

The Evaluation of Self Care Agency and General Self Efficiency Level in Dialysis Patients

Diyaliz Hastalarının Öz Bakım Gücü ve Genel Öz Yeterlilik Düzeylerinin Değerlendirilmesi

ABSTRACT

OBJECTIVE: The aim of this study was to evaluate the self care agency and self efficiency levels of the hemodialysis and continuous ambulatory peritoneal dialysis (CAPD) patients, and to define the factors effecting self care and self efficiency.

MATERIAL and METHODS: This cross sectional study was carried out on 143 patients who were admitted to the Erciyes University Faculty of Medicine hospital for dialysis between August-December 2016. The Self-Care Agency Scale, General Self Efficiency Scale, demographic and socio-cultural properties of the patients, and a questionnaire including information about the disease were used for collecting data.

RESULTS: The mean value of the self-care agency scores in men was statistically significantly higher than in women (106.2±16.6 vs. 99.9±20.1). The mean value of the general self efficiency scores in university graduates was statistically significantly higher than in elementary school graduates (70.4±9.5 vs. 60.7±14.2). The mean value of the self-care agency scores in housewives was statistically significantly lower than in the other occupation groups (99.0±20.9). The mean score of general self efficiency scores in people living in slums was lower than in the other groups (53.6±14.2).

CONCLUSION: In hemodialysis and CAPD patients, it has been found that the general efficiency level increases as self care agency increases.

KEY WORDS: Hemodialysis, Continuous Ambulatory Peritoneal Dialysis, Self Care Agency, General Efficiency

ÖZ

AMAÇ: Bu çalışmada, hemodiyaliz ve Sürekli Periton Diyalizi (SAPD) uygulanan hastalarının öz bakım gücü ve öz yeterlilik düzeylerinin değerlendirilmesi, öz bakım ve öz yeterliliği etkileyen faktörlerin belirlenmesi amaçlanmıştır.

GEREÇ ve YÖNTEMLER: Kesitsel tipteki bu çalışmada, Ağustos-Aralık 2016 tarihlerinde Erciyes Üniversitesi Tıp Fakültesi hastanelerine diyaliz için başvuran 143 hasta üzerinde yürütülmüştür. Araştırmada veri toplama aracı olarak, hastaların demografik-sosyokültürel özelliklerini ve hastalığa ilişkin bilgileri içeren anket formu ile Öz bakım Gücü Ölçeği ve Genel Öz Yeterlilik Ölçeği kullanılmıştır.

BULGULAR: Erkek hastaların öz bakım gücü puan ortalamaları anlamlı düzeyde yüksek bulunmuştur (106.2±16.6'ya karşı 99.9±20.1). Üniversite mezunu hastaların genel öz yeterlilik puan ortalamaları ilköğretim mezunlarına göre anlamlı düzeyde yüksek bulunmuştur (70.4±9.5'e karşı 60.7±14.2). Ev hanımı olan hastaların öz bakım puan ortalamaları diğer meslek gruplarına göre anlamlı düzeyde düşük bulunmuştur (99.0±20.9). Gecekonuda oturan hastaların genel öz yeterlilik puan ortalamaları diğer gruplara göre düşük düzeyde bulunmuştur (53.6±14.2).

SONUÇ: Hemodiyaliz ve SAPD uygulanan hastaların, öz bakım gücü arttıkça genel yeterlilik düzeylerinin de arttığı tespit edilmiştir.

ANAHTAR SÖZCÜKLER: Hemodiyaliz, Sürekli Periton Diyalizi, Öz bakım gücü, Genel yeterlilik

Selçuk MISTIK¹
Demet ÜNALAN²
Kevser GÖKTAŞ¹
Şeyma Gül YAPICI¹
Bülent TOKGÖZ³

- 1 Erciyes University Faculty of Medicine, Department of Family Medicine, Kayseri, Turkey
- 2 Erciyes University, Halil Bayraktar Health Services Vocational College, Kayseri, Turkey
- 3 Erciyes University Faculty of Medicine, Department of Internal Medicine, Kayseri, Turkey



Received : 17.02.2018

Accepted : 27.03.2018

Correspondence Address:

Selçuk MISTIK
Erciyes Üniversitesi Tıp Fakültesi, Aile Hekimliği Anabilim Dalı, Kayseri, Turkey
Phone : +90 352 207 66 66/23851
E-mail : smistik@erciyes.edu.tr

INTRODUCTION

The use of hemodialysis and CAPD in end stage renal disease (ESRD) patients have provided a longer survival for these patients. In the long term, the survival problem has left its place for the problem of self care of the patient. These patients cannot work actively in a regular job due to the disease and the necessities of the treatment. On the other hand, there may be necessity for help to conduct the regular care of the patients.

