# Psychosocial Adjustment and Social Support in Hemodialysis Patients

## Hemodiyaliz Hastalarında Psikososyal Uyum ve Sosyal Destek

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**ABSTRACT Objective:** The purpose of this study was to examine the relationship between psychosocial adjustment and perceived social support in patients receiving hemodialysis (HD) treatment for chronic renal failure. **Material and Methods:** The study design was descriptive-correlational. In three HD centres, the sample consisted of 134 patients receiving HD treatment, 49.3% of whom were female and mean age was 51 years. Psychosocial Adjustment to Illness Scale-Self Report (PAIS-SR) and Multidimensional Scale of Perceived Social Support (MSPSS) were used to data. **Results:** HD patients had mean total PAIS-SR score which was 49.70 (SD= 19.32), and most distress was reported on vocational environment, with sexual relationships and social environment. HD patients had mean total MSPSS score which was 68.94 (SD= 14.77). They had good levels of perceived social support as well as its domains including family, friend and a significant other's support. A significant correlation was found between psychosocial adjustment and perceived social support. Higher levels of perceived social support were associated with better psychosocial adjustment. In addition to, higher levels of perceived social support were associated with better PAIS-SR's domains including health care orientation, extended family relationships, social environment and psychological status. **Conclusion:** These findings show that social support, and especially family and friend supports are very important factors for psychosocial adjustment.

**Key Words:** Social support; renal dialysis; adjustment disorders

**ÖZET Amaç:** Bu çalışmanın amacı; hemodiyaliz (HD) tedavisi alan kronik böbrek yetmezliği olan hastalarda psikososyal uyum ile algılanan sosyal destek arasındaki ilişkiyi belirlemektir. **Gereç ve Yöntemler:** Çalışmanın şekli tanımlayıcı ve ilişkilendiricidir. Örneklemi, üç HD merkezinde tedavi gören %49.3'ü kadın, yaş ortalaması 51 yıl olan 134 HD hastası oluşturdu. Veri toplamak için Hastalığa Psikosoyal Uyum-Öz Bildirim Ölçeği (PAIS-SR) ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği (MSPSS) kullanıldı. **Bulgular:** HD hastalarının toplam PAIS-SR puanı 49.70 (SD= 19.32) olup, en çok iş ortamı, seksüel ilişkiler ve sosyal çevre ile ilgili sorunlar bildirildi. Toplam MSPSS puanı 68.94 (SD= 14.77) olup toplam MSPSS yanı sıra aile, arkadaş ve diğer özel kişilerin destekleri gibi alt boyutları da iyi düzeydeydi. Psikososyal uyum ile algılanan sosyal destek arasında anlamlı ilişki bulundu. Algılanan sosyal destek düzeyi ne kadar fazla ise psikososyal uyum da o kadar iyi olmaktadır. Ayrıca algılanan sosyal destek düzeyi ne kadar fazla ise PAIS-SR'nin alt boyutlarından sağlık bakımına uyum geniş aile ilişkileri, sosyal çevre ve psikolojik durum da o kadar iyi olmaktadır. **Sonuç:** Bu bulgular sosyal destek, özellikle aile ve arkadaş desteğinin psikososyal uyum için çok önemli faktörler olduğunu göstermektedir.

**Anahtar Kelimeler:** Sosyal destek; böbrek diyalizi; hastalığa uyum

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Chronic renal failure or end stage renal disease is a progressive, irreversible deterioration in renal function in which the body's ability to maintain metabolic and fluid and electrolyte balance fails, resulting

in uremia. There is no cure, but life can be prolonged with hemodialysis, peritoneal dialysis, however, kidney transplantation cures completely.[1] Epidemiology of end-stage renal disease (ESRD) and renal replacement therapy (RRT) are under continuous evolution in Turkey, as in the world. Number of the ESRD patients requiring RRT have increased at the end of 2003 years with respect to last years in Turkey. It was found that while incidence of ESRD patients was 118 per million populations (pmp), point prevalence of ESRD was 432 pmp.[2]

