Samsun Sağlık Bilimleri Dergisi,
Journal of Samsun Health Sciences
e-ISSN: 2791-9722, JSHS April 2024, 9(1): 173-186

Hopelessness in Patients Receiving Hemodialysis Treatment in The Covid-19 Pandemic: A Descriptive and Cross-Sectional Study

COVID-19 Pandemisinde Hemodiyaliz Tedavisi Alan Hastalarda Umutsuzluk: Tanımlayıcı ve Kesitsel Çalışma

Zeynep PEHLİVAN KÖKSAL[1], Vacide AŞIK ÖZDEMİR[2]

[1]Recep Tayyip Erdoğan University, Faculty of Health Sciences, Nursing Department, Rize · **zpehlivan687@gmail.com** · ORCID > 0000-0002-7318-9153

[2]Recep Tayyip Erdoğan University, Faculty of Health Sciences, Nursing Department, Rize · **vacide.asikozdemir@erdogan.edu.tr** · ORCID > 0000-0001-6421-1518

Makale Bilgisi/Article Information

Makale Türü/Article Types: Araştırma Makalesi/Research Article
Geliş Tarihi/Received: 24 Ağustos/Agust 2023
Kabul Tarihi/Accepted: 7 Şubat/February 2024
Yıl/Year: 2024 | **Cilt – Volume:** 9 | **Sayı – Issue:** 1 | **Sayfa/Pages:** 173-186

Atıf/Cite as: Pehlivan Köksal, Z., Aşık Özdemir, V. "Hopelessness in Patients Receiving Hemodialysis Treatment in The Covid-19 Pandemic: A Descriptive and Cross-Sectional Study" Journal of Samsun Health Sciences 9(1), April 2024: 173-186.

Sorumlu Yazar/Corresponding Author: Zeynep PEHLİVAN KÖKSAL

Yazar Notu/Author Note: This study was presented as an oral presentation to the 8th International Conference on COVID-19 Studies.

https://doi.org/10.47115/jshs.1349153

HOPELESSNESS IN PATIENTS RECEIVING HEMODIALYSIS TREATMENT IN THE COVID-19 PANDEMIC: A DESCRIPTIVE AND CROSS-SECTIONAL STUDY

ABSTRACT

Aim: This study was conducted to reveal the hopelessness level of the patients receiving hemodialysis treatment during the COVID-19 pandemic and the factors affecting it.

Method: This study was conducted with patients receiving HD treatment in dialysis centers affiliated with three hospitals in a province in Northeast Turkey between January and April 2022. The universe of the research is all patients who are treated in the dialysis units of the mentioned hospitals (N=147). The study was completed with 110 patients who met the inclusion criteria and volunteered to participate in the study. The data of the study were collected with the "Descriptive Information Form", "Charlson Comorbidity Index" and "Beck Hopelessness Scale (BHS)".

Results: 58.2% of the patients with a mean age of 63.30±15.33 were male, and 80.0% were married. 50.9% of them were diagnosed with COVID-19, 56.4% perceived themselves in the risk group for COVID-19, and 30.0% stated that COVID-19 causes hopelessness in their daily life. The mean total score was 7.87±5.38 for the BHS and 5.34±2.35 for the Charlson Comorbidity Index. There was a significant positive correlation between BHS total score and age ($p<0.05$). The mean BHS total score of the patients who were not diagnosed with COVID-19 was significantly higher than the than those diagnosed ($p<0.05$).

Conclusion and Recommendations: One-third of the hemodialysis patients experienced hopelessness during the pandemic period, their hopelessness level was moderate, the level of hopelessness increased as age increased, and the hopelessness level of those who were not diagnosed with COVID-19 was higher. In this context, early diagnosis, follow-up, treatment and management of hopelessness by healthcare professionals is important in preventing irreversible errors in patients.

Keywords: Pandemic, COVID-19, Hemodialysis, Hopelessness.

❋❋❋

COVID-19 PANDEMİSİNDE HEMODİYALİZ TEDAVİSİ ALAN HASTALARDA UMUTSUZLUK: TANIMLAYICI VE KESİTSEL ÇALIŞMA

ÖZ

Amaç: Bu çalışma, COVID-19 pandemisinde hemodiyaliz tedavisi alan hastaların umutsuzluk düzeyini ve etkileyen faktörleri ortaya koymak amacıyla yapıldı.

Yöntem: Bu araştırma, 2022 yılının Ocak-Nisan ayları arasında Türkiye'nin Kuzeydoğusu'ndaki bir ilde bulunan üç hastaneye bağlı diyaliz merkezlerinde HD tedavisi alan hastalarla yapıldı. Araştırmanın evrenini adı geçen hastanelerin diyaliz ünitelerinde tedavi gören tüm hastalar oluşturdu (N=147). Araştırma, dahil edilme kriterlerini karşılayan ve araştırmaya katılmaya gönüllü olan 110 hasta ile tamamlandı. "Tanıtıcı Bilgiler Formu", "Charlson Komorbidite İndeksi" ve "Beck Umutsuzluk Ölçeği (BUÖ)" ile araştırmanın verileri toplandı.

