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THE PREDICTION OF THE MENTAL HEALTH BASED ON TYPE D PERSONALITY AND RUMINATION IN PATIENTS WITH CORONARY HEART DISEASE

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ABSTRACT

The study aimed to predict the general health based on type D personality and rumination in patients with coronary artery was performed. The population of the city in 2014 included all of coronary artery disease who are admitted to Kosar hospital. The participants were 140 (male and female) patients with coronary heart disease selected from Kosar Hospital. For assessing the research variables the participants completed three measures: Mental health Questionnaire, Type-D personality Questionnaire, and rumination Scale. The results showed that negative affectivity and social inhibition was significant predictors of the mental health. Also, rumination and symbolic rumination was significant predictors of mental health.

Keyword: Mental Health, Type D personality, Rumination, Patients with coronary heart disease

INTRODUCTION

The view of the World Health Organization, health includes the convenience of complete physical, mental and social, not just the absence of disease or disability (Lest, 1988). According to this definition, we realize that health is a multidimensional problem. Even today, in addition to physical, mental, social and spiritual aspects are also considered. It should be noted that different aspects of health and disease interact and influence each

other. cardiovascular disease (CVD) and especially coronary artery disease (CAD) is one of the most serious health problems and causes of disability in developed countries Developed and the developing (Vardyany *et al*., 2008; WHO, 2009) as the top cause of death in the world devoted. According to reports, 40 percent of all cases of death from these diseases include Murray & Lopez 1997). Psychological, social, and many have been raised in relation to coronary artery disease It increases the risk (Sarafino, 2002). These include variables such as personality factors, life stresses and their life style (Taylor, 2003).Based on the above, several factors affect human health. Personality and emotional and mental disorders, including those factors that were investigated in this study. Important role in the emotional character of the effect of the leaves.Sustainable and unique personality of each individual, including features that distinguish him from others and may change in response to different situations (Schultz, 2002). Public health and the relationship between his character is very strong and if a person does not have the normal growth and development, can say is deprived of Mental Health (Bono and Very, 2000).Different types of personality due to its effects on health have been identified, one of which by Dinolt, Bratsart proposed system and type D personality or character is helpless (Watson, 1984). Type D personality with two components tend increasingly to experience negative emotions (negative affectivity) and social inhibition of emotions characterized (Penbeker Watson, 1989).What is clear from the findings of many studies is that people with type figure D, compared to other personality types,Increasing the risk of development and progression of physical and mental disorders are (Denolt, 2000; Hebra, Linden, and Weinberg structures Anderson, 2003).Peleh and colleagues (2009) in a study entitled "Psychological risk factors in cardiovascular disease and chronic heart disease." The results found that affective variables, depression, anxiety and social inhibition factors for coronary artery disease are distinctive.This Selyg (2008) as "health care and psychological and behavioral factors on quality of life," suggests that Type D personality and sense of coherence less coronary heart disease compared with healthy individuals causes of health and have a lower quality of life.The study of Williams et al (2008) as "the effect D personality and social support mechanisms showed that patients with type D personality and maladaptive health behaviors such as smoking, lack of exercise and a diet high in fat tend more;The

results of this study suggest that Type D personality risk factors for coronary artery disease is the author. Whitehead *et al* (2007) in a study entitled "fatigue refuse coronary syndrome and personality type D» indicates that there is no significant relationship between type D personality and fatigue. Bright *et al* (2013) in a study to compare the components of Type D personality and quality of life in patients with coronary heart healthy subjects studied and the results showed that CHD has the personality type D are higher than in healthy controls, but this difference is expected only in negative emotions. In other words, coronary heart disease, anxiety, depression, anger and irritability are more. Besharat and colleagues (2013) investigate the mediating role of anger in the relationship between negative affect and social inhibition with disease severity discussed and the results showed that anger, negative affectivity and social inhibition had no significant association with disease severity. Tehrani *et al*. (2012) investigate the relationship between mental health and personality and life events Tehran's nurses working in emergency services. The results showed that there was a negative relationship between personality types and mental health. The personality type B had better mental health. Masoudnia (2011) investigate the relationship between type D personality and its components with public health students, and the results showed that the components of negative affectivity and retention of social Personality constructs D, 7/3 percent of the variance explained general health.Personality constructs D, 7/3 percent of the variance explained general health.

