

**THE RELATIONSHIP BETWEEN THE GENERALIZED ANXIETY AND PERFECTIONISM WITH  
MODERATING EFFECT OF REFERENTIAL THINKING**

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**ABSTRACT**

The aim of this study was to examine the correlation between the associated anxiety and perfectionism with moderating effect of referential thinking. The population of this study was Islamic Azad University students and community of 165 students who have had anxiety and were selected by purposive sampling method. Referential thinking and perfectionism scale were used to collect information questionnaires of pervasive anxiety. Data were analyzed by modeling of structural equation and results indicated that there is a relationship between generalized anxiety and perfectionism which is moderated via referential thinking. Therefore, it can be concluded that generalized anxiety is affected by perfectionism and referential thinking.

**KEYWORDS:** anxiety, perfectionism, referential thinking.

**INTRODUCTION**

Generalized anxiety disorder is the most common anxiety disorder and a large number of studies have shown that this disorder compared to the major depressive disorder, has more serious traumatic consequences (Kessler et al., 2005). Approximately 25% of patients going to anxiety disorders clinics and about 12 percent of patients going to psychiatric clinics possesses such disorder (Hanrahan, Field, Jones and Davey, 2013). There are different conceptual ideas about worries in patients with generalized anxiety disorder. Perfectionism is one of the cognitive processes that has been evaluated as predictor of concern. Perfectionism is a multidimensional construct that by attempts to set high standards for integrity and performance can be specified together with tendency to completely critical values of personal behavior and hypersensitivity in case of errors (Hewitt and Flett, 2002). According to Burns, perfectionism is defined as a network of knowledge including expectations and interpretations of the events and individual's assessments for himself and the others, which is specified by setting unrealistic standards, serious adhering to those values without hesitation and equating the personal value with performance. Perfectionism Under this approach is connected to set and adhere to high standards of personal performance in all areas of life (Bronze, 1980). Frost and colleagues showed that concern about the errors is the main factor of perfectionism. Therefore, the perfectionists are always dissatisfied with their performance and believe that they cannot do what they want (Frost, Heimberg, Holt, Mattia and Neubauer, 1993). Research of Egan et al (2007) showed that the dimensions of perfectionism are the strong predictor for concern (Egan, Piek, Dyck and Rees, 2007). Different dimensions of perfectionism is related to anxiety and worry (Kawamura, Hunt, Frost and DiBartolo, 2001), so that perfectionist individuals may experience high levels of concern and psychological distress as a result of high fear of failure, following the unrealistic goals. The relationship between perfectionism and concern is further supported by researches showing that concerned people have a great need to evidence (Pratt, Tallis and Eysenck, 1997). Need for additional information before making a decision, may indicate a person with irrational criteria that includes worry about making mistakes and doubts about the ability of individual, parental expectations and criticizes, community-based perfectionism, which is strongly connected to concerns (Stober and Joormann, 2001). Accordingly, perfectionism is associated with anxiety but how perfectionism and anxiety in patients with generalized anxiety disorder are connected is not known yet. Flow path of human mind does not always follow a targeted, focused on activity or a logical path. Mind is repeatedly engaged in unintended cognitive activities that overlap with human ability to engage with ideas and useful functions (Pierce and Sarason, 1996). Anxiety, attention digress, attention directions, forgets for a moment, daily dreaming, rumination and obsession thinking are examples of mental processes that create cognitive interactions (Kelinger, 1996). The subjective factors can inadvertently interfere with the functioning and mental processing and social behavior of people and moreover have a significant role to play in some psychological damage (Sarason et al., 1996). Researchers believe that disruptive thoughts are very common so that about 90-80% of the general population in some cases are experiencing them (Purdon and Clark, 1999). Being Natural

and ubiquity of disruptive thoughts raise the question that what causes these thoughts annoying and disruptive and make them more frequent in psychology disorders?

In this regard, the referential thinking involves the main features of repetitive negative thinking (being repetitive, automatic and difficult to cut thoughts), inefficient perceives and catch of mental capacity by repetitive negative thoughts (Ehring, 2010). Regarding the point that referential thinking focuses on failures and problems selectively, probably people who have more referential thoughts have more symptoms of anxiety, including expected risk (cognitive component), emergency response (physical element), feelings of fear, anxiety and worry (emotional element), and avoidance and evasion (behavioral component) (Haljin, 2002, the translation of Seyyed Mohammadi, 2010). Referential thinking is one of the factors that can be considered as a mediator in the mentioned relationship in patients with generalized anxiety disorder. Considering the above mentioned issues, the present study, the researcher is investigating the point that whether referential thinking can play a mediating role in relationship between perfectionism and anxiety.

