



Moderating Effects of Spiritual Health on Negative Life Events and Psychological Distress in Freshmen

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ABSTRACT

Aims First year for the undergraduate students is not only a time for increased stress, but a time of increased risk for the development of physical, social, academic, and psychological health problems due to the toll this stress can take. Spiritual health is considered as an important aspect of human health. The aim of the present study was to examine moderating effects of spiritual health on negative life events and psychological distress in freshmen.

Instruments & Methods This descriptive correlational study was conducted between 2016 and 2017. We sampled 277 freshmen in Lorestan University, Iran, based on the simple random sampling method. The students completed the Adolescent Life Events Questionnaire (ALEQ), Spiritual Health Scale, and the Depression, Anxiety, and Stress Scales (DASS). Hierarchical linear regression analyses were used to examine the moderating role of spiritual health, using SPSS 24.0 software.

Findings Negative life events was positively correlated with stress ($r=0.45$; $p<0.01$), anxiety ($r=0.52$; $p<0.01$), and depression ($r=0.48$; $p<0.01$). Also, spiritual health was negatively correlated with negative life events ($r=-0.47$; $p<0.01$), stress ($r=-0.39$; $p<0.01$), anxiety ($r=-0.43$; $p<0.01$), and depression ($r=-0.37$; $p<0.01$). Spiritual health was also a moderator in the relationship between negative life events and psychological distress.

Conclusion Spiritual health is an important moderator of student's negative life events on psychological distress. Higher levels of spiritual health is associated with lower levels of psychological distress.

Keywords Negative Life Events; Spiritual Health; Distress

CITATION LINKS

- [1] Well-being in an academic environment
- [2] Stages of change, self-efficacy and stress management perceptions in first year undergraduate students
- [3] Stress, positive psychology and the national student survey
- [4] Stress among higher education students: Towards a research agenda
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- [10] Measuring cognitive vulnerability to depression in adolescence: Reliability, validity, and gender differences
- [11] The relationships among self-care, dispositional mindfulness, and psychological distress in medical students
- [12] The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations
- [13] Negative life events and psychological distress among young adults
- [14] Life events and personal causation: Some relationships with satisfaction and distress
- [15] Negative life events, cognitive emotion regulation and emotional problems
- [16] Life events and psychological distress: A prospective study of young adolescents
- [17] Negative life events and depression in elderly persons: A meta-analysis
- [18] Evaluation of life events in major depression: Assessing negative emotional bias
- [19] Anxiety symptoms mediate the relationship between exposure to stressful negative life events and depressive symptoms: A conditional process modelling of the protective effects of resilience
- [20] The moderating role of spirituality in the association between stress and substance use among adolescents: Differences by gender

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Introduction

First year for the undergraduate students is not only a time for increased stress, but a time of increased risk for the development of physical, social, academic, and psychological health problems due to the toll this stress can take. Stecker found that an alarming number of students reported symptoms of depression, stress, substance use, and even suicidal ideation [1].

Research findings have indicated that pressure of work, especially preparing for examinations and acquiring professional knowledge, are the most stressful aspects [2]. Other studies demonstrate that the most common stressors for undergraduates are fear of failure [3], stressors related to examinations and time management [4], and feeling overwhelmed by workload [5].

In addition, different studies have reported that the prevalence of depression in the students of universities in Iran was 10.5% to 53%. Spirituality is considered an important predictor of anxiety and depression among students. A study demonstrated that people, who have higher levels of spirituality, had lower levels of anxiety and depression. Moreover, happiness among the students increases with the enhancement of spiritual health [6].

Spiritual health is considered as an important

aspect of human health. Generally, spiritual health provides a harmonious and integrated relationship between internal forces and it is determined by stability features in life such as peace, proportionality, coordination, feeling intimacy with the self, God, society, and environment. Spiritual health determines a person's integrity and wholeness [7].

Based on Islamic view, spiritual health is the most important dimension of health. Empirical evidence is available to indicate a direct relationship between religious involvement and spirituality with positive health outcomes [8]. Spiritual health is one of the fundamental concepts about the stress-induced problem. When spiritual health of person goes to the serious risk, it may be experiencing the feelings of loneliness, depression, and the feeling of not having a meaning in life. Spiritual health plays a vital role in coping with stress and has positive effect on health promotion. The researchers emphasized that the increased level of meaning and spirituality in the life not only overcomes conflicts, but also increases life satisfaction [9].