Bulgular: Yaş ortalaması 63.30±15.33 olan hastaların %58.2'si erkek ve %80.0'ı evlidir. Hastaların %50.9'u COVID-19 tanısı almıştır, %56.4'ü kendisini COVID-19 açısından riskli grupta görmektedir ve %30.0'u COVID-19'un günlük yaşamında umutsuzluk yaşamasına neden olduğunu belirtmiştir. BUÖ toplam puan ortalamaları 7.87±5.38, Charlson Komorbidite İndeksi toplam puan ortalamaları 5.34±2.35 olarak bulundu. BHS toplam puan ile yaş arasında pozitif yönde anlamlı ilişki mevcuttu ($p<0.05$). COVID-19 tanısı almayanların BUÖ toplam puan ortalamaları, tanı alan gruba göre anlamlı derecede yüksek bulundu ($p<0.05$).

Sonuç ve Öneriler: Pandemi sürecinde hemodiyaliz tedavisi alan hastaların üçte birinin umutsuzluk yaşadığı, umutsuzluk düzeyinin orta düzeyde olduğu, yaş arttıkça umutsuzluk düzeyinin arttığı ve COVID-19 tanısı almayanların umutsuzluk düzeyinin daha yüksek olduğu belirlendi. Bu kapsamda umutsuzluğun sağlık profesyonelleri tarafından erken tanısı, takibi, tedavisi ve yönetimi, hastalarda geri dönüşü olmayan hataların önlenmesi açısından önemlidir.

Anahtar Kelimeler: Pandemi, COVID-19, Hemodiyaliz, Umutsuzluk.

❋❋❋

INTRODUCTION

The COVID-19 pandemic first appeared in Wuhan, China, and quickly spread over the world (Ciotti et al., 2020). In this pandemic, it has been reported that individuals with Chronic Kidney Disease (CKD) are at higher risk of COVID-19 than healthy individuals in terms of both morbidity and mortality (Henry & Lippi,

2020; Li et al., 2020). The reasons for this include patients being older than the general population, having comorbid diseases such as diabetes and cardiovascular diseases, having to travel to come to the unit, and being relatively close to each other as a group in the unit (Carlson et al., 2021; Meijers et al., 2020; Li et al., 2020; Ponce et al., 2024; Tang et al., 2020; Wang, 2020; Yu et al., 2021). According to a study in Wuhan, COVID-19-related morbidity in HD patients was 2%, which is substantially much greater than the normal population (Öneç, 2020).

Patients undergoing HD treatment must deal with a variety of issues, including dependency on a dialysis machine on certain days of the week, adherence to medication and diet therapy, financial struggles brought on by the inability to work, adjustments to work and family responsibilities, sexual dysfunction, and concerns about maintaining life. These problems deepen with the pandemic and cause hemodialysis patients to experience negative psychological states such as anxiety, depression, and hopelessness (Bahar & Ayar, 2022; Li et al., 2020; Moreira et al., 2021; Yakaryılmaz & Pembegül, 2022).

The Turkish Language Association defines hope as "the sense of having hopeful aspirations for the future." Hope gives people the feeling of coping with the negative experiences they may encounter in the future, and thus positively affects their mental health. The antithesis of being hopeful is hopelessness, which is a state of mind that harms one's psychosocial well-being and results in mental health issues like depression and suicide (Başaran et al., 2016). The North American Nursing Diagnostic Association accepted hopelessness as a nursing diagnosis in 1986 and described it as "a situation in which the individual perceives limited or no choices or discovers no personal possibilities and is unwilling to devote energy for his/her benefit (American Nurses Association, 1998).

During the COVID-19 pandemic, hemodialysis patients feel more hopeless and are more anxious about becoming sick, spreading disease, being hospitalized, and dying (Başaran et al., 2016). In a study showed that negative and traumatic situations like the pandemic increased the level of hopelessness in patients (Yılmaz et al., 2020). In different studies, it has been determined that patients receiving hemodialysis treatment experience moderate and high levels of hopelessness (Bahar & Ayar, 2022; Büyükbayram et al., 2021; Yakaryılmaz & Pembegül, 2022). It has been reported in different studies that the COVID-19 pandemic causes psychological problems such as anxiety and depression in individuals with chronic diseases and paves the way for despair (Sheykhangafshe & Esmaeilinasab, 2021; Voorend et al., 2021; Yu et al., 2021).

