

Learned Resourcefulness and Emotional Intelligence of Nursing Students: A Descriptive and Cross-Sectional Study

Hemşirelik Öğrencilerinde Öğrenilmiş Güçlülük ve Duygusal Zekâ: Tanımlayıcı ve Kesitsel Bir Çalışma

Ceyda BAŞOĞUL

ABSTRACT

Aim: The aim of this study is to determine the levels of learned resourcefulness and emotional intelligence and the relationship between them in nursing students.

Materials and Methods: The population of this descriptive and cross-sectional study consisted of 291 students enrolled in the Nursing Department, Faculty of Health Sciences of a university in the spring semester of the 2017-2018 academic year. Data were collected using the Socio-Demographic Form, the Rosenbaum Learned Resourcefulness Scale (RLRS), and the Emotional Intelligence Evaluation Scale (EIES).

Results: The mean age of the participants was 21.01 ± 2.08 , and most of the participants were females (64.3%). The mean scores of the participants were found to be 111.84 ± 16.82 and 123.47 ± 25.12 for the RLRS and EIES respectively. When the relationship between the scales was analyzed, a statistically significant, positive correlation was found between the EIES sub-scales (emotional awareness, emotion management, motivation, empathy, social skills) and the RLRS ($p < 0.01$).

Conclusion: The results of the study showed that the emotional intelligence level of the students was "low"; the learned resourcefulness mean score was close to the mean of the scale; and there was a positive and significant relationship between them. It is recommended to plan education programs and advanced researches to improve the emotional intelligence and learned resourcefulness levels of nursing students.

Keywords: Nursing students; Learned resourcefulness; Emotional intelligence.

Introduction

Nursing is generally considered one of the most stressful occupations (1-3). Throughout their nursing education including clinical practices, nursing students may encounter conditions that cause stress and thus experience emotional problems (4). In stressful cases, an individual with a

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Gönderim Tarihi: 03.02.2020 - Kabul Tarihi: 04.03.2021

ÖZ

Amaç: Bu araştırmanın amacı, hemşirelik öğrencilerinin öğrenilmiş güçlülük ve duygusal zekâ düzeylerinin ve ikisi arasındaki ilişkinin belirlenmesidir.

Gereç ve Yöntem: Bu tanımlayıcı ve kesitsel çalışmanın örneklemini 2017-2018 akademik yılı bahar döneminde bir üniversitenin hemşirelik bölümünde okuyan 291 öğrenci oluşturmuştur. Veriler Tanıtıcı Özellikler Formu, Rosenbaum Öğrenilmiş Güçlülük Ölçeği ve Duygusal Zekâ Değerlendirme Ölçeği aracılığıyla toplanmıştır.

Bulgular: Öğrencilerin yaş ortalaması 21.01 ± 2.08 , %64,3'ü kadındır. Öğrencilerin öğrenilmiş güçlülük puan ortalaması 111.84 ± 16.82 , duygusal zekâ puan ortalaması 123.47 ± 25.12 'dir. Öl-çekler arasındaki ilişki incelendiğinde Duygusal Zekâ Değerlendirme Ölçeği alt boyutları (duyguların farkında olma, duygularını yönetme, kendini motive etme, empati, sosyal beceriler) ve öğrenilmiş güçlülük arasında pozitif yönde anlamlı bir ilişki saptanmıştır ($p < 0.01$).

Sonuç: Çalışmanın sonucunda, öğrencilerin duygusal zekâ düzeyinin "düşük", öğrenilmiş güçlülük puan ortalamasının ölçek ortalamasına yakın ve ikisi arasında pozitif yönde anlamlı ve güçlü bir ilişkinin olduğu saptanmıştır. Hemşirelik öğrencilerinin duygusal zekâ ve öğrenilmiş güçlülük düzeylerinin iyileştirilmesine yönelik eğitimlerin ve ileri araştırmaların planlaması önerilir.