There are many physical and psychological problems which patients with chronic diseases have to face. The disabilities caused by the disease may be accompanied by the social problems such as not being able to work and perform the usual social activities.

There are some scales that show the level of self-care and the self efficiency of the patients with chronic disease such as ESRD. The Self-Care Agency Scale and the General Self Efficiency Scales are two scales which show the ability of the patient for taking care of themselves (1-3). These scales may help in deciding the patients' need for assistance in self care and the social support required by the patient.

The aim of this study was to evaluate the self-care and self efficiency of the hemodialysis and CAPD patients by using the Self-Care Agency Scale and the General Self Efficiency Scale as data collection tools and show the effect of the disease on self care and efficiency.

MATERIALS and METHODS

This cross sectional study was carried out on 143 patients who had been admitted to Erciyes University Faculty of Medicine hospital and a private dialysis center for hemodialysis and CAPD between August-December 2016. This study was approved by the Ethics Committee of Erciyes University, Faculty of Medicine and informed consent was obtained from the participants.

Data Collection Tools

Self-Care Agency Scale, General Self Efficiency Scale, demographic and socio-cultural properties of the patients, and a questionnaire including information about the disease were used for collecting data. Data was collected by face-to-face interviews.

1. Patient Information Form

The form included questions on socio-demographic properties such as age, gender, marital status, education, occupation, monthly income, and type of accommodation. Also, the changes in patients' life due to disease were recorded. Presence of other chronic diseases and duration of disease and dialysis treatment were recorded as well.

2. Self-Care Agency Scale

The scale was developed by Kearney and Fleischer. The reliability and validity in Turkish was done by Nahcıvan for

healthy young people and by Pınar for chronic diseases. The five-point Likert type scale includes 35 comments (1,2). The comments 3, 6, 9, 13, 19, 22, 25, 26 and 31 are negatively evaluated. Every comment in the scale is pointed between 0 to 4. Evaluation is performed on a total of 136 points, and a high total point shows that the individual is independent and efficient in performing self-care. The Cronbach-alpha internal consistency coefficient in Self-Care Agency Scale was found to be 0.839 in our study.

3. General Self-Efficacy Scale

The scale was developed by Sherer et al (1982) as 23 items, and changed to 17 items by Magaletta and Oliver (1999). The adaptation to Turkish culture was performed by Yıldırım and İlhan (3). Every comment in the scale is pointed between 1 to 5. The comments 2, 4, 5, 6, 7, 10, 11,12, 14, 16 and 17 are negatively evaluated. The total point of the scale varies between 17 to 85. The increase in the scale point shows that the belief in self-efficiency is increasing. The Cronbach-alpha internal consistency coefficient in General Self-Efficacy Scale was found to be 0.854 in our study.

Statistical Analysis

The Study Data was analyzed in the R 3.2.0 (www.r-project.org) program. Student's t test was used in the comparison of two independent groups. Analysis of variance was used for the comparison of more than two groups. Tukey (post hoc) test was used to find the group causing the difference. Pearson correlation coefficient was used to evaluate the relation between the variables. The value $p < 0.05$ was accepted as statistically significant.

RESULTS

Of the patients 57.3% were men, 32.2% were 65 years and older, 59.4% were elementary school graduates, 87.4% were married, 38.5% were housewives, 44.1% were earning minimum wage-2000 TL per month, 67.1% were living in apartments, 76.9% were not smoking, 96.5% were not taking alcohol.

The Chronic Kidney Disease (CKD) mean duration of the patients was 8.1 ± 6.8 years, and the median (min-max) was 6.0 years (1 month-37 years). Of the patients 73.4% had a chronic disease other than CKD where 22.4% had hypertension, 11.2% had diabetes mellitus, hypertension and heart failure. The patients' mean time to start hemodialysis was 5.6 ± 5.2 years, median (min-max) 5.0 years (1 month-22 years), and for peritoneal dialysis the mean time was 3.8 ± 3.4 years, median (min-max) 3.0 years (1 month-16 years). Hemodialysis patients were treated a mean value of 2.7 ± 0.5 days a week, and peritoneal dialysis patients were treated 3.6 ± 1.7 hours. The mean point of Self-Care Agency Scale in men was statistically significantly higher than in women ($p < 0.05$) (Table I).

