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## The Effect of Emotion Management Training Given to Nursing Students on Alexithymia and Self- Consciousness

### Hemşirelik Öğrencilerine Verilen Duygu Yönetimi Eğitiminin Aleksitimi ve Öz Bilinç Düzeyine Etkisi

Fatma KARASU<sup>1</sup> 

Ebru ÖZTÜRK ÇOPUR<sup>1</sup> 

Melike YAVAŞ ÇELİK<sup>2</sup> 

Rabia ARPACI<sup>3</sup> 

<sup>1</sup> Dr. Öğr. Üyesi, Kilis 7 Aralık University, Yusuf Şerefoğlu Faculty of Health Sciences, Department of Nursing, Kilis, Turkey

<sup>2</sup> Dr. Öğr. Üyesi, Gaziantep University, Faculty of Health Sciences, Department of Midwifery, Gaziantep, Turkey

<sup>3</sup> Arş. Gör., Kilis 7 Aralık University, Yusuf Şerefoğlu Faculty of Health Sciences, Department of Nursing, Kilis, Turkey

**Yazışmadan sorumlu yazar:** Fatma KARASU; fatmakarasu@kilis.edu.tr

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## Abstract:

**Objective:** This study was conducted to evaluate the effect of emotion management training given to nursing students on alexithymia and self-consciousness levels.

**Method:** This research is an intervention study with pretest-posttest control group. The sample of the research was determined by power analysis and it was carried out with 32 students in the intervention group and 32 students in the control group. The data were collected between February-June 2021. In the collecting data were used Socio-demographic Data Form, Toronto Alexithymia Scale, and Self-Consciousness Scale. In the analysing of data were used t-test for dependent groups, t-test for independent groups, chi-square and ANOVA tests.

**Results:** In the intervention group of students' Toronto Alexithymia Scale mean score pre-test are  $67.03 \pm 10.86$ , post-test  $49.75 \pm 8.25$ ; in the control group of students pre-test are  $69.03 \pm 8.23$ , post-test  $69.87 \pm 10.15$ , and it was determined that the difference between the post-test mean scores of the groups was statistically significant ( $p < 0.05$ ). In the intervention group of students' Self-Consciousness Scale mean score on pre-test are  $31.59 \pm 6.75$ , post-test  $38.84 \pm 3.41$ ; in the control group of students pre-test are  $32.46 \pm 6.97$ , post-test  $32.21 \pm 7.36$ , and it was determined that the difference between the post-test mean scores of the groups was statistically significant ( $p < 0.05$ ).

**Conclusion:** It was determined that given to nursing students emotional management training affected positive way alexithymia and self-consciousness levels.

**Key Words:** Alexithymia; self-consciousness; emotion management; nursing students

## Özet:

**Amaç:** Bu çalışma hemşirelik öğrencilerine verilen duygu yönetimi eğitiminin aleksitimi ve öz bilinç düzeyine etkisini değerlendirmek amacıyla yapılmıştır.

**Yöntem:** Bu araştırma, ön test-son test kontrol gruplu müdahale çalışmasıdır. Araştırmanın örnekleme power analizi ile belirlenmiş olup girişim grubuna 32, kontrol grubuna 32 öğrenci ile yürütülmüştür. Veriler Şubat-Haziran 2021 tarihleri arasında toplanmıştır. Verilerin toplanmasında, Sosyo-demografik Veri Formu, Toronto Aleksitimi Ölçeği ve Öz Bilinçlilik Ölçeği kullanılmıştır. Verilerin analizinde bağımlı gruplarda t testi, bağımsız gruplarda t testi, ki-kare ve ANOVA testleri kullanılmıştır.

**Bulgular:** Girişim grubundaki öğrencilerinin Toronto Aleksitimi Ölçeği puan ortalamalarının ön test  $67.03 \pm 10.86$ , son test  $49.75 \pm 8.25$ ; kontrol grubundaki öğrencilerinin ise ön test  $69.03 \pm 8.23$ , son test  $69.87 \pm 10.15$  olduğu ve grupların son test puan ortalamaları arasındaki farkın istatistiksel olarak önemli olduğu saptanmıştır ( $p < 0.05$ ). Girişim grubu öğrencilerinin Öz Bilinçlilik Ölçeği puan ortalamaları ön test  $31.59 \pm 6.75$ , son test  $38.84 \pm 3.41$ ; kontrol grubu öğrencilerinin ise ön test  $32.46 \pm 6.97$ , son test  $32.21 \pm 7.36$  olduğu ve grupların son test puan ortalamaları arasındaki farkın istatistiksel olarak anlamlı olduğu saptanmıştır ( $p < 0.05$ ).

