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Cognitive Emotion Regulation and Caregiver Roles of Nurses: A Descriptive, Cross-Sectional and Relational Study

Hemşirelerin Bilişsel Duygu Düzenleme Durumları ve Bakım Verici Rolleri: Tanımlayıcı, Kesitsel ve İlişkisel Bir Çalışma

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ABSTRACT Objective: Emotion regulation is the individual's ability to monitor, evaluate, control, and modify emotional responses to achieve a goal. The caring role of nurses is the oldest role of nurses, which forms the basis of their traditional practices and modern nursing roles. This study was conducted to determine the relationship between nurses' cognitive emotional regulation states and their caregiving roles. **Material and Methods:** This study is descriptive and cross-sectional. The sample of the study consisted of 220 nurses working in a university hospital. Personal Information Form, Cognitive Emotion Regulation Scale and Nurses' Attitudes towards Caregiver Roles Scale were used to collect data. Student t-test and one-way analysis of variance test were used to compare normally distributed data. Pearson correlation coefficient and regression analysis were used to examine the relationship between variables. The significance level was taken as $p<0.05$. **Results:** It was determined that nurses' cognitive emotion regulation mean scores and caregiver roles were high. A highly significant positive correlation was found between total and sub-dimension mean scores of cognitive emotion regulation and total and sub-dimension mean scores of caregiver roles ($p=0.001$). **Conclusion:** It is very important to determine the cognitive emotion regulation states, which are a skill that can be developed and directly affect nursing care, and to take initiatives to increase the quality of the care provided.

Keywords: Cognitive; emotion regulation; nursing care

ÖZET Amaç: Duygu düzenleme, bireyin bir amaca ulaşmak için duygusal tepkilerini izleme, değerlendirme, kontrol etme ve değiştirme yeteneğidir. Hemşirelerin bakım verici rolü, hemşirelerin geleneksel uygulamalarının ve modern hemşirelik rollerinin temelini oluşturan en eski rolüdür. Bu çalışma, hemşirelerin bilişsel duygu düzenleme durumları ve bakım verici rollerinin ilişkisini belirlemek amacıyla yapılmıştır. **Gereç ve Yöntemler:** Bu çalışma, tanımlayıcı ve kesitsel niteliktedir. Araştırmanın örneklemini bir üniversite hastanesinde görev yapan 220 hemşire oluşturmuştur. Verilerin toplanmasında Kişisel Bilgi Formu, Bilişsel Duygu Düzenleme Ölçeği ve Hemşirelerin Bakım Verici Rollerine İlişkin Tutum Ölçeği kullanılmıştır. Normal dağılan verilerin karşılaştırılmasında Student t-testi ve tek yönlü varyans analizi testi kullanılmıştır. Değişkenler arasındaki ilişkiyi incelemek için Pearson korelasyon katsayısı ve regresyon analizi kullanılmıştır. Anlamlılık düzeyi $p<0,05$ olarak alınmıştır. **Bulgular:** Hemşirelerin bilişsel duygu düzenleme puan ortalamalarının ve bakım verici rollerinin yüksek olduğu belirlenmiştir. Bilişsel duygu düzenleme toplam ve alt boyut puan ortalamaları ile bakıcı rolleri toplam ve alt boyut puan ortalamaları arasında pozitif yönde oldukça anlamlı bir ilişki saptanmıştır ($p=0,001$). **Sonuç:** Hemşirelik bakımını doğrudan etkileyen ve geliştirilebilen bir beceri olan bilişsel duygu düzenleme durumlarının belirlenmesi ve verilen bakımın kalitesini artırıcı girişimlerde bulunulması oldukça önemlidir.

Anahtar Kelimeler: Bilişsel; duygu düzenleme; hemşirelik bakımı

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Emotion regulation is the ability of an individual to monitor, evaluate, control and change emotional reactions in order to achieve a goal.[1,2] Emotion regulation has a wide scope that includes conscious and unconscious cognitive processes in addition to social, biological and behavioral processes.[3] When faced with a feeling that the person is uncomfortable with, in order to bring this feeling to a level where it is not disturbed; It can increase the intensity of the emotion, reduce the effect of emotions or make them continue. In this way, emotions can be controlled and the person can cope with their emotions.[4] From a psychoanalytic point of view, emotion regulation processes are closely related to how and how much defense mech-

