



Research Article

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Predicting the defense mechanisms based on personality traits in university employees

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ABSTRACT

The objective of this study was to predict defense mechanisms based on personality traits in employees of Islamic Azad University of Marvdasht. The research is applied in terms of objective and descriptive-correlational in terms of data collection, conducted in the prediction plan. The population of study included all employees of Islamic Azad University of Marvdasht. The sample of study was selected by using systematic random sampling among population of study. To collect data, Andrews Defense mechanisms tests and McCrae - Costa Personality Traits Questionnaire were used. To analyze the data, the Pearson correlation coefficient and multiple regression method were used. The results showed that there is a significant relationship between defense mechanisms and personality traits and personality traits have significant predicting power for defense mechanisms.

Keywords: *defense mechanisms, personality traits, university employees*

INTRODUCTION

Defense mechanisms have been considered by clinical studies since they have special importance in the conceptualization and treatment of mental disorders from the psychodynamic perspective [1]. In general, defense is a term that includes the active struggles of the "ego" to protect against the risks, which typically they are lack the subject of love, castration, and unhappiness of "super ego" and they are associated with unpleasant emotions, and they are created during life evolution [2] According to American Psychology Association [3]. In the wider definition that is less psychoanalytic compared to previous definition, defense mechanisms are viewed as patterns of feelings, thoughts, and behaviors that are relatively involuntary, which they are shaped in response to risk perception or psychological aggression or against unexpected changes in the internal and external environment or in response to cognitive dissonance. There is much evidence available that selecting the defense style justifies the individual differences in response to stressful situations. Defense mechanisms while have individual differences, they are common in two traits. First, they are denial or distortion of the reality, that is, although necessary, they are distorting. Secondly, defense mechanisms act unconsciously. People are not aware of this mechanism, and this means that people are at the conscious level of their subjective, unreal, or distorted mental images [4]. Defense mechanisms in fact distort the reality and rate of distorting the reality in immature and neurotic defenses is more than that in mature defenses. As cognitive distortion rate of defense in greater, the level of conscious awareness is reduced, resulting in less effort done to cope with the cognitive distortions [5]. Therefore, defense mechanisms reduce our conscious understanding and our feelings and conflict with our beliefs. Therefore, defense mechanisms, particularly immature mechanisms, are an obstacle to understanding the realities in an individual, inhibit the effective and rational defense, and reduce the insight capacity and self-exploration [6]. One of the key variables playing important role in the use of defense mechanisms is

personality traits. Big five-factor model of personality has been considered by many psychologists in recent years as powerful approach to study the personality traits. This model suggests that man is a rational creature, which can recognize his personality and behavior. According to this theory, human is a creature who understands his way of life and has ability to analyze its actions and reactions [7]. The big five main factors include: neuroticism (N), which is also called nervousness or emotional instability, extraversion (E), openness to experience (O), agreeableness (A) and conscientiousness (C). According to Bullock (1995), factors N and F were taken from Cuttle analyses, endogenous factor was taken from Costa and McCrae, and factors A and C were taken from analyzing the words in English language.

In general, definition of personality traits in everyday life backs to stable traits during time, which do not change so much from one situation to another and it refers to nature of the individual. In general, our behavior is affected by cognitive and emotional traits and abilities. To predict such traits, they should be carefully examined [8]. VanBercl [9] examined personality traits with defense mechanisms among female medical students and found that those with higher neurotic traits use highly immature defense mechanisms. Kachuei et al. [10] in a study to determine the relationship between personality traits and defense styles with eating disorder symptoms concluded that there is significant relationship between eating disorders symptoms, immature defense style, neurotic defense style, conscientiousness, agreeableness, and neuroticism. In addition, personality trait of conscientiousness immature defense style and two-half defense mechanisms, false altruism, replacement and rationalization are able to predict eating disorder symptoms. Behzadi pour et al. [11] in a study under title of personality traits and defense mechanisms in obese individuals compared to normal weight individuals concluded that obese people use more mechanisms of projection, inversion, and somatization. In addition, obese people are different from people with normal weight on extraversion, acceptability, conscientiousness, and openness [12]. Dadsetan [12] examined defense styles in different types of narcissistic personalities. The analysis of the results using the fundamental correlation found the relationship between narcissistic type and the way of using defense mechanisms. Detailed analysis showed that the relationship between narcissistic and neuroticism defense mechanism is negative and significant, but it has significant and positive relationship with mental immature defense mechanisms. Bund and Perry [13] in a study titled as long-term changes of defense styles and psychoanalytic therapy in patients with depression, personality disorders, and anxiety concluded that defenses play an important role in mental health. Several reviews also have supported the assumption that physical and mental health of individuals is significantly correlated with their defense mechanisms. Besharat [14] examined the relationship between positive and negative perfectionism and defense mechanisms and stated that positive perfectionism has positive correlation with mature defense mechanism, while it has negative correlation with neurotic and immature defense mechanisms. Conversely, negative perfectionism is negatively correlated with mature defense mechanism and it is positively correlated with immature and neurotic defense mechanisms. Positive perfectionism increases the capability of an individual for realism, acceptance of personal limits, reduced failure, and positivism. Through intensifying the ideal criteria, negative perfectionism reduces the capability of an individual for realism, acceptance of personal limits, reduced failure, and positivism and it improves the use of immature and neurotic defense mechanisms. In addition, Andarouz et al [15] found out that obsessive people are characterized by less use of humor, suppression, sublimation, and more use of transition to acting, projection, and cancellation. Evren et al [16] in a study titled as investigating the personality traits and defense styles related to relapse during 12-month follow-up in alcohol-dependent men on 70 alcohol-dependent men concluded that immature styles predict relapse among relatives under treatment. The aim of this study was to predict defense mechanisms based on personality traits. Therefore, research hypotheses were formulated as follows.