There was a statistically significant difference when the General Self Efficiency Scale mean points were compared according to educational levels. The mean points of General

Table I: The distribution of the patients' Self-Care Agency Scale and General Self Efficiency Scale points according to the demographic and socio-cultural properties.

Variables	n (%)	Self-Care Agency Scale X±SD	General Self Efficiency Scale X±SD
Age groups			
24-33	10 (7.0)	109.5±15.2	63.4±9.1
34-43	19 (13.3)	99.6±19.4	61.8±13.5
44-53	35 (24.5)	103.5±19.2	64.1±13.4
54-63	33 (23.1)	107.4±15.1	66.3±13.5
64 and over	46 (32.2)	101.0±20.0	59.2±15.4
p		0.379	0.243
Gender			
Women	61 (42.7)	99.9±20.1	62.1±14.2
Men	82 (57.3)	106.2±16.6	63.1±13.9
p		0.043	0.661
Educational level			
Illiterate	15 (10.5)	102.9±13.2	60.0±16.7 ^{ab}
Elementary school	85 (59.4)	100.8±20.9	60.7±14.2 ^a
High school	26 (18.2)	107.9±13.6	65.5±12.2 ^{ab}
University	17 (11.9)	110.6±11.8	70.4±9.5 ^b
p		0.117	0.035
Marital status			
Married	125 (87.4)	103.9±18.8	63.0±14.4
Single	18 (12.6)	100.4±15.8	60.6±10.5
p		0.448	0.504
Profession			
Retired	50 (35.0)	104.3±17.4 ^{ab}	60.3±13.9
Housewife	55 (38.5)	99.0±20.9 ^a	62.2±14.7
Other*	38 (26.6)	108.9±14.1 ^b	66.4±12.5
p		0.037	0.129
Income			
Minimum wage ↓	47 (32.9)	104.6±19.2	61.2±16.4
Minimum wage -2000 TL	63 (44.1)	102.7±19.0	62.8±14.2
2001-3000 TL	23 (16.1)	100.9±18.6	63.3±8.8
3000 ↑	10 (7.0)	109.4±8.7	67.4±9.5
p		0.624	0.637
House type			
Apartment	96 (67.1)	104.6±18.4	64.6±13.4 ^a
Detached house	39 (27.3)	101.4±18.6	59.9±14.5 ^b
Slum	8 (5.6)	99.8±18.7	53.6±14.2 ^c
p		0.552	0.035
Smoking			
Yes	33 (23.1)	100.0±18.4	66.7±12.7
No	110 (76.9)	104.5±18.4	62.4±14.4
p		0.213	0.635
Alcohol consumption			
Yes	5 (3.5)	93.0±19.8	49.4±9.6
No	138 (96.5)	103.9±18.3	63.2±13.9
p		0.196	0.030
Disease other than CKD			
Yes	105 (73.4)	102.2±18.7	63.4±13.7
No	38 (26.6)	107.0±17.3	60.7±14.7
p		0.167	0.313
Dialysis type			
Hemodialysis	98 (68.5)	102.8±18.9	62.0±14.5
Peritoneal dialysis	45 (31.5)	105.0±17.3	64.1±12.7
p		0.494	0.423

* The alphabetical superscripts stand for statistical significance if groups are different (a and b are different, ab is not)

Self Efficiency Score were statistically significantly higher in university graduates than in elementary school graduates. ($p<0.05$) (Table I).

There was a statistically significant difference when the Self-Care Agency Scale mean points were compared according to occupations. The mean points of Self-Care Agency Scale in housewives were statistically significantly lower than in the other occupations ($p<0.05$) (Table I). There was a statistically significant difference when the General Self Efficiency Scale mean points were compared according to house types ($p<0.05$). The mean points of General Self Efficiency Scale in patients living in slums were statistically significantly lower than in the other house types (Table I). The General Self Efficiency Scale mean points of the patients consuming alcohol was statistically significantly lower than in patients not consuming alcohol ($p<0.05$) (Table I).