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anisms are used. According to the tradition of coping with stress, when a threat is re-evaluated, a new relational meaning of the stressful encounter is built and emotions are changed.[5] Employees who do not acknowledge their negative emotions or who see their work activities being compromised by the interference of negative emotions need to focus their attention on suppressing or transforming these emotions because negative emotions can be frustrating for them.[6,7] It has been reported that nurses' ability to regulate their emotions will affect their psychological health, interactions with patients, and clinical performance.[6] When the literature was examined, Donoso et al., found that good efficacy in emotion regulation was associated with nurses' high motivation at work and happiness at home.[7] Again, Masiero et al., found in their study that health professionals who have difficulty in verbally expressing and managing their emotions are more prone to burnout.[8]

The caregiver role is the oldest role that forms the basis of traditional practices of nurses and also forms the basis of modern nursing roles.[9,10] It is possible to say that other roles of modern nursing are derived and developed from this role.[11] Nurses have a number of roles that they perform independently in the caregiving processes. The caregiver role is an independent role that provides the opportunity for the nurse to assert her autonomy. This role is indispensable for the nursing profession.[12] When the literature is examined, it has been reported that the caregiver roles of nurses are at a high level in Tuna and Sahin studies.[9] Again, Danaci and Koç found that nurses with low burnout and high job satisfaction have higher perceptions of individualized care and support the individuality of patients in their care practices.[13] Nurses' long working hours, constant shift duties, interpersonal conflicts with peers, the elderly, patients or doctors, performing non-nursing tasks, and being constantly confronted with life-threatening situations cause stress.[14-16] It is thought that this stress experienced by nurses will affect their caregiver roles and therefore the quality of patient care. Wang et al., reported in their study that acceptance and positive refocusing in nurses contributed to cognitive emotion regulation strategies and reduction of anxiety or depression.[17] The fact that this intense stress experienced by nurses is not reflected in their care behaviors is thought to be related to the cognitive emotion regulation abilities of nurses. From the individual's perspective, when a stressful event occurs, the individual first evaluates the importance of the situation to his or her well-being, and only events considered relevant may have the potential to cause stress, tension, or distress. When a person evaluates a relevant situation as a threat and perceives that their ability to control and cope with it is diminished, they are more likely to experience stress or tension.[5] In this context, it is predicted that nurses can cope with the negative situations they encounter during the practice of the nursing profession by using appropriate cognitive emotional regulation processes. It is predicted that the quality of the care provided by nurses who can carry out the cognitive emotion regulation process actively and successfully will increase. It is thought that the quality of care of nurses who can control their emotions with cognitive emotion regulation, show an empathetic attitude, and successfully carry out the communication and interaction process will increase. In this context, the aim of in the present study is to determine the effect of nurses' cognitive emotion regulation on their caregiver roles.

HYPOTHESES OF THE RESEARCH

H_1: There is a relationship between nurses' cognitive emotional regulation states and their caregiving roles.

H_2: Nurses' cognitive emotion regulation states affect their caregiving roles.

H_3: Nurses' caring roles affect their cognitive emotional regulation states.

MATERIAL AND METHODS

PARTICIPANTS AND SETTING

This research was conducted in a university hospital in Türkiye between January 2022 and February 2022. The population of the research consists of 500 nurses working in the university hospital.

The sample size of the study was determined as at least 217 nurses, with the known universe of the sample calculation formula. $s = \frac{Nt^2p.q}{d^2(N-1)+t^2p.q} = 217$

220 nurses who accepted to participate in the study and filled out the forms were included in the sample of the study. The participants in the research were informed about the purpose of this research, and the forms were applied to the participants who agreed to participate in the research.

DATA COLLECTION

In this research, three forms were used to collect data: "Individual Information Form" created by the authors, "Cognitive Emotion Regulation Scale" evaluating cognitive emotion regulation, and "Attitude Scale for Nurses' Caregiver Roles" evaluating nurses' caregiver roles.

INDIVIDUAL INFORMATION FORM

The personal information form was created by the researchers. This form consists of six closed-ended questions such as age, gender, working year, marital status, education level, number of patients per nurse.

COGNITIVE EMOTION REGULATION SCALE

Cognitive Emotion Regulation Scale Garnefski and Kraaij it was developed in (2001). The Turkish validity and reliability study of the Cognitive Emotion Regulation Scale was conducted by Cakmak and Cevik to determine the cognitive emotion regulation states of individuals. The Cognitive Emotion Regulation Scale consists of nine different scales with each two items: self-blame, other-blame, rumination, catastrophizzmeans 5 points almost always.[18,19] Psychometric features were established among a large adult general population, and Cronbach's alpha (0.78) reliability coefficients for the subscales were found to be acceptably high. In this study, Cronbach's alpha value was found to be 0.82.

