

Comparison of Perfectionism and negative affectability in the patients with coronary artery disease and healthy individuals

Paria Bildari¹, Heiman Mahmoud fakhe², Mohammad Azad Abdollahpour³ and Narmin Boroumand⁴

¹MA in Psychology

²Faculty member of Payame Noor University.

Address: West Azerbaijan Province-Mahabad township-Islamic Azad University, Mahabad branch-Cell phone No.09141680834

³Faculty member of Islamic Azad University, Mahabad branch-Cell phone No.09144447402

⁴MA in Psychology.

Article history:

Received date: 06 January 2020

Review date: 23 February 2020

Accepted date: 25 March 2020

Abstract

The present research gets into comparing the psychic factors such as perfectionism, and negative affectivity in patients with coronary artery disease and healthy individuals. For this purpose one hundred and thirty two persons were chosen from among the clients (sixty six patients, sixty six healthy individuals) to Seyyed-al-shohada cardiac Hospital, Taleghani cardiac Hospital, Imam Khomeini Cardiac Hospital and the private doctor offices in the city of Orumieh by means of convenience sampling. Healthy individuals were being chosen from among the patients relatives and Hill's tests of perfectionism, and the positive and negative affectivity test of PANAS were being carried out on them. For data analysis the MANOVA method was used. The results of the research indicated that there is a significant difference between individuals afflicted with coronary artery disease and the healthy individuals in terms of perfectionism factors and the negative affectivity. It means that perfectionism and the negative affectivity in the individuals afflicted with coronary artery disease is more than healthy individuals. The findings of this research in addition to indicating the influence of variables in patients can introduce valuable approaches toward general health and prevention.

Keywords:

Perfectionism, Negative affectivity,
Coronary artery disease

Please cite this article as: Bildari P, Mahmoud fakhe H, Abdollahpour M.A, Boroumand N, 2020. Investigate the mental health of female students in following the style of contemporary life (Case study: Students of Kashan University). SRPH Journal of Medical Sciences and Healthcare Management Volume 2, Number 2: (6-14)

Introduction:

Coronary heart disease (CHD) or disorders, which all in all are called coronary heart disease, are diseases that involve the cardiac system and the blood circulation system. (Mousavi et al., 2003) The coronary heart system is one of the critical systems of body which immediately absorbs any kind of environmental changes or changes which happen in the emotional and sentimental situations of an individual such as: fear, indignation, anxiety, happiness, emotions and harshly undergoes changes in the form of change in the number of heart beats (per minute), change in the heart beat rhythm, and finally change in the yield of general heart function which these changes can be observed and measured in the form of changes in blood pressure, Renal function, coronary blood flow in the muscles and skin. (Curtis, 2006, quoted by Ashtiani, 2004)

From among the non-communicable diseases CHD is being mentioned as the leading cause of death and disability in the developing countries up to 2020. According to the report by WHD (World Health Organization) in the year 2002 the cause of death of thirty hundred and seventeen individuals per day was due to CHD and each day two thousands, seven hundred and twenty six days of our lifetime fritter away due to coronary heart diseases. From the year 2000 on the last Sunday (29) of September is being entitled as the



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Patient relatives) as clients who had come to the professionalized hospitals, the state-run Seyyed-al-shohada Hospital, Imam Khomeini Hospital, and some private clinics in the city of Orumieh. The sample of this research includes one hundred and thirty two (132) individuals, sixty six (66) patients, and sixty six(66) healthy individuals which according to the book of "Research methods in the behavioral sciences" by Dr.Ali Delavar, in the causal-comparative researches the number of sample items equals fifteen individuals which in the present case to increase the validity and for generalizability the sample number is increased by sixty six individuals whom are chosen throughout convenience sampling from among the whole coronary artery patients or clients and their relatives. Patients were chosen who had at least a three-year term of definite diagnosis of heart disease from a cardiologist and in terms of age the individuals under study were in the age range of forty to sixty. To analyze the data of the research some descriptive statistics tests such as mean, standard deviation, and inferential statistics were used. The test which was used for hypotheses testing was the multivariate analysis of variance (MANOVA) and the analysis of the whole data was being done by means of SPSS software.

Research Tools:

1-Emotion is an organized relative situation out of various actions and reactions parallel to the thinking of an individual which is more stable in comparison with other excitements and in other words emotion accompanies systematic and stabilized excitements in an individual and the existence of emotion in an individual is an answer to an innate need or an external stimulus which is accompanied by physiological symptoms such as sudden heart palpitations, muscle contraction, hypertension, and an increase in the secretion of adrenaline. (Shafiabadi, 1996)

Temper is being considered as a continuum ranging from positive affectivity to negative affectivity in which the anxious individuals are at the end of it. According to an opinion by Lerner & Lerner (1981) individuals who are at the negative extreme of this continuum laugh and are in general cheerful and enjoy their lives.