Anahtar Kelimeler: Hemşirelik öğrencileri; Öğrenilmiş güçlülük; Duygusal zekâ.

high emotional intelligence level can cope with stress effectively by identifying the stress early and managing the triggers. This awareness is fundamental for nursing students who encounter new stressful situations. Emotional intelligence acts as a mediator factor between psychological health and decreased stress (5). Besides the emotional intelligence, learned resourcefulness is important for stress management. These two concepts are effective in various important topics in the nursing profession; some examples include adapting to new situations, coping with difficulties, empathy,

interpersonal relationships, managing conflicts effectively, professional success, and satisfaction (1,4-10)

Rosenbaum (1983) reports that the concept of resourcefulness, which refers to cognitive-based skills, is of importance for controlling the effects of emotions and thoughts preventing individuals from reaching a goal (11). The concept of learned resourcefulness emerged particularly in the field of nursing and health sciences practice fields about 40 years ago (12). Meichenbaum (1977), the first person to develop the concept of learned resourcefulness, reported three components for this concept: (a) self-monitoring, (b) problem solving, and (c) emotion regulation and self-control (13). On the other hand, Rosenbaum (1983) defined four main components which included (a) use of positive self-statements, (b) problem solving, (c) delay of gratification, and (d) perceived self-efficacy, which utilizes self-regulations and cognition to cope with emotional and physiological reactions (11). Learned resourcefulness is not expected to affect an individual's perception about a situation; however, it is assumed to have effects on self-efficacy beliefs about coping with a situation (14). High learned resourcefulness and the ability to regulate emotions and cognition decrease the negative effects of stress to the minimum and increase the coping efficiency (11).

The concept of learned resourcefulness could be associated with emotional intelligence components such as awareness and management of emotions, expression of emotions, empathy, and motivation. Nursing is a profession that requires the ability to empathize, care and react in emotional interaction with the individuals. Communication to be established with patients and their families could be challenging for nursing students due to the presence of an illness and its effects on the family. In this regard, emotional intelligence is of importance in students' gaining more self-control and confidence and thus connecting themselves to the profession (15). According to Bar-On (2006), emotional intelligence is a multi-factorial mechanism about social and emotional capabilities that enable individuals to know, understand, express, and manage emotions; establishing communica-

tion with other people; adapting to changes; finding solutions to problems; and effectively coping with daily conflicts (16). Emotional intelligence for the nursing profession in today's world could be defined as a practice ability of a nurse in demonstrating self-awareness, self-management, empathy, social awareness, self-motivation, and social relationship management skills (17,18). Students with high emotional intelligence scores were reported to have higher professional development, interpersonal relationships, and communication skills and demonstrate better professional performance (6). Por et al. (2011) found that students with higher emotional intelligence reported higher competence and well-being beside the outstanding problem-solving ability and social support scores; moreover, they were found to have lower perceived stress levels (7). The literature involves studies that investigated nursing students' emotional intelligence and learned resourcefulness levels separately. The present study found that students' emotional intelligence and learned resourcefulness levels had positive effects on stress management, coping, mental health, well-being, empathy, academic success, communication skills and professional performance (1,4-6,9,10); however, no studies were found to have investigated the relationship between emotional intelligence and learned resourcefulness. An investigation of the relationship between nursing students' learned resourcefulness and emotional intelligence could enable an increase in the awareness about this issue. This understanding could contribute to policies and practices designed for decreasing nursing students' stress, facilitating adaptation to challenging situations, supporting their coping, and increasing academic and professional performance. This way, an increase in the number of qualified nursing department graduates is reflected in the quality of health care services. Therefore, the present study is believed to be of importance in both higher education and professional nursing in terms of both theory and practice.

The major purpose of this study is to investigate the levels of learned resourcefulness and emotional intelligence and the relationship between them in nursing students.

Research Questions

1. What are nursing students' learned resourcefulness levels?
2. What are nursing students' emotional intelligence levels?
3. Do nursing students' socio-demographic features affect learned resourcefulness and emotional intelligence levels?
4. Is there a statistically significant relationship between learned resourcefulness and emotional intelligence scores?

Materials and Methods

Study Design: This study utilized a descriptive and cross-sectional correlation research design to determine the levels of learned resourcefulness and emotional intelligence and the relationship between them in nursing students.

Setting and Sample: The target population of the study was 363 students who were enrolled in the Nursing Department of Faculty of Health Sciences at Adiyaman University. The sample size was calculated using G*Power with a medium effect size of 0.4, probability of alpha error .05, a power (1-β) of 0.95. The minimum sample size was 278. The inclusion criteria were being enrolled in the nursing department of the university in the 2017-2018 academic year and agreeing to participate in the study. The exclusion criteria were rejecting to participate in the study and filling in the questionnaire forms incompletely or incorrectly. Hence, 305 students agreed to participate in the study and filled in the data collection tools. However, 14 questionnaires that were not completed fully were excluded. The analysis was therefore performed on the data collected from 291 students (80.2% of the target population).