It is thought that patients receiving HD treatment during the pandemic have increased levels of hopelessness due to both pandemic-related problems and treatment . Although there are studies in the literature examining the hopelessness lev-

els of patients receiving HD treatment before the pandemic (Büyükbayram et al., 2021; Cengiz & Sarıtaş, 2019; Ercan & Demir, 2018), a limited number of studies in this field after the pandemic. Therefore, this study was conducted to reveal the hopelessness level of patients who received HD treatment during the COVID-19 pandemic and the factors affecting it.

Research questions:

1. What is the hopelessness level of patients receiving HD treatment in the COVID-19 Pandemic?
2. What are the factors affecting the hopelessness level of patients receiving HD treatment in the COVID-19 Pandemic?

METHOD

Design of the Study, Place and Time: The study is descriptive and cross-sectional. This study was conducted with patients receiving HD treatment in dialysis centers affiliated with three hospitals in a province in Northeast Turkey between January and April 2022.

Participants: The population of the study was all patients (N=147) who received treatment in the dialysis units of the relevant hospitals. Persons aged 18 and over without any psychiatric diagnosis and who could communicate verbally were included in the study on a voluntary basis. Accordingly, the study was terminated with 110 patients because 26 could not communicate verbally and 11 did not want to participate in the study.

Measures: The data were collected using the *"Descriptive Information Form"*, the *"Charlson Comorbidity Index"*, and the *"Beck Hopelessness Scale"*. The data were collected by the researcher during the HD treatment of the patients at a time suitable to the patient using the face-to-face interview technique. The interview lasted an average of 10-15 minutes for each patient.

The Descriptive Information Form: This form consists of 13 related to sociodemographic characteristics (age, gender, smoking status, etc.), 5 related to CKD and HD treatment (kidney disease diagnosis age, frequency of HD treatment, etc.), COVID-19 pandemic process and It consists of a total of 26 questions, 7 of which are about the effects on the patient and 1 about the other diseases.

The Charlson Comorbidity Index: It was developed by Charlson et al. in 1987. Comorbid diseases are scored according to their severity on the index. Comorbidities are given a score of 1, 2, 3, and 4, respectively, from mild to severe, and comorbidity grading is made according to the weighted score obtained by summing the

scores of comorbid diseases. According to this grading, patients are divided into four grades 0, 1-2, 3-4, 5, and above, and the scores obtained by the patients ranged from 0 (no comorbidity) to 31 (maximum comorbidity) (Charlson et al., 1987).

The Beck Hopelessness Scale (BHS): The Turkish validity and reliability study of the scale, which was developed by Beck, Weissman, Lester, and Trexler in 1971 in order to determine the negative expectations of the person for the future, was conducted by Seber, Dilbaz, Kaptanoğlu, and Tekin in 1993 and the Cronbach alpha coefficient was found to be 0.86 (Beck et al., 1971; Seber et al., 1993). The Turkish validity and reliability study of the scale, which was developed by Beck, Weissman, Lester, and Trexler in 1971, was carried out by Seber, Dilbaz, Kaptanoğlu, and Tekin in 1993 (Beck et al., 1971; Seber et al., 1993). Then, Durak and Palabıyıkoğlu studied the scale in 1994 and obtained more detailed information about the validity, reliability, and factor structure of the scale. Cronbach alpha coefficient of the scale was found to be 0.85 (Durak & Palabıyıkoğlu, 1994). In this study, the Cronbach alpha number of the scale was found to be 0.89. The scale, which consists of 20 items in total, has 3 sub-dimensions (feelings about the future, loss of motivation and expectations). The total scale score obtained by taking 0 or 1 from each item is "normal" if it is between 0 and 3, "mild" if it is between 4 and 8 points, "moderate" if it is between 9 and 14 points, and "severe" if it is between 14 and 20 points" indicates the level of hopelessness (Seber et al., 1993; Durak & Palabıyıkoğlu, 1994). Then, Durak and Palabıyıkoğlu studied the scale in 1994 and obtained more detailed information about the validity, reliability, and factor structure. Cronbach alpha coefficient of the scale was found to be 0.85 (Durak & Palabıyıkoğlu, 1994).

Data Collection: The research is of descriptive type and is a survey study. Research data were collected by the same investigator using face-to-face interview technique during the hemodialysis treatment of the patients, at a time when the patient was also available.

Data Analysis: The obtained data were analyzed using the Statistical Package for Social Sciences (SPSS) 20.0 package program and their conformity to the normal distribution was checked with the Shapiro-Wilk test. In the analysis of the data, frequency, percentage, minimum and maximum values and standard deviation were used. In the analysis of the difference between independent variables, Mann Whitney U test was used for data with less than two groups that did not fit into the normal distribution, Kruskal Wallis test and Pearson correlation analysis were used for data containing more than two groups. Independent t-test was used for data containing less than two groups, and One-Way ANOVA test was used for data containing more than two groups. Obtained data were evaluated at $p<0.05$ significance level.

