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Original Article

Examining the Relationship Between Alexithymia, Anger, and Self-Esteem in Patients Undergoing Hemodialysis

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ABSTRACT

Objective: The aim of this study was to examine the correlation between alexithymia, anger, and self-esteem in patients undergoing hemodialysis.

Methods: The research was carried out in a descriptive cross-sectional design. The study was conducted with 152 hemodialysis patients between January 2021 and April 2021. The data of the study were collected using Personal Information Form, Toronto Alexithymia Scale, Rosenberg Self-Esteem Scale, and Trait Anger Scale. Numbers, percentage distributions, mean, SD, independent sample *t*-test, 1-way analysis of variance, Pearson's correlation, and regression analysis were used in the data analysis.

Results: A positive correlation was found between the alexithymia level and self-esteem scores. A positive correlation was found between anger level and alexithymia level. There was a positive correlation between self-esteem level scores and anger levels. It was determined that alexithymia explained 41.7% of the change in anger and self-esteem. It was determined that people with low self-esteem had high levels of alexithymia and anger levels.

Conclusion: Alexithymia level had a significant effect on anger and self-esteem in hemodialysis patients. As self-esteem decreases in hemodialysis patients, alexithymia and anger levels increase. As the anger level of the patients increases, the level of alexithymia increases.

Keywords: Alexithymia, anger, hemodialysis, self-esteem

Introduction

End-stage renal failure (ESRF) is one of the most frequently encountered chronic illnesses in Türkiye and in the world.[1-3] Although kidney transplant is a good option for patients with ESRF, this is not always possible and patients have to choose one of the dialysis methods for treatment. The most frequently used dialysis method is hemodialysis, and it is requires the treatment and monitoring of these patients in terms of their lifelong health.[4]

While hemodialysis treatment increases the life expectations of patients, it also causes many problems.[3,4] Having to go to a clinic on certain days of the week, being dependent on a machine, loss of people's workforce, changes in the body image, loss of time, financial losses, loss of roles at home and in social life, and isolation from the social life may lead to experience economic, social, and psychological problems by the patients as well as physical health problems.[4] Lack of self-confidence, anxiety, mental breakdown, short temper, anger, desperateness, worry, and fear of death are the significant psychological problems experienced by patients undergoing hemodialysis.[5-7] In addition, hemodialysis causes changes in the life standards and routine of the patients and a decrease in their self-esteem.[5,6]

Patients admitted to hemodialysis experience many problems considered to be linked to alexithymia as they start the treatment process with the diagnosis of the illness.[8,9] Alexithymia is a concept that expresses the interpersonal relationships and emotions such as emptiness in emotions, challenges in interpersonal communication, less social support, and negative effect.[9,10] In alexithymia, the decrease in self-esteem may cause problems in interpersonal relationships and anger.[11] Hemodialysis patients experience alexithymic characteristics such as negativity in interpersonal relationships and difficulty in social participation as well as the feeling of anger intensely.[8,9] Studies conducted with patients undergoing

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hemodialysis have reported that persons experiencing anger have alexithymic characteristics[9] and there was a decrease (alexithymic) in recognizing, identifying, and expressing emotions, the tendency of concrete thinking, and distinguishing emotional states and physical states in a great majority of the patients.[12] Therefore, it is required to deal with patients undergoing hemodialysis not only in a physical manner in relation to the quality of the illness or treatment continuation but also mentally and emotionally.

Many mental problems occur during the treatment process in hemodialysis patients. This situation can lead to important problems in the relationships of the sick individuals with their social environment. Decreased self-esteem due to alexithymia in hemodialysis patients can cause problems in interpersonal relationships and anger. In the literature, no studies assessing the self-esteem, alexithymia levels, and anger states of patients undergoing hemodialysis together have been reported. Therefore, in this study, the relationship between alexithymia, self-esteem, and anger in patients undergoing hemodialysis was examined. It is considered that the findings of the present study will meet this gap in the literature. For this general purpose, answers for the following questions were sought.

