

The Relationship between Resilience and Perceived Social Support with Hope in Hemodialysis Patients: A Cross-sectional Study

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ABSTRACT

Introduction: Hemodialysis is one of the most common treatments for renal patients. Despite the hemodialysis effect, these patients face a variety of physical and mental stressors. Therefore, the purpose of this study was to determine the relationship between resilience and perceived social support with hope in hemodialysis patients referred to a dialysis center in Shoushtar.

Materials and Methods: The present study was an analytical cross-sectional study on 87 hemodialysis patients referred to the dialysis center of the Khatamolanbia Hospital in Shoushtar. Patients were selected using the convenience sampling method. The data gathering tools in this study included demographic information form, Herth Hope Index (HHI), Conner-Davidson Resilience Scale (CD-RIS) and Multidimensional Scale of Perceived Social Support (MSPSS). The data were analyzed using descriptive statistics (mean and standard deviation) as well as the Mann-Whitney, Kruskal-Wallis, Spearman correlation coefficient and linear regression tests in SPSS version 16.

Results: The results showed that the mean age of the patients was 54.55 ± 17.12 year. Moreover, there was a direct and significant relationship between perceived social support ($r=0.656, <0.001$) and resilience ($r=0.501, p<0.001$) with hope.

Conclusion: Authors suggest that health care providers increase life expectancy among these patients with hemodialysis using the necessary training in the resilience and social protection of patients and their families.

Key words: Resilience, Perceived social support, Hope, Dialysis

HOW TO CITE THIS ARTICLE: Ali Hatami, Zahra Khalvati Ghalati, Mohammad Rasouli Badrani, Azam Jahangirimehr, Akram Hemmatipour, The Relationship between Resilience and Perceived Social Support with Hope in Hemodialysis Patients: A Cross-sectional Study, J Res Med Dent Sci, 2019, 7(3): 14-20

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Received: 15/04/2019

Accepted: 10/05/2019

INTRODUCTION

Chronic renal failure (CRF) is one of the major health problems in the world that reduces kidney function for three months or more [1]. The progression of CRF can be end stage renal disease, in which kidney function reaches about 10% to 15% of its normal capacity [2]. In the world, there are about 2786,000 patients with end stage renal disease [3]. According to the latest data from the Iranian Association for the Protection of Iranian Renal Patients, out of every 1 million people, 75 are afflicted with CRF, of which 29,500 are undergoing hemodialysis treatment [4]. Hemodialysis is one of the most common treatments for renal patients, which, despite its therapeutic effect, confronts patients with various physical and mental stressors [5]. Among the important psychological

problems for these patients are anxiety and depression, and in severe stages, hopelessness, denial and non-adherence to the continuation of treatment [6]. So, psychological disorders can deprive an individual of their independence [7]. Such dependence can cause impairment of individual performance and limitations in occupational, family and social tasks, and ultimately disruption of mental health and disappointment [6]. About 15%-30% of deaths in patients with CRF are due to lack of adherence to the treatment [8]. Hope, therefore, is recognized as one of the main components affecting the health status and ability of patients undergoing hemodialysis [9]. Hope is an indicator of the power of will, thinking and planning, which has been formed to realize goals and identify barriers [10]. Dahmardeh et al. regards hope as a highly positive emotional state, which derives from the sense of success resulting from the interrelationship between the agent and paths to achieve goals [11]. In fact, hope as one of the main sources of reconciliation enables patients to keep a completely open mind to improve their suffering

