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COVID-19 Pandemi Sürecinde Yoğun Bakım Hemşirelerinde Aleksitimi, Empati ve Tükenmişlik Düzeyi Arasındaki İlişkinin İncelenmesi

The Relationship between Alexithymia, Empathy and Burnout Levels Amongst Intensive Care Nurses During the COVID-19 Pandemic

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ÖZ

Amaç: Bu araştırmada, pandemi sürecinde yoğun bakım ünitesinde çalışan hemşirelerin aleksitimi, empatik eğilim ve tükenmişlik düzeyleri ile aralarındaki ilişkinin incelenmesi amaçlandı.

Materyal ve Metot: Kesitsel ve ilişki arayıcı türde çalışmanın örneklemini 170 yoğun bakım hemşiresi oluşturdu. Veriler, online olarak, Şubat-Mart 2021 tarihleri arasında, Hemşire Bilgi Formu, Toronto Aleksitimi Ölçeği-20, Empatik Eğilim Ölçeği ve Maslach Tükenmişlik Envanteri ile toplandı.

Bulgular: Çalışmaya dahil edilen yoğun bakım hemşirelerinin %81,2' si kadın, yaş ortalaması 29.9±6,1 yıl, % 67,6' sı lisans mezunu ve %46,5' i pandemi yoğun bakım ünitesinde çalışmakta idi. Yoğun bakım hemşirelerinin aleksitimi toplam puan ortalaması 51,4±10,7 idi ve dörtte biri aleksitimi özelliklerine sahipti. Hemşirelerin empati eğilim seviyesi ortanın biraz üzerinde, tükenmişlik alt boyut puan ortalamaları ise orta düzeyde idi. Çoklu regresyon analizi sonuçları, kurulan regresyon modelinin istatistiksel açıdan anlamlı olduğunu gösterdi (F= 36,4, p< 0,001). Empati ve tükenmişlik düzeylerinin aleksitimi düzeylerini açıklama oranının %30 olduğu belirlendi. Yoğun bakım hemşirelerinin empati düzeylerinin aleksitimi düzeylerini negatif yönde (β= -0,29, p< 0,001), tükenmişlik düzeylerinin aleksitimi düzeylerini pozitif yönde istatistiksel açıdan anlamlı şekilde yordadığı saptandı (β= 35, p< 0,001).

Sonuç: Yoğun bakım hemşirelerinin aleksitimi puanları ile empati eğilimi puanları arasında negatif bir ilişki olduğu, diğer yandan aleksitimi ile tükenmişlik arasında pozitif ilişki olduğu sonucuna varıldı.

Anahtar Kelimeler: Aleksitimi, empati, pandemi, tükenmişlik, yoğun bakım

ABSTRACT

Objective: The study aims to determine the relationship between in intensive care nurses' alexithymia, empathic tendency, and burnout levels in the COVID-19 pandemic process.

Materials and Methods: The cross-sectional and correlational study was conducted with 170 intensive care nurses. Data were collected with Nurse Information Form, Toronto Alexithymia Scale 20, Empathic Tendencies Scale and Maslach Burnout Inventory between February and March 2021 as online.

Results: Of the ICU nurses participating in the study, 81.2% were female, mean age were 29.9±6.1 years, 67.6% had bachelor's degree and 46.5% of them were working in the pandemic ICU. The mean alexithymia was 51.4±10.7 and a quarter of the nurses were alexithymic. Empathic tendencies levels were slightly above average and burnout subdimensions mean were medium. Multiple regression analysis results show that the built regression model is statistically significant (F= 36.4, p< 0.001). Empathy and burnout levels could explain 30% of their alexithymia levels. The ICU nurses' empathy levels predicted alexithymia levels negatively (β= -0.29, p< 0.001), and burnout levels predicted alexithymia levels positively (β=35, p< 0.001) to a statistically significant degree.

