



Hemşirelik Öğrencilerinin İlk ve Son Yıllarında Duygusal Zekâ ve Algılanan Stres Düzeyleri Arasındaki İlişkinin Belirlenmesi

Determination of the Relationship Between Emotional Intelligence and Perceived Stress Levels in the First and Final Years of Nursing Students

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ABSTRACT

This study was conducted to determine the relationship between emotional intelligence and perceived stress levels of nursing students in their first and final years. The study was carried out with 275 students (first and last year students) studying in the nursing department of a university between 15 December 2022 and 10 January 2023. Data were collected through face-to-face interviews using the 'Personal Information Form', 'Schutte Emotional Intelligence Test' and 'Perceived Stress Scale'. In the data analysis, SPSS version 26.0 was used for number, percentage, standard deviation and mean values, Kolmogorow-Smirnow and Shapiro-Wilk normality tests, Mann-Whitney U test and Kruskal Wallis tests for the analysis of differences between variables, Spearman Correlation analysis tests were used to determine the relationship between scale scores. It was found that the mean total score of the 'Schutte Emotional Intelligence Test' was 121.72±18.47 and the mean total score of the 'Perceived Stress Level Scale' was 41.11±7.93. The mean scores of the 'Perceived Stress Level Scale' of the female students ($p=0.00$) and the mean scores of the 'Schutte Emotional Intelligence Test' of the 4th class students were statistically significant ($p=0.05$), and there was no correlation between the 'Schutte Emotional Intelligence Test' and the 'Perceived Stress Level Scale' ($r=0.69$). As a result, it was observed that nursing students had high levels of emotional intelligence and perceived stress, the academic class status of the students affected the emotional intelligence score, and the gender variable affected the perceived stress score.

Keywords: *Nursing students; Emotional intelligence; Stress*

ÖZ

Bu araştırma hemşirelik öğrencilerinin ilk ve son yıllarında duygusal zekâ ve algılanan stres düzeyleri arasındaki ilişkinin belirlenmesi amacıyla yürütülmüştür. Çalışma bir üniversitenin hemşirelik bölümünde 15 Aralık 2022- 10 Ocak 2023 tarihleri arasında öğrenim gören 275 öğrenci (birinci ve son sınıf öğrencileri) ile gerçekleştirilmiştir. Araştırmada veriler 'Kişisel Bilgi Formu', 'Schutte Duygusal Zekâ Testi' ve 'Algılanan Stres Ölçeği' kullanılarak yüz yüze görüşme ile toplanmıştır. Veri analizinde SPSS 26.0 versiyon kullanılarak sayı, yüzde, standart sapma ve ortalama değerleri, Kolmogorow-Smirnow ve Shapiro-Wilk normallik testleri, değişkenler arası farklılık analizlerinde, Mann-Whitney U testi ve Kruskal Wallis testleri, ölçek puanlarının arasındaki ilişkinin belirlenmesi için Spearman Korelasyon analizi testleri kullanılmıştır. Öğrencilerin 'Schutte Duygusal Zekâ Testi' toplam puan ortalamalarının 121,72± 18,47 ve 'Algılanan Stres Seviyesi Ölçeği' toplam puan ortalamalarının ise 41,11± 7,93 olduğu bulunmuştur. Kadın cinsiyette olan öğrencilerin 'Algılanan Stres Seviyesi Ölçeği' puan ortalamalarının ($p= 0,00$) ve 4. sınıf öğrencilerinin 'Schutte Duygusal Zekâ Testi' puan ortalamalarının istatistiksel olarak anlamlı olduğu ($p= 0,05$), 'Schutte Duygusal Zekâ Testi' ile 'Algılanan Stres Seviyesi Ölçeği' arasında herhangi bir korelasyon olmadığı ($r= 0,69$) görülmüştür. Sonuç olarak hemşirelik öğrencilerinin duygusal zekâ ve algıladıkları stres düzeylerinin yüksek olduğu, öğrencilerin akademik sınıf durumunun duygusal zekâ puanını, cinsiyet değişkeninin de algılanan stres puanını etkilediği görülmüştür.

Anahtar Kelimeler: *Hemşirelik öğrencileri; Duygusal zekâ; Stres*

INTRODUCTION

Nursing education is a dynamic process that aims to enable students to make observations, develop knowledge, attitudes and behaviours and use their skills by combining theoretical knowledge and clinical practice infrastructure (1,2). It is very important for students who are trained as nurses to have high levels of self-esteem and self-confidence throughout their education and to be able to establish healthy communication in terms of their professional success (2).

