Investigating the prevalence of personality disorders and its relationship with personality traits among students

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ABSTRACT

The present study was aimed to investigate the prevalence of personality disorders and its relationship with personality traits among students. This research was among epidemiological-correlational descriptive studies. Method: For this purpose, 389 male students were selected via a multi-stage cluster sampling method. All subjects completed Millon's personality disorder (1987) and five-factor personality Costaand McCrae's questionnaires (1989). Results: The results showed that the prevalence of personality disorders is among students. It was also found that there existed a positive correlation between schizoid, avoidant, dependent, schizotypal, borderline and paranoid personality disorders with Neuroticism factor (r = .1). There was a significant negative correlation between schizoid, avoidant and schizotypal personality disorders with extraversion factor (r = .1) and significant positive correlation between histrionic disorders and extraversion (r = .1). There was a significant negative correlation between dependent personality disorder and Openness factor (r = .1), significant negative correlation between narcissistic, antisocial and paranoid personality disorders with agree ableness factor (r = .1) and finally, significant negative correlation between antisocial, passive-aggressive and borderline personality disorders with accountability factor (r = .1)and a significant positive correlation between accountability factor and compulsive personality disorder (r = .1). Conclusion: The results suggest a prevalence of personality disorders among students and significant correlation between some disorders with personality factors. Further studies in this area could provide more insightful findings in the field.

Keywords: personality disorder, personality traits, students

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INTRODUCTION

Personality disorders as disparate categories of disorders are defined by old, inclusive, and inflexible behavior models and internal experiences that are incompatible with the cultural expectations of subject. These problematic models are evident at least in two cases of the following areas: cognition, emotions, relationships and impulse control [1]. The diagnosis of personality disorders is not performed as the same as all other DSM-V disorders unless they make a neurosis or functional damage [1]. Ten different personality disorders are classified in three categories in the fifth revision of Diagnostic and Statistical Manual of Mental Disorders, it indicates an idea that the disorders are characterized by odd or unconventional [category A] histrionic, emotional, or unusual behavior [category B] or anxious or fearful behavior [Category C]. This category provides a useful organizing framework for our discussions [1]. Personality characteristics used for classification form a continuum i.e. the most of these characteristics or traits are present to varying degrees in most individuals when people with a personality disorder respond to personality questionnaire, personality traits are more extreme than that seen in the public [2]. Thus, personality disorders can be defined with extreme limits of traits all around us. Therefore, the dimensional approach can be more appropriate to the diagnosis of personality disorder. In fact, a dimensional system was considered for DSM-IV, DSM-III-TR, but it was not possible to achieve a consensus on this issue; which aspects should be considered [3]. Extensive studies

have been conducted to examine the epidemiology of personality disorders in different groups and the whole [4, 5, 6, 7, and 8]. Many researchers increasingly have criticized the categorical classification system and Statistical Manual of Mental Disorders [9-14] and they have been thinking about alternative models for this categorization [16, 12, 15]. One of these alternative patterns is classification of personality disorders based on a structural model of personality, including five-factor model of personality [17]. In the last three decades, five-factor model of personality has devoted a lot of research to itself, that one of the main reasons is the substantial evidence that emphasizes on five-factor a strackable almost in all cultures [18]. Costa & McCrae came to the conclusion that five major dimensions could be included between individual differences in personality traits using factor analysis [19]. These five dimensions include Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness [19]. Five-factor model of personality [five-factor model] is originated from a language paradigm that claims all the important adjectiveterms are rooted in language to describe the character functions of its own and others [18]. Although at first five-factor model was originated from studies in English, but now this model is presented in multiple languages and cultures and it is rooted in them [18].