NURSES' ATTITUDE SCALE TOWARDS CAREGIVER ROLES

Nurses' Attitudes Towards Caregiver Roles Scale was developed by Kocak et al. to determine nurses' attitudes towards their caregiver roles and has been validated and reliable by the same researchers and consists of 16 items, a 5-point Likert-type scale.[20] It consists of three sub-scales, namely, "Attitude towards meeting the patient's self-care needs and the role of the nurse in counseling", "Attitude towards the role of the nurse in protecting the individual and respecting their rights" and "Attitude towards the role of the nurse in the treatment process". The participants evaluate the items of the scale in line with the responses of "Strongly Disagree", "Disagree", "Partly Agree", "Agree" and "Completely Agree" and these evaluations are scored between 1-5 points. The lowest score obtained from the scale is 16, and the highest score is 80. The lowest score obtained from the subscale of the scale "Meeting the patient's self-care needs and the attitude towards the nurse's counseling role" was 7, the highest score was 35, the lowest score obtained from the sub-scale of "Attitude towards the role of protecting the individual and respecting the rights of the nurse" was 4, the highest score 20, the lowest score obtained from the subscale of "Attitude towards the role of the nurse in the treatment process" is 5, and the highest score is 20. When the scores of the scale are taken into account, it is reported that the higher the score, the more positive the attitudes of nurses towards their caregiver roles. In this study, the Cronbach's alpha value of the scale was calculated as 0.82.

DATA ANALYSIS

The data of this study were analyzed with the IBM SPSS V26 (USA) program, and frequency and percentage distributions were used in the analysis of sociodemographic data. Student t-test and one-way analysis of variance test (Tukey and Tamhane T2 tests) were used to analyze normally distributed data. Pearson correlation coefficient and multiple regression analysis were used to examine the relationship between the variables of the study. Statistical significance level was calculated as $p<0.05$.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the Social and Human Sciences Ethics Committee of Tokat Gaziosmanpaşa University (28/10-December 27, 2021). Institutional permission was obtained from the hospital before starting the implementation process of the study. Afterwards, the participants, who constituted the sample of the research, were informed about the purpose of the research and their written and verbal consents were obtained. This research was conducted in accordance with the principles of the Declaration of Helsinki.

RESULTS

Table 1 presents some introductory characteristics of the nurses included in the study, it was determined that 62.30% of the sample was female, 70.00% was between the ages of 18-35, 68.18% of the nurses were married and 43.20% had a bachelor's degree. It was also found that 35.50% of the nurses had 6-10 years of work and 26.80% of them looked after 10-15 patients on average (Table 1).

When the Cognitive Emotion Regulation Scale sub-dimension mean scores of the nurses participating in the study were examined, Self-blame Sub-dimension was 3.52±1.26, Acceptance Sub-dimension was 3.52±1.26, Rumination Sub-dimension 3.54± 1.38, Positive refocusing Sub-dimension 3.46±1.24, Refocus on planning Sub-dimension 3.50±1.26, Positive reappraisal Sub-dimension 3.46±1.24, Putting into perspective Sub-dimension is 3.46±1.26, Catastrophizing Sub-dimension is calculated as 3.37±1.20 and Other-blame Sub-dimension is calculated as 3.51±1.24. When the Attitude Scale for Nurse's Caregiver Role sub-dimension mean scores of the nurses included in the study were examined, Addressing Self-Care Needs and Counseling sub-dimension was 24.30±8.75, Protecting the Individual and Respecting Their Rights sub-dimension was 14.00±5.07 and Attitude Towards Treatment Roles sub-dimension was 17.68±5.78 (Table 2).

In Table 3, Cognitive Emotion Regulation Scale Scores According to Nurses' Sociodemographic Characteristics are given. Self-blame 3.98±0.86, Acceptance 3.98±0.86, Rumination 4.02±1.41, single nurses, Positive refocusing 3.83±0.86, Refocus on planning 3.92±0.89, Positive reappraisal 3.96±0.87, Putting into perspective 3.87±0.92, Catastrophizing 3.84±0.88, Other-blame 3.93±0.84, and Total score was determined as 3.93±0.84. Self-blame 3.71±1.17, Acceptance 3.71±1.17, Rumination 3.70±1.13, Nurses with postgraduate education, Positive refocusing 3.63±1.17, Refocus on planning 3.71±1.17, Positive reappraisal 3.71±1.17, Putting into perspective 3.57±1.17, Catastrophizing 3.61±1.19, Other-blame 3.65±1.14 and Total score was calculated as 3.66±1.14. Nurses caring for 10-15 patients Self-blame 4.01±1.16, Acceptance 4.01±1.16, Rumination 4.01±1.09, Positive refocusing 3.95±1.17, Refocus on planning 4.01±1.16, Positive reappraisal

TABLE 1: Distribution of nurses by some introductory characteristics (n=220).

