ORIGINAL ARTICLE

Comparison of Perfectionism in Patients with Cardiovascular Disease and Normal Subjects: A Case - Control Study

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Abstract

Background: Studies have shown that some personal characteristics such as perfectionism are associated with cardiovascular diseases. Hence, this study was designed with the aim of doing a comparative evaluation of perfectionism in coronary heart disease patients and healthy individuals referred to Shahid Faghihi Hospital in Shiraz.

Methods: This is a case-control study carried out on 80 cardiovascular patients and 80 healthy people who referred to Shahid Faghihi Hospital. The sampling was done through the convenience sampling method. The Frost Multidimensional Perfectionism Scale (FMPS) was used to collect the information. Besides, t-test was applied to analyze the data in the SPSS software, version 16.

Results: The mean ages of the participants in this study were 48±12.2 and 34±9.6 in patients and normal subjects, respectively. Negative perfectionism among the people with cardiovascular disease was higher than the healthy individuals (69.5±12.8 and 64±15.5, respectively, with P=0.03) and there was a significant difference between these two groups. In terms of perfectionism subscales, there was a significant difference between the two groups regarding personal standards (P<0.00), parental expectations (P=0.02), and uncertainty in acts (P=0.04).

Conclusion: In general, our study results showed that there was no significant difference between patients with cardiovascular disease and normal subjects in terms of perfectionism, but a significant difference was seen between some subscales of perfectionism in the two groups.

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Introduction

The rate of deaths caused by heart diseases in Iran is 25 to 45 percent. In addition to causing mortality, heart diseases lead to a high prevalence of disabilities and reduce the quality of life, health and productivity; they are also the major cause of health costs.[1] Studies have shown that some personal characteristics such as perfectionism are associated with the cardiovascular disease.[2]

Perfectionists are described as those who consider high standards, follow them obstinately, and define their values based on achieving those standards. The need to achieve high standards is associated with an increased concern about self-assessment in ambiguous situations as well as the desire for self-criticism.[3] Therefore, this constant concern seems to affect the risk of heart diseases. It seems that perfectionism is common in patients with heart coronary disease.[4,5]

Perfectionism is known as a multi-dimensional structure including self-oriented perfectionism, others-oriented perfectionism, and emotion-oriented perfectionism, and various components of Type A behavior have a positive and significant relationship with its all three dimensions.[5]

Patients with CVD represent perfectionism features in different life situations. They consider unrealistic and inappropriate standards for themselves and for the important people in their lives including their spouses, children, and close friends, and are never satisfied with the performance of themselves as well as those of the above-mentioned people.[6,7]

Perfectionism is considered as a cognitive style or a long-standing personality trait that develops from childhood and has the following three dimensions: self-oriented perfectionists, others-oriented perfectionism and community-oriented perfectionism. Self-oriented perfectionism is defined as determining strict standards for oneself and evaluating one's behaviors obstinately. Others-oriented perfectionism means having a high unrealistic standard for others' behaviors, and community-oriented perfectionism means perceiving the high unrealistic standards that others have for someone and put him/her under pressure to be perfect.[8] Since the coronary heart disease is one type of cardiac disease that has primarily a psychosomatic nature and the role of psychological factors in its incidence has become clear, these factors directly or indirectly influence the physiological risk factors and increase the risk of coronary heart disease. This implies the role of psychological factors in the incidence of coronary heart disease.[9]

It also seems that nowadays medical interventions in the treatment and prevention of heart diseases are not much successful, because the role of psychological factors, personality, lifestyle and emotional moods in the continuity and exacerbation of these diseases is undeniable.[7] Given the importance of previously-mentioned psychological issues with regard to the incidence and exacerbation of coronary heart diseases, it can be said that if we can identify the personalities susceptible to the disease on time, they will be helped on how to properly regulate their emotions, modify the perfectionism aspect of their personality, or relatively adjust some aspects of their personality in order to reduce the devastating effects of the heart disease and make the effects of medical treatments more stable. Numerous studies have examined perfectionism in patients with cardiovascular disease. However, few studies have examined the dimensions and subscales of perfectionism; thus, this study was done with the aim of comparing perfectionism in patients with cardiovascular disease and normal subjects who referred to Shahid Faghihi Hospital in Shiraz. Through understanding the relationship between cardiovascular disease and dimensions of perfectionism, educational interventions can be designed for the prevention of cardiovascular disease.