1. What are the levels of alexithymia, anger, and self-esteem in hemodialysis patients?
2. Is there a difference between the sociodemographic characteristics of hemodialysis patients and their alexithymia, anger, and self-esteem levels?
3. Is there a relationship between alexithymia, anger, and self-esteem levels in hemodialysis patients?
4. Does alexithymia have an effect on anger and self-esteem levels in hemodialysis patients?

Methods

Type of Study
The study was carried out with a descriptive cross-sectional design.

Population and Sample of the Study
The population of the study consisted of 238 patients who were treated in the dialysis center of 2 public hospitals in a city located in the southeast of Türkiye. The sample of the study was calculated to be 148 people, with 5% margin of error and 95% CI. The study was completed with 152 patients who applied to dialysis centers, met the inclusion criteria, and volunteered to participate in the study.

Inclusion Criteria of the Study
- Being a hemodialysis patient for at least 6 months;
- Being aged between 18 and 65 years and volunteering to participate in the study; and
- Having no communication problem

Data Collection Tools
The data of the study were collected using Personal Information Form, Toronto Alexithymia Scale (TAS), Rosenberg Self-Esteem Scale (RSES), and Trait Anger (T-Anger) Scale.

Personal Information Form
It is a form that includes information of the patients about age, gender, educational status, marital status, health insurance, body mass index (BMI), smoking, alcohol consumption, employment, and duration of the illness.

Toronto Alexithymia Scale
It was developed by Taylor et al in order to determine the level of alexithymia.[13] The Turkish validity–reliability study of the scale was carried out by Güleç et al.[14] The scale has 3 subscales: Difficulty Describing Feelings, Difficulty Identifying Feelings, and Externally Oriented Thinking. This 5-point Likert scale has a Cronbach's alpha value of 0.78. In the next study assessing the psychometric characteristics of the scale, the cutoff point was determined as 51. Individuals need to get a score of 51 or above in order to be considered as alexithymic.[14] In this study, the Cronbach's alpha value was determined as 0.79

Rosenberg Self-Esteem Scale
It was developed by Rosenberg[15] in order to determine the level of self-esteem, and Çuhadaroğlu[16] conducted its validity and reliability study by adapting it to Turkish. The 4-point Likert scale has a Cronbach's alpha value of 0.75. Based on the total score, a low score refers to high self-esteem and a high score refers to low self-esteem. Accordingly, 0-1 points correspond to a high level of self-esteem, 2-4 points to a moderate level of self-esteem, and 5-6 points to a low level of self-esteem.[16] In this study, the Cronbach's alpha value was calculated as 0.85.

Trait Anger Scale
The feeling of anger scale was developed by Spielberger et al.[17] Its Turkish validity and reliability was carried out by Özer.[18] It was determined that this 4-point Likert scale had a Cronbach's alpha value of 0.69-0.92 among different samples.[18] The lowest score that can be obtained from the scale is 10, whereas the highest score is 40. High scores indicate a high level of anger.[18] In this study, the Cronbach's alpha value was calculated as 0.68.

Data Collection
The study was conducted at the hospital between January 2021 and April 2021. The researcher informed the patients about the purpose of the study, and patients who consented for the study took the surveys. It took about 20 minutes to complete the questionnaire.

Data Analysis
The data of the study were assessed through the SPSS 21.0 (IBM SPSS Corp.; Armonk, NY, USA) package program. Numbers, percentage distributions, mean, SD, independent sample *t*-test, 1-way analysis of variance (ANOVA), Pearson's correlation, and regression analysis were used in the data analysis. $P < .05$ was accepted as statistically significant.

Ethical Considerations
Before starting the study, ethical approval was granted by the noninvasive ethics committee of Hasan Kalyoncu Üniversitesi (Ethical board no: 2020/084; Date: 29.09.2020) in order to carry out the study. After getting the ethics committee approval, institutional permission was obtained from Gaziantep Provincial Health Department in order to carry out the study. The patients were informed about the purpose of the study and "informed consent" was obtained. The study was carried out in accordance with the Helsinki Declaration.

