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Status of Self-Transcendence and Quality of Life in Patients Receiving Hemodialysis

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ABSTRACT

Objective: The aim of this study is to evaluate the status of self-transcendence and quality of life in patients receiving hemodialysis therapy. **Materials and Methods:** It is a descriptive and cross-sectional study. The universe of the study consisted of all patients (n=380) who received hemodialysis treatment in dialysis centers located in the city center of Zonguldak. Personal Information Form, Reed's self-transcendence scale, and EUROHIS (WHOQOL-8.Tr) Scale were used in data collection. **Results:** There was a highly positive relationship between the self-transcendence scale and the EUROHIS (WHOQOL-8.Tr) (p=0.000, r=0.605). Also, it was found in this study that age and level of income of hemodialysis patients affected the quality of life and the self-transcendence. **Conclusion:** As a result, it was determined that the patients aged 60-74 years and those with low-income levels in hemodialysis patients had a poor self-transcendence status, while patients aged 75 and over, with low income and unemployed had poor quality of life. There is a need for experimental and randomized controlled studies to be carried out in larger samples to increase the quality of life and self-transcendence.
Keywords: Quality of Life, Hemodialysis, Nursing Theory, Spiritual Healing.

Hemodiyaliz Tedavisi Alan Hastalarda Öz-Aşkınlık Durumu ve Yaşam Kalitesi

ÖZ

Amaç: Bu çalışmanın amacı, hemodiyaliz tedavisi alan hastalarda kendini aşma durumunu ve yaşam kalitesinin değerlendirilmesidir. **Gereç ve Yöntem:** Tanımlayıcı ve kesitsel bir çalışmadır. Araştırmanın evrenini Zonguldak il merkezinde bulunan diyaliz merkezlerinde hemodiyaliz tedavisi gören tüm hastalar (n=380) oluşturmuştur. Araştırma verilerinin toplanmasında "Kişisel Bilgi Formu", "Reed'in öz-aşkınlık ölçeği" ve ''EUROHIS (WHOQOL-8.Tr)'' ölçeği kullanılmıştır. **Bulgular:** Reed'in öz-aşkınlık ölçeği ile EUROHIS (WHOQOL-8.Tr) ölçeği arasında güçlü pozitif bir ilişki saptandı (p=0.000, r=0.605). Ayrıca, bu çalışmada hemodiyaliz hastalarının yaşı ve gelir düzeyinin yaşam kalitesini ve kendini aşmayı etkilediği bulundu. **Sonuç:** Sonuç olarak hemodializ hastalarında 60-74 yaş grubu ve gelir düzeyi düşük olan hastaların öz-aşkınlık durumunun kötü olduğu, 75 yaş ve üstü düşük gelir düzeyine sahip ve çalışmayan hastaların ise yaşam kalitelerinin kötü olduğu saptanmıştır. Yaşam kalitesini ve kendini aşmayı artırmak için daha büyük örneklemlerde yapılacak deneysel ve randomize kontrollü çalışmalara ihtiyaç vardır
Anahtar Kelimeler: Yaşam Kalitesi, Hemodializ, Hemşirelik Kuramı, Spiritüel İyileşme

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INTRODUCTION

End-stage renal failure (ESRD) is a progressive and irreversible disease leading to a series of biochemical, clinical, and metabolic disorders that are directly or indirectly associated with a high rate of morbidity, mortality, and hospitalization (Oliveira et al., 2016). In end-stage renal failure, patients need renal replacement therapies such as hemodialysis (HD), peritoneal dialysis (PD), and renal transplantation. Today, more than 2 million people worldwide lead their lives with dialysis treatments or transplantations due to ESRD (Ok & Işıl, 2019). HD treatment is still one of the most widely used renal replacement therapy methods that improve quality of life and prolong life in patients with ESRD (Durmaz Akyol, 2016). Although HD is a treatment method that increases life expectancy of patients (Tayyebi et al., 2010), it adversely affects patients physically, socially, economically, and psychologically (Alemdar & Pakyüz, 2015). These negative effects of HD also significantly affect the patient's quality of life (QOL) (Alemdar & Pakyüz, 2015). As HD treatment is a life-long treatment method and socioeconomic and disease factors affect QOL in this process, the need for support arises in patients (Tayyebi et al., 2010). The aim of supporting patients is to make them improve transcendence, gain new perspectives in life and develop a search for meaning and welfare (Haugan et al., 2020). Self-transcendence is a nursing theory developed by Pamela Reed, which allows patients to find spiritual meanings in life by accepting death as a part of life, enhances health perception, and helps to overcome disease-related challenges and make the person feel better (Milani et al., 2017). As it is known, while holistic nursing care focuses on healing the whole person through the handling of the body, mind, spirit, emotions and environment as a whole, the concept of self-transcendence draws attention as a central aspect of the spirituality of people. In this way, nurses play an important role in their patients' self-transcendence and reaching a higher level of health (Reed, 2009).

