Original Article: Mediating Role of Perfectionism between Thought Control Strategies and Test Anxiety

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ABSTRACT

The purpose of this study was to determine the relationship between thought control strategies and test anxiety: the mediating role of perfectionism among male and female students of high schools for the gifted in the first and second districts of Kerman in 2017. It was a descriptive and correlational study. The statistical population of the study included female and male students of high schools for the gifted in the first and second districts of Kerman in the age range of 12 to 18 years old with a total sample size of 2400 subjects. Considering the population size and the sample size, a total number of 331 subjects were selected according to Morgan's table. Participants were selected randomly in a multi-stage cluster sampling and pun within each cluster by a simple random method. The research tools were the Thought Control Questionnaire of Wells and Matthews (1994), the Test Anxiety questionnaire of Sarason (1957) and Frost et al. (1990) questionnaire on perfectionism. Research results using Pearson's correlation coefficient and the indirect effect (mediator variable) using bootstrap method in Preacher and Hayes' Macro SPSS program (2004) showed that thought control had a significant effect on perfectionism and perfectionism had a significant effect on test anxiety. However, thought control strategies did not have a significant effect on test anxiety.

Introduction

Today, in most educational systems, entering higher education levels is based on tests and evaluations that students take during the academic year and based on the grades they obtain. Due to the increasing role of tests in educational systems, most students experience test anxiety, which causes students who are intelligent and have studied hard and prepared well, not to perform to the best of their abilities on tests or class evaluations. In general, test anxiety is a complication that overwhelms the health of individuals. In addition to social concerns and psychiatric disorders in students with high test anxiety, the effect on endocrine and exocrine glands or high anxiety, providing the grounds for short term forgetfulness, perceptual errors, interference with the level of immunity and the association with the reaction to skin sweating are the effects that

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various studies have proven. Not only does this phenomenon affect the totality of their study programs, but also limits their personal development. Ultimately, this phenomenon will affect the provision of services to people in the society, and inadequate graduates with inadequate academic performance and development can obviously cause problems in the provision of services [1].

Researchers point to various factors such as dimensions of perfectionism and weakness in meta-cognitive beliefs and thought control strategies as factors that contribute to tests anxiety. Test anxiety is more, especially in gifted students, were due to their and their family's perfectionism, as well as the expectations that the educational system has for them to perform better than other students. This leads to the idea in students that they must do everything to the best of their abilities, otherwise they will not be satisfied. Not reaching perfection, especially in the field of academic progress and academic performance will cause performance and test anxiety, depression and a feeling of guilt in them [2]. Perfectionism refers to the tendency of a person to have a set of extreme standards and to focus on deficiencies and failures in performance. However, the important point is that perfectionism in individuals depends on the circumstances they are in and their attitudes regarding them which can be positive and normal and lead to success and satisfaction or they can be negative and abnormal and lead to dissatisfaction and disappointment.

However, in general, fear of failure, worrying about how others see and think about them (especially in adolescence), the formation of high standards and the uncertainty of achieving success, and the thoughts that perfectionist deal with are all causes that lead to anxiety. In other words, every person has a set of abilities and determines his/her own goals with the awareness of these talents [1]. It is assumed that perfectionists have cognitive schemas that make them choose goals beyond their power and capability regardless of their abilities. On the one hand, since they are afraid of failing to achieve their desired perfection and are not satisfied by anything other than full success, these perfectionist ideas lead to their academic failure. This is because perfectionist students are not satisfied with just doing tasks and getting excellent and full results. It does not suffice if their performance is better than their peers and they have

done the work or task to the desirable and acceptable level, they are fully satisfied only when they complete the task flawlessly or without any errors. For this reason, they might not take certain responsibilities or leave them in half-way because of the fear of failing to reach their goals and this causes them fail academically. Perfectionism can indirectly lead to academic failure by causing depression and anxiety. The effect of depression and anxiety on performance reduction, including academic performance, has been proven. Freud considered perfectionism to be a general sign of neurosis and obsessive-compassion behavior that excited people to achieve their ideal goals of perfection and supremacy.