**Sonuç:** Hemşirelik öğrencilerine verilen duygu yönetimi eğitiminin aleksitimi ve öz bilinç düzeylerini pozitif yönde etkilediği belirlenmiştir.

**Anahtar Kelimeler:** Aleksitimi; öz bilinç; duygu yönetimi; hemşirelik öğrencileri

## Introduction

Emotions are the most important factor in establishing healthy and balanced relationships for humans who are social beings.<sup>(1)</sup> It is stated that the physical and psychosocial well-being of the individual is closely related to the ability to recognize and express their emotions.<sup>(2)</sup>

Recognition and expression ability of emotions is revealed emotion management concept. The ability to manage emotions is a process; that primarily includes the awareness and recognition of emotions, and the ability to direct and adapt to emotions.<sup>(3)</sup> The basis of an individual's ability to recognize emotions is the internal communication it will provide with itself.<sup>(4)</sup> Being able to recognize one's own and other's emotions creates adequate skills in establishing healthy relationships, while also developing a sense of responsibility towards others.<sup>(5)</sup> However, for various reasons, many people have problems in recognizing and expressing their emotions. This emotional distress is defined as alexithymia.<sup>(6)</sup> Alexithymia is characterized by difficulty in expressing all emotions at the emotional, behavioral, physiological, and subjective/experiential levels.<sup>(7,8)</sup> The concept of alexithymia, which started to be used in the field of mental health as a term specific to psychosomatic diseases, has become a situation that is examined not only in sick individuals but also in healthy individuals.<sup>(9,10)</sup> Studies indicate that the prevalence of alexithymia, which is also common in healthy individuals, is approximately 10%.<sup>(11,12)</sup> Alexithymic individuals, who cannot fully express their own emotions, also have difficulties in understanding the emotions of others. This situation causes alexithymic individuals to have limited empathy skills.<sup>(7,13)</sup> For effective communication, it is important to fully express emotions and understand the feelings of the other person.<sup>(14)</sup> Studies have reported that alexithymia causes a lack of empathy in individuals, and accordingly, individuals experience problems in interpersonal relationships and communication.<sup>(15,16)</sup> In addition to these, these individuals, who cannot experience sharing their feelings, withdraw into themselves and become lonely, somatize the feelings they cannot Express, and express them in the form of bodily complaints.<sup>(17,18)</sup> Another important element of emotion management is the concept of self-consciousness. Self-consciousness, which is used in the sense of knowing one's self, being aware of his power, and knowing his needs and goals; It is defined as the ability of an individual to understand his own emotions and mood.<sup>(3,19)</sup> Individuals who are aware of their own emotions will be able to easily understand the emotions of others and establish quality communication.<sup>(20)</sup> While establishing healthy communication is important for all people, this is also important in the nursing profession where interpersonal interaction is at the forefront.<sup>(16)</sup> Many theorists have defined nursing as an "interpersonal interaction process" and emphasized the importance of communication in patient-nurse interaction.<sup>(21)</sup> Nurses fulfill their main role of care functions through the interpersonal relationships they establish.<sup>(14)</sup> Understanding the patient's feelings and being sensitive to their needs during the care process is important for the effective execution of nursing care.<sup>(12)</sup> Therefore, concepts such as management of emotions,

alexithymia, self-consciousness, empathy, which affect the quality of communication become important. In a study conducted with nursing students, it was stated that alexithymia effected students' sense of loneliness, social identity perception, and shyness.<sup>(22)</sup> In another study conducted with nursing and midwifery students, it was found that as the level of alexithymia increased, loneliness increased in students.<sup>(23)</sup> For quality nursing care, first of all, nurses should have emotional awareness, that is, self-consciousness. It is stated that nurses who have self-consciousness will communicate more effectively with patients in an empathetic approach and this will increase the quality of nursing care.<sup>(12,14,24)</sup> In the literature, no study that examines the levels of alexithymia and self-consciousness by giving emotion management training to nursing students. In this context, it was thought that there was a need for studies in related fields, and this study was conducted in a way to examine the effect of emotion management training given to nursing students on alexithymia and self-consciousness levels.

