



Mediating Role of Resilience and Self-Efficacy in the Relationship between Cognitive Emotion Regulation Strategies and Psychological Well-Being of Iranian Students

ARTICLE INFO

Article Type

Original Research

Authors

Roohi S.¹ MSc,
Norouzi H.² MSc,
Yousefi Afrashteh M.*¹ PhD

How to cite this article

Roohi S, Norouzi H, Yousefi Afrashteh M. Mediating Role of Resilience and Self-Efficacy in the Relationship between Cognitive Emotion Regulation Strategies and Psychological Well-Being of Iranian Students. Health Education and Health Promotion. 2019;7(4):183-190.

¹General Psychology Department, Psychology & Educational Sciences Faculty, University of Zanjan Zanjan, Iran

²Clinical Psychology Department, Psychology & Educational Sciences Faculty, Semnan University, Semnan, Iran

*Correspondence

Address: General Psychology Department, Psychology & Educational Sciences Faculty, University of Zanjan Zanjan, Iran

Phone: -

Fax: -

mjdiosefi@gmail.com

Article History

Received: August 27, 2019

Accepted: August 31, 2019

ePublished: December 21, 2019

ABSTRACT

Aims Psychological well-being is a key concept in preventing health problems and increasing life expectancy. Psychological well-being is associated with some positive psychological structures. The purpose of this study was to investigate the mediating role of resilience and self-efficacy in the relationship between cognitive emotion regulation and the psychological well-being of Iranian students.

Materials & Methods In this cross-sectional descriptive study, 285 students (142 men and 143 women) were selected by multistage sampling method from Zanjan University, Zanjan, Iran in the academic year of 2017-2018. Data were collected using psychological well-being, resilience, self-efficacy, and cognitive-emotional regulation questionnaires. Data were analyzed by LISREL 8.8 and SPSS-20 software using Pearson correlation coefficient and structural equation modeling (SEM).

Findings Psychological well-being had a direct relation with resilience, self-efficacy, and catastrophizing strategy. Cognitive emotion regulation strategies showed a direct relationship with resilience and self-efficacy and finally, resilience, and self-efficacy in the relationship between cognitive emotional regulation and psychological well-being strategies had a complete mediating role and incomplete mediating role, respectively.

Conclusion Resilience and self-efficacy play a mediating role in the relationship between psychological well-being and cognitive emotion regulation strategies in Iranian students.

Keywords Cognitive Emotion Regulation; Resilience; Self-Efficacy; Psychological Well-Being ; Students

CITATION LINKS

[1] The structure of psychological ... [2] Psychological well-being ... [3] Gender differences in aspects ... [4] Development of a resilience ... [5] Promoting resiliency among Native ... [6] Development of a new resilience ... [7] Personality as risk and resilience ... [8] Resilience and affect balance ... [9] Resilience and well-being ... [10] Psychological resilience, positive emotions ... [11] Mediating role of resilience in the ... [12] Resilience as a mediator between ... [13] Perceived self-efficacy in cognitive ... [14] Stress, coping and burn-out in nursing ... [15] The presence of resilience is associated with ... [16] Development of self-efficacy of newly graduated ... [17] The relations between perceived self-efficacy ... [18] Cognitive reappraisal ability as a protective factor ... [19] Manual for the use of the cognitive emotion regulation ... [20] Cognitive emotion regulation strategies contributing ... [21] Quality of life, emotion regulation, and heart rate ... [22] Academic Stress and Self-Regulation among University ... [23] Structural equation modeling with ... [24] Measuring optimistic self-beliefs: A Chinese adaptation of ... [25] Cognitive emotion regulation in patients with schizophrenia ... [26] Relationship between resilience, optimism and ... [27] Hope, resilience and subjective well-being among ... [28] Psychological vulnerability, resilience, and subjective ... [29] The role of resilience and coping styles in subjective ... [30] Positive emotions trigger upward spirals ... [31] The mediating effects of team and ... [32] Is there a relationship between ... [33] Impact of self-efficacy on psychological well-being ... [34] An analytical model of ... [35] Mindfulness skills and emotion regulation ... [36] Effectiveness of emotion regulation ... [37] Trait reappraisal is associated with ... [38] Regulating emotions during stressful ... [39] Cognitive emotion regulation... [40] Impact of mental health services on resilience... [41] Cognitive emotion regulation strategies ... [42] The regulation of negative and positive... [43] The Correlation of Self-Constraint ... [44] Emotional intelligence and teacher... [45] Cognitive emotion regulation in the ... [46] The role of cognitive emotion regulation ... [47] The effectiveness of ... [48] The construct of resilience: a critical ...

