

Determination of Alexithymia and Communication Skills Levels of Nursing Students After Restrictions in the Covid-19 Pandemic

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ABSTRACT

Objective: This descriptive cross-sectional study was carried out to determine nursing students' alexithymia and communication skills levels and affecting factors, and to investigate the relationship between alexithymia level and communication skills after the restrictions of the Covid-19 pandemic.

Materials and Methods: The sample consisted of nursing students (N=140) from a private university in Istanbul, Turkey. Data were collected using a Personal Information Form, Toronto Alexithymia Scale (TAS-20) and Communication Skills Scale (CSS).

Results: It was determined that 90.7% (n=127) of the participants were female, the mean age was 20.63±1.53 and 30.7% (n=43) were senior nursing. 55.0% (n=77) of the participants stated that their interpersonal relations were good after the restrictions. Participants had a mean TAS-20 score of 55.15±9.12 and a CSS score of 102.25±11.29. It was determined that TAS-20 and CSS total and sub-dimension mean scores differed according to sociodemographic characteristics. The results showed that there was a significant relationship between the sub-dimension mean scores of both scales and the level of interpersonal relationships stated by the participants after the restrictions (p<0.05).

Conclusion: It was stated that nursing students had moderate alexithymia and good communication skills. Participants who evaluated their interpersonal communication as bad after the restrictions had more difficulty in recognizing, expressing and communicating their emotions. It is recommended that innovative practices on emotion awareness and communication be integrated into the nursing curriculum, and that evidence-based research be conducted on the subject.

Keywords: Alexithymia, communication skills, nursing student, pandemic

INTRODUCTION

Being aware of our own and other individuals' emotions is an important component of human relationships for our psychosocial and physical well-being. However, for various reasons, many people may have difficulty recognizing and expressing their emotions (1). Alexithymia, which was introduced to the literature by Nemiah and Sifneos in the early 1970s, is also called emotional deafness (2,3). Alexithymia is defined as (1) difficulty in defining emotions, (2) difficulty in distinguishing between emotions and bodily sensations, (3) limited imagination due to emotional deprivation, and

(4) avoidance of emotional thoughts. It has been seen that alexithymia has been associated with psychosomatic problems and emotion regulation disorders since the 1970s. (2,4,5). When the article by Bagby et al., who developed the scale, is examined; it is seen that there is a statistically significant relationship between all sub-dimensions of the scale they developed to determine the level of alexithymia and decreased ability to experience openness to experience and pleasurable emotions (such as joy, happiness, and love) (5).

The individual cannot make sense of and express his own feelings, and may remain blind to the feelings of others (6).

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In this context, while alexithymia causes problems in the definition of emotional state, it also affects interpersonal communication. On the other hand, our communication skills also affect our emotions (7). Effective communication skill in the nursing profession is accepted as both a personal skill and a technique learned and gained in the teaching process (8). Effective communication between the nurse and the patient, their relatives, and other health professionals improves both the quality of patient care and patient satisfaction by assisting the patient in coping with stress, finding solutions to problems, and healing. These results directly support the increase in professional satisfaction (9). As the development of nursing students' communication skills is related to innovative learning strategies, interactive learning strategies can be developed by evaluating students' communication skill levels (10). Many difficulties were encountered during the pandemic period in nursing education, which was traditionally conducted in a face-to-face learning environment (11). As a matter of fact, there are studies on the use of different strategies for communication skills in nursing education during the pandemic period (12-15). With the removal of the restrictions after the pandemic period, the face-to-face education order was returned (11).

In the nurse-patient relationship, both emotional awareness and communication skills constitute the basic aspects of care in order to recognize the needs of the patient and establish a therapeutic relationship (8). As a result, it is stated that nursing students should focus on managing their emotional competencies in relation to the patient and evaluating their communication skills, rather than memorizing concepts that are useful for passing exams or gaining practical skills (16,17). Nurses that are emotionally aware communicate more effectively with patients, which improves patient care outcomes (6).

