

An investigation of coping styles of hemodialysis patients

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ABSTRACT

Background: Hemodialysis patients are exposed to different stressful factors and have to use coping strategies as supportive processes. The goal of the present study is to investigate coping styles of hemodialysis patients.

Materials and Methods: This is a descriptive analytical study conducted on 96 patients referring to hemodialysis centers affiliated to Isfahan University of Medical Sciences in 2011. The data, collected by a questionnaire including two sections of demographic characteristics and patients' coping with the disease, were analyzed by parametric and non-parametric statistical tests.

Results: Patients used emotion focused coping strategies more (mean = 20.07, SD = 4.39) to adapt with the disease compared to problem focused coping strategies (mean = 14.65, SD = 5.08). There was a significant association in coping ($P = 0.027$) and emotion focused dimension ($P = 0.008$) in various ages, but there was no significant association in problem focused dimension ($P = 0.134$).

Conclusion: Since most of the hemodialysis patients use emotion focused coping styles, it is suggested to consider educational programs on application of problem focused coping styles for these patients in order to decrease the pressures of the disease and treatment, and to promote their mental health, quality of life and efficiency.

Key words: Coping, hemodialysis, Iran, renal disease

INTRODUCTION

Chronic and life threatening disease are among stressful factors in human.^[1] The length of the disease, the period of treatment, hospitalization and treatment costs, mental status and social damages as a result of chronic diseases influence the family,^[2] personal identity, psychosocial dimensions,^[3] emotional balance, self-content, merit and efficiency, social interactions and inter personal relations. The effect is so that the patients need to adapt with the disease and its complications^[4] as the resulted stress these patients tolerate affect their quality of life and mortality.^[5-7]

In fact, adaptive actions help the patients with chronic diseases to cope with existing concerns in order to reach an acceptable level of health and physical, mental and social function.^[8]

One of the chronic and life threatening diseases that 2-3% of the people around the world are involved in is chronic renal

failure.^[9] This disease is a pathological process with frequent causes leading to an irreversible reduction in kidneys function which results in ESRD, so that these patient should undergo renal replacement therapies (hemodialysis, peritoneal dialysis and kidney transplantation) for the rest of their life to prevent uremia and its complications.^[10,11] Hemodialysis is the most common treatment among these treatments in Iran and all over the world.^[12] Not only ESRD disorders but the complications of hemodialysis make the patients' life so hard, and result in a reduction in their quality of life.^[13-15] It is so that these patients need to adapt with the resulted conditions to enhance their quality of life despite being involved in the disorders of the disease and its treatment since the goal of replacement therapies is not only to make their life longer but to promote their quality of life as well. High ratio of depression, anxiety,^[16] sleep and marital relationship disorders^[17-21] and high statistics of suicide in these patients^[17-21] show the necessity of helping these patients to be coordinated with the changes made by the disease and its treatment.^[22] Application of coping methods in chronic diseases results in reduction of anxiety and patients' concerns of the disease.^[23] Meanwhile, the hemodialysis patients, like all other chronic patients and even sometimes more than other patients, are exposed to stress and use coping strategies as a supportive process.^[9] Based on evidences, these patients adopt various methods to cope with the stresses of the disease and treatment procedures. The manner of application in each of these methods depends on personal experiences, social support system, personal beliefs and the access of these support resources.^[24,25]

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Coping strategies are a collection of cognitive and behavioral personal struggles adopted to interpret, comment and modify stressful situations and result in the suffer relief of these situations. Two main strategies are emotion focused strategies including all attempts to regulate emotional outcomes of the stressful events and make an emotional balance through emotions control and problem focused coping strategies that include self-constructive behavior in relation with stressful situations and try to detect or change the source of stress.^[26,27]

Although both strategies bring about a reduction in stress, studies showed that those individuals who use emotion focused coping strategies have lower psycho cognitive adaptation^[9,28] while problem focused coping strategies is seen among those with appropriate mental health and social adaptation.^[29] Therefore, balanced logical and mature individuals use problem focused coping strategies more, when faced with stress, but sensitive immature and not balanced individuals usually use emotion focused coping strategies.^[30]

Since the selection of appropriate coping strategies against mental pressures can reduce the amount of pressure the individuals' tolerate,^[31] and the goal of care and treatment of the patients with chronic diseases is to help them adapt with the disease and its outcomes, nurses' awareness concerning coping strategies used by the patients and their related effective factors can help them program and give assistive nursing care for patients' adaptation.^[22] This study was conducted to investigate coping strategies among men and women undergoing hemodialysis.

