends and others based on a scale of four degrees strongly agree, agree, disagree and strongly disagree. On a research this Cranach's alpha scale was obtained 0.81 (35). Also, in another study, Cranach's alpha for this questionnaire was obtained 0.79 (36). In the present study, Cranach's alpha method was used to assess the reliability of the social support questionnaire. The Coefficient Cranach's alpha for the social support questionnaire was obtained 0.73, indicating a relatively good reliability of the questionnaire. The validity of this scale using structure validity was 0.64.

**Connor-Davidson Resilience Scale (RISC-CD):** The scale consists of 25 items and is provided by Conner and Davidson (13), in order to measure the ability to cope with stresses and threats. For each item, five-item scale range from zero (completely false) to four (always true) is scored. Although the scale measures different dimensions of the resilience, however has a total score? In a research alpha coefficient of this scale was obtained 0.87 and reliability was obtained 0.73 by retest method (37). In another study, the reliability of this questionnaire was obtained 0.93, which is desirable (38). In the present study, Cranach's alpha method was used to assess the reliability of the resilience questionnaire. The coefficient Cranach's alpha for the resilience questionnaire was obtained 0.81, indicating a relatively desired reliability of the questionnaire. The validity of this scale using structure validity was 0.72.

## Result

Table 1, shows the mean, standard deviations, minimum and maximum scores on all variables studied.

As shown in Table 1, the mean and standard deviations for negative life events variable is -18.37 and 40.19, for resilience variable 80.10 and 12.38, for social

support variable 16.70 and 5.31 and for mental health variable is 51.14 and 23.92, respectively. As shown in the table 2, all obtained coefficients among study variables are significant (levels of significance for all coefficients are shown with an asterisk in the table).

Correlation coefficient of negative life events with mental health is -0.531, correlation coefficient of negative life events with resilience -0.230, correlation coefficient of negative life events with social support -0.174, correlation coefficient of resilience with mental health 0.259, correlation coefficient of social support and mental health 0.283.

**Fitness of the study model**

In this study, fitness indices were used to examine the fitting of the proposed model. In the table 3, fitness indices of the present study assumed model were fitting.

According to Table 3, the goodness of fit index chi-square ($\chi^2$) is equals to 151.51 with a degree of freedom 1 and a significance level of 0.001. Given that the chi-square ($\chi^2$) is sensitive to increasing sample size and existing correlation between variables, so in most cases the index is statistically significant. Hence, for the knowledge of the model fitting, other indices were used. Therefore according to the results inserted in table 3 it can be observed that the proposed study model for the entire sample of subjects, the ratio of chi-square to degree of freedom ($\chi^2$/df) is equal to 151/51, Goodness of Fit Index (GFI) is equal to 0.78, Adjusted Goodness of fit index (AGFI) is equal to -1.17, Increasing Fit Index (IFI) is equal to 0.37, Tucker-Lewis Index (TLI) is equal to -2.87, Comparative fit index (CFI) is equal to 0.36, Normed Fit Index (NFI) is equal to 0.37, Root Mean Square Error of Approximation (RMSEA) is equal to 0.09. These indices show that the proposed model needs to be corrected.

**Estimation of the improved study model parameters**

In this section, the measurement pattern and structural pattern of the modified study model is proposed. The figure 2 shows standardized path coefficients for the final study model. Table 6, shows paths and standardized coefficients in the final model of the relationship between negative life events and mental health with resiliency and social support mediation.

As shown in figure 1, some of the suggested ways based on the proposed initial model of researchers were not significant and after the final analysis and fitting indicators, the results improve the proposed model and the results in Table 5 were obtained.

Based on the contents of table 4, direct route of resilience to mental health is not significant. Therefore, removal of non-significant routes was done. After applying these changes, an additional analysis was performed on the data. In Table 5, the analysis results can be seen on the final model. Fitness indices in the final model have significant differences after correction.

According to Table 5, chi-square index ($\chi^2$) is equals to 0.003, with degree of freedom 1 and a significance level of 0.001. Given that ($\chi^2$) is sensitive to increasing the sample size and the existing correlation between variables, therefore the most cases this index is statistically significant. Hence, to have knowledge about model fitness, the other indices were used. According to the results listed in table 5, it could be observed that in the proposed research model for all subjects, ($\chi^2$/df) is equal to 0.003, (RMSEA) is equal to 0.000, (GFI) is equal to 1.000, (AGFI) is equal to 1.000, (NFI) is equal to 1.000, (TLI) is equal to 1.000 and (IFI) is equal to 1.000 suggesting desired fitness of the proposed or hypothetical model of the study with data.