[12]. On this basis, at advanced stages of the disease, hopeful people focus more on the problem and make it more cohesive [13]. Rahimpour et al. showed that increased hope in hemodialysis patients reduced their stress, anxiety and depression [14]. Chronic diseases, in addition to creating crises in one's life, cause disruption of family dynamics [15]. Physiological and psychological needs in these patients are different from those in healthy people, which are considered a part of coping processes to find a way to meet these needs [16]. Recently, health researchers have realized probable associations between resilience with mental and physical illnesses that are of high importance [17]. Resilience refers to the dynamic process of positive adaptation to unpleasant experiences in life, which leads to compromise when dealing with stressful situations [18]. Resilience can increase social support by ensuring coping ability, self-esteem, emotional stability and personal characteristics in individuals [19]. Newton-John et al. in their study claimed that individuals with high resilience exhibited a lower level of avoidance and coping with problems related to their illness [20]. Consequently, adaptation to chronic diseases occurs faster in people who have facilitators such as resilience, ability to solve problems, hope, spirituality, and social support [16]. Hemodialysis patients, due to chronic conditions, usually suffer from problems such as a decrease in the quality of relationships with their family and friends, which requires more social support in these patients [21]. Social support is defined as an affective-coping mechanism that refers to the feeling of being affiliated with and [22]. The perception and attitude of patients about received support are more important than receiving it, because it can increase the level of self-care and positive impact on the physical, psychological and social status of the individual [23]. As the level of social support increases in hemodialysis patients, these patients feel more satisfied with their life and can cope with problems that cause decreased self-esteem and loneliness in them [24]. A research by Baghaie et al. indicated that the low quality of life of renal patients was associated with control factors, such as increased need for care, treatment and social support interventions [25]. Considering the necessity and importance of the two concepts of resilience and social protection in hemodialysis patients and their effect on the daily life of these patients, we aimed to determine the relationship between resilience and perceived social support with hope in hemodialysis patients referred to a dialysis center in Shoushtar.

MATERIALS AND METHODS

The present study was an analytical-cross sectional study conducted in 2018 on hemodialysis patients referred to a dialysis center in Shoushtar. Patients referred to the dialysis center were selected using the convenience sampling method and according to inclusion criteria. The criteria for entering the study included a willingness to participate in the study and medical records at the dialysis center. Moreover, the criteria for exclusion from the study included incomplete questionnaires as well as

diagnosis of severe physical illness and severe cognitive impairment. Of the 92 patients referred to the dialysis center, five patients were excluded from the study due to incomplete completion of the questionnaires, and 87 subjects were enrolled in the study.

The data gathering tools in this study included demographic information form, Herth Hope Index (HHI), Conner-Davidson Resilience Scale (CD-RIS) and Multidimensional Scale of Perceived Social Support (MSPSS). The demographic information form included age, sex, marital status, educational level, occupation, place of residence, economic status, duration of illness, family history of the disease, and history of smoking. HHI was designed by Herth in 1990 with 12 items. Totally disagree on the Likert scale of 4 degrees (score 1) to totally agree (score 4). Items 3 and 6 are scored in reverse order. The overall score of this indicator varies from 48 to 12, and the highest score indicates the best hope status [26]. The validity and reliability of the present questionnaire were confirmed in study of Benzein et al. [27]. Moreover, Baljani et al. reported the reliability of this questionnaire based on Cronbach's alpha of 0.82 [28]. CD-RIS contains 25 items. The scoring method of this questionnaire is a 5-point Likert-type scale from a completely false (score 0) to a perfectly correct (score 4). The score range in this questionnaire is between 0-100 and its cutting point is 50. The individual score above 50 leads to a higher resilience rate in individuals [29]. Moreira et al. reported the reliability of this questionnaire using the Cronbach's alpha of 0.98 [30]. MSPSS was designed in 1988 with a 12-point scale. This scale consists of three dimensions of social support received by the family (items 3, 4, 8 and 11), friends (items 6, 7, 9 and 12) and others (items 1, 2, 5, and 10). Scoring in this questionnaire based on the 7-degree Likert scale ranges from extremely disagree (score 1) to very much agree (score 7). The range of scores on this scale is between 12-84; which is placed in three levels of low (score between 12-35), moderate (score between 36-59) and high (score between 60-84) perceived social support [1]. In their study, Zimet et al. reported the internal reliability of this questionnaire using Cronbach's alpha of 0.82 [31]. Moreover, Esmaeil et al. obtained a reliability of this scale using Cronbach's alpha of 89% [22]. The researcher referred to the dialysis center in Shoushtar after receiving the necessary written approvals from the research deputy of the Shoushtar University of Medical Sciences and making coordination with the dialysis center. Then, the researcher introduced himself and provided a brief explanation of the research goals, and after obtaining written informed consent from the patients, provided them with a questionnaire. Finally, the research samples were answered in the presence of the researcher. The data were analyzed using descriptive statistics (mean and standard deviation) as well as the Mann-Whitney, Kruskal-Wallis, Spearman correlation coefficient and linear regression tests in SPSS version 16.

RESULTS

The mean age of the patients was 54.55 ± 17.12 year. Among the 87 patients with hemodialysis, 57.5% were male, 71.3% were married and 80.5% were urban. Based on 41.4% of the patients with diploma, 41.3% had a history of disease for 7 years, 63.2% had no family history and 77% had no history of smoking. In addition, according to the job status, 35.6% were housekeepers, 28.7% were free, 3.4% were employees, 23% were retired and 9.2% were unemployed.