Conclusion: It was concluded that intensive care nurses' the alexithymia scores have a negative correlation with empathic tendencies and a positive correlation with burnout.

Keywords: Alexithymia, burnout, critical care, empathy, pandemics

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INTRODUCTION

The COVID-19 pandemic, with its global impacts, has left intensive care unit (ICU) nurses to cope with many challenges including busy working hours, stress, jeopardizing their health and putting loved ones at risk of illness,[1] loneliness due to social isolation and experiences of sickness and death.[2,3] Lack of human and physical resources and the number of colleagues infected are the strongest predictors of stress, anxiety, and depression among nurses.[4] The pandemic also leads to other restrictions such as the use of masks, protective equipment, the need to reduce physical contact with patients, the increase in the number of patients receiving care and limitations on the effective communication between patients and nurses and sharing of emotions.[2,3]

Protecting the mental health of nurses and controlling stress during the pandemic process is a vital consideration.[5] One study emphasized that ICU nurses were the health professionals who suffer from the most mental health problems among other health care workers in the Covid-19 pandemic.[6] Intensive care nurses are faced with an insecure, worrisome work environment and emotionally challenging experiences as well as physical fatigue under the conditions of pandemic. In this situation, it may be difficult for nurses to control their emotional reactions.[2,3] Therefore, care should be taken against the problem of alexithymia, which affects the interaction of nurses with the individuals they care for. Referring to difficulties in reacting emotionally and distinguishing emotions and verbally expressing them, "alexithymia" is described as a behaviour of being unresponsive to stimuli in the context of both positive and negative emotions.[7] Alexithymia reduce individuals' ability to withstand stress, limit their capacity to adapt, exaggerate bodily sensations related to emotions, and cause them to develop somatic symptoms.[8]

Alexithymia may even make it impossible for an individual to empathize with another person.[9] Alexithymia is closely related to burnout as well as empathy. Individuals with alexithymic may be prone to experiencing burnout due to their limited capacity to cope with stress.[10] Empathy, which is accepted as one of the basic components of the art of nursing, is a force that directs the helping process. Thus, the nurse will be able to recognize the individual and her/his needs and maintain effective communication.[11] The decrease in empathy tendency, which is one of the most important competencies of nurses in providing quality care, burnout and accompanying alexithymia can appear as a problem that hinders this process. Many factors such as stress, emotional labour, emotional intelligence level, high workload and work stress can cause burnout along with alexithymia.[12] In fact, various factors such as lack of social support, risk of transmission, increased workload, working in risky clinical units during the pandemic were demonstrated to increase burnout in nurses.[13] Intensive care units are critical units in terms of nursing and patient care, where patients experience intense anxiety, depression and fear of death, and where nurses have to have long-term and intense interaction with patients.[14] First of all, it is necessary to determine alexithymia, burnout, empathic tendency levels and then focus on the measures to be taken for its management in ICUs. Because it is a safety problem for ICU nurses and their patients.

In the literature on relevant work yielded studies investigating alexithymia, empathy and burnout in different populations.[7,9,10] There was, however, no studies examining alexithymia, empathy and burnout in ICU nurses and the relationship between them during the Covid-19 pandemic.

This study aims to examine the relationship between alexithymia, empathic tendency and burnout levels of ICUs during the Covid-19 pandemic.

MATERIALS AND METHODS

Ethical Considerations: Permission for the study from Karadeniz Technical University Medicine Faculty Scientific Research Ethics Committee (Date:28/01/2021, decision no: 2021/5) were obtained to conduct the study. Approval (Number: 2020-12-29T23_35_42) was also received from the Turkish Ministry of Health. The aim and content of the research were explained to potential participants before data collection. Participants were assured that the data would not be used outside the scope of the research. The Helsinki Declaration principles were followed at all stages of the research.

Design: This was a cross-sectional and correlational research.