The nursing profession and the educational process of the nursing curriculum are inherently stressful because they impose professional responsibility on students to establish emotional relationships with patients, patient families, and colleagues. It is stated that nursing students are exposed to various stress factors affecting their academic success in this profession with a high stress rate since the early stages of their education (1–3). It is stated that these stressors can be seen in nursing students in the form of academic stressors (exams, timing of exams, evaluations, workload, problems related to fear of failure in education, etc.), stress factors in clinics (fear of making mistakes, work, negative reactions to the death or pain of patients, relationships with members of the profession, etc.) and psychosocial/social stress factors (4).

Perceived stress is defined as an individual's assessment of the degree to which objects or life events are challenging. Therefore, perceived stress encompasses an internal, subjective dimension that varies from person to person. The assessment of stress experienced by individuals as being at an unmanageable level highlights the concept of perceived stress (5). Nursing students experience stress at higher rates compared to students studying in different disciplines because they are exposed to unusual environments, professional and personal stress more in clinical practice (6,7). Therefore, determining the stress factors encountered by nursing students is important in terms of coping with stress and gaining a professional identity (8). In this direction, the health status of nursing students who become nursing workforce should be taken into consideration, and it should be kept in mind that an unhealthy workforce cannot meet the demands of patients. It should be taken into consideration that the stress of a graduated student will not end; the same stress factors, coping mechanisms, and skills learnt from educational experiences will follow them to the professional field. Therefore, it is stated that without sufficient emotional intelligence, students will not be able to control and interpret their emotions effectively, and it is emphasised that emotional intelligence is one of the necessary skills to cope effectively with stress emotions (9).

Emotional intelligence, which was first defined by Salovey and Mayer (1990) as ‘the ability to understand one's own and others’ emotions, to distinguish between them, and to use this information to direct one's thoughts and actions’ (9), is a concept that covers many characteristics necessary for the nursing profession such as perception, self-control, empathy, problem solving, communication, adaptation to new environments and situations, and independent behaviour (10). It is stated that individuals with high emotional intelligence can use their emotions in the way they want and express them better, adapt to change better, cope with stress better, and be more social in order to achieve the goals they want in different areas of life such as education, work, and private life. Moreover, it is reported that emotional intelligence trainings in terms of nursing affect clinical competence by increasing the importance of emotions in making the right decision in a clinical environment and may benefit nursing students and nurses in future practices (10,11).

When the literature was examined in this direction, it was found that studies focusing on the development of emotional intelligence, such as the ability to understand and manage emotional demands inherent in the roles of nurses, were insufficient (12), and in individuals working in other health care roles such as medical students, the stress perceived by individuals with high emotional intelligence was lower. It was found that nursing students with high emotional intelligence and lower stress levels had easier emotional intelligence development, and nursing students with emotional intelligence scores below the average had higher rates of withdrawal from nursing programmes (13). In addition, it is stated that emotional intelligence is defined as related to success in transition to

professional practice and prevention of burnout in the field of nursing (11), but it remains as a critical element that is not sufficiently emphasised in nursing education (14). It is seen that there is a gap in the literature on the examination of the relationship between emotional intelligence and perceived stress levels in nursing education programmes. It is thought that academic success can be positively affected by determining emotional intelligence and perceived stress and it is predicted that the stress levels that may occur in the educational processes of students can be reduced. Therefore, this study was conducted to determine the relationship between emotional intelligence and perceived stress levels of nursing students in their first and last years.

Research Questions

- What are the demographic characteristics of first and fourth year nursing students?
- What is the emotional intelligence of first year and final year nursing students?
- What are the perceived stress levels of first-year and senior nursing students?
- Is there a relationship between emotional intelligence and perceived stress levels of first and final year nursing students?

MATERIAL and METHOD

Type of Research

The study was conducted in a descriptive and correlational design.