In Abolghasemi *et al* (2009) in a study entitled "Relationship between type D personality and sense of coherence and health in people with coronary artery disease." The results found that high levels of affective component, of the right people with the disease reduces coronary artery Chelsea clear and lecturer (2002) in research on personality types and mental health Trit lupus erythematosus and rheumatoid systemically investigated and the results showed that People have a tendency to personality types A and B personality dispositions of individuals with mental health and less anxiety, depression and physical pain greater.On the other hand, restless minds and unwanted thoughts and emotional disorders also affect your health.

In the recent years the thinking patterns of unwanted thoughts and its role in the persistence of emotional disorders, has been a lot of interest. One of unwanted thoughts, emotional disorders, rumination is..

Metacognitive perspective of mood disorder, rumination is an essential component in the onset and maintenance of depression knows. The passive and repetitive thoughts, block adaptive problem solving and lead to increased negative thoughts are (Davis, 2000). Wilkinson, Croudace & Good Year (2013) in a study to examine the relationship between rumination, anxiety and depression symptoms were evaluated and the results showed that the symptoms of depression and anxiety, rumination significant correlation.Yook *et al* (2010) in a study entitled intolerance of uncertainty, worry and rumination in major depressive disorder and generalized anxiety disorder and major depressive disorder found that between rumination

And there is a generalized anxiety disorder.Geiger & Kwon (2010) in a study entitled rumination and depression syndrome: the mediating role of hope, found that by reducing rumination can hope for is to symptoms of depression, as well as a positive and significant effect on rumination syndrome depression. Roelofs *et al*. (2009) investigate the effect of rumination and distraction on mood, anxious and depressive rumination and distraction were evaluated and found to be significantly associated with anxiety and depression symptoms in the long term.

RoelofsPapageorgiou & Siegle (2003) in a study entitled rumination and depression: Advances in theory and research, to examine the relationship between rumination and depression were evaluated and the results showed that Et al. (2009) investigate the effect of rumination and distraction on mood Rumination is a positive significant association with depression.

Baqrynzhad, SalehiFadardi and Tabatabai (2010) research examining the relationship between rumination and depression in a sample of students in Iran, and the results showed thatRumination and depression significantly predicted 30% of the variance. In addition to the role of psychological factors are predictive of general health searches on chronic diseases and coronary heart disease than type D personality variables were examined and rumination. This study intends to fill this research gap. Given the importance of the general health of a future coronary artery disease, this study sought to examine the predictive variables that Type D personality and rumination in association with coronary artery disease's general health.

METHODOLOGY

This descriptive correlational study. In this study, type D personality and rumination as predictor variables and the criterion variable is intended as general health.

The population

The target population included all patients with coronary artery disease in 2014 of the city is referred to Kosar hospital. Sample and sampling

The sample consisted of 134 patients (male and female) which sampling method among patients with coronary artery disease by their expert. Patients with acute conditions, such as patients with severe heart failure, severe pain were not performed in this study.

Research Tools

1. Using a demographic questionnaire that was completed by coronary artery disease, the results obtained in relation to age and education which will be mentioned below.
2. Type D personality questionnaire Type D personality questionnaires in 1998 and consists of 14 items by Denolt traits associated with Type D personality was made to measure. Or frustrated by the constant interaction between type D personality and character traits generally defined as follows: affective (7 items) and social inhibition (7 items).