Basic personality models are constantly researching in the field of personality pathology. Just during 15 years, more than 50 studies have investigated the correlation between the personality five-factor model and personality disorders [20]. Researchers have summarized the results of several studies that communicate between the five-factor personality model and personality disorders [18, 21-25]. Studies show that the results obtained are more or less identical in a range of studies that have adapted the personality disorder diagnoses with five-factor model dimensions [21-26]. Most personality disorders are characterized by high Neuroticism and disagreement. High Extraversion had a close correlation with Histrionic and Neuroticism [two disorders that include Histrionic behavior]. While low Extraversion had a close correlation with the disorders of schizoid, Schizotypal, and Avoidance [24-27]. Antisocial personality disorder usually is characterized by low Conscientiousness and Accountability [24-27,], Paranoid personality disorder is characterized by High Neuroticism and low Agreeableness [24- 27], Schizoid disorder is characterized by low Extraversion [24-26], Schizotypal is characterized by high Neuroticism and low Extraversion and Agreeableness [24-27], borderline personality disorder is characterized by high Neuroticism and low accountability and Agreeableness [24-27], histrionicis characterized by high Extraversion [24-27],Narcissism is characterized by high Extraversion and low Agreeableness [24-27],avoidant personality disorder is characterized by high Neuroticism and low Extraversion [24-26,] as well as dependent personality disorder is characterized by high Neuroticism [24-27,]and finally compulsive personality disorder is characterized by high accountability [24,25,26]. According to the above mentioned issues, the central question in the study is as follows: how is the prevalence of personality disorders among students and what relationship exists between the disorders and personality traits? all or most of the research has been done on the correlation between personality disorders and personality five-factor model in Western contexts [Europe and America] and whether the findings are applicable to Iranian samples or remain unanswered still. In the internal investigations contrary to international researches, there are studies in the field of personality disorders on the prisoners or other non-student groups. And doing a little research in this area on the students has not long history at home, and for example we do not have accurate statistics on the prevalence of personality disorders among college students. For the reasons, this study is designed for students of Azad University of East Azarbaijan province to investigate the prevalence of personality disorders and its relationship with personality traits.

MATERIALS AND METHODS

This research was among epidemiological-correlational descriptive studies. All subjects completed Millon's personality disorder (28) and five-factor personality Costa and McCrae's NEO-FF-I questionnaires (29), along with certain demographic characteristics such as age, gender and educational field. The subjects were informed of the objectives of questionnaires before completing the questionnaires and they had a thorough knowledge and freedom in the presence or absence in the research process.

The statistic community included all male students of Islamic Azad University of East Azerbaijan province who were students of the university at the time of questionnaire completion and in the second semester 2014. The sample was selected from the community and via multi-stage cluster sampling method. The method of sample selection was randomly within each cluster of it , so that at first 3 Islamic Azad Universities from 3 cities of East Azarbaijan were selected to study as randomly . Then two business days were selected randomly for each academic unit. Next, 10 classrooms were selected randomly from the entire same classrooms' academic unit during 2 days that totally three University units of Tabriz, Sarab and Malekan were selected with a sample size of 389 subjects under study sample. Of course, this is a sufficient number of samples for the study community according to Morgan table.

Millon's personality disorder MCMI-III questionnaire: it is designed by Millon (1987) based on biological -Psychic - social theory and his clinical experience and research (30). Its revised form has been made of 175 his short sentences

- descriptive by answers "yes and no" that are suitable for individual and group performance (28). This test is composed of 22 clinical scales of personality models (scales of schizoid, avoidant, dependent, histrionic, narcissism, antisocial, aggressive, obsessive - incontinence, passive –sadism, critical patterns of personality (including schizophrenic, borderline and paranoid) and clinical symptoms (anxiety scales, body shape, bipolar confusion, bad-tempered, alcohol dependence, drug dependence, thought disorder, major depression and delusional disorder. this questionnaire has a moderating factor (x) a validity scale (v) and two measures of response trends according Millon (y, z). the test was first introduced by the KhajehMugahi (1993) in Iran and a pilot study was conducted for normalization of it in Tehran (31). Reliability coefficient of test has been reported through internal consistency of data 0.80 andvia retest 0. 86 (31). This questionnaire has the cutoffpoint and score 85 or more in each factoris the indicator of personality disorder in that factor.

