**Samsun Sağlık Bilimleri Dergisi,**
Journal of Samsun Health Sciences

e-ISSN: 2791-9722, JSHS Aralık 2023, 8(3): 499-516

# The Identification of The Relationship Between Hemodialysis Patients' Hopelessness and Daily Life Activities

## Hemodiyaliz Hastalarında Umutsuzluk ile Günlük Yaşam Aktivitesi Arasındaki İlişkinin Belirlenmesi

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**Makale Bilgisi/Article Information**

**Makale Türü/Article Types:** Araştırma Makalesi/Research Article
**Geliş Tarihi/Received:** 30 Ağustos/August 2022
**Kabul Tarihi/Accepted:** 1 Aralık/December 2023
**Yıl/Year:** 2023 | **Cilt – Volume:** 8 | **Sayı – Issue:** 3 | **Sayfa/Pages:** 499-516

**Atıf/Cite as:** Töyer Şahin, N., Çıtlık Sarıtaş, S. "The Identification of The Relationship Between Hemodialysis Patients' Hopelessness and Daily Life Activities" Journal of Samsun Health Sciences 8(3), Aralık 2023: 499-516.

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**Yazar Notu/Author Note:** Bu çalışma yazarlardan Nilhan Töyer Şahin'in İnönü Üniversitesi Sağlık Bilimleri Enstitüsü'nde Seyhan Çıtlık Sarıtaş danışmanlığında hazırlanan "Hemodiyaliz Hastalarında Umutsuzluk ile Günlük Yaşam Aktivitesi Arasındaki İlişkinin Belirlenmesi" başlıklı tezden üretilmiştir.

https://doi.org/10.47115/jshs.1168433

# THE IDENTIFICATION OF THE RELATIONSHIP BETWEEN HEMODIALYSIS PATIENTS' HOPELESSNESS AND DAILY LIFE ACTIVITIES

## ABSTRACT

***Aim:*** This research aims to identify the relationship between hemodialysis patients' hopelessness and dependence on another person in daily life activities.

***Method:*** Relational descriptive research; 301 patients who applied to the Nephrology Clinic of the University Hospital and underwent hemodialysis were completed. "Descriptive Characteristics Form, Beck Hopelessness Scale and Katz Daily Living Activity Scale" were used to classify the data.

***Result:*** The average Beck Hopelessness Scale scores of the participating patients was 10.38 ± 5.92. When the BUS score averages and descriptive characteristics (age, marital status, educational status, employment status, income status, presence of chronic disease, duration of dialysis) were compared, statistically significant differences were detected ($p < 0.05$). The average Katz Activities of Daily Living Scale scores of the participating patients was 15.06 ± 3.41. A statistically significant difference was found between the Katz Independence in Activities of Daily Living score averages of the participating patients and their age and educational status ($p < 0.05$).

***Conclusions and Suggestions:*** In this study, the relationship between hopelessness and daily living activities in hemodialysis patients was examined; Regular monitoring of patients' hopelessness and life levels, starting with hopelessness, cutting parameters for the intervals of daily living parts, holistic evaluation of all parameters that increase the degree of limitation in ADL, and planning of all of these as required.

***Keywords:*** Hemodialysis, Daily Life Activity, Hopelessness, Nephrology.

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# HEMODİYALİZ HASTALARINDA UMUTSUZLUK İLE GÜNLÜK YAŞAM AKTİVİTESİ ARASINDAKİ İLİŞKİNİN BELİRLENMESİ

## ÖZ

***Amaç:*** Bu araştırmanın amacı, hemodiyaliz hastalarında umutsuzluk ile günlük yaşam aktiviteleri arasındaki ilişkiyi belirlemektir.

***Yöntem:*** İlişkisel tanımlayıcı özellikteki araştırma; Üniversite Hastanesinin Nefroloji Kliniğine başvuru yapan ve hemodiyalize giren 301 hasta ile tamamlan-

dı. Verilerin toplanmasında "Tanıtıcı Özellikler Formu, Beck Umutsuzluk Ölçeği ve Katz Günlük Yaşam Aktivitesi Ölçeği" kullanılmıştır.

***Bulgular:*** Katılımcı hastaların Beck Umutsuzluk Ölçeği puanlarının ortalaması 10,38 ± 5,92 olarak saptandı. BUÖ puan ortalamaları ile tanıtıcı özellikleri (yaş, medeni durum, eğitim durumu, çalışma durumu, gelir durumu, kronik hastalık varlığı, diyalize girme süresi) karşılaştırıldığında istatistiksel olarak anlamlı farklılıklar saptanmıştır ($p<0.05$). Katılımcı hastaların Katz Günlük Yaşam Aktiviteleri Ölçeği puanlarının ortalaması 15,06 ± 3,41 olarak saptandı. Katılımcı hastaların Katz Günlük Yaşam Aktivitelerinde Bağımsızlık puan ortalamaları ile yaş ve eğitim durumu arasında istatistiksel olarak anlamlı farklılık saptanmıştır ($p<0,05$).