During the Covid-19 epidemic, university students maintained their studies through a variety of online platforms. Restrictions, social distancing, and the adoption of home quarantine have led to increased usage of social media and the internet for a variety of purposes (3,18,19). Some studies have found that constraints during the pandemic promote alexithymia in university students and significantly impact their communication abilities. There are numerous studies in the literature that assessed nursing students' alexithymia and communication abilities before and during the pandemic (1,3,8,16,18). However, there has not been research on the evaluation of alexithymia and communication skills after the pandemic and restrictions. It is thought that this study will fill this gap in the literature. Research findings are important in order to see the general process before, during, and after the pandemic.

METHODS

Design

This descriptive cross-sectional study had three objectives: (1) determining the levels of alexithymia and communication skills of nursing students after the restrictions in the Covid-19 pandemic, (2) investigating the relationship between

students' alexithymia and communication skills and their sociodemographic characteristics, and (3) examining after the restrictions in the Covid-19 pandemic.

Sample

The study population consisted of a total of 300 nursing students from the nursing department of a private university in Istanbul, Turkey, in the 2021-2022 academic year. Participants were recruited using simple random sampling. The inclusion criteria were (1) being 18 years of age or older, and (2) being an active student during data collection. The exclusion criteria were (1) not having filled out the data collection forms and (2) receiving or having received treatment for a mental disorder. Power analysis was performed using the G Power 3.1 program, the power of the study was found to be 90% with the effect size ($d=0.15$) and 5% margin of error for a sample size of 143. One hundred and fifty students filled out the data collection forms. Ten students were excluded from the analysis because they received or had been receiving treatment for mental disorders or not having filled out the data collection forms. Therefore, the sample consisted of 140 students.

Measures

All participants were informed about the research purpose and procedure. The data were collected using a Personal Information Form, Toronto Alexithymia Scale (TAS-20), and Communication Skills Scale. The data were collected online (Google Forms) between March and June 2021. All participants were emailed the questionnaire.

The personal information form was based on a literature review conducted by the researchers (1,3,8,16,18). The form consisted of four items (age, gender, grade etc.). At the end of the form, the participants were asked a question of self-evaluation, "When you think about your social relationships after the restrictions in the Covid-19 pandemic, how would you describe your interpersonal relations?"

Toronto Alexithymia Scale (TAS-20) was developed by Bagby, Parker & Taylor (1994) and adapted to Turkish by Güleç et al. (2009) (4,20). The scale is the first measurement tool used to measure alexithymia. The scale consists of 20 items and three subscales: difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking. The items are rated on a five-point Likert-type scale ("1=strongly disagree" to "5=strongly agree"). Higher scores indicate that individuals talk less (or not at all) about their own emotions or cannot distinguish their emotions while doing this. The scale has a Cronbach's alpha of 0.78, and the subscales were between 0.57-0.80 (20), which was 0.724 in the present study.

The Communication Skills Scale was developed by Owen and Bugay (21) to evaluate the communication skills of university students. The scale consists of 25 items and a four-factor structure: communication principles and basic skills, self-expression, active listening and non-verbal communication, and willingness to communicate. Higher scores indicate that the level of communication skills is high. The scale has a Cronbach's alpha of 0.88 (21), which was 0.884 in the present study.

Data analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS, v.24 NY, New York) at a significance level of $p < 0.05$. Frequency (n), percentage (%), and minimum and maximum values were used for descriptive statistics. Independent samples t-test, which is one of the parametric tests, was used in the comparison of the quantitative data in pairs, the One-Way ANOVA test was used in the comparisons of more than two groups, and the Tukey test was used for post hoc analyses. Pearson correlation analysis was used to determine the relationship between scale scores.

Ethical Considerations

Institutional permissions and ethics committee approval was obtained (Date: 03.12.2021 & No: 2021/23). Permission was obtained from the university. All nursing students were briefed about the research purpose, procedure, and confidentiality. Informed consent was obtained from those who agreed to participate in the study. The study was conducted in line with the Declaration of Helsinki. The manuscript was prepared in accordance with STROBE guidelines for cross-sectional studies (22).