Results

In the present study carried out for examining the relationship between alexithymia, anger, and self-esteem in patients undergoing hemodialysis, it was determined that 45.4% of the patients undergoing hemodialysis were female, 70.4% were married, 53.9% had green card, 42.1% had a primary school education, 71.1% did not smoke, 96.7% did not consume alcohol, and 32.2% were overweight (Table 1). It was found that the mean age of the patients was 47.1 ± 11.1 and 37.5% underwent dialysis for 5 years and more, 58.6% did not work before the illness, and 84.9% were unemployed after the illness (Table 1).

There was no significant difference between the patients' alexithymia and anger levels in relation to gender, education, marital status,

Table 1. Distribution of Sociodemographic Characteristics of the Patients (n = 152)

	n	%
Gender		
Female	69	45.4
Male	83	54.6
Educational status		
Illiterate	42	27.6
Literate	19	12.5
Primary school	64	42.1
Secondary high school	27	17.8
Marital status		
Married	107	70.4
Single	45	29.6
Health insurance		
General health insurance	70	46.1
Green card	82	53.9
BMI		
Weak	36	23.7
Normal weight	47	30.9
Overweight	49	32.2
Obese	18	11.8
Morbidly obese	2	1.3
Status of smoking		
Smoking	43	28.3
Nonsmoking	109	71.7
Alcohol consumption		
Yes	5	3.3
No	147	96.7
Status of employment before the illness		
Full-time	54	35.5
Part-time	9	5.9
Unemployed	89	58.6
Status of employment after the illness		
Full-time	4	2.6
Part-time	19	12.5
Unemployed	129	84.9
Duration of illness		
1-2 years	45	29.6
3-4 years	50	32.9
5 years and above	57	37.5
Minimum–Maximum	**X ± SD**	
Age 18-65 years	47.1 ± 11.1	

BMI: Weak ≤18.5, normal weight: 18.5-24.9, overweight: 25.0-29.9; obese: 30.0-44.9; morbidly obese: ≥45.0.
BMI, body mass index.

health insurance, BMI, smoking status, alcohol consumption, and disease duration ($P > .05$) (Table 2). There was no significant difference between the patients' self-esteem in relation to gender, education, marital status, health insurance, BMI, alcohol consumption, and disease duration ($P > .05$) (Table 2). It was determined that there was a significant difference between the smoking status of the patients and their self-esteem ($P < .05$) (Table 2).

It was found that TAS total mean score was 54.1 ± 8.0, the RSES total mean score was 2.7 ± 1.5, and the total score for T-Anger Scale was 21.0 ± 5.7. It was found that the Difficulty Identifying Feelings subscale total mean score was 17.5 ± 4.7, the Difficulty Describing Feelings subscale total mean score was 13.6 ± 3.3, and the Externally Oriented Thinking subscale total mean score was 22.9 ± 3.3 (Table 3).

It was determined that the alexithymia level of the patients having high self-esteem (46.7 ± 7.3) was lower than the patients having low self-esteem (62.4 ± 5.8). The Difficulty Identifying Feelings subscale level of the patients having high self-esteem (14.2 ± 3.7) was lower than that of the patients with low self-esteem (22.7 ± 5.1). The Difficulty Describing Feelings subscale level of the patients having high self-esteem (11.8 ± 3.2) was lower than that of the patients with low self-esteem (16.4 ± 3.4). The Externally Oriented Thinking subscale level of the patients having high self-esteem (20.6 ± 4.3) was lower than that of the patients with low self-esteem (23.2 ± 2.0). The anger level of the patients having high self-esteem (19.3 ± 5.5) was lower than that of the patients with low self-esteem (24.6 ± 5.3) (Table 4).