***Sonuçlar ve Öneriler:*** Hemodiyaliz hastalarında umutsuzluk ile günlük yaşam aktivitesi arasındaki ilişkinin incelendiği bu araştırmada; hastaların umutsuzluk ve yaşam kalitesi düzeylerinin periyodik olarak takip edilmesi, bireylerin umutsuzluk ile baş etme, günlük yaşam aktivitesini yerine getirme yeteneklerini geliştirmeye yönelik uygulamaların oluşturulması, GYA'da kısıtlılığın derecesini arttıran tüm parametrelerin bütüncül değerlendirilip, bireyin bakımının tüm sorunları kapsayacak şekilde planlanması önerilmektedir.

***Anahtar Kelimeler:*** Hemodiyaliz, Günlük Yaşam Aktivitesi, Umutsuzluk, Nefroloji.

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## INTRODUCTION

Across the world and in Turkey, the number of patients with chronic renal failure increases with each passing day. Hemodialysis therapy is quite important to the enhancement of the quality of life and the extension of the lifetime in patients with chronic renal failure. However, hemodialysis therapy can be accompanied by a number of problems. In this process, on the one hand, the patients can feel hopeless, and on the other hand, they can have trouble fulfilling their daily life activities (Varol E & Karaca Sivrikaya, 2018).

According to the data recording system of the Turkish Society of Nephrology, 84.128 patients who had end-stage renal failure and underwent renal replacement therapy were present in Turkey as of the end of 2021. Of these patients undergoing renal replacement therapy, 60.051 patients had hemodialysis, 3.417 patients had peritoneal dialysis (TND, 2021).

Chronic renal failure can bring about psychological and mental disorders. Accordingly, these patients can feel hopeless as a consequence of experiencing such psychological and mental problems together with a chronic disease (Turkish Nephrology Association, 2019).

The hope is the expectation that the probability of attaining a future aim is above zero. Its essential feature is the belief that a way out is present and the changes can occur in the individual's life with some help. On the other hand, hopelessness can be defined as the negative expectation that the probability of attaining an aim is below zero (Biçer & Karabulutlu, 2020). The feeling of hopelessness contains negative expectations about the future. The hopelessness levels of particularly the patients undergoing hemodialysis go up as these patients repeat the disease-related processes numerous times. As a consequence, the patients can sink into depression. In this sense, it can be said that the feelings of hopelessness increased and the quality of life was negatively affected in these patients (Kömürcü & Kuzu, 2020). Upon examining the previous studies, it was discerned that the patients undergoing hemodialysis therapy experienced hopelessness (Kömürcü & Kuzu, 2020). These results point out that the patients who were confronted with several psychological, social, physical, and economic problems due to the hemodialysis therapy suffered hopelessness.

Besides, as stated above, the quality of these patients' lives is negatively affected during the treatment process. These patients can fail to perform daily life activities due to certain symptoms such as the increased tiredness, the fall in strength, and the loss of abilities. This situation affects the quality of the patient's life negatively. In the research by Turgay et al. (2017) the daily life activities and depression levels of the patients who underwent hemodialysis were evaluated. The research stressed the importance of nursing care and approaches that would support raising these patients' independence levels (Başaran et al, 2016). Biçer and Bayat (2012) conducted research to evaluate the quality of hemodialysis patients' lives and found that the hemodialysis patients had a lower quality of life than healthy individuals. It was considered that the lower quality of life might have been associated with both chronic kidney disease and the treatment method.

Therefore, in this process, the patients need information about the disease, its treatment, and other related problems (Turgay et al., 2017). Allocating more time to these patients than other health staff, the nurses are in a key position to enable them to overcome their problems and manage the disease process successfully. At the same time, the nurses are supposed to ensure that the patient's relatives who feel the stress experienced by the patient are supported and taken care of (Başaran et al., 2016).

To a large extent, the success of hemodialysis therapy depends on the adaptation to the therapy. In this process, the nurses can enhance the patient's adaptation to therapy by virtue of enabling the patient to feel better by meeting the expectations and needs of the patient and the patient's relatives relatives (Yılmaz et al., 2020). The purpose of nursing care should be to slow down the advancement of the disease and increase the quality of life by enhancing the patient's adaptation to the therapy. Drug therapy, diet, physical exercise programs, lifestyle changes, changing

environmental factors, and health training are among the leading components of nursing care. The nurse primarily follows up the therapy, which is applied to the patients at the hospital setting, and the patients' responses to the nursing care. The nursing initiatives implemented during the hemodialysis therapy process are comprised of the stage of preparation before the hemodialysis, the stage of launching the hemodialysis therapy, the stage of following up of the patient during hemodialysis, the stage of concluding the hemodialysis process, and the stage of monitoring the patient's situation in the post-hemodialysis period. For the subsequent monitoring procedures, the nurses' recommendations focus on the nursing care to be offered to the patients at home (Başaran et al., 2016). The process of nursing care should be planned in line with the needs of each patient by taking into consideration the effects of hemodialysis on life, and this process should be put into practice by identifying the priorities accurately, and afterwards, the effectiveness of the initiatives that were applied should be evaluated.

### Research Questions:

1. Is there a relationship between hopelessness and activities of daily living in hemodialysis patients?
2. Does the distribution according to demographic data have an effect on hopelessness in hemodialysis patients?
3. Does the distribution according to demographic data have an effect on the activities of daily living in hemodialysis patients?

