Bulletin of the *Transilvania* University of Braşov
Series VII: Social Sciences • Law • Vol. 4 (53) No. 2 - 2011

COPING IN PATIENTS WITH HEART FAILURE

A.D. FARCAŞ[1] L.E. NĂSTASĂ[2]

Abstract: *The outcome of patients with chronic heart failure is influenced by the type of coping with chronic heart disease. We employed the COPE questionnaire to identify the mechanisms of coping and analyze the parameters involved. Our results show that heart failure patients use mainly emotion-based coping (acceptance, seeking emotional support, religion). Independent variables that influence the type of coping mechanisms include gender, anxiety, depression and decreased quality of life. Identification of disadaptive mechanisms should become an important step in a complex management program devised by a multidisciplinary team.*

Key words: *coping, heart failure, quality of life.*

1. Introduction

Living with chronic heart diseases is uncomfortable for the patients, who must adapt to this discomfort [15]. The adaptive process is performed using coping mechanisms or techniques that have a favourable or unfavourable influence and therefore are called adaptive and disadaptive, respectively.

Failure of adjusting one's behaviour to the disease results in disadaptive coping which implies dissatisfaction, uncertainty, anxiety, passivity, feelings of helplessness and depression, all of which have an unfavourable effect on disease, mortality and quality of life [17].

The process of adjustment is influenced by modulating factors such as the perceived controllability of the stressor and personality features (genetic factors, personal life experience, behavioural types, disimunogenic personality traits) [8], [23].

Research regarding the importance of coping in the outcome and life of patients with heart failure is relatively recent [8], [23] and not as extensive as, for example, distress in patients with myocardial infarction [19].

2. Objectives

Our study aims to analyze the coping mechanisms used by patients with heart failure. We also studied the influence of personal features (such as patient age and gender, duration of disease and the number of associated illnesses) as well as

[1] Faculty of Medicine, *Iuliu Haţieganu* University of Medicine and Pharmacy, Cluj Napoca
[2] Faculty of Psychology and Educational Sciences, *Transilvania* University of Braşov

disimunogenic traits (anxiety trait and depression) in the process of choosing the mechanisms of coping.

3. Material and methods

The study was conducted on a group of 150 patients with chronic congestive heart failure admitted for the worsening of the heart failure in the Cardiology Department of the Emergency County Hospital in Cluj-Napoca with a 12-months follow-up. Clinical data were gathered that included symptoms and signs of heart failure cause of disease, cause of worsening, additional diseases.

DSM III (Beck) [1] depression scale was used to evaluate the presence and level of depression.

STAI (State Trait Anxiety Inventory) [26], [27] was used to evaluate depression in the study group.

The COPE [4-5] questionnaire was used to identify mechanisms of coping in the patient group and to analyze the influence of personality features and disimunogenic traits in the process of choosing the mechanism of coping.

The Minnessota [25] questionnaire was used to assess the perception of quality of life, both globally and in specific dimensions – physical, emotional and social.

4. Results and discussions

4.1. Results

The most frequent coping mechanism in the study group was acceptance (69.3%), followed by seeking for social support (68%) and religion (64%). A large number of patients (60%) use mental disengagement as coping mechanism in heart failure (Table 1).

Positive thinking was used by over 58.6% of the patients, whereas 44% of the patients use venting of emotions and 45.3% use denial.

Patients who 'often' use 'behavioural disengagement' represent 42% of the 150 patients with chronic heart failure.

Coping mechanisms used by the patients in the study group

Table 1

Coping mechanism	P_4/ P total*
Acceptance	69.3 % (104)
Seeking social support	68 % (102)
Religion	64 % (96)
Mental disengagement	60 % (90)
Positive thinking	58.6 % (88)
Denial	45.3 % (68)
Venting of emotions	44 % (66)
Behavioral disengagement	42 % (63)

*P 4/ P total – Number of patients responding with 'I often do this' divided by the total number of patients in the study group

Choosing the type of mechanism used in the coping with chronic heart failure is influenced by a vast number of factors – demographics, clinical and personality features, as shown in Table 2.