Research Questions:

a) What is the level of alexithymia, empathic tendency and burnout in ICU nurses during the Covid-19 pandemic?
b) Is there a relationship between ICU nurses' alexithymia, empathic tendency and burnout levels during the Covid-19 pandemic?

Participants and Settings: The research population consisted of 926 ICU nurses registered to the Turkish Intensive Care Nurses Association. The sample size was calculated in the G*power software based on 80% power, 0.3 effect size and 99% confidence interval. According to this calculation, the required minimum sample size was determined as 125 ICU nurses. Thus, 170 ICU nurses formed the sample of the research. To be included in the study, ICU nurses had to be experience at least one year in ICU and

volunteered for the participation. ICU nurses were excluded who had less than one year experience and involuntary.

Instruments:

Nurse Information Form: The Nurse Information Form included 9 questions. The form was about nurses' personal details such as age, gender, education, occupational and ICU experience, and regarding their working systems; nursing care model (patient/task-centred care), total working hours, shift system, type of ICU (pandemic and others).[15-17]

Toronto Alexithymia Scale 20 (TAS-20): TAS-20 was developed by Babgy et al. in 1994. The Turkish validity and reliability of the TAS-20 was performed by Güleç et al.[18] TAS-20 is an internationally widely used 20-item scale that enables the determination of alexithymia by clinical practice and research. It is a 5-point Likert type scale and is graded as 1=strongly disagree and 5=strongly agree. It is recommended to consider a score of 59 and above to categorise an individual as alexithymic but it is accepted that the level of alexithymia increases as the score obtained from the scale increases. The scale consists of three sub-scales: difficulty in describing emotions, difficulty in identifying emotions, and externally- oriented thinking. The scale's Cronbach's alpha value was 0.78.[18] In this study, the Cronbach alpha coefficient of the scale was 0.83.

Empathic Tendencies Scale (ETS): ETS was developed by Dökmen in 1988 to measure the empathic potential of people.[19] It is a 5-point Likert-type scale consisting of 20 items. Each item in the scale is scored between 1 and 5, and the 3rd, 6th, 7th, 8th, 11th, 12th, 13th, and 15th items are reverse scored. The minimum score that can be obtained from the scale is 20, and the maximum is 100. A high score indicates a high empathic tendency whereas lower scores indicate lower empathic tendency.[19] In the original study of the scale, correlation coefficients were calculated by applying test-retest and parallel form methods for validity and reliability (0.85, 0.68, respectively). In previous studies, the cronbach alpha value was calculated over 70%.[16,20] In this study, the Cronbach alpha coefficient of the scale was 0.65.

Maslach Burnout Inventory (MBI): MBI was developed by Maslach and Jackson and its validity and reliability were studied by Çam[21] in the nurse population. The 5-point Likert scale has sub-scales of emotional exhaustion, depersonalization and personal failure.[22] Emotional exhaustion sub-scale has 9 items (1, 2, 3, 6, 8, 13, 14, 16, 20), depersonalization sub-scale has 5 (5, 10, 11, 15, 22) and personal failure sub-scale has 8 (4, 7, 9, 12, 17, 18, 19, 21) resulting in 22 items in total. Each item of the scale is scored as 0-4 as follows: 0 = never, 1 = several times a year, 2= several times a month, 3= several times a week, 4= every day. The Cronbach's alpha value was 0.80 for the emotional exhaustion sub-scale, 0.70 for the depersonalization sub-scale, and 0.77 for the personal failure sub-scale. It is described as a valid measurement tool for measuring burnout in nurses.[22] In this study, the Cronbach alpha coefficient of the scale was 0.84.

Data Collection: Data were collected via online survey method based on self- reporting. The online survey link created by the researcher was shared electronically with the ICU nurses. ICU nurses with access to the online survey link read the explanations about the study and answered the questions after ticking the checkbox indicating whether they agree to participate in the study. The response time for the questions in the data collection tools were 15 minutes on average. Data were collected between February and March 2021.