The Ethical Aspect of the Research: Prior to the study, written permission and ethics committee approval (Date/Decision no: 19.10.2021/181) were obtained from the relevant institutions. In addition, permission to use the scale was obtained from the authors who conducted the validity and reliability study via e-mail, and the patients included in the study on a voluntary basis were informed about the study and their consent was obtained.

RESULTS

The mean age of the patients in the study was 63.30±15.33 years (min. 22, max. 95), 58.2% were male, 48.2% were primary school graduates, 80.0% were married, 83.6% were not working, 82.7% had nuclear families, 67.3% were non-smokers, and 42.7% were slightly overweight.

60.0% of the patients had been receiving HD treatment for 5 years or less, 91.8% received HD treatment three times a week, and 94.5% had comorbidities. 50.9% were diagnosed with COVID-19, 94.5% received COVID-19 vaccine, 57.3% had a first-degree relative diagnosed with COVID-19, and 12.7% lost a first-degree relative due to COVID-19. 56.4% had a perception of being in a risk group for COVID-19-19, 42.7% had the perception that COVID-19 would affect his/her psychology more negatively due to HD treatment, and 30.0% reported experiencing hopelessness in their daily lives due to COVID-19.

Table 1. Mean scores of the BHS and Charlson Comorbidity Index (*n*=110)

Scale	Minimum	Maximum	X±S.D.
Charlson Comorbidity Index	0	11	5.34±2.35
BHS Total score	0	20	7.87±5.38

The patients' Charlson Comorbidity Index total mean score was found to be 5.34±2.35, and the BHS total score mean was 7.87±5.38 (Table 1).

Table 2. Comparison of Descriptive Characteristics of Patients with Total Score of BHS (n=110)

Descriptive Characteristics	n (%)	BHS Total Score	p-test
		X±S.D.	
Age		63.30±15.33	**0.009**[a]
The Charlson Comorbidity Index		5.34±2.35	
Gender			
Female	46 (41.8)	7.56±5.84	0.614[b]

Male	64 (58.2)	8.09±5.07	
Education level			
Illiterate	24 (21.8)	8.37±5.79	0.271[c]
Primary school	53 (48.2)	8.47±5.37	
Secondary school	13 (11.8)	7.76±5.49	
High school and over	20 (18.2)	5.75±4.67	
Marital status			
Married	88 (80.0)	7.88±5.29	0.958[b]
Single	22 (20.0)	7.81±5.90	
Employment status			
Yes	18 (16.4)	6.61±4.88	0.280[b]
No	92 (83.6)	8.11±5.47	
Family type			
Living alone	5 (4.5)	9.60±9.04	0.696[c]
Nuclear family	91 (82.7)	7.65±5.27	
Extended family	14 (12.9)	8.64±4.82	
Smoking			
Yes	17 (15.5)	7.41±3.96	0.753[c]
No	74 (67.2)	8.22±5.89	
Quit	19 (17.3)	6.89±4.40	
Duration of HD treatment			
≤ 5 years	66 (60.0)	7.80±5.71	0.822[c]
6-10 years	31 (28.2)	8.22±5.12	
≥ 11 years	13 (11.8)	7.38±4.55	
Frequency of HD treatment			
2 times a week	9 (8.2)	11.0±5.26	0.064[e]
3 times a week	101 (91.8)	7.59±5.33	
Presence of comorbidity			
Yes	104 (94.5)	8.10±5.38	0.059[b]
No	6 (5.5)	3.83±4.02	
Being diagnosed with COVID-19			
Yes	56 (50.9)	6.46±4.71	**0.005**[b]
No	54 (49.1)	9.33±5.69	
Receiving COVID-19 vaccination			
Yes	104 (94.5)	8.02±5.48	0.384[e]
No	6 (5.5)	5.16±2.13	

Having a first-degree relative diagnosed with COVID-19			
Yes	63 (57.3)	8.46±5.01	0.139[b]
No	47 (42.7)	7.42±5.65	
Loss of a first-degree relative due to COVID-19			
Yes	14 (12.7)	9.92±6.65	0.184[e]
No	96 (87.3)	7.57±5.15	
Perception of being in a risk group for COVID-19			
Yes	62 (56.3)	8.03±5.92	0.172[d]
No	41 (37.3)	7.17±4.32	
Partially	7 (6.4)	10.57±5.82	
Having the perception that COVID-19 will affect his/her psychology more negatively due to HD treatment			
Yes	47 (42.7)	8.78±5.80	0.254[c]
No	40 (36.4)	6.70±4.79	
Partially	23 (20.9)	8.04±5.32	
COVID-19 causes hopelessness in daily life			
Yes	33 (30.0)	9.57±6.10	0.069[c]
No	39 (35.5)	6.25±4.19	
Partially	38 (34.5)	8.05±5.46	

a: Pearson correlation analysis, b: Independent t-test, c: Kruskall Wallis H test, d: One-way ANOVA, e: Mann Whitney U test

There is a significant positive correlation between age and the BHS total mean scores ($p<0.05$). The BHS score increases with increasing age. The mean BHS total score of those not diagnosed with COVID-19 was significantly higher than the others ($p<0.05$). No significant difference was found between the groups in terms of gender, education level, marital status, employment status, family type, place of residence, income status, smoking, duration and frequency of HD, use of medication, presence of hypertension, presence of comorbidities, COVID-19 vaccination status, having a first-degree relative diagnosed with COVID-19, loss of a first-degree relative due to COVID-19, perception of being in a risk group for COVID-19, and perception of COVID-19 causing hopelessness in daily life ($p>0.05$) (Table 2).