For example, women and men with heart failure use different ways to cope with the stress produced by the disease. Women use more frequently seeking emotional social support, venting of emotions, denial and positive thinking whereas men use more frequently seeking instrumental social support, mental disengagement and behavioural disengagement.

Our results show a correlation between the type of coping and age and a change in coping mechanism as patients grow older.

Younger patients (50 - 65 years) employ a 'problem-solving' [11] type of coping that includes seeking informational social support, venting of emotions, positive thinking and denial.

Patients aged 66-79 try to adapt by focusing on emotions and use mainly the

following coping mechanisms: acceptance, religion and seeking emotional/social support.

Correlations between personality features and type of coping mechanism used

Table 2

Coping mechanism	Age	Duration of heart failure	Comorbi-dities	Anxiety	Depression
Acceptance	0.36**	0.47***	0.40***	0.12	0.33**
Religion	0.48***	0.46***	0.32**	0.31*	0.32*
Social support	-0.34**	-0.26*	0.27*	0.28*	0.20
Mental disengagement	0.16	0.20*	0.21*	0.26**	0.30*
Positive thinking	-0.36**	0.23*	-0.27*	-0.25*	-0.28*
Venting of emotions	-0.32**	0.14	0.22*	0.40***	0.40***
Denial	-0.36**	-0.21*	0.20*	0.33**	0.39**
Behavioural disengagement	0.13	0.22*	0.28*	0.38**	0.38**

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Duration of cardiac disease and duration of heart failure are also important in coping. Patients diagnosed in the past 12 months employ denial and seeking social support as coping mechanisms.

Long-term living with disease (over 12 months) determines different coping mechanisms: acceptance, behavioural disengagement, mental disengagement and religion.

Patients with many co morbidities use less often positive thinking and more often acceptance and religion. Seeking social support and emotional release are useful in patients with many associated diseases.

Anxious patients (with increased anxiety trait) use emotional-type of coping mechanisms: denial 57.2%, venting of emotions 68.2% behavioural disengagement 60.3%, seeking social support 35.6 % mainly emotional support.

Chronic heart failure patients with moderate and severe depression use denial 48.3%, behavioural disengagement 68.4%, venting of emotions 74.3% and acceptance 47.3%.

Our results show that positive thinking negatively correlates with the level of anxiety trait and depression.

The outcome of coping with heart disease influences the quality of life, therefore we analysed the type of coping mechanism in relationship to the physical, emotional and social dimensions of quality of life.

Coping with severe and global decrease in quality of life employs venting of emotions, mental disengagement, denial and behavioural disengagement.

The level of decrease of quality of life physical score correlates with statistical significance with venting of emotions, mental disengagement, denial, behavioural disengagement and religion. Worsening of physical status is associated with less frequent use of acceptance (Table 3).

Once the emotional dimension of quality of life is affected, the coping becomes more passive: venting of emotions, mental disengagement, behavioural disengagement and denial but these patients also employ seeking social support and religion.

A decline in the social dimension of quality of life determines using coping mechanisms such as seeking social support.

Correlations between mechanisms of coping and perceived quality of life in patients with chronic heart failure

Table 3

Coping mechanism	Quality of life			
	Global score	Physical score	Emotional score	Social score
Acceptance	- 0.16	- 0.24*	- 0.15	- 0.17
Religion	0.20*	0.20*	0.21*	0.05
Social support	0.29**	0.12	0.27**	0.28**
Mental disengagement	0.30**	0.32**	0.34**	0.36**
Positive thinking	0.08	0.05	0.04	- 0.05
Venting of emotions	0.46***	0.36**	0.48***	0.43***
Denial	0.23**	0.28**	0.30**	0.27**
Behavioural disengagement	0.29**	0.18	0.26**	0.24**

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

4.2. Discussion

The stress caused by living with disease is determined by many factors, including knowledge about disease, significant and recurring symptoms, repeated worsening and hospitalizations and the unpredictability of the outcome. Therefore living with chronic heart disease requires coping [2-3].