Characteristics	n	%
Gender		
Female	137	62.30
Male	83	37.70
Age		
18-35	154	70.00
36-55	66	30.00
Marital status		
Married	150	68.18
Single	70	31.82
Educational status		
Health vocational high school	49	17.30
Licence	95	43.20
Graduate	76	34.50
Working year		
0-5 years	52	23.60
Between 6-10 years	78	35.50
Between 11-15 years	58	26.40
More than 15 years	32	14.50
Number of patients per nurse		
1-3 patients	22	10.0
4-6 patients	49	22.3
7-9 patients	56	25.5
10-15 patients	59	26.8
16-21 patients	34	15.5

TABLE 2: Mean scores of the Cognitive Emotion Regulation Scale and Attitude Scale for Nurse's Caregiver Role (n=220).

Cognitive Emotion Regulation Scale	X̄±SD	Minimum	Maximum
Self-blame	3.52±1.26	1.00	5.00
Acceptance	3.52±1.26	1.00	5.00
Rumination	3.54±1.38	1.00	5.00
Positive refocusing	3.46±1.24	1.00	5.00
Refocus on planning	3.50±1.26	1.00	5.00
Positive reappraisal	3.46±1.24	1.00	5.00
Putting into perspective	3.46±1.26	1.00	5.00
Catastrophizing	3.37±1.20	1.00	5.00
Other-blame	3.51±1.24	2.00	5.00
Total score	3.48±1.23	1.00	5.00
Attitude Scale for Nurse's Caregiver Role			
Addressing self-care needs and counseling	24.30±8.75	7.00	55.00
Protecting the individual and respecting their rights	14.00±5.07	4.00	20.00
Attitude towards treatment roles	17.68±5.78	5.00	25.00
Total score	56.00±19.56	16.00	80.00

SD: Standard deviation.

TABLE 3: Cognitive Emotion Regulation Scale mean scores according to nurses' sociodemographic characteristics (n=220).