A positive correlation was found between the alexithymia level and self-esteem scores (r: 0.645; $P < .001$). In other words, alexithymia levels increased since self-esteem decreased with increased self-esteem scores. A positive correlation was found between anger levels and alexithymia levels (r: 0.220; $P < .001$). There was a positive correlation between self-esteem level scores and anger levels (r: 0.294; $P < .001$). In other words, anger levels increased since self-esteem decreased with increased self-esteem scores (Table 5).

It was determined that alexithymia had a significant effect on anger and self-esteem levels ($R = 0.646^a$; adjusted $R^2 = 0.417$; $P < .05$). It was determined that alexithymia explained 41.7% of the change in anger and self-esteem levels (adjusted $R^2 = 0.417$) (Table 6).

It was determined that people with low self-esteem had high levels of alexithymia and anger levels. Low self-esteem alexithymia and anger levels explained 18.6% of the total variance ($R^2 = 0.186$; $P < .05$) (Figure 1).

Discussion

In our study examining the relationship between alexithymia, self-esteem, and anger in hemodialysis patients, it was determined that the total mean score of alexithymia scale in hemodialysis patients did not differ in relation to gender. Pojatic et al[19] and Akyuz et al[12] in their studies with hemodialysis patients found that there was no difference between the mean scores of the alexithymia scale in relation to gender, which is similar to the findings of our study.

In our study, the mean alexithymia total score in hemodialysis patients was determined as 54.1 ± 8.0. Unlike our study, Akyüz et al in their study on hemodialysis patients reported that the mean total score of alexithymia was higher than our study (63 ± 7.78 in females, 62.65 ± 4.86 in males). This difference may be due to sociodemographic characteristics, regional differences, and social support systems. Also Dehaghani et al[20] in their study with hemodialysis patients reported a higher alexithymia total score average (63.51 ± 5.46 in the intervention group and 62.44 ± 3.53 in the control group) than the alexithymia total score average obtained in our study. The difference between the 2 studies may be due to intercultural differences and environmental factors.

In our study, it was found that hemodialysis patients with high self-esteem scale total scores (low self-esteem) had high alexithymia total scores. In the studies conducted by Oktay and Batıgün[11] and Solmaz et al,[21] it was determined that individuals with high alexithymia scale total score averages had high self-esteem scores (low self-esteem), and their findings obtained are consistent with ours. The mental or social problems individuals experience while undergoing hemodialysis; a depressive emotional state; a negative outlook; lack of self-confidence; loss of roles at work, in family, and in society due to illness; and the challenges experienced in interpersonal relationships may

Table 2. Comparison of the Toronto Alexithymia Scale, Trait Anger Scale, and Rosenberg Self-Esteem Scale Mean Scores of the Patients Based on Their Sociodemographic Characteristics (n = 152)

