

## Quality of life and social support in Hemodialysis patients

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### ABSTRACT

**Objective:** To determine the quality of life and social support of hemodialysis patients.

**Methodology:** This study sample consisted of 164 patients receiving hemodialysis. Data were collected with a personal information form, the Medical Outcomes Study 36-item Short Form and the Multidimensional Scale of Perceived Social Support questionnaire.

**Results:** It was found that the quality of life of hemodialysis patients is low. Women and married patients had high PCS and retired patients had lower MCS. Married patients had high a specific person support and retired patients had high friends support.

**Conclusion:** Hemodialysis patients have a low QoL and there is a close relationship between quality of life and social support. Enabling hemodialysis patients to identify and make effective use of the sources of social support will help them to increase their quality of life.

**KEY WORDS:** Hemodialysis, Quality of Life, Social Support.

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### INTRODUCTION

End-stage renal disease (ESRD) is a life-threatening condition and survival can be maintained only with renal replacement therapy. Treatment options for the disease often involve either long-term dialysis or kidney transplantation.<sup>1</sup> Furthermore, the complications of ESRD, its treatment and co-existing diseases have been found to have a significant impact on the physical health of patients. It is well documented that the health status of the renal

patients population is worse than that of the general healthy population; for this reason, the assessment of quality of life (HRQOL) of ESRD patients has received considerable attention.<sup>2-4</sup> People with illnesses have different coping responses and varied coping resources, such as social support.<sup>5</sup>

Social support is defined as all kinds of financial and spiritual support that an individual receives from one's close environment.<sup>6</sup> Several studies have demonstrated that social support is associated with improved outcomes and improved survival in several chronic illnesses, including cancer and end stage renal disease.<sup>7,8</sup> It was reported that social support have a significant effect on general well being of dialysis patients and their adaptation to treatment.<sup>9</sup>

This study was carried out in order to determine the quality of life and the social support status of hemodialysis patients.

### METHODOLOGY

This study was conducted with 164 patients receiving hemodialysis treatment in a university hospital's hemodialysis unit. Permission to conduct the study was received from hospital administration. After patients were given information about the

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study, their verbal consent to participate was received. All study participants were adult patients 18 years and older who were literate, were receiving hemodialysis treatment for at least the previous six months, were being dialyzed three days per week, who had no communication problem or emotional problem. Data were collected with a Personal Information Form (PIF), the Medical Outcomes Study 36-item Short Form (SF-36) and Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire.

**The PIF:** This form was included questions about the patients' age, gender, marital status, educational level, occupation, family type, and duration of hemodialysis treatment.

**The SF-36:** This instrument has been used extensively in populations of patients with renal disease.<sup>10</sup> The validity and reliability study for the Turkish version of the instrument was conducted in 1995 by Pinar.<sup>11</sup> The SF-36 is divided in two domains: PCS and MCS. The PCS and MCS scores are standardized to a mean (SD) of 50, with scores above and below 50 indicating above and below average functioning, respectively. Global SF-36, PCS and MCS scores can all vary between 0 and 100. A high score indicates a better quality of life.<sup>10-12</sup>

**The MSPSS:** The validity and reliability study for the Turkish version of the instrument was conducted in 1995 by Eker and Arkar. The scale consists of 12 items, with 4 items assessing each source of perceived social support, generating the subscales of family, friends, and specific person support. A higher score reflects a higher level of perceived social support for that item.<sup>13</sup>

**Data analysis:** Descriptive analysis was used to present demographic data. Pearson correlation analysis was used to determine relationships between quality of life, social support and duration of hemodialysis. The t test and ANOVA were used in the evaluation of quality of life and social support according to sociodemographic characteristics.

## RESULTS

A total of 164 patients were included in this study. It was found that 51.2% of the patients were male; 79.3% were married; 43.9% were primary school graduates; 31.7% were housewives; 72.6% lived within a nuclear family; and 40.2% of patients had hemodialysis periods of four years and over. It was found that there was a statistically significant positive correlation between social support and quality of life ( $r=.601$ ,  $p=.000$ ).

It was found that there was a statistically significant difference between the quality of life scores of the patients depending on sex, marital status, occupation and family type ( $p<0.05$ ). The PCS levels of the married and female patients were high, the MCS levels of the retired patients are low, and the total quality of life scores of the patients living in an extended family are low (Table-I).

It was found that there was a significant difference ( $p<0.05$ ) between the social support scores of the patients according to marital status, education, occupation and family type. Married patients had high a specific person support and global social support and retired patients had high friends support. Friends support levels in literate patients and friends support levels, total social support levels in patients living in an extended family are low (Table-II).