When the literature is examined, the status of self-transcendence has mostly been studied in the elderly population (Haugan et al., 2016; McCarthy et al., 2015a; McCarthy et al., 2015b; Thomas & Dunn, 2014). Although there are a large number of studies examining the quality of life in patients receiving HD therapy, only two studies evaluating self-transcendence have been encountered (AliPour Ganjineh Ketab et al., 2018; Khahi et al., 2017). Therefore, this study was made descriptively and cross-sectionally to evaluate the relationship between self-transcendence and QOL in patients receiving HD therapy.

MATERIALS AND METHODS

Design, setting, and sample

The universe of the study consisted of all patients (n=380) who receives HD treatment in two dialysis centers located in the city center of Zonguldak between May 3, 2019 and August 28, 2019. In the study, no sample selection was made from the universe, and all of the patients who received hemodialysis treatment between the dates of the study were included in the study. The sample of the study was comprised of all patients (n=230) aged 18 and over who did not have any psychiatric illness, any problems of vision, hearing, and perception, to have Turkish reading and writing skills and agreed to participate in the study.

Data collection

"Personal Information Form", "Reed's self-transcendence scale" and "EUROHIS (WHOQOL-8.Tr)" was used in data collection. In cases that were not understood on the forms by the patients, necessary explanations were made and a face-to-face interview method was used. The filling process took approximately 20-25 minutes.

***Personal Information Form*:** In this form consisting of 9 questions, patients were asked questions about socio-demographic features such as age, gender, level of education, marital status, level of income, occupation, employment status, and weekly dialysis status and how many years they had received dialysis treatment.

Reed's Self-Transcendence Scale: The scale was developed by Reed (1991) to assess self-transcendence. The scale was adapted into Turkish by Sarıçam (2015). The scale is a one-dimensional, four-point Likert scale (''none (1 point)'', ''Very little (2 points)'', ''Quite (3 points)'' and ''Very (4 points)'') and consists of 15 items (Reed, 1991; Sariçam, 2015). The lowest score to be taken from the scale was 15, the highest was 60, and as the score increased (1-4 points for each item), self-transcendence increased. As a result of the explanatory factor analysis that was applied for the construct validity of the scale, the items were collected in one dimension in accordance with the original form. According to the data obtained in the construct validity study of the scale, valid fit index values were obtained in confirmatory factor analysis ($\chi 2$=301.39, sd=86, RMSEA=0.062, CFI=0.97, RFI=0.95, GFI=0.94, NFI=0.96, SRMR=0.042). The factor loads of the scale are between 0.35 and 0.57. Cronbach's alpha was found to be 0.87 in the study that Sariçam (2015) performed and assessed the validity and reliability. In our study, Cronbach's alpha coefficient of the self-transcendence scale was found to be 0.90.

EUROHIS (WHOQOL-8.Tr): The EUROHIS-QOL.8 (WHOQOL-8) scale is the general-purpose index Quality of Life in Health scale, produced by selecting specific questions from the WHOQOL-Bref scale. The scale was adapted into Turkish by Eser et al. (2010). It consists of 8 questions, two of which are general questions. Response options are in 5-point Likert type. The extreme words of the answer options are "none" and "completely". As the score increases, the quality of life improves. The scale can be scored by taking the average score of the questions, calculating, or using alternative methods such as converting the total to 100 points. The first question of the scale is the general perception of quality of life, and the second question is general perception of health. Therefore, in the Turkish version, none of these two questions are asked to be unanswered. If one of these two questions is left unanswered, the

calculation of the score is not recommended. However, only one of the remaining 6 questions can be allowed to be left unanswered. The calculation is made by putting the average score of the other questions in the place of the unanswered question. These 6 questions are: energy (s3), being satisfied with daily life skills (s4), self-satisfaction (s5), being satisfied with the relationship with other people (s6), money (s7) and conditions of the house where they live (s8). The scale questions of the EUROHIS (WHOQOL-8.Tr) consisting of 8 questions were scored in a way that the lowest score to be 0 and the highest score to be 32 (Eser et al., 2010). Cronbach's alpha was found to be 0.85 in the study by Eser et al., (2010). In our study, the Cronbach alpha coefficient of the EUROHIS (WHOQOL-8.Tr) scale was found to be 0.76.