### **Research Hypotheses**

**H<sub>a</sub>:** Emotion management training given to nursing students affects their alexithymia levels.

**H<sub>b</sub>:** Emotion management training given to nursing students affects their self-consciousness levels.

### **Methods**

#### **Type of Research**

This research was designed in an experimental model and was conducted with a pretest-posttest control group.

#### **Population and Sample of the Research**

This research was conducted in the nursing department of a university (385 nursing students in total). Before determining the sample of the study, the Toronto Alexithymia Scale was applied to all students in a digital environment. A total of 191 students with > 51 points from the scale constituted the universe. The sample size of the study was determined as  $\alpha=0.05$ ,  $\beta=0.10$  and the power of the test was 0.07 to 62 using the G. Power program. Considering the losses that may occur in the research, the research started with 45 students for the intervention and control groups. The research was carried out with 32 students in the intervention group and 32 students in the control group.

#### **Inclusion criteria in the study**

- Being a nursing student at the university where the research was conducted,
- Being over 18 years of age,
- To be able to use the online program where the training will be given,

- Not having a disability,
- Not having received emotional management training,
- To volunteer to participate in the research.

#### **Exclusion criteria from the study**

- Participating in any psychological support group,
- To experience a loss at least 6 months ago.

#### **Data Collection Tools**

Socio-demographic Data Form, Toronto Alexithymia Scale, and Self-Consciousness Scale were used to collect data in the study.

**Socio-Demographic Data Form:** This form consists of a total of nine questions about age, gender, class, place of residence, family type, number of siblings, education level of parents, and family income.

**Toronto Alexithymia Scale (TAS-20):** This scale was developed by Taylor et al (1985).<sup>(25)</sup> Güleç et al. (2009) performed Turkish validity and reliability and the Cronbach alpha coefficient was calculated as 0.78. The scale is a 5-point Likert-type scale consisting of 20 items and 3 sub-dimensions. These sub-dimensions are; Difficulty Recognizing Emotions (items 1, 3, 6, 7, 9, 13, and 14), Difficulty Expressing Emotions (items 2, 4, 11, 12, and 17) is Extroverted Thinking (items 5, 8, 10, 15, 16, 18, 19, and 20). The maximum score that can be obtained from the scale is 100 and the minimum score is 20.<sup>(26)</sup> From the whole scale,  $\leq 50$  points are included in the non-alexithymic group, 51-60 points in the moderately alexithymic group, and  $\geq 61$  points in the completely alexithymic group.<sup>(27)</sup> In this study, Cronbach's alpha coefficient was calculated as 0.80 for the total scale, 0.89 for the Difficulty Recognizing Emotions subscale, 0.70 for the Difficulty Expressing Emotions subscale, and 0.67 for the Extraverted Thinking subscale.

**Self-Consciousness Scale:** The Turkish adaptation of the self-consciousness scale developed by Fenigstein, Scheier, and Buss (1975) was carried out by Rugancı (1994).<sup>(28)</sup> The scale, which includes 12 items, is a 5-point Likert type (1=not at all appropriate, 5=completely appropriate). The scale, which does not have any reversed items, has two sub-dimensions, six items of which are public self-consciousness and six items of which are private self-consciousness. As the score obtained from the scale increases, self-consciousness increases. The Cronbach's alpha value of the Self- Consciousness Scale was found to be 0.877, and the Cronbach's alpha values of the Private Self-Consciousness and General Self-Consciousness sub-dimensions were 0.61 and 0.83, respectively.<sup>(29)</sup> In this study, Cronbach's alpha coefficient was calculated as 0.78 for the

total scale, 0.71 and 0.74 for the General Self Consciousness and Private Self Consciousness sub-dimensions, respectively.

### **Data Collection**

Research data were collected online in a digital environment between February and June 2021 due to the Covid-19 pandemic. Completing the online questionnaire took an average of 10-15 minutes. The period between pre-test and post-test data collection is 90 days (3 months).

### **Emotion Management Training**

The promotional poster prepared online for the emotion management training to be given was shared with the students and the training day was determined after the students were informed (the purpose of the study, the content of the training to be given, the personal information will not be used in the study, the profit and loss status of the participant from the study) about the study. A virtual education platform was created using the Zoom (Zoom Video Communications, San Jose, California) program for students included in the study for social distance measures within the scope of struggling with COVID-19.

