International Journal of Medicine Research
ISSN: 2455-7404; Impact Factor: RJIF 5.42
Received: 17-01-2019; Accepted: 20-02-2019
www.medicinesjournal.com
Volume 4; Issue 2; April 2019; Page No. 59-62

Coping strategies in chronic heart failure

Dr. Poonam M[1], Dr. Smitha Pavan[2*], Dr. Neelam M[3], Dr. Gireesh[4], Dr. Sandesh KS[5]
[1] Department of Psychiatry, KVGMCH, Sullia, Karnataka, India
[2] Department of Pathology, Karnataka, India
[3] Department of General Medicine, BMCRI, Bangalore, Karnataka, India
[4] Department of General Medicine, KVGMCH, Sullia, Karnataka, India
[5] Head, Department of PG Studies in Social Work, NMC, Sullia, Karnataka, India
[*] Corresponding Author: Dr. Smitha Pavan

Abstract
Disturbances of mental function are common among patients with chronic heart failure (CHF) and may become more frequent and serious as failure of the heart progresses. Depression and Anxiety in these patients are more commonly reported in the literature. There can be a gradual deterioration in their coping skills. The current study attempts to study coping skills in the study subjects. The sample consists of 100 in patients with chronic heart failure of more than one-year duration. A diagnosis was established using Framingham's criteria for heart failure and severity was assessed using the New York Heart Association functional class. They were also administered the semi structured proforma and the Coping Checklist. Descriptive Statistics, Chi square were used for data analysis. Over all in the sample adaptive coping styles were observed.

Keywords: disturbances, square, descriptive, common, functional

1. Introduction

Chronic Heart Failure; Coping skill

Chronic heart failure (CHF) is a complex clinical syndrome characterized by abnormalities of right or left ventricular function and changes in neurohumoral regulation, accompanied by effort intolerance, fluid retention and decreased survival.[1] Heart failure has a complex therapeutic regime of multiple medications, dietary restrictions, and vigilant symptom monitoring to maintain an acceptable quality of life. Overall prevalence of CHF is 2% in adult population. It increases to 6% to 10% in people above the age of65 years [2].

The diagnosis of a serious chronic illness begins a period of significant distress and adjustment for these patients. They must begin to make different treatment decisions, redistributing responsibilities, adjust to the threat of a potentially life threatening and long term illness.

Coping behaviour is the attempt to deal with negative emotions. It includes ongoing cognitive and behavioural efforts to manage specific external or internal demands that are appraised as taxing or exceeding the resources of the person [3].

The Process Theory of Coping by Lazarus and Folkman describes coping as a process that is likely to change over time. Stressful events are the result of an interaction between the individual and the environment, and stress is mediated by the person's appraisal of the situation and his/her perceived resources available todeal with the stress. Individuals cope with stressful situations using both emotion-focused and problem-focused strategies, and coping efforts result in immediate and long-term outcomes such as adherence to treatment plans, physiological changes, or psychological well-being. Emotion-focused coping occurs when an individual perceives a demand or stress to be impossible to change and tries to alter the way he/she thinks or feels about the situation.Examples are avoidance, acceptance, denial, seeking social support, and venting of feelings. Alternatively, problem-focused coping occurs when an individual interprets a situation or stressor as modifiable. Examples include active coping, problem solving, planning, and information seeking. Many different methods of coping with a situation are possible and, in general, can be considered either adaptive or maladaptive in nature [3].

A study to understand coping styles in a sample of CHF patients was conducted by Terje *et al* [4]. The sample consisted of 119 clinically stable CHF patients with symptomatic heart failure. Coping styles accounted for a significant amount (9.3%) of unique variance in depression when controlled for personality traits [4].

Coping strategies and depression in heart failure

222 stable HF patients were assessed with Beck Depression Inventory (BDI), Life Orientation Test (LOT-R) assessed optimism, ENRICHD Social Support Inventory (ESSI) and Perceived Social Support Scale (PSSS) assessed social support, and COPE assessed coping styles. Higher BDI scores were associated with lower scores on the acceptance humour, planning, and emotional support subscales of the COPE, and higher scores on the behavioural disengagement, denial, venting, and mental disengagement subscales. Higher LOT-R scores were associated with higher BDI scores. BDI≥10 was associated with greater likelihood of behavioural disengagement, denial, mental disengagement, venting and pessimism. Depressive symptoms in HF patients are associated with avoidant coping, lower perceived social support, and pessimism [5].

