

## Relationship between personality traits and anxiety in medical students of CMH Lahore Medical College

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**Objective:** To assess the influence of personality traits on pre-disposing the students of CMH Lahore Medical College to anxiety.

**Methodology:** This cross sectional study was conducted in CMH Lahore Medical College, Pakistan from January to December 2019. A total of 146 MBBS students of age 19 to 24 years was randomly selected. The questionnaire "Big Five Inventory-2 Extra Short Form" was used to assess the personality characteristics of participants and "GAD-7 scale" was used to assess the anxiety levels of the participants.

**Results:** There were influences of personality traits (neuroticism, agreeableness, conscientiousness, extraversion and openness to experience), on pre-disposing the students to

anxiety. Students who scored higher in neuroticism personality trait had highest levels of anxiety. Conscientiousness also showed correlation with anxiety levels. Agreeableness extraversion and openness to experience were negatively linked to anxiety.

**Conclusion:** The results confirm the hypothesis by establishing a valid relationship between an individual's personality traits and the likelihood of becoming a victim of generalized anxiety disorder. The study specifically showed high correlation between neuroticism personality trait and anxiety. (Rawal Med J 202;45:963-966).

**Keywords:** Personality traits, neuroticism, conscientiousness.

### INTRODUCTION

Generalized Anxiety Disorder is a condition in which an individual experiences unreasonable concern about a number of occurrences, consistently for a period of at least 6 months, such that it is arduous for the individual to suppress the worry. This disproportionate anxiety hinders the routine life of the individual and decreases his ability to perform tasks in an apt manner. The individual's vigor is wasted on the worry making it difficult for him to focus and rest.<sup>1</sup> Anxiety disorder is not related to stress-inducing events however, it can be exacerbated by certain scenarios.<sup>2</sup> The disorder may have a genetic basis and could be affected by environmental factors. The incidence is greater in females (4.6%) as compared to males (2.6%).

Mental health care of medical students is a complex process influenced by innate characteristics of the student, training-related stressors.<sup>3</sup> Severity of symptoms of anxiety and symptoms of depression in medical students is negatively related to

emotional stability and positively related to stress vulnerability.<sup>4</sup> The prevalence of anxiety and depressive disorders in Pakistan has been quoted at around 34%.<sup>5,6</sup> Personality traits can be defined as a person's unique pattern of behavior, thoughts, feelings and emotions. Personality traits can reasonably be used to anticipate psychological disorders.<sup>7</sup> The Five Factor Model has been used to demonstrate this relationship.<sup>8</sup> The model assesses the personality of an individual through five domains, namely openness to experience, extraversion, neuroticism, conscientiousness and agreeableness.<sup>9</sup>

Young university students are more susceptible to mental disorders when compared to their peers not enrolled in universities.<sup>10,11,12</sup> The consequences of such disorders include decreased academic accomplishment, raised peril of suicide and disturbances in personal relationships.<sup>13,14,15</sup> These disorders can occur due to an aggravation of an already present disorder or new symptoms can appear as a result of the numerous stressors

associated with university life.<sup>16,17,18</sup> A significant factor that increases stress in students is a yearning for home due to being away.<sup>19</sup> Feeling a need to succeed, perceptions of one's own body and self-esteem are also stressors in university students.<sup>20</sup> Medical students suffer from psychological distress to a greater extent than the general population.<sup>21,22</sup> Thus, purpose of this study was to investigate five personality traits (neuroticism, agreeableness, conscientiousness, extroversion and openness to experience), as predictor of anxiety levels in medical students.

## METHODOLOGY

This cross sectional study was conducted in CMH Lahore Medical College, Pakistan from January 2019 to December 2019. The sample of 146 MBBS students of age 19 to 24 years was randomly selected. Consent was taken from authorities and then from individuals on a personal level. Demographic information was obtained through the form comprising of items, which focused on participant's age, gender and year of study. The Big Five Inventory and 2 Extra Short Form were used for assessment of personality. It is an adaptation of the original BFI in a short form. This is a simple 15 items scale with some reverse items. It is a valid and reliable tool. There are five scales of this questionnaire: 1- Openness to experience (OEAA); 2- Extraversion (EAAA) related to the ease with which one conducts his social interactions; 3- Neuroticism (NEAA) defined as the tendency to have recurrent, severe harmful emotions; 4- Conscientiousness (CAAA) as desire to achieve a goal in an efficient and organized manner and 5- Agreeableness (AgAA) as the ability to have amicable relationships.