Methods such as giving information, discussion, question-answer, and practice questions were used in emotion management training. Emotion management training was given to the students in the intervention group once a week for four weeks by a researcher.

**1. week training:** Discussion questions: What comes to mind when you hear the word emotion? What emotions do the concepts of emotion evoke for you?, What are the emotions people want to experience and emotions they don't want to experience? has been determined. The definition of the concept of emotion, classification of emotions (positive and negative emotions), common emotion types, recognition, and the importance of expressing emotions constituted the first week's training content.

**2. week training:** Discussion questions: What are the consequences of holding in and ignoring our emotions?, Are there difficulties in expressing our emotions? What are the emotions that you have difficulty in expressing?, What is the language of me and you in communication?, How can we express our feelings using the language of me? has been determined. Expressing emotions (facial expression, voice, body language), the importance of expressing emotions, the use of the language of me and you, the sample application of the language me and you and the ability to use the language of me in daily life constituted the second week's training content.

**3. week training:** Discussion questions: Why do individuals feel different emotions and behave differently in the face of the same events? has been determined. Comprehending the relationship and difference between the components of emotions (cognitive, biological, behavioral



elements), primary functional-non-functional emotions, secondary emotions, emotion-behavior / emotion-thought, learning the difference between emotional and rational mind constituted the training content of the third week.

**4. week training:** Discussion questions: Is the feeling of anger harmful? What are the physical symptoms of anger? What do you think and do when you get angry? Which reactions are acceptable and which are unacceptable when expressing anger? has been determined. Defining anger, characteristics of anger, physical signs of anger, expression of anger, anger expression exercise, anger control (traffic lights method) constituted the training content for the fourth week. Before starting the training each week, the previous week was repeated.

This four-week training has been turned into a training guide.

### **Intervention Group**

*First video call:* The first video call with the students over Zoom started with the students getting to know each other. Before starting the training, discussion questions about the training were asked to attract the attention of the participants to the subject. Then the first-week of training was given. Students' questions about education were answered. The interview took approximately 45 minutes.

*Second video call:* In the second video call with the students over Zoom, the previous week was repeated, discussion questions were asked and the second-week of training was given. Students' questions about education were answered. The interview took approximately 40 minutes.

*Third video call:* In the third Zoom video call with the students, the previous week was repeated, discussion questions were asked and the third-week of training was given. Students' questions about education were answered. The interview took approximately 40 minutes.

*Fourth video call:* In the fourth Zoom video call with the students, the previous week was repeated, discussion questions were asked and the fourth-week of training was given. Students' questions about education were answered. The interview took approximately 40 minutes. The training guide was sent to the e-mail addresses of the students.

### **Control Group**

*First video call:* After the students were informed about the research in the first Zoom video call, the pre-test was applied. The interview took approximately 15 minutes.

*Second video call:* The second interview with the students was held three months after the first interview. Emotion management training was given after the post-test was applied in the video call made over Zoom. The students' questions about education were answered and the education guide was sent to the students' e-mail addresses. The interview lasted approximately 60 minutes.

**Table 1. Comparison of Socio-demographic Variables of Intervention and Control Groups (n=64)**

Introductory features		Intervention Group (n= 32)		Control Group (n= 32)		*Importance
		n	%	n	%	
Gender	Female	22	68.7	23	71.9	$\chi^2=0.075$ p=0.784
	Male	10	31.3	9	28.1	
Age	19-21 age	22	68.7	21	65.6	$\chi^2=0.071$ p=0.790
	≥ 22 age	10	31.3	11	34.4	
Class	1. class	8	25.0	8	25.0	$\chi^2=0.405$ p=0.939
	2. class	9	28.1	10	31.3	
	3. class	7	21.9	8	25.0	
	4. class	8	25.0	6	18.7	
Living place	Village	8	25.0	8	25.0	$\chi^2=0.762$ p=0.683
	Distinct-town	12	37.5	9	28.1	
	City center	12	37.5	15	46.9	
Family type	Extended family	14	43.7	10	31.3	$\chi^2=1.067$ p=0.302
	Nuclear family	18	56.3	22	68.7	
Sibling number	1-2 sibling	10	31.3	7	21.8	$\chi^2=1.240$ p=0.538
	3-4 sibling	10	31.3	14	43.8	
	≥ 5 sibling	12	37.4	11	34.4	
Mother education level	≤ Primary education	22	68.7	24	75.0	$\chi^2=0.309$ p=0.578
	≥ Highschool	10	31.3	8	25.0	
Father education level	≤ Primary education	19	59.4	21	65.6	$\chi^2=0.267$ p=0.606
	≥ Highschool	13	40.6	11	34.4	
Family income level	Income less than expenses	10	31.3	8	25.0	$\chi^2=0.444$ p=0.801
	Income equal expenses	14	43.7	14	43.7	
	Income more than expenses	8	25.0	10	31.3	
Total		32	100.0	32	100.0	
		Intervention Group		Control Group		**Importance
		$\bar{X} \pm SS$		$\bar{X} \pm SS$		
Age mean (month)		20.31±1.35		20.84±1.48		F=2.238 p=0.140