Tablo 3. Correlation Analysis Between Patients' Charlson Comorbidity Index and Beck Hopelessness Scale Average Scores

	BHS
Charlson Comorbidity Index	r=0.151
	p=0.116

Pearson correlation analysis

No significant relationship was found between Charlson Comorbidity Index and Beck Hopelessness Scale mean scores (p>0.05).

DISCUSSION

Determining the degree of hopelessness among hemodialysis patients during the pandemic and the factors influencing it will improve patient care by raising nurses' awareness of it and shedding light on further research in this field because hopelessness can result in psychological issues like anxiety and depression and life-threatening situations like suicidal ideation by impairing patients' compliance with treatment and perspective on life (Bahar & Ayar, 2022; Başaran et al., 2016; Sheykhangafshe & Esmaeilinasab, 2021; Yakaryılmaz & Pembegül, 2022).

Our study showed that one-third of hemodialysis patients experienced hopelessness during the COVID-19 pandemic, and their hopelessness level was mild, according to the BHS. Other studies conducted before the pandemic found that HD patients experienced mild and moderate levels of hopelessness (Başaran et al., 2016; Cengiz & Sarıtaş, 2019; Ok & Kutlu, 2019; Tan et al., 2005;). During the pandemic, the incidence of psychological symptoms such as anxiety, depression, and hopelessness increased in HD patients (Duru, 2022; Hao et al., 2021), and half of the hemodialysis patients felt hopeless (Afifi et al., 2022). Given that HD patients encounter a wide range of physical and psychological symptoms that vary depending on the condition and the course of therapy, patients may unavoidably feel hopeless.

It was found that there was a positive and significant relationship between age and hopelessness level. As age increases, the level of hopelessness increases. Consistent with our results, research has shown that HD patients' hopelessness rises with age (Başaran et al., 2016), whereas another studys has found no relationship between age and level of hopelessness (Bahar & Ayar, 2022; Ok & Kutlu, 2019). The level of hopelessness is thought to rise with age for a variety of reasons, including the higher prevalence of chronic diseases and the heavier symptom and treatment burdens associated with these diseases, an increase in death-related thoughts, physical insufficiencies and hence dependence on others for daily needs, and a weaker ability to cope with diseases and symptoms.

Our study, men's hopelessness level was higher than women's, but there was no significance. Consistent with our study, the literature has citations that the level of hopelessness is not affected by gender (Andrade et al., 2015; Ercan & Demir, 2018; Yakaryılmaz & Pembegül, 2022). However, some studies in the literature have conflicting results on the subject. For example, it was found that male hemodialysis patients were more hopeless (Cengiz & Sarıtaş, 2019), and female hemodialysis patients were significantly more hopeful than male patients (Başaran et al., 2016).

Despite the lack of a statistically significant relationship between gender and hopelessness in this study, it is believed that men's higher ratings on the hopelessness scale may be due to their more active involvement in social and professional activities. Therefore, it is possible to speculate that HD therapy may result in pessimism by restricting or entirely ending the social and professional lives of male patients.

Although married patients' hopelessness scores were greater than those of single patients, the difference between them was not statistically significant. Likewise, other investigations also found that marital status had no impact on HD patients' sense of hopelessness (Andrade et al., 2015; Bahar & Ayar, 2022; Cengiz & Sarıtaş, 2019). Even though there is no significant relationship between marital status and hopelessness in this study, it is believed that married patients have higher hopelessness scores because they worry about not being able to fulfill the demands of marriage and because of potential role changes brought on by the disease.

Although the difference was not statistically significant, unemployed patients scored higher on the hopelessness scale. Hopelessness scores of those who received HD treatment and who did not work were found to be higher (Bahar & Ayar, 2022). According to these results, the fact that both the sociocultural environment and socioeconomic status of the non-working patients were lower may have increased the hopelessness levels of the patients.

The hopelessness scores of the patients living alone were found to be insignificantly higher in our study. Similarly, HD patients living alone and having a low level of social support have higher hopelessness scores (Büyükbayram et al., 2021). Even though there is no significant difference according to these data, it is believed that patients who are alone may feel inadequate in coping with the challenges they confront and thus may suffer hopelessness connected to this.