Data Analyses: IBM SPSS 20.0 (Statistical Package for the Social Sciences) software was used for data analysis. Descriptive statistics (minimum, maximum, mean, standard deviation, median, frequency) were used to determine characteristics of the nurses. Simple linear correlation test based on Pearson moment correlation coefficient formula was used to test the relationship between research variables. Analysis results of multiple regression tests were interpreted by considering the statistical significance criteria. Whether the data set met the assumptions of multiple linear regression analysis was investigated. Firstly, the skewness and kurtosis coefficients of the variables included in the regression model were calculated. The skewness and kurtosis coefficients between -1.50 and +1.50 indicate a normally distributed data set. A variance inflation factor value (1.15) less than the criterion value of 10 shows that there is no multicollinearity problem between the independent variables. It was determined that the variance of the errors was constant at each independent variable level. Statistical significance was set at $p<0.05$.

RESULTS

The study was conducted with 170 ICU nurses. Of the ICU nurses participating in the study, 81.2% were female, their average age ranged between 22-45 (mean: 29.9, SD: 6.1), and 67.6% had bachelor's degree. Nurses had an average of 7.5 (SD: 6.1) years of professional experience, and 5.1 (SD:4.5) years of ICU experience.

Regarding their working systems, 46.5% of them were working in the pandemic ICU, 87.6% in a patient-centred working system, with an average of 51.9 hours per week, 86.5% of the nurses worked in both night and day shifts and 66.5% worked on a 24-hour shift system (Table 1).

Table 1. Sociodemographic characteristics and working system of the ICU nurses.

Variable		n	%	Mean ± SD	Median (min. -max.)
Gender	Female	138	81.2	-	-
	Male	32	18.8	-	-
Age		-	-	29.9±6.1	28 (22-45)
Education level	Health High School	8	4.7	-	-
	Associate degree	16	9.4	-	-
	Bachelor's degree	115	67.6	-	-
	Graduate degree	31	18.3	-	-
Professional experience (year)		-	-	7.5±6.1	6 (1-27)
ICU experience (year)		-	-	5.1±4.5	3 (1-20)
ICU type	Pandemic	79	46.5	-	-
	Other	91	53.5	-	-
Nursing care model	Patient-centered care	149	87.6	-	-
	Functional care	21	12.4	-	-
Total working hours (per week)		-	-	51.9±11.7	48 (40-96)
Shift system	Only daily	23	13.5	-	-
	Both daily and night	147	86.5	-	-
24-hour shift	Yes	113	66.5	-	-
	No	57	33.5	-	-

SD:Standard deviation; Min:Minimum, Max:Maximum.

TAS-20 total mean was 51.4±10.7. Scores for the subdimension means were 16.7±5.77 for difficulty identifying feelings, 12.5±3.70 for difficulty describing feelings and 22.2±3.44 for externally oriented thinking. Considering the cut-off point of the scale (59 points), 25.30% of the participants had alexithymia (n=43).

The mean total of the ETS was found to be 67.7±7.31. MBI total mean was 40.7± 12.6. The MBI sub-scale mean were 16.5±4.26 for emotional exhaustion, 7.70±4.59 for depersonalization, and 14.1±5.84 for personal achievement (Table 2).

A statistically significant, moderate, negative relationship was determined between ICU nurses' alexithymia and empathic tendencies (r= -0.43; p< 0.01) and burnout levels and empathic tendencies (r= -0.36, p< 0.01). There was a statistically significant, moderate, negative relationship between empathic

Table 2. Alexithymia, empathic tendency and burnout levels of the ICU nurses.