MATERIALS AND METHODS

This is a descriptive analytical study conducted in Isfahan, Iran in 2011. The qualified patients (age over 30 years, at least three months of hemodialysis, Iranian nationality and Persian speaking) were selected by census sampling from hemodialysis centers affiliated to Isfahan University of Medical Sciences. The patients, being hospitalized due to acute problems and referred for hemodialysis or those who had recently (past three months) an emotional crisis (divorce or a relative's death), were left out of the study. Finally, 96 out of 110 qualified patients entered the study.

The data in the present study were collected by a questionnaire containing two sections: First section included demographic characteristics, and the seconds was about coping with the disease. Billings and Moth Coping Strategies Questionnaire including 19 questions was employed to investigate coping strategies.^[32] In this questionnaire, two coping strategies of problem focused (eight questions) and emotion focused (11 questions) are measured. The

questions were four point questions and were scored 0-3 based on the subjects' choice of always = 3, often = 2, sometimes = 1 and never = 0. The scores of the questionnaire ranged 0-57 (negative questions were scored inversely). The reliability of Billings and Month coping questionnaire had been calculated by Pourshahbaz through the split method with use of Spearman- Brown formula with alpha of 78%.^[33] The data were collected by questionnaires after complete explanation of the research goal to the subjects and obtaining their informed consent. In case of the subjects who were not able to write, the questions were asked from the subjects in privacy and were precisely ticked in the questionnaire with no change.

Descriptive statistical tests (mean, SD) were employed to investigate coping strategies, and analytical and parametric and non-parametric statistical tests (Pearson correlation, spearman and *t*-test) were adopted to investigate the association between coping strategies and demographic characteristics.

RESULTS

The results showed that 40.2% of the subjects were at 59-78 years of age and 57.3% were male. With regard to level of education, most of the subjects had primary school education (28.4%). About 12.6% were single and 87.4% were married. Most of the subjects were jobless (84%) and 50% had medical history of other diseases such as lupus erythematosus, hypertension, cardiovascular and pulmonary diseases and diabetes in addition to their renal disease and treatment of hemodialysis. In the present study, the findings showed that the subjects used emotion focused coping strategies (Mean = 20.07, SD = 4.39) [Table 1] and there was no significant difference among male and female subjects concerning mean total scores of coping (total coping styles) ($P = 0.19$), problem focused dimension ($P = 0.10$) and emotion focused dimension ($P = 0.40$). There was also no significant association in the level of coping ($P = 0.23$), problem focused dimension ($P = 0.09$) and emotion focused dimension ($P = 0.43$) based on marital status.

There was an inverse significant association between the number of the children and score of coping, emotion focused and problem focused dimensions so that with higher number of the children, coping ($P = 0.000$),

Table 1: Mean score of coping and its dimensions

Coping responses	Mean	SD
Coping score	34.71	8.37
Emotion- focused score	20.07	4.39
Problem-focused score	14.65	5.08

and use of emotion focused ($P = 0.000$) and problem focused ($P = 0.021$) coping strategies would decrease. The findings of the present study showed that there was an inverse significant association coping ($P = 0.027$) and emotion focused dimension ($P = 0.008$) in different ages, but there was no significant association in problem focused dimension ($P = 0.134$) [Table 2].

Based on Spearman test, there was a significant association between education and coping score ($P = 0.000$), emotion focused ($P = 0.000$) and problem focused ($P = 0.029$) dimensions. So that higher education would increase coping and use of emotion focused and problem focused coping strategies [Table 3].