\* Chi-square test \*\*ANOVA test.

No statistical significance was determined between the gender, age, class, place of residence, family type, number of siblings, mother and father education, family income status of the students in the intervention and control group. ( $p>0.05$ ) (Table 1).

### Analysis of Data

SPSS 24.0 package program (Statistical Package for the Social Sciences) was used to evaluate the research data. The examination of the normal distribution was made with Shapiro-Wilk's test. In the data analysis were used numbers, percentages, mean, standard deviation, t-test dependent groups, t-test in independent groups, chi-square and one-way analyses of variance (ANOVA). The significance level was accepted as  $p<0.05$  when interpreting the results.



## Ethical Aspect of Research

Ethics Committee (Ethics Committee No:2021/01) permission was obtained to conduct the study. After informing about the research, digitally informed consent was obtained from the students who agreed to participate. No intervention was applied to the control group. After the post-test was applied, the training was given to the control group students. This study was conducted in accordance with the Principles of the Declaration of Helsinki.

## Findings

When the pre-test mean scores of the Toronto Alexithymia Scale (TAS) and Self-Consciousness Scale total and sub-dimensions of the Intervention and Control group students were compared, it was found that the difference between the groups was not statistically significant ( $p>0.05$ ). When the post-test mean scores of the TAS and Self-Consciousness Scale total and sub-dimensions of the intervention and control group students were compared, the difference between the two means was found to be statistically significant ( $p<0.05$ ) (Table 2).

**Table 2. Comparison of Toronto Alexithymia Scale and Self-Consciousness Scale Total and Sub-Dimensional Mean Scores of Pre-Test-Post-Test Intervention and Control Group Students (n = 64)**

Scales	Pre- Test				Post-Test			
	Intervention Group	Control Group	Importance		C		Importance	
	$\bar{X} \pm SS$	$\bar{X} \pm SS$	t	p	$\bar{X} \pm SS$	$\bar{X} \pm SS$	t	p
<b>TAS Total</b>	67.03±10.86	69.03±8.23	-0.817	0.417	49.75±8.25	69.03±8.23	-4.376	<b>0.000</b>
Difficulty Recognition Emotions	23.87±6.94	25.46±4.93	-1.058	0.294	16.93±6.20	26.31±5.78	-2.509	<b>0.015</b>
Difficulty Expression Emotions	16.65±4.24	17.75±2.88	-1.205	0.233	12.40±4.02	17.93±3.23	-2.775	<b>0.007</b>
Extraverted Thinking	26.50±3.51	25.78±3.10	0.866	0.390	20.50±3.68	25.62±3.48	-2.373	<b>0.021</b>
<b>Self-Consciousness Scale</b>	31.59±6.75	32.46±6.97	-0.510	0.612	38.84±3.41	32.21±7.36	3.703	<b>0.000</b>
Private Self Consciousness	16.06±3.40	16.62±5.00	-0.525	0.601	20.31±2.36	17.09±4.31	3.703	<b>0.000</b>
General Self Consciousness	15.53±4.18	15.84±3.33	-0.331	0.742	18.53±2.67	15.12±4.08	3.945	<b>0.000</b>

TAS= Toronto Alexithymia Scale.

t= Independent Groups t-test,  $p < 0.05$ .

In the comparison of the pretest-posttest mean scores of the TAS total and sub-dimensions of the students in the intervention group, it was determined that the posttest mean score of the students decreased and the difference between the two averages was statistically significant ( $p<0.05$ ). In the comparison of the pretest-posttest mean scores of the total and sub-dimensions of the Self-Consciousness Scale of the students in the intervention group, it was determined

that the posttest mean score of the students increased and the difference between the two averages was statistically significant. ( $p < 0.05$ ) (Table 3).