Based on the contents of the table 6, the path coefficients related to the final model are significant at the level shown in the last column.

**Findings related to indirect assumptions in the proposed pattern**

To examine the indirect effects of variables, the bootstrap method was used which would be discussed. Proposed model suggests indirect and mediated pathways between the study variables. A mediated relationship was tested using bootstrap method with AMOS-20 software. Table 7, results show mediated relations using bootstrap method.

Based on the contents of the table 7, negative life events path to the mental health through the resilience is significant at the level $p<0.001$ and the negative life events path to the mental health by social support is significant at the level $p<0.002$.

Contents of Table 8 shows that the upper and lower limits of indirect relation of negative life events with mental health through resilience and indirect relation of negative life events with mental health through social support do not encompass zero and this indicates the significance of the indirect paths.

**Table 1. Mean, standard deviations, minimum and maximum scores of the subjects in the study variables**

| | mean | SD | minimum | maximum |
|---|---|---|---|---|
| Negative life events | 20.31 | 40.19 | -124 | 60 |
| Resilience | 80.10 | 12.38 | 48 | 100 |
| Social support | 16.70 | 5.31 | 5 | 23 |
| Mental health | 51.14 | 23.92 | 5 | 84 |

**Table 2. Correlation coefficient between negative life events, resilience and social support with mental health**

| | 1 | 2 | 3 |
|---|---|---|---|
| 1. negative life events | - | - | - |
| 2. resilience | -0.230** | - | - |
| 3. social support | -0.174* | 0.754** | - |
| 4. mental health | -0.531** | 0.259** | 0.283** |

**Table 3. The fitness indicators of the present study hypothetical model**

| indicator | proposed model |
|---|---|
| $\chi^2$ | 151.51 |
| df | 1 |
| AGFI | -1.17 |
| $\chi^2$/df | 151.51 |
| CFI | 0.360 |
| GFI | 0.78 |
| RMSEA | 0.09 |
| TLI | -2.87 |
| NFI | 0.37 |
| IFI | 0.370 |

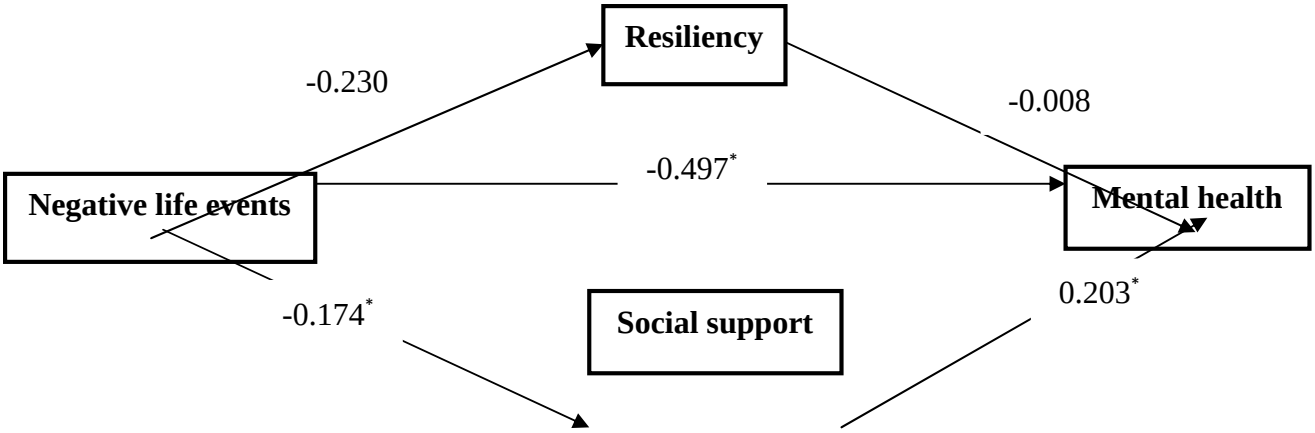


**Figure 1. Path coefficients of the proposed model for the relationship between negative life events and mental health with resiliency and social support mediation**