Measurements: Data were collected through three forms; the Socio-demographic Form, the Rosenbaum's Learned Resourcefulness Scale, and the Emotional Intelligence Evaluation Scale.

1. The Socio-demographic Form: The form included 7 questions about the descriptive char-

acteristics of the students (class level, age, gender, marital status, socio-economic status and the place where they lived the longest period of time).

2. The Rosenbaum Learned Resourcefulness Scale (RLRS): The scale was originally developed by Rosenbaum (1980) as the Self-Control Schedule (SCS). The name of the scale was then changed by Rosenbaum as the Learned Resourcefulness Scale. It is a self-assessment scale that aims to measure how well an individual uses the cognitive strategies s/he can use in coping with stress and stress reactions. The original version of the 6-point Likert scale indicated the extent to which participants evaluate the item as characteristic of himself or herself (-3 very uncharacteristic of me, to + 3 very characteristic of me) (19). The scale was adapted to Turkish by Siva (1991) and Dağ (1991) (20,21). Eleven items of the 36-item scale that is rated on a 5-point Likert scale are scored reversely (4, 6, 8, 9, 14, 16, 18, 19, 21, 29, 35). The responses ranged from "totally inappropriate," (1) to "totally appropriate"(5). Scores to be obtained from the scale range between 36 and 180. Higher scores indicate a repertoire of a variety of cognitive strategies in coping with stress, in other words, a higher learned resourcefulness level (21). Cronbach's Alpha internal consistency coefficient of the scale was found .82 in the original study, .78 in the study conducted by Dağ (1991) (21), and .81 in the present study.

3. The Emotional Intelligence Evaluation Scale (EIES): The 30-item scale was developed by Hall (1999) and its reliability and validity were performed by Ergin (22). The scale is composed of 5 sub-scales as emotional awareness (Items 1, 2, 4, 17, 19 and 25), emotion management (Items 3, 7, 8, 10, 18 and 30), motivation (Items 5, 6, 13, 14, 16 and 22), empathy (Items 9, 11, 20, 21, 23 and 28), and social skills (12, 15, 24, 26, 27 and 29). The 30-item scale is rated on a 6-point scale (1: disagree very much, 2: disagree moderately, 3: disagree slightly, 4: agree slightly, 5: agree moderately, 6: agree very much). There are no reverse items in the scale. The certain cut-off points in the scale indicate low (129 and below), normal (130-154), and high (155 and over) scores. Ergin found Cronbach's Alpha coefficient as .84 (22).

Cronbach’s alpha internal consistency coefficient was found .92 in the present study.

Data Collection: The study was conducted in the spring semester of the 2017-2018 academic year. After the necessary permissions to conduct the study were obtained, appropriate days, hours and classrooms at school were determined. Before the beginning of the courses (with the permission of the relevant teaching staff), the students were informed by the researcher about the purpose of the research, and their informed consent was obtained in the classroom. Finally, the questionnaire forms were distributed to students who agreed to participate in the research. The students were told that the participation was voluntary, the data collected would be used only for research purposes, and their credentials would be kept confidential. Filling in the data collection tools took about 8 to 10 minutes.

Data Analysis: Data were analyzed using SPSS for Windows 21. Descriptive statistics (percentages, means, and standard deviations) were utilized for the analysis of the socio-demographic data. Kolmogorov-Smirnov test was utilized to find out whether data distributed normally. Non-parametric tests were used as the data did not distribute normally ($p < .05$). A comparison of the variables was done using the Mann-Whitney U test for two independent groups and the Kruskal-Wallis test for more than two independent groups, and Spearman correlation analysis was performed for correlation analysis. Statistical significance was taken as .05 for the comparisons. Cronbach’s Alpha was performed for reliability analysis.

Compliance of Ethical Statement: Written permission was obtained from Adiyaman University Non-invasive Research Ethics Committee (2018/2-25) and the Nursing Department of Faculty of Health Sciences. Before data collection, the students were informed about the purpose of the study and their written informed consent was obtained.

Results

An analysis of the socio-demographic features of the participating students showed that their aver-

age age was 21.01 ± 2.08 . The majority of the participants (52.6%) were aged from 21 to 24, 64.3% were females, 95.9% were single, and 70.8% had a medium socio-economic level (Table 1).