## MATERIALS AND METHOD

**Research Type**: This research was designed as a descriptive study.

**Research Population and Sample:** The research population comprised 1.337 adult patients who underwent hemodialysis at the Hemodialysis Unit and Nephrology Clinic in Turkey. Using the formula for calculating the sample size for a known population, the sample size was identified as 298 participants. However, to reduce the margin of error, the research was conducted with the participation of 301 patients. The non-probability sampling method was used in the selection of the sample from the population. The patients who were open to communication and cooperation, who had no psychological problems and no audiovisual disorders were included in the research.

**Data Collection:** Using the individual interview method, the researcher collected the data at the Hemodialysis Unit and Nephrology Clinic of XXXX University Hospital in April-August 2019. The information about the patients who underwent hemodialysis was retrieved from the data records of XXX University Hospital. Fol-

lowing the session of hemodialysis therapy, the forms were filled out in light of the responses given to the questions that the researcher read aloud to the patients. An interview with a patient took approximately 15-20 minutes.

**Data Collection Tools:** The research data were collected using the Descriptive Characteristics Form, the Beck Hopelessness Scale, and the Katz Index of Independence in Activities of Daily Living.

***Descriptive Characteristics Form:*** Prepared by the researchers, this form contained questions that were designed to identify the patients' socio-demographic characteristics.

***Beck Hopelessness Scale (BHS):*** Beck et al. (1974) developed this measurement tool in 1974. It was adapted to Turkish by Durak and Palabıyıkoglu (1994). Comprised of three sub-scales, namely, 'Feelings About the Future', 'Loss of Motivation', and 'Future Expectations', the BHS has dichotomous-styled yes/no questions. The BHS contains 20 items, and the minimum and maximum scores to be obtained from the BHS are successively 0 and 20 points. The answer 'no' is scored as 1 point for items 1, 3, 5, 6, 8, 10, 13, 15, and 19, whilst the answer 'yes' is scored as 1 point for items 2, 4, 7, 9, 11, 12, 14, 16, 17, 18, and 20. The high scores obtained from the overall BHS and its sub-scales demonstrate that the respondent has a high-level of hopelessness. As the measure of internal consistency, the Cronbach's Alpha coefficient was found as 0.85 for the BHS. Its item-total correlations ranged between 0.31 and 0.67 (Durak & Palabıyıkoğlu, 1994). In this current research, the Cronbach's Alpha coefficient was calculated as 0.79, 0.72, 0.83, and 0.77 consecutively for the overall BHS and its sub-scales of 'Feelings About the Future', 'Loss of Motivation', and 'Future Expectations'.

***Katz Index of Independence in Activities of Daily Living (Katz ADL):*** Katz et al. (1963) developed this measurement tool in 1963 to evaluate daily life activities. As per the validity and reliability study performed in Turkey for the Katz ADL, the Cronbach's Alpha coefficient was calculated as 0.73. Based on the activities of (1) bathing, (2) dressing, (3) toileting, (4) transferring, (5) continence, and (6) feeding, the Katz ADL had six items. The answers to be given by the respondents to the Katz ADL can be 'dependent', 'partially dependent', and 'independent'. The respondents obtaining 13-18, 7-12, and 0-6 points from the Katz ADL are characterized respectively as independent, partially dependent, and dependent, and as the score obtained by a respondent from the Katz ADL goes up, the respondent's dependence level decreases (Pehlivanoğlu et al., 2016). In this current research, the Cronbach's Alpha coefficient was found as 0.71 for the Katz ADL.

**Analysis of Research Data:** The research data were analyzed using the Statistical Package for Social Science for Windows (SPSS) 24.0. The Shapiro-Wilk test was utilized to analyze whether the quantitative data were normally distributed. More-

over, the descriptive statistics, the Cronbach's Alpha coefficient, independent samples t-test, and the one-way analysis of variance were used to analyze of data. In the research, statistical significance was identified if the P-value was below 0.05 ($p<0.05$).

**Ethical Principles of the Research:** Before launching this research, written permissions were received from the Office of the Chief Physician and the Department of Nephrology. Besides, the ethical endorsement was obtained from the Invasive Clinical Research and Publications Ethics Committee. Upon being informed about the research, the participant patients were told that their data would not be shared with a third party, and also, they were asked to consent verbally to participate in the research.

## RESULTS

### Socio-Demographic Findings

It was found that, of the participant patients, 55.1% were male, 53.5% were aged 50 years or above, 69.4% were married, 23.6% were middle school graduates, 62.1% had medium-level income, 76.4% did not work, 53.2% had another chronic disease besides chronic renal failure, and 66.8% had the chronic renal failure for more than six months.

### Findings on Hopelessness Levels

**Table 1.** Distribution of Patients' Beck Hopelessness Scale Mean Scores

| Scale | Min-Max Amount That Can Be Taken From The Scale | Min- Max Amount Taken From The Scale | M±SD |
|---|---|---|---|
| **Feeling About the Future** | 0-5 | 0-5 | 2.72±1.75 |
| **Loss of Motivation** | 0-8 | 1-8 | 3.83±2.43 |
| **Hope** | 0-7 | 0-7 | 3.82±2.30 |
| **Total** | 0-20 | 1-19 | 10.38±5.92 |

**Table 1.** The Breakdown of the Means of Participant Patients' BHS Scores

It was ascertained that the mean of participant patients' BHS scores was 10.38 ± 5.92 points. In light of the mean of BHS scores obtained by the participant patients, it is discerned that the participant patients experienced medium-level hopelessness. Upon the review of the means of participant patients' BHS sub-scale scores, it was identified that the means of scores obtained by the participant patients from the BHS sub-scales of 'Feelings About the Future', 'Loss of Motivation', and 'Future Expectations' were successively 2.72 ± 1.75, 3.83± 2.43, and 3.82 ± 2.30 points (Table 1).