Introduction

Psychological well-being is a multidimensional construct consisting of autonomy, environmental domination, personal growth, positive relationships with one another, goal orientation in life, and self-acceptance [1]. Psychological well-being is a key concept in preventing health problems and increasing life expectancy [2]. It is a psychological aspect of quality of life defined as the perception of individuals from living in the field of emotional behaviors, psychological functions, and mental health dimensions. It consists of two parts: 1) a cognitive judgment about how people are making progress in their lives and 2) the level of pleasant experiences [3]. Psychological well-being is associated with some positive psychological structures that one of them is resilience [4]. Resilience as dynamic processes help a person to respond appropriately under difficult circumstances [5], while others define it as a personal quality that helps the person to overcome difficulties [6]. People who are more resilient in difficult situations can better deal with threatening conditions, deal well with stress, and have a higher ability to respond to life stress [7]. Previous studies have shown that resilience as a personality trait influences psychological well-being of an individual [8, 9]. Additionally, resilient people can well recover from daily stresses [10]. Therefore, resilience is seen as one of the most important predictors of psychological well-being [11, 12].

The self-efficacy of a person's beliefs about his ability to plan and act leads to specific results [13]. Low self-efficacy leads to negative emotions such as anxiety, depression, helplessness, and weakening of academic performance [14]. Researchers have shown that self-efficacy can lead to resilience in a person [15]. Individuals with high levels of self-efficacy typically have higher resilience and, consequently, a higher ability to manage difficult condition [16]. Student self-efficacy had a significant positive correlation with the six main factors of psychological well-being [17].

Cognitive emotion regulation is an adaptive strategy. Since this strategy directly affects assessments, individuals can employ it to change their emotional response to stressful events to improve performance [18]. Researches have shown the positive re-focusing and positive reappraisal are direct predictors strategies, but self-blame strategies are a reverse predictor strategies of public health [19]. Studies showed that adaptive strategies of cognitive emotional regulation including acceptance, positive refocusing, refocusing on planning, and positive reappraisal have a more significant correlation with resilience, while incompatible strategies include self-blame, rumination, catastrophizing, and others-blame have a negative relationship with resilience [20]. Meule *et al.* believe that positive strategies of cognitive emotion regulation can be improved by improving perceived mental capacity and increasing

individual perception and positive self-awareness [21]. On the other hand, the results of some studies showed that the psychological well-being of Malaysian students is significantly predicted by planning, putting into perspective, blaming others and in this regard, these strategies were able to explain 41% of the variance of psychological well-being [22].

Based on the research background, psychological well-being is one of the variables influenced by structures such as cognitive emotional regulation strategies. Considering the findings of previous studies, the major weakness of them is not examining the mediatory role of resilience and self-efficacy in the relationship between psychological well-being and cognitive emotion regulation in students. So, one of the innovative aspects of this research is the design of resilience and self-efficacy as a mediator variable and to examine other variables associated with it. Moreover, no research has been done about the relationship between these variables in the structural model in the Iranian students. Instead, many of these variables have been investigated separately in previous researches without any relation to other variables. This matter prevents the formation of valid findings and the creation of coherent information in the minds of researchers. These weaknesses themselves can be the strength of this study because we will come up with an integrated model to examine the relationship between these components.

Hence, the purpose of this study was to investigate the mediating role of resilience and self-efficacy in the relationship between cognitive emotion regulation and the psychological well-being of Iranian students.

Materials and Methods

Based on its purpose, the present research is of the applied research type and according to the method of data collection is a descriptive research, and structural equation modeling (SEM), in particular. SEM is a multi-variable analysis method that is from multivariate regression family and, more precisely, is a general linear model expansion that allows the researcher to test a set of regression equations simultaneously [23]. In this study, cognitive emotion regulation was considered as a predictor variable, resilience and self-efficacy as the mediator variables, and psychological well-being as the criterion variable, respectively. The statistical population of the study included students (bachelor, graduate, and Ph.D.) from Zanjan University in the academic year of 2017-2018. This population has been reported by about 10,000 people. Finally, 300 students were selected through multistage sampling method. The following questionnaires were used for data collection:

1- Psychological well-being scale: The short version (18 items) of the Reef Psychological Well-

being Scale, was designed by Ryff in 1989, and revised in 2002. This scale has 18 items and has 6 dimensions (i.e., self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth). Items range in the Likert Spectrum from 7 points out of 1 (totally disagree) to 6 (I fully agree) where the higher scores represent higher psychological well-being [1]. The reliability of this tool in the present study was obtained by Cronbach's alpha (95%), which indicates its proper validity.