**Table 4. Parameters of direct effects of study variables in the study model**

| parameters / paths | B | β | S.E | P |
|---|---|---|---|---|
| From negative life events to mental health | -0.288 | -0497 | 0.036 | 0.001 |
| From negative life events to resiliency | -0.071 | -0.230 | 0.022 | 0.001 |
| From negative life events to social support | -0.023 | -0.174 | 0.010 | 0.016 |
| From resiliency to mental health | -0.008 | -0.015 | 0.175 | 0.930 |
| From social support to mental health | 0.888 | 0.203 | 0.402 | 0.027 |

**Table 5. Fitness indices of the final model in the present study**

| indicator | proposed model |
|---|---|
| $\chi^2$ | 0.003 |
| df | 1 |
| AGFI | 1.000 |
| $\chi^2$/df | 0.003 |
| CFI | 1.000 |
| GFI | 1.000 |
| RMSEA | 0.000 |
| TLI | 1.000 |
| NFI | 1.000 |
| IFI | 1.000 |

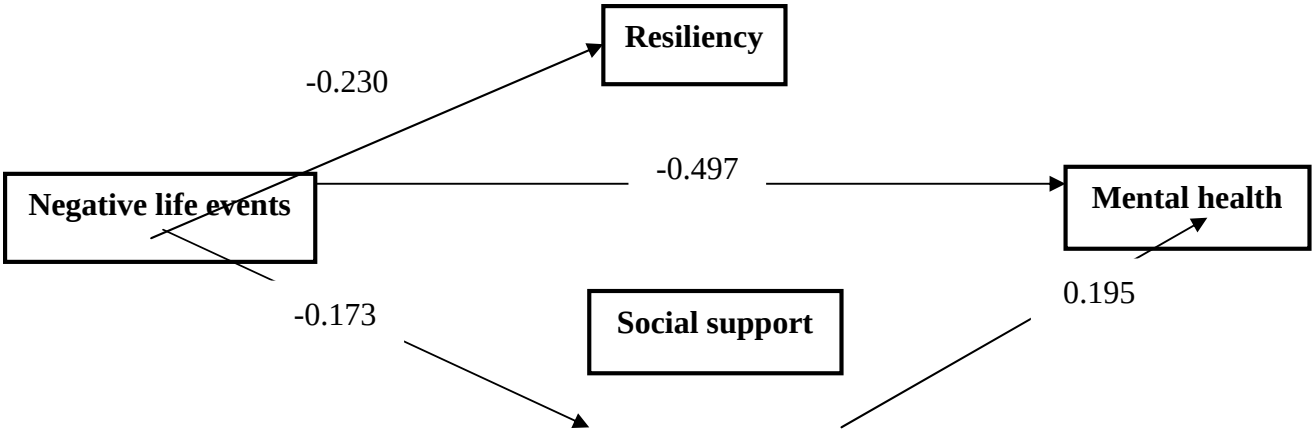


**Figure 2. Path coefficients of the final model for the relationship between negative life events and mental health with resiliency and social support mediation**

**Table 6. Parameters of direct effects of study variables in the study model**

| parameters / paths | B | β | S.E | P |
|---|---|---|---|---|
| From negative life events to mental health | -0.288 | -0497 | 0.036 | 0.001 |
| From negative life events to resiliency | -0.071 | -0.230 | 0.022 | 0.001 |
| From negative life events to social support | -0.023 | -0.174 | 0.010 | 0.016 |
| From social support to mental health | 0.853 | 0.195 | 0.268 | 0.001 |

**Table 7. Bootstrap method results for the mediated paths of study in the proposed pattern**

| Pathways | Upper limit | Lower limit | P |
|---|---|---|---|
| Negative life events to mental health through the resiliency | -0.109 | -0.028 | 0.001 |
| Negative life events to mental health through the social support | -0.009 | -0.019 | 0.002 |

**Table 8. Values of indirect effects of study variables**

| pathway | data | boot | bias | S.E | Upper limit | Lower limit |
|---|---|---|---|---|---|---|
| Overall relationship of negative life events through resiliency and social support with the mental health | -0.0193 | -0.0192 | 0.0001 | 0.0096 | -0.0024 | -0.0407 |
| Relationship of negative life events through resiliency with the mental health | 0.0011 | 0.0006 | -0.0004 | 0.0102 | -0.0208 | -0.0198 |
| Relationship of negative life events through social support with the mental health | -0.0204 | -0.0198 | 0.0006 | 0.0102 | -0.0450 | -0.0042 |

## Discussion

This study was done with the aim of examining the relation of negative life events and mental health with resiliency and social support mediation in female medical students at the Jondi Shapoor University of Ahvaz and the results showed that there is a positive and significant relationship between negative life events and mental health with resiliency and social support mediation. Also, results showed that there is positive and significant relationship between negative life events and mental health with social support mediation.