Materials and Methods

Study Design

This study was a case-control one carried out on 160 people who referred to Shahid Faghihi Hospital in Shiraz in 2015.

Sampling and Patients

The samples were selected through the convenience sampling method. The case group included 80 patients with cardiovascular disease and the control group included healthy people who did not have the disease and were referred to Shahid Faghihi Hospital in 2015. The patients in the case group were those with a definite diagnosis of coronary artery disease by the specialists while the people in the control group had not been diagnosed with any types of cardiovascular disease but were similar to the patients in terms of demographic factors including age, gender, marital status and education. In addition, patients with acute conditions such as those with serious heart failure, severe heart pain and patients who were not able to complete the questionnaire were excluded. The inclusion criteria for the study were as follows: completing a written consent to participate in the research, being at the age range of 25 to 65 years, the education level ranging from illiteracy to high level education, lack of major psychiatric disorders, lack of using psychiatric drugs and narcotics, definite diagnosis of coronary artery disease by a cardiologist for the group of patients. Also, the exclusion criteria for both groups were the presence of psychological disorders or a history of mental illnesses, a history of lung diseases, using medications, and using drugs based on self-reporting.

Instrument

To collect the information about perfectionism and its components, Frost Multidimensional Perfectionism Scale (FMPS) was used. FMPS has been created to evaluate different dimensions of perfectionism. This test has six subscales: concern over mistakes, uncertainty about the acts, parental expectations, parental criticism, personal standards, and regularity. In addition, the total score of perfectionism is obtained by adding up all the scores of the 35 statements in the test. A top score obtained in the test indicates high perfectionism in a given area. Scoring the options is done as follows: (strongly disagree=1), (disagree=2), (no idea=3), (agree=4) and (strongly agree=5). To obtain the score of each scale, the scores of all statements relevant to the intended subscale should

be added up. In this case, higher scores indicate high perfectionism in the given area. The internal consistency coefficient of the test subscales and that of the entire test were reported 0.73 to 0.93 and 0.90, respectively. In an Australian sample, the internal consistency coefficient of the test subscales was 770 to .90 and that of the entire test was reported to be 0.91.

To collect the required information, after going to Shahid Faghihi Hospital and talking with the patients and getting their oral consent, we explained the questionnaire to them and the required information was collected by face to face interviews.

Statistical Analysis

The mean, standard deviation and frequency were used for describing the data, and the independent t-test was used for data analysis as well. The data analysis was performed using SPSS, version 16.

Results

80 subjects with cardiovascular disease and 80 healthy people participated in this study. The mean ages of the participants in this study were 48±12.2 and 34±9.6 for patients with cardiovascular disease and healthy subjects, respectively. They were studied in terms of perfectionism and the obtained results showed that the average perfectionism in healthy subjects and the patients was the same and no statistically significant difference was observed between the two groups of participants (P=0.06). As can be seen in Table 1, regarding positive and negative perfectionism in patients with cardiovascular disease and in healthy individuals, the mean scores of positive perfectionism were the same in patients and healthy people and they did not have a significant difference (P=0.84); there was a significant difference between patients and healthy people in terms of negative perfectionism (P=0.03).

To examine the differences between the components of perfectionism in both groups, we used the independent t-test. The results in Table 2 show that there was a significant difference between the two groups of cardiovascular patients and healthy individuals referred to Shahid Faghihi Hospital in Shiraz in terms of personal standards (P0.00<), parental expectations (P=0.02), and uncertainty in acts (P=0.04) subscales. But no significant difference was seen between the patients with cardiovascular disease and healthy individuals in terms of regularity (P=0.76), parental criticism (P=0.57), and concerns over mistakes (P=0.10).

