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*Original Article*

# Sexual dysfunction and depression in Turkish female hemodialysis patients

*Elanur Yilmaz Karabulutlu[1], Ayse Okanli[2], Sibel Karaca Sivrikaya[3]*

**ABSTRACT**

***Objective:*** This study aimed to evaluate sexual dysfunction, depression and associated factors in female hemodialysis patients.

***Methodology:*** The study had a cross-sectional and descriptive correlational design and was conducted in a dialysis centre located in Erzurum between April and May 2006. Thirty-three female dialysis patients comprised the study sample.

***Results:*** Sexual function scores of the female hemodialysis patients in the study were low, and the patients experienced moderate depression. The most common dysfunction was problems in arousal, but pain was the least common complaint. It was determined that with increasing severity of depression, average scores of sexual desire, arousal, lubrication, orgasm, satisfaction and total FSFI The Female Sexual Function Index (FSFI) of the patients decreased.

***Conclusions:*** Sexual dysfunction is highly prevalent in female hemodialysis patients. It is strongly associated with increasing severity of depression.

**KEY WORDS:** Dialysis, Female patients, Sexual Dysfunction.

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## INTRODUCTION

Chronic Kidney Disease (CKD) which markedly distrupts normal life styles of patients and reduces the quality of life is an important chronic disease in our country as well as throughout the world. According to 2006 registry of nephrology, dialysis, and transplantation, there are 33950 hemodialysis (HD) patients in Turkey. Of these, 43.6% comprises female patients. The number of people diagnosed with end-stage renal disease (ESRD) and requiring dialysis treatment is increasing in Turkey.[1] Patients with CKD experience a number of problems associated with, both a chronic disease and dialysis treatment. Sexual dysfunction (SD) is a common problem in patients with CKD.[2-8]

Sexuality and sexual functions have been considered a taboo for a long time to the extent that even the healthcare personnel are apprehensive in bringing up relevant issues. However, sexual problems are encountered by 43% of women and 31% of men in general population.[9] A higher incidence rate has been reported for sexual dysfunctions among female

dialysis patients than among male dialysis patients.[10] It has been reported that 40% of male HD patients and 55% of female HD patients have difficulty reaching an orgasm.[6,7,11]

Although most of the literature related to SD in CKD focuses on male CKD patients, it seems the rate of female CKD patients with SD is also at considerable levels. Female patients report reduced libido, difficulty with sexual arousal, lack of vaginal lubrication, pain during intercourse, and difficulty reaching an orgasm, menstrual irregularities and infertility are commonly noted.[3,7,12-14]

SD occurs in patients with CKD due to physical and psycho-social reasons. A number of factors, such as hormonal irregularities, diabetes, vascular disturbances, the use of anti-hypertensive drugs, anemia, fatigue, sleep disturbances, insufficient dialysis are responsible for SD. In addition, psychological factors, such as depression, anxiety and stress associated with the disease itself and method of treatment also lead to SD.[4,7,15] The psychological factors caused by the method of treatment also leads to changes in family life, loss of labour, inability to maintain household and reduction in social activities, which results in evading sexual intercourse.[7]

Depression is the most common psychological problem with very high incidence rates among dialysis patients.[16-18] Depression is characterized by loss of interest, reduction in energy, lowered self-esteem, and inability to experience pleasure. This constellation of symptoms may be expected to produce difficulties in sexual relationships, and depression has long been associated with sexual problems.[19] Dialysis patients frequently exhibit a depressive affect. These symptoms can result in changes in sleep, appetite, activity level, and libido and can contribute to problems with marital and family relationships, as well as reduced occupational activity. The patients who are most depressed are those with the most severe degree of sexual dysfunction; patients who exhibit the fewest depressive symptoms are those with the mild degree of sexual dysfunction.[7,13,20]

Sexuality is an indispensable part of life. In the presence of problems associated with sexuality, all the other arenas of life and as a result, the quality of life as a whole are negatively affected. Therefore, health staff should evaluate sexual functions of patients, and in case of associated problems, they should intervene to provide solutions to these problems.[21] SD affects quality of life negatively in many women. Thus, this study was performed to determine sexual dysfunction, depression and associated factors in female HD patients.

## METHODOLOGY

This descriptive correlational study was performed in the Dialysis Centre in Erzurum between April and May 2006. Forty-four female dialysis patients were receiving treatment at this centre in these dates. Only 33 patients who were eligible for the study were enrolled into the study. Eligibility criteria included able to read and understand in Turkish language, receiving regular hemodialysis treatment for at least six months, being medically stable, and having active sexual life after dialysis and the cognitive ability to respond to the questions and accepting to participate in the study.

A questionnaire was used in data collection. The questionnaire comprised questions on the demographic features and disease characteristics of the patients. In addition, Beck Depression Inventory (BDI) and Female Sexual Function Index (FSFI) were used.