## **MATERIALS AND METHODS**

### **Research methodology**

Present study is a descriptive and correlation-model type where methods of data collection was field study using a questionnaire. The study population included all students of Kish International unit of Azad University, campus of Tehran University and Kish Payam Noor University in the year 2014-2015, in the total number of 1,924 persons. Targeted sampling method was also used here. In this regard, firstly 500 students were selected randomly and took the generalized anxiety test. Next, 120 of students whose scores were high, based on the test cut line were selected as the final sample considering the plant formulation ( $N > 50 + 8M$ ).

### **Research tools**

#### **Generalized Anxiety questionnaire**

The 7-questions scale of generalized anxiety was prepared by Spitz et al (2006). Generalized anxiety disorder scale has 7 items where in this scale 3 questions are selected about clinical symptoms to diagnosis and statistical guide for mental disorders, fourth edition, and other anxiety scales. Each of the questions is scored on a scale of 0 to 3, while the extent of scale score is from zero to 21. Spitz et al (2006) reported the superiority of internal consistency of generalized anxiety disorder scale (0.92) and report the good test-retest reliability (0.83). In a study conducted to assess the psychometric properties of 7-questions scales of generalized anxiety, researchers conducted this scale in two parts within 2 weeks on 18 students. The correlation coefficient caused by twice performance of the mentioned scale in this sample was ( $P < 0/01$ )  $r = 0.59$ , showing the acceptable reliability of a limited scale in Iran. In order to evaluate the diagnostic validity of the short scale 7-questions of patients with generalized anxiety disorder, scores of 40 patients who received a diagnosis of generalized anxiety disorder based on psychiatric interview and researcher-made questionnaire and also based on statistics diagnostic criteria of mental disorders, fourth edition, were investigated. The Highest and lowest scores of the people who received the diagnosis of generalized anxiety disorder according to psychiatric interview and researcher-made questionnaire was 16.63, 10 and 21, respectively. It is noteworthy that the cut score of generalized anxiety disorder was determined to be 10 or higher. Therefore, it could be said that the present scale could successfully identify the mentioned group in the case of presence of generalized anxiety disorder. According to the research finding it can be stated that the 7-questions short scale generalized anxiety disorder, has a good diagnostic validity (Naeninian et al., 2010).

#### **Referential Thinking Questionnaire**

Referential thinking questionnaire is prepared by Kernig et al (2010) to evaluate the repetitive negative thinking (RNT). This scale is a self-administered questionnaire containing 15 words. Results of confirmatory factor analysis showed that this test is composed of one overall scale test of a referential thinking and three subscales including: the main characteristics of repetitive negative thinking (being repetitive, automatic and difficult to cut thoughts), inefficient perceived and capture of mental capacity by repetitive negative thoughts. This test is more applicable for depressed patients and people who suffer from mood disorders. Participants should show their agreement or disagreement with each of the expressions in a 5-point Likert scale (from never=0 to always=4). In order to obtain a total score, all of the points of 15 statements should be together. The change domain of questionnaire scores is within 0-60. Higher scores show the high volume of repetitive negative thoughts on the subjected participants. To obtain the score of each

subscale, that is enough to add all score of the considered subscale. Researches of Ehring and colleagues showed good internal consistency of the referential thinking. They reported the Cronbach's alpha coefficient 0.95 for overall test, 0.94 for subscales of main characteristics, 0.83 for the perceived inefficiency subscale, and 0.86 capture of mental capacity subscale. Also, the consistency of re-estimating within 4 weeks was reported as shown below: Total test=0.69, main characteristics subscale=0.66, perceived inefficiency subscale=0.68, and capture of mental capacity= 0.69.