Scales	Mean ± SD	Median	Min- Max
Difficulty in describing emotions	16.7± 5.77	16.0	7.00-35.00
Difficulty in identifying emotions	12.5± 3.70	12.0	5.00-24.00
Externally-oriented thinking	22.2± 3.44	23.0	9.00-30.00
Alexthymia total	51.4± 10.7	52.0	24.00-82.00
Empathic Tendencies Scale Total	67.7± 7.31	67.0	50,0-91,0
Emotional exhaustion	16.5± 4.26	16.5	3.00-31.00
Depersonalization	7.70± 4.59	7.00	0.00-18.00
Personal failure	14.1± 5.84	14.0	0.00-32.00
Burnout total	40.7± 12.6	41.0	4.00-83.00

SD:Standard deviation; Min:Minimum; Max:Maximum.

tendency and difficulty in identifying feelings (r= -0.35, p< 0.01), difficulty in describing feelings (r= -0.36, p< 0.01) and externally oriented thinking (r = -0.35, p< 0.01). There was also a statistically significant moderate positive correlation between alexithymia total and burnout total levels (r= 0.48, p< 0.01) (Table 3).

Multiple regression analysis results show that the built regression model is statistically significant (F= 36.4, p< 0.001). Empathy and burnout levels of the ICU nurses could explain 30% of their alexithymia levels. The ICU nurses' empathy levels predicted alexithymia levels negatively (β= -0.29, p< 0.001), and burnout levels predicted alexithymia levels positively (β= 35, p< 0.001) to a statistically significant degree (Table 4).

Table 3. The correlation between the alexithymia, burnout, emphatic tendencies levels.

Scales	1	2	3	4	5	6	7	8	9
Difficulty in describing emotions	-	-	-	-	-	-	-	-	-
Difficulty in identifying emotions	0.80**	-	-	-	-	-	-	-	-
Externally-oriented thinking	0.35**	0.29**	-	-	-	-	-	-	-
Alexthymia total	0.93**	0.87**	0.61**	-	-	-	-	-	-
Empathic tendecies total	-0.35**	-0.36**	-0.35**	-0.43**	-	-	-	-	-
Emotional exhaustion	0.45**	0.38**	0.26**	0.46**	0.38**	-	-	-	-
Depersonalization	0.38**	0.38**	0.15*	0.38**	0.29**	0.46**	-	-	-
Personal failure	0.49**	0.45**	0.15	0.47**	0.32**	0.63**	0.87**	-	-
Burnout total	0.50**	0.45**	0.17*	0.48**	-0.36**	0.81**	0.80**	0.94**	-

*: p <0.05; **: p <0.01.

DISCUSSION AND CONCLUSION

The aim of this study was to examine the relationship between ICU nurses' alexithymia, empathic tendency and burnout levels during the Covid-19 pandemic. One fourth of the ICU nurses in this study were found to be alexithymic. The alexithymia score average determined in this study was similar to those reported by Konal Korkmaz et al.[17] in their study with ICU nurses (46.30± 9.50 for ICU nurses), by Karaismailoglu et al.[23] in their study with operating room nurses (52.94±6.71 for operating room nurses) and by Bratis et al.[15] in their study in which the authors evaluated alexithymia in nurses (46.84± 13.37). It appears from these findings of in this study that the alexithymia levels of ICU nurses did not increase remarkably during the pandemic but one fourth of the ICU nurses were alexithymic, which was the most striking finding of this study. Alexithymia may be an important factor that complicates/prevents the display of care behaviours that encompass understanding people and offering one's presence, which forms the basis of nursing care.

Nurses' empathic capacity affects patient care outcomes positively by developing a positive patient-nurse relationship[24] and meeting the patient's psychological and social needs. The ICU nurses participating in this study had relatively good average scores for empathic tendency. Pandemic is a process that needs to be addressed in every aspect with its social and emotional dimensions along with physical health. It has affected not only the working life of health professionals but also their daily life in all aspects. The fact that nurses and their relatives have been infected before or the potential to be infected during the pandemic may also have contributed to

Table 4. The regression analysis explaining the burnout and empathic tendencies levels on nurses' alexithymia levels (N=170).