Of the patients, 81.8% stated that their life changed after CKD, 64.3% told that physical activity/exercise level was decreased after disease. There was change in nutritional habits in 65.7% of the patients, and patients who had to use medicine continuously was 68.5%. The patients who cannot decide alone was 11.9%, and 11.2% could not walk without help (Table II).

There was a statistically significant difference between the groups when the Self-Care Agency Scale mean points were compared according to being able to walk without help.

The mean points of Self-Care Agency Scale in patients who cannot walk without help were statistically significantly lower than in the patients who can walk without help ($p<0.05$) (Table II). The Self-Care Agency Scale and the General Self Efficiency Scale mean points were statistically significantly lower in

patients who could not decide alone than in patients who could decide alone ($p<0.05$) (Table II).

In hemodialysis and CAPD patients, the relation between age, duration of disease, hemodialysis and CAPD treatment duration, hemodialysis/week/day, CAPD/day/hour and Self-Care Agency Scale and General Self Efficiency Scale was investigated. There was a moderate positive statistically significant correlation between the Self-Care Agency Scale and the General Self Efficiency Scale ($r=0.529$, $p<0.01$).

DISCUSSION

The self-care agency scores in men was higher than in women, and the general self efficiency scores in university graduates was higher than in elementary school graduates. The self-care agency scores in housewives was lower than in the other occupation groups, and the general self efficiency scores in people living in the slums was lower than in the other groups. In patients taking alcohol, the general self efficiency scores was lower, and the self-care agency scores of the patients who cannot walk without help, and the self care agency scores and the general self efficiency score of the ones who could not decide by themselves was low. There was a moderate positive correlation between the self-care agency scale and the general self efficiency scale of the hemodialysis and CAPD patients. This study demonstrated that general efficiency level increases as self care agency increases in hemodialysis and CAPD patients.

Hemodialysis and CAPD patients need care that requires the involvement of many people including support from both health professionals and friends. Hemodialysis and peritoneal dialysis patients have difficulties in self care. The strength of this study is that it is a study where the Self-Care Agency Scale and General Self Efficiency Scale are used together.

Table II: The distribution of the patients' Self-Care Agency Scale and General Self Efficiency Scale mean scores according to change in life after disease.

Variables	n (%)	Self-Care Agency Scale X±SD	General Self Efficiency Scale X±SD
Change in life due to disease			
Yes	117 (81.8)	102.6±19.0	63.7±13.4
No	26 (18.2)	107.5±15.0	58.2±15.8
p		0.220	0.070
Cannot walk without help			
Yes	16 (11.2)	93.4±24.2	61.9±14.8
No	127 (88.8)	104.7±17.2	62.8±13.9
p		0.020	0.808
Cannot make decisions alone			
Yes	17 (11.9)	92.7±22.4	56.0±15.8
No	126 (88.1)	104.9±17.4	63.6±13.5
p		0.010	0.035

The limitation of this study is that the Self-Care Agency Scale and General Self Efficiency Scale are both reported by the patient instead of the objective findings of a physical examination. In addition, cross sectional design and lacking of a healthy control group are important limitations of this study.

Muz and Eglence have performed a study on the self care agency and self efficiency in 2013. They have found that hemodialysis procedure effects the patients' self care agency and self efficiency levels and there was a positive relation between self care agency and self efficiency. These results are compliant with our result that general efficiency level increases as self care agency increases (4).

In another study, Ören and Enç have studied the development and psychometric testing of the self-care agency scale for patients undergoing long-term dialysis in Turkey. They have administered the self care agency scale to 300 patients, where 175 were hemodialysis patients and 125 were peritoneal dialysis patients. The validity and reliability of self care agency scale was tested in their study. Ören et al. concluded that the Self-Care Agency Scale was a valid and reliable instrument for patients on long-term dialysis (5).

Bağ and Mollaoğlu have performed a study on the evaluation of self-care and self-efficacy in patients undergoing hemodialysis. The results of their study showed that there was a correlation between self-care ability and many factors like education level, work status, income level and frequency of dialysis. They have found a positive correlation between patients' self-care ability and self-efficacy. They also stated that as level of self-care ability increases, self-efficacy level increases as well. Their suggestion was to organize education programmes to increase self-care and self-efficacy (6).

This study showed that dialysis effects both self-care agency and self efficiency. There is a necessity to help dialysis patients overcome problems. A teamwork may help solve these problems.

In hemodialysis and CAPD patients, it has been found that general efficiency level increases as self care agency increases.

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