Vollman *et al* [6]. investigated the relationships between

depression and coping in heart failure patients (n = 75) by administering verbal questionnaires. Most participants had NYHA class II (36%) or III (48%) heart failure. The Beck Depression Inventory [7]. was administered to measure depression, and the Ways of Coping Questionnaire 13 measured coping. Fifty-three percent of the participants had a clinically significant history of depression and 43% were taking antidepressant medications. The problem-focused strategies such as seeking social support and planful problem solving had a direct, negative relationship with depression, and the emotion-focused strategies such as wishful thinking had a direct, positive relationship with depression. Escape-avoidance, planful problem solving, and the demographic variables of being single and functional impairment level according to NYHA stage surfaced as significant predictors of depression.

A study by Klein *et al.* [9] used a convenience sample of heart failure patients (n = 80) from a family care centre and heart failure specialty clinic to identify the relationship between coping styles and depression and the relationship between coping styles and health-related quality of life. This sample was different from other studies because it consisted entirely of older adults with a mean age of 69 years who were outpatients. Most participants had NYHA class II (35%) or III (59%) heart failure. Depression was measured with the Geriatric Depression Scale and coping was measured using the Brief COPE scale. Patients who used more active behavioural coping demonstrated less fatigue and more energy. Avoidance coping was associated with behaviour that used self-blame, denial, venting, self-distraction, and behavioural disengagement. Denial and self-blame was significantly correlated with increased levels of depression. Findings suggested that those patients who used maladaptive coping styles had more depression.

Doering *et al.* [10] also used a single data collection to determine the relationship between coping and emotional states in heart failure patients. Similar to the previous 2 studies, they used a convenience sample from an outpatient setting. The average age of the participants was 54.1 years, and the majority were found to have NYHA class III (48.8%) or IV (27.4%) heart failure. Participants completed questionnaires during a single clinic visit. Coping was measured with the Dealing with Illness Checklist and the Profile of Mood States was used to measure depression. High users of avoidance coping exhibited significantly higher levels of confusion, fatigue, anxiety, anger, and depression. Higher levels of vigor were found in patients who were high users of active behavioural coping, compared with those who were low users. There was no statistical difference in the other emotional states between high and low users of active behavioural coping No differences were noted in emotions between high and low users of active cognitive coping.

Carels [11]. used a unique approach to gather data from heart failure patients to assess the association between Depression, measured with the Beck Depression Inventory, and coping measured with the instrumental support, acceptance, active coping, and mental disengagement subscales of the Brief COPE. The participants were recruited from an outpatient clinic and consisted largely of men (57%) who were NYHA class II (52%) or III (40%) with a mean (SD) age of 67.7 (11.8) years. Results revealed that there was significantly lower depression with the use of active or acceptance coping. Symptom focus, distraction, and advice seeking coping were not significantly associated with depression. Overall those who used adaptive coping tended to have less depression.

Overall evidence shows that individuals who used more problem-focused coping methods had less depression and those who used more escape-avoidance coping had more depression Coping with the ever changing and often stressful symptoms of heart failure, a stringent medical regimen, and diet restrictions can be challenging for many patients. Effective, engaged coping styles have been shown to be a critical component of a person's ability to adapt to, and deal with, health threats particularly those involving cardiovascular disease.

Distribution of means of the different types of coping skills in the study sample

Table 1

Coping method	Mean	Standard deviation
Total Coping	37.09	11.52
Problem Solving	47.70	21.60
Social Support	48.43	20.40
Positive Distraction	34.79	23.34
Negative Distraction	28.89	20.95
Acceptance /Redefinition	40.64	18.29
Religious	30.78	21.18
Denial/Blame	31.55	22.17

Our study sample has used a mean of 37 coping behaviours with regard to Total Coping. The raw scores on the subscales were transformed to make them comparable as the scales had unequal items. Problem solving, social support, positive distraction, acceptance coping and religious method are used more than negative distraction and denial/blame in the sample overall. Social support and problem solving were the most commonly used methods.