			TAS		TA		RBS	
	n	%	X ± SD	Significance	X ± SD	Significance	X ± SD	Significance
Gender								
Female	69	45.4	52.9 ± 8.6	*t* = 1.951	20.9 ± 5.5	*t* = 0.366	2.5 ± 1.5	*t* = 1.402
Male	83	54.6	55.5 ± 7.0	*P = .053	21.2 ± 5.9	*P = .715	2.8 ± 1.4	*P = .163
Educational background								
Illiterate	42	27.6	55.4 ± 6.9	*F* = 1.892	20.9 ± 5.5	*F* = 0.007	2.9 ± 1.4	*F* = 1.909
Literate	19	12.5	56.7 ± 9.2	**P = .133	21.0 ± 6.6	**P = .999	2.9 ± 1.8	**P = .131
Primary school	64	42.1	52.6 ± 7.8		21.0 ± 5.5		2.7 ± 1.4	
Secondary high school	27	17.8	53.8 ± 8.8		21.1 ± 6.0		2.1 ± 1.5	
Marital status								
Married	107	70.4	54.0 ± 7.9	*t* = −0.259	21.1 ± 5.7	*t* = −0.237	2.6 ± 1.5	*t* = −0.237
Single	45	29.6	54.4 ± 8.2	*P = .796	20.8 ± 5.7	*P = .813	2.7 ± 1.5	*P = .813
Health insurance								
SSI	70	46.1	54.2 ± 6.9	*t* = 0.107	20.7 ± 4.3	*t* = −0.627	2.5 ± 1.4	*t* = -1.594
Green card	82	53.9	54.0 ± 8.9	*P = .915	21.3 ± 6.7	*P = .532	2.8 ± 1.5	*P = .113
BMI								
Weak	36	23.7	54.8 ± 10.2	*F* = 0.298	22.1 ± 5.8	*F* = 1.011	3.0 ± 1.6	*F* = 0.878
Normal weight	47	30.9	53.4 ± 8.0	**P = .879	20.2 ± 6.01	**P = .404	2.5 ± 1.5	**P = .479
Overweight	49	32.2	53.7 ± 6.4		20.5 ± 5.0		2.5 ± 1.3	
Obese	18	11.8	55.3 ± 7.5		22.5 ± 6.5		2.8 ± 1.4	
Morbidly obese	2	1.3	55.0 ± 7.0		20.0 ± 1.4		2.0 ± 1.4	
Status of smoking								
Smoking	43	28.3	53.9 ± 9.2	t = 0.222	21.6 ± 7.2	t = −0.735	2.2 ± 1.5	t = 2.465
Nonsmoking	109	71.7	54.2 ± 7.5	*P = .825	20.8 ± 5.0	*P = .463	2.8 ± 1.4	*P = .015
Alcohol consumption								
Yes	5	3.3	57.8 ± 6.4	*t* = −1.035	26.6 ± 5.0	*t* = −2.225	2.6 ± 1.5	*t* = 0.166
No	147	96.7	54.0 ± 8.0	*P = .302	20.8 ± 5.6	*P = .028	2.7 ± 1.5	*P = .869
Duration of illness								
1-2 years	45	29.6	53.6 ± 9.0	*F* = 0.331	21.7 ± 6.2	*F* = 1.516	2.6 ± 1.5	*F* = 0.015
3-4 years	50	32.9	53.7 ± 8.0	**P = .719	21.6 ± 4.8	**P = .223	2.7 ± 1.3	**P = .985
5 years and above	57	37.5	54.8 ± 7.2		20.0 ± 5.9		2.7 ± 1.5	

ANOVA, 1-way analysis of variance; BMI, body mass index; RSES, Rosenberg Self-Esteem Scale; TA, Trait Anger Scale; TAS, Toronto Alexithymia Scale; SSI, Social Security Institution.
**ANOVA test, $P < .05$
*Independent sample *t*-test.

have an effect on self-esteem and alexithymia levels. The most frequently encountered psychiatric problems among dialysis patients are a constant depressive emotional state, low self-esteem, and affective disorders.[22, 23] The development of depression in these patients; It is associated with is loss of their physical and intellectual abilities, loss of roles at work, disruptions in family and in social life and deterioration of sexual and kidney functions.[22] Self-esteem is the acceptance of individuals by themselves, creating an identity and being accepted by others. People with high self-esteem assess themselves positively,

Table 3. Toronto Alexithymia Scale, Rosenberg Self-Esteem Scale, and Trait Anger Total and Subscale Scores of the Patients (n = 152)

	Minimum–Maximum	X ± SD	Problem Significance Level
TAS Total	29-76	54.1 ± 8.0	Average
Difficulty Identifying Feelings Subscale	7-33	17.5 ± 4.7	High
Difficulty Describing Feelings Subscale	5-22	13.6 ± 3.3	Average
Externally Oriented Thinking Subscale	11-30	22.9 ± 3.3	High
RSES Total	0-6	2.7 ± 1.5	Average
TA Total	10-37	21.0 ± 5.7	Average Average

RSES, Rosenberg Self-Esteem Scale; TA, Trait Anger Scale; TAS, Toronto Alexithymia Scale.

