

Mental health of patients with heart disease: analysis of alexithymia and family social support.

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Abstract

The present study was conducted to determine the relationship of alexithymia and family social support with the mental health of patients with cardiac condition. The correlational method was used in the study. 200 individuals were selected as sample, using consecutive sampling method, from patients with cardiac condition who visited Imam Ali Hospital in Kermanshah, Iran during March and April 2014. The data collection instruments were the Mental Health Inventory (GHQ-28), Alexithymia (TAS_20) and Perceived Social Support from Family (PSS-Fa). The data were analyzed using Pearson's correlation coefficient and stepwise regression analysis. The results of the study showed that there was a positive association of alexithymia, the components of difficulty identifying feelings (DIF) and difficulty describing feelings (DDF) with mental health. Negative correlation was obtained between family social support and mental health. The results of the regression analysis showed that DIF and family social support had the ability to predict mental health. Considering the results, in treatment of cardiac diseases, it is recommended to provide psychological interventions, especially paying attention to the patients' emotions and their family's social support, in addition to doing medical actions.

Keywords: Mental health, Alexithymia, Family social support, Heart disease, Patient.

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Introduction

Cardiovascular diseases are chronic diseases that affect blood flow to the heart, brain, or the peripheral regions of the body [1]. Today, cardiovascular diseases have led to considerable number of mortalities in the world and the number of deaths is estimated to reach 11.1 million by 2020, up from 7.1 million in 1999 [2]. In Iran, cardiovascular diseases are considered the leading cause of deaths and the cause of nearly 50% of the total number of deaths annually [3]. In most cases of cardiovascular diseases, psychological disorders are also observed as a comorbid disease along with the complications of cardiac conditions [4]. This will have severe impacts on the health, recovery, and life quality of the patients and will lead to increase in utilizing of health care, early disability and imposition of economic burden on the individuals and security systems of the society [5]. The recognition of the factors impacting the mental health of cardiac patients can help them in undergoing treatment.

It seems that alexithymia is one of the relevant factors impacting mental health of cardiac patients. Alexithymia, as a

personality character, is the lack or problem in identifying, describing and dealing with personal feelings and often leads to misunderstanding of other people's feelings [6]. This characteristic results in defective cognitive process, emotional adjustment, and adaptation which are relevant in commencement and advancement of psychological and medical disorders [7]. People with this complication are extremely affected by the physical and emotional correlates which are not verbalized. These deficiencies hinder the adjustment of emotions and complicate the successful adaptation [8]. In contrast, individuals who are emotionally more capable are more successful in coping with negative experiences and show better adjustment to the environment and the others [9]. The results of several studies have indicated that the deficiency in regulating emotions is related to the occurrence of symptoms of psychopathology [10,11], depression [12-15], anxiety [12,15,16], phobia [17], suicidal thoughts [13] and mental health problem [9,18,19]. Social support is one of the determining factors in social health and it deals with the importance of the human social dimension and has attracted significant attention in recent years [20]. Studies

have shown that social support has positive effects on cardiovascular and immune systems of the body [21] and social support paucity perceived by patients with cardiac condition has a strong correlation with intensity and duration of the disease. Social support acts as a protector against stressful life events and increases commitment toward medical treatments and recovery [22]. Emotional quality is accompanied by the sense of belonging and provides the needed information to minimize the physical or psychological harmful effects of life events [23]. McCorkle et al. found out that social support plays a role in increasing welfare and decreasing psychological symptoms, especially symptoms of depression [24].

Considering high prevalence of cardiac diseases and its effect on psychological state of the patients, paying attention to the factors that impact mental health plays a significant role in performance, life quality and cooperation of the patients in the treatment procedure. These factors can be effective in prognosis of the disease. Given the importance of the issue, the present study was carried out to determine the correlation of alexithymia and family social support with the mental health of patients with cardiac condition.

Materials and Methods

This study is cross-sectional and of correlational type. The statistical population of study comprised of all patients with cardiac condition who visited Imam Ali Hospital of Kermanshah, Iran in March and April 2014. The inclusion criteria included having a cardiac condition, a minimum of 9 years of education, no history of significant mental disease, and having at least one-year history of cardiac disease. Regarding the population, a sample size of 200 individuals was selected using convenience sampling method. The selected patients began to fill out the questionnaires after declaring consent to participate in the study and gaining the required assurance of privacy of information. The patients then completed the questionnaires individually and in the presence of the researcher and then the questionnaires were collected. The SPSS software for Windows (ver. 19.0) was used to analyze the data and mean, standard deviation, Pearson correlation coefficient, and stepwise regression analysis result were reported.