In the comparison of the pretest-posttest mean scores of the total TAS, Difficulty in Expressing Emotions, and Extraverted Thinking sub-dimensions of the students in the control group, it was determined that the difference between the two averages was not statistically significant ( $p > 0.05$ ). A significant difference was determined between the pretest-posttest mean scores of the students in the control group in the Difficulty Recognizing their Emotions sub-dimension ( $p < 0.05$ ). When the pretest-posttest mean scores of the total and sub-dimensions of the Self Consciousness Scale of the students in the control group were compared, the difference between the two averages was not found to be statistically significant ( $p > 0.05$ ) (Table 3).

**Table 3. Comparison of Pre-Test-Post-Test Mean Scores of Total and Sub-Dimensions of Toronto Alexithymia Scale and Self-Awareness Scale of Students in Intervention and Control Groups (n = 64)**

Scales	Intervention Group				Control Group			
	Pre Test	Post Test	Importance		Pre Test	Post Test	Importance	
	$\bar{X} \pm SS$	$\bar{X} \pm SS$	t	p	$\bar{X} \pm SS$	$\bar{X} \pm SS$	t	p
<b>TAS Total</b>	67.03±10.86	49.75±8.25	3.938	<b>0.000</b>	69.03±8.23	69.87±10.15	-1.487	0.147
Difficulty Recognition Emotions	23.87±6.94	16.93±6.20	3.352	<b>0.002</b>	25.46±4.93	26.31±5.78	-2.294	<b>0.029</b>
Difficulty Expression Emotions	16.65±4.24	12.40±4.02	2.423	<b>0.021</b>	17.75±2.88	17.93±3.23	-1.063	0.296
Extraverted Thinking	26.50±3.51	20.50±3.68	3.832	<b>0.001</b>	25.78±3.10	25.62±3.48	0.724	0.475
<b>Self- Consciousness Scale</b>	31.59±6.75	38.84±3.41	-6.799	<b>0.000</b>	32.46±6.97	32.21±7.36	0.635	0.530
Private Self Consciousness	16.06±3.40	20.31±2.36	-6.485	<b>0.000</b>	16.62±5.00	17.09±4.31	-1.651	0.109
General Self Consciousness	15.53±4.18	18.53±2.67	-6.826	<b>0.001</b>	15.84±3.33	15.12±4.08	1.215	0.247

TAS= Toronto Alexithymia Scale.  
t=Dependent Groups t-test,  $p < 0.05$ .

## Discussion

It cannot be expected that alexithymic nurses, who cannot fully define and express their own feelings, are very sensitive to the feelings of patients/healthy individuals. In other words, alexithymic nurses not only have difficulty in recognizing their own emotions, but also have difficulties in recognizing the emotions of patients/healthy individuals.<sup>(16,30)</sup> Self-knowledge (Self-Consciousness) is expressed as knowing your strengths, weaknesses, and areas open to development, recognizing your emotions, and being aware of them. Nurses who cannot use this awareness to guide thoughts and behaviors and who cannot express themselves clearly often

experience difficulties in their professional relationships and communication. It can be said that the first step and the most important condition for the nurse to increase the quality of care, establish and develop therapeutic relationships, be satisfied with their job, and realize their own personal development, is self-knowledge.<sup>(31)</sup> It is important to examine the alexithymia and self-consciousness of nursing students who are preparing to practice the nursing profession in the future, since the correct expression of emotions and understanding the emotions of the other person are the basic steps in an effective communication process. In this respect, this study was conducted to examine the effect of emotion management training given to nursing students on alexithymia and self-consciousness levels.