The demographic questionnaire was used to assess patients' basic information such as age, marital status, employment, education, and house hold income. The questions included features related to the disease such as dialysis duration, the frequency of dialysis treatment, the degree of knowledge about the disease, desire to obtain counseling about their sexual lives.

BDI was developed by Beck et al and its reliability for Turkey was studied by Tegin (1980) and Hisli (1988-1989). BDI reflects the most common indications of depression. BDI is a likert type of self-evaluation scale consisting of 21 items and each question is scored between 0 and 3. The lowest possible score is 0, while the highest one is 63.The higher the scores, the more severe the condition is. Accordingly, any score of 10-17 is considered to indicate mild depression; scores of 18-29, moderate-severe score as moderate-severe depression, and scores of 30-63 as severe depression. The split half coefficient of the scale was .61.[22] The split half coefficient of this study was .77. (Table-I).

FSFI was developed by Rosen et al[9] and its reliability for Turkey was studied by Aygin and Eti.[23] The scale evaluates sexual problems in the last four weeks. This is a multi-dimensional scale consisting of 19 items. The scale evaluates six dimensions: desire, stimulation, lubrication, orgasm, satisfaction and pain. Each of the items is scored between 0 and 5. The lowest score possible is 2.0, and the highest one is 36.0. The lower the score, the more severe the sexual dysfunction for the desire is 1.2-6.0, for stimulation is 0-6.0, for lubrication 0-6.0, for orgasm 0-6.0,

for satisfaction is 0-6.0, and for the pain is 0-6.0 (Aygin & Etiaslan, 2005).The Cronbach alpha coefficients for the sub-scales of the scale were 0.85 for sexual desire, 0.95 for arousal, 0.95 for lubrication, 0.96 for orgasm, .96 for satisfaction, 0.98 for pain, and 0.98 for the total score.[23] The Cronbach alpha coefficients for the sub-scales of the scale in this study were 0.79 for sexual desire, 0.97 for arousal, 0.95 for lubrication, 0.91 for orgasm, .86 for satisfaction, 0.92 for pain, and 0.97 for the total score.

The data were collected by means of face-to-face interviews held by researchers. The interviews were conducted before the dialysis procedure. The interviews held with those who volunteered lasted about 20-30 minutes.

The patients were informed about the objective of the research and they were assured that if they preferred not to continue, they could withdraw from the study any time they desired. Permission to conduct this study was obtained from the Hemodialysis Units at the Ataturk University.

The data were analyzed through SPSS (Statistical PackagefortheSocialSciences) 11.5 package program, using percentage, one-sample t test, Kruskall-Wallis test, and correlation analysis. The data were expressed in meansp<0.05 was considered statistically significant.

## RESULTS

All the patients were married and unemployed and 72.2% of the patients were illiterate and 48.5% were of low-income families. The mean age was 41.03±8.02 years. The mean dialysis duration was 64.12±42.66 months, and all of the patients received dialysis three times in a week. Of all the patients, 60.6% had sufficient knowledge about their disease, and 70.8% of the patients needed counseling on their sexual life after dialysis.

Table-I presents the FSFI scores of the patients. According to these results, in female HD patients, sexual function scores were low, and these patients were moderately depressed. The most common problem was in arousal, while the least common one was pain during intercourse (Table-II).

In 60.6% of the patients, moderate degree; in 21.2% of the patients, moderate-severe, and in 18.2%, severe depression were determined. Evaluation of the factors affecting the sexual functions of the patients indicated that demographic characteristics and dialysis time did not affect the sexual functions of the patients (p>0.05).

When the relationship between depression and sexual dysfunction of the patients was examined, it was found that as the level of depression of the patients increased, the mean scores of sexual desire (r = -0.516 p<0.01), arousal (r = -0.439 p<0.05), lubrication (r = -0.407 p<0.05), orgasm (r = -0.387 p<0.05), satisfaction (r = -0.446 p<0.01) and total FSFI (r = -0.461 p<0.01) decreased. This indicates a statistically significant difference between the sexual function disorders and depression levels of the patients.While the differences between the scores of sub-dimensions were statistically significant, the sub-dimension of pain and depression was not statistically correlated (r = -0.321 p>0.05) (Table-III).