Table 1. Descriptive Characteristics of Students (Adiyaman, 2018)

<i>Characteristics (n=291)</i>	N	%
Classes		
1 st year	70	24.1
2 nd year	66	22.7
3 rd year	77	26.5
4 th year	78	26.8
Age Groups (Year)		
17-20 years	127	43.6
21- 24 years	153	52.6
25- 36 years	11	3.8
Gender		
Female	187	64.3
Male	104	35.7
Marital status		
Single	279	95.9
Married	12	4.1

Table 2 demonstrates the statistical analysis of students’ Rosenbaum Learned Resourcefulness Scale, Emotional Intelligence Evaluation Scale and sub-scales. RLRS mean score was 111.84 ± 16.82 , and the emotional intelligence mean score was 123.47 ± 25.12 . The students were found to have received minimum 53 and maximum 173 points from the EIES scale. Emotional intelligence sub-scales mean scores were 26.03 ± 6.09 for the emotional awareness, 25.46 ± 6.04 for the empathy, 25.46 ± 6.04 for the social skills, 24.57 ± 5.87 for the motivation, and 22.83 ± 5.65 for the emotion management () respectively.

Table 2. Statistical Analysis of Students' Rosenbaum Learned Resourcefulness Scale, Emotional Intelligence Evaluation Scale and Sub-scales (n=291) (Adıyaman, 2018)

Scales	<i>M ± SD</i>	<i>Median</i>	<i>Min-Max</i>
Learned Resourcefulness (RLRS)	111.84±16.82	112	69-163
Emotional Intelligence (EIES)			
Emotional awareness	26.03±6.09	27	8-36
Emotion management	22.83±5.65	23	8-36
Motivation	24.57±5.87	25	9-36
Empathy	25.46±6.04	26	10-36
Social skills	25.46±6.04	25	9-34
Emotional Intelligence Total	123.47±25.12	126	53-173

Table 3. Comparison of Students' Emotional Intelligence and Learned Resourcefulness Scores by Class Year and Gender (n=291) (Adıyaman, 2018)

Class	N	Emotional Intelligence (EIES)			Learned Resourcefulness (RLRS)		
		<i>M ± SD</i>	<i>Median</i>	<i>Mean Rank</i>	<i>M ± SD</i>	<i>Median</i>	<i>Mean Rank</i>
1 st year	70	123.70±24.55	129	148,94	114.00±16.50	114	155.25
2 nd year	66	113.74±24.22	113	112,92	109.21±17.77	106	132.00
3 rd year	77	127.15±23.22	125	156,91	112.57±17.50	115	151.93
4 th year	78	127.78±26.24	132	160,58	111.35±15.41	110	143.69
Gender	N	$\chi^2=13.92; p=.003^*$			$\chi^2=3.11; p=.374$		
Female	187	125.80±24.70	129	154.03	110.84±16.36	110	141.02
Male	104	119.21±25.32	117	131.56	113.59±17.47	114	154.95
		$z=-2.184; p=0.029^*$			$z=-1.354; p=0.176$		

*p < 0.05

Table 4. Relationship between Learned Resourcefulness and Emotional Intelligence Sub-scales Scores (n=291) (Adıyaman, 2018)

Scales	Emotional Intelligence					
	Emotional awareness	Emotion management	Motivation	Empathy	Social skills	Total
	r(p)	r(p)	r(p)	r(p)	r(p)	r(p)
<i>Learned Resourcefulness</i>	.425 (.000)*	.397 (.000)*	.399 (.000)*	.384 (.000)*	.376 (.000)*	.469 (.000)*

* p< 0,05

The comparison of the nursing students' EIES and RLRS scores according to their socio-demographic features showed no significant differences by age, marital status, socio-economic status, and the place where they lived the longest period of time ($p>0.05$). The comparison of stu-

dents' EIES and RLRS scores according to class level is given in Table 3. Emotional intelligence mean scores were 123.70±24.55 for the first-year students, 113,74±24.22 for the second-year students, 127.15±23.22 for the third-year students, and 127.78±26.24 for the fourth-year students;

there was a significant difference between the class levels ($p < 0.05$). No significant difference was found between the groups in terms of the learned resourcefulness mean scores ($p > 0.05$). Female students' emotional intelligence mean score was 125.80 ± 24.70 and that of males was 119.21 ± 25.32 . This difference was found to be statistically significant ($p < 0.05$).