Population and Sample of the Study

The population of the study consisted of 420 students (first- and final-year students) studying in the nursing department of Muğla Sıtkı Koçman University Faculty of Health Sciences between 15 December 2022 and 10 January 2023. In this study, sample calculation was performed using the sample calculation formula for a known population. With 420 students enrolled in grades 1 and 4, the sample size for the study was determined to be 201 based on a 5% margin of error and a 95% confidence interval. Considering possible data loss, the study was completed with 275 students who met the inclusion criteria. The inclusion criteria for this study were determined as students must be first-year and final-year students of the Nursing Department and must be open to communication and cooperation. The primary reason for including only first- and fourth-year nursing students in our study was to comparatively examine the changes in emotional intelligence and perceived stress levels at two critical stages of nursing education at the beginning of the program (first year) and in the pre-graduation period (fourth year). Students who did not volunteer to participate in the study and second- and third-year students, representing the intermediate phases, were not included in the sample for this purpose. This selection allowed for a clearer and more straightforward analysis of the potential effects of nursing education on students.

Data Collection Tools

'Personal Information Form', 'Schutte Emotional Intelligence Test' and 'Perceived Stress Scale' were used to collect the data.

Personal Information Form

This form, which was created by the researchers, consists of 10 questions questioning the descriptive characteristics of the students (age, gender, grade level, place of permanent residence, place of current residence, income status of the family, status of receiving training on emotional intelligence, type of training received, status of receiving training on coping with stress, type of training received).

Schutte Emotional Intelligence Test

The Turkish adaptation of the Schutte Emotional Intelligence Test (SEIT-33) developed by Schutte et al. (15) was conducted by Tatar et al. (16), and the internal consistency coefficient of the 33-item test was found to be 0.86. The test is a five-point Likert-type scale ranging from 'strongly disagree=1' to 'strongly agree=5'. In SEIT-33, items 5, 28 and 33 are reverse coded items. The total score is obtained by summing all items and the minimum and maximum score to be obtained from

the measurement tool varies between 33-165 points. In this study, the Cronbach's alpha value of Schutte Emotional Intelligence Test (SEIT-33) was found to be 0.93.

Perceived Stress Scale

Developed by Cohen et al. (17) and Turkish validity and reliability study by Eskin et al. (18), the 14-item scale is designed to measure the extent to which certain situations in a person's life are perceived as stressful. Participants evaluate each item on a 5-point Likert-type scale ranging from 'Never (0)' to 'Very often (4)'. The 7 items with positive statements (items 4, 5, 6, 7, 9, 10, 13) are reversed. The total score obtained from the scale varies between 0-56 points. The high score obtained from the scale indicates that the stress perception of the person is high. Cronbach's alpha value of the Perceived Stress Level Scale was found to be 0.71 in this study.

Collection of Research Data

The data of the study was collected through face-to-face interviews with students in their classrooms, where students were given approximately 15 minutes to complete the survey form in groups at their convenience.

Data Analysis

SPSS version 26 (IBM Corp.) was used to analyse the research data. While number, percentage, standard deviation and mean values were used in the analysis of descriptive data, Kolmogorow-Smirnow and Shapiro-Wilk tests were applied to determine whether the data were normally distributed and it was concluded that the data did not show normal distribution. In the analyses of differences between variables, Mann-Whitney U test was used to compare paired groups, and Kruskal-Wallis tests were used to analyse three or more groups. Spearman Correlation analysis was used to determine the relationship between the scale scores. The statistical significance level of the data was evaluated as $p < 0.05$.

Ethical Dimension of the Research

After obtaining permission from the Health Sciences Ethics Committee of a university (Date: 12.12.2022, Protocol No: 220155-138) and the institution where the study will be conducted, the 'Informed Voluntary Consent Form' was presented to the students who agreed to participate in the study. The students who read and signed the form were given time to answer the questionnaire forms, and the process of collecting the study data was completed.

Limitations of the Study

The limitation of the study is that the research was conducted with the students of only one university.

RESULTS

The mean age of 275 students participating in the study was 21.09 ± 2.11 ; 63.6% of the students were female, and 53.1% were in the 4th grade. It was observed that 89.5% of the students were directly enrolled, 46.9% of them lived in the city centre, and 79.6% of them lived in the dormitory environment during their student life (Table 1).

Table 1. Demographic Characteristics of Students (n=275)

Variable	Categories	Mean±SD	n	%
Age		21.09±2.11		
Gender	Female		175	63.6
	Male		100	36.4
Current class	1st class		129	46.9
	4th class		146	53.1

Registration status	Direct registration	246	89.5
	Horizontal transfer	7	2.5
	Vertical transfer	22	8.0
Place of Living	Rural	45	16.4
	Township	101	36.7
	City centre	129	46.9
Current Place of Living	Dormitory	219	79.6
	Home (with family)	23	8.4
	Home (with friends)	33	12.0

The mean scores of the 'Schutte Emotional Intelligence Test' and 'Perceived Stress Level Scale' were 121.72 ± 18.47 and 41.11 ± 7.93 , respectively (Table 2). When the demographic characteristics of the students were compared with the mean scores of the 'Schutte Emotional Intelligence Test' and the mean total scores of the 'Perceived Stress Level Scale', only the mean scores of the 'Perceived Stress Level Scale' of the female students ($p=0.00$) and the mean scores of the 'Schutte Emotional Intelligence Test' of the 4th-grade students were statistically significant ($p=0.05$) (Table 2).