Patients with living hemodialysis will be adapting to chronic renal failure and its many psychosocial problems. Psychosocial problems include personal and social identities; cognitive, emotional, and moral developmental phases; family and marital developmental phase; and degree of resultant life threat.[3] Physiological-physical mode challenges in chronic renal failure may include anemia, painful joint, cardiovascular problems, dialysis site infections, and impairment of sexual desire. Patients with chronic renal failure may be confronted with multiple self-concept mode issues such as body-image distortions due to hemodialysis-access scarring, lowered self-esteem, and illness acceptance. Regarding the role-function mode, women with chronic renal failure may struggle to maintain their roles as workers, mothers, and wives.[4] Psychosocial problems occur due to lost role, life-style changes and psychological distress.

In hemodialysis patient population, psychosocial adjustment scores have been found as moderate.[5-7] Or fairly well.[4] Psychosocial adjustment to illness has been shown to be related to hemodialysis duration and ages of participants.[4] Social support has been identified as an important factor in adjustment.[3,8]

Social support is a person's perception that he/she is a member of a complex network of affection, mutual aid, and obligation. The perception of received and offered social support is uniformly associated with improved survival in the wide variety of illnesses in which it has been assessed.[9] Family support is one of the most important factors affecting how patients adapt to illness. A diagnosis of chronic illness challenges basic assumptions about the self and world, and successful adjustment requires restoration of these assumptions. The family provides ongoing support, participates in problem solving, and learns to provide necessary ongoing care.[10] Family support is associated with better psychological well-being, reduced stress or better emotional well-being. There have been several reports of the effect of social and family support on patients with dialysis therapy.[6,11] The quality of social support (helpfulness) provided by family and friends has been found to be positively related to psychological adjustment.[12]

Many studies show that hemodialysis patients have high level of social support scores.[13,14] It has been reported that social support is important lifelong and depression decreases.[11,13,15,16] Patients in hemodialysis are better in adjusting to illness in the presence of support from loved ones, support groups, and medical staff.[17]

A review of the literature suggests that hemodialysis patients live with this chronic illness and the associated stressors for extended periods of time, and constant adjustment and support is required. Research is needed to investigate relationships between social support and psychosocial adjustment to illness. The purpose of this study was to examine the relationship between psychosocial adjustment and perceived social support in patients receiving hemodialysis treatment for chronic renal failure.

## MATERIAL AND METHODS

The study design was descriptive-correlational. A sampling technique was used to recruit the hemodialysis patients from three dialysis centers, between January and June 2006. Of the 34 hemodialysis centres, we randomly selected three (10%) and asked for permission to enrol patients in our study. Three centres (University hospital, state hospital and private dialysis centre) agreed to participate.

Participants were selected according to the following criteria; had been on hemodialysis for more than six months; over 18 years and below 65

years, able to speak and read Turkish, and did not have communicational problems. Of 215 participants available to enter the longitudinal study, 81 did not meet inclusion criteria. The study participants were 134 hemodialysis patients

Participants were informed about the aim and nature of the study and said that they could withdraw from the study at any time. Participants were received the informed consent. Following informed consent, data were collected by the author through interview at participants' convenience during the first hour of the dialysis period to avoid fatigue, which usually follows hemodialysis.

Data was collected using a demographic data sheet, PAIS-SR and the MSPSS. The demographic data sheet consisted of information about participant's age, gender, education, marital status, employment status, and dialysis duration. Scales take about 30 minutes to complete.

