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Explaining Generalized Anxiety Disorder based on Cognitive Regulation Strategies of Emotion, Poor understanding of Emotions and thought-Action Combination

Azam Davoodi [1], Hamid Taher Neshat Doost [2], Mohammad Reza Abedi [3], Hooshang Talebi[4]

1. Ph.D. Student of Psychology, Department of Psychology, Sciences and Research Branch, Islamic Azad University, Isfahan, Iran. Email: davoodi.azam@yahoo.com

2. Professor, Faculty of Education & Psychology, University of Isfahan, Isfahan, Iran. Email: h.neshat@edu.ui.ac.ir

3. Associate professor, Faculty of Education & Psychology, University of Isfahan, Isfahan, Iran. Email: m.r.abedi@edu.ui.ac.ir

4. Associate professor, Department of Statistics, University of Isfahan, Isfahan, Iran. Email: H-Talebi@sci.ui.ac.ir

Corresponding author: Azam Davoodi, Ph.D. Student of Psychology, Department of Psychology, Sciences and Research Branch, Islamic Azad University, Isfahan, Iran. Email: davoodi.azam@yahoo.com

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Abstract

Generalized anxiety disorder is influenced by different emotional and cognitive components. The purpose of this study was to simultaneously investigate the role of cognitive regulation strategies of emotion, poor understanding of emotions, and thought-action combination in patients suffering from generalized anxiety disorder. The correlational method of the study was used in this study and the sample included 120 patients suffering from generalized anxiety disorder selected among the patients of four psychiatric centers in the city of Shiraz through available Sampling. The Cognitive Regulation Strategies Of Emotion questionnaires (Garnefsky et al, 2001), Beck's Anxiety (1988), Thoughts Combination Instrument (Wells et al, 2001) and Toronto's 20 Alexithymia Scale (Begbi et al, 1994) were used to collect data. The results showed that there was a significant and positive relationship between the difficulty in identifying and describing emotions, non-adaptive/maladaptive emotions regulation strategies and thought-action combination with generalized anxiety disorder. Stepwise Regression Analysis indicated that the difficulty in identifying emotions, non-adaptive emotions regulation strategies and the difficulty in describing emotions are appropriate predictors for this disorder, respectively. In overall, with regard to the role of

emotional deficits and thought-action combination in generalized anxiety disorder, the above variables should be considered in prevention and treatment programs of this disorder.

Keywords: Emotion regulation deficits, thought-action combination, behavioral deterrence, generalized anxiety disorder

Introduction

Generalized anxiety disorder is the most common anxiety disorder among adults with the prevalence of 6% during lifetime (Snyder et al, 2000). Approximately, 12% of patients referring to psychiatric clinics are those suffering from generalized anxiety disorder (Kessler, Claire & Vitchen, 2001). Fourth Diagnostic and Statistical Manual of Mental Disorders has introduced this disorder as an excessive and uncontrollable worry about various incidents that continue on most days, at least for six months. Anxiety causes distress and action-disorder and can be associated with at least the following three characteristics: restlessness, fatigue, difficulty in concentrating or amnesia, irritability, muscle cramp and difficulty in sleeping (American Psychiatric Association, 2000). Despite high prevalence of generalized anxiety disorder, there is a poor understanding of this disorder compared to other anxiety disorders and fewer researches have assessed the psychopathologic mechanisms involved in this disorder (Dougas, 2000). Therefore, there are more difficulties in treating people suffering from this disorder

Recently, theorists have developed several new models for better understanding of the mechanisms available in generalized anxiety disorder. Each mechanism has highlighted a specific aspect of the explanation for this disorder. For example, Menin's Lack of Emotional Regulation Model (2004) refers to the emotional aspects and Wells' Supra-Cognitive Model (1997) refers to the importance of controlling thoughts in creating this disorder.

In the emotion dysregulation model, Generalized Anxiety Disorder is characterized by deficits in experience and emotion regulation. In particular, this model holds that people with such disorder have difficulty to identify, describe and distinguish their emotional experiences from each other (poor understanding of emotions). Emotions, instead of being a source of information controlling the behavior, are annoyingly and unsuitably experienced (Menin, McLaughlin & Flanagan, 2009). Moreover, people suffering from this disorder have difficulty in appropriately recognizing their emotion and reducing the extent of negative emotional experiences (non-adaptive management and regulation of emotion) (Turk et al, 2005). For these people, this concern is a cognitive process used to handle the emotional experience but other strategies such as non-adaptive cognitive strategies may also be used to regulate the emotion (Ditcher, et al, 2008).