1. There is significant relationship between defense mechanisms and personality traits.
2. Personality traits predict defense mechanisms significantly.

Method

This study is correlational-descriptive study in terms of nature and research objectives.

Population and sample of study: The study population included all the employees of Marvdasht Islamic Azad University in year 2015. Using systematic random sampling, 99 of them (56 males and 43 females) were selected and they were invited to respond the research tool. Accordingly, list of employees was prepared firstly from university staffing department and sample members were selected. Data collection tool: defense style questionnaire DSQ-40: Defense Style Questionnaire (DSQ) was developed in 1993 by Andaruz et al, which includes 40 questions and evaluates 20 defense mechanisms in three levels of mature, immature, and neurotic (Table 1) and scale of scoring and interpretation of its scores is based on 9-point Likert score [17].

Cronbach's alpha coefficient for each of the mature, immature, and neurotic styles was 0.73, 0.75, and 0.74, respectively and retest reliability coefficient with 4-week interval was reported 0.82. Based on these findings, it was determined that defense styles questionnaire in the study groups has appropriate credibility. NEO-Five Factor Inventory (short form): this questionnaire measures 5 main factors of personality and 6 traits in each factor or 30 traits in total, and accordingly, it provides comprehensive evaluation of personality. This questionnaire is scored based on Likert scale. In NEO test standardization, correlation coefficient of main dimension was obtained between 0.56 and 0.87, and Cronbach's alpha coefficients for each of the main factors of neuroticism, extraversion, openness, adaptability, and conscientiousness were obtained 0.86, 0.73, 0.56, 0.68, and 0.87, respectively [18].

Procedure: field method was used to collect data and data were collected by distributing the questionnaire among subjects. After required coordination with Marvdasht Islamic Azad University, subjects were explained on objectives and necessity of the research. After ensuring that the information of the subjects is confidential, questionnaires of defense mechanisms and personality traits were provided for subjects.

Findings

Table 1: Results of the correlation coefficient between personality traits and defense mechanisms

Variable		Mature	Immature	Neurotic
Neuroticism	The correlation coefficient	-0.39	0.32	0.005
	Significance level	0.0001	0.0001	0.96
Extroversion	The correlation coefficient	0.49	-0.09	-0.36
	Significance level	0.001	0.35	0.001
Agreeableness	The correlation coefficient	0.27	-0.009	-0.24
	Significance level	0.007	0.93	0.01
Openness to experience	The correlation coefficient	0.19	-0.14	-0.22
	Significance level	0.06	0.14	0.02
Conscientiousness	The correlation coefficient	0.41	-0.16	0.37
	Significance level	0.0001	0.11	0.0001

Results of Table 1 show that there is negative and significant relationship between neuroticism and mature defense mechanisms and between extroversion, agreeableness, and openness to experience and neurotic defense mechanism. In addition, there is positive and significant relationship between neuroticism and immature defense mechanism and

extraversion, and agreeableness, between conscientiousness and mature defense mechanism, and between conscientiousness and neurotic defense mechanism.

Table 2: Results of the linear relationship between personality traits and immature defense mechanisms

Index	Sum of squares	df	Mean squares	F value	Significance level
Regression value	012.38	5	02.47	02.48	0.03
Remaining value	092.83	93	0.99		

The results of linear relationship analysis in Table 2 show that personality traits predict immature defense mechanisms significantly ($P < 0.05$). The significance level of each of the variables is separately examined later.

