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Predicting exam anxiety according to personality features and self-efficacy in MA female students at Islamic Azad University, Khomeinishahr Branch

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ABSTRACT

The present study was conducted to investigate prediction of exam anxiety according to personality features and the self-efficacy in MA female students at Islamic Azad University, Khomeinishahr Branch in academic year 2015-16. It had descriptive-correlational research method and its statistical population included all 740 MA female students at Islamic Azad University, Khomeinishahr Branch in academic year 2015-2016. The sample size was determined 256 individuals according to Morgan table through random sampling method who were selected from all MA students at Islamic Azad University, Khomeinishahr branch. The applied instrument in the present study included NEO five-factor personality inventory, Sarason's test anxiety questionnaire and Sherer's self-efficacy questionnaire. After collecting questionnaires and extracting raw data, the data analysis was done via SPSS software through descriptive statistical, regression analysis and Pearson correlation methods. The results of Pearson correlation analysis revealed that there is a significant relationship between personality aspects of components of adaptability (-0.19), empiricism (-0.15) as well as self-efficacy (-0.36) and the exam anxiety ($p < 0.05$). In addition, the results of regression analysis showed that, adaptability, accountability and self-efficacy can predict the exam anxiety of female students ($p < 0.05$). According to the study results it seems necessary in treating the students' exam anxiety to pay enough attention to personality features and their component of self-efficacy in order to facilitate their treatment process.

Key words: Exam anxiety, personality features, self-efficacy, female students

INTRODUCTION

Anxiety is considered an appropriate and consistent response as a part of every human life in all societies. Lack of anxiety or morbid anxiety might encounter the individual with numerous problems and dangers. The anxiety in its normal and constructive level makes the person take measure on time and appropriate, therefore it makes their life more stable and fruitful (Lashkari Pour, Bakhshani, and Soleimani, 2005).

One of anxiety types is the exam anxiety which is strongly probable to affect the students' learning and educational development in different educational levels and it causes losing a large part of human-economic potential resources and capabilities when it goes beyond desirable level (Biabangard 2007).

Exam anxiety is a general term referring to a kind of anxiety with a specific social phobia that puts the individual in doubt considering his/her abilities and its outcome is the decrease in the power to cope with the situations like

examination, the situations wherein the person is evaluated and entail problem solving; in fact the exam anxiety is a kind of evaluation; that is, considering the stage of its emergence, the anxiety, per se, is the threat-making from the exam situation, exam anxiety emerges against educational stressors in abnormal cognitive condition (such as anxious perceptions and unrelated thoughts to the exam). These abnormal responses to very pressure-making situations would lead to the decrease of active memory performance (Heidari, Ehtesham Zade and Hallajani, 2009). Taking the physiologic changes occurred as the result of exam anxiety, various factors such as personality features and self-efficacy can be associated to the emergence of this phenomenon (Zidner, 2007). Personality refers to those features in the individual or people which involve their fixed thinking, affective and behavioral patterns. It is an extended definition of personality and it causes attending to different aspects of one person while it reveals attending to the individual's stable behavior patterns and internal quality to regularize, the environmental investigation of these models, Our system under investigation includes thought, affections, and external (observable) behaviors especially the relationship of these three aspects with each other in building a unique personality is of high importance in personality psychology (Ozer and Matinez, 2006).

Various factors are effective in the people's personality formation; however, making general conclusion in this regard implies that both the environment and heredity are effective in determining personality. Each person is born with a set of capabilities and capacities, but it is the environment which determines to what extent these capabilities flower and emerge and the interaction between the two establish a special personality in the person (Pour Shahrian, et.al, 2010). According to five-factor personality viewpoint, personality description can be explained by five strong factors. They are introduced by neurosis (N), extroversion (E), openness to experience (O), adaptability (A) and accountability (C) (Garrosa et.al, 2008).

One of the factors related to exam anxiety which is undeniable in its emergence and stabilization is the students' self-efficacy (Nik Manesh, 2011). Woul (2004) has reported that if the students believe that they can learn through acceptable attempt, they will try more and persevere more encountering problems. Self-efficacy, as a predictor personality feature, can be an effective factor in academic and educational settings (Salami, 2009). Hence, the manner of the people's behavior can often be predicted through beliefs they have about their abilities and because of what they are really able to do (Caprara, Pastorelli, Regalia, Scabini & Bandura, 2005).