Short Neo Form Questionnaire (NEO-FFI). The theoretical underpinning of this questionnaire is based on the theory of personality 5-functional called great five-factor. This theory was presented by psychologists living in America **Costa and McCrae**in the late 80th century which was revised in the early 90's. Great Five-factors are as follows:

1) Neuroticism, which includes anxiety, hostility and anger, depression, self-awareness, early arousal - vulnerability.
2) Extraversion which includes warm-blooded, sociability, assertiveness, thrill-seeking and positive emotions.
3)Openness which includes imagination, aesthetics, feelings, actions, thoughts and values.
4)Agreeableness which includes trustworthiness, honesty, altruism, compliance, modesty, agility.
5) Conscientiousness which includes self-contained efficiency, discipline, conscientiousness, achievement, effort, self-discipline, thoughtfulness.

Short NEO-form questionnaire (NEO-FFI) was used to measure the personality five-factor model. This is the short form of 240- article questionnaire (NEO-PIR), including 60 articles for evaluation of personality five-factor model (Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness) by **Costa and McCrae**(1992). And it will be scored based on the Likert scale from strongly disagree to strongly agree (29). Its retest Reliability coefficients has been achieved within three months between 0.83 and 0.75 as well as Cronbach's alpha coefficient 0.92 by its designers for this scale (29). Gerosifarshi (2001) also reported the internal consistency coefficients for each of the factors "Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness as 0.86, 0.56, 0.72, 0.68 and 0.87 (32) respectively. Cronbach's alpha coefficient for the above articles in the present study was 0.48, 0.69, 0.87, 0.84,0.61.

RESULTS

Firstly the demographic characteristics of the sample are displayed, including age, education and marital status in Table 1.

Table 1. Demographic characteristics of the sample in terms of age, education and marital status

characteristics	age		education	frequencies	percent	married	single
	average	standard deviation				Frequencies (percent)	Frequencies (percent)
	21.65	6.08	Humanities	175	.44	(.27) 105	(.73) 284
			Basic Sciences	57	.14		
			Engineering	139	.35		
			Art	18	0.04		

Table 2. Descriptive statistics of the sample in studied variables

variables	maximum	minimum	average	standard deviation
Schizoid	85	45	57.05	8.25
Avoidance	87	44	57.33	9.86
Dependent	89	45	58.21	9.68
Histrionic	87	44	57.76	9.56
Narcissist	89	45	58.08	10.44
antisocial	89	45	59.45	11.46
Aggressiveabuser	89	42	59.36	11.54
Compulsive	89	43	58.51	10.36
Passiveaggressive	89	45	58.71	10.78
Schizotypal	89	45	58/48	10/14
Borderline	89	45	59/30	10/61
Paranoid	89	45	58.71	10.60
Neuroticism	47	14	28.96	9.70
Extraversion	47	12	28.13	9.66
openness	46	10	23.38	9.44
Agreeableness	47	10	23.31	9.81
Conscientiousness	47	10	23.90	9.72

Descriptive statistics of the sample, including maximum, minimum, average and standard deviation of scores are provided in variables in Table 2.

In accordance with what has been proposed in the present study, one of the main objectives of the present study was to determine the prevalence of personality disorders among university students. In this regard, the estimated prevalence for any disorder will be included after the first hypothesis mentioned in Table 3.

Table3.Prevalence of personality disorders in students

variables	sample	Number observed	percent
Schizoid	389	2	0.51
Avoidance	389	5	1.28
Dependent	389	7	1.79
Histrionic	389	9	2.31
Narcissist	389	11	2.82
antisocial	389	4	1.02
Aggressiveabuser	389	7	1.79
Compulsive	389	15	3.85
Passiveaggressive	389	12	3.08
Schizotypal	389	3	0.77
Borderline	389	10	2.57
Paranoid	389	6	1.54

The frequency and prevalence of personality disorders have been listed in Table 3. The correlation matrix between the variables outlined in Table 4. The correlation between the variables is calculated by the Pearson correlation coefficient formula. It should be noted that the significance or insignificance of this correlation has been shown through asterisks drawn on top of each correlation between variables.