Results in table 6 shows that the standardized coefficients of path from negative life events to mental health, are negative and significant (standard estimate=-0.497, p=0.001). Conclusion is consistent with Peng at el (2), Margaret at el (24) and Sadeghian and Heidarian Pour (8) results. Entering university is a critical period with great changes in social relationships, expectations and new roles, and exposure to such conditions often associated with stress and worry. On the other hand, entering university from high school period is a sudden change and for a group of people, being separated from family is also a source of stress. Also, negative experiences such as discrepancy with friends, concerns about the health of the family, changes in religious activity, concern about future career, entering the hospital environment, sexual difficulties and participating in an important exam can create numerous difficulties for students or provide ground for mental disorders (8). On the other hand, university as a stressor environment often has a negative effect on academic performance and mental and physical health of students (39). Results in the table 6 shows that standard coefficient of negative life events path to resiliency is negative and significant (standard estimate=-0.230, p=0.001). Conclusion is consistent with Roy at el (25) and Nrugham at el (24) results. Due to the long period of study of medical students as they move forward in their education, their resilience decreases, also, the possibility of the occurrence of negative events increases in their personal and academic lives, which this issue will reduce their resilience. These findings are consistent with results of Agyom at el (30) study. According to the table 6, the standard coefficient of negative life events path to social support is negative and significant (standard estimate=-0.174, p=0.016). Most negative events that happen in people's lives, lead to the loss of family members or torn between family members, thus supporting the children in these families are low (30). The results in table 6 show that the standardized coefficient of resilience path to mental health is not significant (standard estimate=-0.015, p=0.930). These findings are inconsistent with the results of Peng (2), Azadi and Azad (9) and Besharat at el (10) research. It can be said about the finding that because the sample of the study are female students, therefore, when the girls have faced with troubles, their resiliency is low and ability to handle the problems is also low, they are quickly impressed and subsequently face with mental health problems such as depression. The table results 6 show that social support path to mental health is positive and significant (standard estimate=0.195, p=0.001). These findings are consistent with results obtained in studies of Peng at el (2), Mcdowell at el (18) and Azadi and Azad (9). One of the strongest predictors of mental health is social support, so that the social network is more extended, rates of mental health are higher as well. Social support causes that person feels being beloved, being cared, and being respected and feels that he or she belongs to a large group, and the combination of these factors will lead to provide mental health. Also, given that the students were female and young and girls at this age make intense emotional relationships with friends and certain individuals, which will lead to their mental health. The table shows 7 that negative life events effect on mental health

with resilience mediation is significant by the lower limit -0.109 and the upper limit -0.280. Therefore, there is a positive and indirect relationship between negative life events and mental health with resilience mediation. Conclusion is consistent with Peng at el (2), Roy at el (25) and Nrugham at el (24) results. Resilience by reducing negative emotions and increased mental health is defined as a resource to facilitate overcoming ordeals, problems; resistances to stress caused by negative life events and eliminate their psychological effects. As a result, individuals with high levels of resilience in stressful situations and adverse conditions retain their mental health and have psychological compatibility. Also, the table shows 7 that negative life events effect on mental health with social support mediation is significant by the lower limit -0.0096 and the upper limit -0.019. Therefore, there is a negative and significant relationship between negative life events and mental health with ocial support mediation. Conclusion is consistent with Peng at el (2) results. Social support is one of the strongest predictors of mental health. Social support reduces the stress by protection against negative life events and stressful events, leading to provide mental health. Also, being ensured that when faced with negative events, he or she can take refuge in a social network, allowing him to assess life events less threatening. Due to the long duration of their studies, medical students should increase their resilience as an essential part of their life so they can create a better balance for the duration of their student life.