**Table 2.** Comparison of Beck's Hopelessness Scale Mean Scores and Descriptive Characteristics of Patients

| | Scale Total Score M±SD | Intentions About The Future M±SD | Loss of Motivation M±SD | Hope M±SD |
|---|---|---|---|---|
| **Age** | | | | |
| 18-28 | 8.98±5.80 | 2.32±1.73 | 3.32±2.43 | 3.33±2.19 |
| 29-39 | 10.66±5.53 | 2.68±1.56 | 4.12±2.29 | 3.85±2.29 |
| 40-50 | 11.54±6.11 | 3.10±1.84 | 4.15±2.43 | 4.28±2.50 |
| 50 and Over | 14.27±4.65 | 3.92±1.34 | 5.10±2.08 | 5.25±1.83 |
| ***KW*** | *28.031* | *31.513* | *18.835* | *24.617* |
| ***p*** | ***.000**** | ***.000**** | ***.000**** | ***.000**** |
| **Gender** | | | | |
| Female | 9.89±5.78 | 2.55±1.72 | 3.65±2.37 | 3.68±2.20 |
| Male | 10.77±6.02 | 2.86±1.77 | 3.96±2.48 | 3.94±2.38 |
| ***MWU*** | *-1.350* | *-1.712* | *-1.118* | *-1.058* |
| ***p*** | *.177* | *.087* | *.266* | *.290* |
| **Marital Status** | | | | |
| Married | 9.87±5.96 | 2.58±1.74 | 3.65±2.39 | 3.63±2.33 |
| Single | 11.53±5.70 | 3.03±1.74 | 4.22±2.48 | 4.27±2.16 |
| ***MWU*** | *-2.128* | *-2.1230* | *-1.751* | *-2.174* |
| ***p*** | ***.033**** | ***.034**** | *.080* | ***.030**** |
| **Education** | | | | |
| Illiterate | 14.15±5.24 | 3.75±1.46 | 5.25±2.16 | 5.15±2.16 |
| Literate | 12.57±5.17 | 3.45±1.61 | 4.57±2.20 | 4.54±2.04 |
| Primary Education | 9.47±5.78 | 2.41±1.66 | 3.47±2.46 | 3.58±2.17 |
| Secondary Education | 9.02±5.39 | 2.37±1.64 | 3.34±2.16 | 3.30±2.20 |
| Undergraduate and Above | 7.02±5.22 | 1.72±1.56 | 2.64±2.25 | 2.65±2.11 |
| ***KW*** | *58.020* | *59.532* | *43.306* | *45.689* |
| ***p*** | ***.000**** | ***.000**** | ***.000**** | ***.000**** |
| **Employment** | | | | |
| Unemployed | 13.84±4.93 | 3.67±1.42 | 5.15±2.05 | 5.01±2.06 |
| Employed | 9.31±5.80 | 2.43±1.74 | 3.42±2.40 | 3.46±2.25 |
| ***MWU*** | *5.704* | *5.330* | *5.184* | *5.031* |
| ***p*** | ***.000**** | ***.000**** | ***.000**** | ***.000**** |
| **Income** | | | | |
| Good | 7.23±5.42 | 1.73±1.56 | 2.83±2.28 | 2.66±2.18 |
| Medium | 11.13±5.62 | 3.01±1.67 | 4.00±2.33 | 4.12±2.21 |
| Poor | 11.97±6.28 | 3.02±1.85 | 4.60±2.64 | 4.34±2.29 |

| | | | | |
|---|---|---|---|---|
| ***KW*** | *26.074* | *27.874* | *16.378* | *22.666* |
| ***p*** | ***.000**** | ***.000**** | ***.000**** | ***.000**** |
| **Chronic Disease** | | | | |
| No | 9.18±6.19 | 2.34±1.79 | 3.40±2.49 | 3.43±2.39 |
| Yes | 11.73±5.30 | 3.15±1.61 | 4.31±2.27 | 4.26±2.12 |
| ***MWU*** | *-3.597* | *-3,943* | *-3,178* | *-3,064* |
| ***p*** | ***.000**** | ***.000**** | ***.001**** | ***.002**** |
| **Period of Illness** | | | | |
| Less than 6 Months | 9.26±5.98 | 2.40±1.74 | 3.43±2.47 | 3.42±2.36 |
| 6 Months and Over | 12.63±5.13 | 3.37±1.60 | 4.62±2.15 | 4.64±1.94 |
| ***MWU*** | *-4.547* | *-4.629* | *-3.872* | *-4.254* |
| ***p*** | ***.000**** | ***.000**** | ***.000**** | ***.000**** |

*p<0.05 **p<0.01

**Table 2.** The Comparison of the Means of Participant Patients' BHS Scores As Per Their Descriptive Characteristics

It was found that there were statistically significant differences in the means of participant patients' BHS scores as per the variables of age, marital status, education level, employment status, income level, having another chronic disease besides chronic renal failure, and the duration of undergoing hemodialysis therapy whereas there was no statistically significant difference in the participant patients' hopelessness levels as per the variable of gender (Table 2).