In the present study, Cronbach's alpha reliability coefficient and Spearman Brown used to determine the coefficients are as follows:

Cronbach's alpha coefficients and Spearman Brown Table personality questionnaire

Coefficient	Type Reliability	Variable
0/779	**Cronbach**	**Personality Type D (total)**
0/652	**Spearman-Brown**	
0/796	**Cronbach**	**Personality Type D (negative affect)**
0/794	**Spearman-Brown**	
0/493	**Cronbach**	**Personality Type D (social inhibition)**
0/354	**Spearman-Brown**	

Rumination Scale

Rumination Scale by Yusuf (2009) is designed to include 39 items. The grading scale in the form of multiple-choice Likert scale (no. 1, part 2, mostly 3, lot 4) is Each one has been graded 4 and the sum of the scores obtained by each individual And the subject is asked about experiences, thoughts and feelings in the past two weeks to respond In the present study, Cronbach's alpha reliability coefficient and Spearman Brown used to determine the coefficients are as follows.

The General Health Questionnaire

General Health Questionnaire Goldberg and Hiller (1979) was made. This questionnaire

forms 12, 28, 30 and 60 items are available. Form 12 questions that were used in this study has the property that it can in the shortest time, the screening of healthy persons and patients.

In the present study, Cronbach's alpha reliability coefficient and Spearman Brown was employed by the Cronbach's alpha coefficient of Spearman-Brown 0/819 and 0/764 is.

Methods of data analysis

Data collected by questionnaires and scales were entered into SPSS software. Pearson correlation analysis and multiple regression analysis were selected for the study hypotheses.

Results and Tables

Table1: alpha coefficient and Spearman Brown rumination scale

Coefficient	Type Reliability	Variable
0/945	**Cronbach**	**Rumination (total)**
0/913	**Spearman-Brown**	
0/868	**Cronbach**	**Rumination (head facing)**
0/794	**Spearman-Brown**	
0/855	**Cronbach**	**Rumination (self-blame)**
0/868	**Spearman-Brown**	
0/799	**Cronbach**	**Rumination (Signed)**
0/713	**Spearman-Brown**	
0/690	**Cronbach**	**Rumination (introspection)**
0/675	**Spearman-Brown**	
0/681	**Cronbach**	**Rumination (of depression)**
0/612	**Spearman-Brown**	

Table 2: Demographic data on the age and education of patients

Education					Age						
No response	**Master's degree or higher**	**MA**	**Diploma**	**Diploma Below**	**No response**	**More than 65**	**Between** 65**to** 50	**Between** 50 **to** 40	30**Between** 40 **to**	20 **to 30**	
0	3	20	28	17	1	11	34	10	5	7	**Number of males**
0	5	16	29	16	0	6	25	9	19	7	**Number of women**
0	8	36	57	33	1	17	59	19	24	14	**The total**

RESULTS

In descriptive statistics, such as the total amount of scores, mean, standard deviation and range shifts and subscales scores of the variables used in this study is presented.Some respondents mentioned that due to various reasons and remaining loss of 68 male and 66 female patients (a total of 134 subjects), as shown in **Table 2**.

Table 3: Total scores, mean, standard deviation, minimum and maximum public health variables, type D personality and its sub scales and subscales rumination and that, for all subjects

maximum	At least	.Average	Average	Total	Variable name	Row
12	0	2/94	3/09	414	**Public health**	1
47	0	8/62	31/53	4225	**Personality type D (KTL)**	2
27	0	6/2	16/54	2217	**Personality type D (negative emotion)**	3
26	0	3/8	14/98	2008	**Personality type D (social inhibition)**	4
120	42	17/87	70/78	9485	**Rumination (total)**	5
46	14	6/64	24/85	3330	**Rumination (head Grybany)**	6
27	9	4/37	13/91	1864	**Rumination (self-blame)**	7
24	7	4/03	13/93	1867	**Rumination (Signed)**	8
19	5	2/73	9/62	1290	**Rumination (introspection)**	9
18	5	2/64	8/46	1134	**Rumination (depression results)**	10