2- Resilience scale: This scale has been designed by Connor-Davidson to measure the resilience of adults and has 25 questions that measure different resilience dimensions including individual ability, resistance to negative influences, positive acceptance of change, trust in individual instincts, social support and social security, spiritual faith, and pragmatic approach. The internal consistency of this scale using the Cronbach's alpha coefficient is 0.89. In this scale, for each item, a five-choice grading range (from totally incorrect to always correct) is considered. The minimum and maximum resilience scores of the subject in this scale are 0 and 100, respectively [6].

3- Self-efficacy scale: Self-efficacy scale is a 10-item tool created in by Schouetz and Jeroussalem to assess self-efficiency among adults. The questionnaire identifies individuals' perceptions of their ability to cope and adapt to life. Items in the questionnaire in the Likert spectrum are 4 points from 1 (completely wrong) to 4 (perfectly correct). In the study for internal consistency, the reported Cronbach's alpha was 0.83 [24].

4- Cognitive emotion regulation strategies: This tool is a multi-dimensional questionnaire and a self-report that created in by Garnowski, Craig, and Spinovan. The cognitive emotion regulation strategies questionnaire includes 36 items and has a special form for adults and children. The cognitive emotion regulation questionnaire assesses the cognitive strategy of self-blame, acceptance, rumination, positive re-focusing, re-focus on planning, positive reappraisal, putting into perceptiveness, catastrophizing and others-blame. Cronbach's alpha

coefficient for the above dimensions has been reported in the range of 0.86 to 0.83. The items in the questionnaire are in the 5-point Likert spectrum (from never to always) and all four questions evaluate one factor [25].

To collect the needed data, after visiting Zanjan University and attending its colleges, students were asked to complete the questionnaire according to the instructions given in the questionnaire. A total of 15 questionnaires were removed due to a defect in data analysis. Finally, 285 people (142 men and 143 women) were analyzed in this study. Before filling the questionnaires, the participants initially agreed to their participation in the research. Also, they were provided the necessary explanations about the research purpose and the confidentiality of the information.

The data were analyzed by calculating the descriptive statistics using SPSS 20 and, next, the data were analyzed with structural equations modeling with LISREL 8.8. To test the research hypotheses and determine the role of each of the predictive variables in the variability of psychological well-being, the Pearson correlation coefficient and path analysis were used.

Findings

The total number of participants in the study was 285 students including 142 males (49.9%) and 142 women (50.1%). The average age of participants was 24.0±4.5 years old. Most of the participants were bachelor and single (Table 1).

Table 1) Distribution of absolute and relative frequency of demographic variables in students (N=285)

Variables	No.	%
Gender		
Female	143	50.1
Male	142	49.9
Education level		
BA	153	53.7
MA	103	36.1
PhD	29	10.2
Marital status		
Single	251	88.1
Married	34	11.9

Table 2) The mean scores of research variables and the matrix of correlation coefficients between them

Variables	1	2	3	4	5	6	7	8	9	10	11
1- Self-blame	1										
2- Acceptance	0.234**	1									
3- Rumination	0.264**	0.277**	1								
4- Positive refocusing	-0.322**	-0.072	-0.176**	1							
5- Refocus on planning	-0.277**	-0.058	-0.089	0.556**	1						
6- Positive reappraisal	-0.174**	-0.053	-2.149*	0.439**	0.619**	1					
7- Putting into perspective	-0.098	0.025	-0.113	0.334**	0.314**	0.490**	1				
8- Catastrophizing	0.238**	0.275**	0.152*	-0.291**	-0.246**	-0.183**	-0.069	1			
9- Other-blame	0.120*	0.093	0.098	-0.131*	-0.145*	-0.170**	-0.049	0.485**	1		
10- Resilience	-0.346**	-0.016	-0.164**	0.508**	0.592**	0.511**	0.273**	-0.245**	-0.310**	1	
11- Self-efficacy	-0.409**	-0.011	-0.305**	0.465**	0.584**	0.479**	0.275**	-0.112	-0.198**	0.763**	1
12- Psychological well-being	-0.304**	-0.019**	-0.097	0.448**	0.442**	0.297**	0.108**	-0.360**	-0.359**	0.672**	0.575**