The aim of the present study was to examine moderating effects of spiritual health on negative life events and psychological distress in freshmen (Figure 1).

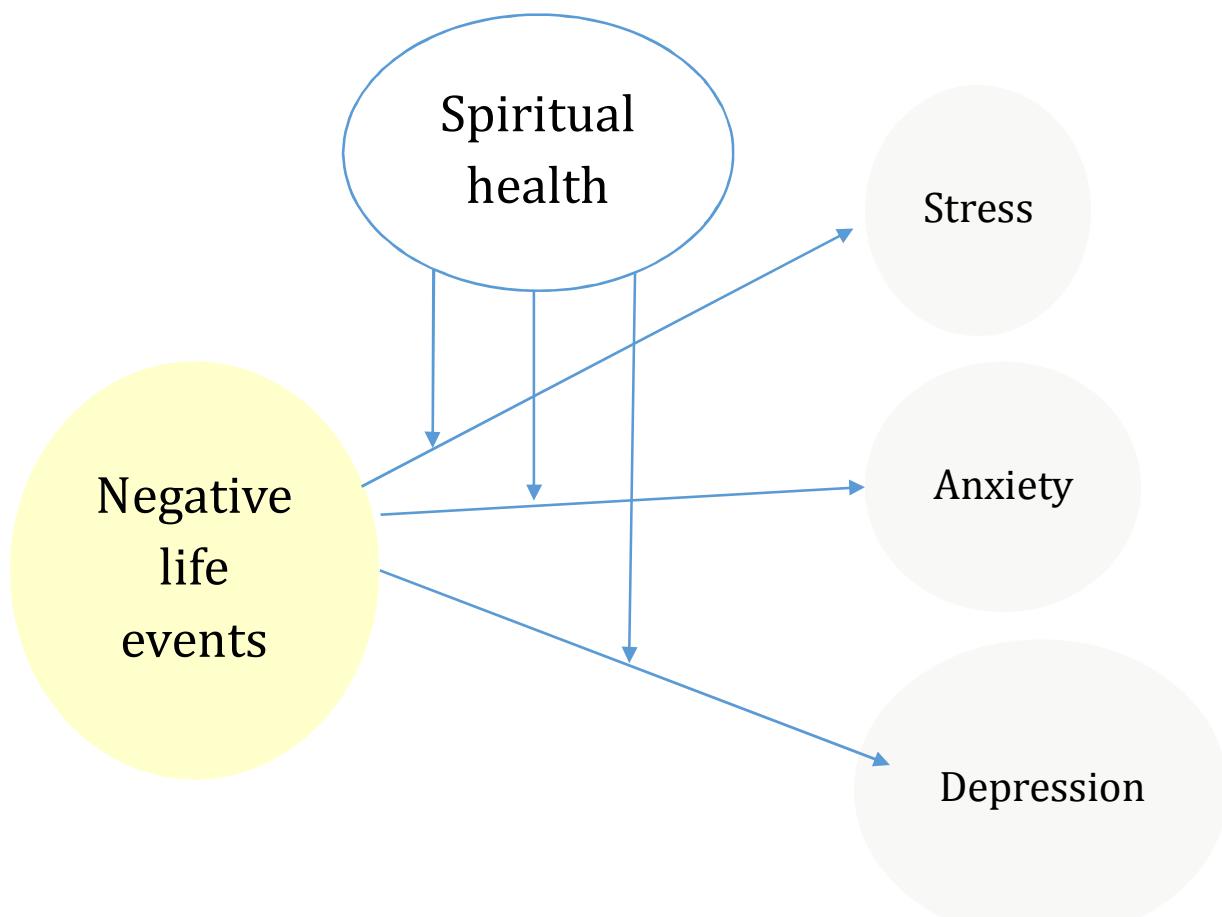


Figure 1) Moderating influence of spiritual health on the relationship between the negative life events and psychological distress of freshmen

Instruments and Methods

This descriptive correlational study was conducted between 2016 and 2017. Based on Morgan sampling table, we sampled 277 freshmen in Lorestan University, Iran, based on the simple random sampling method. Students were aged 17 to 18 years. We used the following questionnaires:

The Adolescent Life Events Questionnaire (ALEQ)^[10]: It is a 70-item self-report checklist that assesses a broad range of negative life events typically occurring among adolescents (approximate ages 13-18). The negative events are classified into 4 domains relevant to adolescents: 1) Family and parents (e.g., You and your family moved to a new town, but you did not want to move), 2) Romantic relationships (e.g., Got in a fight/argument with a boyfriend/girlfriend), 3) School and classes (e.g., Did poorly on, or failed, a test or class project), and 4) Friends and social activities (e.g., Do not have as many friends as you would like to). Adolescents are asked to read each event and indicate Yes or No if the event happened to them in the last 3 months. Scores are calculated by counting the number of Yes items within each domain to obtain a total scale score. For the purposes of this study, the ALEQ was carefully translated and corresponded to the main scale by the authors. Then, the 69-item ALEQ was used to assess negative life events (29 items=Family and parents, 10 items= Romantic relationships, 11 items=School and classes, and 19 items=Friends and social activities). The internal consistency of 0.69 was acceptable for this study.

Paloutzian and Ellison's spiritual well-being scale: It is a 20-item questionnaire. 10 items measure religious well-being and the rest investigate existential well-being. Spiritual health score is the sum of the scores for these two subscales with minimum and maximum possible score of 20 and 120, respectively. The items are rated by 6-point Likert scale from absolutely disagree to absolutely agree. For items 3, 4, 7, 8, 10, 1, 14, 15, 17, 19, and 20, absolutely disagree represents score 1 and for items 1, 2, 5, 6, 9, 12, 13, 16, and 18, absolutely disagree represents score 6. The scores for spiritual health were divided into 3 levels, including low (20-40), moderate (41-99), and high (100-120). For this questionnaire, correlation coefficient of spiritual health was 0.82^[6].

Depression, Anxiety, and Stress Scales (DASS): Distress was assessed, using the DASS; a set of 3 self-report scales (depression, anxiety, and stress) containing 14 items scored on a 4-point frequency/severity scale ranging from 0 (did not apply to me) to 3 (applied to me very much, or most of the time). Each scale is divided into subscales of 2 to 5 items: the depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia; the anxiety scale assesses autonomic arousal,

skeletal muscle effects, situational anxiety, and subjective experience of anxious affect; the stress scale assesses the levels of chronic nonspecific arousal-difficulty relaxing, nervous arousal, being easily upset/agitated, irritability/over-reactivity, and impatience. The total scale has good internal consistency with an alpha coefficient score of 0.97. Alpha coefficients for the depression, anxiety, and stress subscales are 0.94, 0.88, and 0.93, respectively^[11].

DASS was carefully translated and corresponded to the main scale by the authors. Then, to examine its validity, confirmatory factor analysis was carried out on its items and its reliability was calculated. The scale has appropriate psychometric qualities to be used in Iran. DASS internal consistency reliability, using Cronbach's alpha, was 0.88.

For each potential moderator variable, regression models were performed separately. In the first step, we entered gender as a covariate. In the second step, the predictor variable (negative life events) was entered in to the regression equation. At step 3, potential moderator variable (spiritual health) was entered into the regression equations. In the final step, interaction variables (negative life events x spiritual health) were entered into the models. Significant change in R^2 for the interaction term indicates a significant moderator effect.

The data were analyzed, using SPSS 24.0 software. Missing values in the data were computed along with the sample means. The moderator effect of spiritual health were tested, using hierarchical multiple regression analysis based on the steps of Baron and Kenny's^[12] moderating model. In order to decrease the multicollinearity problems in the analyses, standard z-scores were used.

Findings

Descriptive statistics and bivariate correlation for the negative life events, spiritual health, stress, anxiety, and depression were presented (Table 1). As expected, negative life events was positively correlated with stress ($r=0.45$; $p<0.01$), anxiety ($r=0.52$; $p<0.01$), and depression ($r=0.48$; $p<0.01$); also, spiritual health was negatively correlated with negative life events ($r=-0.47$; $p<0.01$), stress ($r=-0.39$; $p<0.01$), anxiety ($r=-0.43$; $p<0.01$), and depression ($r=-0.37$; $p<0.01$). In addition, skewness and kurtosis values were found to be within acceptable range (± 1) for a normal distribution.