Cognitive regulation strategies of emotion are cognitive responses to events that consciously or unconsciously act for reforming intensity or persons' emotional experience or the event (Campell-Siles & Barlow, 2005; Rothenberg & Gross, 2007; Williams & Berg, 2007). Emotion regulation through recognition is inseparably associated with human life. Cognition and cognitive processes can help people regulate and manage emotions during threatening events and after experiencing stress-bringer events (Garnfsky, Graij & Aspinhawn, 2001). Garnfsky et al (2001) have introduced nine consciously cognitive regulation strategies of

emotion and demonstrated that it can be divided into two distinct strategies. First, strategies which are theoretically more adaptive including positive refocusing, positive reappraisal, development perspective and refocusing on planning applications and admissions. Second, strategies which are theoretically non-adaptive and include self-blame, blaming others, rumination and catastrophe.

Researches have showed that people suffering from Generalized Anxiety Disorder show more emotion intensity than the control group and have less skill to identify, describe, and regulate negative emotion reactions (Menin et al, 2005, 2007, 2009; Turk et al, 2005). Aldao and Nolen-Hokesma (2010) found that non-adaptive emotion regulation strategies (rumination and suppression) showed a positive correlation with Generalized Anxiety Disorder, and adaptive strategies (reappraisal and problem solving) showed a significant negative correlation with the disorder. Martin and Dalan (2005) also reported that self-blame, rumination, catastrophe and positive reappraisal can significantly predict symptoms of anxiety.

However, the difficulties in regulating emotions are not only known as predisposing factors for anxiety disorders and cognitive factors are also influential (Arbach, Abla & Howe, 2007). The point under question is whether anxiety disorder is influenced by emotional factors or cognitive factors? Thought-action combination has been conceptualized as an important cognitive bias leading to misinterpretation of the meaning (Rachman, 1998). Thought-action combination believes that people and actions are inseparably connected to each other and raises the assumption of false causal relationships between the individual's thoughts with external reality. It is composed of two elements: 1. Moral thought-action combination which holds that thinking about an unethical action is as bad as doing it, and 2. Probable thought-action combination holding that thinking about a negative incident for self and others increases the probability of happening the event (Rachman, 1993). In the recent decades, this structure has been focused on by researches related to anxiety disorders. Although, these cognitive biases are more raised in obsessive-compulsive disorder (Shafren and et al, 1996; Wales & Papajorjou, 1998, Myers et al, 2009; Rizz et al, 2010), a number of researchers have studied its role in anxiety disorder.

Abramotiz et al (2003) showed that patients with generalized anxiety disorder and obsessive-compulsive disorder had higher scores in both types of thought-action combination than the non-patient group. A number of studies have also shown that probable thought-action combination subscale scores are positively correlated with scores of the Worry Questionnaire (Hazelt-Stevens , Zooker & Kerask, 2002; Cools, Menin & Hymberg, 2001). The probable subscale scores predicted that which one of the subjects has all or part of the diagnostic criteria for generalized anxiety disorder (Hazelt-Stevens et al, 2002). Thompson-Holands's , Farchuni and Barlow's study (2013), in a sample of patients with a diagnostic combination, showed that the presence of any Generalized Anxiety Disorder diagnosis is the most powerful predictor for thought-action combination and this cognitive structure is decreased after treatment. According to (Racine et al, 1999), the experimental manipulation of thought-action combination leads to increased frequency of intrusive thoughts, confusion level and resistance. The researchers concluded that thought-action combination may develop disturbing thoughts.

In general, theoretical and research basics show that the variables of cognitive regulation strategies of emotion, understanding emotions and thought-action combination have each independently a relationship with anxiety disorder. However, no study has directly reviewed the role of these three variables together with Generalized Anxiety Disorder in way that we can say which of the variables has a more influential role in this disorder. Obviously, having this information may provide new strategies in both prevention and treatment for the related therapists. Therefore, the present study was conducted to examine the role of cognitive regulation strategies of emotion, poor understanding of emotions and thought-action combination simultaneously in patients suffering from generalized anxiety disorder.