Table 4. Toronto Alexithymia Scale and Trait Anger Level States of the Patients Based on Their Self-Esteem Levels

	Self-Esteem Levels			
	High	Average	Low	
	n = 37 (24.3%)	n = 92 (60.5%)	n = 23 (15.1%)	
	X ± SD	X ± SD	X ± SD	**Significance
TAS	46.7 ± 7.3	55.0 ± 6.0	62. 4 ± 5.8	*F* = 45.470 **P < .001**
TAS Difficulty Identifying Feelings	14.2 ± 3.7	17.5 ± 3.7	22.7 ± 5.1	*F* = 32.045 **P < .001**
TAS Difficulty Describing Feelings	11.8 ± 3.2	13.7 ± 2.9	13.7 ± 2.9	F = 16.047 **P < .001**
TAS Externally Oriented Thinking	20.6 ± 4.3	23.7 ± 2.7	23.2 ± 2.0	F = 13.872 **P < .001**
TA Total	19.3 ± 5.5	20.8 ± 5.5	24.6 ± 5.3	F = 6.822 **P < .001**

ANOVA, analysis of variance; TA, Trait Anger Scale; TAS, Toronto Alexithymia Scale.
**ANOVA test, $P < .05$.

Table 5. Correlation of Toronto Alexithymia Scale, Rosenberg Self-Esteem Scale, and Trait Anger Scale Scale Total and Subscale Scores

		1	2	3	4	5
TAS Total (1)						
TAS Subscale of Difficulty Identifying Feelings (2)	*r*	0.831**				
	P	**<.001**				
TAS Subscale of Difficulty Describing Feelings (3)	*r*	0.733**	0.496**			
	P	**<.001**	**<.001**			
TAS Subscale of Externally Oriented Thinking (4)	*r*	0.484**	0.079	0.049		
	P	**<.001**	.331	.550		
RSES Total (5)	*r*	0.645**	0.550**	0.450**	0.316**	
	P	**<.001**	**<.001**	**<.001**	**<.001**	
Anger Total (6)	*r*	0.220**	0.209**	0.215*	0.016	0.294**
	P	**.006**	**.010**	**.008**	.844	**<.001**

RSES, Rosenberg Self-Esteem Scale, correlation test; TAS, Toronto Alexithymia Scale.
**P <.01.
*P <.05.

Table 6. Linear Regression Analysis Results of Toronto Alexithymia Scale, Self-Esteem Levels, and Anger Levels

	B	Standart Error	Beta	*t*	Significance
Stable	43.981	1.952		22.534	**<.001**
Trait Anger	.047	0.092	0.034	.515	.607
Self-esteem	3.380	0.0348	0.635	9.705	**<.001**
	R	***R²***	***F***	***P***	
	0.646[a]	**0.417**	**53.295**	**<.001[b]**	

[a] Linear regression test, dependent variable: level of self-esteem B, Regression coefficient
[b] Predictors (Constant): Trait Anger, TAS level.

accept themselves as individuals, and have confidence. However, difficulties in recognizing and expressing themselves are encountered among individuals with alexithymia.[21]

In our study, it was determined that patients with low self-esteem (high self-esteem scale scores) had high anger scale scores. In another study, it was found that there was a negative significant correlation between studies; Önder and Bölükbaşı[24] stated that as self-esteem decreased, anger increased, and in their study, Puskar et al[25] stated that anger increased in people with low self-esteem, and there was a negative correlation between anger and self-esteem, which is compatible with the findings of the present study.[26] The labor and financial losses caused by hemodialysis; embarrassment caused by increased dependence on the machine, family, or health care team; changing living conditions; and failures in the fight against the disease may cause low self-esteem and increase in anger levels. In hemodialysis patients, excessive dependence or independence on caregivers may be reflected in the form of shyness, rebelliousness, desire and inclination to do things that are forbidden to them, dependence on dialysis machine, loneliness, and angry behaviors toward healthy people.[7] The patients