Gender ($\beta=-0.14$; $p<0.01$), negative life events ($\beta=0.44$; $p<0.001$), spiritual health ($\beta=-0.22$; $p<0.001$), and the interaction of negative life events and spiritual health ($\beta=0.13$; $p<0.01$) significantly predicted stress. Spiritual health had a moderating effect on the relationship between negative life events and stress (Table 2).

Gender ($\beta=-0.16$; $p<0.006$), negative life events ($\beta=0.51$; $p<0.001$), spiritual health ($\beta=-0.22$;

$p<0.001$), and the interaction of negative life events and spiritual health ($\beta=0.25$; $p<0.001$) significantly predicted anxiety. Spiritual health had a moderating effect on the relationship between negative life events and anxiety (Table 3).

Gender ($\beta=-0.14$; $p<0.01$), negative life events

($\beta=0.47$, $p<0.001$), spiritual health ($\beta=-0.17$; $p<0.003$), and the interaction of negative life events and spiritual health ($\beta=0.20$; $p<0.001$) significantly predicted depression. Spiritual health had a moderating effect on the relationship between negative life events and depression (Table 4).

Table 1) Means, standard deviations, skewness, kurtosis, and correlations of the variables

Variable	1	2	3	4	5
Negative life events	1				
Spiritual health	-0.47**	1			
Stress	0.45**	-0.39**	1		
Anxiety	0.52**	-0.43**	0.77**	1	
Depression	0.48**	0.37**	0.70**	0.73**	1
M \pm SD	28.59 \pm 12.81	71.48 \pm 25.30	12.87 \pm 4.54	12.14 \pm 4.77	13.07 \pm 4.73
Skewness	0.14	-0.74	0.22	0.29	0.73
Kurtosis	-0.95	-0.94	-0.98	-0.95	0.07

** Correlation is significant at $p<0.01$

Table 2) Hierarchical regression model for moderator role of spiritual health in the relationship between negative life events and stress in freshmen

Predictor Variables	β	t	p
Control Variables (entered in the 1 st step; Constant)			
Gender	-0.14	-2.35	0.01
Overall F (1.275)=5.46; $p<0.019$; Total R ² =0.02			
Main Effects (entered in the 2 nd step)			
Gender	-0.09	-1.69	0.09
Negative life events	0.44	8.14	0.001
Overall F (2.274)=36.61; $p<0.001$; Total R ² =0.21; Total R ² Change (from previous step)=0.19; F Change=66.35 ($p<0.001$)			
Main Effects (entered in the 3 rd step)			
Gender	-0.06	-1.23	0.21
Negative life events	0.33	5.6	0.001
Spiritual health	-0.22	-3.65	0.001
Overall F (3.273)=29.96; $p<0.001$; Total R ² =0.24; Total R ² Change (from previous step)=0.03; F Change=13.35 ($p<0.001$)			
Interaction Term (entered in 4 th step)			
Gender	-0.05	-1.11	0.26
Negative life events	0.36	5.99	0.001
Spiritual health	-0.25	-4.16	0.001
(Negative life events x spiritual health)	0.13	2.36	0.019
Overall F (4.272)=18.13; $p<0.001$; Total R ² =0.26; Total R ² Change (from previous step)=0.03; F Change=5.60 ($p<0.01$)			

Table 3) Hierarchical regression model for moderator role of spiritual health in the relationship between negative life events and anxiety in freshmen

Predictor Variables	β	t	p
Control Variables (entered in the 1 st step; Constant)		2.59	.01
Gender	-0.16	-2.75	0.006
Overall F (1.275)=7.58; $p<0.006$; Total R ² =0.02			
Main Effects (entered in the 2 nd step)			
Gender	-0.10	-2.07	0.03
Negative life events	0.51	10.04	0.001
Overall F (2.274)=55.63; $p<0.001$; Total R ² =0.28; Total R ² Change (from previous step)=0.26; F Change=100.91 ($p<0.001$)			
Main Effects (entered in the 3 rd step)			
Gender	-0.08	-1.58	0.21
Negative life events	0.40	7.22	0.001
Spiritual health	-0.22	-4.01	0.001
Overall F (3.273)=44.48; $p<0.001$; Total R ² =0.32; Total R ² Change (from previous step)=0.04; F Change=16.08 ($p<0.001$)			
Interaction Term (entered in the 4 th step)			
Gender	-0.06	-1.36	0.17
Negative life events	0.45	8.22	0.001
Spiritual health	-0.30	-5.29	0.001
(Negative life events x spiritual health)	0.25	4.89	0.001
Overall F (4.272)=42.17; $p<0.001$; Total R ² =0.38; Total R ² Change (from previous step)=0.05; F Change=23.99 ($p<0.001$)			