2-Positive and negative affect schedule (PANAS) which is being used to assess the emotional situation of attendants in a specific time is composed of twenty words in which every word describes various feelings and emotions. Test items give to each word a mark from likert scale (1=very rarely, 2=never, 3=extremely, up to 5=extremely). The positive affectivity mark is achieved from sum of the marks of ten words which consists of these words: intelligent, energetic, decisive, eagle-eyed, lively, interested, excited, powerful, eager, felling proud and honor. In this manner the negative affectivity is the sum of achieved marks out of ten negative words which consist of these words: excitable, ashamed, nervous, frightened, anxious, agitated, having qualm, scared, inclination to use violence. Positive and negative words are inserted in the test sporadically. Cronbach's alpha coefficient of 84 to 97 was achieved for the items of this scale. (Watson et al., 1988) Also, the above-mentioned researchers reported the reliability of this tool as acceptable. In another study on the population of Iran which was being carried out by Kaviani et al.(2001), the reliability coefficient of 77 and 83 were achieved for the positive and negative affectivity respectively. In another study by Bakhshipour and Dozhkam(2003), Cronbach's alpha coefficient for the internal consistency of the subscale of negative affectivity was measured by 87.

Research findings:

Descriptive analysis of data

The present research is being carried out on clients with coronary artery disease coming to the professionalized clinics, state-run hospitals, and private clinic in the township of Orumieh and on healthy individuals. By means of convenience sampling sixty six patients and sixty six healthy individuals were chosen as counterpart. Since this research is being done on men and women in both groups a mixture of two sexes were existent. In terms of age the individuals under study were in the age range of forty to sixty; the age range and the level of study for the members of both groups has been illustrated in Table No.1 to 4.

Table1:age the individuals under study were in the age range of forty to sixty

Age			Education level		
Under 45 Years old	patient	7	illiterate	patient	16
	healthy	8		healthy	14
46-50 Years old	patient	13	Literacy Movement Level literate		9
	healthy	16		healthy	11
51-55 Years old	patient	18	Primary school	patient	15
	patient	11		healthy	12
56-60 Years Old	patient	25	Junior High school	patient	20
	healthy	27		healthy	21
Above 60 Years old	patient	3	High school, Graduate And above	patient	8
	healthy	4		healthy	10

Table No.1 indicates the age range and the level of education of test items for the two groups of patients with coronary artery disease. In table No.2 the statistical data relevant to the perfectionism variables, personality type D and acquittal for the two groups of patients with coronary artery disease and healthy individuals.

Table No.2-Description of the scores of the test items for the two groups of patients with coronary heart disease and healthy individuals

scales	Groups	Number	Mean	Standard error Of measurement (SEM)	Standard Deviation(SD)	Minimum Mark	Maximum mark
perfectionism	patient	66	83.712	1.323	10.754	49	110
	healthy	66	79.939	0.827	6.722	64	96
Society-oriented Perfectionism	patient	66	22.575	0.358	2.909	15	28
	healthy	66	20.136	0.338	2.750	14	25
Individual-oriented perfectionism	patient	66	26.666	0.571	4.642	20	35
	healthy	66	23.500	0.338	2.752	15	31
Negative affectivity	patient	66	15.636	0.287	2.337	12	23
	healthy	66	12.257	0.224	1.986	7	16

Table No.2-4 indicates the number, average, standard error of measurement (SEM), the minimum and maximum of marks of the test items for the two groups of patients with coronary artery disease and healthy individuals.

First hypothesis:

There is a statistical level of significance between patients with coronary artery disease and healthy individuals in terms of perfectionism (individual-oriented and society-oriented).

The results of Levene’s test based on the presupposition of equality of variances are presented in table No.3.

Table No.3-4.Results of Levene’s test based on the presupposition of equality of variances

Variable	F	Degree of freedom1	Degree of freedom2	Level of significance
perfectionism	3.831	1	130	0.052
Society-oriented perfectionism	0.199	1	130	0.656
Individual-oriented perfectionism	3.680	1	130	0.132

As it is observed in Table No.3 the presupposition of Levene’s test based on equality of variances of the groups of the statistical universe is approved.

The results of multivariate analysis of variance for the comparison of the average of perfectionism marks for the two groups of patients with the coronary artery disease and healthy individuals are presented in table No.4.