Although the assessment of this personality structure has been forgotten, the significance of this concept and its harmful role has once again been taken into consideration in the last two decades of the twentieth century. Until now, the notion of perfectionism was a one-dimensional concept and no attention was paid to its interpersonal characteristics; however, in the last decade of the twentieth century, perfectionism came out from the one-dimensional state and was introduced as a multidimensional construct.

The three dimensions of perfectionism include: a) self-oriented perfectionism, b) other-oriented perfectionism, and c) social-oriented perfectionism. Self-oriented perfectionism is identified by positive characteristics of trying and competing to improve, self-esteem and self-fulfillment on one hand, and by negative characteristics of self-blaming, self-criticism, feeling guilty, depression and neuroticism on the other hand. Other-oriented perfectionism is correlated to the negative characteristics of blaming, authoritarianism, histrionic, narcissist and anti-social characteristics. Social-oriented perfectionism is also related to the need to be confirmed by others, fear of negative assessment, external skill focus, failure overgeneralization, self-criticism, self-blaming, psychological, psychological dissonance and depression [4].

Due to the perfectionism that causes anxiety in the talented students, their performance in meta-cognitive beliefs and thought control strategies is weak. Thought control strategies are the reactions that individuals have to control the activities of the meta-cognitive system. Wells and Matteus recognize emotional disorders by threat control

strategy [5]. People use a wide range of strategies to control the unwanted or stressful thoughts. In a factor analysis study, Wells and Matteus determined five control strategies that can be evaluated through the Thought Control Questionnaire (TCQ). These strategies include reassessment, punishment, social control, worry and distraction (Wells and Davis, 2003). According to the definition of thought control strategies, it can be mentioned that people suffering from diabetes can help themselves improve their conditions by (positive or negative) thought control.

Results have shown that positive beliefs about worry and anxiety play a role in most anxiety disorders as a common factor. In addition, use of positive meta-cognitive beliefs about worry and meta-cognitive beliefs about uncontrollability, risk and self-punishment thought control strategies is higher in perfectionists with the perfectionism leading them to more anxiety. These findings are consistent with findings of Wells and Cutter (2001) and Ruscio and Bourcock (2004). The present study aims at investigating the fact whether thought control strategies can influence perfectionism dimensions and therefore, reduce students' anxiety regarding their tests and homework [6].

Research Methodology

This is a descriptive study following a correlational survey approach. The statistical population of the present study includes the male and female talented high school students of districts one and two of Kerman City who were in the age range of 12-18 that comprised a sample of 2400 subjects. Considering the population and sample size, a total number of 331 subjects were selected based on Morgan's table. The participants were selected by multistage cluster sampling and put in each cluster by simple random method.

Research Instruments

Thought Control Questionnaire (TCQ)

This questionnaire was designed by Wells and Matthews in 1994 and includes 29 questions. The questionnaire was designed with the aim of assessing the ability of controlling one's thoughts against distracting thoughts in different aspects (distractions, concern, social controls, punishments and reassessment). Cronbach's Alpha for the subscales of the questionnaire was in the range of 0.64-0.79. The correlation of the re-test in the 6-week interval was as follows: distraction 0.76, social control 0.79, concern 0.71, punishments 0.64, reassessment 0.76 and the total questionnaire 0.83, which indicates appropriate reliability of the questionnaire. In Iran, Khanipour et al. (2011) calculated the convergent and discriminant validity of the factors in the thought control questionnaire through their correlation to BAI-II and GHQ-28, which indicates the appropriate validity of the questionnaire. In addition, they also estimated the reliability coefficient related to two weeks by test-retest method to be 0.65. They also reported a reliability coefficient of 0.73 by Cronbach's alpha.