p<0.05; p<0.01**

Table 3) Indices for assessing the relationships between variables

Independent variables	Dependent variables	Direct effect		Indirect effect		Total effect	
		Standard coefficient	t	Standard Coefficient	t	Standard Coefficient	t
Self- efficacy	self- blame	-0.13	-3.40	-0.09	-3.07	-0.22	-4.66
	Rumination	-0.18	-4.84	-	-	-0.18	-4.84
	positive refocusing	-	-	0.11	3.28	0.11	3.28
	refocus on planning	0.21	4.92	0.19	4.75	0.40	7.58
	positive reappraisal	-	-	0.11	3.11	0.11	3.11
	Catastrophizing	0.15	3.91	-	-	0.15	3.91
Resilience	other-blame	-	-	-0.12	-4.13	-0.12	-4.13
	self- blame	-0.15	-3.15	-	-	-0.15	-3.15
	positive refocusing	0.18	3.39	-	-	0.18	3.39
	refocus on planning	0.31	5.08	-	-	0.31	5.08
	positive reappraisal	0.18	3.20	-	-	0.18	3.20
	other-blame	-0.19	-4.35	-	-	-0.19	-4.35
Psychological well-being	self- blame	-	-	-0.11	-3.73	-0.11	-3.73
	Rumination	-	-	-0.03	-2.48	-0.03	-2.48
	positive refocusing	-	-	0.11	3.27	0.11	3.27
	refocus on planning	-	-	0.22	5.51	0.22	5.51
	positive reappraisal	-	-	0.11	3.10	0.11	3.10
	Catastrophizing	-0.22	-4.98	0.03	2.32	-0.19	-4.33
	other-blame	-	-	-0.11	-4.11	-0.11	-4.11
	self- efficacy	0.19	2.89	-	-	0.19	2.89
Resilience	0.47	6.97	0.11	-	0.58	12.55	

The correlations between psychological well-being as a dependent variable with self-blame (-0.304), acceptance (-0.019), rumination (-0.097), positive refocusing (0.448), re-focus on planning (0.442), positive reappraisal (0.297), putting into perspective of (0.108), catastrophizing (-0.360), other-blame (-0.359), resilience (0.672), and self-efficacy (0.575) were significant. Only the correlation between rumination and psychological well-being was not significant and the other correlations were significant (p<0.01; Table 2).

Regarding the correction of the initial model and the elimination of non-significant relationships, all the mentioned relationships were significant (p<0.05). There was a significant positive correlation between psychological well-being as a dependent variable with resilience and self-efficacy, suggesting that with the increase in resilience and self-efficacy, psychological well-being is also improved (Table 3). To confirm the mediation of a variable between two variables, the predictor variable with mediator and mediator variable with the criterion variable should also have significant direct effect; however, if the predictor variable also has a significant relationship with the criterion variable, the mediator is incomplete and, if not significant, it is a complete mediator. Therefore, self-efficacy had complete mediator role between self-blame with psychological well-being, rumination with psychological well-being, re-focusing with psychological well-being, and catastrophizing with psychological well-being. Meanwhile, the self-efficacy had an incomplete mediator role between catastrophizing with psychological well-being. In addition, the resilience between the strategies of self-blame with psychological well-being, re-focusing with psychological well-being, re-focus on planning with psychological well-being, positive reappraisal with psychological well-being and others-blame with

psychological well-being had a complete mediatory role.

Moreover, there was a significant positive correlation between self-efficacy with catastrophizing strategy and positive re-focus, but self-efficacy had a significant negative direct relation with self-blame strategy and rumination. In fact, with increasing the use of catastrophic and positive re-focus strategies, self-efficacy increases while with increasing use of self-blame and rumination strategies, self-efficacy decreases.

Finally, there was a significant positive direct correlation between positive refocusing, re-focusing on planning, and positive reappraisal with resilience and negative direct correlation between self-blame and others-blame strategies with resilience. In fact, by increasing the use of positive refocusing, re-focusing on planning and positive reappraisal, resilience increases while increasing the use of self-blame and other-blame strategies, resilience decreases.

Table 4) General fit assessment indices of model

Indices	Size	Limit required	Status
X ²	-	20.27	-
df	-	11	-
P	>0.05	0.04	Good
X ² /df	<3	0.65	Good
RMSEA	>0.05	0.05	Good
GFI	>0.90	0.99	Good
AGFI	>0.90	0.93	Good
TLI	>0.90	0.98	Good
NFI	>0.90	0.99	Good
CFI	>0.90	0.99	Good

In order to evaluate the overall quality of the model, the general fit assessment indices were used. Each of the eight examined indicators was in the optimal situation. As a general assessment of the fitness status of the path model, we can conclude that the fit of the structural model is desirable (Table 4; Figure 1).