A significant number of these patients (45.3%) employ denial and have an unfavourable outcome because they delay starting the treatment and have a low compliance [16], [20], therefore identifying them by using the COPE [21] questionnaire is a very important step in their management.

Acceptance and religion are frequently used in older patients, longer disease duration and large number of co morbidities. Some studies state an adaptive and even active of religion as a coping mechanism [18], [28]

Younger (50-65 years) patients employ active, adaptive coping mechanisms that are problem-focused [11] by employing positive thinking and seeking instrumental social support – discussions with health care workers or studying medical information available from various sources such as Internet or patient books and brochures [9], [21].

Our results indicate that gender plays a major part in choosing the type of coping mechanism, similar to the results in the another studies [14], [29] .

Women tend to overestimate the impact of the disease [19], [30] thus they employ denial as coping mechanism. Persistence of denial has unfavourable effects: delay in starting treatment and rehabilitation, reduced seeking instrumental social support such as household or medical assistance.

In coping with an acute cardiac event men seek social support by involving wives in the rehabilitation, decreasing workload and enrolling in rehabilitation programs [19], [24]. Our results show that in coping with chronic disease men also employ mental disengagement and behavioural disengagement – coping mechanisms that prevent them from self-care.

We found similar results with Felton and Reverson [9] and also with Tamres, Janicki and Helgeson [29] regarding venting of emotions which is a passive type of coping, often found in older (65-79 years), depressive, anxious or patients with multiple co morbidities.

The effects of disadaptive coping mechanisms such as behavioural disengagement (42%) include relinquishing treatment and rehabilitation programs [13]. In our study group this pattern was found in older patients (ages 65-79) and in patients with a longer duration of disease [10].

Duration of disease plays a major part in choosing the type of coping. In the first 12 months following diagnosis patients use denial and seeking social support but later they use mainly acceptance, behavioural disengagement, mental disengagement and religion.

Co morbidities further deteriorate the physical and psychological status of the patient, increase the number of medications, dietary and lifestyle restrictions - factors that account for the change in coping mechanisms from positive thinking to acceptance and religion.

Many published papers support the modulator role of anxiety trait in choosing the type of coping [7], [8], [12], [13] because it causes a lack of self-confidence, the feeling of inability to control the environment and self-blame after that [7], [13]. These features explain the preference for emotional coping, mainly passive: denial, emotional relief, behavioural disengagement and seeking social support.

These patients seek social support, both emotional and instrumental in their endeavour to better control their environment, therefore some researchers designate them „high monitors" who scan their environment in search for relevant information regarding the threat [22].

Depression correlates with disadaptive and passive coping mechanisms. Similar results were published by other researchers [6], [8], [12] highlighting the adverse effect of depression on the outcome of these patients.

A significant finding is the reduced presence of active coping such as „positive thinking" in depressive and anxious patients. These patients need to be taught how to use it and also more frequent use of it during psychotherapy.

By re-interpretation of the stressor these patients reduce its impact and improve the recovery.

Another coping mechanism frequently used by both anxious and depressive patients is venting of emotions which can have both adaptive (if used short-term) and disadaptive (if used medium- and long-term). Expressing emotions is only the first step in dealing with them, the following steps should consist of cognitive or behavioural techniques employed to find a solution and then to apply it.

Quality of life [30] in patients affected by this severe chronic heart disease is as important as their survival, therefore we analyzed the type of coping used for

alterations of various dimensions of their life.