Table-I: Patients' quality of life scores according to personal characteristics (n=164).

Characteristics	PCS	MCS	Global SF-36
	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
<i>Sex</i>			
Female	54.36 $\pm$ 4.61	47.66 $\pm$ 4.56	49.63 $\pm$ 6.52
Male	52.56 $\pm$ 5.00	48.30 $\pm$ 5.83	51.23 $\pm$ 6.35
	t= 2.398 p=0.018	t=0.774 p=0.440	t= 1.592 p=0.113
<i>Marital status</i>			
Single	51.65 $\pm$ 6.15	47.53 $\pm$ 5.11	51.35 $\pm$ 6.07
Married	53.91 $\pm$ 4.40	48.11 $\pm$ 5.29	50.21 $\pm$ 6.57
	t=2.438 p=0.016	t= 0.571 p=0.569	t=0.919 p=0.360
<i>Education</i>			
Literate	53.56 $\pm$ 5.05	48.66 $\pm$ 4.89	48.95 $\pm$ 6.77
Primary school	53.64 $\pm$ 4.33	47.60 $\pm$ 5.02	51.19 $\pm$ 5.94
High school	52.79 $\pm$ 5.73	47.64 $\pm$ 6.29	51.48 $\pm$ 6.70
	F= 0.368 p=0.693	F= 0.756 p=0.471	F=2.533 p=0.083
<i>Occupation</i>			
Housewife	54.17 $\pm$ 5.16	47.38 $\pm$ 5.16	50.81 $\pm$ 6.50
Civil servant	53.29 $\pm$ 4.65	49.04 $\pm$ 4.29	50.24 $\pm$ 6.98
Retired	53.43 $\pm$ 3.71	45.80 $\pm$ 6.74	50.03 $\pm$ 4.81
Freelance	52.52 $\pm$ 5.68	49.36 $\pm$ 4.50	50.55 $\pm$ 7.14
	F=0.797 p=0.497	F= 3.538 p=0.016	F= 4.740 p=0.953
<i>Family type</i>			
Nuclear	53.39 $\pm$ 5.09	48.03 $\pm$ 5.39	51.07 $\pm$ 6.48
Extended	53.58 $\pm$ 4.34	47.87 $\pm$ 4.88	48.80 $\pm$ 6.21
	t=0.223 p=0.824	t= 0.181 p=0.856	t=2.021 p=0.045
<i>Hemodialysis duration</i>			
0-1 years	53.87 $\pm$ 5.01	46.81 $\pm$ 5.36	51.19 $\pm$ 6.74
2-3 years	53.53 $\pm$ 5.24	48.28 $\pm$ 4.49	49.63 $\pm$ 6.81
4 + years	53.24 $\pm$ 4.71	48.26 $\pm$ 5.53	50.58 $\pm$ 6.23
	F=0.199 p=0.820	F=0.968 p=0.382	F=0.566 p=0.569

Table-II: Patients' social support scores according to personal characteristics (n=164).

Characteristics	Family support Mean ± SD	Friends support Mean ± SD	Specific person support Mean ± SD	Global social support Mean ± SD
<i>Sex</i>				
Female	19.94 ± 6.19	16.35 ± 7.27	19.04 ± 6.81	55.33 ± 17.56
Male	20.43 ± 6.76	16.98 ± 7.25	18.62 ± 7.70	56.14 ± 17.34
	t=0.119 p=0.905	t=0.278 p=0.781	t=0.394 p=0.694	t=0.079 p=0.937
<i>Marital status</i>				
Single	19.74 ± 6.24	16.00 ± 7.12	16.88 ± 7.26	52.88 ± 16.89
Married	20.31 ± 6.55	16.85 ± 7.29	19.33 ± 7.20	56.50 ± 17.52
	t=1.552 p=0.123	t=0.892 p=0.374	t= 2.907 p=0.004	t=2.189 p=0.030
<i>Education</i>				
No formal education	19.81 ± 6.47	14.63 ± 6.99	18.97 ± 6.69	53.42 ± 16.43
Primary school	20.74 ± 6.52	18.33 ± 7.26	19.07 ± 7.65	57.79 ± 18.34
High school	19.67 ± 6.46	16.70 ± 6.93	18.03 ± 7.53	55.45 ± 16.95
	F= 0.461 p=0.632	F=4.419 p=0.014	F= 0.247 p=0.781	F= 1.027 p=0.360
<i>Occupation</i>				
Housewife	20.71 ± 6.47	16.79 ± 7.67	19.25 ± 7.02	56.75 ± 17.99
Civil servant	19.55 ± 5.66	14.55 ± 5.71	18.84 ± 6.22	53.67 ± 14.34
Retired	21.23 ± 6.31	20.30 ± 7.39	19.00 ± 8.48	59.66 ± 19.82
Freelance	19.36 ± 7.72	16.33 ± 7.46	17.97 ± 8.10	53.69 ± 18.30
	F= 0.707 p=0.549	F=4.163 p=0.007	F= 0.215 p=0.886	F=0.948 p=0.419
<i>Family type</i>				
Nuclear	20.46 ± 6.43	17.46 ± 7.34	19.41 ± 7.43	57.42 ± 17.23
Extended	19.47 ± 6.59	14.58 ± 6.62	17.27 ± 6.61	51.31 ± 17.26
	t=0.878 p=0.381	t= 2.304 p=0.022	t= 1.697 p=0.092	t=2.027 p=0.044
<i>Hemodialysis duration</i>				
0-1 years	20.74 ± 6.37	17.29 ± 7.16	20.00 ± 6.62	58.06 ± 18.44
2-3 years	19.28 ± 6.97	15.49 ± 7.15	18.19 ± 8.15	52.95 ± 19.06
4 + years	20.43 ± 6.29	17.02 ± 7.33	18.72 ± 7.05	56.28 ± 16.20
	F=0.599 p=0.551	F=0.789 p=0.456	F=0.578 p=0.562	F=0.871 p=0.421