Comparing the means of Socio demographic and Clinical variables coping skills using one way ANOVA

Table 2

Variable	Variable groups	Problem Solving		Social Support		Positive Distraction		Negative Distraction	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Age	<60	48.9	22.6	44.4	17.5	34.5	24.1	31.8	24.6
	>60	46.9	21.1	50	21.3	34.9	23.1	27.2	18.5
	p value	0.668		0.726		0.94		0.284	
Gender	Male	47.8	22.3	49.6	20.1	35.4	23.3	28.3	22.1
	Female	47.5	20.5	46	21.1	33.5	23.8	30.2	18.6
	p value	0.95		0.413		0.704		0.668	
Marital Status (n=92)	Married	49.2	21.2	48.5	21.4	33.9	23.3	28.3	21.8
	Widow	45.7	19.4	49	18.4	37.1	22.7	32.3	18.9

	p value	0.473		0.955		0.841		0.65	
Socio economic status	Upper	50.7	22.9	44.4	17.5	22.4	20.9	24.6	17.5
	Lower	46.5	21.1	50	21.3	39.6	22.5	30.6	17.7
	p value	0.387		0.218		**0.001****		0.204	
NYHA	I/II	50.6	18.5	55.5	16.7	33.2	19.9	31.4	23.4
	III/IV	47.1	19.8	47	23	35.1	24	28.4	20.4
	p value	0.548		0.119		0.759		0.594	
Duration of illness	1-5 yrs	46.8	20.4	49	20.8	33.4	22.4	29	22.2
	>6 yrs	50.9	25.4	47	19.4	39.4	26.2	28.5	17.7
	P value	0.425		0.624		0.278		0.92	

Table 3

Variable	Variable groups	Acceptance/Redefinition		Religious		Denial/Blame		Total Coping	
		Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Age	<60	38.6	16	29.1	22	28.3	20.9	21.3	15.1
	>60	41.8	20	31.7	20.8	33.5	22.8	19.3	8.8
	p value	0.728		0.089		0.406		0.415	
Gender	Male	40.5	19.9	30.1	20.9	30.6	21.2	37	11
	Female	40.9	14.6	32.3	22.1	33.5	24.4	37	10
	p value	0.919		0.626		0.543		0.915	
Marital status n=92	Married	39.8	17.9	30.5	20.9	30.6	20.6	36.8	11.1
	Widow	43.3	16.2	34.4	23	32.9	26.1	38.8	11.1
	p value	0.75		0.468		0.75		0.716	
Socio economic status	Upper	39.6	20	25	18	28.5	18.5	21.2	15.1
	Lower	41	17.7	33	22	32.7	23.5	19.3	8.8
	p value	0.954		0.083		0.227		0.048*	
NYHA	I/II	41.7	15.1	28.8	20	24.1	16.7	20	7
	III/IV	40.4	19	31.2	21	33.1	23	20	12
	p value	0.792		0.668		0.127		0.96	
Duration of illness	1-5 yrs	40.5	17.1	29.6	20.8	32.3	23.1	20.3	11.7
	>6 yrs	41.1	22.2	34.8	22.3	28.8	19.1	18.2	7.6
	P value	0.889		0.304		0.51		0.408	

*Significance at p =<0.05, **Significance at p=<0.001

For ease of analysis, age was categorised into <60, >60 years, socioeconomic status into lower class and upper class and duration of cardiac illness into below 5 years and above 5 years of illness.

Subjects belonging to lower socioeconomic strata use significantly more of positive distraction type of coping (p=0.001) and Total coping (p=0.048).

Coping Strategies in chronic heart failure

In our study we have found that the mean score of total coping is 37. Most commonly used coping methods were problem solving and social support followed by acceptance /redefinition and positive distraction. Denial/blame and negative distraction were less used coping methods. Overall Adaptive coping methods were more commonly used than maladaptive methods in our total sample in relation to chronic heart failure. Our results are similar to the study by Farcus *et al*. [12] wherein the most frequent coping mechanism in his study group was acceptance (69.3%), followed by seeking for social support and religion. Positive thinking was used by over 58.6% of the patients, whereas 44% of the patientsuse venting of emotions and 45.3% use denial.

In our study sample, we have seen that as age advances there is an increasing use of religious coping (p=0.089). It is used more by the older age group compared to younger age group. Patients aged 66-79 years try to adapt by focusing on emotions and use mainly the following coping mechanisms: acceptance, religion.[12]In our study the coping styles used by older patients reflects the coping style used in general population.