**Perfectionism Scale**

Persian version of perfectionism list with 58 words included: 6 subscales (adaptive: targeting, organize targeted, aiming at perfection) (Non-Compliance: interpersonal sensitivity, perceived parental pressure, high standard for the others) which was validated and normalized by Hooman Vasmaei (2011) in an Iranian version. Scale scoring of this method was validated and reliable based on multiple choices Likert scale as: 1 = strongly disagree, 2 = disagree, 3 = agree, 4=strongly agree. In order to achieve the reliability of this complex, re-estimation and Cronbach's alpha coefficient were used. The total Cronbach's alpha coefficient as an index for validity of the questionnaire was determined to be 0.926. After final implementation, the consistency coefficient of perfectionism list via re-estimation method was again performed on 50 persons within 2-6 weeks (average 4 weeks). The calculated value of Pearson correlation between two performances was 0.736. This value was statistically significant at the levels lower than 0.0001. The re-estimating consistency of perfectionism list shows the stability of its basic structures.

**FINDINGS**

The sample of study consisted of 163 people, including 131 women and 32 men with an age range of 18-42 years, 114 undergraduates and 49 graduate, 127 single and 36 married persons. Table 1 represents the indices of central tendency and dispersion based on the scores of generalized anxiety, perfectionism and its subscales and subscales besides referential thinking.

Table 1. Indexes of central tendency and dispersion related to the dependent variables

Standard deviation	Mean	Number	Dependent Variable
4.92	9.47	165	General anxiety
12.20	27.24	165	Referential thinking
8.69	16.09	165	Repetitive negative thinking
3.33	5.65	165	Inefficiency
3.59	5.68	165	Mental capture
10.14	48.03	165	Inter personal
3.60	21.03	165	Being superior
3.95	20.28	165	Organizing
4.17	17.65	165	Pressure perception
4.35	23.06	165	Targeting
4.81	22.87	165	Being standard

Whereas the basis of structural equation modeling is on the variance - covariance or correlation between the variables, the matrix of correlations between variables is reported in Table 2.

Table 2. Correlation matrix of research variables

Generalized anxiety	Perfectionism	Referential thinking	
		1	Referential thinking
	1	0.14*	Perfectionism
1	0.26*	0.28*	Generalized anxiety

Results of Table 2 showed that the relationship among perfectionism, referential thinking and anxiety disorder are significant at the 95% confidence level ( $p < 0.05$ ). In order to answer the key question of this study that "Is the model of description of anxiety disorder fitted to experimental data, regarding the perfectionism and mediating role of referential thinking?" In this way modeling of structural equations and IMUS software were used. Table 5 shows the most important indexes of the test of fitting of research conceptual model.

Table 3. Indexes of model fitting

AGFI	GFI	CFI	NNFI	NFI	RMSEA	$df^2/\chi$	Fitting indexes
0.90	0.95	0.93	0.86	0.91	0.09	2.66	Obtained value
More than 0.9	Less than 0.1	Less than 3	Permitted value				

Because each of the obtained individual indexes of model fitting could not cause the model fitness or lack of fitness, it is required to interpret such indexes altogether. Results of Table 5-4 shows that indexes of fitting of final model have an overall good condition and therefore, replying to the research hypotheses are permitted. In continue, final model is reported in the case of non-standard coefficients and coefficients of path ( $\beta$ ).