	Cognitive Emotion Regulation Scale									
Variable	Self-blame X̄±SD	Acceptance X̄±SD	Rumination X̄±SD	Positive refocusing X̄±SD	Refocus on planning X̄±SD	Positive reappraisal X̄±SD	Putting into perspective X̄±SD	Catastrophizing X̄±SD	Other-blame X̄±SD	Total score X̄±SD
Gender										
Female	3.43±1.28	3.43±1.28	3.47±1.50	3.35±1.24	3.40±1.24	3.38±1.26	3.36±1.27	3.29±1.21	3.41±1.25	3.39±1.24
Male	3.67±1.24	3.67±1.27	3.66±1.16	3.63±1.22	3.67±1.22	3.59±1.21	3.62±1.23	3.51±1.18	3.66±1.21	3.63±1.19
Test statistics	**t=-1.385**	**t=-1.385**	**t=-1.027**	**t=-1.631**	**t=-1.552**	**t=-1.210**	**t=-1.458**	**t=-1.312**	**t=-1.465**	**t=-1.417**
	p=0.082	**p=0.082**	**p=0.031**	**p=0.147**	**p=0.076**	**p=0.134**	**p=0.120**	**p=0.166**	**p=0.093**	**p=0.356**
Age										
18-35	3.58±1.28	3.58±1.28	3.60±1.47	3.51±1.25	3.57±1.28	3.50±1.25	3.55±1.28	3.38±1.21	3.55±1.26	3.54±1.24
36-55	3.38±1.22	3.37±1.22	3.41±1.15	3.33±1.21	3.34±1.22	3.37±1.22	3.23±1.18	3.34±1.18	3.40±1.18	3.35±1.18
Test statistics	**t=1.102**	**t=1.108**	**t=0.903**	**t=1.018**	**t=1.195**	**t=0.678**	**t=1.749**	**t=0.213**	**t=0.858**	**t=1.011**
	p=0.652	**p=0.658**	**p=0.306**	**p=0.816**	**p=0.602**	**p=0.799**	**p=0.424**	**p=0.690**	**p=0.376**	**p=0.637**
Marital status										
Married	3.98±0.86	3.32±1.36	3.34±1.32	3.30±1.36	3.32±1.36	3.25±1.37	3.28±1.34	3.17±1.26	3.33±1.34	3.29±1.32
Single	3.32±1.36	3.98±0.86	4.02±1.41	3.83±0.86	3.92±0.89	3.96±0.87	3.87±0.92	3.84±0.88	3.93±0.84	3.93±0.84
Test statistics	**t=-3.632**	**t=-3.632**	**t=-3.427**	**t=-2.939**	**t=-3.281**	**t=-4.063**	**t=-3.280**	**t=-3.931**	**t=-3.362**	**t=-3.607**
	p=0.001	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**
Educational status										
Vocational school of health	3.71±1.17	3.71±1.17	3.70±1.13	2.43±1.26	2.37±1.25	2.37±1.25	2.37±1.25	3.61±1.19	3.65±1.14	2.37±1.24
Licence	3.58±1.29	3.55±1.29	3.65±1.56	3.48±1.26	3.56±1.29	3.51±1.25	3.54±1.28	3.40±1.20	3.59±1.25	3.55±1.24
Graduate	2.37±1.25	2.34±1.25	2.37±1.25	3.63±1.17	3.71±1.17	3.71±1.17	3.57±1.17	2.33±1.17	2.17±1.25	3.66±1.14
Test statistics	**F=5.333**	**F=5.345**	**F=4.656**	**F=4.343**	**F=5.353**	**F=5.83**	**F=4.497**	**F=5.274**	**F=5.248**	**F=5.303**
	p=0.001 *	**p=0.001**	**p=0.004**	**p=0.005**	**p=0.001***	**p=0.001**	**p=0.004**	**p=0.002**	**p=0.002**	**p=0.002**
Working year										
0-5 years	3.73±1.22	3.73±1.22	3.75±1.16	3.66±1.20	3.71±1.22	3.56±1.15	3.67±1.23	3.61±1.21	3.71±1.20	3.68±1.18
Between 6-10 years	3.44±1.36	3.46±1.36	3.47±1.32	3.33±1.32	3.43±1.36	3.39±1.35	3.39±1.36	3.36±1.29	3.46±1.36	3.41±1.32
Between 11-15 years	3.43±1.27	3.42±1.27	3.36±1.23	3.37±1.26	3.41±1.27	3.43±1.27	3.40±1.25	3.21±1.15	3.40±1.19	3.38±1.22
More than 15 years	3.53±1.10	3.52±1.10	3.70±1.34	3.59±1.04	3.50±1.10	3.53±1.10	3.39±1.06	3.29±1.05	3.50±1.09	3.50±1.08
Test statistics	**F=0.652**	**F=0.650**	**F=0.960**	**F=0.910**	**F=0.632**	**F=0.235**	**F=0.636**	**F=1.072**	**F=0.630**	**F=0.660**
	p=0.582	**p=0.586**	**p=0.413**	**p=0.436**	**p=0.595**	**p=0.872**	**p=0.593**	**p=0.362**	**p=0.596**	**p=0.578**
Number of patients per nurse										
1-3 patients	3.36±1.04	3.36±1.04	3.68±2.31	3.15±0.90	3.36±1.04	3.31±1.04	3.38±1.06	3.38±1.96	3.31±0.93	3.37±1.03
4-6 patients	3.36±1.25	3.36±1.25	3.33±1.23	3.36±1.25	3.36±1.25	3.36±1.25	3.34±1.23	3.23±1.19	3.37±1.20	3.34±1.22
7-9 patients	3.69±1.20	3.69±1.20	3.65±1.19	3.64±1.17	3.69±1.20	3.66±1.19	3.65±1.20	3.49±1.16	3.67±1.16	3.65±1.17
10-15 patients	2.70±1.29	2.70±1.29	2.76±1.22	2.64±1.20	2.58±1.20	2.55±1.13	2.70±1.29	2.70±1.29	2.70±1.29	2.67±1.22
16-21 patients	4.01±1.16	4.01±1.16	4.01±1.09	3.95±1.17	4.01±1.16	3.93±1.15	3.83±1.21	3.76±1.14	4.00±1.17	3.95±1.12
Test statistics	**F=6.974**	**F=6.984**	**F=5.195**	**F=7.489**	**F=8.349**	**F=8.008**	**F=5.162**	**F=4.727**	**F=7.089**	**F=6.919**
	p=0.001	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**	**p=0.001**

t: Student t-test; F: One-way analysis of variance; p<0.05; SD: Standard deviation.
*p<0.005.

3.93±1.15, Putting into perspective 3.83±1.21, Catastrophizing 3.76±1.14, Other-blame 4.00±1.17, and Total score was found as 3.95±1.12.