The patients who underwent HD therapy for 6–10 years had a higher sense of hopelessness, although there was no statistically significant difference between them. It has been reported that as the duration of HD treatment of patients increases, their level of hopelessness also increases (Büyükbayram et al., 2021; Cengiz & Sarıtaş, 2019; Cullen et al., 2020). Contrary to these results, another study showed that there was no significant difference between the duration of illness and hopelessness (Başaran et al., 2016). Although there is no significant difference according to the results of this study, the frequency and severity of the symptoms experienced by the patients and thus the hopelessness may increase with the prolongation of the disease and the duration of treatment.

The hopelessness scores of those with comorbidity are insignificantly higher than the others. The simultaneous presence of more than one disease, despite the

insignificant difference, can lead to many symptoms or symptom clusters, increasing the treatment intensity and level of dependence, and thus hopelessness levels.

In our study, the hopelessness level of patients who were not diagnosed with COVID-19 was significantly higher. In a study, it was determined that patients receiving hemodialysis treatment experienced anxiety and depression due to the risk of contamination and uncertainty due to the COVID-19 pandemic (Lee et al., 2020). In a different study, it was concluded that the mental health of hemodialysis patients was not affected by the COVID-19 epidemic (Bonenkamp et al., 2021). More comprehensive studies are needed for definitive results.

Because they are older than patients in the general population, have concomitant illnesses including diabetes and cardiovascular diseases, must travel to the unit, and are in a group and close to one another there, patients getting HD therapy have a greater risk of COVID-19 than other groups (Cullen et al., 2020; Meijers et al., 2020; Tang et al., 2020). In this study, more than half of the patients (56.4%) perceived themselves in the group at higher risk for COVID-19 than other people and their hopelessness score averages were higher than those who did not, but the difference was not significant.

42.7% of the patients perceived that COVID-19 would affect their psychology more negatively due to HD treatment, but this difference was not significant. According to reports, individuals receiving HD treatment may experience a number of psychological effects such as depression, stress and hopelessness associated with the Covid-19 pandemic (Chan et al., 2021; Duran & Güngör, 2015; Grandizoli & Araújo Filho, 2020; Tavassoli et al., 2019). HD treatment is a process in which patients have to deal with many problems such as having to receive treatment on certain days of the week, restrictions in social and family roles, and treatment complications. Therefore, it is believed that the COVID-19 pandemic may have had a more negative psychological impact on this patient group than it did on other populations.

Limitations: The most important limitation of the study is that the study was carried out in three HD units in a city and the data depended on the form and scales created by the researchers. At the same time, the study is a cross-sectional study and reveals a specific time period and cannot be generalized.

Conclusion and Recommendations: This study was carried out to determine the hopelessness level of patients receiving HD treatment during the pandemic and the affecting factors. According to the results, one-third of patients receiving HD treatment during the pandemic experienced hopelessness, their hopelessness was at a moderate level, as age increased, the level of hopelessness increased, and those who were not diagnosed with COVID-19 had a higher level of hopelessness.

Hopelessness can lead to life-threatening situations such as suicidal thoughts. Therefore, early diagnosis, follow-up, treatment, and management of this symptom by health professionals are important in preventing irreversible errors in patients. Due to the skarcity of literature on the subject, it is recommended that studies investigating the hopelessness levels of hemodialysis patients and affecting factors should be conducted with a larger sample group more comprehensively.

Acknowledgement

The authors thank all hemodialysis patients who participated in this study.

Conflict of Interest

The author declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The authors did not receive support from any organization for the submitted work.

Author Contributions

Design of study: ZPK (%50), VAÖ (%50)

Data collection: ZPK (%100)

Data analysis and interpretation: ZPK (%50), VAÖ (%50)

Drafting of the article: ZPK (%50), VAÖ (%50)

Submission and Revision: ZPK (%50), VAÖ (%50)

REFERENCES

Afifi, R., Maazouzi, C., Zamd, M., Mtioui, N., Elkhayat, S., Medkouri, G., & Benghanem, M. (2022). MO823: Psychological impact of COVID-19 in hemodialysis patients. *Nephrology Dialysis Transplantation, 37*(Supplement_3), gfac083-005. https://doi.org/10.1093/ndt/gfac083.005

American Nurses Association (ANA). American Nurses Association: Standards of Clinical Nursing Practice, 2 nd ed. Washington, DC. American Nurses Publishing;1998.

Andrade, S. V., Sesso, R. & Diniz, D. H. D. M. P. (2015). Hopelessness, suicide ideation, and depression in chronic kidney disease patients on hemodialysis or transplant recipients. *Brazilian Journal of Nephrology, 37*(1), 55-63. https://doi.org/10.5935/0101-2800.20150009

Bahar, A., & Ayar, D. (2022). The relationship of anxiety and hopelessness in hemodialysis patients. *Social Sciences Studies Journal, 8*(98), 1593-1600. http://dx.doi.org/10.29228/sssj.62075

Başaran, D., Altun, Ö.Ş., Kaban, F., & Ecder, T. (2016). Evaluation of Hopelessness Levels of Hemodialysis Patients. *Journal of Nephrology Nursing, 11*(1), 9-16. (Original work published in Turkish).