Table 4.Correlation matrix between variables (personality disorders and personality traits)

variables	Neuroticism	Extraversion	openness	Agreeableness	Conscientiousness
Schizoid	.456**	-.342**	-.039	-.046	.077
Avoidance	.336**	-.516**	-.087	-.086	.084
Dependent	.471**	.093	-.306**	-.066	-.096
Histrionic	.027	.476**	.066	.003	.023
Narcissist	.045	.054	-.019	-.479**	-.024
antisocial	.021	.011	.047	-.306**	-.388**
Aggressiveabuser	.006	.058	.001	-.016	-.069
Compulsive	.069	.065	.045	.036	.738**
Passiveaggressive	.009	.011	-.023	-.023	-.479**
Schizotypal	.682**	-.516**	-.052	-.009	-.096
Borderline	.422**	-.010	.028	-.016	-.274**
Paranoid	.305**	-.208	-.090	-.342**	-.064

* Significant at level 5. ** Significant at level1.

As Table 4 shows, there is a positive correlation between schizoid personality disorder and Neuroticism factor and significant negative correlation with Extraversion factor. There is a positive significant correlation between avoidant personality disorder and Neuroticism factor. And significant negative correlation with the factor of Extraversion. There is a significant positive correlation between dependent personality disorder and Neuroticism factor and significant negative correlation with Openness factor. There is a positive correlation between Histrionic personality disorder and Extraversion factor. There is a negative correlation between narcissistic personality disorder and Agreeableness factor. There is a negative correlation between antisocial personality disorder and Agreeableness and accountability factors. There is a positive correlation between obsessive-compulsive personality disorder and accountability factor. There is a negative correlation between passive aggressive personality disorder and accountability factor. There is a positive correlation between schizotypal personality disorder and Neuroticism factor and significant negative correlation with Extraversion factor. There is a positive correlation between borderline personality disorder and Neuroticism factor and significant negative correlation with Agreeableness factor and accountability factor. And finally there is a positive correlation between paranoid personality disorder and Neuroticism factor and significant negative correlation with the Agreeableness factor. All correlations listed on Level .1 are significant.

DISCUSSION

Here is the correlation between the variables to be considered separately. As there was a positive correlation between schizoid personality disorder, avoidant, dependent, schizotypal, borderline, paranoid and Neuroticism on level .1. This is roughly in line with most of the results in this area [18-27]. [APA, 2013] DSM-5 knows the disorder

as pervasive pattern of fragmentation from social relations and a limited range of expression of emotions in interpersonal situations describing the schizoid personality disorder. This phrase has been raised about high Neuroticism factor: reactive persons are those who experience the negative emotions more than others and are less satisfied with life than most people [1]. Reactive persons show reaction to any stimulus [29]. According to the above explanations about schizoid personality disorder and neuroticism, it becomes clear that a common feature is in both cases and it is disorder and difficulty in social relationships in both cases. In fact, people with schizoid personality disorder may have particular difficulty in expressing the anger, even in response to direct stimulation [with the impression that they lack of excitement] [1]. Having the negative emotions, including anger is neuroticism factor from the diagnosis foundations. And it has also been found that the destructive excitement impacts on the compatibility of person and environment [19]. This description specifies that a common aspect between schizoid personality disorder and Neuroticism factor is difficult in the individual and social relationship that the inability factor to control anger can be more prominent in this area. It describes the disorder as follows in stating the schizotypal personality disorder in DSM: «pervasive pattern of social and interpersonal deficits are characterized bymuch discomfort against the intimate relationships and decrease of the ability for it , in addition, cognitive or perceptual distortions and bizarre behavior "[1], however, it becomes clear that the disorder characteristics and problem in social relations and interpersonal can be common between schizotypal personality disorder and Neuroticism factor .it should be noted that the schizoid personality disorder and schizotypal personality disorder are located in the first cluster. Another disorder, paranoid personality disorder is placed in the cluster. The results showed that there is a positive correlation between Neuroticism with all three disorders of the cluster. According to the DSM-5 [2013] the main disorder of the persons is appeared in relation with others. Paranoids suspect to others. People with paranoid personality disorder are also vindictive towards others. Inefficient pattern for relation to others with negative emotion in the disorder as well as 2 other disorders of the cluster can have an important contribution to the relationship between these disorder and factor [1].

