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Procedia - Social and Behavioral Sciences 30 (2011) 171 – 175

Procedia
Social and Behavioral Sciences

WCPCG-2011

An investigation of the relationship between coping styles and psychological adaptation with recovery process in a sample of coronary heart disease patients

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Abstract

The relationship between coping styles and psychological adaptation with recovery process was investigated in a sample of Coronary Heart Disease (CHD) patients. 150 patients were included in this study at intake and forty five patients (27 men, 18 women) participated in follow-up study. All participants were asked to complete Tehran Coping Styles Scale (TCSS) and Mental Health Inventory (MHI). Recovery Process Questionnaire (RPQ) was completed through patient's medical file and clinical examinations by cardiologists. Perceived recovery revealed a significant positive association with negative emotional-focused coping style. It can be concluded that perceived recovery of CHD patients is positively influenced by negative emotional-focused coping style.

Selection and/or peer-review under responsibility of the 2nd World Conference on Psychology, Counselling and Guidance.

Keywords: Coping; Stress; Health psychology; Heart disease; Mental health

1. Introduction

The Coronary Heart Disease (CHD) is caused by the stricture of coroners– the blood vessels which carry oxygen-rich blood to the heart. This is the most important kind of heart disease and is one of the major causes of death in the world. Compatibility problems are much more reported from those heart patients who had more social problems and stress, not necessarily those whose disease is more severe (Sarafino, 2006). Stress, depression and denial, makes the disease recovery process longer (Sarafino, 2006). Those heart patients who suffer severe stress and depression also will develop more critical problems such as arrhythmia, and the probability of their death in first months is more than those who suffer less stress (Sarafino, 2006).

Lazarus and Folkman (1984) defined coping strategies as series of behavioral and cognitive responses whose aim is to decrease stressful situation pressure to the minimum. Recent research showed that the strategies persons adopt, affects not only their psychological, but also their physical well-being (Piko, 2001). So, coping is one of the factors which has wildly been studied (Hobfoll, Schwarzer, & Cohen, 1998). Identification of affective strategies of coping as mediator factors in stress-disease relationship has gained momentum in this research area (Somerfield & MacCrae, 2000).

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Selection and/or peer-review under responsibility of the 2nd World Conference on Psychology, Counselling and Guidance.
doi:10.1016/j.sbspro.2011.10.034

Research on the role of the psychological factors on CHD patients' recovery process, has showed that using problem-focused coping styles were more effective than using emotional-focused coping styles in the recovery of those patients who suffered from heart attack. After leaving the hospital, these patients showed better social and mental adaptation than those who used emotional-based coping style (Keckeisen & Nyamathi, 1990).

The main purpose of the present study was to assess the relationship between coping styles and the level of psychological adaptation of CHD patients with recovery process and this disease. In addition to the independent roles of the previously mentioned factors, the interaction of these two factors on CHD patient's recovery process will be studied. Studying the role of coping styles and psychological adaptation levels makes the relationship between the factors and CHD recovery process clear. It will have practical implications for the prevention of aggravation of disease, repetitive attacks, and deaths toll. It will result in more successful and general therapies.

2. Method

2.1. Participants and Procedure

The population which has been studied in this study were CHD patients in a heart hospital in Tehran. The sample consists of 90 CHD patients, hospitalized in post CCU, CCU, men surgery section, internal center for men, women surgery section, internal center for women and private sections of the hospital. The criterion for participating in this study was having no serious medical record except CHD and mental disease. The age of the disease start, the length of disease, the length of hospitalization, surgery date, and other medical information were drawn out of medical files of patients. Clear instructions were given to all subjects on how to fill the questionnaires. Sample selection was done in two stages. In the first step, coping styles and mental health questionnaires were filled one or two weeks before surgery, and in the second step, (follow-up) recovery process questionnaires were filled in 3 or 4 months after the surgery. Filling the questionnaires, by the subjects or the researcher, took almost 45 to 60 minutes. Due to the general state of the patients, maximum 3 questionnaires were filled in each day. Recovery process questionnaires were filled by the specialists, based on careful examinations and medical record of the patients. In the first step, 150 questionnaires were filled in. However, the final sample consisted of 45 patients (18 females, 27 males; M_{age} = 55.67 years, age range: 36-77 years).

2.2. Measures

Tehran Coping Styles Scale (TCSS)- This is a Farsi version of the COPE (Carver, Scheier, & Weintrub, 1989), a theoretically based measure assessing 15 coping strategies that are applicable across numerous stressful settings. Adequate psychometric properties of English (e.g., Carver et al., 1989; Eubank & Collins, 2000) and Farsi (Besharat, 2007) versions of the scale have been reported.

Mental Health Inventory (MHI; Veit & Ware, 1983)- This is a 34-item questionnaire which provides two subscales, psychological well-being and psychological distress. The questionnaire enjoys a five-point Likert scale. The minimum score in subscales of psychological well-being and psychological distress are 14 and 20, respectively. The maximum score in the subscales are 60 and 100, respectively. Psychometric properties of the scale were confirmed in several studies (Besharat, 2006, 2009).