The PAIS-SR was designed by Derogatis & Derogatis.[18] PAIS-SR has been used in order to gather information on patients' opinions about their own adjustment. PAIS-SR's 46 items consists of a multiple choice questionnaire which measures the impact of chronic illness in seven domains, including health care orientation, vocational environment, domestic environment, sexual relationships, extended family relationships, social environment, and psychological distress. All items were used from the original version PAIS-SR questionnaire. When summed over the individual domains, the total score reflects the individual's overall adjustment to illness. Each item is composed of four statements given on a four-point scale and scored from 0-"no disturbance", to 3 -"marked disturbance". PAIS-SR total score ranges from 0 to 138. Thus, a high score in a specific domain indicates poor psychosocial adjustment in that domain. The domain intercorrelation average has been found to be .28, and reliability coefficient alpha for patients range from .63 to .87.[18] In the present study, cronbach's alpha coefficient for the total PAIS-SR scale was .78, and subscale reliabilities ranged from. 71 to .79.

The MSPSS was developed by Zimet et al. and the validity and reliability of the Turkish version were tested by Eker et al.[19] The social support contains family, friend and significant other's support. This scale has 12 items and three domains namely family support, friend support and a significant other's support. Each item is rated on a seven-point Likert scale ranging from "very strongly disagree" (coded 1) to "very strongly agree" (coded 7). Total score ranges between 12 and 84, and higher scores indicate high social support. Eker reported that reliability alpha coefficient for scale domains ranged from a low .80 to a high .95.[19] In the presentthis study, coefficient alpha for the total MSPSS scale was .87, subscale of MSPSS reliabilities ranged from .85 to 86.

Data was analyzed by using a statistical program (SPSS version 11), and was presented as mean and percent. Spearman correlation coefficients were used to examine associations between continuous variables. A two-tailed p-value <.05 was considered statistically significant.

## RESULTS

The study participants were 134 hemodialysis patients, and 49.3% of them were female. Age ranged from 21 to 65 years with a mean of 51.07 (SD= 12.75) years. The patients of 77.6% were married and 22.4% were single (18 never married, 9 dyad mate and 3 divorced before the hemodialysis therapy). All participants were living with their family (partner, child or parents). The patients of 47.8% of them had primary education and 43.3% of them were retired. The mean dialysis duration was 4.92 (SD= 3.60) years.

The causes of renal disease were: chronic glomerulonephritis 35.8%, hypertensive nephropathy 23.9%, diabetic nephropathy 20.1%, chronic pyelonephritis 11.2%, amyloidosis 1.5% and other renal diseases 7.5%. The majority of participants attended hemodialysis for four hours, three times a week.

The mean total PAIS-SR score was 49.70 (SD= 19.32), (see Table 1). The lower PAIS-SR scores indicate better adjustment and higher scores indicate worse adjustment. Most distress was reported on vocational environment, with sexual relationships and social environment coming next. Least distress

**TABLE 1:** Multidimensional scale of perceived social support, psychosocial adjustment to illness scale-self report and their domains scores (n= 134).

| Variables | No. of items | Median | Mean ± SD | (min-max) |
|---|---|---|---|---|
| Total PAIS-SR score | 12 | 72.50 | 68.94 ±14.77 | (12.0 – 84.0) |
| Health care orientation | 8 | 8.00 | 8.14 ± 3.77 | (0.0 – 18.0) |
| Vocational environment | 6 | 9.00 | 8.80 ± 3.64 | (0.0 – 18.0) |
| Domestic environment | 8 | 6.00 | 7.19 ± 4.42 | (0.0 – 20.0) |
| Sexual relationships | 6 | 7.00 | 7.72 ± 5.18 | (0.0 – 18.0) |
| Extended family relationships | 5 | 3.00 | 3.34 ± 3.10 | (0.0 – 12.0) |
| Social environment | 6 | 9.00 | 8.15 ± 4.59 | (0.0 – 18.0) |
| Psychological distress | 7 | 6.00 | 6.36 ± 4.38 | (0.0 – 18.0) |
| Total MSPSS core | 46 | 49.00 | 49.70 ± 19.32 | (8.0 – 122.0) |
| Family support | 4 | 27.00 | 24.61 ± 5.26 | (4.0 – 28.0) |
| Significant other's support | 4 | 26.00 | 23.05 ± 6.77 | (4.0 – 28.0) |
| Friend support | 4 | 24.00 | 21.28 ± 7.28 | (4.0 – 28.0) |

SD: Standard deviation; PAIS-SR: Psychosocial adjustment to illness scale-self report; MSPSS: Multidimensional scale of perceived social support.

was reported on health care orientation, with domestic environment, extended family relationships and psychological status domains.