Research instruments

1. The General Health Questionnaire-28 (GHQ-28): was used to assess the mental health of the subjects. This questionnaire was developed by Goldberg in 1972 and exists in forms with 12, 28, 30, and 60 items. The 28-item form was used in this study. The 28-item general health questionnaire is comprised of four subscales of seven questions which assess physical symptoms, anxiety, social performance disorder, and depression. All items of the GHQ have four options with two kinds of rating methods. One is rated in form of (0-0-1-1) and the second is Likert rating scale in which the items are rated as (0-1-2-3) [25]. Shigemi and Tseuda obtained Cronbach's alpha of 0.90 after using this questionnaire on Japanese office

workers [26]. In normalization of the GHQ in Iran, Houman reported the internal consistency of the subscales of this questionnaire, using Cronbach's alpha, being 0.85, 0.87, 0.70 [27] and 0.91 respectively and reported the internal consistency for the whole scale which shows the general health being 0.85.

2. Toronto Alexithymia Scale (TAS-20) is a 20-item test which assesses 3 subscales of difficulty identifying feelings (DIF) consisted of 7 items, difficulty describing feelings (DDF) consisted of 5 items, and externally-oriented thinking (EOT) consisted of 8 items using 5-point Likert scale from 1 (totally agree) to 5 (totally disagree). A total score is also obtained by summing up the three subscales for the alexithymia [28]. The psychometric properties of TAS-20 have been evaluated and confirmed in various studies [29]. In the Farsi version of the TAS-20, the Cronbach's alpha for the total alexithymia and the three subscales of DIF, DDF and EOT were obtained being 0.85, 0.82, 0.75, and 0.72, respectively which indicate a good internal correlation of the scale. The test-retest reliability of the TAS-20 was confirmed two times with a four-week interval from $r=0.85$ to $r=0.87$ for the total alexithymia and several subscales in a sample size of 67 individuals. The simultaneous validity of the TAS-20 scale was evaluated and confirmed in terms of correlation between subscales of this scale and scales of emotional intelligence, psychological welfare, and psychological hopelessness. The results of Pearson's correlation coefficient showed that there was a significant correlation between the scores of the tested individuals in alexithymia scale and emotional intelligence, psychological welfare, and psychological hopelessness. The correlation coefficients between alexithymia subscales and the above variables were also significant. The confirmatory factor analysis results also confirmed the existence of three indicators of DIF, DDF and EOT in the Farsi version of TAS-20 [30]. In the study by Karami, Zakiee and Alikhani (2013) Cronbach's alpha of the total questionnaire was obtained being 0.93 [31]. In the present study, the Cronbach's alpha was 0.64.

3. Perceived Social Support from Family (PSS-Fa) is a questionnaire designed by Procidano and Heller (1983) in 20 items to measure the social support of family. The scoring method is in the form of Yes, No, I don't know. The maximum point for each item is +1 and the total range of points is between 0 and 20. The higher points indicate higher social support of the family [32]. The Cronbach's alpha of the questionnaire was obtained being between 0.88 and 0.91 [33]. In the present study, the Cronbach's alpha was obtained being 0.84.

Results

From the total 200 studied individuals, there were 125 males and 75 females with age range of 21 to 78 years with the mean age of 55.79 years. The average duration of their illness was 3.65 years. 95% of the individuals under the survey were married and most of them had 9 years of education (65.5%) and 43% of them were self-employed (Table 1).

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Table 1. Demographic information on the sample.

Variables		Mean (SD)	Range
Age		55.79 (12.13)	21-78
Duration of Heart disease (year)		3.65 (4.56)	24-Jan
	Frequency (n)	Percentage (%)	
Male	Sex	125	37.5
Female		75	62.5
Married	Marital status	190	95
Single		10	5
9 years of education		131	65.5
High school diploma	Education	50	25
Associate Degree		11	5.5
Bachelor's Degree & above		8	4
Housewife		52	26
Employee		22	11
Unemployed	Occupation	8	4
Retired		32	16
Self-employed		86	43

As shown in Table 2, there was a significant association of the components of DIF, DDF and alexithymia total score with mental health with correlation coefficients of 0.35 ($p<0.01$),

0.16 ($p<0.5$) and 0.27 ($p<0.01$) respectively. There was no significant correlation between EOT and mental health. The results showed that there was a correlation between family social support and mental health ($r=-0.34$, $P<0.01$).