There is a negative correlation between using ‚acceptance' as a coping mechanism and the alteration of physical status, which brings us to a paradox. Although the main coping mechanism is acceptance', patients with severe decrease in physical status (fatigue, shortness of breath, leg swelling, difficulties moving) adapt not by acceptance but by denial, venting of emotions, behavioural disengagement and mental disengagement. Due to their intrinsic disadaptive nature they fail to efficiently reduce the stressor, thus turning to religion.

Naturally, coping with decreased emotional status is performed through venting of emotions and religion.

Severe decrease of the social status naturally determines seeking social support. Emotional social support can be provided by volunteers, relatives, friends, support groups while informational social support by talks with health care professionals, reading patient brochures and watching relevant films.

The professional caring for the patient with heart failure (be it a physician or a psychologist) should not stop at simply establishing a severe and global decrease of quality of life of the patient but to go further and using a detailed analysis of the effect of the disease on the three dimensions (physical, emotional and social) should try to provide specific and effective support.

5. Conclusions

Coping of patients with heart failure is mainly emotion-focused. The adaptive process is influenced by demographics and clinical parameters as well as personality traits. Identifying coping mechanisms is relevant to the rehabilitation process and also to the emotional and mental balance of the patient. It also has practical aspects by guiding the therapy.

References

1. Beck, A.T., Steer, R.A., *et al*.: *Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation*. In: Clinical Psychology Review (1988) Vol. 8, p. 77-100.
2. Bombardier, C.H., D'Amico, C., Jordan, J.S.: *The relationship of appraisal and coping to chronic illness adjustment.* In: Behaviour Research and Therapy (1990) Vol 28(4), p. 297-304.
3. Buetow, S., Goodyear-Smith, F., *et al*.: *Coping strategies in the self-management of chronic heart failure.* In: Fam Pract (2001) Vol. 18, p.117-22.
4. Carver, C.S., Scheier, M.F., *et al*.: *Assessing Coping Strategies: A Theoretically Based Approach.* In: Journal of Personality and Social Psychology **56** (1989) No.2, p. 267-283.
5. Carver, C.S.: *You want to measure coping but your protocol's too long: Consider the Brief COPE.* In: International Journal of Behavioral Medicine **4** (1997), p. 92-100.
6. Cleland, J.G.F., Wang, M.: *Depression and heart failure—not yet a target for therapy?* In: European Heart Journal (1999) Vol. 20, p.1529-1530.
7. Croyle, R.T., Ditto, P.H.: *Illness cognition and behavior: an experimental approach.* In: Journal of Behavioral Medicine (1990) Vol. 13, p. 31–52.