Limitations

The findings of this study should be interpreted within the scope of several limitations. First of all, the results are sample-specific and not generalizable to the whole population. Second, the research findings are based on students' self-report. Third, the findings of the study should be interpreted within the context of the cross-sectional nature of the study.

RESULTS

Sociodemographic characteristics and scales' results

It was determined that the mean age of the participants was 20.63 ± 1.53 years, 90.7% were female and 30.7% were senior students. More than half of the participants stated that their interpersonal communication was good after the restrictions during the Covid-19 pandemic (Table 1).

Participants had a mean TAS-20 score of 55.15 ± 9.12 , with the breakdown of scores as follows: "difficulty identifying feelings", "difficulty describing feelings" and "externally-oriented thinking" scores of 16.41 ± 5.66 , 13.87 ± 3.09 and 24.87 ± 3 , respectively. Participants had a mean CSS score of 102.25 ± 11.29 , with the breakdown of scores as

follows: "communication principles and basic skills", "self-expression", "active listening and non-verbal communication" and "willingness to communicate" scores of 41.52 ± 4.85 , 15.82 ± 2.89 , 25.31 ± 3.24 and 19.57 ± 3.30 , respectively (Table 2).

Toronto alexithymia scale results

Male participants had a significantly higher mean TAS-20, difficulty describing feelings, and externally-oriented thinking scores than their female counterparts ($p < 0.05$). Participants who stated that their interpersonal communication was bad after the restrictions in the Covid-19 pandemic had significantly higher mean TAS-20 and all sub-dimensions scores than those whose communication was good ($p < 0.05$) (Table 3).

Communication skills scale results

Female participants had a significantly higher mean CSS "communication principles and basic skills" subscale score than their male counterparts ($p < 0.05$). Participants who stated that their interpersonal communication was good after the restrictions in the Covid-19 pandemic had significantly higher mean CSS, self-expression, active listening and non-verbal communication, and willingness to communicate scores than those whose communication was bad ($p < 0.05$) (Table 4).

Table 1: Participants' Sociodemographic Characteristics (N=140)

Sociodemographic Characteristics	Mean \pm SD	
Age	20.63 \pm 1.53	
	n	%
Gender		
Women	127	90.7
Men	13	9.3
Grade		
1st	38	27.1
2nd	28	20.0
3rd	31	22.1
4th	43	30.7
When you think about your social relationships after the restrictions in the Covid-19 pandemic, how would you describe your interpersonal relations?		
I think my interpersonal relations were good.	77	55.0
I think my interpersonal relations were bad.	23	16.4
Neutral	40	28.6

Table 2: Descriptive statistics – scales' scores (N=140)

Scales	Mean \pm SD	Minimum	Maximum	Number of Items
<i>Difficulty Identifying Feelings</i>	16.41 \pm 5.66	7.00	35.00	7
<i>Difficulty Describing Feelings</i>	13.87 \pm 3.09	5.00	21.00	5
<i>Externally-Oriented Thinking</i>	24.87 \pm 3.80	13.00	34.00	8
Toronto Alexithymia Scale (TAS-20)	55.15\pm9.12	31.00	87.00	20
<i>Communication principles and basic skills</i>	41.52 \pm 4.85	26.00	50.00	10
<i>Self-expression</i>	15.82 \pm 2.89	8.00	26.00	4
<i>Active listening and non-verbal communication</i>	25.31 \pm 3.24	16.00	30.00	6
<i>Willingness to communicate</i>	19.57 \pm 3.30	11.00	25.00	5
Communication Skills Scale (CSS)	102.25\pm11.29	71.00	124.00	25

It was found that there was a low level and statistically significant correlation was found between the mean of TAS-20 and its sub-dimensions scores and CSS “self-expression” sub-dimension mean score. However, it was determined that there was a low nonlinear and statistically significant relationship between the total score of the CSS and all the sub-dimensions of TAS-20. There was no statistically significant correlation found between the total scores of both scales ($p>0.05$) (Table 5).