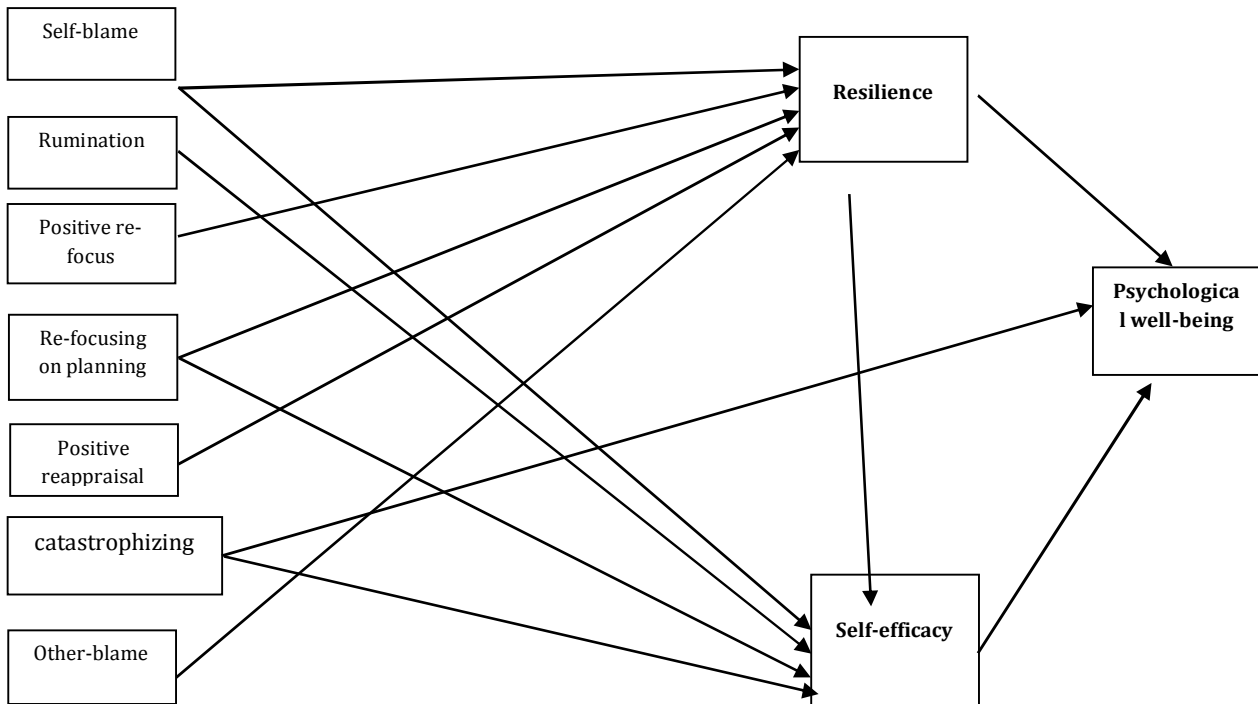


Fig 1) Model of the mediating role of resilience and self-efficacy in the relationship between cognitive emotion regulation and psychological well-being of Iranian students

Discussion

According to the results, there is a significant positive relationship between psychological well-being as a dependent variable with resilience as a mediator variable. So, it is inferred that with increasing the resilience in students, their psychological well-being also increases. The findings of the present study are consistent with those of some other works [26-29]. To explain the obtained results, there is a theory that explain resilience with including elements such as positive emotions will make coping more effective in confronting psychological stress [30]. In this regard, positive affirmation of affections is one of the most important components of positive psychology. Whether somebody has ability to acceptance and positive transmission of emotions, he will have a higher mental health and thus will be more resilient against the problems and experience a higher psychological well-being. Hence, it is clear that resilience in students is an important factor in creating psychological well-being.

According to the results, there is a significant positive relationship between psychological well-being as a dependent variable with self-efficacy as a mediator variable. In other words, with increasing self-efficacy in students, their psychological well-being increases, as well. The findings of the present study are consistent with those of some other studies [31-33]. To explain the results, we should first define the self-efficacy. According to this definition, efficient people

are more confident in their ability to achieve their goals and are healthier, more successful, and more efficient. This definition is probably a good explanation for the positive relationship between self-efficacy and psychological well-being. According to the results obtained in this study, individuals who consider themselves to be effective in managing the difficulties and problems of life will experience a higher level of satisfaction, which is often defined as a psychological well-being. Besides, high self-efficacy leads to a kind of relaxation when confronted with difficult tasks and problems. In fact, beliefs about self-efficacy express and determine the level at which a person completes a difficult task [34]. Therefore, self-efficacy is an important source for achieving psychological well-being.