In this study, while there was no difference between the pretest mean scores of the TAS total and sub-dimensions of nursing students in the Intervention and Control group, there was a significant difference between the posttest mean scores (Table 2). It is thought that the emotion management training given to the students creates the difference between the Intervention and Control groups. It was determined that the post-test mean scores of the TAS total and sub-dimensions of the Intervention group, who were trained, were positively affected compared to the Control group, and the students' alexithymia levels decreased. This result reveals that the training has a positive effect. In addition, it was determined that there was a significant difference between the pretest-posttest mean scores of the intervention group nursing students in total and sub-dimensions of TAS (Table 3). It was determined that the post-test mean scores of the intervention group nursing students in total and sub-dimensions of TAS decreased. Saeidi et al. (2020) determined in their study that working nurses are moderately alexithymic and nurses with high alexithymia have high burnout levels.<sup>(31)</sup> In their study, Sancar and Aktaş (2019) found that nursing students have moderate alexithymia and that as students' alexithymia levels increase, their communication skills decrease.<sup>(16)</sup> Mersin et al. (2019) found that nursing students were moderately alexithymic.<sup>(32)</sup> In this study, it was determined that the pre-test TAS total scores of the intervention group nursing students were high ( $\geq 61$  points completely alexithymic), the post-test TAS total scores after the emotion management training were given decreased, and the students were in the non-alexithymic ( $\leq 50$  points non-alexithymic) group. Alexithymia has direct associations with many psychiatric disorders because those with alexithymia are under higher physical and emotional stress.<sup>(33)</sup> Individuals with alexithymia have limited ability to establish healthy interpersonal relationships at work.<sup>(34)</sup> Although alexithymia is a concept that has been researched in many occupational groups today, understanding and transferring emotions, empathy, and communication skills are important

especially in the nursing profession where interpersonal interaction is at the forefront. Understanding the patient's feelings and being sensitive to the needs of the patient during the care process is important for the effective execution of nursing care.<sup>(24)</sup> Because alexithymia, with its associated problems, can reduce productivity and efficiency among nurses and thus negatively affect the quality of care.<sup>(35,36)</sup> In nursing education, the place of emotional expression is very important for student nurses to be aware of their own and others' emotions in the face of stressful and difficult situations, and to improve their coping and adaptation processes. Identifying these problems and providing the necessary support during education is very important for the personal and professional development of the students.

The presence of alexithymia, which causes a lack of emotion, inadequate emotional response and lack of empathy, can cause many problems between the nurse, and the patient. Quality and effective communication process are of great importance in providing care services in order to maximize the health status of the individual in the nursing profession. For quality and effective communication, there is a need for nurses who have the ability to understand and express their feelings and be aware of the problems of individuals.<sup>(30,36,37)</sup> In their study, Sangani and Jangi (2019) determined that as nursing students' alexithymia levels increase, their feelings of shyness also increase.<sup>(22)</sup> Good communication between the nurse and the patient/healthy individual increases the quality of care. First of all, nurses need to have emotional awareness in order for nurses to understand the patient/healthy individual correctly, to determine their needs, and to plan and make appropriate interventions.<sup>(14,24)</sup> Nursing education has an important place in gaining professional values in nursing, increasing the quality of care, increasing patient satisfaction and job satisfaction. Expression of emotion in nursing education is of great importance in professional self-development.<sup>(38,39)</sup> Students being aware of their own feelings and being individuals who can express this can help them understand the feelings of patients and their relatives in their professional life, identify the underlying problem and plan the appropriate nursing process. In addition, it may be beneficial for nursing students to be nurses with problem-solving skills in the future, to protect and improve public health, to increase the quality of life, to meet the needs of patients and their families with complex health problems, and to make the right decisions about care.

There was no significant difference between the pre-test and post-test mean scores of the total TAS, Difficulty Expressing Emotions, and Extraverted Thinking sub-dimensions of the nursing students in the control group. However, it was determined that the nursing students in the control group had a higher mean score for the Difficulty Recognizing Emotions sub-dimension

post-test, and therefore there was a significant difference between the mean scores of the pre-test and post-test (Table 3). Nursing students who are not aware of their own feelings and cannot establish satisfying relationships; may experience some difficulties in fulfilling their responsibilities towards patients and their relatives, society, and healthcare team members (such as not being able to recognize the emotions of patients and their relatives, having difficulty in planning the appropriate nursing process for patients, and being in conflict with the team).<sup>(14,40)</sup>

In this respect, it is very important that nursing students, who are preparing to practice the nursing profession in the future, have the ability to cope with the stresses of daily life and the problems they experience in the clinics, as it will directly affect the quality of care.

The decrease in alexithymia score averages after the emotion management training given to nursing students indicates that the training was effective. In line with this result, "Emotion management training given to nursing students affects alexithymia levels" supports the H1a hypothesis. Self-Consciousness, which has important effects on emotions, thoughts and behaviors, is expressed as the level of mental attention of the individual towards himself.