Statistical analysis

The data were analyzed using the SPSS version 24.0 (IBM SPSS for Windows, ver.24). In calculating sample width, power (test power) for each variable was determined by taking at least 80% and type 1 error of 5%. Skewness-Kurtosis values and the Kolmogorov-Smirnov test were used to evaluate whether the data were distributed normally. Parametric tests were applied in the study because the variables were normally distributed. The descriptive statistics of continuous variables in the study were shown with mean, standard deviation, while descriptive statistics of categorical variables were shown by frequency and percentage. To determine the differences between the groups, the independent samples t-test, one-way ANOVA test, and the Multiple linear regression analysis were used. Duncan test was used to identify different groups following analysis of variance. Pearson correlation analysis was used to determine the effects of independent variables. The statistical significance level (α) was taken as 5% in the calculations. $p<0.05$ was accepted as statistically significant.

Ethical considerations

Before starting the study, the scale permission was obtained electronically in order to be able to apply Reed's Self-Transcendence scale and EUROHIS (WHOQOL-8.Tr). Ethics committee approval was obtained from the Zonguldak Bülent Ecevit University Clinical Research Ethics Committee (Date: 24.01.2019, Number: 33479383/05). Also, written permission was obtained from the Provincial Health Directorate (Date 29/04/2019 Number:15291). The study was conducted on the basis of voluntary participation and ethical principles were adhered to during the study. Patients who were participated in the study explained the purpose of the research and data is specified to be used only for scientific purposes. Also their verbal informed consent was obtained.

RESULTS

While 60.4% were between the ages of 60-74, 80% were married. 56.5% of the patients participating in the study were male and 75.7% were primary school graduates. 43.9% were retired and 81.7% were found to have a moderate level of income. The majority of the patients (92.6%) stated that they received dialysis three days a week and (62.2%) received dialysis treatment between 1-4 years.

Patients' mean scores of the Self-Transcendence and EUROHIS (WHOQOL-8.Tr) scales were given in Table 1. According to the table, mean scores of the Self-Transcendence and EUROHIS (WHOQOL-8.Tr) Scales were 45.4±7.3 and 25.5±4.5, respectively. There was a highly positive relationship between the two scales (p, 0.000, r=0.605).

Table 1. Mean scores of quality of life and self-transcendence scale of hemodialysis patients and correlation coefficients of the scales (n=230).

Scales	Mean±SD	r	p*
1. Self-Transcendence Scale	45.4±7.30	0.605	p<0.001
2. EUROHIS (WHOQOL-8.Tr) Scale	25.0±4.50		

SD: Standard deviation, *Pearson correlation analysis.

The distribution of mean scores of Self-transcendence and EUROHIS (WHOQOL-8.Tr) Scale according to the socio-demographic and some medical features of the patients were given in Table 2. According to Table 2, a statistically significant difference was found between age, level of education, level of income and duration of dialysis and total score of the self-transcendence scale ($p<0.05$). Self-transcendence mean scores of the patients who were between the age range of 39-59 (47.61±6.95), had a high level of income (49.55±6.81), were primary school graduates (46.04±7.60) and received dialysis treatment more than 7 years (47.60±6.35) were found to be statistically and significantly higher. Gender, marital status, occupation, employment status and frequency of dialysis did not affect the Self-transcendence Scale score ($p>0.05$). Additionally, according to Table 2, age, education, occupation, level of income and employment status affected the quality of life ($p<0.05$) and the EUROHIS (WHOQOL-8.Tr) mean scores of the patients who were at the age group of 18-38 (26.66±4.00), primary school graduates (25.95±4.50), workers (27.59± 4.59), had a high level of income (30.48±3.99) and employed (29.83±3.18) were found to be statistically and significantly higher. Gender, marital status, frequency and duration of dialysis did not affect the EUROHIS (WHOQOL-8.Tr) score ($p>0.05$) (Table 2).

Table 2. Distribution of self-transcendence and quality of life scale mean scores according to the socio demographic characteristics of the patients.