Based on the results, self-efficacy has a complete mediatory role between self-blame, rumination, positive refocusing, and catastrophizing strategies with psychological well-being. Meanwhile, the self-efficacy between catastrophizing strategy and psychological well-being has an incomplete mediating role. The findings of this study are consistent with the results of other studies [13, 31, 35, 36]. To explain the results, it should be noted that self-efficacy, by definition, reflects the ability of an individual to organize and execute an action. The perception of a position as a threat depends on the interpretation of individuals from that position. So, it can be concluded that the self-efficacy or perception

that individuals possess of their ability transiently lead to the regulation of cognitive or positive assessments of their environment or work [36], which affects the general health of individuals and leads to greater well-being.

Furthermore, the resilience between positive emotional regulation strategies such as positive refocusing, re-focusing on planning, and positive reappraisal with psychological well-being and also between negative strategies of emotion regulation such as others-blame and psychological well-being has a complete mediating role. The findings of the present study are consistent with the findings of other studies [18, 37-39]. In explaining this finding, it can be stated that using this type of emotion regulation strategies may reduce the negative emotions and, as a result, improve cognitive and emotional performance and increase resilience [18]. Therefore, considering the nature of resilience, it can be said that resilient individuals have the skills to think and act adeptly under stressful conditions and resilient people are also generally able to easily escape from stressful life events [40]. In other words, with the promotion of resilience, a person can resist and overcome the factors that cause anxiety. Hence, resilience plays an effective role in the relationship between strategies for emotional regulation and psychological well-being.

Based on the results, there was a significant positive direct correlation between positive refocusing strategies with self-efficacy and a significant negative correlation was found between self-blame and rumination strategies with self-efficacy. In this regard, the results of some studies [41-43] can be used to explain these results. Cognitive emotion as a cognitive and emotional ability can be attributed to the mental, biological, and motivational processes that help to establish a person's relationship with the environment, equip him with efficient and effective responses to situations, and thus improve the individual's sense of efficiency. In fact, the cognitive emotion regulation can enhance the sense of individual control over affairs and enhance the person's belief in managing situations, while the use of negative emotional strategies through the use of ineffective responses and by influencing cognitive and emotional dissonance leads to reduced self-efficacy among people [44].

Finally, positive cognitive emotional strategies such as positive refocusing, re-focuses on planning, and positive reappraisal have significant positive correlations with resilience. Inverse correlations were found between negative strategies of cognitive emotion regulation such as self-blame and others-blame strategies with resilience. The results of the research are consistent with the findings of other studies [37, 45, 46]. In order to explain the findings of the present study, we can point that the basis of resilience is rooted in positive thinking and how people think about causes [47]. Based on this concept,

people who use positive cognitive emotion regulation strategies are those who use optimistic explanation style and attribute the unfortunate event to external, unstable and controllable causes. Such people do not blame themselves for their own problems and thus are more tolerant of problems and difficulties. In explaining the significant negative relationship between cognitive emotional strategies with resilience, it can be stated that using these strategies will allow people with a different perspective to evaluate events and focus more on the negative dimensions and aspects of that event. As a result, they experience more discomfort and stress and cannot cope with this unfortunate event.

Considering what discussed above, one of the research limitations is the collection of data using self-report tools that can reduce the internal validity of the research. Another limitation of the research is its spatial domain; since the research has only been carried out among students at the University of Zanjan, the generalizations of this research should be done with caution. Another limitation is the use of the cross-sectional method in this research, which itself leads to difficulty in interpretations. Therefore, considering the limitations, it is recommended to use more reliable tools in future researches to increase the validity of the research. It is also suggested that future researches be conducted in other societies in order to maximize the ability to generalize the results. Furthermore, applying the longitudinal method in future studies would lead to stronger and more reliable results.

Despite the limitations, the present study examined the role of variables such as resilience, self-efficacy, and psychological well-being include some implications in the field of positive psychology. Psychologists and counselors need to consider the role of resilience and having psychological training programs, including the concepts of resilience and self-efficacy in order to maximize psychological well-being. In addition, since flexibility is a learned attribute [48], counseling programs that seek to increase resilience can be effective in improving psychological well-being.

Conclusion

Resilience and self-efficacy play a mediating role in the relationship between psychological well-being and cognitive emotion regulation strategies in Iranian students.

Acknowledgements: We acknowledge the contribution of all students who completed the research questionnaires.

Ethical Permission: None declared by authors.

Conflict of Interests: None declared by authors.

Authors' Contribution: Roohi S. (First Author), Introduction Writer/Main Researcher (40%); Norouzi H. (Second Author), Assistant Researcher/Statistical Analyst (30%); Yousefi Afrashteh M. (Third Author), Discussion Writer (30%)

Funding/Support: None declared by authors.