Table 1 show that the average total scores of perceived social support was 48.18 ± 12.48 , which indicates the average level of social support in them. Among the dimensions of perceived social support, most support was related to the degree of social support perceived by the family. In addition, the mean resilience scores (43.97 ± 13.47) and hope (32.27 ± 6.02) in these patients showed a low loss of life and high hope.

Table 1: Descriptive indexes of perceived social support, resilience and hope in hemodialysis patients studied

Variables	Minimum	Maximum	Mean	Standard Deviation
Perceived Social Support by Family	10	26	18.44	4.67
Perceived Social Support by Friends	5	24	13.51	4.67
Perceived Social Support by Others	9	23	16.83	4.06
Total Score of Perceived Social Support	26	69	48.18	12.48
Resilience	21	69	43.97	13.47
Hope	21	43	32.27	6.02

The spearman correlation coefficient test was used to examine the relationship between resilience and perceived social support. The results showed that there was a direct and significant relationship between perceived social support ($p < 0.001$) and resilience

($p < 0.001$) with hope. Among the dimensions of perceived social support, only the dimension of social support perceived by others was not significant with resilience ($p > 0.05$) (Table 2).

Table 2: Correlation matrix between perceived social support and its dimensions and resilience and hope in hemodialysis patients

Variables	Perceived Social Support by Family	Perceived Social Support by Friends	Perceived Social Support by Others	Total Score of Perceived Social Support	Resilience	Hope
Perceived Social Support by Family	1					
Perceived Social Support by Friends	0.690**	1				
Perceived Social Support by Others	0.686**	0.599**	1			
Total Score of Perceived Social Support	0.881**	0.807**	0.877**	1		
Resilience	0.380**	0.091	0.330*	0.378**	1	
Hope	0.526**	0.353**	0.451**	0.501**	0.656**	1

* Significant at the level of 0.05
** Significant at the level of 0.01

In order to investigate the role of each of the resilience and perceived social support variables in predicting the hope of hemodialysis patients, linear regression analysis was used whose results are shown in Table 3. The linear

regression model showed that resilience ($\beta = 0.024$, $p < 0.001$) and perceived social support by family ($\beta = 0.39$, $p < 0.001$) could predict 51% of changes in hope ($\beta = 43.86$, $p < 0.001$) ($r^2 = 0.51$).

Table 3: Linear regression results of resilience and perceived social support by family dimensions in predicting hope hemodialysis patients

Variables	B	Std. Error	β	t	Sig.
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Constant	14.419	2.06	-	6.999	0.001
Resilience	0.24	0.037	0.538	6.497	0.001
Perceived Social Support by Family	0.395	0.107	0.307	3.711	0.001

The linear regression model: Hope=14.49+0.24 (resilience)+0.295 (perceived social support by family) +Std. Error

and hope with demographic factors, the statistical tests were Mann-Whitney and Kruskal-Wallis (Table 4).

To determine the statistical relationship between perceived social support and its dimensions, resilience

Table 4: Comparison of perceived social support variables from family, friends, others, total score of perceived social support, resilience and hope based on demographic information