Table 4: Results of the correlation coefficient between the variables

10	9	8	7	6	5	4	3	2	1	Variable name	Row
									1	**Public health**	1
								1	0/ 342**	**Personality type D (total)**	2
							1	0/ 920**	0/ 302**	**Negative Emotion**	3
						1	0/ 453**	0/ 767**	0/282**	**Social inhibition**	4
					1	-0/ 235**	-0/ 434**	-0/ 416**	0/ 563**	**Rumination (total)**	5
				1	0/ 946**	-0/ 188*	-0/420**	-0/ 385**	0/ 487**	**Head in hands**	6
			1	0/ 723**	0/ 859**	-0/ 260**	-0/ 431**	-0/ 425**	0/ 549**	**Self-deprecation**	7
		1	0/ 571**	0/ 748**	0/ 823**	-0/ 162	-0/ 260**	-0/ 259**	0/ 493**	**Marked**	8
	1	0/ 634**	0/ 654**	0/ 767**	0/ 834**	-0/ 234**	-0/ 376**	-0/ 374**	0/ 468**	**Introspection**	9
1	0/ 628**	0/ 559**	0/ 790**	0/ 753**	0/ 843**	-0/195*	-0/ 383**	-0/ 362**	0/ 440**	**Depression results**	10

*** : P** < 0/0 5 ، ** : **P** < 0/01

Table 5: Multiple linear regression simultaneous (enter)

dF	F	R^2	P (Sig)	t	B	Predictor variables	Criterion variables
2	8/742	0/118	0/0001	6/85	6/92	**Constant**	**Public health**
			0/019	2/38	0/104	**Negative Emotion**	
			0/049	1/98	0/141	**Social inhibition**	

Table 6: Simultaneous Multiple linear regression analysis (enter)

dF	F	R^2	P (Sig)	t	B	Predictor variables	Criterion variables
5	14/09	0/355	0/0001	3/99	-3/44	**Constant**	**Public**

			0/001	3/33	0/28	**Self-deprecation**	**health**
			0/024	2/28	0/181	**Rumination marked**	
			0/905	0/119	-0/008	**Entrance face**	
			0/374	0/893	0/11	**Introspection**	
			0/546	0/605	-0/087	**Depression results**	

DISCUSSION

This study examined the predictive role of type D personality and rumination in relation to public health centers for treatment of coronary artery disease in Shiraz.Based on a sample of 140 men and women with coronary artery disease to Kosar hospital in Shiraz at least 3 years with a definitive diagnosis in coronary artery disease have been confirmed by the experts were selected using purposive sampling.The questionnaire consisted of the subjects personality type D, scale and general health questionnaire focused rumination. Results indicate that the negative affect and social inhibition can be a part of public health in the prediction of coronary artery disease. R2 values obtained showed that %11.8 of the general health of negative affectivity and social inhibition can be explained by variables.According to the 0/0001 = P (regression) specified that model, its extension to the community. The first research hypothesis was confirmed. The results of the analysis of the second hypothesis, the study showed that self-blame and rumination rumination may be symptomatic of a part of public healthto predict coronary artery disease. R2 values obtained showed that the public health by 5/35% of the variation can be explained in symptoms between rumination and self-deprecation. According to the 0/0001 = P (regression) specified that model, its extension to the community. The second hypothesis was confirmed.Findings with the results of a research hypothesis League (2008), Williams et al (2008), stairs and colleagues (2009), Masoudnia (2011) and Isazadegan (2011) is consistent.The above results can be said in explanation, the public health of the individual and his personality is a very strong character, and if someone does not have the normal growth and development, we have been deprived of Mental Health (Bono and He, 2000).The researchers showed that the type D personality in general risk factor for poor health outcomes, health-related quality of life and the various forms of disorders including anxiety, depression and post traumatic stress disorder (Pedersen and

