Original Article

Predicting female students' social anxiety based on their personality traits

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Abstract

Introduction: One of the most important psychological issues reflected more in the social developments is social anxiety disorder. In this context, this paper aims at predicting social anxiety in female students studying in the University of Mazandaran, based on their personality traits.

Materials and Methods: The population of this descriptive study consists of all female students in the University of Mazandaran in 2014-2015. The samples are 384 students selected by stratified random sampling. Collecting data of social anxiety, we used Watson and Friend's social anxiety scale (SAD, FNE), and personality inventory short form (NEO) to collect the data of personality traits. The data were analyzed by SPSS 22 and using Pearson's correlation and multiple regression.

Results: The results showed that neuroticism was positive and significant predictor of social anxiety (β=0.50, P<0.000). Extroversion (β=-0.32, P<0.000) and agreeableness (β=-0.10, P<0.049) were negative and significant predictors of social anxiety. Openness and conscientiousness were not predictors of social anxiety.

Conclusion: The results show that different personality traits can predict different aspects of social anxiety in students.

Keywords: Personality traits, Social anxiety, Students

Introduction

Mental health problems are one of important problems in human societies, which are on the rise. In fact, considering developments in sciences and the associated complexity in individual and social life and high levels of stress in people, stressful mental and emotional issues are of greater importance (1). One of the most important issue reflected more in developments of the modern life is social anxiety.

Social anxiety is the fear of social situations that involve interaction with other people. You could say social anxiety is the fear and anxiety of being negatively judged and evaluated by other people. The studied show that anxiety is associated with others' emotions, behaviors, and dissatisfaction (2). Miller (3) believes that social anxiety is defined as chronic fear of one or more social situations in which one is judged by others and is afraid of being shy in front of others.

In recent years, numerous researches have studied outbreak, etiology, and treatment of this problem. The epidemiologic studies show that the rate of social anxiety disorder outbreak in lifetime is 13.3%. Along with increasing the outbreak rate of this anxiety, researchers try to find the effective factors on this type of anxiety. Some believe that family factors and environmental experiences can affect initiation and continuation of this anxiety. Anxious and sensitive parents, too high and irrational expectations, punishment and humiliation, and extreme supports could be the cause of this type of anxiety (4). According to Butler (5), the causes of social anxiety are various. Some of these causes are: biological factors (excitation system and personality traits), environmental factors (relationship with parents and those who care one in childhood, and one's experience of being judged, evaluated, and praised…), bad and traumatic experiences (being threatened and devoted…), and problems arising

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from the requirements of different stages in life. Therefore, he suggests personality traits as biological factors that can predict social anxiety. Onder (6) believes that personality traits are important factors in determining how people adjust with the stressful events and how they will be recovered.

Indeed, personality is a complex psychological structure and includes countless sets of traits with different impacts on body and mind. One of the most known theories on personality is five-factor theory of personality known as big five personality traits. This theory was reevaluated by Costa and Mccrae in the late 80s and early 90s (7). The factors in this theory are: 1. Neuroticism: long-term tendency to be in a negative emotional state (anxiety, worry, sadness and tension). 2. Extraversion: It indicates how outgoing and social a person is. One enjoys being with people, participating in social gathering, and are full of energy. 3. Openness: It is an overarching concept that is characterized by an emphasis on transparency and free, unrestricted access to knowledge and information, as well as collaborative or cooperative management and decision-making rather than a central authority. 4. Agreeableness (adjustment): It reflects social and prosocial orientation and it can be said to be the opposite of hostile attitudes towards others. It is perceived as kind, sympathetic, cooperative, warm, considerate, trust, and humility. 5. Conscientiousness: It implies a desire to do a task well. It describes the power to control impulses as it is accepted in the society. It facilitates the task- and goal-oriented behaviors. It is characterized by characteristics as thinking before acting, to delay gratification of desires, following rules and norms, and organizing and prioritizing tasks (8).