Recovery Process Questionnaire (RPQ)- In this study, patients' recovery indices were assessed by the RPQ, based on recovery indices after heart surgery and medical records of patients, created by medical officials, especially heart and coronary disease specialists. This questionnaire has 10 items which addresses two scales including perceived recovery and objective recovery. Perceived recovery is assessed through items about ache, hard-breathing, and improvement which patients feels. The minimum score in this scale will be 3 and the maximum will be 11. Objective recovery which is estimated based on items about lung, hearing, fever, sound of heart, abdominal evacuation, and wound examination, patient coming back to life and job activities. The minimum score in this scale is 1 and the maximum is 10. Content validity of this questionnaire is established by some heart disease specialists (Pourang, 2008).

3. Results

Table 1. Correlations between measures of objective recovery, coping styles, psychological well-being, and psychological distress

Disease length	Less than 7months	7 to 63 months	More than 63 months	all
factor				
Problem- focused coping style	- 0/110	0/210	0/254	0/074
Positive- emotional focused coping style	- 0/179	- 0/047	- 0/077	- 0/117
Negative emotional focused coping style	0/118	- 0/188	0/354	0/090
Psychological well-being	0/101	- 0/031	0/269	0/057
Psychological distress	- 0/049	- 0/080	0/249	0/095

Table 2. Correlations between measures of perceived recovery, coping styles, psychological well-being, and psychological distress

Disease length	**Less than 7 months**	**7 to 63 months**	**More than 63 months**	**all**
factor				
Problem- focused coping style	- 0/170	- 0/083	0/235	- 0/032
Positive- emotional focused coping style	- 0/126	0/418	- 0/123	0/086
Negative emotional focused coping style	0/336	0/459	0/201	0/338
Psychological well-being	- 0/055	- 0/012	- 0/131	- 0/051
Psychological distress	0/229	0/496	0/147	0/278

. Table 3. Correlations between measures of objective recovery, coping styles, psychological well-being, and psychological distress

Hospitalization period / factor	6 months	6 to 11.5 months	More than 11.5 months	all
Problem- focused coping style	- 0/035	0/257	0/068	0/074
Positive- emotional focused coping style	- 0/104	- 0/583	- 0/016	- 0/117
Negative emotional focused coping style	- 0/148	- 0/390	0/362	0/090
Psychological well-being	0/177	- 0/452	0/172	0/057
Psychological distress	- 0/249	0/095	0/328	0/095

Table 4. Correlations between measures of perceived recovery, coping styles, psychological well-being, and psychological distress

Hospitalization period / factor	6 months	6 to 11.5 months	More than 11.5 months	all
Problem- focused coping style	- 0/042	- 0/523	0/266	- 0/032
Positive- emotional focused coping style	0/026	0/449	- 0/042	0/086
Negative emotional focused coping style	0/299	0/705	0/195	0/338
Psychological well-being	-0/117	- 0/251	0/130	- 0/051
Psychological distress	0/226	0/225	0/363	0/278

4. Discussion

The results of the present study showed that there is a positive significant correlation between negative emotional-focused coping style and recovery process. These findings are somehow similar to the previous research (see livneh, 1999) and can be interpreted on the basis of the following possibilities.

Using unproductive coping style (negative emotional-focused), the distinctive feature of which is avoiding from stressful factors through neglect and disregard (Zeidner & Endler, 1996), patients decrease a huge amount of their stress; instead of directly dealing with the stress' source and considering different aspects of it. When facing a severe problem, the person may deny its existence. In medical context, those who suffer fatal and chronic diseases, usually use this strategy. However, strategies such as denial, neglect, disregard, and avoidance are rewarding when one cannot solve the problem. It seems that using negative emotional-focused style, these patients deal with the problem less emotionally. Provisionally, it results in the reduction of stress and increase of perceived recovery.

There is also the probability that those who use negative emotional focused-style and deny their disease, ignore it or disregard it, had made unintentional mistakes in reporting their pain, breathe stricture, improvement feeling and

generally the perceived recovery. Establishing their health requires repeated examinations and it is not possible to do this through a three-month period study. This is one of the limitations of this study.

Based on the findings of this research, some suggestions are proposed for training and medical and clinical measures especially in coronary heart disease. Coping styles are series of skills that can be learned through teaching and experience. They are somehow changeable. Developing teaching programs appropriate for change level, normal and predominant coping styles, needs and the subject's coping problems and identifying necessary styles and considering change limits in styles as the purpose of these programs are fundamental. In different stages of change in which coping styles develop, systematic family, teachers, proctors and therapists intervention plays a major role in problem-focused and positive emotional-focused coping styles. The importance of this preventing program becomes clear when attention is paid to the role and effect of using coping styles to deal with stress originated diseases and threats of the public health.

The limitation of the statistical population of this research because of special physical states of patients, the limited research time and the nature of the research (descriptive), undermine the generalizability of the findings.

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