Table 4) Hierarchical regression model for moderator role of spiritual health in the relationship between negative life events and depression in freshmen

Predictor Variables	β	t	p
Control Variables (entered in the 1 st step; Constant)			
Gender	-0.14	-2.36	0.01
Overall F (1.275)=5.59; p<0.019; Total R ² =0.02			
Main Effects (entered in the 2 nd step)			
Gender	-0.08	-1.67	0.09
Negative life events	0.47	8.89	0.001
Overall F (2.274)=43.13; p<0.001; Total R ² =0.23; Total R ² Change (from previous step)=0.21; F Change =79.07 (p<0.001)			
Main Effects (entered in the 3 rd step)			
Gender	-0.06	-1.28	0.19
negative life events	0.38	6.56	0.001
spiritual health	-0.17	-2.97	0.003
Overall F (3.273)=32.52; p<0.001; Total R ² =0.26; Total R ² Change (from previous step)=0.02; F Change=8.83 (p<0.003)			
Interaction Term (entered in the 4 th step)			
Gender	-0.05	-1.10	0.26
negative life events	0.42	7.23	0.001
spiritual health	-0.23	-3.88	0.001
(negative life events x spiritual health)	0.20	3.68	0.001
Overall F (4.272)=28.90; p<0.001; Total R ² =0.29; Total R ² Change (from previous step)=0.03; F Change=13.58 (p<0.001)			

Discussion

The present study had two objectives. The first objective was an examination of the predictive value of negative life events and psychological distress (stress, anxiety, and depression). The second was to determine the ability of spiritual health to act as moderator on that relationship.

Results at the individual level of analysis indicate that negative life events was positively correlated with psychological distress. The results of the study support other studies that found a positive relationship between negative life events and psychological distress [13-16]. Further, in a study, Kraaij *et al.* [17] found significant negative correlations between negative life events and depression. In another study, Girz *et al.* [18] reported correlations between negative life events and depression. Also, Anyan *et al.* [19] in a study, found significant negative correlations between negative life events and anxiety.

According to another important finding of a study, spiritual health was a moderator role in the relationship between negative life events and psychological distress. Based on the findings of the current study, less psychological distress was observed in students with a high spiritual health compared to students with a low spiritual health. The results are consistent with the other studies [20]. This findings have several plausible explanations. Spiritual health can be nurtured in early life. Studies identified that reactive helps individuals to moderate negative life events and confront challenges thereby encouraging health and wellness. A second explanation for this finding is that the spiritual health adolescents use more of adaptive cognitive coping strategies when coping with negative incidents.

In sum, in this study, we have attempted to increase knowledge of the moderating role of spiritual health

in the negative life events. Several limitations must be acknowledged in the present study. First, it is important to note that the present study was cross sectional, meaning that results can only be interpreted as correlational, and direction of causality cannot be determined. Future studies should be encouraged to overcome these limitations by longitudinal design, which would enable quantification regarding the effectiveness of intervention spiritual health in moderating the relationship between role negative life events and psychological distress.

Another issue related to measurement is that data in this study were obtained, using self-report measures, and the results may be contaminated by the variance of the common method. It would be appropriate to complement these measurements with others obtained with different methods. Despite these limitations, the findings of the present study have numerous implications for theory and practice. Considering these findings, psychological distress decreases as negative life events, and this decrease is higher for the students, who have high spiritual health. These findings suggest that attention to program dynamics or culture could improve students' spiritual health. Thus, an implication of this results is that interventions focused on decrease psychological distress may need to increase spiritual health.

Conclusion

Spiritual health is an important moderator of student's negative life events on psychological distress.

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Ethical Permissions: All procedures performed in

the study involving human participants were in accordance with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Informed consent was obtained from all individual participants included in the study.

Conflict of interests: The authors declare no conflict of interest.

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