In this context, various studies indicated that personality traits are effective factors on different types of anxiety. For example, Warren (9) studied the relationship between computer anxiety, personality, and organization effectiveness. The results confirmed the significant relation between personality traits and computer anxiety. Latifi et al (9), in a similar study, attempt to predict the computer anxiety among teachers based on their personality traits and emotional intelligence components. The results showed that there is a significant inverse relation between computer anxiety and components of emotional intelligence and characteristics like extraversion, openness, agreeableness, and conscientiousness, and there is a positive significant relation between computer anxiety and neuroticism. Khosravi and Bigdeli (10),

in their study on the relation between personality traits and test anxiety, showed that only neuroticism, among the other studied personality traits, could predict the test anxiety. Sarvghad et al. (11) studied the relation between attachment styles and personality traits and anxiety and showed that neuroticism could predict the anxiety among the female students and the traits of neuroticism and conscientiousness could predict the anxiety among the male students. Finally, Vossoughi et al. (12) and Karsten et al. (13), in separate studies, studied the structural relations of neo personality traits and symptoms of anxiety and depression. Both studies concluded that neuroticism is the common traits in these two disorders.

As mentioned, the role of personality traits in different types of anxiety has been approved theoretically and practically. Yet, there could be found no study on the roles of personality traits in social anxiety. On the other hand, according to the researchers, most stressful problems causing social anxiety are reflected in adulthood. For example, living away from family, being compelled to make an important decision, and accepting personal responsibilities by oneself (1), and obviously, such problems are more reflected in student life and most studies revealed that anxiety has been more observed among female students (10). Anxiety experience may cause problems later in life, leading to personal problems as well as negative impacts on professional and daily life performance. In this regard, considering the importance of recognition of personality traits and their roles in causing anxiety among students who are regarded as the main factors of development in the society, this paper aims at predicting anxiety among the female students based on their personality traits and attempts to answer this question which trait is the most important in predicting social anxiety among the female students.

Materials and Methods
The methodology used in this correlational study is simultaneous regression. The population consists of all the female students in the University of Mazandaran in the educational years 2014-2015, among whom 384 students were selected by using stratified random sampling. The sampling was done by recording the real size of female students in each faculty in different classes and then, by Morgan sample size (1970), the sample suited for each size was included in the final sample. Collecting the consents, the participants were assured that the data are confidential. Then, the social anxiety scales

(FNE, SAD) and five personality traits (NEO-FFI) were used to assess the variable of social anxiety, and personality traits in students, respectively. Finally, the students answered the questions and 342 questionnaires were collected to be analyzed.

Research instruments

- Social Avoidance and Distress (SAD) and Fear of Negative Evaluation (FNE) Scales: This scale includes 58 items and two components of social avoidance and distress and fear of negative evaluation. 28 items are concerned with the social avoidance and 30 items assess fear of negative evaluation. The subscale of social avoidance has 15 items with positive answers and 13 items with negative answers and the higher score reflects higher social avoidance and distress. The total score is obtained by adding the total number of correct answers for the items 2-5-10-11-13-14-16-18-19-20-21-23-24-26 and incorrect answers for the other items. The subscale of fear of negative evaluation has 17 items with positive answers and 13 items with negative answers and the higher score reflects higher fear of negative evaluation. The total score can be obtained by adding the total number of correct answers for the items 30-31-33-35-37-39-41-42-45-47-48-50-52-53-56-57-58 and incorrect answers for the other items. The continuum is ranked based on the whole correct and incorrect answers and is recognized as zero and one for each answer, respectively (14). Watson and Friend (1969) reported the validity of this scale as 68% and 78% for social avoidance and fear of negative evaluation, respectively. They also used Taylor anxiety test (1953) and studied the reliability of these scales and reported the correlation coefficient for the fear of negative evaluation scale as 60% and for social avoidance scale as 54% (15). In Iran, Mehrabizade Honarmand et al. reported the validities of the scales, by using retest and Cronbach Alpha as 0.89 and 0.92, and 0.88, 0.83, 0.86, and 0.90 for the subscales of social avoidance and fear of negative evaluation, respectively. Using "social anxiety/cognition disorganization" scale and the simultaneous structural validity scale of social anxiety, the validity of the questionnaire was measured. The total correlational coefficients for the two scales were 0.67 and 0.85, respectively, and for the subscale of social avoidance were 0.56 and 0.75 and for the subscale of fear of negative evaluation were 0.62 and 0.75 (15). The reliability of the questionnaire in this study was measured by Cronbach Alpha method, which was 0.88 for the social avoidance and distress and 0.87 for the fear of negative evaluation.