Avoidant personality and dependent disorder fall in the third cluster of Personality disorders [1]. The main feature of this category of disorders are anxious and being afraid [1]. The two are considered negative emotions of persons and negative emotionality is the most prominent feature of Neuroticism [29]. It should also be noted in particular that the pervasive pattern of social inhibition and extreme sensitivity to negative evaluation form the distinctive features of avoidant personality disorder [1]. Also dependent personality disorder is characterized by pervasive and excessive need to be taken care that leads to behaviors of domination, dependency and fear of separation. [1]. Pattern of negative emotions, especially in relationships with others can be characterized by two recent personality disorders explaining the positive correlation between these disorders and Neuroticism. People with high Neuroticism are those who experience the negative emotions more than others and are less satisfied with life than most people. Reactive people respond to any stimulus [18]. The entire collection Aincludes a general tendency to experience the negative emotions such as fear, sadness, confusion, anger, guilt and hatred [though it has something more than preparation for psychological disorders].

The results also point to a positive correlation between borderline personality disorder and Neuroticism. The main feature of borderline personality disorder is considered a pervasive pattern of instability of interpersonal relationships, self-image, emotions and impulsivity [1]. A model of problems is common in interrelationships full of negative emotions in borderline personality disorder and Neuroticism factor. Emotional instability and inappropriate anger and Inability to control anger are also distinctive features of borderline personality disorder [1]. It should also be noted that the scale of anger and malice is in sub-factors of Neuroticism N2 [hostility] which measures the tendency to experience the anger and related senses such as feelings of helplessness and frustration. Also N5 factor [haste or impulsivity] is an indicator of inability in the whims of individuals [29]. It can be seen that the borderline personality disorder and Neuroticism have common factors in negative emotions such as inability to control anger and impulsivity that justifies further the relationship between two variables. Of course, this does not mean that people with Neuroticism or those with high scores in this factor have borderline personality disorder. It could further mean that there are some shared components [negative emotions and troubled relations model] between people with borderline personality disorder and Neuroticism. Together with these components [negative emotions and troubled relations model] with some different characteristics in both groups appear different traits.

There is a negative correlation between Extraversion factor and schizoid, schizotypal, avoidant and Histrionic personality disorders at level .1and a significant positive correlation between Extraversion factor and Histrionic personality disorder at level .1. This is roughly in line with most of the findings in this area [18, 20, 21, 22, 23, 24, 25, 26, 27,]. There are several features in Extraversion and extroverts that is important in explaining the negative relationship of this factor with avoidant, schizoid and schizotypal personality disorders. Extroverts are social individuals, who like others and are willing to participate in their communities and parties. They are also talky and like the excitement and mobility [19]. This specification refers to traits that differ in people with avoidant, schizoid and schizotypal personality disorder in various ways. According to a description, people with schizoid personality

are Cold natured and non-social and introspective behavior and avoidance of close relationships are the main characteristics of them [1]. This avoidance of others and of relationships with others is evident in people with avoidant personality [1]. However, people with avoidant personality disorder tend to interact with others [ibid.]. On the other hand, people with schizotypal personality disorder have a damaged social model. Interpersonal and social isolation is characteristic features of the people [ibid.]. With this interpretation, it is clear that social relations model is completely different in extroverts and people with avoidant, schizoid and avoidant personality disorders. The personality orientation is outward in extroverts and interpersonal and social relations and it is inward in people with schizoid, avoidant and schizotypal personality disorders. Social isolation is self-imposed or forced.

In the meantime, there are positive and significant relationships between Extraversion and Histrionic personality associated with being active of both groups in social relationships. Histrionic personality actually measures the aspects of active type - dependent on the Millon typology. People with this personality disorder demonstrate the good social skills to gain respect and affection from others though they also have a hidden fear of self-determination and independence [29]. In fact, being active, especially in the field of social relations can be one of the Extraversion common traits and Histrionic personality. As mentioned, extroverts in the field of social exchanges tend to it and also active in this area.

Results also showed that there is a negative correlation between Openness and dependent personality disorder at level .1. Based on the descriptions of McCrae and Costa [1992], open people are very openness and curious in fertility of inner experiences and the world around and their life is full of experience [19]. These people want to enjoy the new theories and unconventional values. On the other hand people with dependent personality disorders are very passive. They are completely passive to communicate with others and then they are always waiting for the work of others and completely dependent on them. In fact, we can say that people with dependent personality do not have Openness traits in order to communicate and interact with others and they always expect it from others. While people with Openness are actively searching for these relations and other interested activities.