**Table 3.** Distribution of Katz Activities of Daily Living Scale Mean Scores of the Patients

| Scale | Min.- Max. Amount That Can Be Taken From The Scale | Min.-Max. Amount Taken From The Scale | M±SD |
|---|---|---|---|
| Bathing | 0-3 | 0-3 | 2.33±0.73 |
| Transfer | 0-3 | 0-3 | 2.45 ± 0.65 |
| Clothing | 0-3 | 0-3 | 2.45 ± 0.66 |
| Call of Nature | 0-3 | 0-3 | 2.52 ± 0.66 |
| Continence | 0-3 | 0-3 | 2.59 ± 0.64 |
| Nutrition | 0-3 | 0-3 | 2.71 ± 0.59 |
| Total | 0-18 | 0-18 | 15.06 ± 3.41 |

**Table 3.** The Breakdown of the Means of Participant Patients' Katz ADL Scores

It was ascertained that the mean of participant patients' Katz ADL scores was 15.06 ± 3.41 points, and the participant patients were 'partially dependent' in the activity of 'bathing' whilst they were 'independent' in the rest of the activities addressed under the Katz ADL. In this respect, the participant patients were deemed independent in their daily activities (Table 3).

**Table 4.** Comparison of Mean Scores of The Katz Activities of Daily Living Scale and Descriptive Characteristics of The Patients

| | Scale Total Score M±SD | Bathing M±SD | Clothing M±SD | Call of Nature M±SD | Transfer M±SD | Continence M±SD | Nutrition M±SD |
|---|---|---|---|---|---|---|---|
| **Age** | | | | | | | |
| 18-28 | 15.82±3.43 | 2.52±0.75 | 2.60±0.70 | 2.62±0.70 | 2.57±0.71 | 2.67±0.57 | 2.82±0.54 |
| 29-39 | 15.78±3.16 | 2.45±0.62 | 2.58±0.58 | 2.71±0.58 | 2.60±0.61 | 2.67±0.63 | 2.73±0.61 |
| 40-50 | 15.46±2.72 | 2.40±0.65 | 2.57±0.60 | 2.62±0.55 | 2.51±0.60 | 2.57±0.60 | 2.75±0.54 |
| 50 and Over | 14.60±3.61 | 2.23±0.75 | 2.34±0.69 | 2.42±0.68 | 2.36±0.66 | 2.56±0.68 | 2.66±0.61 |
| ***KW*** | *7.601* | *7.818* | *10.595* | *12.606* | *8.849* | *1.966* | *5.024* |
| ***p*** | *.055* | *.051* | ***.014**** | ***.007**** | ***.031**** | *.579* | *.170* |
| **Gender** | | | | | | | |
| Female | 14.84±3.37 | 2.31±0.70 | 2.40±0.67 | 2.48±0.65 | 2.38±0.65 | 2.58±0.61 | 2.66±0.63 |
| Male | 15.30±3.43 | 2.35±0.73 | 2.50±0.66 | 2.56±0.66 | 2.51±0.65 | 2.60±0.67 | 2.75±0.55 |
| ***MWU*** | *-1.521* | *-.601* | *-1.551* | *-1.292* | *-1.982* | *-.845* | *-1.246* |
| ***p*** | *.128* | *.548* | *.121* | *.196* | *.057* | *.398* | *.213* |
| **Marital Status** | | | | | | | |
| Married | 15.07±3.38 | 2.33±0.71 | 2.46±0.65 | 2.53±0.64 | 2.43±0.64 | 2.59±0.65 | 2.70±0.59 |
| Single | 15.15±3.49 | 2.33±0.74 | 2.43±0.70 | 2.53±0.70 | 2.51±0.68 | 2.60±0.64 | 2.72±0.59 |
| ***MWU*** | *-.319* | *-.065* | *-.274* | *-.350* | *-1.228* | *-.198* | *-.421* |
| ***p*** | *.750* | *.949* | *.784* | *.726* | *.220* | *.843* | *.674* |
| **Education** | | | | | | | |
| Illiterate | 13.70±3.69 | 2.02±0.76 | 2.17±0.76 | 2.28±0.72 | 2.20±0.71 | 2.45±0.71 | 2.55±0.71 |
| Literate | 13.37±3.77 | 1.97±0.77 | 2.18±0.62 | 2.23±0.68 | 2.18±0.69 | 2.27±0.82 | 2.51±0.73 |
| Primary Education | 15.86±2.32 | 2.44±0.55 | 2.53±0.53 | 2.66±0.47 | 2.56±0.55 | 2.84±0.36 | 2.80±0.40 |
| Secondary Education | 16.09±3.14 | 2.56±0.62 | 2.66±0.63 | 2.67±0.62 | 2.66±0.58 | 2.70±0.57 | 2.83±0.50 |
| Undergraduate and Above | 16.09±3.09 | 2.61±0.69 | 2.69±0.57 | 2.75±0.62 | 2.61±0.59 | 2.59±0.63 | 2.82±0.51 |
| ***KW*** | *39.353* | *39.402* | *36.475* | *35.187* | *30.064* | *22.224* | *16.148* |
| ***p*** | ***.000**** | ***.000**** | ***.000**** | ***.000**** | ***.000**** | ***.000**** | ***.003**** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Employment** | | | | | | | |
| Unemployed | 15.33±3.43 | 2.42±0.74 | 2.54±0.65 | 2.56±0.69 | 2.49±0.69 | 2.50±0.69 | 2.80±0.55 |
| Employed | 15.02±3.40 | 2.31±0.71 | 2.43±0.67 | 2.52±0.65 | 2.44±0.65 | 2.62±0.63 | 2.68±0.60 |
| ***MWU*** | *.764* | *1.333* | *1.408* | *.765* | *.757* | *1.414* | *1.873* |
| ***p*** | *.445* | *.182* | *.159* | *.444* | *.449* | *.157* | *.061* |
| **Income** | | | | | | | |
| Good | 15.45±3.26 | 2.47±0.72 | 2.54±0.65 | 2.63±0.60 | 2.45±0.62 | 2.58±0.68 | 2.76±0.52 |
| Medium | 15.22±3.49 | 2.34±0.73 | 2.47±0.67 | 2.54±0.66 | 2.50±0.67 | 2.62±0.62 | 2.72±0.59 |
| Poor | 14.51±3.23 | 2.22±0.68 | 2.35±0.66 | 2.42±0.67 | 2.33±0.63 | 2.52±0.67 | 2.64±0.64 |
| ***KW*** | *5.427* | *4.645* | *3.337* | *3.458* | *4.614* | *1.233* | *1.386* |
| ***p*** | *.066* | *.098* | *.189* | *.177* | *.100* | *.540* | *.500* |
| **Chronic Disease** | | | | | | | |
| No | 14.96±3.37 | 2.30±0.75 | 2.43±0.67 | 2.52±0.64 | 2.42±0.64 | 2.55±0.66 | 2.71±0.56 |
| Yes | 15.24±3.45 | 2.37±0.69 | 2.48±0.66 | 2.53±0.68 | 2.49±0.67 | 2.64±0.63 | 2.70±0.62 |
| ***MWU*** | *-.971* | *-.669* | *-.572* | *-.456* | *-1.185* | *-1.397* | *-.354* |
| ***p*** | *.332* | *.502* | *.567* | *.649* | *.236* | *.162* | *.724* |
| **Period of Illness** | | | | | | | |
| Less than 6 months | 15.47±3.16 | 2.41±0.69 | 2.52±0.62 | 2.57±0.67 | 2.53±0.64 | 2.66±0.57 | 2.78±0.54 |
| 6 Months and Over | 14.91±3.51 | 2.30±0.73 | 2.42±0.68 | 2.51±0.65 | 2.42±0.66 | 2.56±0.68 | 2.68±0.61 |
| ***MWU*** | *1.218* | *1.171* | *.998* | *.953* | *1.405* | *.850* | *1.530* |
| ***p*** | *.223* | *.242* | *.318* | *.340* | *.160* | *.396* | *.126* |