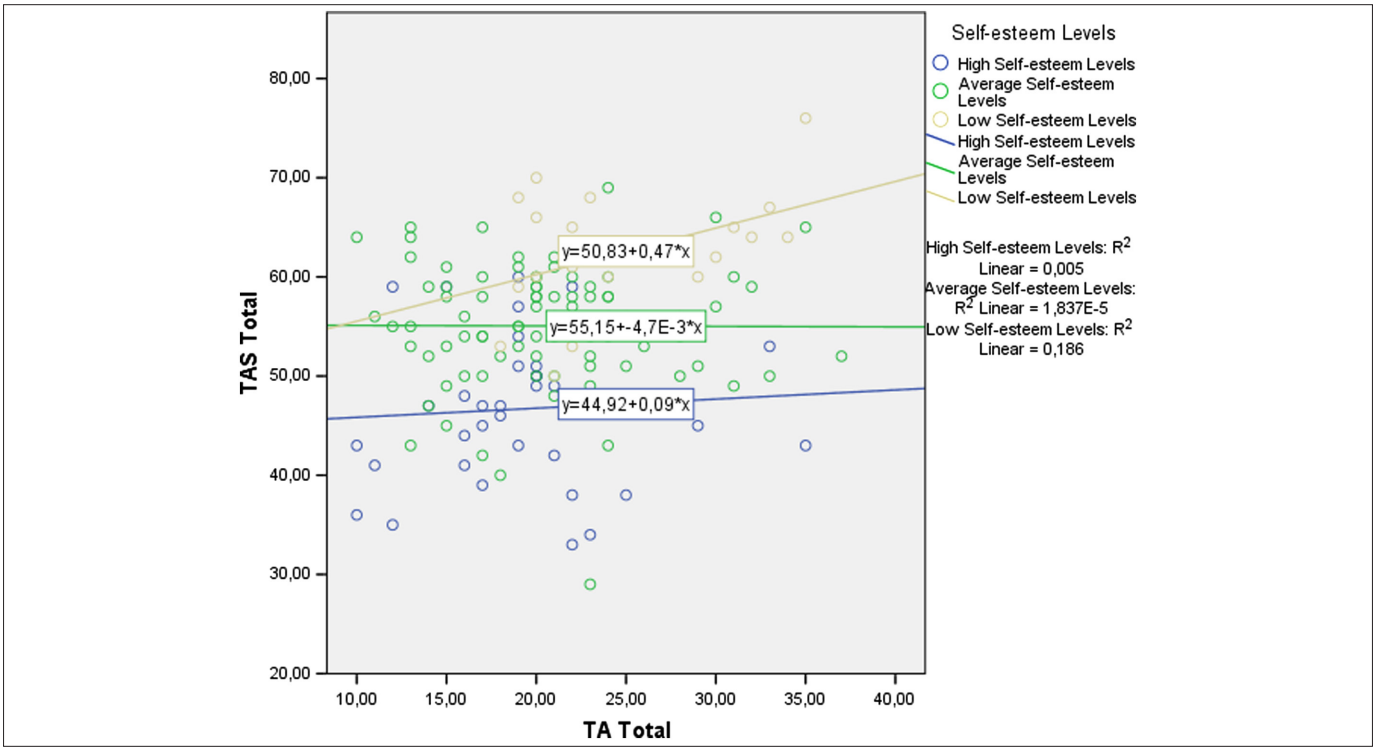

Figure 1. Regression between Self-esteem and TAS and Anger Levels

undergoing hemodialysis may experience difficulties in educational and training due to the disease and there may be disruptions in work life and interpersonal relationship. Increased anger due to this situation can cause their self-esteem. It can be asserted that self-esteem is a psychological structure that can facilitate coping with the anger.[27]