Socio-demographic and some characteristics		Self-Transcendence	EUROHIS (WHOQOL-8.Tr)
		Mean±SD	Mean±SD
Age (years)	18-38	45.88±5.34[ab]	26.66±4.00[a]
	39-59	47.61±6.95[a]	26.52±4.50[a]
	60-74	44.56±7.53[b]	25.26±4.49[ab]
	75 and over	45.49±7.68[b]	22.78±4.45[b]
	p / test value	**0.030 F=2.85[X]**	**0.023 F=3.23[X]**
Gender	Female	44.74±6.56	44.74±6.56
	Male	26.25±4.73	46.06±7.90
	p / test value	0.176 t=-1.35	0.176 t=-1.359 [Ŧ]
Level of education	Illiterate	43.76 ± 6.36	24.26±4.45
	Primary School	46.04 ± 7.60	25.95±4.50
	p / test value	**0.028 t=-2.22 [Ŧ]**	**0.010 t=-2.44 [Ŧ]**
Marital status	Married	45.74±7.51	25.74±4.56
	Single widow	44.51±6.77	24.76±4.83
	p / test value	0.307 t=1.02	0.169 t=1.31 [Ŧ]
Occupation	Worker	47.09±7.23	27.59±4.59[a]
	Civil Servant	46.28±3.40	27.28±2.92[ab]
	Housewife	44.35±6.46	24.13±4.19[ab]
	Self-employed	44.90±8.50	26.30±3.33 [ab]
	Retired	46.16±8.16	26.15±4.72 [ab]
	p / test value	0.518 F=1.25	**0.002 F=4.30[X]**
Level of income	High	49.55±6.81[a]	30.48±3.99[a]
	Medium	45.14±7.39[b]	25.11±4.10[b]
	Poor	42.53±5.43[b]	22.00±4.50[c]
	p / test value	**0.004 F=5.75**	**p<0.001 F=25.99[X]**
Frequency of receiving dialysis	One day in a week	48.66±0.57	28.00±1.73
	Two days in a week	41.20±7.29	23.40±4.88
	Three days in a week	45.68±7.42	25.68±4.54
	Four days in a week	43.50±2.51	21.75±0.95
	p / test value	0.223 F=0.420	0.107 F=2.057 [X]
Duration of dialysis treatment	1-4 years	45.72±6.98	25.42±4.63
	5-7 years	42.65±8.38	24.58±4.99
	8 years and more	47.60±6.35	26.52±4.15
	p / test value	**0.009 F=3.42[X]**	0.259 F=1.35 [X]
Employment status	**Employed**	49.00±9.12	29.83±3.18
	Unemployed	43.39±7.31	25.42±4.52
	p / test value	0.238 t=1.18	**0.01 t=2.36 [Ŧ]**

Ŧ: Independent Samples-t test, F [X] **:**One-Way Anova test, a,b: Shows the difference between groups (Duncan post-hoc test)
SD: Standard deviation.

When multiple regression analysis was done, it was found that age and level of income had a determining role on self-transcendence at a rate of 0.083% (R2=0.08, p=0.001) (Table 3).

Table 3. Examining the scores of self-transcendence scale by regression analysis according to socio-demographic and some characteristics (n=230).

Self-Transcendence Scale				
	β¹	**β ²**	**t**	**p**
Constant	56.667		12.682	0.000
Age (years)	-1.922	-0.168	-2.457	**0.015**
Level of education (primary school, illiterate)	1.086	0.063	0.939	0.349
Level of income (high, medium, poor)	-3.914	-0.226	-3.473	**0.001**
Duration of dialysis (years)	-0.138	-0.022	-0.326	0.745
R [a]=0.288 R^2=0.083 F=5.069 p=0.001				

Multiple lineer regression analysis, [a]= Regression coefficient β¹: Nonstandardized beta; β²: Standardized beta.

According to the EUROHIS (WHOQOL-8.Tr) scale, a statistically significant difference was found between age, level of education, occupation, level of income and employment status (p<0.05). When multiple regression analysis was done, age, level of income and employment status had determining roles on quality of life at a rate of 0.268% (R2=0.26, p=0.000). According to the EUROHIS (WHOQOL-8.Tr) scale, no statistically significant difference was found between gender, marital status, frequency and duration of receiving dialysis (p>0.05) (Table 4).

Table 4. Examining the scores of EUROHIS-QOL scale by regression analysis according to socio-demographic and some characteristics (n=230).