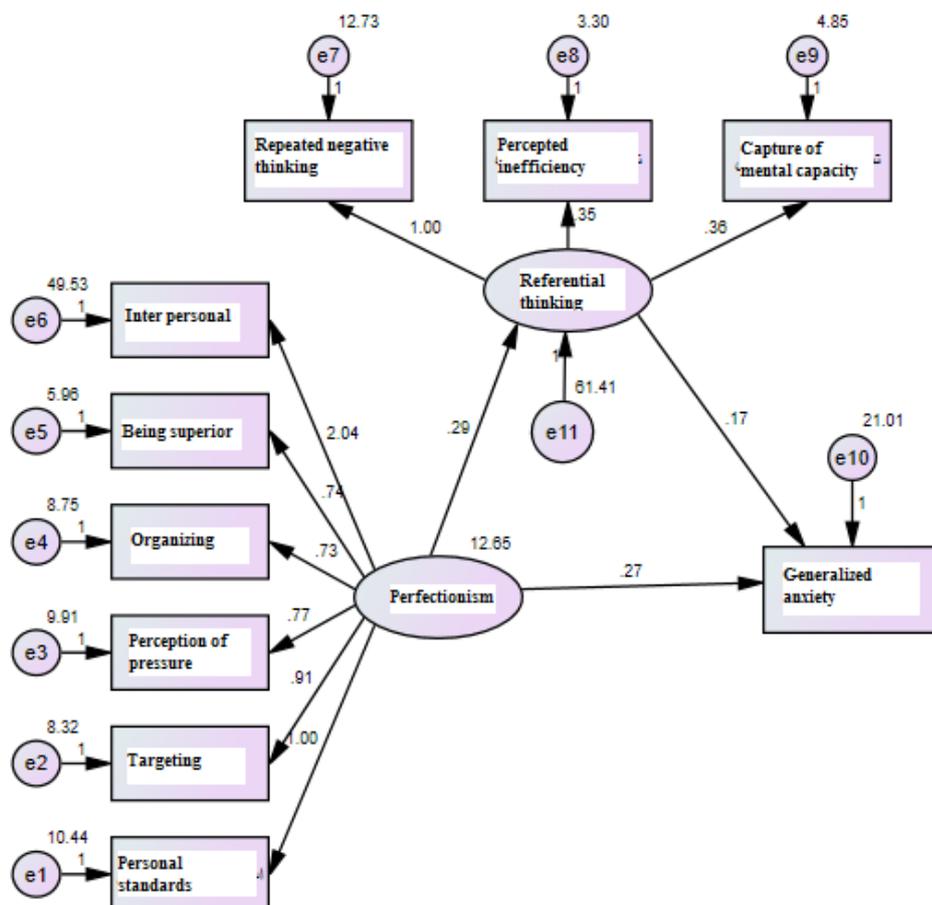


Figure 1. Non-standard coefficients of final model paths of expressing the generalized anxiety

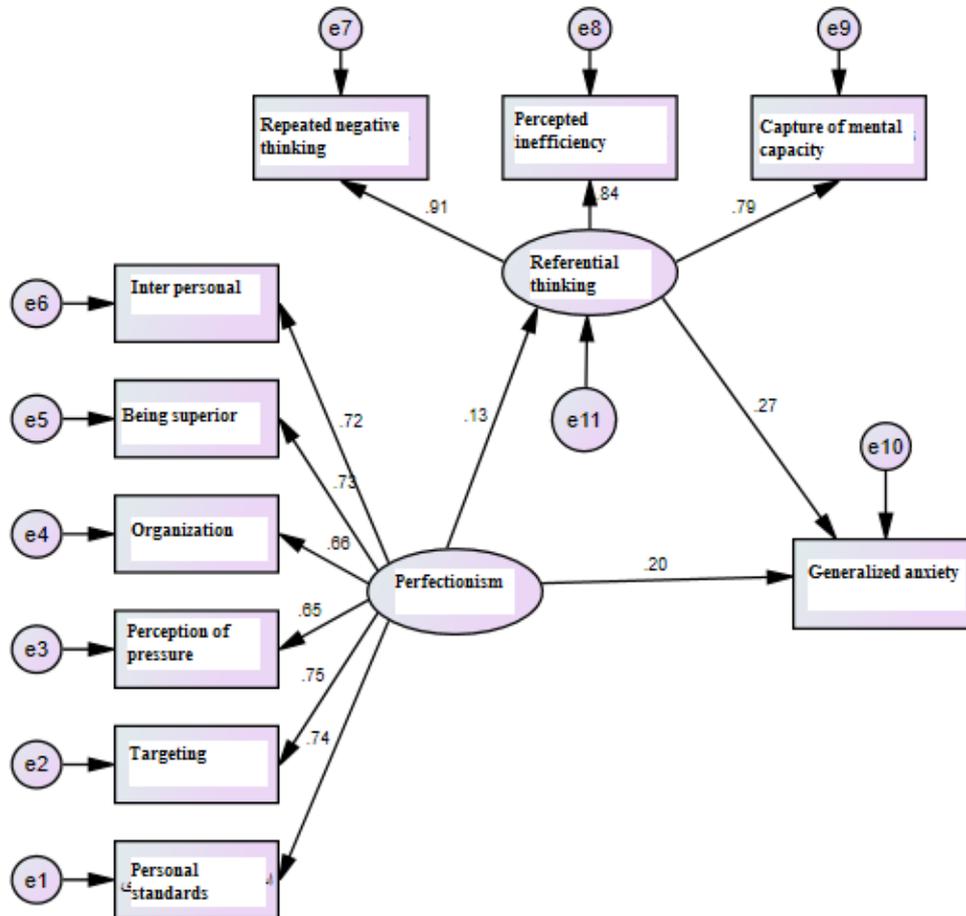


Figure 2. Standardized coefficients of final model pathes of expressing the generalized anxiet

In continue, direct and indirect correlations among the variables are defined.