Sarason's Test Anxiety Questionnaire

Sarason's Test Anxiety Questionnaire was introduced in 1957 by Sarason. It contains 37 questions that should be answered using "Yes" and "No" in 10 to 15 minutes. Considering the appropriate psychometric features and the standard cut scores of the questionnaire, it is quite common to use it in evaluation of test anxiety. Sarason's Test Anxiety Questionnaire allows access to the mental states and physiological experiences of the individual before, during and after the test by a self-report method.

To score Sarason's Test Anxiety questionnaire, score 1 should be assigned to the "No" answer for questions 3, 15, 26, 27, 29 and 33. In addition, score 1 should be given for the "Yes" answers to the remaining questions. Having added up the scores, the person's test anxiety score will be obtained. The higher scores show higher level of test anxiety and the person will be categorized in one of the following three categories based on his/her score:

Mild anxiety: a score of 12 or below

Moderate anxiety: a score between 13 and 20

Severe anxiety: a score of 21 and above

The validity and reliability of this questionnaire are calculated in numerous studies. The Cronbach's alpha of 0.88, internal consistency of 0.95 and the criterion validity of 0.72 indicate that the questionnaire is acceptable in general.

Frost Multidimensional Perfectionism Scale

Frost *et al.* (1990) designed this scale to assess different dimensions of perfectionism. This test contains 35 phrases and 6 subscales of concern over mistakes, doubts about actions, parental expectations, parental criticism, personal standards and organization. Moreover, total perfectionism score is obtained by adding up the scores of all 35 questions. High scores in this test indicate the person's high perfectionism in the corresponding field. There are five answers for each of the questions in this scale: strongly disagree, disagree, neutral, agree and strongly agree. Their corresponding scores are 1, 2, 3, 4 and 5.

Regarding the reliability of the Frost multidimensional perfectionism scale, Frost et al. (1993) reported internal consistency coefficients in the range of 0.73-0.93 for the subscales and the total internal consistency coefficient of 0.90 for the test in general [7].
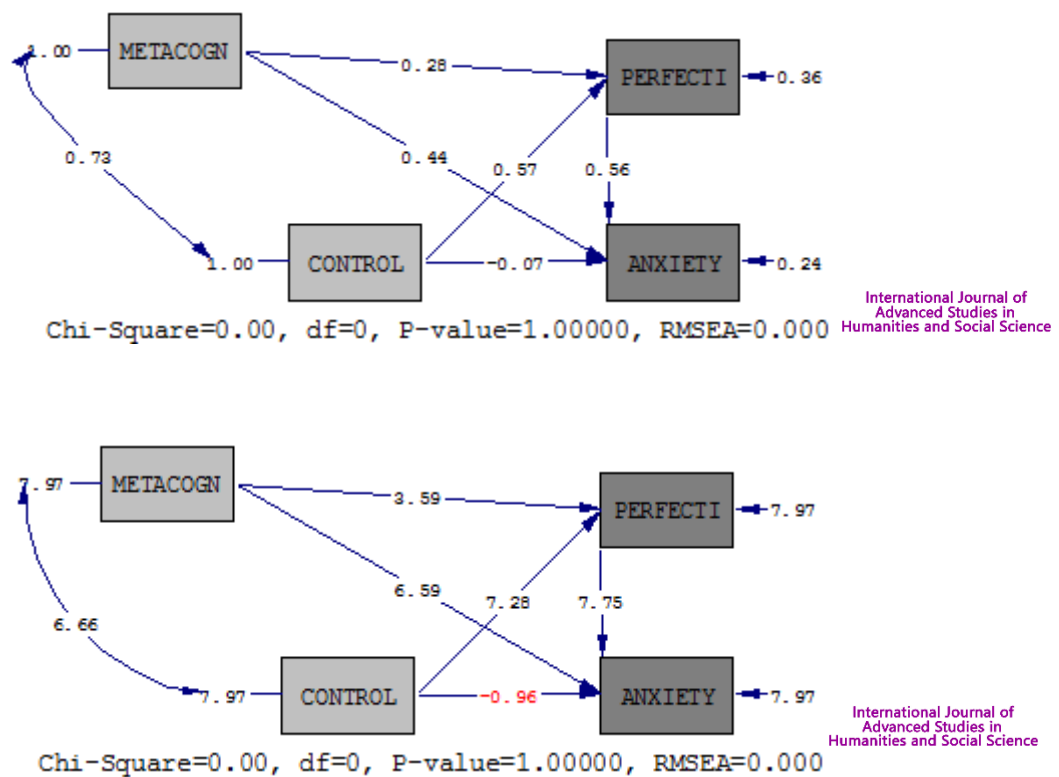