Table 4 shows the Attitude Scale Scores Regarding the Nurse's Caregiver Role According to the Sociodemographic Characteristics of the Nurses. Addressing Self-Care Needs and Counseling sub-dimension score of single nurses is 27.16±6.20, Protecting the Individual and Respecting Their Rights sub-dimension score is 15.71±3.58, Attitude Towards

TABLE 4: Attitude Scale for Nurse's Caregiver Role mean scores according to nurses' sociodemographic characteristics (n=220).

	Attitude Scale for Nurse's Caregiver Role			
	Addressing self-care needs and counseling X̄±SD	Protecting the individual and respecting their rights X̄±SD	Attitude towards treatment roles X̄±SD	Total score X̄±SD
Gender				
Female	23.54±8.82	13.60±5.12	17.20±5.86	54.35±19.75
Male	25.56±8.52	14.67±4.94	18.46±5.61	58.71±19.04
Test statistics	**t=-1.665**	**t=-1.518**	**t=-1.577**	**t=-1.605**
	p=0.074	**p=0.081**	**p=0.114.**	**p=0.091**
Age				
18-35	24.71±8.86	14.24±5.13	17.95±5.88	56.90±19.81
36-55	23.36±8.42	13.46±4.93	17.04±5.56	53.87±19.83
Test statistics	**t=1.049**	**t=1.032**	**t=1.068**	**t=1.053**
	p=0.644	**p=0.719**	**p=0.743**	**p=0.683**
Marital status				
Married	23.08±9.39	13.27±5.44	16.94±6.28	53.30±21.07
Single	27.16±6.20	15.71±3.58	19.40±3.96	62.28±13.66
Test statistics	**t=-3.329**	**t=-3.332**	**t=-2.947**	**t=-3.185**
	p=0.001	p=0.001	p=0.001	p=0.001
Educational status				
Vocational school of health	16.68±8.79	9.43±5.05	12.06±6.06	38.18±19.87
Licence	24.76±8.96	14.28±5.13	17.96±5.77	57.02±19.82
Graduate	25.64±7.98	14.76±4.73	18.56±5.40	58.97±18.08
Test statistics	**F=5.061**	**F=5.317**	**F=6.095**	**F=5.442**
	p=0.00 *	**p=0.001**	**p=0.001**	**p=0.001**
Working year				
0-5 years	25.80±8.31	14.92±4.89	18.94±5.39	59.67±18.57
Between 6-10 years	23.89±9.27	13.71±5.43	17.33±6.25	54.94±20.92
Between 11-15 years	23.50±8.89	13.62±5.05	16.93±5.89	54.05±19.77
More than 15 years	24.34±7.89	13.93±5.52	17.84±4.88	56.12±17.26
Test statistics	**F=0.729**	**F=0.760**	**F=1.253**	**F=0.877**
	p=0.536	**p=0.517**	**p=0.291**	**p=0.454**
Number of patients per nurse				
1-3 patients	23.36±7.23	13.40±4.26	16.54±4.74	53.31±16.20
4-6 patients	23.36±8.47	13.42±5.06	17.08±5.84	53.87±19.35
7-9 patients	25.78±8.21	14.78±4.81	18.42±5.57	59.00±18.56
10-15 patients	27.96±8.07	16.01±4.62	20.06±5.43	64.05±18.10
16-21 patients	17.50±8.11	10.47±4.90	13.91±5.23	41.88±18.16
Test statistics	**F=9.641**	**F=7.885**	**F=7.476**	**F=8.532**
	p=0.001	**p=0.001**	**p=0.001**	**p=0.001**

SD: Standard deviation.
*p<0.005.

Treatment Roles sub-dimension score is 19.40±3.96, and Total score was calculated as 62.28±13.66. Addressing Self-Care Needs and Counseling sub-dimension score of nurses with graduate education is 25.64±7.98, Protecting the Individual and Respecting Their Rights sub-dimension score is 14.76±4.73, The Attitude Towards Treatment Roles sub-dimension score was 18.56±5.40, and the Total score was 58.97±18.08. Addressing Self-Care Needs and Counseling sub-dimension score of nurses caring for 10-15 patients was 27.96±8.07, Protecting the Individual and Respecting Their Rights sub-dimension score

was 16.01±4.62, Attitude Towards Treatment Roles sub-dimension score was 20.06±5.43 and Total score was 64.05±18.10.

The relationship between Cognitive Emotion Regulation and the attitude towards the nurse's caregiver role is shown in Table 5. Accordingly, there is a high level of positive and significant correlation between Cognitive Emotion Regulation and all its sub-dimensions, attitudes towards the nurse's caregiver role and all sub-dimensions (p=0.001).