Table 2. Demographic Characteristics of Students and Schutte Emotional Intelligence Test and Perceived Stress Level Scale Score Means (n=275)

Variable	Categories	n	%	Mean±SD	SEIT		PSLS	
					Mean	Test ve p değeri	Mean	Test ve p değeri
Gender	Female	175	63.6	21.09±2.11 (Min:18, Max:27)	139.16	Z=-0.31	156.91	Z=-5.22
	Male	100	36.4		135.98	p=0.74	104.91	p=0.00*
Age		275				KW=13.87 p=0.12		KW=13.59 p=0.19
Current Class	1st class	129	46.9		127.74	Z=-1.91	130.12	Z=-1.44
	4th class	146	53.1		146.06	p=0.05*	143.97	p=0.14
Registration Status	Direct registration	246	89.5		138.31	KW=0.76	138.32	KW=0.09
	Horizontal Transfer	7	2.5		157.79	p=0.68	141.43	p=0.95
	Vertical transfer	22	8.0		128.27		133.30	
Place of Living	Rural	45	16.4		137.88	KW=1.95	147.84	KW=1.25
	Township	101	36.7		146.30	p=0.37	132.23	p=0.53
	City centre	129	46.9		131.55		139.09	
Current Place of Living	Dormitory	219	79.6		135.02	KW=1.68	135.93	KW=0.73
	Home (with family)	23	8.4		144.28	p=0.43	144.78	p=0.69
	Home (with friends)	33	12.0		153.38		146.98	
SEIT Total Score Means				121.72±18.47 (Min:33, Max:165)				
PSLS Total Score Means				41.11±7.93, (Min:4, Max:55)				

*: $p < 0.05$, p: Level of Significance; SD, Standard Deviation; KW, Kruskal Wallis Test; Z, Mann Whitney U Test

The correlations between the total scores of 'Schutte Emotional Intelligence Test' and 'Perceived Stress Level Scale' were analysed and it was determined that there was no relationship between the scales ($r=0.69$) ($p < 0.05$) (Table 3).

Table 3. The Relationship Between ‘Schutte Emotional Intelligence Test’ and ‘Perceived Stress Level Scale’ Total Scores (n=275)

Scales	Spearman's Rho	SEIT Total Score	PSLS Total Score
SEIT Total Score	r		0.69
PSLS Total Score	r	0.69	

r: Spearman Correlation Analysis, $p < 0.05$

DISCUSSION

Emotions and the skills of solving emotions are the factors that energise people, increase motivation, and mobilise people (19). In addition to cognitive intelligence, people also have emotional intelligence, which differs from person to person and affects individuals' learning skills. People with emotional intelligence can mobilise themselves, regulate their moods by not allowing negativities to affect their thoughts, cope with stress, control their impulses, and act more hopefully by putting themselves in other people's shoes (9). It is known that individuals with high emotional intelligence have higher work performance, productivity, and success levels (20). Therefore, it is emphasised that nurses should have high emotional intelligence in order to practice effectively, communicate effectively with care recipients, family members, and all individuals in the institutions where they work, create a peaceful working environment, and adopt teamwork (20,21).

In the present study, the mean total score of the Schutte Emotional Intelligence Test of the students in this study was found to be 121.72 ± 18.47 (the total score obtained from the scale ranged between 33-165). When the literature studies examining the emotional intelligence levels of nursing students were examined, it was found that the mean total score of the students in Gumustekin and Kaya's (9) study was 123.93 ± 16.88 , the mean total score of the nursing students in Talman et al.'s (22) study varied between 102 and 160, and the mean total score of the nursing students in El dahshan et al. (23), 75.3% of nursing students had average or above average emotional intelligence, 89.7% of nursing students had average emotional intelligence in Asturias' study (24) and the majority of nursing students had average emotional intelligence in Mohamed's study (25). It is seen that the results of this study are compatible with the literature, and the emotional intelligence of the students in the study is above average.