Figure 1. The figure of method, (Measuring the overall model and results of the hypotheses in significant mode) [8].

Discussion and Conclusion

The results of this research showed that metacognitive beliefs have a significant effect on perfectionism and exam stress. The results of this study are consistent with the researches of Abolghasemi *et al.* (2010), Shumer *et al.* (1993), Luyan *et al.* (2002), Spada *et al.* (2012), Hadsunovalis (2010), Zioisk *et al.* (2009) and Paris (2010).

In explaining this hypothesis, we can say that people with higher levels have more exam stress than the topics related to the anxiety of mental occupation because they encounter data processing or more negative biases. There is a relationship between worrying and self-punishing strategies with exam stress and also a distraction, and using social control is related to exam stress. Worrying as a strategy for thought control is included in replacing the concerns and low important thoughts instead of a main unpleasant thought. Hence,

considering strict criteria and the emphasis on maximum deal against unpleasant intra-psychological experiences (means disturbing and disproportionate thoughts) which is appeared in self-punishing strategies, is correct more with controlling method than hidden avoiding such as considering low important issues in responding to the experience of unpleasant mental images and thoughts. But the people who use social control for coping with worrying experience are less likely to get pathological anxiety states. In contrast, the students who use social control against worrying, they are less likely to be confused due to high interpersonal skills, and for this reason, they are less likely to suffer from anxiety [10].

Hence, one of the main factors of pathological anxiety is controlling the attempts of the people by the strategies of thought control in responding to thoughts and unpleasant mental images. These strategies prevent typical processes such as habituation through repeated encounters, and failure in them may be considered as a threat by losing control for the continuing process. In turn, it causes making exam stress among the students. On the other hand, in perfectionists, perfectionism is an attempt to avoid an unpleasant thing (critique, disaster, uncertainty, or lack of control). Perfectionism grows for avoiding uncertainty or for taking control of its environment.

Many students suffering from exam stress report that they need everything will be exact, perfect, and distinctive. The compulsions should be correctly done. These students are described as under suffering by an internal tendency for confidence and completion of information and high score in the exam. Lack of such complete confidence, the probability in which the students are skeptical, and there is a doubt for applying and whether these works are correctly done, are part of perfectionism signs [11].

Incompatible perfectionism can cause high sensitivity to the expectations of other people. This specification is evaluated by community-oriented perfectionism. The researches show that the main specification of perfectionism in these people is avoiding mistakes, not access to the purposes. Avoiding mistakes can be important for these students due to avoiding and preventing others from blame and dissatisfaction. Community-oriented perfectionism leads to a search for its valuable objective and external references. Such references may include social feedback, which is correctly evaluated as a dimensional comparison. Community-oriented perfectionism has resulted in an increasing sense of responsibility. So, perfectionist students use the strategies of thought control for restraining their disturbing thoughts. The activation of disturbing thought causing negative evaluation of disturbing thought is considered as a threat sign. In turn, this evaluation causes the severity of negative excitements, which are mostly stress. As a result, the person turns to the strategies of thought control for decreasing stress and their cognitive system control [11-13].

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