*p<0.05 **p<0.01

**Table 4.** The Comparison of the Means of Participant Patients' Katz ADL Scores As Per Their Descriptive Characteristics

It was identified that, as per the variables of age and education level, there were statistically significant differences in the means of participant patients' Katz ADL scores. On the other hand, as per the variables of gender, marital status, employment status, income level, having another chronic disease besides chronic renal failure, and the duration of undergoing hemodialysis therapy, there was no statistically significant difference in the means of participant patients' Katz ADL scores (Table 4).

**Table 5.** The Relationships Between Patients' Hopelessness Levels and Daily Living Activities Addiction Levels

| | | Total Score of Hopelessness | Total Score of Feeling about the Future | Total Score of Loss of Motivation | Total Score of Hope |
|---|---|---|---|---|---|
| **Daily Living Activities** | **r** | 0.312 | 0.318 | 0.245 | 0.301 |
| | **p** | ***0.000***** | ***0.000***** | ***0.000***** | ***0.000***** |
| **Bathing** | **r** | 0.395 | 0.370 | 0.333 | 0.383 |
| | **p** | ***0.000***** | ***0.000***** | ***0.000***** | ***0.000***** |
| **Clothing** | **r** | 0.322 | 0.323 | 0.270 | 0.296 |
| | **p** | ***0.000***** | ***0.000***** | ***0.000***** | ***0.000***** |
| **Call of Nature** | **r** | 0.283 | 0.290 | 0.228 | 0.264 |
| | **p** | ***0.000***** | ***0.000***** | ***0.000***** | ***0.000***** |
| **Transfer** | **r** | 0.295 | 0.313 | 0.229 | 0.278 |
| | **p** | ***0.000***** | ***0.000***** | ***0.000***** | ***0.000***** |
| **Continence** | **r** | 0.193 | 0.110 | 0.116 | 0.138 |
| | **p** | ***0.001***** | ***0.027***** | ***0.024***** | ***0.016***** |
| **Nutrition** | **r** | 0.202 | 0.219 | 0.170 | 0.174 |
| | **p** | ***0.000***** | ***0.000***** | ***0.003***** | ***0.002***** |

**Table 5.** The Relationship Between the Participant Patients' Hopelessness Levels and Daily Life Activities

It was found that the participant patients' overall BHS scores and BHS sub-scale scores had statistically significant relationships with their dependence levels in the overall daily life activities and all sub-activities of daily life (Table 5). All statistically significant relationships between these two measurement tools and their sub-scales are positive. In other words, as the participant patients' levels of dependence on daily life activities increase, their hopelessness levels also increase.