Multiple Linear Regression Analysis Results of the Cognitive Emotion Regulation Scale Sub-Dimensions of the Caregiver Roles Scale are presented in Table 6. It was determined that caregiver roles had a significant effect on cognitive emotion regulation sub-dimensions (p=0.001).

TABLE 5: The Relationship Between Cognitive Emotion Regulation Scale and Attitude Scale for Nurse's Caregiver Role Scale (n=220).

Spearman's rho		Addressing self-care needs and counseling	Protecting the individual and respecting their rights	Attitude Towards treatment roles	Total score
Self-blame	r	0.980	0.982	0.986	0.980
	p	0.001**	0.001**	0.001**	0.001**
Acceptance	r	0.970	0.970	0.986	0.970
	p	0.002**	0.002**	0.002**	0.002**
Rumination	r	0.969	0.984	0.880	0.969
	p	0.003**	0.003**	0.003**	0.003**
Positive refocusing	r	0.970	0.970	0.974	0.970
	p	0.001*	0.001 *	0.001*	0.001*
Refocus on planning	r	0.996	0.996	0.947	0.996
	p	0.001**	0.001**	0.001**	0.001**
Positive reappraisal	r	0.995	0.995	0.966	0.995
	p	0.001**	0.001**	0.001**	0.001**
Putting into perspective	r	0.940	0.966	0.940	0.940
	p	0.001**	0.001**	0.001**	0.001**
Catastrophizing	r	0.949	0.960	0.949	0.949
	p	0.001**	0.001**	0.001**	0.001**
Other-blame	r	0.976	0.960	0.982	0.976
	p	0.001*	0.001*	0.001*	0.001*
Total score	r	0.980	0.956	0.994	0.993
	p	0.001**	0.001**	0.001**	0.001**

**Correlation is significant at the 0.01 level (2-tailed).
*p<0.005.

TABLE 6: Multiple Linear Regression Analysis Results for the Cognitive Emotion Regulation Scale Sub-Dimension of the Caregiver Roles Scale.

	B	Standard error	β	t value	p value
Constant	0.061	0.300		2.049	0.001
Self-blame	0.987	0.008	0.993	122.493	0.001
Acceptance	17.105	1.602	0.520	9.664	0.001
Rumination	12.540	0.116	0.840	10.980	0.001
Positive refocusing	16.794	1.540	0.794	12.760	0.001
Refocus on planning	0.674	0.002	0.372	12.670	0.001
Positive reappraisal	0.728	0.076	0.514	10.017	0.001
Putting into perspective	0.428	1.468	0.618	9.115	0.001
Catastrophizing	0.624	1.664	0.742	10.428	0.001
Other-blame	0.415	0.088	0.613	10.540	0.001

TABLE 7: Multiple Linear Regression Analysis Results for the Sub-Dimension of the Cognitive Emotion Regulation Scale, Caregiver Roles Scale.

	B	Standard error	β	t value	p value
Constant	0.078	0.200		1.050	0.001
Addressing self-care needs and counseling	0.680	0.008	0.993	10.694	0.003
Protecting the individual and respecting their rights	15.680	1.660	0.420	9.650	0.002
Attitude towards treatment roles	14.150	0.120	0.640	10.880	0.002

Multiple Linear Regression Analysis Results of the Sub-Dimensions of the Cognitive Emotion Regulation Scale Caregiver Roles Scale are given in Table 7. It was found that cognitive emotion regulation had a significant effect on the sub-dimensions of the Caregiver Roles Scale (p=0.001).

DISCUSSION

In the present study to determine the reflections of nurses' cognitive emotion regulation on their caregiver roles, it was concluded that nurses' cognitive emotion regulation states significantly affected their caregiver roles, and in this context, our findings were discussed in relation to the relevant literature.

Emotion regulation defines the capacity to self-modulate emotions to achieve desired emotional outcomes.[21] In the present study, nurses' cognitive emotion regulation scores were found to be at a good level. It has been reported that nurses can partially control negative emotions, show emotions as they are, cope with and manage anger partially.[22] Nurses' ability to regulate their emotions affects their psychological health, interactions with patients, and clinical performance.[23] In the present study, the five adaptive strategies (acceptance, positive refocusing, refocusing on planning, positive reappraisal and putting into perspective) sub-dimensions of single nurses were higher, and four maladaptive strategies (self-blame, rumination, catastrophizing, and blaming others) sub-dimensions were higher in single nurses than in married nurses was found to be low (p=0.001). It is thought that this situation causes stress in nurses together with the responsibility of marriage and work life, and this situation negatively affects cognitive emotion regulation.