Sources of Variations	Amount	F	Degree of freedom	Level of significance	Eta squared(γ^2)	Statistical power
Pillai’s effect	0.368	24.847	3	0.000	0.368	1.000
Lambda wilks	0.632	24.847	3	0.000	0.368	1.000
Hotelling’s t-square(T2)test	0.582	24.847	3	0.000	0.368	1.000
	0.582	24.847	3	0.000	0.368	1.000

The results of Levene’s test based on equality of variances are presented in table No.5.

Table No.5- Results of Levene’s test based on the presupposition of equality of variances

Variable	F	Degree of freedom1	Degree of freedom2	Level of significance
Negative affectivity	0.726	1	130	0.396

As it is being observed in table No.5 the presupposition of Levene based on the presupposition of equality of variances of the groups of the statistical universe is approved.($P < 0.396$)

The results of the analysis of variance (ANOVA) of the average of negative affectivity marks for the two groups of patients with the coronary artery disease and the healthy individuals are presented in table No.6.

Table No.6-Results of analysis of variance of comparing the average of negative affectivity marks for the two groups of coronary artery patients and healthy individuals

Variable	Source of Variations	Sum of Squares	Degree of Freedom	Mean of Squares	Coefficient Of F	Level of Significance	Eta squared(γ^2)	Statistical power
Negative Affectivity	groups	376.735	1	376.735	80.093	0.000	0.381	1.000
	error	611.894	130	4.707	-	-	-	-
	total	26665.000	132	-	-	-	-	-

Table No.16-4 indicates the results of analysis of variance, comparison of mean of the negative affectivity marks for the two groups of patients with coronary artery disease and the healthy individuals which considering the tabular data the amount of F observed for the variable of negative affectivity (80.093) with a degree of freedom of (1&130) is bigger than F in the table (6.84) in the Alpha level of 0.01($P < 0.01$). So the null hypothesis is rejected and the research hypothesis is being approved and it can be concluded that there is a statistical significance between negative affectivity for the two groups of patients with coronary artery disease and the healthy individuals with a certainty level of %99.

Discussion and Results:

The present research uses the causal- comparative study (ex post facto study) in order to scrutinize and compare perfectionism and the negative affectivity in the patients with coronary artery disease and the healthy individuals and bears two hypotheses which we will scrutinize them later on. In this research it is supposed that there is a statistical level of significance between perfectionism and the negative affectivity in the patients with coronary artery disease and healthy individuals.

First hypothesis:

There is a statistical level of significance between patients afflicted with coronary artery disease and healthy individuals in terms of perfectionism (society-oriented and individual-oriented).

The statistical analysis of table No.4-4 indicates that this hypothesis at the 0.01 level of significance is being approved. Approval of the first research hypothesis means that there is a statistical level of significance between the society-oriented marks and the individual-oriented marks of the patients with coronary artery disease and the healthy individuals.

The theorists and researchers during the recent two decades with lots of interest and attempt went into scrutinizing the personality construct of perfectionism and put a special emphasis on the correlates and the negative after effects of perfectionism, psychic pathology of perfectionism and the vulnerability of most of the perfectionists against the psychological disorders.(Hewitt, Fleth& Ediger,1996) In addition to this the clinical researchers hold that perfectionism leads to a chronic feeling of failure, procrastination, uncertainty, futility, shamefulness.(Burns, 1980&Pacht, 1984)

Frost, Marten, Lahart&Rosenbleat (1991) have defined perfectionism as a series of extremely high standards for performance which is accompanied by critical and excessive self-assessment.

In the study by Hewitt et al.(quoted by Abolghasemi, 2005) weak and moderate correlations between aspects of perfectionism and the somatic complaint has been reported. Also, a weak correlation exists between somatic complaints and perfectionism.

Najjarian and Aari(1999) achieved a positive correlation between perfectionism and the somatic complaints of university students.

Kuleta&Dungelove(quoted by Abolghasemi, 2009) carried out a research on the arousal state of patients afflicted with cardiac anemia. Forty two men and fifty two women (with an average age of 51.5) suffer from anemia. In the case of arousal with probable pathogeny the share of men was %71 and the share of women was %69. In these patients the behavioral type A, antagonism, perfectionism, lack of rise to the occasion, and anxiety were being identified as the risk factors. The research evidence indicates that perfectionists complain about somatic pains and discomforts.(Quoted by Aboulghasemi, 2009) Weal correlations were being achieved between somatic complaints and perfectionism in the studies by Dunkeli and Blankstein(2000), Martin et al.(1996), and Wyatt and Gilbert(1998). Aby(1993) scrutinized the relationship between perfectionism and the somatization disorders. Perfectionism and learned helplessness are among the effective components in the creation of somatization disorder, attribution style, and the chronic fatigue syndrome (CFS).