8. Doering, L.V., Dracup, K., *et al*.: *Is Coping Style Linked to Emotional States in Heart Failure Patients?* In: Journal of Cardiac Failure **10** (2004) No. 4, p. 344-349.
9. Felton, B.J., Revenson, T.A.: *Age Differences in Coping with Chronic Illness.* Paper presented at the Annual Scientific Meeting of the Gerontological Society, San Francisco, 1983.
10. Ferketich, A.K., Binkley, P.F.: *Psychological distress and cardiovascular disease: results from the 2002 National Health Interview Survey.* In: European Heart Journal **26** (2005) No. 18, p. 1923-1929.
11. Folkman, S., Lazarus, R.S.: *If it changes, it must be a process; study of emotion and coping, during three stage of college examination.* In: Journal of Personality and Social Psychology (1985) Vol. 48, p.150-170.
12. Friedmann, E., Thomas, S.A., *et al*.: *Relationship of Depression, Anxiety, and Social Isolation to Chronic Heart Failure Outpatient Mortality.* In: American Heart Journal **152** (2006) No. 5, p. 940.e1-940.e8.
13. Haworth, J.E., Moniz-Cook, E., *et al*. *Prevalence and predictors of anxiety and depression in a sample of chronic heart failure patients with left ventricular systolic dysfunction.* In: European Journal of Heart Failure. (2005) Vol. 7(5), p. 803-808.
14. Heo, S., Moser, D.K., *et al*.: *Gender differences in and factors related to self-care behaviors: a cross-sectional, correlational study of patients with heart failure.* In: International Journal of Nurses Studies **45** (2008) No.12, p. 1807-1815.
15. Iamandescu, I.B.: *Stresul psihic- factor modulator complex al sănătăţii.* (*Psychological stress – complex modulator factor for health*) In: Psihologie Medicală. Psihologia sănătăţii. (*Medical psychology. Psychology of health*), Iamandescu, I.B (ed.). Editura InfoMedica, Bucuresti, 2005.
16. Joynt, K.E., Whellan, D.J., *et al*.: *Why is depression bad for failing heart?* In: Journal of Cardiac Failure (2004) Vol.10, p. 258-271.
17. Klein, D.M., Turvey, C.L., Pies, C.J.: *Relationship of Coping Styles With Quality of Life and Depressive Symptoms in Older Heart Failure Patients.* In: Journal of Aging and Health **19** (2007) No. 1, p. 22-38.
18. Koenig, H.G., Cohen, H.J., *et al*.: *Religious Coping and Depression Among Elderly, Hospitalized Medically Ill Men.* In: American Journal of Psychiatry (1992) Vol. 149, p. 1693-1700.
19. Kristofferzon, M.L., Lofmark, R., Carlsson, M.: *Myocardial infarction: gender differences in coping and social support. Integrative Literature reviews and meta-analyses.* In: Journal of Advanced Nursing **44** (2003) No. 4, p. 360-374.
20. Levine, J., Warrenburg, S., *et al*.: *The Role of Denial in Recovery from Coronary Heart Disease*. In: Psychosomatic Medicine **49** (1987) No. 2, p. 109-117.
21. McCrae, R.R.: *Age Differences and Changes in the Use of Coping Mechanisms.* In: Journal of Gerontology **44** (1989) No. 6, p. 161-169.
22. Miller, S.M., Brody, D.S., Summerton, J.: *Styles of coping with threat: implications for health.* In: Journal of Personality and Social Psychology (1988) Vol. 54, p. 142–148.
23. Murberg, T.A., Furze, G., Bru, E.: *Avoidance coping styles predict mortality among patients with congestive heart failure: a 6-year*

follow-up study. In: Personality and Individual Differences **36** (2004) No. 4, p. 757-766.
24. Ptacek, J.T., Smith, R.E., Dodge, K.L.: *Gender Differences in Coping with Stress: When Stressor and Appraisals Do Not Differ.* In: Personality and Social Psychology Bulletin **20** (1994) No. 4, p. 421-430.
25. Rector, T.S., Ksa, C.J.: *Patients self-assessment of their congestive heart failure: Content, reliability and validity of a new measure. The Minnesota Living with Heart Failure.* In: American Heart Journal (1992) Vol. 124, p. 107-117.
26. Spielberger, C.D., Gorusch, R.L., Lushene, L.E: *STAI manual for the state-trait anxiety inventory.* Palo Alto. Consulting Psychologists Press, 1970.
27. Spielberger, C.D.: *State-trait anxiety inventory for adults. Sampler set, manual, test, scoring key*. Palo Alto. Consulting Psychologists Press, 1983.
28. Strawbridge, W., Shema, S., *et al*.: *Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships.* In: Ann Behav Med. (2005) Vol. 46, p. 51-67.
29. Tamres, L.K., Janicki, D., Helgeson, V.S.: *Sex Differences in Coping Behavior: A Meta-Analytic Review and an Examination of Relative Coping.* In: Personality and Social Psychology Review **6** (2002) No. 1, p. 2-30.
30. Tiener, E., Oishi, S., Lucas, R.E.: *Personality, Culture, and Subjective Well-Being: Emotional and Cognitive Evaluations of Life.* In: Annual Review of Psychology (2003) Vol. 54, p. 403-425.