Method

The research's method is descriptive and has a correlational design. The study sample included all patients suffering from generalized anxiety disorder who consulted to psychiatric centers of Shiraz city in the year 2012. Among the clients of four psychiatric centers, 120 patients suffering from generalized anxiety disorder were selected using Available Sampling aging 18-55 years old. Selection criteria for the patients and their entry into the sample was the psychiatrist diagnosis, the diagnostic interviews using the Structured Clinical Interview for Axis One Disorders (SCID-I) by a clinical psychologist and gaining mean and higher score on Beck's Anxiety Inventory. In addition, other criteria such as getting diagnosis for the first time, the lack of psychotherapy background, simultaneous detection of other mental disorders, lack of brain damages, and having a high school education, higher level of education in understanding, and responding to the questionnaire were considered in choosing patients. Four instruments were used to collect data in this study.

Toronto Alexithymia Scale -20 (TAS-20): This scale consists of 20 questions; three subscales measure the difficulty in identifying feelings, difficulty in describing feelings and objective thinking in Likert's rating scale from score 1 (completely disagree) to score 5 (totally agree). Psychometric properties of this scale have been verified in numerous researches in clinical and non-clinical groups (Parker, Taylor and Bageby, 2003; Lovez et al, 2001). In the Persian version of this questionnaire, the Cronbach's alpha coefficients for total Alexithymia and three difficulty subscales in identifying feelings, difficulty in describing feelings and objective thinking was reported 0/85, 0/82, 0/75, 0/72, respectively. The reliability was reported in the range of 0/70 to 0/77. Simultaneous Persian scale validity was obtained to be -0/77, -0/68 and -0/44, respectively measured by emotional intelligence, psychological well-being and psychological distress questionnaire. In addition, confirmatory factor analysis results also confirmed three subscales of Persian version (Besharat, 2007). In the present study, two subscales of difficulty in identifying feelings and difficulty in describing feelings were used to assess poor understanding of emotions as emotional component.

Cognitive Emotion Regulation Questionnaire (CERQ): This questionnaire has 36 items and each item is measured from Never (1) to always on a Likert scale of 5 ° (5). The questionnaire is used for the identification of individual cognitive regulation strategies of emotion after experiencing stressful life events. It has nine subscales including refocusing planning, positive reappraisal, positive refocusing, blaming others, self-blame, intellectual

rumination, view/perspective development, catastrophe and acceptance (Garnefsky, Grayji and Spinhown, 2001). Samani and Sadeqi's research (2010) showed a seven -factor structure for the questionnaire. Cronbach's alpha coefficients were reported to in the range of 0/62 to 0/91 for these factors and test-retest reliability coefficients in the range of 0/75 to 0/88. In this study, two general factors were obtained in analyzing the second factor on the primary factors of the questionnaire, which are called positive cognitive emotion regulation (positive refocusing, positive re-planning and reassessing, perspective development) and negative cognitive regulation strategies (blaming others, self-blame, rumination, catastrophe and acceptance). General factor scores were used in this study.

Thoughts Fusion Inventory (TFI): It is a 14- item self-report scale that measures persons' beliefs about meaning, the risks and consequences of their thoughts. The responses to this scale are graded based on the range of zero (I don't believe at all) to 100 (I quite believe it) based on decupling scores. Goiliam (2004) reported good internal consistency coefficient (Cronbach's alpha, 0/89) for the test and the correlation of all materials were in the range of 0/35 to 0/78 A significant correlation was also reported between Thoughts Fusion Inventory and metacognition questionnaire -30 (MCQ-30) and a thought-action combination (Shefran et al, 1996) (Goiliam, Wells and Cartwright -Hutton, 2004). Mirz, Fisher and Wells (2008) have also reported reliability coefficient of the test to be 0/69 by sing test-retest. In Iran, Shirinzadeh Dastgiri, Nateqyian and Goudarzi (2006) reported the internal consistency coefficient for the total test to be 0/89 and for the sub-factors to be 0/84 to 0/76 and correlation of subscales together with the total scale to be 0/44 to 0/88, which indicates an acceptable validity and reliability for the scale.