## DISCUSSION

The findings obtained from this research to identify the hemodialysis patients' levels of hopelessness and dependence in daily life activities were discussed in light of the relevant literature.

First, the current research ascertained that the participant patients had a medium-level mean hopelessness score (10.38 ± 5.92) (Table 1). Ranging between 0-19 points, the total score obtained from the BHS indicates a hopelessness level, and when an individual obtains a high score from the BHS, it is assumed that the

individual has a high-level hopelessness. Büyükbayram et al. (2021) identified that the mean hopelessness score of the patients undergoing hemodialysis therapy was 8,61±6,85 points. Başaran et al. (2016) found that the mean hopelessness score of the patients undergoing hemodialysis therapy was 12.76 ± 3.04 points.and this mean of scores is similar to the one obtained in this current study. Günaydın and Özdelikara (2022) found that the mean hopelessness score of the patients undergoing hemodialysis therapy was 5.68±4.43 points.

Moreover, in the research by Eslami et al. (2017), it was discerned that 28% of the patients had high-level hopelessness. The hemodialysis patients suffer hopelessness as the recovery is delayed, and accordingly the fear of death rises, the patients constantly live with the symptoms, and their dependence levels increase as a consequence of the hemodialysis session held approximately for four hours a day on three days a week under the hemodialysis therapy, and also, the disease affects their lives entirely. It can be considered that having the therapy for a long duration, being dependent on the hospital for a specific period on certain weekdays, and having prognostic uncertainty would have induced the patients to feel hopeless.

Second, in the current research, it was discerned that the participant patients' hopelessness levels increased as the age went up (Table 2). The research by Başaran et al. (2016) is one of the research studies that had findings similar to the above finding of this current study and indicated that age had a statistically significant relationship with hopelessness.

In a similar vein to the present study, the research by Başaran et al. (2016) demonstrated that, as the participant's age advanced, the hopelessness level rose. It can be put forward that the participant patients might have sunk into hopelessness due to thinking that their dependence would increase in association with being people of advanced age besides having pre-existing diseases.

Third, in the current research, it was found that there was no statistically significant difference in the participant patients' hopelessness levels as per the variable of gender (Table 2). It is considered that this might have been the case as the women had more limited economic liberties and were, in a way, economically dependent, were confined inside the house, and had more restricted social lives than the men.

Fourth, in the current research, it was found that the participant patients who were not married had higher hopelessness levels (Table 2). However, in similar studies on the topic, it was ascertained that there was no statistically significant relationship between marital status and hopelessness levels (Kılınç, 2016). It is considered that the single patients' hopes of recovering from the disease decreased along with the buildup of disease symptoms and this situation, in turn, negatively affected such patients' hopes of setting up a family.

Fifth, the current study identified that, as the participant patients' education levels went up, their hopelessness levels decreased they became more hopeful (Table 2). In a similar vein to the finding obtained under the current study, the study performed by Büyükbayram et. al. (2021) to analyze the social support and hopelessness levels of the patients with chronic renal failure found that there was a statistically significant difference in the patients' hopelessness levels as per the variable of education level, and the illiterate patients had high-level hopelessness whereas the patients who were university graduates had low-level hopelessness. Additionally, other studies in the relevant literature have results consistent with the above finding of this current study (Başaran et. al, 2016; Andrade et. al., 2015; Ercan & Demir, 2018; Cengiz & Sarıtaş, 2019; Büyükbayram et. al., 2021)

As the patient's education level goes up, the patient develops different coping behaviors, and it is considered that there will be a decrease in the patient's hopelessness level along with the positive effect of these coping methods.

Sixth, in the current research, it was ascertained that the working participant patients had lower hopelessness levels (Table 2). In the studies conducted in a similar vein to the current research, it was identified that the working patients had a low level of hopelessness whilst the patients who did not work had high-level hopelessness (Erşan et al., 2013; Savaşan et al., 2013). On the other hand, the research by Başaran et al. (2016), found that the working patients had higher hopelessness levels. In light of the above finding of the current research, it can be put forward that the working patients' hopelessness levels decreased in view of the fact that the working patients had broader socio-cultural environments and opportunities.

Seventh, in the current research, it was discerned that the participant patients with income below expenses had a higher mean of hopelessness scores (Table 2). Also, in other research studies in the relevant literature, it was ascertained that the hopelessness levels decreased along with the rise in income levels (Savaşan et al., 2013, Başaran et al., 2016; Mollaoğu & Candan, 2018; Ercan & Demir, 2018; Cengiz &Sarıtaş, 2019; Büyükbayram et al., 2021). In a similar to the current research, the study by Karakurt et al. (2018) found that the hopelessness levels decreased as the income levels went up. Additionally, in the study by Religioni et al. (2019), the patients with lower levels of income obtained higher hopelessness scores than other groups of patients. Likewise, in the research study by Kocalevent et al. (2017) it was discerned that the hopelessness levels increased as the income levels went down. It is considered that the difference in hopelessness levels might have arisen from the differences in the patients' socio-demographic characteristics and material opportunities.