EUROHIS (WHOQOL-8.Tr)				
	β¹	**β ²**	**t**	**p**
Constant	48.823		-11.790	0.000
Age (years)	-1.388	-0.197	-3.236	**0.001**
Level of education	0.335	0.032	0.523	0.602
Level of income	-4.974	-0.465	-7.889	**0.000**
Employment status	-5.396	-0.190	-3.184	**0.002**
Occupation (housewife, civil servant, worker, retired)	0.054	0.016	0.266	0.791
R [a]=0.518 R^2=0.268 F=16.398 p=0.000				

Multiple linear regression analysis, [a]= Regression coefficient β¹: nonstandardized beta; β²: Standardized beta

DISCUSSION

In this study, patients receiving HD therapy mean score of Self-Transcendence Scale was 45.4±7.3 and it was found to be relevant to age, level of education, level of income and duration of dialysis. In the regression analysis carried out, it was determined that age and level of income were determinant on self-transcendence. Self-transcendence plays a significant role in individuals' accepting and overcoming the difficulties arising due to the disease and finding spiritual meanings in life. It was also stated that it positively affected self-care behavior and QOL in individuals with chronic diseases (Milani et al., 2017). In our study, the mean score of the self-transcendence scale was found to be 45.4±7.3, and similar to our study; it was found as 43.18±5.3, in the study examining the effect of a peer support group on self-transcendence in patients receiving HD therapy (Milani et al., 2017). Self-transcendence mean scores in other chronic diseases such as multiple sclerosis and hypertension, in which prevalence was examined, were similar to our study (Milani et al., 2015; Thomas & Dunn, 2014). Feeling himself/herself better, accepting death as a part of life and discovering life with its spiritual aspects help him/her to cope with long-term illnesses and disabilities.

In our study, the self-transcendence mean scores of 39-59 age group, primary school graduates, those with high level of income and receiving dialysis for 8 years or more were found higher. In the study, in which the effect of peer support group on self-transcendence was examined in patients receiving HD treatment, self-transcendence mean scores of primary school graduates and those with high level of income were higher (Milani et al.,2017). These results are in line with our study. In addition, the

study evaluating the effect of peer support group on self-transcendence in patients with multiple sclerosis (MS), another disease group, also showed similar results with our study. The mean scores of the patient's majority of whom were between the age group of 39-51, with a high level of income and diagnosed with MS for an average of 14 years were found as 47.09 ± 8.06 (Milani et al., 2015; Milani et al., 2017). In our study, the self-transcendence score of patients with dialysis duration of 8 years or more was also found high. The reason for this can be explained by their adaptation to the disease and HD treatment. The concept of self-transcendence also involves the manners of adapting well to physical changes and the current life situation. Therefore, in patients in our sample group receiving dialysis for 8 years or more, both their adaptation to disease and self-transcendence may have been positively affected.

In our study, a highly positive correlation was found between the self-transcendence scale and the EUROHIS (WHOQOL-8.Tr) scale (p, 0.000, r=0.605). In the study conducted in patients receiving HD therapy by Khani et al. (2017), a rise in patients' physical functional status and a direct and significant relationship between them were found in the patients whose mean scores of self-transcendence were high (Khahi et al., 2017). Similarly, in the study of self-transcendence in elderly adults with hypertension, it was found that patients with high self-transcendence mean scores had higher positive health behaviors (Thomas & Dunn, 2014). These results also support our study. Self-transcendence, the ability to expand one's relationship with others and the environment, is identified as one of the developmental resources that promote well-being in later adulthood during increased vulnerability. Self-transcendence provides hope and meaning which helps a person to adapt and cope with chronic illness (Haugan et al., 2016). This increases the quality of life in individuals with chronic diseases. As a matter of fact, it has been reported in many studies that self-transcendence increases the quality of life by decreasing anxiety and hopelessness in individuals and increasing adaptation to the disease (Haugan et al., 2016; Kim, 2015). Therefore, in the patients receiving HD therapy, ensuring the nurse-patient interaction and make an educational intervention to increase their self-transcendence can assist them to cope with their disease and increase QOL in older adults.