Beck Anxiety Inventory (BAI): Beck et al (1988) developed this questionnaire which specifically measures clinical anxiety symptoms in individuals. This questionnaire is a 21-item scale in which each question is scored in a four-part range from 0 to 3. The internal consistency coefficient is equals to 0/92; test-retest reliability was reported to be 0/75 within one-week interval and 0/30 to 0/76 for its materials. Five types of content, concurrent, structural, factorial and diagnostic validity has been measured for this test which all show a high efficiency of this instrument in measuring the extent of anxiety (Beck et al, 1988). Kaviani and Mousavi (1999), in reviewing psychometric characteristics of this test in Iranian population, reported the validity coefficient of 0/72 and the reliability of 0/83 within a month using test-retest and Cronbach's alpha was 0/92.

Results

The study sample included 120 patients suffering from Generalized Anxiety Disorder (80 females and 40 males) with the mean and age standard deviation of 7/14 and 29/5, respectively. Table 1 shows Mean, standard deviation and correlation between variables of cognitive regulation strategies of emotion (adaptive and non-adaptive regulation strategies), poor understanding of emotions (difficulty in identifying and describing emotions), and generalized anxiety disorder.

Table 1,
Mean, standard deviation and correlation between the study's variables

Variables	M	SD	1	2	3	5	6	7
1.generalized anxiety disorder	32.48	10.88	1					
2.adaptive regulation strategies	46.02	12.06	.36**	1				
3.non- adaptive regulation strategies	58.83	13.91	-.13	-.06	1			
4.difficulty in identifying emotions	20.99	6.10	.41**	.49**	-.09	1		
5.difficulty in describing emotions	14.48	4.42	.31**	.26**	.007	.66**	1	
6.thought and action combination	40.28	20.33	.18*	.30**	.18*	.26**	.25**	1

** P<0.01 * P<0.05

As shown in Table 1, there is a significant positive correlation between non-adaptive emotion regulation strategies, difficulty in identifying and describing emotions with generalized anxiety disorder (p <.01) and thought-action combination with generalized anxiety disorder (p .05). However, there is no significant relationship between adaptive emotion regulation strategies and generalized anxiety disorder.

Stepwise Multiple Regression Analysis was used to determine the weight of each emotion and thought-action combination variables in generalized anxiety disorder. The results showed that difficulty in identifying emotions (the first step) (F = 20.03, p <.001) as the first variable explains 17 % of the variance of generalized anxiety disorder. In the second step, the difficulty in identifying emotion and non-adaptive regulation strategies (F = 14.43, p <.001) were two emotional components which brought the explained variance of generalized anxiety disorder to 20%.

The third and final step of difficulty in describing emotions besides the difficulty in identifying emotion and non-adaptive regulation strategies (F = 12.25, p <.001) explained 22% of the variance in generalized anxiety disorder. It seems that although there exists a significant relationship between thought-action combination and generalized anxiety disorder, emotional variables have a significant role in predicting generalized anxiety disorder. Standardized and non-standardized coefficients of β are presented in Table 2 for significant predictor variables in generalized anxiety disorder.

Table 2,
Results of stepwise multiple regression of cognitive emotion regulation strategies, poor understanding of emotion and thought, and action combination on criterion variables of generalized anxiety disorder

Steps	Predictors	B	SE	β	t	P	R	R^2	F
1	Difficulty in identifying emotions	73/0		41/0	47/4	0001/0	412/0	17/0	*03/20
2	Difficulty in identifying emotions	54/0	18/0	30/0	14/3	004/0	452/0	20/0	*43/14
	Non-adaptive regulation strategies	34/0	09/0	21/0	84/2	04/0			
3	Difficulty in identifying emotions	48/0	15/0	28/0	67/2	005/0	473/0	22/0	*25/12
	Non-adaptive regulation Strategies	30/0	10/0	18/0	04/2	05/0			
	Difficulty describing in emotions	19/0	07/0	14/0	01/2	04/0			