- NEO Five-Factor Inventory (NEO-FFI): This inventory was built by Costa and McCrae (1982) and was first translated by Kiamehr into Persian (16). This inventory includes 60 questions to assess five factors of personality including Neuroticism (N), Extraversion (E), Openness (O), Agreeableness (A), and Conscientiousness (C). Determining each trait, 12 items are proposed in a 5-option Likert scale (strongly disagree, disagree, undecided, agree, and strongly agree) and are scored by 0-4, respectively. Measuring the validity of the inventory, the results by Costa and McCrae showed that the correlations between five subscales of short form and those of long form are 0.77- 0.92. Costa and McCrae (18) reported the Cronbach Alpha coefficients for the subscales of neuroticism, extraversion, openness, agreeableness, and conscientiousness as 0.83, 0.65, 0.66, 0.66, and 0.83, respectively. In Iran, Anisi et al. measured the validity and reliability of the NEO personality inventory and reported the Cronbach Alpha coefficients for neuroticism, extraversion, openness, agreeableness, and conscientiousness as 0.80, 0.58, 0.36, 0.60, and 0.83, respectively. Moreover, on measuring the validity, the correlational coefficients of neuroticism, and extraversion in NEO inventory and those of neuroticism and extraversion in Eysenck questionnaire were 0.68, and 0.47, respectively. Therefore, NEO personality inventory is a good tool to determine the students' personality traits (19). In the present study, the Cronbach's alpha coefficients for the subscales of neuroticism, extraversion, openness, agreeableness, and conscientiousness are 0.68, 0.74, 0.52, 0.58, and 0.78, respectively.

Assessing the correlation between the variables, we used Pearson correlation coefficient, and the simultaneous regression to study the prediction of social anxiety by personality traits. The data were analyzed by SPSS version 22.

Results

The present research aimed at studying the social anxiety among the female students of the University of Mazandaran, based on their personality traits. The demographic and descriptive information of the participants are shown in Table 1 and the results of the descriptive statistics (mean and standard deviation) are presented in Table 2.

Table 1. Demographic and statistical information of participants

Degree	Percentage	Age average	Standard Deviation

Bachelor	9.35	20.84	3.89
Master	28.94	24.2	5.27
Doctorate	61.69	29.06	3.12

Table 2. Mean and Standard deviation of variables

Variables	Average	Standard Deviation
Neuroticism (N)	2.01	0.51
Extraversion (E)	2.37	0.52
Openness (O)	2.32	0.40
Agreeableness (A)	2.37	0.42
Conscientiousness (C)	2.74	0.50
Social anxiety	0.43	0.18

According to Table 2, the trait of conscientiousness has the highest score (2.74) and the trait of neuroticism has the lowest score (2.01). The other traits', i.e. extraversion, openness, and agreeableness, scores are 2.37, 2.32, and 2.37 respectively. The social anxiety average is 0.43.

To investigate the correlation between personality traits and social anxiety Pearson correlation coefficient was used. The results are shown in Table 3.

Table 3. Correlation matrix between personality traits and social anxiety

Variables	1	2	3	4	5	6
Neuroticism (N)	1					
Extraversion (E)	-0.48**	1				
Openness (O)	-0.06	0.12*	1			
Agreeableness (A)	-0.42**	0.47**	0.07	1		
Conscientiousness (C)	-0.42**	0.44**	0.05	0.40**	1	
Social anxiety	0.61**	-0.52**	-0.12*	-0.26**	-0.29**	1

** All coefficients are significant at 0.01 level

* All coefficients are significant at 0.05 level

As shown in Table 3, a positive significant relationship was found between the neuroticism with social anxiety (r=0.61, P=0.000) and extraversion with openness (r=0.12, P=0.032), extraversion with agreeableness (r=0.47, P=0.000), and extraversion with conscientiousness (r=0.44, P=0.000). Also a positive significant relationship was found between the agreeableness with conscientiousness (r=0.40, P=0.000). Also a negative significant relationship was found between the neuroticism with extraversion (r = -0.48, P=0.000) and neuroticism with agreeableness (r= -

0.42, P=0.000), neuroticism with conscientiousness (r= -0.42, P=0.000). In addition, a negative significant relationship was observed between the extraversion with social anxiety (r= -0.52, P=0.000) and openness with social anxiety (r= - 0.12, P=0.036), agreeableness with social anxiety (r= -0.26, P=0.000) and conscientiousness with social anxiety (r= -0.29, P=0.000).

