



COGNITIVE EMOTION REGULATION, DEPRESSION AND STRESS IN IRANIAN STUDENTS

OFTADEHAL M.¹, MAHMOODI KAHRIZ B.² AND TORABI NAMI M.^{1,3*}

¹Institute for Cognitive Science Studies, Tehran, Iran.

²Department of Psychology, Shahid Beheshti University, Tehran, Iran.

³Department of Neuroscience, School of Advanced Medical Science and Technologies, Shiraz University of Medical Sciences, Shiraz, Iran.

*Corresponding Author: Email- torabi_m@iricss.org

Received: October 12, 2012; Accepted: October 25, 2012

Abstract-

Background and Aim: People of different ethnic and cultural backgrounds may apply various general or specific coping strategies in response to stress. In the face of a specific stressful life event, one may take a maladaptive cognitive style and strategy, potentially leading to depression or anxiety. Given the cultural particulars, we hypothesized that coping strategies amongst Iranian students entail a specific cognitive style differentiating them from their peers in other communities. This study investigated the predictive role of cognitive emotion regulation strategies (self-blame, other-blame, catastrophizing, positive refocusing, positive reappraisal, and acceptance) for depression and anxiety. **Materials and Methods:** 277 student (100 males, 177 females) completed the Cognitive Emotion Regulation Strategies Questionnaire (CERQ) and the Depression Anxiety Stress Scales (DASS). Multivariate regression analysis was used to evaluate both assessment tools obtained dataset.

Results: Other-blame was the strongest negative predictor of depression followed by positive refocusing and positive reappraisal coping strategies. Other-blame, acceptance, self-blame and catastrophizing strategies were in turn the strongest positive predictors for stress. Other-blame was positively correlated with age. Results indicated that, other-blame and projection is the mostly applied coping strategy amongst our study subjects.

Conclusion: The frequently used other-blame coping strategy among our Iranian students study population (especially in those of older age) is predictive for stress. To prevent this, structured counselling and educational programs at target population or general public levels should be sought to rectify their improper coping styles in the face of misery.

Keywords- cognitive emotion regulation, stress, depression, other-blame, students

Citation: Oftadehal M., Mahmoodi Kahriz B. and Torabi Nami M. (2012) Cognitive Emotion Regulation, Depression and Stress In Iranian Students. Neuroscience Research Letters, ISSN: 0976-8866 & E-ISSN: 0976-8874, Volume 3, Issue 1, pp.-39-42.

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Introduction

Several theories have introduced cognition as a culturally influenced phenomenon [1,2]. People of various cultural origins have shown to take different strategies to adapt with a wide range of stressors they encounter [3]. Classical approach has categorized coping and problem solving strategies into two styles, one belonging to western (North American and European) and the other to eastern (mainly Chinese and Japanese) cultures. Being short of evidence, this classification is not scientifically supported. The cognitive style seems to be more widely varied than the two mentioned. For instance, Middle Eastern countries including Iran have their own cultural particulars which conforms neither to Western nor Far-Eastern styles. Using distinct proverbs, metonymies, and sentences with perhaps a different coping style seen among Iranians, might have possibly rooted in the country's frequently experienced invasions and overrun by Mongolian and Arabs over history. These events have possibly affected Iranians' coping style in the face of emotional stressors. It seems that cultural differences potentially influence cognitive processes.

The cognitive regulation of emotion is an important part of the coping strategies. Monat and Lazarus [4] have defined coping as "an individual's efforts to master demands that are appraised as exceeding or taxing his or her resources". Researchers have divided coping strategies into two major styles: 1) problem-focused coping which are strategies directly addressing the stressor; and 2) emotion-focused coping as strategies aiming at emotional regulation with regard to the stressor [5]. On the other hand, the paradigm which goes across the boundaries of the above division focuses on the cognitive (what we think) versus the behavioural (what we do) dimensions [6]. The Cognitive Emotion Regulation Questionnaire (CERQ) is an assessment measure for coping styles which measures the 'cognitive' coping as quite a separate entity from the 'behavioural' coping strategies in regulation of emotion. Cognitive coping strategies essentially refer to rather stable styles of dealing with negative life events. It is assumed that, in certain situations people may use specific cognitive strategies, totally different to other contexts. Self-blame and catastrophizing are amongst strategies included in the CERQ. These refer to the thoughts of blaming

one's self for what he has experienced, while emphasizing on its terror [7,8]. Compelling evidence have suggested that, the affective connotations carried by self-blame and catastrophizing judgments may lead to depression [9,10].