## DISCUSSION

Dialysis treatment causes a major life change for patients. In this study, the quality of life of the patients was found to be low. Several studies have investigated quality of life as an outcome of treatment in ESRD and found that patients receiving dialysis treatment had a lower quality of life than people in the general population.<sup>14,15</sup> The studies showed that the quality of life of hemodialysis patients is low<sup>16</sup> and their quality of life is even lower than that of peritoneal dialysis patients and patients who had undergone kidney transplantation.<sup>14,15</sup> The findings of this study are consistent with these results.

The PCS scores of the female patients were high. Previous studies that examined the quality of life of hemodialysis patients according to sex have reported different results. Acaray and Pinar found no statistically significant sex-related difference between the quality of life of male and female hemodialysis patients, but the quality of life scores of females were higher than those of males.<sup>12</sup> Tel found that the PCS and the global quality of life were low in females,<sup>16</sup>

Suet-Ching found that the quality of life of females was worse than that of males,<sup>17</sup> and Yang et al. found that the quality of life scores of males were higher than those of females.<sup>18</sup>

In this study, it was a statistically significant positive relationship between social support and quality of life (p<001). Social support has a beneficial role on physical and psychological wellbeing.<sup>9</sup> Patel et al. found that as social support increases in hemodialysis patients, the quality of life also increases.<sup>7</sup> The finding of this study is consistent with these results. The PCS quality of life scores, the support from a special person and the total social support scores of married patients are high. Social support and marital relationships can be a source of strength and consolation, however, isolation and marital discord might worsen life for patients with chronic kidney disease.<sup>19</sup> The global quality of life, the support from friends and the total social support scores of the patients living in an extended family were low (Table I,II). Previous studies that examined the quality of life scores of hemodialysis patients according to their family types have reported varied

findings. Tel found that the physical and the global quality of life of patients living in an extended family was low.<sup>16</sup> Acaray and Pinar found that global quality of life was higher in an extended family.<sup>12</sup> The MCS of the retired patients was low and their friend support scores were high. As individuals adopt a less active lifestyle due to retirement, they turn towards friends for support. Education plays an important role in one's ability to expressing oneself and in interaction with one's environment. It is thought that this may explain the finding that the level of support from friends is low among literate patients.

In this, no statistically significant difference was found between the quality of life and the social support scores of patients according to their hemodialysis periods. In some studies, it was found that there is no statistically significant relationship between the dialysis period and patients' quality of life.<sup>16,18</sup> In contrast, Acaray and Pinar found that as the patients' dialysis period increases, a significant decrease occurs in all fields of quality of life.<sup>12</sup>

### CONCLUSION

Despite the restrictions caused by hemodialysis treatment, increasing patients' quality of life and enabling them to adequately make use of sources of social support are important factors in management of the disease. Therefore, while providing medical care for hemodialysis patients, nephrologists should evaluate whether or not the patient's quality of life and sources of social support are sufficient. Increasing hemodialysis patients' awareness and effective use of sources of social support may help them to increase their quality of life and to adapt to hemodialysis treatment.

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