One of the limitations of this study was that the answers to the questions of the questionnaire were under instantaneous conditions. Also, this study was conducted on a sample of female students of medical fields and it is possible that by conducting it on samples of male students and other academic disciplines, different results will be obtained. Therefore the generalization of results to other academic disciplines and another gender should be done cautiously. The only tool for data collection in this study was a questionnaire that was completed by the subjects, which has the common problem of building self-esteem. In this study resilience and social support is used as mediation between negative life events and mental health which can state definitely that other influential variables and factors were also effective that were beyond our control.

## References

1-Niemi PM, Vainiomaki PT. Medical students' academic distress, coping and achievement strategies during the preclinical years. Journal of Teaching and Learning in Medicine 1999: 11(3); 125–134.

2-Peng L, Zhan J, Li M, Li P, Zhang Y, Zuo X, Miao Y, Xu Y. Negative life events and mental health of Chinese medical students: The effect of resilience, personality and social support. Journal of Psychiatry Research 2012: 196; 138-141.

3-Hashemi SH. Study of medical student's difficulties in Isfahan University of Medical Sciences. Master students Thesis in educational programming course. Isfahan: Isfahan University of Medical Sciences 1993: Abstract. (Persian).

4-Sadri H. Study of the educational problems of different schools of Shaheed Beheshti University of Medical Sciences according to the student's point of view. Thesis of G.P student in medical faculty. Tehran; Shaheed Beheshti University of Medical Sciences 1997: Abstract. (Persian).

5-Borjian Boroujeni S, Shirzad H, Kheiri S, Haghshenas Z, Mirzavand H, Beigi A, Nekooi B. Educational problems of students of medical sciences at Shahrekord university raised in the educational councils from 2002 to the end of 2005. Journal of Medical Education Development Center 2009: 6(1); 50-56.(Persian).

6-Dahlin M, Joneborg N, Runeson B. Stress and depression among medical students: a cross-sectional study. Journal of Medical Education 2005: 39(6); 594–604.

7-Midtgaard M, Ekeberg o, Vaglum P, Tyssen R. Mental health treatment needs for medical students: a national longitudinal study. Journal of European Psychiatry 2009: 23(7); 505–511.

8-Sadeghian E, Heidarian Pour A. Stressor factors and its relationship mental health in medical students' Hamedan University. Journal of Nursing and Midwifery Tehran University of Medical Sciences (life) 2009: 15(1); 71-81(Persian).