Other strategies used when one encounters stress, include positive refocusing and positive reappraisal. These coping methods substitute the actual emotionally painful event with positive and pleasant thoughts or in a sense, linking a positive meaning to what occurred [11,12]. Previous studies have demonstrated that, cognitive coping methods such as self-blame and catastrophizing positively correlate with depression or other cognitive-mental drawbacks; whereas, positive reappraisal indicates the proper cognitive-emotional innate capabilities [7,8,11,13]. Other-blame refers to the projection of self faults on others, hence blaming them [14]. Acceptance, on the other hand, is the act of resigning to what has happened [11]. One's affects and behaviours are shown to be critically influenced by the emotion regulation and this plays a significant part in controlling negative emotions which in turn can partly determine the state well being [15-18]. The individual and cultural variability in methods used for emotion described by Amone-P'Olak, et al. [16], has suggested that, some methods appear to be more adaptive than others. Distinct cognitive emotion regulation strategies can help positive confrontation with negative experiences [16]. The focus of these strategies are acting on the stressors as well as controlling the emotions associated with them [16]. Furthermore, the cognitive regulation of emotions is inextricably associated with human life and has helped managing emotions following stressful events [19,20].

In addition, the extent of catastrophizing and self-blame are related to some reported psychopathological symptoms [17,18,21-26]. There have been some local investigations showing how cognitive emotion regulation scales varies in different cultures [27]. Given the above insights, and hypothesizing that the Iranian cognitive emotion regulation possibly follows a different style as compared to other communities, we chose a convenience sample of Iranian university students to investigate their cognitive emotion regulation strategies with regard to stress. Although these subjects do not necessarily represent the general population, the obtained data may provide a view on what cognitive- emotion coping strategies are used by Iranians in response to stressful situations.

Materials and Methods

Participants

A convenience sample of 277 Persian speaking, Iranian university students (100 males, 177 females) who enrolled in different academic programs enrolled in the current survey. The mean±SD for their age was 22.5 ± 2.8 years.

Instruments

Cognitive Emotion Regulation Questionnaire (CERQ)- This is a multidimensional questionnaire constructed to define cognitive emotion regulation strategies when someone experiences a stressful event or situation. In contrary to other coping questionnaires, the present tool refers exclusively to an individual's thoughts. The CERQ comprises several strategy domains including self-blame, catastrophizing, acceptance, positive refocusing, positive reappraisal and other-blame. These domains are sub-scaled as 26 item rated on a 5 point score. Validation studies have substantiated that,

the sub-scales acquire a proper internal consistencies, with the Cronbach's alpha ranging from 0.67 to 0.81 [27]. Moreover, this questionnaire has been translated into different languages and subsequently been validated [28,29]. The Persian version of CERQ has been assessed for its validity and reliability [30]. This has led to the alpha of 0.77, 0.70, 0.64 and 0.76 for self-blame/catastrophizing, acceptance, positive refocusing/positive reappraisal and other-blame, respectively.

The Depression Anxiety Stress Scales (DASS)- This 42-item self-rated questionnaire has been developed to measure the negative emotional states including depression, anxiety and stress. Each question entails a 4-point response format. Concerning the validation of this questionnaire, DASS-42 depression and stress subscales are shown to highly correlate with Beck's Depression Inventory (BDI-II) and the Subjective Stress Scale (SSS), with the correlation coefficients of 0.849 and 0.757, respectively. When administered to a normative sample, the Cronbach's alpha for reliability of depression, anxiety and stress subscales are reported to be 0.91, 0.84 and 0.90, respectively [31].

Procedure

Our approach was to visit university classrooms, explaining the study rationale and participation requirements. The students who voluntarily decided to participate in this survey were debriefed about the study. Following a verbal consent, they completed all self-report questionnaires, anonymously.

Statistical Analysis

Employing the stepwise method, three linear regression analyses were performed. Dependent variables were depression and stress. CERQ scales (self-blame, catastrophizing, acceptance, positive refocusing, positive reappraisal and other-blame) were considered as independent variables.

Results

Linear regression analysis revealed that, other blame is the mostly correlated predictive factor for depression. The beta coefficient for the predictive role other-blame was -0.375 indicating that, it negatively predicts depression. In addition, next step analysis likewise showed a negative predictive role of positive refocusing and positive reappraisal with regard to depression. However the two other variables did not demonstrate a predictive role for depression. Results of t analysis for the two CERQ subscales which significantly correlated with depression are outlined in [Table-1].

Furthermore, to evaluate the predictive role of CERQ sub-scale strategies (self-blame, catastrophizing, acceptance, positive refocusing, positive reappraisal and other-blame) with regard to stress, stepwise linear regression analyses were performed.

Based on our results, the strongest factor which predicts stress is other-blame. The beta coefficient of -0.513 indicates that, other-blame negatively predicts the stress. Moreover, next step analysis demonstrated that, acceptance positively predicts stress. There was a negative correlation between positive refocusing, positive reappraisal and stress. Other variable did not show to attain a significant predictive role with regard to stress. The t analysis for each of three variables which significantly correlated with stress is summarized in [Table-2].

Further results indicated a significant and positive relationship between other-blame coping strategy and the age, with a beta coefficient of 0.287.

Taking age as the depending variable, the stepwise linear regression analysis was carried out to assess its relationship with CERQ sub-scales, showing that other-blame is the sole factor predicting age. The positive relationship suggests that, older participants were more likely to apply the other-blame coping strategy in the face of adversity. The *t* analysis for other-blame and its significant correlation with age is depicted in [Table-3].