DISCUSSION

While the primary goal of this study was to determine nursing students’ levels of alexithymia and communication skills following the restrictions in the Covid-19 pandemic process, the secondary goal was to determine the relationship between students’ alexithymia and communication skills and their sociodemographic characteristics.

Table 3: Comparison of participants’ sociodemographic characteristics and TAS (20) Scores (N=140)

Variables	Difficulty Identifying Feelings		Difficulty Identifying Feelings		Difficulty Identifying Feelings		Toronto Alexithymia Scale (TAS-20)	
	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value
Gender*								
Women	16.19 (5.74)	-1.424	13.68 (3.13)	-2.258	24.54 (3.73)	-3.300	54.42 (9.11)	-3.053
Men	18.53 (4.52)	0.157	15.69 (2.01)	0.026	28.07 (2.95)	0.001	62.30 (5.67)	0.003
Grade**								
1st	17.21 (6.17)		13.63 (3.51)		24.86 (4.43)		55.71 (10.38)	
2nd	15.85 (5.21)	0.483	13.85 (2.67)	0.343	25.78 (3.25)	1.649	55.50 (7.16)	0.224
3rd	16.67 (5.92)	0.695	13.64 (3.22)	0.791	23.67 (4.24)	0.181	54.00 (10.26)	0.879
4th	15.88 (5.38)		14.25 (2.93)		25.13 (3.03)		55.27 (8.44)	
When you think about your social relationships after the restrictions in the Covid-19 pandemic, how would you describe your interpersonal relations?***								
^a I think my interpersonal relations were good.	15.28 (5.56)	4.861 0.009	13.45 (3.20)	3.987 0.021	25.66 (3.65)	4.712 0.017	54.40 (9.51)	2.670
^b I think my interpersonal relations were bad.	19.26 (4.47)	a-b p=0.008	15.47 (2.67)	a-b p=0.016	24.39 (2.85)	a-c p=0.016	59.13 (6.29)	0.073
^c Neutral	16.95 (5.93)		13.75 (2.86)		23.62 (4.24)		54.32 (9.33)	

*Independent Sample T Test, **One-Way ANOVA, $p<0.005$, Post-hoc comparisons:Tukey

Table 4: Comparison of participants’ sociodemographic characteristics and CSS Scores (N=140)

Variables	Communication principles and basic skills		Self-expression		Active listening and non-verbal communication		Willingness to communicate		Communication Skills Scale (CSS)	
	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value	Mean (SD)	Test Value p-value
Gender*										
Women	41.89 (4.75)	2.883	15.86 (2.94)	0.478	25.37 (3.18)	0.634	19.46 (3.35)	-1.280	102.59 (11.34)	1.142
Men	37.92 (4.53)	0.005	15.46 (2.47)	0.663	24.76 (3.89)	0.527	20.69 (2.56)	0.203	98.84 (10.59)	0.255
Grade**										
1st	42.15 (4.73)		15.39 (3.34)		26.13 (3.33)		19.15 (3.55)		102.84 (12.74)	
2nd	41.60 (4.82)	0.445	15.75 (2.64)	0.487	25.00 (3.57)	1.657	20.17 (3.00)	0.530	102.53 (12.00)	0.093
3rd	41.54 (5.15)	0.721	16.00 (2.46)	0.692	24.45 (3.12)	0.179	19.45 (3.61)	0.662	101.45 (10.51)	0.964
4th	40.90 (4.85)		16.13 (2.96)		25.41 (2.93)		19.65 (3.06)		102.11 (10.32)	
When you think about your social relationships after the restrictions in the Covid-19 pandemic, how would you describe your interpersonal relations?***										
^a I think my interpersonal relations were good.	42.09 (4.68)		16.84 (2.55)	12.969 <0.001	25.98 (3.21)	3.820 0.024	20.80 (2.61)	14.541 <0.001	105.72 (10.59)	9.333 <0.001
^b I think my interpersonal relations were bad.	40.56 (4.43)	1.209 0.302	14.08 (2.31)	p=<0.001 a-c	24.47 (2.48)	a-c p=0.047	17.60 (2.79)	p=<0.001 a-c	96.73 (7.20)	p=0.002 a-c
^c Neutral	41.00 (5.36)		14.87 (3.06)	p=<0.001	24.50 (3.46)		18.35 (3.79)	p=<0.001	98.72 (12.32)	p=0.003