Variable	n	Perceived	Perceived	Perceived	Total perceived support	Resilience	Hope	Statistical test	
		Social Support by Family	Social Support by Friends	Social Support by Others					
		Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD	Mean ± SD		
Sex	Female	37	18.54 ± 4.34	13.21 ± 4.97	16.13 ± 4.57	47.62 ± 12.85	35.86 ± 12.14	30.24 ± 4.87	Mann Whitney test
	Man	50	18.38 ± 4.94	13.74 ± 4.52	17.36 ± 3.61	48.60 ± 12.31	49.98 ± 11.13	33.78 ± 6.38	
	p-value	0.024*	0.039**	0.329	0.002**	0.001**	0.006**		
Location	City	70	18.80 ± 4.58	14.11 ± 4.47	17.11 ± 3.75	49.25 ± 11.92	44.71 ± 13.23	32.37 ± 6.03	
	Village	17	17.01 ± 4.92	11.05 ± 4.94	15.70 ± 5.15	43.76 ± 14.10	40.94 ± 14.46	31.88 ± 6.13	
	p-value	0.219	0.026*	0.349	0.154	0.294	0.707		
Smoking	Yes	20	18.50 ± 5.35	11.75 ± 2.40	17.50 ± 2.13	47.65 ± 8.32	50.50 ± 14.32	31.50 ± 6.54	
	No	67	18.43 ± 4.49	14.04 ± 5.08	16.64 ± 4.48	48.34 ± 13.52	42.04 ± 12.68	32.50 ± 5.79	
	p-value	0.674	0.802	0.612	0.028*	0.672	0.075		
Family history of the disease	Yes	32	16.34 ± 4.97	11.75 ± 5.06	15.40 ± 4.10	43.37 ± 12.61	43.03 ± 10.96	30.81 ± 6.74	
	No	55	19.67 ± 4.05	14.54 ± 4.18	17.67 ± 3.84	50.98 ± 11.62	44.52 ± 14.81	33.12 ± 5.44	
	p-value	0.942	0.034*	0.689	0.946	0.015*	0.903		
Marital Status	Single	20	20.75 ± 3.66	16.20 ± 5.09	19.35 ± 2.41	56.30 ± 9.63	43.65 ± 13.63	30.12 ± 7.15	
	Married	62	17.79 ± 4.88	12.70 ± 4.44	16.40 ± 4.09	46.06 ± 12.61	44.53 ± 13.79	32.16 ± 5.85	
	Divorced	5	17.40 ± 2.70	12.80 ± 1.64	12.20 ± 3.34	42.02 ± 6.08	38.40 ± 8.67	30.80 ± 2.77	
	p-value	0.041*	p=0.013*	0.001**	0.001**	0.598	0.497		
Level of Education	<Diploma	41	18.51 ± 4.66	13.58 ± 4.84	16.36 ± 4.29	47.24 ± 13.18	45.41 ± 15.19	32.58 ± 6.46	
	Diploma	36	18.97 ± 4.91	13.91 ± 4.71	17.11 ± 4.10	49.88 ± 12.53	42.08 ± 11.49	32.05 ± 5.91	
	>Diploma	10	16.31 ± 3.43	11.80 ± 4.02	17.80 ± 2.89	45.90 ± 9.22	44.90 ± 13.08	31.80 ± 4.89	
	p-value	0.266	0.224	0.438	0.561	0.644	0.891		
Economic situation	Good	10	16.60 ± 4.43	9.70 ± 3.59	14.80 ± 3.15	38.10 ± 10.98	37.90 ± 12.43	31.10 ± 4.95	
	Medium	48	19.72 ± 5.14	14.48 ± 4.87	17.64 ± 3.62	51.35 ± 12.42	44.02 ± 14.09	31.79 ± 7.04	
	Weak	29	16.96 ± 3.19	13.72 ± 4.21	16.20 ± 4.75	46.41 ± 11.13	46.10 ± 12.54	33.48 ± 4.22	

	p-value	0.014*	0.011*	0.043*	0.004**	0.212	0.508
Housewife	31	18.51 ± 4.57	13.29 ± 5.44	15.80 ± 4.93	47.29 ± 13/96	35.25 ± 25.56	29.58 ± 5.01
Free	25	15.64 ± 3.43	10.52 ± 1.04	15.96 ± 2.44	41.96 ± 4/56	46.36 ± 12.46	30.72 ± 5.96
Employee	3	26.04 ± 1.10	17.02 ± 1.21	20.11 ± 1.06	63.01 ± 1.13	58.66 ± 1.63	36.33 ± 0.57
Retired	20	20.55 ± 3.20	15.90 ± 4.50	19.05 ± 3.59	53.50 ± 13.46	49.45 ± 11.30	36.45 ± 4.45
Unemployed	8	18.87 ± 6.72	16.50 ± 4.62	16.87 ± 4.22	52.25 ± 13.42	51.12 ± 8.92	35.62 ± 7.19
Job	p-value	0.001*	0.751	0.631	0.713	0.001**	0.001**