Denvlt, 2003; Denvlt , wheezing and Ratsert, 2000; Akvars, Dnvlt, and Vrays Hemming, 2005). What is clear is that the findings of numerous studies People with personality type D, as compared to other personality types, increasing the risk of development and progression of physical and mental disorders are (Dnvlt, 2000; Hbra, Linden, and Weinberg structures Anderson, 2003).Type D personality has two components: (1) the tendency to experience negative emotions and negative emotions during various occasions pointed out, (2) social inhibition that tends to inhibit the expression of emotions in social interactions (Dnvlt, 2003). . Dnvlt et al (2003) concluded that, independent of type D Type of personality is an important predictor for coronary artery disease is an important and lasting effects on quality of life and wellbeing of patients affected.In general, people with type D personality wide range of emotional disorders such as depression, anxiety, post-traumatic stress disorder and have the people with this type having an unhealthy lifestyle and quality of life, injury and subsequent With psychological disorders such as anxiety and depression are more prone to the high number of health problems and disease. Type D personality can be a predictor of physical illness and mental disorders among people. This type of personality through the reduction of positive emotions, social inhibition and lack of emotional support from friends and family in times of stress, decreased life satisfaction,Increasing social isolation and psychological disorders such as depression, anger, anxiety and loss of function in the various activities. People with Type D personality rather than health-related behaviors. These people compared to non-Type D personality and the lack of enjoyable activities,Poor nutrition, lack of respect and lack of health care and the apparent lack of regular medical tests meet the requirements for public health, health levels are reduced. In addition, these patients had significantly lower levels of social support that have adopted the lifestyle, experience.The type D personality as an independent risk factor in the development of psychological distress and adverse prognosis in patients with coronary heart disease is considered (Elyzabd, 2007).

In this disorder, the walls of one or more coronary arteries due to the deposition of a material called plaque (fatty substances or fiber) to completely or partially blocked blood flow to various parts of the heart becomes permanently or temporarily stops (Aschrvdr, 2005).The type D personality as an independent risk factor in the development of psychological distress and adverse prognosis

in patients with coronary heart disease is considered (Alyzabd, 2007).

In this disorder, the walls of one or more coronary arteries due to the deposition of a material called plaque (fatty substances or fiber) to completely or partially blocked blood flow to various parts of the heart becomes permanently or temporarily stops (Aschrvdr, 2005).And health costs are the main reason. Psychological effects of a disease can be excessive and may be very anxious and depressed people and cause them not to perform everyday tasks. No doubt, anxiety and depression affect both mind and body, and sometimes both effects simultaneously occur (Keyvannya, 2008).Various researches have shown that Type D personality is an important predictor of coronary artery disease and the effect on quality of life and sustainability of public health, the type with a variety of psychological problems including depression, anxiety, quality of life and lower levels of psychological well-being,Anger, chronic stress, pessimism and low self-esteem are related. People with Type D personality around the world to see and further threatening the use of avoidance strategies drawn (Denvlt, 1991).

Jung and colleagues in research on heart disease (one year after surgery) showed that rates of depression than type D personality is associated with greater patient health status and health (Jung et al., 2007).Williams and Associates study results indicate that patients with type D personality and maladaptive health behaviors such as smoking, lack of exercise and a poor diet are more likely. The results of this study suggest that Type D personality risk factors for coronary artery disease is the author and with poor prognosis, suffering and distress associated health (Williams, 2008).Type D personality stress through physiological and behavioral changes affect health. People with high stress extreme desire to have the possibility of getting sick or hurt their actions increases (Sarafynv, 2002). Stressful conditions caused by adrenaline and noradrenaline increases your heart rate, which is due to cardiovascular disease (Kunani, 2003).As a result of the changes, such as increased heart rate and high blood pressure, heart disease, and this can increase oxygen in people with heart disease, the leading cause of heart attacks. Plus type D personality and its components in the long term can damage coronary arteries and coronary heart disease have accelerated and intensified.A short release tension and constriction of blood platelet aggregation Kvlamynha and corticosteroids can increase coronary artery blood vessels and increase the risk of blood clots in the arteries (Muller et al., 1989;

Rostami et al., 2008) .Based on the above, type D personality leads to anxiety and depression, which are of public health issues, anxiety and depression in patients with coronary artery disease worse result And reducing the public health consequences. It can be concluded that the type D personality can predict health status in patients with coronary artery disease. The first research hypothesis is confirmed.Findings from studies Wilkinson et al. (2013); Yuk (2010), Geiger (2010), BagheryNezhad et al (2010) is consistent.In response styles theory argues that ruminative response style, with light distracting sensory response, associated with an increase in depressed mood. Effects of ruminative responses to sad mood and depression, using a frequency scale ruminative responses accepted by various researchers (Moldes et al., 2007).Also Payajorjyo and Wells (2001; quoted Cycle et al., 1999), a study showed that negative automatic thoughts, short and concise evaluation of failure in depressed patients, whereas rumination, long chains of repetitive thoughts, spinning and focused their initial response to negative thoughts. Rumination and cognitive behavioral therapy delays the healing of depression.Thus creating negative rumination is boring and it has been proven in extensive studies (Papajvrjyv and Wells, 2001; quoted Saygl et al., 1999; Bahrami and Mahmood, 2007).