9-Azadi A, Azad H. The relationship between social support, resilience and mental health in students Illam University. Journal of Veteran Medical Research 2011: 3(12), 48-58. (Persian).
10-Besharat MA, Salehi M, Shahmohammadi K, Nadali H, Zebardast, O. Relationship between resilience and work hard with exercise success and mental health in athletes. Journal of Contemporary Psychology 2011: 3(2); 38-49(Persian).
11-Bonanno GA. Loss, trauma and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? Journal of the American Psychologist 2004: 59(1); 20–28.
12-Brenda JM. Resilience factors and processes: no longer at risk. The Alberta Journal of Educational Research2007: 53(2); 127–142.
13-Connor KM, Davidson JRT. Development of a new resilience scale: The Connor-Davidson resilience scale. Depression and Anxiety 2003: 18; 76-82.
14-Rew L, Taylor-Seehafer M, Thomas NY, Yockey RD. Correlates of resilience in homeless adolescents. Journal of Nurse Scholarship 2001: 33(1); 33–40.
15-Dmitry MD, Robert S, Karen R, Isabelle C .Resilience and mental health. Journal of Clinical Psychology Review 2010: 30(5); 479–495.
16-Ashutosh A, Sharma M. Designing a mental health education program for south Asian international students in United States. California Journal of Health Promotion 2006: 4(2); 144–154.
17-Teoh HJ, Tam, CL. A comparison of headache and non- headache sufferers on measures of social support and mental problems. Journal of Malaysian Family Physician 2008: 3(2); 82- 86.
18-Mcdowell TL, Serovich JM. (2007). The effect of perceived and actual social support on the mental health of HIV- positive persons. Journal of AIDS Care 2007: 19(10); 1223-1229.
19-Ghodsi AM. Sociological study of the relationship between social support and depression. 2003: PhD thesis in Sociology, Faculty of Humanities, Tarbiat Modarres University. (Persian).
20-Bakhshipour A, Peiravi H, Abedian A. Examine the relationship between life satisfaction and social support with mental health in students. Journal of mental health 2005: 7(27, 28); 145-152. (Persian).
21- Rathus SA. Psychology. Holt, Rinehart and Winston, 1990.
22-Bifulco A, Bernazzani O, Moran PM, Ball C. (2000). Lifetime stressors and recurrent depression: preliminary findings of the Adult Life Phase Interview (ALPHI). Journal of Social Psychiatry and Psychiatric Epidemiology 2000: 35(6); 264–275.
23-Franko DL, Striegel-Moore RH, Brown KM, Barton BA, McMahon RP, Schreiber GB, Crawford PB, Daniels SR. Expanding our understanding of the relationship between negative life events and depressive symptoms in black and white adolescent girls. Journal of Psychological Medicine 2004: 34(7); 1319–1330.
24-Margaret B, Thompson T, Davidson J. Resilience in response to life stress: the effects of coping style and cognitive hardiness. Journal of Personality and Individual Differences 2003: 34(1); 77–95.
25-Roy A, Carli V, Sarchiapone M. Resilience mitigates the suicide risk associated with childhood trauma. Journal of Affective Disorders 2011: 133(3); 591–594.
26-Nrugham L, Holen A, Sund AM. Associations between attempted suicide, violent life events, depressive symptoms, and resilience in adolescents and young adults. Journal of Nervous and Mental Disease 2010: 198(2); 131–136.
27-Friedlander LJ, Reid GJ, Shupak N, Cribbie R. Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. Journal of College Student Development 2007: 48(3); 259–274.
28-McCorkle BH, Rogers ES, Dunn EC, Lyass A, Wan YM. Increasing social support for individuals with serious mental illness: evaluating the compeer model of intentional friendship. Journal of Community Mental Health Journal 2008: 45(5); 359–366.
29-Eskin M. Self-reported assertiveness in Swedish and Turkish adolescents: a cross-cultural comparison. Scandinavian Journal of Psychology 2003: 44(1); 7–12.
30-Eggum ND, Sallquist J, Eisenberg N. “Then it will be good”: negative life events and resilience in Ugandan Youth. Journal of Adolescent Research 2011: 26(6); 766-796.
31-Goldberg DP, Hillier V. A scaled version of General Health Questionnaire. Journal of Psychological Medicine 1979: 9; 131-145.
22-Tabebordbar F, Kazemi SA, Ranjbaran J. Relationship mental health and job performance based on personality tiers of teachers in order to propose a causal model. Journal of Psycholigocal Methods and Models 2010: 1(2); 13-24. (Persian).
33-Sarason IG, Johnson JH, Siegely M. Assessing the impact of life changes: development of the life experiences survey. Journal of Consulting and Clinical Psychology 1978: 46; 932-946.
34-Bakhshani N, Birshak B, Atefvahid MK, Bolhari J. Relationship between perceived support and stressful life events. Journal of Thought and Behavior in Clinical Psychology 2003: 9(2); 49-55(Persian).

35-Zeinivand A. Relationship between self-esteem and social support academic achievement of high school students in Darrehshahr. Master's thesis 2005: Tarbiat moallem University of Tehran. (Persian).
36-Khoshkonesh A, Asadi M, Shiralipour A, Keshavarz Afshar, H. The role of essential needs and social support in social adjustment among high school students. Journal of Applied Psychology 2010: 1(13); 82-94. (Persian).
37-Albokordi S, Nouri R, Nikoseirjahromi M, Zahedian F. Relationship between self-esteem and social support with depression in male prisoners. Journal of Mazandaran University of Medical Sciences 2010: 20(77); 62-68. (Persian).
38-Hashemi L, Jokar B. Relationship between spiritual transcendence in students. Journal of Educational Psychology 2011: 8(13); 123-142. (Persian).
39-Jookar B at. Predicted resilience on the religious in students. Proceedings of Fifth National Conference on Mental Health in College Students 2010; 67-68. (Persian).
40-Kjeldstadli K, Tyssen R, Finset A, Hem E, Gud T, Gronvold NT, Ekeberg O, Vaglum P. Life satisfaction and resilience in medical school--a six-year longitudinal, nationwide and comparative study. Journal of BMC Medical Education 2006: 6(48); 1-8. (Persian).