According to the findings of the study, when the demographic characteristics of the nursing students and the total mean scores of the ‘Schutte Emotional Intelligence Test’ were compared, it was seen that the mean emotional intelligence scores of the final-year students were statistically significant compared to the first-year students. In the literature, there are studies showing that there is no statistically significant difference between the mean emotional intelligence scores of students and the class in which they study (9,20,26), as well as studies indicating that the emotional intelligence of students increases as the years they study at university increase (21,25,27). Although there are variations in the studies, it is seen that similar results are reached with the literature based on the findings of the current study. This result can be attributed to the positive development of interpersonal relationships and social adaptation processes with the increase in students' professional knowledge and skills every year. In addition, with the increase in age every year, it is thought that as the students reach higher grades due to the increase in individual experiences, they are able to develop coping systems by adapting better to university life and the education process; thus their emotional intelligence also develops.

It was observed that the mean total scores of the 1st and 4th year students included in the study were high in the ‘Perceived Stress Level Scale’. When the literature is examined, it is seen that the stress

levels perceived by the students in the studies conducted with nursing students appear at different rates. In Yesiltepe and Seker's (28) study, the mean total score of the students from the Perceived Stress Level Scale was 44.56 ± 12.15 at a high level, 30.16 ± 3.91 in Gucluel and Kendirkiran's (29) study. In other studies conducted in this direction, it was reported that the perceived stress levels of the students were at a moderate level. In the present study, it was observed that the stress levels of nursing students were at a high level, above the average, similar to the studies conducted. In addition to the responsibilities of being a student in the nursing students, factors such as going on a practice internship in the intensive and stressful nursing profession, caring for individuals with health problems in hospitals as a place of practice, and having to deal with communication problems that may develop between educators in the field of nursing and employees in the clinical field may cause nursing students to experience stress (30,31). Therefore, the high stress levels of the students in the present study may be attributed to many reasons.

Considering the demographic characteristics of nursing students, it was found that the mean scores of the 'Perceived Stress Level Scale' of female students in this study were higher than male students. Similarly, there are studies indicating that the total stress scores of nursing students of female gender are higher than those of male students (30,31). However, there are also studies in the literature reporting that being of female or male gender does not affect perceived stress levels (32). This finding of the present study shows that gender variable is not an important factor in the nursing profession, but nursing students of female gender perceive more stress. It can be thought that stress levels increase as a reflection of the high roles and responsibilities attributed to the female gender in terms of sociocultural aspects. This situation may also be attributed to the fact that student nurses of female gender have difficulty in coping with the stress they experience in their daily lives.

In our study, no significant relationship was found between emotional intelligence and perceived stress among nursing students. This finding partially contradicts the meta-analysis by Schutte et al. (33), which suggested that emotional intelligence is generally inversely related to stress, as well as the study by Yildirim Hamurcu et al. (34), which reported a negative correlation between these variables among nursing students. On the other hand, Birks et al. (35) indicated that emotional intelligence exerted only a limited buffering effect on stress among health sciences students. More recently, Xu et al. (36) demonstrated that emotional intelligence and empathy show variable associations with different dimensions of academic stress, suggesting that the relationship is neither linear nor universal. Taken together, these findings suggest that perceived stress is influenced not only by emotional intelligence but also by multiple contextual factors such as academic workload, social support, and coping mechanisms. The present study's results indicate that emotional intelligence may not play a stress reducing role under all circumstances, highlighting the need for further research to explore the complex nature of this relationship in greater depth.

CONCLUSION

According to the results of the study, it was seen that the emotional intelligence and perceived stress levels of nursing students were high, the academic class status of the students affected the emotional intelligence score, and the gender variable affected and increased the perceived stress score.

The fact that nursing students are faced with many stressful situations during their student years may affect their professional identity development, critical thinking, and decision-making skills throughout their university education and may even cause various health problems. Students need to develop their emotional intelligence in order to adapt to all these processes and changes in their lives and to cope with the problems they are exposed to. Because as emotional intelligence develops, the perceived stress level is expected to decrease.

For this reason, it may be recommended that students should set their goals in a way that will improve their emotional intelligence, control their own thoughts, manage their existing stress, understand their own emotions, empathise when necessary, and find solutions to problems. In addition, it can be recommended to address professional awareness in the theory and practice courses

of nursing students who will be the nurses of the future, to teach effective communication and coping techniques to increase professional performance, and to include practices to improve problem-solving skills.

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