In the next step, the simultaneous regression was used to study the prediction of social anxiety by personality traits. The results are shown in Table 4.

Table 4. Predicting social anxiety based on personality traits

Predictor Variables	Criterion Variable	F	P <	R	R²	β	T	P
Neuroticism (N)						0.50	9.94	0.000
Extraversion (E)						-0.32	6.23	0.000
Openness (O)	Social Anxiety	51.66	0.000	0.67	0.44	-0.05	1.24	0.217
Agreeableness (A)						-0.10	1.98	0.049
Conscientiousness (C)						0.03	0.55	0.581

[a] β, Beta coefficient; F, F-test; t, t-test; P, Significant Level; R, Regression Coefficient; R², Determination Coefficient

According to Table 4, all the predictor variables have a significant effect on social anxiety (F=51.66, P<0.000). Also according to the contents of Table 4, neuroticism was a positive significant predictor of social anxiety (P=0.000, β=0.50) and extraversion was a negative significant predictors of social anxiety (P=0.000, β= -0.32). Also Agreeableness

was negative significant predictors of social anxiety but openness and conscientiousness was not predictor of social anxiety. Note that all the predictor variables presented 44% of variance of social anxiety.

Discussion

The purpose of this paper was predicting the social anxiety among the female students based on their personality traits. Five big personality traits were studied, in this study, as predictors of social anxiety.

The results indicated that the trait of neuroticism is the positive and significant predictor of social anxiety. This finding conforms to the results by Latifi et al. (9), Khosravi and Bigdeli (10), Sarvghad et al. (11), Vossoughi et al. (12), and Karsten et al. (13), all of which confirmed the predicting role of neuroticism in different types of anxiety. Theoretically, Costa and Mccrae define neuroticism opposed to adjustment and emotional stability and believe that such people experienced higher levels of anxiety since they are worried, unsafe, and nervous (20). Also, neurotic people expose themselves more against tensions due to negative understanding and interpretations of events (21). These people evaluate the situations negatively and this is because of their pessimistic views. In this context, neurotic people are always afraid of negative evaluations that are considered as the main element of social anxiety, and higher levels of anxiety can be easily observed in such anxious people.

Moreover, the results showed that extraversion is the negative and significant predictor of social anxiety among the students. It can be explained that high self-confidence, curiosity, sociability, and being energetic are the main characteristics of extravert people (11). Obviously, high self-confident people are not afraid of being evaluated by others. Also, the extraverts are sociable with a life full of human experiences and communication, who are open to accept others with different behaviors, even unusual, and hence, they may experience positive and negative emotions more than others; however, they emphasize more on positive aspects of experiences (22), making them brave to face with new and unknown situations. Curiosity and being active lead these people to experience in public. Therefore, normally the extraverts experience less social anxiety.

Another finding of the present study was that the trait of agreeableness is a significant negative predictor of social anxiety. It can be said that agreeable people are basically altruistic and believe that others behave the same (23). This belief directs people to positive aspects of social life. In fact, optimism and criticizability are main characteristics of agreeable people (11). The combination of these two characteristics can reduce the main components of social anxiety, i.e. social avoidance and distress and fear of negative evaluation. Agreeable people's optimism reduces social avoidance and distress; that is avoiding public and having negative feelings in social relations and communication. Criticizability can reduce fear of negative evaluation that is constant fear of one or more social performance unknown for the person. Finally, it can be concluded that increased agreeableness can decrease social anxiety.

Finally, it can be said that what is obvious is that people are different in their moods and different personality traits can predict different levels of social anxiety. However, most views on personality consider personality traits constant and unchangeable in lifetime (24), there is evidence that personality traits can change over time (25-26). Therefore, we may change them if we know them. The present study was a step forward to achieve this goal. However, any piece of work faces with limitations and we may provide definite conclusion only by more and more researches.

Conclusion

According to the results of the present study, the female students with high levels of anxiety experience neuroticism more, and the traits of extraversion and openness is low in these students. However, it should not be ignored that different personality traits are not the only causes of this problem, but their effects can be changed and optimized by what will happen in the future. Therefore, we may study the effects of mediating variables in other studies on other predicting traits.

Acknowledgements

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