Table 2. Matrix of correlation of alexithymia (its components) and family social support with mental health.

Variables	M (SD)	1	2	3	4	5	6
1. DIF	19.16 (4.96)	1					
2 DDF	15.16 (2.82)	0.40**	1				
3. EOT	23.77 (3.43)	0.08-	0.01	1			
4.Alexithymia(Total)	58.28 (7.56)	0.75**	0.62**	0.45**	1		
5.Family Social Support	16.42 (3.66)	0.07-	0.10-	0.04-	0.08-	1	
6. Mental Health	28.75 (12.28)	0.35**	0.16*	0.01	0.27**	0.34**-	1

Stepwise regression analysis was used to predict mental health by alexithymia and family social support. The results indicated that the prediction takes place in two steps and variables of DIF and family social support together explain 0.23% of the relevant changes of mental health. The results of the regression coefficients showed that the DIF and family social support can predict mental health with beta coefficients of 0.32 and -0.31 respectively (Table 3).

Table 3. Stepwise regression analysis method to predict Mental Health according to Alexithymia and Family Social Support.

Variables		Step	R	R ²	F	P	B	β	t	P	
Dependent	Predictor										
Mental Health	DIF	X ₁	2	0.48	0.23	29.45	0.001	0.82	0.32	5.34	0.001
	Family Social Support	X ₂						-1.07	-0.31	-5.08	0.001

Discussion and Conclusion

Heart is one of the most important and sensitive organs of the body and any damage to it can negatively affect individual's mental and psychological state. Any damage to the heart intensifies the illness in patients with cardiac condition; hence recognizing and considering the relevant factors of the mental health in cardiac patients can help in finding appropriate approaches to improve prognosis and hospitalization duration and also to improve the mental health level and life quality of such patients. Therefore, considering the importance of the issue, the present study was carried out to determine the correlation of alexithymia and family social support with the mental health of cardiac patients. The results of the study showed that there was a positive correlation of alexithymia, DIF and DDF with mental health. However, no significant correlation was found between EOT and the mental health. The results indicate that higher range of alexithymia is

accompanied by lower mental health and higher psychological disorders and on the other hand; decreasing alexithymia improves mental health (higher rates in mental health questionnaire shows less mental health). Among the indicators of alexithymia, DIF has the potentiality to predict mental health of the cardiac patients with the beta coefficient of 0.32.

The results of several studies have indicated that the deficiency in regulating emotions is related to the occurrence of symptoms of psychopathology [10,11], depression [12-15], anxiety [12,15,16], phobia [17], suicidal thoughts [13] and mental health problem [9,18,19]. When confronted by a traumatic event, people with high alexithymia encounter emotional agitation due to inability in regulating and managing feelings. In fact, they experience distinguished feelings which are generally accompanied by a physiological arousal. However, due to difficulty in distinguishing and description, the arousal remains active and does not disappear. These

people are unable to recognize the emotion arising from their physical feelings and just focus on physical feelings. This emphasis on physical feelings intensifies these symptoms and, through a defective circle, creates disorder in automatic nervous system and immunity system which ultimately intensify cardiac condition. In addition, these people are unable to understand their own and others' emotions and show little potential for communion and therefore, are susceptible to get affected by different kinds of psychological disorders. On the other hand, those with low alexithymia show great communication and adjustment abilities. People who can recognize their feelings and express their own emotional conditions better can easily encounter the adversities of life and cope with problems in the environment and thus, have a better mental health. The results of this study revealed that there is a negative correlation between family social support and the mental health of the cardiac patients, meaning the more family social support, the better the mental health an individual can have. On the contrary, the less the family social support, the worse the mental health would be. The family social support can predict mental health of cardiac patients as much as 0.31%. These results are in line with the findings of McCorkle et al. that showed family social support is effective in increasing welfare and decreasing psychological symptoms, especially those of depression [24]. Meanwhile, the social support on the part of the family helps in coping with the cardiac condition in affected people and improves individual's cognitive evaluation and beliefs about the world. Moreover, social support can act as a shield against stress and alleviate psychological and mental symptoms. Since the cardiac condition is a stressful event, social support by the patient's family can play a major role in accelerating the improvement of cardiac condition. Considering the results, in treatment of cardiac diseases, it is recommended to provide psychological interventions, especially paying attention to the patients' emotions and their family's social support, in addition to doing medical actions. Also, the evaluation of these variables should be done in patients with other chronic diseases. The study was conducted on cardiac patients in Kermanshah hospital, Iran, therefore caution should be taken when expanding the results.

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