There was a significant negative correlation between agreeableness and narcissistic, antisocial and paranoid personality disorders at level .1. These results are in line with what other researchers [21-27, 18] had got to them .The agreeable person is altruist, h/she feels sympathy with others and is willing to help them and he believes that others have the same relationship with him/her [19]. Antisocial personality disorder and narcissistic personality disorder are in the second cluster [in a cluster]. According to the [2013] DSM-5T anti-social personality disorder characterized by disregard for and violation of the rights of others [1]. Harpur, Hart, Hare [2002] based on their investigations claimed that the personality five-factor model provides an extensive profile of individuals with antisocial personality disorder that It is characterized by high extraversion and Neuroticism, Openness, Agreeableness and low Conscientiousness [33]. In another study it was found that in this area anti-social is characterized by low agreeableness and conscientiousness [34]. According to the description of Leukefeld, Widiger, Lynam, Miller [2001] antisocial is characterized by higher scores in some Neuroticism and extraversion scales and lower scores in agreeableness scales in conscientiousness [35]. In a meta-analysis conducted to examine the relationship between these two variables, it was determined that a total of five-factor has correlation with anti-social. Accordingly, it was found that Neuroticism is in a weak positive correlation with anti-social. Extroversion and openness are in weak negative correlation with anti-social and agreeableness and conscientiousness have a high negative correlation with antisocial [36]. The results of this study indicate that with respect to the characteristics of the agreeable people and characteristics of people with antisocial personality disorder, both groups are at two ends of a continuum spectrum that the characteristics of the altruism of agreeable people are placed at one end of the spectrum and anti-social characteristics at the other end of the spectrum.

The narcissism is the second cluster of personality disorder. Pattern of human relations in this disorder was indicated of lack of agreeableness in these suffered subjects. Lack of empathy is characterized by people with this personality disorder [1]. However, the empathy with others is a typical pattern of individuals with low agreeableness. Trust is a key concept in significant negative correlation between agreeableness and paranoid personality disorder. As it was stated the agreeable persons believe as they are sympathetic with others, others will be with them in the same manner [19]. On the other hand, according to DSM-5, distrust and suspiciousness to others is the main characteristic of paranoid people [1]. In fact, according to research findings, we can say that paranoid people are in low agreeableness a case that can be said about antisocial personality disorder and narcissistic together. The results also indicated that there is a significant negative correlation between conscientiousness factor and antisocial, passive - aggressive and borderline personality disorders at level 1 and a significant positive correlation at level 1 between this factor and obsessive-compulsive personality disorder. Our findings were consistent with the findings of many researchers [23-27]. Conscientiousness is more based on adherence to moral principles, meaningfulness, educational and career success [19]. On the other hand lack of adherence to moral principles and rights of others is of the characteristics of antisocial personality disorder. In fact, according to the studies, it has been shown that low

Agreeableness and Conscientiousness is the basic characteristics of people with antisocial personality disorder [36, 34, and 33]. A wide range of educational and professional failure history can be seen in the history of individuals with antisocial personality disorder [37, 1]. People with passive - aggressive personality disorders carry out their aggression in the form of lack of Conscientiousness or doing others' demands in the complete intangible and passive method [1]. Non-performance of duties is of the methods used by these people to express aggression [e.g., in spite of admitting it]. On the other hand people with high Conscientiousness are characterized by features such as dull objections, compulsive obsess to cleanliness and or ultra-high pressure to oneself in administrative and professional affairs [19]. These people are detailed, obsessive, punctual and reliable. These characteristics are mentioned in these people back to why this factor is reliable in a positive relationship with Borderline Personality Disorder. As it was said, people with high Conscientiousness are reliable [29]. Reliability is due to the stability and behavior of individual and this case is very severe in people with unstable borderline personality disorder. People with borderline personality disorder [1] cannot be reliable due to the behavior instability.

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