Self-efficacy is one of Bandura's important structures in cognitive-social theory and it means the person's believe and trust in his/her ability to control thoughts, feelings, activities and also effective performance in stressful situations (Caprara, Pastorelli, Regalia, Scabini, 2002). This theory emphasizes the necessary role of self-efficacy beliefs in the human's behavior growth (Meece, Glienke & Burg, 2006). Therefore it is effective on the people's real performance, choices, organization and implementation of activity courses to get and flourish performance and development levels and the degree of the individual's attempt for an activity (Regalia & Bandura, 2002). Self-efficacy has various realms including social, academic, emotional and physical self-efficacy (Tahmasian and Anari, 2009). Endurance in doing assignments, high performance level and appropriate to the capability, looking for new successes, the ability to resolve the problems, not fearing from failure, choosing higher purposes, commitment and stability in reaching them and self-dominance when retreat is necessary are among the features of self-efficient people (Salami, 2004).

Based on Bandura's social learning theory, self-efficacy beliefs are effective in the person's choices in the field of major and the activities he/she doestoo (Zare' Zade and Kadivar, 2007). AsPutwain, Sander,& Larkin(2012), Komaraju & Nadler (2013) showed that students at different educational levels with high self-efficacy enjoyed better academic performance comparing to those with low self-efficacy; further, higher academic self-efficacy predicts academic development in that self-efficacy beliefs, as mediator variable, enforces the effects of variables such as past experiences, cognitive ability, gender and their other beliefs on the variable of academic development. Bandura states that feeling self-efficacy can play a dramatic role in the person's approach and viewpoint toward objectives, assignments and challenges (Cain et.al, 2008)

Now considering the role of personality and self-efficacy in different individual, social, communicational and academic structures of the students at different educational levels, the major issue of the present study is that can female students' exam anxiety be predicated based on personality and self-efficacy features?

MATERIALS AND METHODS

The research method of the present study was descriptive-correlational. The statistical population of the study included all 740 MA female students at Islamic Azad University, Khorasgan Branch, in academic year 2015-16. Determining the sample size is done through various methods. One of the most useful methods is Morgan's formula and table (1970). Considering the fact that the population size (MA female students at Islamic Azad University, Khorasgan Branch) equaled 740, the sample size was determined 256 individuals according to Morgan table. In order to choose the sample size, the random sampling method was used; so 256 MA female students were randomly selected through referring to the faculties of Islamic Azad University, Khorasgan Branch and recognizing MA female students. Then NEO personality aspects inventory, Sherer's self-efficacy and Sarason's test anxiety questionnaires were given to them.

The following instruments were applied in the present study:

NEO five-factor personality inventory: it is one of personality tests built according to factor analysis and among the newest instruments in the field of personality which was introduced by Mc Crea and Costa in 1985 under the name of NEO personality inventory (Costa and Mc Crae, 1992). It was designed in 240 words to measure five basic factors or areas of neurosis, extroversion, flexibility, pleasant feelings and accountability. It has been translated, adapted and normalized by Khormai'e (2007) in Iran. The answer sheet was arranged according to Likert scale (totally disagree, disagree, indifferent, agree and totally agree). The scoring the short form of this questionnaire; i.e., NEO-FFI is not the same in all items; that is, in scoring some items of the short form inventory the scores 4, 3, 2, 1 and 0 are given to totally disagree, disagree, indifference, agree, and totally agree respectively while some items of this form are scored oppositely (Garoozi Farshi, 2001).

Reliability and validity of this inventory were examined in the study by Khormai'e (2006, cited in Jokar and Alborzi, 2010) in a group of students at the University of Shiraz. The test reliability was achieved 0.88, 0.78, 0.80, 0.80 and 0.77 respectively through Cronbach alpha method for the aspects of neurosis, openness to experiences, accountability, adaptability and extroversion and its validity was calculated thorough factor analysis the findings whereof imply suitable validity of the questionnaire. Further, Mc Crae and Costa (2004) have reported the correlation coefficient of this test through NEO 240-question test for personality features of neurosis (0.75), extroversion (0.91), openness to experience (0.71), adaptation (0.78) and accountability (0.75).

Sarason's test anxiety: is the score gotten from Sarason's test anxiety questionnaire. Sarason's test anxiety questionnaire was designed by Sarason in 1957 and it has 37 items which should be responded in 10 to 15 minutes in Yes-No form. In order to score Sarason's test anxiety questionnaire, the score of 1 should be given to NO response in items 3-15-26-27-29-33. Moreover, for each YES response the score 1 should be given to other questions. After summing up the scores, the score of the individual's test anxiety is achieved.

Validity and reliability of this questionnaire were assessed in various studies and cronbach alpha coefficient, internal consistency and criterion-related validity were achieved 0.88, 0.95 and 0.72 respectively which is generally acceptable (cited in Biabangard, 2007). Further, Yazdani (2012) in his study has reported Cronbach alpha coefficient, internal consistency and content validity of this questionnaire 0.88, 0.95 and 0.72 respectively. In the study by Aghajani et al (2014) Cronbach alpha and internal consistency of this questionnaire were achieved 0.77 and 0.71 respectively.