In the society-oriented perfectionism others expect an individual exaggerating and unrealistic expectation since these extreme standards are being experienced on behalf of others as external imposed standards and lead to the feeling of failure, anxiety, anger, helplessness, and disappointment which are relevant to the suicidal and depression thoughts.(Blatt, 1995) Individuals who enjoy a high level of society-oriented perfectionism become agitated in confronting the standards of others; they fear from negative evaluation of others and avoid disapproving others and attach further importance to attracting the attention of others and approving others.(Hewitt& Fleth, 1991)

The society-oriented perfectionism illustrates various aspects of perception of expectations and the criticisms of parents and the anxiety level on mistakes. Hamachek(1978) backs the existence of psychotic and normal perfectionism. The researches indicate that the aspects of perfectionism by Frost et al.(1990) have a very close relationship with the aspects of perfectionism by Hewitt and Fleth.(1991) (quoted by Najjarian& Khodarahimi, 1994)

Terry short, Owens slade & Dewey(1995) have theoretically differentiated between healthy and normal perfectionism and the abnormal and neurotic perfectionism. Barker(1997) presented the functionalist and non-functionalist perfectionism. In the functionalist and normal perfectionism the individual enjoys the attempt and competition for superiority and excellence and at the same time recognizes the personal limitations but in the non-functionalist and abnormal perfectionism the individual will not be satisfied due to their unrealistic expectations from their deeds and do not have the ability to accept the limitations and restrictions.

Slani(2002) introduces agreeable and non-agreeable perfectionism. In the agreeable perfectionism the individual tries and is aware of their problems and limitations and by considering the existing capabilities and facilities makes planning but in the non-agreeable perfectionism the individual has illogic expectations of themselves and does not pleased with their deeds and cannot identify their real problems and limitations and cannot make planning to confront them.

Ego-centered (or self-centered) Perfectionism is a motivational factor which consists of the attempts of an individual to achieve their full self. In this aspect of perfectionism individuals who have high motivations for perfectionism with unrealistic high standards, compulsory attempt and having the all or nothing thinking in relation to the results in the form of complete successes or complete failures concentrate on their previous defects and failures and generalize their unrealistic standards throughout their whole behavioral domain . These individuals are excessively hair-splitting and critical in a way that can not accept their own defects and errors and failures in the various aspects of life.(Flett et al., 1997)

Hewitt and Flett(1991) achieved the relationship between somatic complaints and the thirt eight(38) aspects of society-orientation and the twenty one (21) self-centered aspect.

Second hypothesis:

There is a statistical significance between patients with coronary artery disease and the healthy individuals in terms of negative affectivity. The statistical analysis of table No.16-4 indicates that this hypothesis is being approved in 0.01 level of significance. Approval of the forth research hypothesis means that there is a meaningful difference between the negative affectivity marks of patients with coronary artery disease and the healthy individuals.

The concept of negative affectivity has a strict relationship with the concept of psychosis in the personality theories. The five-factor model of personality including the aspects of psychosis, extroversion, experiment ability, accommodation and conscientiousness in which there is a positive correlation between negative affectivities and psychosis. This characteristic refers to the inclination of an individual to experience negative excitements in various situations and times. Individuals with a high mark in this factor feel more sorrow, anxiety, and irritability. These individuals have a negative view of themselves and mostly pay attention to the problems and troubles of the world. (Bagherian sararoudi, 2007) The results of this research is compatible with the following researches: Pele et al.(2009) after studying and scrutinizing the patients with coronary artery disease and the chronic cardiac patients came to this conclusion that the variables of negative affectivity, depression, anxiety, and social preemption are the differentiating variables of patients with coronary artery disease; although negative affectivity and social preemption had a more key role. Mosbroger and Harting(2000) in a research realized that the emotional preemptive system has a positive correlation with neurosis and negative affectivity and has a negative correlation with negative affectivity. Moli et al.(2008) in a study about the scrutinization of variations in the daily profile of kortizol in the patients afflicted with the cardio-vascular syndrome with the personality type of D illustrated that an increase in the negative affectivity is accompanied by an increase in the secretion of kortizol. The point worthy of consideration is that temperament changes have a moderating role between the personality type of D and an increase in the risk of affliction with the coronary-heart disease and probably other somatic disorders. Thus, it is logical to be supposed that there is a difference in the performance of hypothalamus-hypophysis-adrenal axis in the personality type D and other individuals with other personality traits.

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