The obtained results showed that there was no significant difference in the level of coping ($P = 0.495$), problem focused ($P = 0.481$) and emotion focused dimensions ($P = 0.469$) based on the number of hospitalizations among the patients.

The findings also showed that among the patients with medical history of other diseases, there was no significant difference between coping score ($P = 0.38$), and its dimensions: Emotion focused ($P = 0.81$) and problem focused ($P = 0.21$).

DISCUSSION

In the present study, most of the patients used emotion – focused coping styles. Other similar studies are consistent with the obtained findings of the present study and showed that most of the patients undergoing peritoneal dialysis used emotion focused methods.^[34] Meanwhile, some researchers believe that chronic patients use problem focused methods more.^[35,36] They argue that when these patients are faced with threatening conditions to cope with, they take strenuous actions. This latter finding is not consistent with the results of the present study.

One of the reasons for the inconsistency between the obtained results and those of other researches is the difference in stressful events. The studies on the association between stressful events and coping among hemodialysis patients showed that selection of a coping strategy by the individuals depends on the type of stressful event.^[37] In

addition, racial differences of the studied subjects may be one of the possible reasons for the inconsistency between the obtained results with the former studies since the results of some studies show that various races use different coping methods.^[38]

The findings of the present study showed that there was no significant difference in the level of coping and coping styles in men and women undergoing hemodialysis. Parsian (2007) reported no difference in coping of men and women, which is consistent with the present study.^[39] Meanwhile Yeh (2007) also showed that men use problem focused method more while women use emotion focused method.^[37]

The findings showed although there was an inverse significant association in coping ($P = 0.027$) and emotion focused dimension ($P = 0.008$) in different ages, there was no significant association in problem focused dimension ($P = 0.134$). Yeh (2007) reported an inverse significant association between age and coping strategies, in hemodialysis patients, which concurs with the findings of the present study.^[37]

Spearman test showed a significant association between education level and score of coping ($P = 0.000$) and emotion focused ($P = 0.000$) and problem focused ($P = 0.029$) dimensions so that a higher education level increased spiritual health and coping and use of emotion focused and problem focused coping strategies. Former studies also reported a direct association between coping and education level.^[40,41]

CONCLUSION

The present study showed that most of the hemodialysis patients use emotion focused coping styles. Therefore, it is suggested to consider educational programs on application of problem focused coping styles for hemodialysis patients in order to decrease the pressures of the disease and treatment, and to promote their mental health, quality of life and efficiency.

On the other hand, the obtained results showed a direct

Table 2: Pearson correlation coefficients between score of coping and its dimensions, age, number of children and number of hospitalizations

Variables	Age		Number of children		Number of hospitalizations	
	r	P value	r	P value	r	P value
Score of coping	-0.213	0.27	-0.328	0.001	-0.001	0.495
Score of emotion-focused	-0.264	0.008	-0.383	0.000	-0.008	0.469
Score of problem-focused	-0.124	0.134	-0.211	0.21	-0.005	0.481

Table 3: Spearman correlation coefficients between education and score of coping and its dimension

Variables	Education	
	r	P value
Score of coping	0.334	0.000
Score of emotion-focused	0.385	0.000
Score of problem-focused	0.195	0.029

association between coping and education. There was also a significant association between age and coping so that the subjects with higher ages had lower coping. Therefore, the elder patients or those with lower education should be supported more and as coping strategies are the skills which are attained under influence of education and experience and are somehow changeable, education of coping strategies seem effective in this issue.

All in all, helping the patients to adapt with the disease and select an appropriate coping style is an important issue since the chronic patients should cope with the existing concerns in order to access an acceptable level of health and physical, mental and social function.

ACKNOWLEDGMENT

We thank the study participants for helping us undertake the study and Isfahan University of medical science for financial support.

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How to cite this article: Dehkordi LM, Shahgholian N. An investigation of coping styles of hemodialysis patients. *Iranian J Nursing Midwifery Res* 2013;18:42-6.

Source of Support: Isfahan University of medical sciences.

Conflict of Interest: None.