References

- 1- Ryff CD, Keyes CL. The structure of psychological well-being revisited. *J Pers Soc Psychol.* 1995;69(4):719-27.
- 2- Vázquez C, Hervás G, Rahona JJ, Gómez D. Psychological well-being and health. Contributions of positive psychology. *Ann Clin Health Psychol.* 2009;5(2009):15-27.
- 3- Roothman B, Kirsten DK, Wissing MP. Gender differences in aspects of psychological well-being. *South Afr J Psychol.* 2003;33(4):212-8.
- 4- Alizadeh H, Kaveh Ghahfarokhi M, Yoosefi Looye M, Roohi A. Development of a resilience fostering program, and its effectiveness on psychological well-being in adolescents with externalizing and internalizing behavioral disorders. *J Excep Child.* 2012;12(3):43-60. [Persian]
- 5- Thornton B, Sanchez JE. Promoting resiliency among Native American students to prevent dropouts. *Education.* 2010;131(2):455-64.
- 6- Connor KM, Davidson JR. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety.* 2003;18(2):76-82.
- 7- Smith TW. Personality as risk and resilience in physical health. *Curr Direct Psychol Sci.* 2006;15(5):227-31.
- 8- Liu Y, Wang Z, Lü W. Resilience and affect balance as mediators between trait emotional intelligence and life satisfaction. *Pers Individ Differ.* 2013;54(7):850-5.
- 9- Doyle N, MacLachlan M, Fraser A, Stiliz R, Lismont K, Cox H, McVeigh J. Resilience and well-being amongst seafarers: cross-sectional study of crew across 51 ships. *Int Arch Occup Environ Health.* 2016;89(2):199-209.
- 10- Ong AD, Bergeman CS, Bisconti TL, Wallace KA. Psychological resilience, positive emotions, and successful adaptation to stress in later life. *J Pers Soc Psychol.* 2006;91(4):730-49.
- 11- Bajaj B, Pande N. Mediating role of resilience in the impact of mindfulness on life satisfaction and affect as indices of subjective well-being. *Pers Individ Differ.* 2016;93:63-7.
- 12- Lü W, Wang Z, Liu Y, Zhang H. Resilience as a mediator between extraversion, neuroticism and happiness, PA and NA. *Pers Individ Differ.* 2014;63:128-33.
- 13- Bandura A. Perceived self-efficacy in cognitive development and functioning. *Educ psychol.* 1993;28(2):117-48.
- 14- Gibbons C. Stress, coping and burn-out in nursing students. *Int J Nurs Stud.* 2010;47(10):1299-309.
- 15- Mealer M, Jones J, Newman J, McFann KK, Rothbaum B, Moss M. The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: results of a national survey. *Int J Nurs Stud.* 2012;49(3):292-9.
- 16- Lau R, Willetts G, Hood K, Cross W. Development of self-efficacy of newly graduated registered nurses in an aged care program. *Australas J Ageing.* 2015;34(4):224-8.
- 17- Cabanach RG, Arias AV, Rodriguez CF, Canedo MF. The relations between perceived self-efficacy and psychological well-being in university students. *De Psicologia.* 2012;29(1):40-8.
- 18- Troy AS. Cognitive reappraisal ability as a protective factor: resilience to stress across time and context [Dissertation]. Denver: University of Denver; 2012.
- 19- Garnefski N, Kraaij V, Spinhoven P. Manual for the use of the cognitive emotion regulation questionnaire. The Netherlands: DATEC, Leiderdorp; 2002
- 20- Min JA, Yu JJ, Lee CU, Chae JH. Cognitive emotion regulation strategies contributing to resilience in patients with depression and/or anxiety disorders. *Compr Psychiatry.* 2013;54(8):1190-7.
- 21- Meule A, Fath K, Real RG, Sütterlin S, Vögele C, Kübler A. Quality of life, emotion regulation, and heart rate variability in individuals with intellectual disabilities and concomitant impaired vision. *Psychol Well-Being Theory, Res Pract.* 2013;3(1):1.
- 22- Hj Ramli NH, Alavi M, Mehrinezhad SA, Ahmadi A. Academic Stress and Self-Regulation among University Students in Malaysia: Mediator Role of Mindfulness. *Behav Sci (Basel).* 2018;8(1).pii: E12.
- 23- Homan, H. (2009). Structural equation modeling with application of lisrel software.
- 24- Zhang JX, Schwarzer R. Measuring optimistic self-beliefs: A Chinese adaptation of the general self-efficacy scale. *Int J Nurs Stud.* 1995;37(3):174-83.
- 25- Grezellschak S, Lincoln TM, Westermann S. Cognitive emotion regulation in patients with schizophrenia: Evidence for effective reappraisal and distraction. *Psychiatry Res.* 2015;229(1-2):434-9.
- 26- Souiri H, Hasanirad T. Relationship between resilience, optimism and psychological well-being in students of medicine. *Procedia Soc Behav Sci.* 2011;30:1541-4.
- 27- Kirmani MN, Sharma P, Anas M, Sanam R. Hope, resilience and subjective well-being among college going adolescent girls. *Int J Hum Soc Sci Stud.* 2015;2(1):262-70.
- 28- Satici SA. Psychological vulnerability, resilience, and subjective well-being: The mediating role of hope. *Pers Individ Differ.* 2016;102:68-73.
- 29- Chen C. The role of resilience and coping styles in subjective well-being among Chinese university students. *Asia Pacific Educ Res.* 2016;25(3):377-87.
- 30- Fredrickson BL, Joiner T. Positive emotions trigger upward spirals toward emotional well-being. *Psychol Sci.* 2002;13(2):172-5.
- 31- Nielsen K, Yarker J, Randall R, Munir F. The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: a cross-sectional questionnaire survey. *Int J Nurs Stud.* 2009;46(9):1236-44.
- 32- Natovová L, Chýlová H. Is there a relationship between self-efficacy, well-being and behavioural markers in managing stress at university students? *J Efficiency Respons Educ Sci.* 2014;7(1):14-8.
- 33- Siddiqui S. Impact of self-efficacy on psychological well-being among undergraduate students. *Int J Indian Psychol.* 2015;2(3):5-16.
- 34- Husain A, Zehra SJ. An analytical model of happiness. *Sustain Sci J.* 2005;10(4):687-98.
- 35- Luberto CM, Cotton S, McLeish A, Mingione CJ, O'Bryan EM. Mindfulness skills and emotion regulation: the mediating role of coping self-efficacy. *Mindfulness.* 2014;5(4):373-80.
- 36- Akhlaghi Yazdinejad F, Hossein Sabet F, Borjali A. Effectiveness of emotion regulation training on increasing self-efficacy and well-being in drug-dependent individuals. *J Occup Health Epidemiol.* 2017;6(1):9-16.
- 37- Carlson JM, Dikecligil GN, Greenberg T, Mujica-Parodi LR. Trait reappraisal is associated with resilience to acute psychological stress. *J Res Pers.* 2012;46(5):609-13.
- 38- Stanton AL. Regulating emotions during stressful experiences: The adaptive utility of coping through emotional approach. In: Folkman S, editor. *The Oxford*