In the present study, it was determined that nurses with a master's degree had high cognitive emotion regulation positive sub-dimension scores and low negative sub-dimension scores (p=0.001). Labrague et al. found that nurses with a master's degree reported lower turnover intention than nurses with a bachelor's degree.[24] Emotion regulation is usually automatic but can be controlled by learned strategies.[25] It can be said that this situation increases the cognitive emotion regulation skills of nurses with the increase in education level.

In the present study , it was determined that as the number of patients cared for by nurses increased, cognitive emotion regulation negative sub-dimension scores increased (p=0.001). As the number of patients cared for by nurses increases, so the burden of care increases, the stress levels they experience also increase.[26] When the literature is examined, Solgun et al., reported that as the workload and responsibilities of nurses increase, negative defense mechanisms develop.[27]

Nurses are mostly independent while fulfilling their caregiving roles, and it is this role that makes nursing a profession.[20] It was determined that the nurses in the present study had high scores on the Attitude Scale towards Nurses' Caregiver Roles. Uzelli Yılmaz et al., reported that the average score of nurses was high in their study to examine nurses' attitudes towards their caregiver roles and related factors.[28]

In the present study, a statistically significant positive correlation was found between nurses' cognitive emotion regulation and caregiver roles (H_1, p=0.001). Cognitive emotion regulation strategies adopted by nurses affect emotional control, mental

health and job performance.[18,23] Examining the studies conducted by nurses on cognitive emotion regulation in the literature, Jackson-Koku and Grime found that self-regulation or taught emotion regulation skills or interventions such as mindfulness were associated with a decrease in burnout.[21] Salvarani et al., found that cognitive emotion regulation in emergency room nurses reduced the level of burnout in nurses.[23] Naushad et al., found that nurses who spend more time with patients are more likely to develop emotional bonds with them than doctors.[29] Burnout in nurses causes medical errors, dismissal, reduced quality of care and low patient satisfaction.[30] According to Donoso et al. found that good efficacy in emotion regulation was associated with nurses' high motivation at work and happiness at home.[7] Again, Masiero et al., found in their study that health professionals who have difficulties in emotional regulation behaviors are more prone to burnout.[8] An important factor in predicting intention to leave and quitting is burnout. Troy et al., demonstrated that cognitive reappraisal serves as an important protective factor against depression by providing an effective way to reduce negative emotions in the context of high stress.[31]

In the present study, a statistically significant effect was found between the nurses' cognitive emotion regulation sub-dimensions and caregiver roles sub-dimensions as a result of the regression analysis (H_2, H_3 $p<0.001$). When the literature was examined, Wang et al. in their study focusing on the relationship between cognitive emotion regulation strategies and nurses' anxiety and depression during the coronavirus disease-2019 epidemic, regression analysis showed that greater participation in maladaptive strategies (self-blame, rumination, and catastrophizing) predicted anxiety and depressive symptoms. they reported.[17] Again, Donoso et al., found in their study that the presence of emotional regulation skills in the workplace will increase the positive effect of emotional demands on employees.[7] Furthermore, the results also suggest that nurses with higher emotional regulation skills may be more motivated at work when faced with high emotional job demands and may be better off at home at night, with a spillover effect after work.

However, no study has been found in the literature that deals with the effect of nurses' cognitive emotion regulation on their caregiver roles. In this context, the discussion of our findings was carried out with limited and indirect resources, and our comments on our findings were prioritized.

STRENGTHS AND LIMITATIONS

Nurses' long working hours, constant shift duties, interpersonal conflicts with peers, the elderly, patients or doctors, performing non-nursing duties and constantly facing life-threatening situations cause stress. This study reveals that nurses can provide more effective care if they use their cognitive emotion regulation skills.

The limitations of this study are that the sample is limited to a university hospital in Türkiye and the results cannot be generalized to the entire population. In this study, it is recommended to compare the groups by giving cognitive emotional regulation training in a randomized controlled manner.

CONCLUSION

According to the results of in the present study, it was determined that the cognitive emotion regulation levels and caregiver roles of nurses were high. It was also found that there was a positive and high-level relationship between the cognitive emotion regulation levels of the nurses participating in the study and their caregiver roles. Interventions for cognitive emotion regulation skills are very important in terms of teaching healthy emotion regulation patterns, increasing emotion regulation by improving emotional memory, providing a higher quality level of nursing care, which is at the center of the nursing profession and an indispensable part of the profession, and increasing the quality of care.

Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or mem-

bers of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

This study is entirely author's own work and no other author contribution.

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