Sherers' self-efficacy questionnaire: is the score achieved from the questionnaire of self-efficacy anxiety. This scale includes 17 items each item whereof is arranged from the range of totally disagree to totally agree according to Likert scale. The scoring is done in this way that each item is given to 1 to 5 scores. Items 1,3, 8, 9, 13, 15 are scored from right to left and so are the others form left to right. Therefore, maximum score the person can get from this score is 85 and the minimum is 17. This scale has been translated and validated by Barati (1996).

In order to assess structural validity of general self-efficacy scale, Bakhtiari Barati (1997) correlated the scores form this scale through measures of many personality features (Rotter's scale of internal and external control, personal control sub-scale, Marlo and Keran's social degree scale and Rozenberg's interpersonal competency scale); the predicted correlation was between self-efficacy scale and the amounts of medium personality features (0.61 and significant at 0.05 level) and in order to confirm the considered structure (cited in Keramati and Shahr Aray, 2004).

In addition, the reliability coefficient of the scale was achieved 0.79 through Gottman's split half method test and 0.79 through Cronbach alpha coefficients (Shamai'e Zade and Abedi, 2005). Further, to investigate the reliability of self-efficacy, in the study by Vaghri, (2000) the Cronbach alpha was achieved 0.85. Najafi (2001), too, randomly selected 30 subjects and administered self-efficacy test and the Cronbach alpha equaled 0.83 and it was calculated 0.83 through Spearman-Brown method. In the study by Ganji and Farahani (2009) the reliability coefficient was 0.81 through Cronbach alpha method.

The analysis of the raw data from the study was conducted through descriptive statistical method and Pearson correlation analysis and stepwise regression via SPSS 20 software. At descriptive statistics level, the mean and the standard deviation and at the inferential statistics level, Pearson correlation and regression methods were applied.

RESULTS

Table 1: descriptive findings of personality aspects in the sample group of the study

Neurosis aspect		extroversion aspect		empiricism aspect		adaptability aspect		accountability aspect.	
mean	Standard deviation	mean	Standard deviation	mean	Standard deviation	mean	Standard deviation	mean	Standard deviation
8.79	4.83	19.56	4.63	23.46	5.25	15.95	5.56	20.09	5.99

Table 2: descriptive findings of self-efficacy and exam anxiety

Self-efficacy		exam anxiety	
mean	Standard deviation	Mean	Standard deviation
49.51	9.26	10.32	6.23

Table 3: Pearson correlation matrix among research variables

Variables	neurosis	extroversion	empiricism	adaptability	accountability	self-efficacy	exam anxiety
neurosis	1						
extroversion	-0.03	1					
accountability	-0.08	0.12*	1				
adaptability	0.07	0.17*	0.07	1			
Empiricism	0.04	0.09	0.17*	0.22*	1		
self-efficacy	0.08	0.18*	0.06	0.20**	0.12*	1	
exam anxiety	0.06	-0.04	-0.05	-0.19*	-0.15*	-0.36**	1

* $P=0.05$ ** $p=0.01$

According to the Pearson correlation matrix coefficients in table 3 it is clear that between the aspects of personality, the components of adaptability (-0.19), empiricism (-0.15) and self-efficacy (-0.36) have significant relationship with exam anxiety. Now investigating regression tables are addressed to identify to what extent is the proportion of each predictor variables in significantly predicting criterion variable.

Table 4: regression coefficients of exam anxiety scores on the components of adaptability, accountability and self-efficacy

Predictor variable	nonstandard coefficient	standard error	standard coefficient(β)	t amount	significance level (sig)
Adaptability component	-0.22	0.06	-0.19	-3.17	0.002
accountability component	-0.15	0.06	-0.14	-2.38	0.01
self-efficacy component	-0.300	0.05	-0.36	-6.15	0.0001

According to the results of the above table, regression coefficient was significant among predictor variables of Adaptability component, accountability component and self-efficacy component that considering standardized coefficient all three variables oppositely predict exam anxiety scores.

CONCLUSION

The present study aimed to investigate the prediction of exam anxiety according to personality features and self-efficacy in MA female students at Islamic Azad University, Khorasgan branch in academic year 2015-16. Findings of the study revealed that from personality aspects the components of the components of adaptability (-0.19), empiricism (-0.15) and self-efficacy (-0.36) have significant relationship with exam anxiety ($p<0.05$). Further, the

results of regression analysis showed that the components of adaptability, accountability, and self-efficacy have the power to predict exam anxiety in female university students ($p < 0.05$).