Discussion

This study compared perfectionism in cardiovascular patients and healthy individuals who referred to the Shahid Faghihi Hospital in Shiraz in 2015, and the key result of our study was that there was no significant difference between the patients with coronary artery disease and the healthy individuals in terms of perfectionism. But according to a survey conducted on perfectionism components and their relationship with the cardiovascular disease, the results showed that there was a significant difference between the cardiovascular patients referring to Shahid Faghihi Hospital in Shiraz and the control group in terms of the three subscales "uncertainty about acts, parental expectations and personal standards". But no significant difference was observed between the two groups in terms of the other three components including "concerns over mistakes", "parental criticism" and "regulation". With regard to the difference between positive and negative

Table 1: Mean scores of positive and negative perfectionism in patients and healthy participants

Mean score perfectionism	Condition of Health		Standard deviation	P value
	Healthy	Patient		
Positive	48.63	48.82	6.05	0.84
Negative	64.55	69.5	14.10	0.03

Table 2: Independent T-test for comparing the mean scores of perfectionism components in the two groups of cardiovascular patients and healthy individuals

Perfectionism components		Mean	Standard deviation	Significance
Regularity	Patient	24.45	3.53	0.76
	Healthy	24.45	3.48	
Personal standards	Patient	24.37	3.90	0.00
	Healthy	24.18	3.85	
Parental criticism	Patient	12.93	3.13	0.57
	Healthy	11.56	3.08	
Parental expectations	Patient	16.86	4.48	0.02
	Healthy	16.38	6.03	
Uncertainty in acts	Patient	12.37	3.16	0.04
	Healthy	11.21	3.43	
Concerns over mistakes	Patient	27.32	6.14	0.10
	Healthy	25.23	7.02	

perfectionism, the results of our study showed that there was a significant difference between the people with cardiovascular disease and the healthy individuals only in terms of negative perfectionism, and no significant difference was observed in terms of positive perfectionism. This result is consistent with the findings of a study by Alipoor and Hajizadegan.[10] Generally, perfectionist people and especially negative perfectionists have a thinking system of "all or nothing". It means that something must be done perfectly and ideally; otherwise, even if it has a little degree of weakness, it will not be worth and may be considered as "nothing". For this reason, these people are always under great pressure and stress to fulfill such a desire and, on the other hand, they are too worried about the evaluations and judgments done by others. These pressures and worries can in turn weaken their immune systems and make them susceptible to diseases such as cardiovascular disease, or other psychosomatic or even psychological problems. On the other hand, applying negative characteristics of perfectionism by perfectionists in social interactions may cause the generalization of interpersonal conflicts and hostilities that are known as one of the causes of coronary heart disorders.[10-12] Findings of the study by Alipoor and Hajizadegan indicated the high level of negative perfectionism in patients with coronary heart disease and confirmed the negative and harmful effect of perfectionist thinking and behavior on the cardiovascular system. Making a distinction between positive as well as negative perfectionism, findings of this study show that perfectionism which is one aspect of type a behavioral pattern should be investigated more precisely to predict the risk of CVD because negative perfectionism can predict disorders but positive perfectionism might not have this role.[10] Results of our study showed no significant difference between the two groups in terms of the other three components including "concerns over mistakes", "parental criticism" and "regulation". In this regard, findings of previous studies on the role of perfectionism patterns in CHD are inconsistent. Results of the present research on the relationship between perfectionism components and the cardiovascular disease were consistent with the findings of a study by Moghadas and colleagues but were not consistent with those of Spiro.[13,14] Heidari and colleague in 2015 showed that perfectionism in patients with high blood pressure was more than healthy people; this was inconsistent with our study.[15] Results of the present study showed that the difference between some subscales of perfectionism among cardiovascular patients and healthy individuals is significant. The averages of concerns over mistakes, parental criticism, and regularity in the patient group are significantly higher than the healthy group, and these results are consistent with those of Blatt and colleagues and Scheier and colleagues.[16,17]

Conclusion

Generally, our study suggested that there was no significant difference between the patients with coronary heart disease and the healthy individuals in terms of perfectionism, but there seemed to be a significant difference between the two groups in terms of some subscales of perfectionism. On the other hand, negative perfectionism was higher in patients with cardiovascular disease. Findings of this study can be used to develop and prepare educational programs in order to train the patients and healthy people on perfectionism perspective and increase positive perfectionism among them. It is recommended that prospective cohort studies should be done with larger sample sizes and the personality types of the people should be taken into consideration in order to investigate the interactions between the type of personality, perfectionism and cardiovascular disease so that more effective health-educational interventions could be done by identifying the interactions of these three variables.

Limitations: Some limitations of this study include the small sample size, limited population and the use of a questionnaire to collect the information, because it cannot be generalized to other people with cardiovascular disease and the healthy individuals living elsewhere.

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