Table-I: Score averages patients received from the scales and reliability co-efficients.

| *Scales* | *Reliability Co-efficient* | *Average* | *Standart Deviation* | *Min-Max Vales* |
|---|---|---|---|---|
| ***FSFI*** | | | | |
| Desire | 0.79 | 1.90 | 1.18 | 1.2-6.0 |
| Arousal | 0.97 | 1.52 | 1.58 | 0-6.0 |
| Lubrication | 0.95 | 1.90 | 1.94 | 0-6.0 |
| Orgasm | 0.91 | 1.79 | 1.84 | 0-6.0 |
| Satisfaction | 0.86 | 2.58 | 1.69 | 0-6.0 |
| Pain | 0.92 | 2.73 | 2.44 | 0-6.0 |
| Total Score | 0.97 | 12.45 | 9.44 | 2.0-36.0 |
| BDI | 0.77 | 17.15 | 10.66 | 0-63 |

## DISCUSSION

This study aimed to determine sexual functions, depression of female HD patients and the associated factors. It was found that the mean sexual function scores of the patients decreased as the mean depression scores increased: thus, sexual functions were affected negatively with increasing severity of depression.

In our study, 70.8% of the patients needed counseling on their sexual life. In their study, it was found

Table-II: The distribution of score averages which the women received from sexual function scale.

| *Female Sexual Function Scale (FSFI)* | *Score Averages* |
|---|---|
| Sexual Desire | 1.9 |
| Arousal | 1.52 |
| Lubrication | 1.9 |
| Orgasm | 1.79 |
| Satisfaction | 2.58 |
| Pain | 2.73 |

Table-III: The relationship between Beck Depression Scale and Female Sexual Function Scale.

| *Female Sexual Function Scale (FSFI)* | *Beck Depression Inventory (BDI)* | |
|---|---|---|
| | *r* | *p* |
| Desire | r = -.516 | p<0.01 |
| Arousal | r = -.439 | p<0.05 |
| Lubrication | r = -.407 | p<0.05 |
| Orgasm | r = -.387 | p<0.05 |
| Satisfaction | r = -.446 | p<0.01 |
| Pain | r = -.321 | p>0.05 |
| Total FSFI Score | r = -. 461 | p<0.01 |

that 66.7% of HD patients need sexual consultation.[24] Unluoglu et al[25] investigated the need of HD patients for information and emphasized that sexual problems are one of the major issues they demanded to be informed about. Earlier studies have reported that although SD is a common problem in patients with CRD, they avoid discussing it with members of the health-care team, and members of the health-care team also fail to discuss it with patients most of the time.[8] As previously indicated, the nurse is frequently the initial health care professional to elicit patient's concerns regarding sexual changesor concerns.[6] The nurses not only determine the problems but also provide counseling to patients. Therefore, nurses should determine the need of patients for counseling on their sexuality, and encourage the patients to explain their sexual problems. The nurse should assume a tolerant, informative and remedial role.

In this study, the mean total sexual function score of the female HD patients was low. Physical and psychological factors affected sexual functions of female dialysis patients in a negative way. Thus, low scores of sexual function were expected. In a study from our country, it was also found that female hemodialysis patients, had a 5.23 times greater risk of developing SD compared to female patients receiving peritoneal dialysis treatment.[8] Soykan et al[4] found that SD in female dialysis patients was more common than in male patients. Earlier studies have reported that SD prevalence was higher in female HD patients.[4,5] The patients often have difficulty in arousal, orgasm, desire and lubrication. It has been reported that 71% of HD patients had sexual arousal disorder (failure to attain or maintain the lubrication-swelling response of sexual excitement until completion of the sexual activity and pleasure during sexual activity) and 50% had orgasm inhibitions.[2,12] In an other study it was reported that the most affected aspects in female ESRD patients were desire, orgasm and arousal.[8] In a study by Soykanet et al[4] it was reported that female dialysis patients had difficulty in having orgasm and arousal the most. Thus, the results of our study are in accordance with the results of earlier studies.

Depression may affect sexual function and lead to reduced libido and decreased frequency of intercourse. As a result, it has been suggested that depression may play a role in the genesis of SD in chronic renal failure patients.[3,11] According to our research results, except for FSFI pain sub-dimension, a significant relationship was determined between sexual function total score and the other sub-dimensions and depression. Similar to our research findings, in the study by Peng et al[5] SD was most commonly seen in female patients and there was a strong relationship between depression and SD. In other studies, it was emphasized that depression was a significant risk factor for low libido and sexual dysfunction.[4,13] In our study, the patients suffered moderate depression, and their sexual functions were reduced, which suggests that depression contributes to SD in HD patients.

In evaluation of sexual dysfunctions in dialysis patients, the effects of medical status as well as the psychological difficulties arising in response to the medical status should be considered. It is difficult to provide sexual harmony without considerations to psychological effects associated with the disease. Most often, in sexual dysfunctions developing due to the disease, organic and psychosocial reasons are intermingled. Although one of them outweighs the other at times, the problem should be evaluated as a whole.

## CONCLUSION

This study shows that female HD patients have significant problems of sexual function. The patients were moderately depressed and SD was found to be strongly associated with increasing severity of depression. Therefore, the results of the study have demonstrated that depression in female HD patients is an important risk factor for the development of SD, which emphasizes the need for a psychological evaluation of these patients.

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