*Independent Sample T Test, **One-Way ANOVA, $p<0.005$, Post-hoc comparisons:Tukey

Table 5: Relationship Between TAS-20 and CSS Scores (N=140)

Scales		Difficulty Identifying Feelings	Difficulty Describing Feelings	Externally-Oriented Thinking	Toronto Alexithymia Scale
Communication principles and basic skills	r	-.188*	-.048	.129	-.079
	p	0.026	0.577	0.129	0.353
Self-expression	r	-.378**	-.387**	.246**	-.264**
	p	0.000	0.000	0.003	0.002
Active listening and non-verbal communication	r	-.158	-.112	.236**	-.038
	p	0.063	0.188	0.005	0.659
Willingness to communicate	r	-.340**	-.199*	.284**	-.161
	p	0.000	0.019	0.001	0.058
Communication Skills Scale (CSS)	r	-.323**	-.210*	.269**	-.159
	p	0.000	0.013	0.001	0.060

Pearson Correlation Coefficient, * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

In the research, it was determined that the Toronto Alexithymia Scale mean score of the participants was 55.15±9.12. In this sense, it can be said that nursing students experience moderate alexithymia. In many studies in the literature, it is seen that the alexithymia levels of nursing students are similar to the findings of this study (1,3,6,8,18,23). It is seen that some of these studies in the literature were carried out during the pre-pandemic period, and some during the period when the pandemic and restrictions were applied. In this regard, the findings of the study suggest that there is no change after the pandemic. Recognizing, perceiving, and expressing emotions, as well as understanding the emotions of others, are especially important in the nursing profession. This circumstance is comparable to excellent communication abilities (3,8). The high level of emotional awareness of healthcare professionals helps them to establish a respectful therapeutic relationship by allowing them to deeply understand the emotions of the healthy/sick individual they care for (8). It is recommended to conduct interventional and longitudinal studies in which awareness sessions are structured to recognize students' emotions.

In the research, it was determined that the communication skills scale mean score of the participants was 102.25±11.29. This result can be interpreted as the communication skills of nursing students are at a good level. In the literature, it is seen that the communication skills levels of nursing students are average (8,9,23,24). This current situation can be interpreted as a desirable and pleasing result. It is thought that the low level of alexithymia and high communication skills in nursing students are important for patient-centered care in the future. Bdair performed qualitative research on nursing students during the pandemic time; in all four themes, the students said that they had problems engaging with other students and instructors due to the constraints (25). All over the world, courses on communication skills are included in the content of different courses in nursing curricula. However, it is stated in the literature that students state that there are inconsistencies between communication education in the classroom and real communication needs in clinical practice (26-28). In this respect, it can be concluded that it is important to support quantitative research on the subject with qualitative research. There are

studies stating that training planned on communication is effective for effective communication skills (13). However, there are also studies showing that the theoretical education given has no effect on communication skills (17). In a systematic analysis, Gutiérrez-Puertas et al. found that simulation was successful in enhancing communication skills with patients in the majority of the research reviewed (12). These findings indicate that practice is critical in the application of theoretical knowledge. It is advocated in the literature to adopt creative initiatives targeted at teaching communication skills and emotional awareness to the next generation of nurses in the nursing education curriculum (27-30).