* Significant at the level of 0.05

** Significant at the level of 0.01

The purpose of this study was to investigate the relationship between resilience and perceived social support with hope in hemodialysis patients referred to a dialysis center in Shoushtar in 2018. The results of this study indicated that most of the patients undergoing hemodialysis had a high hope. Orlandi et al. reported a high level of hope for most patients in a study on hemodialysis patients. This means that their findings are consistent with the present study [32]. However, this finding is not consistent with the study by Hejazi et al. [33] who found that most patients undergoing hemodialysis had a lower hope. The difference in results can be due to the difference in the quality of care, amount of social support received and economic situation in the research units of these two studies. In the present study, there was no significant relationship between the mean scores of the patients' hope and marital status. Meanwhile, in the study of Shakeri et al., the mean score of the morbidity of the elderly was higher than that of the non-spouse elderly, which is different from the results of this study [34]. In the study of Oztunc et al., literate patients with breast cancer had higher rates of hope than those with lower education levels [35]. This result is consistent with the present study, which showed a positive and significant relationship between marital status and hopefulness in the patients. The findings of this study also indicated that there was a significant relationship between perceived hope and social support and its dimensions in the patients. These results are closely aligned with the study of Pehlivan et al. conducted in Turkey [36]. In their study, they showed that higher levels of social support in patients led to lower feeling of disappointment. Moreover, the findings of this study showed that most of the hemodialysis patients had a high level of perceived social support. This is in line with the study of Esmaeil et al. [22] and Suwaileh et al. [37]. However, Cheraghi et al. [38] and Heo et al. [39] in their studies showed that perceived social support was at a low level; therefore, their findings do not match the results of our study. It can be stated that this difference is due to the marriage of most patients' undergoing hemodialysis. Scientific theories show that a spouse is the first source of support in individuals. Therefore, the presence of a spouse as an individual who increases the

feeling of love, solidarity and belonging to others can affect the quality of life, performance, and understanding of support. Moreover, the results of this study showed that among perceived social support dimensions, the perceived social support of the family was placed at a high level. These results are consistent with the study of Ahrari et al. [40]. The family appears to be one of the most important sources of social support among patients and thus is of particular importance. The findings also revealed that there was a significant statistical relationship between perceived social support and gender. Accordingly, men had a higher understanding of perceived social support than women. This is consistent with the study of Vázquez et al. [41]. Meanwhile, Mohebi et al. in their study showed that there was no significant statistical relationship between social support and gender [42]. Therefore, this is not consistent with the present study. It can be mentioned that reasons for this difference are different research population and higher number of samples compared to our study. The findings of this study showed that there was a significant relationship between perceived social support and marital status. In that way, married people had higher perceived social support. This conclusion is not consistent with the study by Al-Arabi [43] and Ahanchi et al. [44]. Empathy and integration between couples create strong links among them, acting as the primary source of social support in individuals. The results of our study also showed that there was a positive and significant relationship between hope and resilience in the patients. This is consistent with the study of Bahadori et al. who studied the relationship between hope and resilience with psychological well-being in students [45]. This is also consistent with the study of Sadooghi et al. [46]. In explaining this finding, it can be stated that greater degree of resilience as well as better coping with life's problems and stresses contribute to lower exposure to emotional disturbances and higher hope. For this reason, in a state of hopefulness, one can use creative forces to adapt to conditions, choose trustworthy behaviors, and feel better about life. In addition, the results of this study demonstrated that there was a significant relationship between perceived social support and resilience among the patients undergoing hemodialysis. This is in line with

the research by Rajeiyan *et al.* [47]. Social support reduces the impact of stressful situations in dealing with the disease, with the understanding that there are those who help someone when healing. In fact, perception makes patients less likely to consider the vulnerability of the stressor.

CONCLUSION

The findings of this study showed that there was a significant relationship between resilience and perceived social support with hope in hemodialysis patients. Since hope is one of the most important factors for effective adaptation to the disease, appropriate approaches should be sought to enhance hope in patients and achieve proper adaptation to CRF. Family support and spirited condition are among the most important factors that will not be taken without the acceptance of the disease. To this end, hope can be increased by increasing the sense of control over life, creating purpose and meaning in life, having a positive attitude and establishing warm and sincere relationships. Therefore, patients can be educated about chronic diseases and their families to boost their hope to improve their quality of life.

ETHICAL CONSIDERATIONS

This paper was the result of a research project by the first author of the article. This research project was approved by the Ethics Committee of Shoushtar University of Medical Sciences at No. Sh9708 and the Code of Ethics: IR.SHOUSHTAR.REC.1397.009.

ACKNOWLEDGMENT

Authors need to thank the vice-chancellor of research affairs of the Shoushtar University of Medical Sciences, the officials and staff of the Dialysis Center at the Khatamolanbia Hospital in Shoushtar and all patients in the study.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this manuscript.

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