handbook of stress, health, and coping. New York: Qxford University Press; 2011. p. 369-86.

39- Zlomke KR, Hahn KS. Cognitive emotion regulation strategies: Gender differences and associations to worry. *Pers Individ Differ*. 2010;48(4):408-13.

40- Lal S, Ungar M, Malla A, Leggo C, Suto M. Impact of mental health services on resilience in youth with first episode psychosis: a qualitative study. *Adm Policy Ment Health*. 2017;44(1):92-102.

41- Wang Y, Yi J, He J, Chen G, Li L, Yang Y, Zhu X. Cognitive emotion regulation strategies as predictors of depressive symptoms in women newly diagnosed with breast cancer. *Psychooncology*. 2014;23(1):93-9.

42- Brans K, Koval P, Verduyn P, Lim YL, Kuppens P. The regulation of negative and positive affect in daily life. *Emotion*. 2013;13(5):926-39.

43- Suryaningrum C. The Correlation of Self-Construal, Self-Efficacy, and Emotional Regulation Strategy as Cultural Factors with Social Anxiety: Preliminary Study. In:

Proceedings of the 3rd ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2017), 2017 Oct 21-22, Malang, Indonesia. Paris: Atlantis Press; 2018.

44- Penrose A, Perry C, Ball I. Emotional intelligence and teacher self-efficacy: the contribution of teacher status and length of experience. *Issues Educ Res*. 2007;17(1):1-19.

45- Martin RC, Dahlen ER. Cognitive emotion regulation in the prediction of depression, anxiety, stress, and anger. *Pers individ differe*. 2005;39(7):1249-60.

46- Sharifi Bastan F, Yazdi SM, Zahraei S. The role of cognitive emotion regulation and positive and negative affect in resiliency of women with breast cancer. *Iran J Psychiatr Nurs*. 2016;4(2):38-49. [Persian]

47- Seligman ME. The effectiveness of psychotherapy. The consumer reports study. *Am Psychol*. 1995;50(12):965-74.

48- Luthar SS, Cicchetti D, Becker B. The construct of resilience: a critical evaluation and guidelines for future work. *Child Dev*. 2000;71(3):543-62.