When the sociodemographic characteristics of the participants were compared with the Toronto Alexithymia Scale; it was determined that male students had more difficulty in putting their feelings into words and their mean scores of extroverted thinking were higher. In the literature, it is stated that the emotional brain of women is more developed, and therefore, women's alexithymia levels are lower than men's (1,8,31). However, in a study conducted with nursing students; it was stated that there was no difference in the level of alexithymia between the genders, but the level of alexithymia increased in the last years of my nursing education. In the same study, it was stated that students who were not trained in the management of emotional care burdens could use alexithymia as a defense mechanism (16).

When the sociodemographic characteristics of the participants were compared with the Communication Skills Scale; it was found that female students scored higher in communication principles and basic skills sub-dimensions. There are studies in the literature that are similar to the findings of this study (8,21,31). There are also studies showing that there is no difference between both genders (6,9). In the literature, this difference is explained by socialization and gender role expectations. However, communication skills can vary from culture to culture and between men and women in every culture or subculture (21). In line with the findings of this study, it is thought that it is necessary to investigate more cultural gender differences regarding both human relations and emotions.

With the Toronto Alexithymia Scale, it was determined that the participants who evaluated their interpersonal communication as bad after the pandemic period restrictions had more difficulty in recognizing and expressing their emotions. In similar studies, it was stated that alexithymia may be a risk factor in causing interpersonal problems (6,32). It was found that students who evaluated their interpersonal communication as good after the restrictions during the pandemic period had higher Communication Skills Scale total score and sub-dimension score averages. In another study conducted by Aksoy and Çoban (2017) on nursing students regarding the pre-pandemic period, it was determined that there was a question in the data form about “having problems in interpersonal relationships” and that 70% of the participants did not experience any problems (6). Similarly, in a study conducted by Sancar and Aktaş (2019) with 634 nursing students during the pandemic period, 61.8% of students describe their interpersonal communication as good (8).

The study's findings show that nursing students who struggle to describe their emotions may also struggle with communication skills. Communication entails both the communication of knowledge and the transmission of emotions (13,33). In the literature, the emotional awareness of nursing students is associated with self-confidence in future care and the ability to develop new attitudes in the face of events. In addition, it is stated that nursing students who have effective communication skills should have self-awareness in order to create a therapeutic environment (24). It is predicted that epidemics and natural disasters will continue in the world due to the deterioration of the ecological balance. It is stated that best practices should be utilized while developing the nursing curriculum to prepare for the periodic emergence of infectious diseases worldwide and to train nurses to care for critically ill patients (12,29,30,33,34,35). For this reason, it is thought that it is important to integrate innovative applications such as virtual reality, in-situ simulation, and visual intelligence education into the curriculum and to plan evidence-based research on the subject in nursing education on emotion awareness and communication.

Conclusion and Implications for future research

According to our findings, nursing students had high communication skills and moderate alexithymia following the pandemic period constraints. Positive patient outcomes and patient satisfaction have been linked in the research with emotional awareness and effective communication (10). These research findings have implications for both nursing students and nurse educators. Research findings can be interpreted by looking at the general process before, during and after the pandemic. In this sense, it is thought to contribute to the literature. It is thought that another important issue for nursing education during the pandemic period is both the change of generations and the development of teaching methods. In this regard, it is advised to use qualitative data to supplement quantitative findings on alexithymia and communication abilities, which are crucial for treatment. Also, conducting long-

term research on alexithymia in nursing students is recommended. In this approach, research planning might direct the development of new projects or the content for already-existing courses in the curriculum. It is suggested that this study be expanded to include other health practitioners. In addition, repeating the research on other campuses may strengthen the generalizability of the results. Finally, alexithymia and communication skills are concepts that can be affected by many factors. In this sense, it is recommended that studies be conducted that examine the predictive factors for these concepts in nursing students.

Ethics Committee Approval: This study was approved by the ethics committee of Acıbadem university (Date: 03.12.2021 & No: 2021/23).

Informed Consent: Written consent was obtained from the participants.

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