Table 4. Coefficients and significance of direct and indirect effects on generalized anxiety

sig	Significance statistics	Standardized $\beta$	Non-standardized coefficient	Type of effect	Predictor variable	Criteria variable
0.01	2.42	0.20	0.27	direct	perfectionism	Generalized anxiety
0.08	1.53	0.04	0.06	indirect	perfectionism	
0.001	3.43	0.27	0.17	direct	Referred thinking	

The path coefficient test in Figure 2 shows that the standardized path coefficient (direct effect of perfectionism on referred thinking) was significant at the confidence level of 95% and direct effect of referred thinking on generalized anxiety was also significant ( $p < 0.05$ ).

Another point that should be considered in Figure 2 is about positive path coefficients of criteria variable, reflecting the direct impact of this variable, as by increase of perfectionism, referential thinking and anxiety would also increase. Another hypothesis that this research follows is about the indirect effect of perfectionism variable on generalized anxiety via mediating variable of referential thinking. Results of indirect effects test by means of IMUS software have revealed that effect of perfectionism indirect variable on generalized anxiety via mediating variable of referential thinking at the level of 95% was not significant.

## RESULTS AND DISCUSSIONS

Researches related to moderating role of referential thinking in the correlation of perfectionism and generalized anxiety were not available for researcher. In order to explain the findings of this study, we can refer to Burns (1980) ideas. According to Burns (1980) perfectionist people consider their personal value as equivalent to the happening of their idealistic and unrealistic criteria. This misconception of self-worth, always puts a perfectionist person at risk and threat that their idealistic standards would not come true. As a main component of perfectionism, worry about mistakes helps to continue such worries by providing the internal readiness and required beds. According to the studies conducted by Molnar et al. (2006), perfectionism does not tolerate any kind of failure or mistakes by domination of unrealistic objectives and does not let the opportunity to gain satisfaction from relative success. Another discussion is that the successive shortcomings perceived by the individual affected by the perfectionism characteristics also increase his worries about the repetition of such condition. Perfectionism, via some characteristics like unrealistic expectations, rejection of personal limitations and lack of flexibility, causes the person not to enjoy from his severe efforts and feel satisfied from his personal performance (Besharat, 1384). Feeling unsatisfied from the performance is known as one of the psychological distress components, leading to increase of worries. The confirmed correlation of perfectionism with indexes of conflict and negative emotions (Stober et al., 2001) also protect such definition. To explain this finding that referential thinking affects the generalized anxiety, it could be said that involuntary negative thoughts, which are from the main components of referential thinking, are not usually happened under conscious control of the person. Involuntary negative thoughts are generated by main ideas and abnormal imaginations. These main ideas and concepts are extended during the experiments along with the growth. If a person experienced the difficult and sad events in childhood, it is more likely to have negative main beliefs and imaginations, which finally leads to daily involuntary negative thoughts.

So distressing intrusive thoughts that can form impulses, unwelcome thoughts and ideas are types of epidemic and common events. People use different strategies for control or resistance against such ideas and some of these strategies are associated with emotional stresses (Moore and Bramvtyz, 2007). So it seems that the use of referential thinking in the dealing with problems raises the anxiety level in people. In addition, in order to explain the above finding it is possible to refer to the cognitive model of generalized anxiety (Beck et al., 1985). In this model, it is believed that what makes people to interpret the vast range of occasions as a 'threat', is their beliefs about the self and outside world. The inefficient beliefs and hypotheses that play a role in generalized anxiety are completely diverse, but most of them are revolving around the subjects of acceptance, adequacy, responsibility, control and signs of anxiety. When the generalized anxiety was formed in a person, obtained changes in attention and behavior help the consistency of problem and these people do not show a permanent avoid from external specific positions. But always take some forms of anxiety which are more delicate and instable and makes the negative beliefs stronger in them. In addition, in the template of cognitive theory it could be said that people are tended to process the information in accordance with their initial beliefs and their perception of world and self. In the initial formulation, Beck stated that there are specific mistakes in the logic of thoughts and automatic thoughts and other cognitions of person with emotional disorder. So it seems that having the referential thinking style puts people in a vicious circle. In other words, having negative thoughts causes the generalized anxiety in people and on the other hand strengthens the negative beliefs in them.

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