Consistent with the results of the study regarding the relationship between components of adaptability as well as empiricism and exam anxiety in university students, in a study Mohammadi and MahmoudNia (2010) investigated the relationship between five basic personality factors and burnout among consultants. The results of the study showed that there is a positive significant relationship between the variable of burnout, affective exhaustion and the personality feature of neurosis. Besides, there is a negative significant relationship between the variable of adaptation with the same variable. Moreover, there is a negative correlation coefficient between the variables of burnout, lack of individual success and personality feature of extroversion and personality feature of adaptation. Moreover the studies by Musgrave-Marquart, Bromley & Dalley (1997), De Fruyt & Mervieldev (1996), Petska (2006) and Atash Afrouz (2007) have revealed that there is a significant relationship between the aspect of accountability and academic performance. The people with high accountability own features such as high motivation, attempt in order to develop, order, dutifulness and looking for new ways. These features cause the people with high scores in dutifulness continue to get to their goals with more perseverance and accountability, so, having needed motivation to develop affects the degree of exam anxiety (Petska, 2006).

The people with high scores in empiricism tend to have extended and uncommon curiosity, imagination and thought (Barrick, Mount & Judge, 2001). Empiricism for openness to experience refers to acceptance capacity to experience feelings and internal affections. Open-to-experience people are sensitive and curious about both internal and external world (Costa and Mc Crae, 1992). Empiricism, with openness to experience, shows the extendedness, depth, and complexity of the person's mind and life experiences (Parvin and John, 2001; translated by Javadi and Kadivar, 2007) and implies the power of imagination, curiosity, various interests, innovation and intellectual attitude (Bojard et al, 1999; cited in Diarian, ..2012). Now if the features of the aspect of empiricism are paid attention to, it will be recognized that this aspect has components such as curiosity and innovation which are opposite to exam anxiety; therefore, when a person has empiricism aspect in his/her personality, while encountering new and challenging experiences such as exam, he can face it through his/her problem solving power and experience less degree of exam anxiety.

In addition, the aspect of adaptability discriminates between communicational orientation and tendency toward others and hostility as well as disagreement and it states trust, sympathy and cooperation (John and Serioستاia, 1999). Adaptability includes features which show what they do with and for each other. Kind-heartedness, good-temperedness, reliability, the sense of cooperation, clemency and credulity are among features applied in defining adaptability. It is clear that when the person owns the feature of adaptability and characteristics such as the sense of cooperation, he/she can show higher problem solving from him/herself. If the people are put in interaction and cooperation with each other, they can share a process called brainstorming encountering different issues and problems which cause the people acquire more solutions in cooperation with others and apply them in appropriate time.

In discussing about the significance of the relationship between self-efficacy and exam anxiety, the findings of the present study are along with the findings by Komarajo and Netedler (2013), Potin, Sander and Larkin, (2012), Lane and Lane (2001), Asgari, Kahrizi and Kahrizi (2013), Tamaddoni et al (2007), Karim Zade and Mohseni (2006) and Heidari (2005). As these researchers have shown in separate studies that various aspects of self-efficacy has significant relationship with the components related to academic performance and exam. The findings of the present hypothesis can be explained in two different parts:

A. There are four major psychological processes through them self-efficacy beliefs affect the human performance and it causes the increase of their positive performance in different academic and life aspects. These processes include: cognitive, motivational, affective and selective processes. From these four processes, two cognitive and motivational processes have more theoretic similarity to academic performance (Bandura, 1997).

In the field of cognitive process, the people with high self-efficacy beliefs would regulate their behaviors more according to foresight regarding valuable purposes, they imagine successful scenarios providing positive guidance and supporting performance.

In the area of motivation, self-efficacy beliefs play important role in self-regulating motivation. Most of the human motivations are created through cognition.

The people create motivation in them based on foresight and guide their performance. They form beliefs regarding what they can do and predict probable outcomes of future performance consider purposes for themselves and assess a set of activities to reach valuable purposes.

Self-efficacy beliefs affect causal attribution; the people who know themselves highly efficient attribute their failures to insufficient attempt, while those who know themselves inefficient attribute their failures to their low abilities.

Causal attributions mainly affect motivation, performance, and affective reaction through self-efficacy beliefs, since the people act according to their beliefs about what they can do and probable outcomes of a specific job. All of these conditions cause the students with high self-efficacy to experience better academic performance, because these people experience two states facing assignments or each challenging situation such as exam: they either succeed or fail. When encountering a failure they start their attempt again, since they don't consider themselves helpless and attribute their failure to their insufficient attempt and on the other hand believe in their capabilities, so taking their causal attribution, experience less exam anxiety.

The present study faced limitations such as geographical (Khomeinishahr), gender (female) and course (MA).

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