* P<0.001

Discussion

The present research aimed to investigate the role of cognitive regulation strategies of emotion, poor understanding of emotions and thought-action combination simultaneously in generalized anxiety disorder. The findings showed that there exists a significant and positive relationship between difficulty in describing and identifying emotions and non-adaptive regulation strategies of emotion with generalized anxiety disorder. These two variables have a significant role in explaining the variance of generalized anxiety disorder. These findings are in line with the previous studies of Menin et al, 2005, 2007, 2009; Alda'o and Nolen-Hokesma (2010), and Martin and Dalan (2005). It is believed that concern as the main feature of generalized anxiety disorder allows people to avoid unpleasant emotional experiences by keeping the focus on the cognitive activity. Cognitively processing emotional experience, in fact, reduces consciousness of the emotional state. Thus, people suffering from generalized anxiety disorder may be faced with difficulty in diagnosing primary emotions such as anger, sadness, fear and joy and instead experience their emotions inseparably and confusingly (poor understanding of emotions) (Nevik-Klein et al, 2005). Thus, they cannot access the adaptive information in their emotions or use it to deal with different situations. Finally, due to emotional responses and its poor understanding, these patients harrowingly experience emotions and they are constantly engaged with their emotions (Turk et al, 2005).

So, the patients' emotions are placed in their priorities and try to modify and regulate it.

Studies show that several cognitive regulation strategies of emotion have a negative relationship with psychological damages while other strategies are associated with the occurrence and preservation of clinical disorders (Alda'o & Nolen-Hokesma, 2010). They found that non- adaptive strategies of rumination and suppression were mainly associated with symptoms of the disorder compared to the adaptive reappraisal strategies and problem solving. Regarding the confusion that exists internally in patients suffering from generalized anxiety disorder, it seems that these people experience more needs to use emotion regulation strategies (Menin et al, 2009). These non-adaptive regulation strategies may be protective against concern and negative emotions in short term but continuous use can limit social world and interpersonal relationships of individuals over the time (Ditcher et al, 2008). Thus, the identification of emotion regulation strategies and emotional deficits associated with generalized anxiety disorder can help detect emotional components which have a more important role in creating, maintaining and improving the disorder. This issue can be useful in prevention programs based on cognitive regulation skills (Beraket & Katalog, 2006) and also in emotion regulation treatment (Menin, 2004; Alda'o & Nolen-Hokesma, 2010).

Another part of the research findings revealed that there is a significant relationship between thought-action combination with generalized anxiety disorder which are in line with the research's findings of Racine et al (1999), Hazlet-Stevens, Zouker and Kerask (2002) and Cools, Menin and Hymberg (2001). Probable thought-action combination is more similar to supra-cognitive beliefs common in people with generalized anxiety disorder so that this concern may influence incidents that they fear to be occurred. For example, if I am less concerned about my health, there is less probability of getting sick (Hazelt-Stevens, Zouker and Kerask, 2002). The relationship between scores of thought-action combination and diagnosis of generalized anxiety disorder reflects this belief among the patients that worry could be an adaptive process and lack of worry can be led to disaster (Feriston et al, 1994). When generalized anxiety disorder patients are asked about the reasons for worry, they express this superstitious belief that worrying about something make an incident which is less likely to happen to occur (Borkovek and Roomer, 1995). This aspect of magical thinking of worry in generalized anxiety disorder is somewhat similar to thought-action combination (Thompson-Holandz, Farchuni and Barlow, 2013). However, the survey results showed that although there exists a relationship between thought-action combination with generalized anxiety disorder, this variable is not able to predict the disorder in the presence of emotional components. Thought-action combination has been discussed alone in studies on this predictive power (Hazelt-Stevner et al, 2002).

According to the results of this study, it can be concluded that difficulty in identifying emotions, non-adaptive emotion regulation strategies and difficulty in describing emotions have a significant role in generalized anxiety disorder, respectively. By increasing these variables, the likelihood of generalized anxiety disorder will be increased. Also, knowing about the role and the relevance of these variables with generalized anxiety disorder can provide information for the development of interventions with regard to these variables and thus provide more a efficient treatment for this disorder.

Notably, according to the method of correlation in this study, it cannot be said that emotional

deficits and thought-action combination lead to generalized anxiety disorder and preforming controlled experiments must be considered with other effective variables. It is suggested that the above variables should be surveyed both through self-assessments and performing situations in the future researches. Comparison between generalized anxiety disorder and other anxiety disorders should be simultaneously performed in a series of cognitive and emotional variables to determine differences and similarities and provide a clear and better understanding of each disorder.

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