The mean total MSPSS score was 68.94 (SD= 14.77). All MSPSS domains including family, friend and a significant other's support were good levels, (see Table 1).

The correlation between the MSPSS scores and the PAIS-SR scores is summarized in Table 2. A significant negative correlation was found between total MSPSS score and total PAIS-SR score indicated that higher level of social support was associated with better psychosocial adjustment (Lower the PAIS-SR scores denote better adjustment). In addition to, significant negative correlations were found between total MSPSS score and the PAIS-SR domains, namely, health care orientation, extended family relationships, social environment and psychological status scores. No significant correlations were found between total MSPSS score and the PAIS-SR domains, namely, vocational environment, domestic environment and sexual relationship scores. Because negative correlations indicate positive relationships, a higher level of social support was associated with better health care orientation, extended family relationships, social environment and psychological status.

On the other hand, the MSPSS domain, namely family support score was negatively correlated with psychosocial adjustment, health care orientation, domestic environment, extended family relationships and psychological distress scores. however, The family support score was not correlated with vocational environment, sexual relationships and social environment scores. That is a higher family support was associated with better psychosocial adjustment, health care orientation, domestic environment, extended family relationships and psychological distress.

The MSPSS domain, namely friend support score was negatively correlated with psychosocial adjustment, health care orientation, extended family relationships, social environment and psychological distress scores; however, friend support score was not correlated with vocational environment, domestic environment and sexual relationships scores. That is, a higher family support was associated with better psychosocial adjustment, health care orientation, extended family relationships, social environment and psychological distress.

**TABLE 2:** Correlations (spearman) between perceived social support and psychosocial adjustment to illness (n= 134).

| Variables | Family support | Friend support | Significant other's support | Total MSPSS |
|---|---|---|---|---|
| Health care orientation | r= -.292 | r= -.253 | r=-.139 | r= -.207 |
| | p= .001** | p= .003** | p= .110 | p= .017* |
| Vocational environment | r= -.068 | r= -.144 | r=-.139 | r= -.125 |
| | p= .437 | p= .097 | p= .109 | p= .151 |
| Domestic environment | r= -.255 | r= -.133 | r=-.165 | r= -.145 |
| | p= .003** | p= .127 | p= .057 | p= .095 |
| Sexual relationships | r= -.045 | r= .042 | r=.035 | r= .067 |
| | p= .606 | p= .630 | p= .691 | p= .441 |
| Extended family relationships | r= -.345 | r= -.296 | r=-.171 | r= -.299 |
| | p= .000*** | p= .001** | p= .048* | p= .000*** |
| Social environment | r= -.150 | r= -.278 | r=:-.118 | r= -.205 |
| | p= .084 | p= .001** | p= .176 | p= .018* |
| Psychological distress | r= -.310 | r= -.256 | r=-.139 | r= -.208 |
| | p= .000*** | p= .003** | p= .109 | p= .016* |
| Total PAIS-SR | r= -.288 | r= -.245 | r=-.181 | r= -.220 |
| | p= .001** | p= .004** | p= .036* | p= .011* |

P1: Health care orientation; P2: Vocational environment; P3: Domestic environment; P4: Sexual relationships; P5: Extended family relationships; P6: Social environment; P7: Psychological distress; TP: Total psychosocial adjustment to illness; S1: Family support; S2: Friend support; S3: Significant other's support; TS: Total perceived social support.
*p<. 05, two tailed. **p< 01, two tailed. ***p< .001, two tailed.