Eighth, in the current research, it was found that the participant patients who had a secondary disease besides chronic renal failure had a higher mean of hope-

lessness scores (Table 2). The results of the research study by Atan et al. (2020) were in a similar vein to the findings of the current research and indicated that having an additional chronic disease increased hopelessness. In other research studies in the relevant literature, having a secondary disease besides the pre-existing one led to an increase in the patient's hopelessness level (Günaydın & Özdelikara, 2022). The finding of this current study is similar to the results in the relevant literature. It is considered that the patients' hopelessness levels may have increased as the chronic renal failure lowered the patients' life standards and raised their dependence levels, and moreover, having a secondary disease might have increased their hopelessness levels.

Ninth, in the current research, it was identified that the longer the patients underwent hemodialysis, the higher hopelessness levels they had (Table 2). Likewise, in the research studys by Başran et al. (2016), and Büyükbayram et al. (2021) the long duration of the disease was associated with high hopelessness levels. It can be considered that the hopelessness level might have gone up together with the decline in the patients' hopes of surviving as the symptoms aggravated along with the extension of the treatment duration for the disease. Additionally, other studies in the literature support this data (Duran et. al., 2020; Günaydın & Özdelikara, 2022).

Next, the current research ascertained that the participant patients had a medium-level mean Katz ADL score (15.06 ± 3.41 points) (Table 3). In this respect, the participant patients were deemed independent in their daily life activities. It was identified that the participant patients were 'partially dependent' in the activity of 'bathing' while they were 'independent' in the rest of the activities addressed under the Katz ADL (Table 3).

In the current research, it was discerned that, as per the variables of gender, marital status, employment status, income level, having another chronic disease besides chronic renal failure, and the duration of undergoing hemodialysis therapy, there was no statistically significant difference in the participant patients' levels of dependence in daily life activities. In a similar research study by Alaloul (2017), it was found that, as per the variable of gender, there was no statistically significant difference in all summarized values about the quality of life. Upon the examination of the findings of other research studies in the relevant literature, it was ascertained that, as per the variables of gender and education level, there was no statistically significant difference in the means of scores obtained from the subscales of the Quality of Life Scale (Westin et al., 1999; Küçükberber et al., 2011; Son et al., 2012; Loo et al., 2016).).

In the research conducted by Güler et al. (2022) with the hemodialysis patients, it was ascertained that the majority of the participant patients were dependent on another person in daily life activities. The study by Sungur et al. (2009) found that, even if the individuals with chronic renal failure mostly performed daily life activi-

ties adequately, they could not find effective solutions to the problems experienced at home after the hemodialysis therapy, they were dependent on another person in the home setting, incapable of applying to health facilities, and needed to acquire information and support for the care. In the current research, the comparison of the means of participant patients' Katz ADL scores as per the descriptive characteristics shows that the participant patients aged 50 years or above were more dependent on the activities of bathing, toileting, and transferring than participant patients from other age groups and this difference between the age groups was statistically significant (Table 4). The research by Güler et. al. (2022) asserted that the dependence increased as the age advanced. In the research by Güler et. al. (2022) it was discerned that the individuals aged 65 years or above were more dependent on their daily life activities than the individuals from the groups aged below 65 years. Likewise, in numerous research studies, the relationship between age and dependence was analyzed, and similar results were obtained (Özbudak & Oksay Şahin, 2021; Güler et. al., 2022). The advanced age increases the likelihood of the patients being dependent on another person in daily life activities. In this situation, the advanced age can limit the patients' daily life activities.

Furthermore, in the current research, upon the comparison of the participant patients' levels of dependence in daily life activities as per the education level, it was found that the patients who were university graduates or had higher education obtained a higher mean of Katz ADL scores than the patients from lower education levels and this difference was statistically significant (Table 4). The research by Bilgin et al. (2020) identified that illiterate individuals had a lower self-care strength. Thus, the previous research studies are in support of this current research. In this respect, it can be considered that, as the education level goes up, the patients will assume their health responsibilities more by virtue of understanding the applied treatment more easily, be more active in the management of the treatment process by acquiring more detailed information about the treatment, and hence, they will be better adapted to the daily life activities.

## CONCLUSIONS

In this study that analyzed the relationship between hemodialysis patients' hopelessness and daily life activities, it was identified that the participant patients had a medium-level of hopelessness and were independent in their daily life activities. It was ascertained that there were statistically significant differences in the participant patients' hopelessness levels as per the variables of age, marital status, education level, employment status, income level, having another chronic disease besides chronic renal failure, and the duration of having chronic renal failure while there were statistically significant differences in the participant patients' levels of dependence on another person in daily life activities as per the variables of age and education level.

- It is recommended that, first, the practices be created for periodically following on the patients' levels of hopelessness and quality of life,
- Second, the patient's care be planned in a manner to cover all problems as a response to the increase in the degree of dependence in daily life activities along with the presence of a disease other than the chronic renal failure,
- Thirdly, clinics that care for hemodialysis patients need to provide care with a holistic treatment in departments where there is hopelessness and warmth.
- Fourth, the nursing practices be supported in light of the recommendations cited at the beginning of this paragraph in parallel to the research results,
- And fifth, similar research studies be carried out at different health facilities in different regions.

## Authorship Contribution

Design of Study: NTŞ(%50), SÇS(%50)

Data Acquisition: NTŞ(%60), SÇS(%40)

Data Analysis: NTŞ(%60), SÇS(%40)

Writing Up: NTŞ(%50), SÇS(%50)

Submission and Revision: NTŞ(%60), SÇS(%40)

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