Table 1- Regression coefficients for depression

	Non-standardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	B	Std. Error	Beta		
1 (Constant)	30.514	2.079		14.679	0
Other-blame	-1.303	0.194	-0.375	-6.699	0
(Constant)	36.121	2.806		12.871	0
2 Other-blame	-1.347	0.192	-0.387	-7	0
3 Positive, Refocusing-Positive Reappraisal	-0.321	0.11	-0.162	-2.927	0.004

Table 2- Regression coefficients for stress

	Non-standardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	B	Std. Error	Beta		
1 (Constant)	32.365	1.821		17.774	0
Other-blame	-1.688	0.17	-0.513	-9.912	0
(Constant)	28.821	2.264		12.728	0
2 Other-blame	-1.723	0.169	-0.524	-10.188	0
acceptance	0.252	0.098	0.133	2.586	0.01
(Constant)	30.41	2.296		13.243	0
3 Other-blame	-1.444	0.192	-0.439	-7.538	0
acceptance	0.413	0.11	0.217	3.739	0
Self-blame and Catastrophizing	0.198	0.067	0.195	2.964	0.003

Table 3- Regression coefficients for age

	Non-standardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	B	Std. Error	Beta		
1 (Constant)	19.832	0.705		28.145	0
Other-blame	0.327	0.066	0.287	4.961	0

Discussion

Anxiety and depression are affective disorders potentially induced by experienced negative emotions. Furthermore, non-adaptive coping strategies such as catastrophizing or self-blame and other-blame are known to contribute to depressive and anxiety-related symptoms, respectively. On the other hand, the proper cognitive ability to control and manage emotions would help positively coping with stress [32].

Behavioural self-blame involves the attribution of undesirable events to one's behaviours. This allows a person to perceive that the occurrence of similar future events is more controllable. It has been reported that, the tendency to "catastrophize" during painful stimulation directly contributes to the experience of a more intense pain, suffering and emotional distress [10]. Catastrophizing is conceived as an exaggerated negative "mental set" upon actual or anticipated pain or physical illness experience [33,34].

Results from the current survey substantiated that, the maladaptive "other-blame" coping strategy is the most determinant predictor for depression, stress among participants from Iranian students study

population. Based on our results, this CERQ sub-scale shows a negative relationship with depression and a positive relationship with stress and age.

Other-blame corresponds to thoughts of blaming other for whatever misery one has experienced. This coping strategy holds others responsible for what has happened and refers the experienced adversity to others' fault. Local psychiatry and clinical psychology experts' panels have discussed and argued to define why Iranian people seek the problem source in others and tend to project their shortcomings.

In agreement with our findings, other empirical research involving the CERQ have reported that, other-blame capably predicts the variance scores for depression, anxiety and suicidality [18,21,22,32]. However, the relationship between other-blame and depression in these studies is positive. The cultural underpinnings may at least partly explain the difference between our findings as compared to the surveys done in the west.

An investigation declared that, there is a positive relationship between other-blame and neuroticism, depression, anxiety, hostility and obsession-compulsion and a negative relationship between other-blame and self-esteem [21]. All above studies are in consensus that the more depress or anxious an individual is, the more frequent he or she applies the other-blame for coping with stress. People with a high neurotic index tend to more blame others for what they have experienced, project their responsibilities and criticize other people for their own drawbacks and weaknesses.

The negative correlation we found between positive-refocusing, positive-reappraisal and stress suggests a sort of 'protective' effect seen with the adaptive cognitive coping strategies. Our results were in line with other researches involved to investigate this relationship [18,21-23,25,26,35].

We found the other-blame strategy the most frequent coping method applied by our Iranian students study population which negatively correlated with distress. Iranians do not seem to relate the adverse events to their own responsibility. This may root in their deterministic beliefs denoting that, the adversity is not necessarily under their control and receives influence from other sources. Therefore the act of blaming others for one's own weaknesses possibly stems from the cultural schemas. We also reported a positive relationship between age and other-blame strategy showing that, compared to adolescents, adult more frequently use other-blame strategy in coping with problems and tend to project their responsibility to others. This result is consistent with other researches revealing a positive relationship between age and other-blame coping strategy [21].

Conclusion

Taking all these together, the cognitive and adaptive side of coping is shown to play a central part in theoretical models intended to explain mental health problems. There is however a paucity of these adaptive strategies amongst the methods Iranian students take to cope with stress. When encountered with stress, other-blame (the most frequently used strategy in our study population) is predictive for anxiety related symptoms and stress. To prevent the adverse consequences of this maladaptive and meanwhile preferred method, structured counselling and educational programs at target population or public levels should be sought to rectify our people's improper coping styles in the face of stress.

Acknowledgments

The authors would like to thank authorities and students of Azad University of Tehran for their contribution to this work.

Conflict of Interests

The authors had no competing interest to declare.

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