The MSPSS domain, namely significant other's support score was correlated with psychosocial adjustment and extended family relationships scores; however, significant other's support score was not correlated with vocational environment, domestic environment and sexual relationships scores.

## CONCLUSION

When a diagnosis of chronic illness is first made, a period of adjustment is initiated.[20] Successful adjustment allows individuals to deal with a chronic illness in ways which enhance health. In this study, psychosocial adjustment score was 49.70 (SD= 19.32). The findings are similar to those in quantitative studies which have described the PAIS-SR.[5-7] De-Nour observed that 102 hemodialysis patients' mean PAIS-SR score was 49.5 ± 22.88.[5] Courts reported that the PAIS-SR ranged from 32 to 67.[6] Zimmermann et al found that hemodialysis patients were significantly less well adjusted than transplant patients.[7] On the other hand, Tanyi and Werner found that 65 women receiving hemodialysis were fairly well (the PAIS-SR score was 40.57 ± 17.55) adjusted to illness.[4] The current sample was lower adjusted to illness than the participants on hemodialysis in Tanyi and Werner's study. In addition to, moderate psychosocial adjustment was found in acute myocardial infarction patients.[21] Swain et al found that total PAIS-SR score was 51.46 ± 9.97 in patients with breast cancer.[22] According to these findings, the current sample was better adjusted to illness than the patients with breast cancer; however, they were moderate adjusted to illness same as acute myocardial infarction patients.

Items that depend more on physical performance, such as social environment, vocational environment and sexual relationships was more affected from illness. We think that one of reason for lower adjustment in social and vocational domains is that the majority of participants have not worked. The other reason for lower social and vocational environment adjustment could be that hemodialysis takes up so much time or results in too much fatigue to be fully engaged in job and social activities. Adjustment problem in sexual relationships may be due to feelings of sexual unattractiveness or fatigue. This finding is partly consistent with De-Nour's research which has described psychosocial adjustment. De-Nour expressed that most distress were from health care orientation, vocation environment, with social environment and sexual relations.[5]

In this study, social support and all MSPSS domains, including family, friend and a significant other's support score were found moderate. The findings are similar to those in quantitative studies which have described social support.[23] The reason why social support scores were moderate may be that any participants were not divorced because of illness, and not living alone. Most of the patients had not a job (114 out of 134), so that they had more opportunity for friendship, thus more support.

Higher level of social support was associated with better psychosocial adjustment, as well as with fewer changes in health care orientation, extended family relationships, social environment and psychological status. These findings certainly make sense, because if patients have more social support, they most likely would be better adjusted to health care orientation, extended family relationships and social environment, and they would be better felt as psychological. The participants who had higher level of family support had fewer problems related to health care orientation, domestic environment, extended family relationships, psychological status and psychosocial adjustment. The participants who had higher level of friend support had fewer problems in health care orientation, extended family relationships, social environment, psychological distress and psychosocial adjustment. These findings show that social support, and especially family and friend supports are most important factors for psychosocial adjustment. Drory et al found that the relation social support to psychosocial adjustment was negative and statistically significant in three life domains (domestic, extended family and social). Persons with a greater extent of social support at discharge evinced more psychosocial adjustment in these domains 3 to 6 months later.[21] Whittemore et al shown that support and confidence in living with diabetes was the most consistent factor associated with metabolic control and psychosocial adjustment.[24] The participants who had higher level of significant other's support friend support had fewer problems in extended family relationships and psychosocial adjustment.

## SUMMARY

The results of this study suggest that higher level of social support is associated with better psychosocial adjustment. Furthermore, the participants had moderate levels of psychosocial adjustment and social support. Assessment of the psychosocial adjustment and social support may help medical team to target interventions more accurately. When psychosocial adjustment and social support are found to be inadequate, an individualized intervention plan can be developed to enhance availability. Research is needed to identify ways to increase social support when it is perceived to be inadequate. This study results will be helpfull for further research in understanding how social support affects psychosocial adjustment in hemodialysis patients.

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