Generalized Anxiety Disorder-7 scale was used to assess anxiety. This is a simple seven item scale that is a valid and reliable tool.

**Statistical Analysis:** SPSS version 21 was used for analysis. The relationship of different personality characteristics and anxiety was analyzed by one way ANOVA and multivariate regression analysis.  $p < 0.05$  was considered significant.

## RESULTS

Out of 146 medical students, 58 were male and 88 were female. Table 1 shows the demographic information of the participants. All five personality traits added statistically to the prediction, at the  $p > 0.05$  level. Two personality traits conscientiousness (.079) and neuroticism (1.536), were positive predictor of anxiety which showed that participants having neuroticism personality trait were more prone to develop anxiety. Three personality traits agreeableness, (-.012) openness to experience (-.101), extroversion (-.129), were negative predictor of anxiety (Table 2).

**Table 1. Descriptive statistics (N=146).**

	Variable	Number	%
<b>Age</b>	19	25	17.1
	20	40	44.5
	21	54	81.5
	22	18	93.8
	23	9	100.0
<b>Gender</b>	Male	58	39.7
	Females	88	100.0
<b>Year of study</b>	First year	36	24.7
	Second year	72	74.0
	Third year	16	84.0

**Table 2. Multiple regression analysis of generalized anxiety predicted with, personality trait (N=145).**

Model	Unstandardized coefficient		Unstandardized coefficient		Sig
	B	Std. Error	B	T	
<b>1 (constant)</b>	.806	2.017		.400	.690
<b>Neuroticism</b>	1.536	.202	.535	7.597	.000
<b>Agreeableness</b>	-.012	.032	-1.76	.168	.866
<b>Conscientiousness</b>	.079	.043	-.03	1.058	.292
<b>Openness to experience</b>	-.101	.038	-.748	-1.428	.155
<b>Extroversion</b>	-.129	.022	-.252	-1.835	.069
<b>F</b>	57.708				
<b>R<sup>2</sup></b>	.286				

**Table 3. One way ANOVA, analysis Comparison of score on generalized anxiety by Personality Trait (146).**

		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
<b>Agreeableness</b>	Between Groups	62.978	21	2.999	1.028	.435
	Within Groups	361.631	124	2.916		
	Total	424.610	145			
<b>Conscientious-ness</b>	Between Groups	181.579	21	8.647	2.002	.010
	Within Groups	535.606	124	4.319		
	Total	717.185	145			
<b>Neuroticism</b>	Between Groups	216.579	21	10.313	4.189	.000
	Within Groups	305.257	124	2.462		
	Total	521.836	145			
<b>Openness to experience</b>	Between Groups	59.041	21	2.811	.887	.608
	Within Groups	393.206	124	3.171		
	Total	452.247	145			
<b>Extroversion</b>	Between Groups	196.729	21	9.368	2.261	.303
	Within Groups	513.853	124	4.144		
	Total	710.582	145			

There was significant effect of personality traits on individual prone toward anxiety ( $p < 0.5$ ). One way ANOVA was conducted to compare the effect of five personality trait on individual to become a victim of anxiety. Comparison of different personality trait with anxiety shows that there is a significant effect of two personality traits on individual prone toward anxiety.  $F(21, 124) = 4.189$  for neuroticism personality trait, and  $F(21, 124) = 2.002$  for Conscientiousness personality trait (Table 3).

## DISCUSSION

The present study sample was 146 participants with mean age of 21.28 years. The results of the study as mentioned above confirm the objectives by establishing a valid relationship between an individual's personality traits and the likelihood of becoming a victim of generalized anxiety disorder. Starting from first objectives, five personality traits (neuroticism, agreeableness, Conscientiousness, extroversion and openness to experience), as

predictor of anxiety levels in medical students. The results were in line with a previous study by Alizadeh et al. This study aimed to determine the prognostic value of different personality traits for common psychological problems.<sup>24</sup>

Notable limitations were found in our research: a small sample size and the confinement of the study to only one college students. Moreover, the study was only conducted in Pakistan which prevented us from accounting for the effect Aboriginal culture and family system may play in predisposing a person to mental illness. Following are the suggestions regarding future researches. A socioeconomic profile of the participants can be made along with psychological and medical assessment by respected authorities.

## CONCLUSION

The results of the study confirm the hypothesis by establishing a valid relationship between an individual's personality traits and the likelihood of

becoming a victim of generalized anxiety disorder. The study specifically shows high correlation between neuroticism personality trait and anxiety.

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