On the other hand, numerous physical conditions in a number of psychological factors can affect organ systems, skin, skeletal system, muscular, respiratory, cardiovascular, and circulatory and lymphatic system,Gastric-intestinal tract, genital-urinary, endocrine systems, or sensory organs (Lonnie, lip and Spitzer, 1978). Psychological effects of a disease can be excessive and may seem very worriedand depressed and cause them not to perform everyday tasks. No doubt, anxiety and depression affect both mind and body, and sometimes both effects simultaneously occur (Kyvannya, 2008).

Cardiovascular disease is the major cause of death in developed and developing countries, which are among the most common fatal cardiovascular disease known as coronary artery and more than 50% of cardiac deaths constitute (Raydkr *et al*., 2001).Coronary artery disease is due to a cardiovascular disorder and obstructive coronary artery lesion is created. In this disorder, Hyykya wall of coronary arteries due to the deposition of a material called plaque (fatty substances or fiber) to completely or partially blocked blood flow to various parts of the heart becomes permanently or temporarily stops (Eskordor *et al*. , 2005).Deaths from heart

disease in 25% to 45% and the incidence of ischemic heart disease in the country was high (Said, 2004). In addition to the deaths, the disease leads to high prevalence of disability and loss of life, health and productivity and health costs is the main reason (Gerygz and Lvskaldv, 2005).Several risk factors associated with coronary artery disease, there is an increased incidence of disease occurred following an increase in the prevalence of risk factors Intercourse studies show an increased prevalence of risk factors and changes the way people live in the roots (Chakalyngam and Balgr- Vyntv, 1995).Various researches have shown that anxiety and depression and rumination may be aggravating factors in diseases such as coronary heart disease increase; Wilkinson *et al* (2013) in a study to examine the relationship between rumination, anxiety and the results showed that depression and rumination syndrome presented with symptoms of depression and anxiety is a significant correlation. Cook *et al* (2010) in a study entitled intolerance legal state of limbo worry and rumination in major depressive disorder and generalized anxiety disorder and major depressive disorder found that between rumination

And there is a generalized anxiety disorder.BagheryNezhad *et al*. (2010) investigate the relationship between rumination and depression in a sample of students in Iran, and the results showed a significant 30% of the change in the variance of rumination and depression predicts.Since the use of inefficient development of rumination and provide increased anxiety and depression.Since anxiety and depression, as well as symptoms of coronary artery disease have been identified can be concluded that Rumination can predict coronary artery disease and public health in the second hypothesis of this study was also confirmed.Mental health is defined as a state of well-being and recovery, in which every person can realize their potential, to deal with the stresses of life common in the form of constructive their work and activities And plays an important role in the community where it belongs (WHO, 2001). Diseases of public health in peril, so that research can be a negative impact on public health have pointed CAD (Eslyg, 2008; Denolt *et al*., 2003).Patients with coronary artery disease not only health but also social relationships, life style, family environment, employment and income levels are also affected (Bajenrv *et al*., 2010). These mistakes can affect many different aspects of the physical, psychological, social and spiritual (Jenci *et al*., 2010).The results showed that the type D personality and rumination may be part of

general health in determining coronary artery disease. Therefore, in order to enhance the general health of coronary artery disease in type D personality characteristics they can reduce the incidence of rumination and repetitive thoughts prevented.The results showed that the type D personality and rumination may be part of general health in determining coronary artery disease. Therefore, in order to enhance the general health of coronary artery disease in type D personality characteristics they can reduce the incidence of rumination and repetitive thoughts prevented.

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