Table 3: Simultaneous multiple regression analysis of personality traits to predict immature defense mechanisms

Variable		β	t	P<	R2	df	P<
Predictor variables	Neuroticism	0.31	03.00	0.003	11%	5.93	0.03
	Extroversion	0.08	0.60	0.54			
	Agreeableness	0.03	0.28	0.77			
	Flexibility	-0.09	-0.77	0.43			
	Responsibility	-0.07	-0.47	0.64			

Results of Table 3 show that the personality traits positively and significantly predict immature defense mechanisms. The prediction value is 0.11 that is 11% of immature defense style is explained by personality traits. Among the personality traits, dimension of neuroticism positively and significantly predict immature defense mechanisms, but other dimensions have not reached significant level.

Table 4: The results of the linear relationship between personality traits and mature defense mechanisms developed

Index	Sum of squares	df	Mean squares	F value	Significance level
Regression value	0889.00	5	0177.80	09.44	0.0001
Remaining value	01749.98	93	018.81		

The results of linear relationship in Table 4 show that personality traits predict defense mechanism significantly ($P < 0.005$). The significance level of each of the variables is examined later.

Table 5: Simultaneous multiple regression analysis of personality traits to predict mature defense mechanism

Variable		β	T	P<	R2	df	P<
Predictor variables	Neuroticism	-0.26	-02.91	0.004	0.33	5, 93	0.0001
	Extroversion	0.32	02.66	0.009			
	Agreeableness	0.13	01.50	0.13			
	Openness to experience	-0.13	-01.25	0.21			
	Conscientiousness	0.14	01.11	0.26			

Results of Table 5 show that the personality traits positively and significantly predict mature defense mechanisms. The prediction value is 0.33 that is 33% of immature defense style is explained through personality traits. Among the personality traits, dimension of neuroticism positively and significantly predict mature defense mechanisms, but other dimensions have not reached significant level.

Table 6: The results of the linear relationship between personality traits and neurotic defense mechanisms developed

Index	Sum of squares	df	Mean squares	F value	Significance level
Regression value	0712.06	5	0142.41	08.58	0.0001
Remaining value	01542.92	93	016.59		

The results of linear relationship in Table 6 show that personality traits predict neurotic mechanism significantly ($P < 0.005$). The significance level of each of the variables is examined later.

Table 7: Simultaneous multiple regression analysis of personality traits to predict neurotic defense mechanism

Variable		β	T	P<	R2	df	P<
Predictor variables	Neuroticism	0.22	02.43	0.01	0.32	5.93	0.0001
	Extroversion	0.23	01.83	0.06			
	Agreeableness	0.21	02.34	0.08			
	Openness to experience	-0.007	-0.06	0.94			
	Conscientiousness	0.30	02.25	0/02			

Results of Table 7 show that the personality traits positively and significantly predict neurotic defense mechanisms. The prediction value is 0.32 that is 32% of immature defense style is explained through personality traits. Among the personality traits, dimension of neuroticism positively and significantly predict neurotic defense mechanisms, but other dimensions have not reached significant level.

Discussion and conclusion

The aim of this study was to predict defense mechanisms based on personality traits in employees of Marvdasht Islamic Azad University and the results showed that there is significant relationship between defense mechanisms and personality traits. In addition, personality traits have predictive power significantly for defense mechanisms. The results of this study are in line with the results of [9], [10], [11], [12], [13], [14], [15] and [16]. In explaining these results, we can say that certain traits of neuroticism people like experience of negative emotions, sadness, anger, hate, and having fragile emotions prevent that these people to adapt themselves with norms and sometimes these people use immature and neurotic defense styles rather coping with their problems to escape the negative emotions. In fact, studies have shown that people with high neuroticism have irrational beliefs, and they are not able to control their impulses and instead of using the problem solving strategies to cope with stress, they use excitement or avoidance styles, and they are weaker coping with stress [18]. In explaining extroversion, it can be concluded that as traits such as sociability, firmness, and courage are lower in people, they will use neurotic coping styles to reduce the stress. In addition, the trait of openness is justified so that lower level of openness leads to reduced independence, absence, or lack of independence in the judiciary, and limited intelligence, and these factors in turn influence the coping styles of people. In addition, people with lower score in the conscientiousness trait are not motivated to control their behavior outcomes and such people tend to use immature defense mechanisms.

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