Self-Consciousness is important for the nursing profession, because the psychological state of nurses positively/negatively affects their ability to analyze patients' information, which in turn affects the care they receive positively/negatively.<sup>(41-43)</sup> While there was no significant difference between the pre-test mean scores of the Intervention and Control group nursing students in the total and sub-dimensions of the Self-Consciousness Scale, there was a significant difference between the post-test mean scores. (Table 2). It is thought that the emotion management training given to nursing students creates the difference between the intervention and control groups. It was found that the post-test mean scores of the total and sub-dimensions of the Self-Consciousness Scale of the intervention group were positively affected compared to the control group, and there was an increase in the self-consciousness levels of the students. This result reveals that the education given to nursing students is positive. In addition, a significant difference was determined between the pretest-posttest mean scores of the total and sub-dimensions of the Self- Consciousness Scale of nursing students in the intervention group (Table 3). It was determined that the post-test mean scores of the total and sub-dimensions of the Self- Consciousness Scale of the intervention group nursing students increased. Individuals with a high level of self-consciousness are self-confident, aware of their emotions, know the effect of emotions on others, are aware of where and why they are, know their weak and strong points, easily realize the aspects that need to be developed, and display an attitude that is open to constructive criticism and feedback.<sup>(42,44)</sup> In addition, it is stated that high self-consciousness

supports the individual's high self-confidence and sense of satisfaction, attaches importance to moral values, provides high self-control, keeps away from unwanted behaviors, and allows individuals to rethink their thoughts and behaviors.<sup>(45)</sup> In this respect, it is seen that self-awareness is important for nursing practices. Haley et al. (2017) stated that self-consciousness is related to empathy in nursing students.<sup>(46)</sup> In Turan's (2018) study, self-consciousness enables nurses to better understand their patients and to be more empathetic with their patients; it has been determined that nurses can help patients internalize their emotions.<sup>(47)</sup> In a study, it was stated that self-consciousness improves nurses' ability to empathize with patients and provide appropriate care.<sup>(48)</sup> It has been stated that self-awareness can prevent patients from being harmed in the ethical decision-making process for nurses. It is also reported that low self-consciousness can threaten nurses' objective, moral and rational decision-making if the values of patients are not compatible with their own ethical and moral values.<sup>(47-49)</sup> It was also emphasized that self-consciousness in nurses can play an indispensable role in developing cultural competence, and providing quality care for patients with cultural and religious differences.<sup>(42,48)</sup>

No significance was found between the pretest-posttest mean scores of the total and sub-dimensions of the Self-Awareness Scale of nursing students in the control group (Table 3). It is stated that self-awareness can help them to understand the patient in the nurse-patient relationship and improve their management of the current situation, as well as improve the ability of the individual to manage difficult situations.<sup>(48)</sup> In this respect, it is recommended to evaluate nurses' self-consciousness and to conduct evidence-based research on this subject.

In conclusion; In this study, it was revealed that after the emotion management training given to nursing students, the average scores of self-consciousness increased and the training was effective. This result supports the H<sub>1b</sub> hypothesis that “emotion management training given to nursing students affects their self-consciousness levels”.

## **Conclusion**

Nursing is a profession that requires interactive communication. Therefore, alexithymic or insufficient self-consciousness of nursing candidates may cause problems with individuals with whom they are in constant communication, such as nurse-patient, nurse-work team, and nurse-patient relatives. For this reason, it is important to evaluate the alexithymia and self-consciousness of nurse candidates and to find solutions to these problems. In this study, these two elements were examined and emotion management education was tried as a solution to these two elements. It has been determined that the emotion management training applied to

the students gradually affects the alexithymia and self-consciousness of the students positively. It is important to examine the alexithymia and self-consciousness of nursing students who are preparing to practice the nursing profession in the future, since the correct expression of emotions and understanding the emotions of the other person are the basic steps in the effective communication process. In this respect, this study is guiding and supportive for nursing students.

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Study conception and design: FK, MYÇ, EÖÇ, RA.

Data collection: FK, MYÇ, EÖÇ, RA.

Data analysis and interpretation: FK, MYÇ, EÖÇ, RA.

Drafting of the article: FK, MYÇ, EÖÇ, RA.

Critical revision of the article: FK, MYÇ, EÖÇ, RA.



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