It was determined that there was a positive correlation between alexithymia and anger in patients undergoing hemodialysis, and as the level of alexithymia increased, anger increased. The depression caused by hemodialysis; symptoms of the illness; burnout; health anxiety; inability to express emotions due to the illness; withdrawal; and problems experienced in interpersonal relationships, family, and professional life may increase anger levels. In addition, the difficulties experienced by alexithymic individuals in regulating their anger and suppressing their anger may lead to an increase in their inner anger levels. Among alexithymic people, difficulties in regulating anger and inward anger are factors affecting physical health negatively.[28] Feelings such as fear, anger, and sadness occur in alexithymic individuals and may cause individuals to mask their emotions in some way.[29] Several studies have reported that alexithymia may be associated with many problems such as depression, somatization, anger/aggression, and burnout.[30-34] In their study, Korkmaz et al[28] reported that alexithymia was associated with anger and caused risks for various psychological problems such as burnout and somatization. In their study, Oktay and Batıgün[11] found that individuals having high scores of alexithymia behaved more aggressively due to anger and exhibited more frequently revenge-related, inward, indifferent reactions.

Alexithymic individuals experience more anger; however, since they have difficulty expressing their anger verbally, they express it in a nonverbal way and avoid having interpersonal conflicts. Since alexithymic individuals have a more anxious and aversive attachment type, they experience difficulty in interpersonal relationships, and this causes them to experience anger through inward reactions and aggressive behaviors.[11] In their study, Kahramanol and Dağ[9] concluded that alexithymia explained trait anger and the anger kept inside separately as psychological symptoms. Since individuals having alexithymic characteristics superficially cope with their problems in general, reaching a judgment without analyzing the problems in depth, not establishing cause–effect relationships about the problems, and not including emotions to this process may increase the anger level of these individuals.[35]

It was determined that among the hemodialysis patients, there was a positive correlation between alexithymia and self-esteem scores; that is, as self-esteem decreased, the level of alexithymia increased. The results of the study by Ünal[36] on university students showed that alexithymia had a positive correlation with low self-esteem, as well. Alexithymia is described as the lack of positive emotions, a high level of negative emotions, and difficulties in interpersonal communication.[10] Identifying and describing feelings are important for developing and maintaining a healthy positive self-perception and interpersonal relationships.[11] Individuals with alexithymia are cold in interpersonal relationships, have insufficient confidence, and cannot express their feelings sufficiently.[36,37]

In our study, it was found that self-esteem and anger variables together had a significant effect on alexithymia. Oktay and Batıgün[11] reported that self-perception and anger were significant variables in interpreting alexithymia, which is compatible with findings of the present study. Anger and low self-esteem levels of patients undergoing hemodialysis may be effective in their exhibition of alexithymic characteristics. Since alexithymic individuals have a more anxious and aversive attachment type, they experience difficulty in interpersonal relationships. This may cause the experiencing of anger through inward reactions and aggressive behaviors. All of these may lead to a decrease in self-esteem, and thus lead to problems and anger in interpersonal relationships again, resulting in a vicious circle.[11]

Conclusion

Based on the results of this study, it was determined that there was no significant difference between the sociodemographic characteristics of hemodialysis patients and their alexithymia levels, anger levels, and self-esteem. As the self-esteem scores of the patients increase, their self-esteem decreases and their alexithymia and anger levels increase. As the anger level increases in hemodialysis patients, the level of alexithymia increases.

Nurses need to deal not only with physical problems but also with mental problems of hemodialysis patients. In addition, it is recommended that nurses conduct studies to determine the level of alexithymia and anger in these patients and self-esteem levels that may be associated with alexithymia and take preventive measures to minimize risk factors. Since hemodialysis patients with alexithymic features have difficulty in expressing their emotions, it is important for nurses to empathize while giving care and to reveal their emotions by establishing a safe communication with these patients. In addition, nurses are recommended to examine alexithymic findings and to organize in-service trainings to increase patients' emotional awareness.

Limitation of the Study

The data of the study are limited to the data of hemodialysis patients treated in the dialysis center in 2 state hospitals.

Availability of Data and Material: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Ethics Committee Approval: Ethical committee approval was received from the Ethics Committee of Hasan Kalyoncu University (Approval no: 2020/084, Date: 29.09.2020).

Informed Consent: Written informed consent was obtained from the patients who agreed to take part in the study.

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