Beck, A. T., Weissman, A., Lester, D., & Trexler, L. (1971). The measurement of pessimism. The hopelessness scale. *Journal of Consulting and Clinical Psychology, 12*(6), 861-865. https://doi.org/10.1037/h0037562

Büyükbayram, Z., Ayık, D. B., & İl, D. A. (2021). Perceived social support and hopelessness levels in hemodialysis patients. *Journal of Nephrology Nursing, 16*(3), 134-143. (Original work published in Turkish).

Bonenkamp, A. A., Druiventak, T. A., van Eck van der Sluijs, A., van Ittersum, F. J., van Jaarsveld, B. C., Abrahams, A. C., & Domestico study group. (2021). The Impact of COVID-19 on the mental health of dialysis patients. *Journal of Nephrology, 34*, 337-344. https://doi.org/10.1007/s40620-021-01005-1

Carlson, N., Nelveg-Kristensen, K. E., Freese Ballegaard, E., Feldt-Rasmussen, B., Hornum, M., Kamper, A. L. & Torp-Pedersen, C. (2021). Increased vulnerability to COVID-19 in chronic kidney disease. *Journal of Internal Medicine, 290*(1), 166-178. https://doi.org/10.1111/joim.13239

Cengiz, D. U., & Sarıtaş, S. Ç. (2019). The effect of illness perception on hopelessness level of patients receiving hemodialysis. *Turkish Journal of Nephrology, 28*(4), 257-62.

Chan, A. S. W., Ho, J. M. C., Li, J. S. F., Tam, H. L., & Tang, P.M.K. (2021). Impacts of COVID-19 pandemic on psychological well-being of older chronic kidney disease patients. *Frontiers in Medicine, 8*, https://doi.org/10.3389/fmed.2021.666973

Charlson, M. E., Pompei, P., Ales, K. L., & MacKenzie, C. R. (1987). A new method of classifying prognostic comorbidity in longitudinal studies: development and validation. *Journal of Chronic Diseases, 40*(5), 373-383. https://doi.org/10.1016/0021-9681(87)90171-8

Ciotti, M., Ciccozzi, M., Terrinoni, A., Jiang, W.C., Wang, C.B., & Bernardini, S. (2020). The COVID-19 pandemic. *Critical Reviews Clinical Laboratory Sciences, 57*(6), 365-388. https://doi.org/10.1080/10408363.2020.1783198

Cullen, W., Gulati, G., & Kelly, B. D. (2020). Mental health in the COVID-19 pandemic. QJM: An *International Journal of Medicine, 113*(5), 311-312. https://doi.org/10.1093/qjmed/hcaa110

Durak, A., & Palabıyıkoğlu, R. (1994). Beck hopelessness scale validity and reliability study. *Turkish Journal of Psychology, 2*(2), 3111-319.

Duran, S., & Güngör, E. (2015). Determination of the emotional and social problems in dialysis patients. *Journal of Uludag University Faculty of Medicine, 41*(2), 59-63. (Original work published in Turkish).

Duru, H. (2022). The prevalence and severity of mental health problems and sexual dysfunction in hemodialysis patients before and during the COVID-19 pandemic. *Therapeutic Apheresis and Dialysis, 26*(6), 1211-1219. https://doi.org/10.1111/1744-9987.13805

Ercan, F., & Demir, S. (2018). Hopelessness and quality of life levels in hemodialysis patients. *Gazi Medical Journal, 29*(3), 169-174. http://doi.org/10.12996/gmj.2018.49 (Original work published in Turkish).

Grandizoli, M. V., & Araújo Filho, G. M. D. (2020). Depression, hopelessness, suicide ideation and quality of life of patients on hemodialysis. *Revista da Sociedade Brasileira de Psicologia Hospitaler, 23*(1), 53-65.

Hao, W., Tang, Q., Huang, X., Ao, L., Wang, J., & Xie, D. (2021). Analysis of the prevalence and influencing factors of depression and anxiety among maintenance dialysis patients during the COVID-19 pandemic. *International Urology and Nephrology, 53*, 1453-1461. https://doi.org/10.1007/s11255-021-02791-0

Henry, B. M., & Lippi, G. (2020). Chronic kidney disease is associated with severe coronavirus disease 2019 (COVID-19) infection. *International Urology and Nephrology, 52*(6), 1193-1194. https://doi.org/10.1007/s11255-020-02451-9