Positive distraction was used significantly more by the lower socioeconomic strata (p=0.001). Subjects of lower socio economic status (p=0.048) compared to the upper socioeconomic class used more number of coping strategies to deal with their medical illness

Kristenson *et al*. [13]. found that sustained stress hormone activation (e.g higher cortisol levels) and altered responsivity to stressful situations are more common in people from low socio-economic backgrounds. Few studies have focused on the relationship between social status and coping strategies. Taylor and Seeman [14]. found that, when socio-economic status decreased, avoidant coping was more prevalent. Therefore, it could be hypothesised that social class is associated with psychological adjustment indirectly through the coping strategies that individuals use under stress.

We have also found that the total coping used by our patients is more in the lower socioeconomic class than the upper class. The coping skills are also found to be maladaptive in patients with more severe heart failure. Hence recognising and treating patients with psychiatric illness becomes an important part in improving coping methods.

Limitations of the study

1. The point prevalence rate can be an overestimate of the true prevalence rate in the general population as the study was on inpatients in a tertiary hospital.
2. Majority of our study subjects were educated up to primary school level. The challenge was to make patients understand the items on the scales and respond after proper interpretation.
3. This cross-sectional approach captures only a brief

moment in time and does not give as much insight as a longitudinal approach could in relation to heart failure. The progression of symptoms associated with heart failure would influence the responses.

Acknowledgments
Dr R B Galgali, Dr Vidya Satyanarayanan.

References

1. Crawford HM. Current diagnosis and treatment in cardiology. 3rd Ed. The McGraw-Hill Companies. 2009.
2. Mann LD, Fauci A S, Braunwald, Kasper. Harrison's Principles of Internal Medicine: Heart Failure and Cor Pulmonale. 17th Ed. New York: McGraw-Hill; 2008.
3. Lazarus RS, Folkman S. Stress, Appraisal, and Coping. New York, NY: Springer; 1984.
4. Terje A, Murberg, Bru E, Stephens P. Personality and coping among congestive heart failure patients. Personality and Individual Differences 2002; 32(5):775-784.
5. Trivedi RB, Blumenthal J, O'Connor C, Adams K, Hinderliter A, Carla, Dupree, Johnson K. Coping Styles in Heart Failure Patients with Depressive Symptoms. J Psychosom Res. 2009; 67(4):339-346123.
6. Vollman MW, LaMontagne LL, Hepworth JT. Coping and depressive symptoms in adults living with heart failure. J Cardiovasc Nurs. 2007; 22(2):125-130.
7. Higgins MW, Luepker RV. Trends in Coronary Heart Disease Mortality: The Influence of Medical Care. New York, NY: Oxford University Press, 1988.
8. Alikhani S, Delavari A, Alaedini F, Kelishadi R, Rohbani S, Safaei A. A province-based surveillance system for the risk factors of non-communicable diseases: A prototype for integration of risk factor surveillance into primary healthcare systems of developing countries. Public Health. 2009; 123(5):358-364.
9. Higgins MW, Luepker RV. Trends in Coronary Heart Disease Mortality: The Influence of Medical Care. New York, NY: Oxford University Press, 1988.
10. Alikhani S, Delavari A, Alaedini F, Kelishadi R, Rohbani S, Safaei A. A province-based surveillance system for the risk factors of non-communicable diseases: A prototype for integration of risk factor surveillance into primary healthcare systems of developing countries. Public Health. 2009; 123(5):358-364.
11. Klein DM, Turvey CL, Pies CJ. Relationship of coping styles with quality of life and depressive symptoms in older heart failure patients. J Aging Health. 2007; 19(22):22-38.
12. Doering LV, Dracup LV, Caldwell MA, *et al*. Is coping style linked to emotional states in heart failure patients? J Card Fail. 2004; 10(4):344-349.
13. Carels RA. The association between disease severity, functional status, depression and daily quality of life in congestive heart failure patients. Qual Life Res. 2004; 13:63-72.
14. Farcas AD, Năstasă LE. Coping in patients with heart failure. Bulletin of the Transilvania University of Brasov Series VII: Social Sciences. 2011; 4(53):2.
15. Kristenson M, Eriksen H, Sluiter J, Starke D, Ursin. Psychobiological mechanisms of socioeconomic differences in health. Social Sciences and Medicine. 2004; 58:1511-1522.
16. Taylor SE, Seeman TE. Psychosocial resources and the SES-health relationship. In: Adler NE, Marmot M, McEwen BS and Stew- art J editors. Socioeconomic Status and Health in Industrialised Nations. New York. 1999, 210-225.