In this study, the mean score of EUROHIS (WHOQOL-8.Tr) Scale of patients receiving HD therapy was 25.5±4.5, and the QOL of the patients was found to be high. When the literature was analyzed, it was seen that the QOL in patients receiving HD therapy had different results. While QOL was found to be low in some studies (Abdelghany & Elgoharyve Nienaa, 2016; Mazandarani et al., 2018, Seraji et al., 2017; Zareban et al., 2017), it was found to be high in other studies in parallel with our study. In a study involving 53 patients receiving HD therapy in Iran, QOL of patients with HD were found to be high in a similar way to this study (Matlabi & Ahmadzadeh, 2016). The reason for the increase in QOL may be both due to the technological developments in health services, decrease in hypotension, cramps, dizziness and nausea during dialysis sessions, and the positive change in patients' QOL perceptions thanks to increasing the importance of patient education given by nurses in recent years. When the socio-demographic characteristics were analyzed according to the EUROHIS (WHOQOL-8.Tr) scale, the QOL of the patients who were in the age group of 75 and over, illiterate, housewives, had a low income and unemployed were found to be statistically and significantly low. When multiple regression analysis was performed, it was found that especially age, level of income and employment status had determinant roles on the QOL at a rate of 0.268% (R2=0.268, p=0.000). When the studies were examined, it was reported that there was a negative relationship between age and QOL similarly to the results of this study and QOL decreased as age increased (Abdelghany et al., 2016; Bayoumi & Alwakeel, 2017; Pehlivan et al., 2016; Seraji et al., 2017, Toulabi et al., 2016; Zyoud et al., 2016). Considering that physical and mental deficiencies increase and social life is limited with aging, it has been an expected result that the QOL will decrease with increasing age.

In this study, education is another significant factor affecting QOL in patients receiving HD therapy. In the study, it was determined that the mean score of primary school graduates was higher than the illiterate patients. When the conducted studies were examined, it was observed that there was a positive meaningful relationship between level of education and QOL in line with our study results, and the QOL increased significantly with increasing level of education (Abdelghany et al., 2016; Alemdar & Pakyüz, 2015; Bayoumi & Alwakeel, 2017; Seraji et al., 2017; Vasilopoulou et al., 2016; Zyoud et al., 2016). It has been thought that as the level of education of patients receiving HD therapy increases, their perceptions of health will also increase and the QOL has increased since they can cope better with the current disease and the stressors brought by the disease.

It was also determined that patients receiving HD therapy that had high level of incomes and were employed had a better QOL. In multiple regression analysis, patients' level of income was found to be a determining factor on QOL. In many studies that was conducted and supported the results of our study, it was found that level of income affected the QOL of the patients and the QOL increased as the level of income improved (Abdelghany et al., 2016; Zyoud et al., 2016). Economic comfort makes it easier for the patients to access health services and to continue treatment. For that reason, QOL is expected to increase as the indicators related to level of income become positive.

In this study, it was found that while the mean scores of the employees who worked as workers or civil servants were high, the mean scores of the unemployed and housewives were low. In other studies, supporting our study results, unemployment status was found to be associated with low QOL (Seraji et al., 2017; Zyoud et al., 2016).

It has been considered that the reason for the lower QOL in the unemployed group may be due to the financial and psychological problems they have experienced because of the financial impossibility.

It was found in this study that gender, marital status, duration and frequency of dialysis were not effective on QOL. For instance, while gender was stated not to affect QOL in some studies (Alemdar & Pakyüz, 2015; Durmaz Akyol, 2016; Toulabi et al., 2016; Vasilopoulou et al., 2016), some study results were not compatible with ours (Seraji et al., 2017; Zyoud et al., 2016). This difference may arise from the sample group and regional differences.

CONCLUSION

In conclusion, it was found in this study that age, level of income, and employment status of patients receiving HD therapy affected the QOL, and age and level of income also affected the self-transcendence. Patients receiving HD therapy at the young age group (18-39) and with high level of income have a better QOL and self-transcendence. Therefore, there is a need for experimental and randomized controlled studies to be carried out in larger samples to increase the QOL and self-transcendence, especially in individuals over 60 years of age who have a low level of income and constitute the majority.

Limitations of Study

This study was conducted in Zonguldak province and cannot be generalized to other provinces and regions. Self-transcendence and QOL of patients who receive HD treatment regularly in clinics by nurses should be evaluated. In addition, Awareness of nurses should be increased by providing training about Self-transcendence. Nurses should encourage patients by forming support groups so that they can develop their self-transcendence.

Conflicts of Interest

The authors declare no conflict of interest.

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Author Contributions

Plan, design: CE, MS; **Materials and Methods:** CE, MS; **Data analysis and interpretation:** ZE; **Writing and corrections:** CE, ZE, MS

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