Lee, J., Steel, J., Roumelioti, M. E., Erickson, S., Myaskovsky, L., Yabes, J. G., & Jhamb, M. (2020). Psychosocial impact of COVID-19 pandemic on patients with end-stage kidney disease on hemodialysis. *Kidney 360, 1*(12), 1390-1397. https://doi.org/10.34067%2FKID.0004662020

Li, J., Li, S.X., Zhao, L. F., Kong, D. L., & Guo, Z. Y. (2020). Management recommendations for patients with chronic kidney disease during the novel coronavirus disease 2019 (COVID-19) epidemic. *Chronic Diseases and Translational Medicine, 6*(02), 119-123. https://doi.org/10.1016/j.cdtm.2020.05.001

Meijers, B., Messa, P., & Ronco, C. (2020). Safeguarding the maintenance hemodialysis patient population during the coronavirus disease 19 pandemic. *Blood Purification, 49*(3), 259-264. https://doi.org/10.1159/000507537

Moreira, R. A., da Silva Borges, M., & Moura, A. L. G. (2021). The Hope of Patients Undergoing Hemodialysis and Peritoneal Dialysis. *Multidisciplinary Experiences in Renal Replacement Therapy.* IntechOpen. https://doi.org/10.5772/intechopen.100577

Ok, E., & Kutlu, F. Y. (2019). Hopelessness, anxiety, depression and treatment adherence in chronic hemodialysis patients. *Internation Journal of Caring Sciences, 12*(1), 423-429.

Öneç, K. (2020). Management of Nephrology and Hemodialysis Patients in the Pandemic-Experiences of Düzce University. *Konuralp Medical Journal, 12*(S1), 383-385. (Original work published in Turkish).

Ponce, D., Nitsch, D., & Ikizler, T. A. (2024). Strategies to Prevent Infections in Dialysis Patients. *In Seminars in Nephrology (*p. 151467). WB Saunders. https://doi.org/10.1016/j.semnephrol.2023.151467

Seber, G., Dilbaz, N., Kaptanoğlu, C. & Tekin, D. (1993). Hopelessness scale: validity and reliability. *Journal Crisis, 1*, 139-142. (Original work published in Turkish).

Sheykhangafshe, F. B., & Esmaeilinasab, M. (2021). Psychological implications of coronavirus disease 2019 outbreak in patients with chronic diseases: A systematic review. *Chronic Diseases Journal, 9*(3), 132-143. https://doi.org/10.22122/cdj.v9i3.629

Tang, B., Li, S., Xiong, Y., Tian, M., Yu, J., Xu, L. & Liu, S. (2020). COVID-19 pneumonia in a hemodialysis patient. *Kidney Medicine, 2*(3), 354-358. https://doi.org/10.1016/j.xkme.2020.03.001

Tan, M., Okanlı, A., Karabulutlu, E. & Erdem, N. (2005). Social support in hemodialysis patients and evaluation of the relationshıp between desperity. *Journal of Nursology, 8*(2), 32-39. (Original work published in Turkish).

Tavassoli, N., Darvishpour, A., Mansour-Ghanaei, R., & Atrkarroushan, Z. A. (2019). Correlational study of hope and its relationship with spiritual health on hemodialysis patients. *Journal of Education and Health Promotion*, *8*, 146-150. https://doi.org/10.4103%2Fjehp.jehp_461_18

Voorend, C. G. N., Van Oevelen, M., Nieberg, M., Meuleman, Y., Franssen, C. F. M., Joosten, H., & van Buren, M. (2021). Impact of the COVID-19 pandemic on symptoms of anxiety and depression and health-related quality of life in older patients with chronic kidney disease. *BMC Geriatrics, 21*, 1-10. https://doi.org/10.1186/s12877-021-02593-0

Wang, H. (2020). Maintenance hemodialysis and COVID-19: saving lives with caution, care, and courage. *Kidney Medicine, 2*(3), 365-366. https://doi.org/10.1016/j.xkme.2020.03.003

Yakaryılmaz, F. D., & Pembegül, İ. (2022). The Relationship Between Hopelessness and Daily Living Activities in Hemodialysis Patients. *Fırat University Health Sciences Veterinary Journal, 36*(2), 97-100. https://doi.org/10.4274/ejgg.galenos.2022.2022-1-4. (Original work published in Turkish).

Yılmaz, Z., İstemihan, F.Y., Arayıcı, S. N., Yılmaz, S., & Güloğlu, B. (2020). The investigation of anxiety and hopelessness among individuals throughout COVID-19 outbreak. *Crisis Journal, 28*(3), 135-150.

Yu, J. Y., Kim, J. S., Hong, C. M., Lee, K. Y., Cho, N. J., Park, S., & Lee, E. Y. (2021). Psychological distress of patients with end-stage kidney disease undergoing dialysis during the 2019 coronavirus disease pandemic: A cross-sectional study in a University Hospital. *PLoS One, 16*(12), e0260929. https://doi.org/10.1371/journal.pone.0260929