Variable	B	S. E.	95% CI	β	t	p
Constant	3.35	0.40	-	-	8.31	-
Empathic tendency	-0.42	0.10	[-0.43, -0.15]	-0.29	-4.17	0.001
Burnout	0.35	0.06	[0.23, 0.51]	0.37	5.41	0 .001

R^2 adjusted: 0.30; CI: Confidence Interval for B.

their identification with patients more. In addition, empathic tendency should be improved further to increase the quality of care. Studies have revealed that empathy training given to nurses with different techniques was effective and that empathy was a learnable skill.[25,26] Thus, post-graduation trainings to increase empathic tendency can be beneficial.

Besides, burnout is an important phenomenon for the nurse workforce. The effect of the work environment on burnout is a major factor to be considered.[27] According to a study, ICU nurses have concerns about patient safety and quality of care during the pandemic, which can affect nurses' physical and psychological well-being by causing ethical stress, potentially leading to burnout and staff turnover.[4] In another study, 68% of ICU nurses were at risk of burnout during the first wave of the COVID-19 outbreak.[28] This study demonstrated that ICU nurses experienced moderate burnout. The causes of burnout may be increased workload, risky and stressful work environment, lack of social support.[13] ICU nurses were affected by the undesirable conditions in pandemic. In this study, most of the ICU nurses were working with 24-hour shift system and high weekly working hours, and almost half of that on pandemic ICUs. In this context, this working life characteristics may cause burnout. According to previous studies, burnout poses significant risks (medication errors, increased infections and patient falls etc.) for nurses' mental health and patient safety.[27,29] In the literature has shown that there is a relationship between perceived social support, workload, human material resources and burnout.[30] Considering these risks, an effective fight against burnout should be planned.

Another important finding of this study was the positive relationship between alexithymia and burnout. This finding of the study was supportive of the similar studies in the literature explaining the relationship between alexithymia and burnout.[10,15,17] Besides, the negative correlation between alexithymia and empathic tendency was consistent with the other studies in the literature examining the relationship between these two variables.[9,10] In this study, the built regression model in order to explain the relationships between the variables revealed results in the same direction as the literature information.[10,11] Intensive care nurses who have exhausted and decreased empathic tendency may be experience difficulties in understanding emotions, reacting, and maintaining effective communication with patients and others. It showed that decreased empathic tendency and increased burnout provide risk of alexithymia. In addition to, alexithymia may decrease capacity to cope with stress and empathy tendency, increase burnout. Therefore, it has potential to lead to a vicious circle.

To gather information about all the variables, a self-report scale was used which might be afflicted with the potential of bias and causality could be explained to a limited extent due to the cross-sectional and correlational design of the study.

Based on these findings, it can be suggested to focus on strengthening the empathic tendency and reducing burnout to reduce alexithymia. Firstly, raising awareness about the potential alexithymia and burnout, which are important problems for ICU nurses, offering individual solutions in strengthening mental health (better family and social support, yoga, meditation, etc.) as well as generalized initiatives such as organizing the working environment, empathy training for nurses/other health workers and restructuring of psychological support units can be recommended. In the future, it may be recommended to conduct studies with different research designs.

ICU nurses' and individual and group therapies for emotional awareness may be beneficial in eliminating alexithymia features. Also, health managers and policy makers should focus on improving the work environment to reduce/prevent alexithymia and burnout and strengthen empathic tendency.

Ethics Committee Approval: Permission for the study from Karadeniz Technical University Medicine Faculty Scientific Research Ethics Committee (Date:28/01/2021, decision no: 2021/5) were obtained to conduct the study. Approval (Number: 2020-12-29T23_35_42) was also received from the Turkish Ministry of Health. The aim and content of the research were explained to potential participants before data collection. Participants were assured that the data would not be used outside the scope of the research. The Helsinki Declaration principles were followed at all stages of the research.

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Author Contributions: Concept, Supervision, Materials, Data Collection and Processing, Analysis and Interpretation, and Writing- AÖ.

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