Spearman correlation analysis was performed to find out the relationship between nursing students' emotional intelligence scores and learned resourcefulness scores (Table 4). A positive, strong, and significant relationship was found between learned resourcefulness scores and emotional intelligence total score ($r = .469$) and sub-scale scores of "emotional awareness" ($r = .425$), "emotion management" ($r = .397$), "motivation" ($r = .399$), "empathy" ($r = .384$), and "social skills" ($r = .376$) ($p = 0.000$).

Discussion

The present study is the first study that associates emotional intelligence and learned resourcefulness in nursing students. Students' emotional intelligence levels were found to be "low" and their learned resourcefulness level was found to be close to the scale mean score. In addition, there was a strong, significant relationship between learned resourcefulness and emotional intelligence total and sub-scales.

The results showed that nursing students' learned resourcefulness mean score was close to the scale mean score and a little higher than that (see Table 2). A study that investigated university students' learned resourcefulness reported similar learned resourcefulness mean scores (23). Some studies conducted with nursing students reported higher learned resourcefulness mean scores (126.44; 122.70; 120.07 respectively) than the ones found in this study (111.84) (24-26).

The results showed that the students' emotional intelligence mean score was low. Emotional intelligence sub-scale mean scores from highest to lowest were emotional awareness, empathy, social skills, motivation, and emotion management respectively (Table 2). A review of the related

literature indicates studies that reported medium and normal (10, 27-29) levels of emotional intelligence, yet there are studies indicating low levels of emotional intelligence (30-32). Barkhordari and Rostambeygi (2013) reported that nursing students' emotional intelligence levels were satisfactory in their study (8). Lower emotional intelligence levels of students in this study indicate a need for a course about emotional intelligence, and the curriculum should be revised considering the factors affecting emotional intelligence.

The comparison of nursing students' emotional intelligence scores according to class levels showed the scores from lowest to highest as second, first, third, and fourth year. Hence, emotional intelligence was found to be lowest in the second year and highest in the fourth year, and this difference was statistically significant. An analysis of other study results about this issue demonstrated that emotional intelligence score was higher in upper class years (28,31); however, there are also studies indicating no differences by class year (8,27). The significant difference by class year in this study is considered to result from the nursing education provided. Some factors are considered to increase emotional intelligence levels by increasing students' competence and self-confidence and help them gain problem-solving skills. These factors include gaining experience about the situations encountered in the nursing education process, increased interaction experienced in the academic and clinic environments, expression and management of emotions in the interactions established, experiences about understanding the emotions of others, importance of empathic approach, and care processes in clinical practices. However, although the increase in emotional intelligence levels in upper classes is something positive, it is not at the desired level.

An assessment of nursing students' emotional intelligence scores according to gender showed that the emotional intelligence mean score of female students was significantly higher in comparison to that of males. While some studies in the literature showed that emotional intelligence score did not differ by gender (8,22), some other studies similarly reported higher scores of females com-

pared to males (31, 33). Bar-on (1997) states that females are more aware of their emotions, show sympathy and have social responsibility while males are better at struggling with stress (34). This finding in the study indicates that female students expressed and managed their emotions better, were more empathetic, and had better social skills. The significant difference in intelligence levels by gender could be associated with cultural characteristics in the expression of feelings.

An analysis of the relationship between nursing students' emotional intelligence scores and learned resourcefulness scores showed a statistically significant, positive relationship between learned resourcefulness scores and emotional intelligence total score and sub-scales scores (emotional awareness, emotion management, motivation, empathy, social skills). This result could also indicate that nursing students' learned resourcefulness levels increase with the increase in their emotional intelligence. Emotional intelligence is considered to be a stress-relieving factor that could be considered necessary for nurses (35). In their study conducted with nursing students, Por et al. (2011) reported that students who had high emotional intelligence had lower perceived stress levels with high well-being and efficacy, superior problem-solving ability, and social support scores (7). In terms of learned resourcefulness, individuals who have high learned resourcefulness levels could have a delay of gratification and use positive self-regulation, problem-solving methods, and other self-control strategies (11). In light of these individual changes, learned resourcefulness is an important personality variable that increases coping skills, enables a healthy adaptation, and identifies how to behave in stressful situations. Emotional intelligence and learned resourcefulness are common in issues strengthening people such as adapting to new situations, stress management, self-control, awareness and management of feelings, and the use of appropriate strategies in problem-solving. In light of this information, the positive and significant relationship between emotional intelligence and learned resourcefulness found in this study is somewhat expected.

Risky and stressful clinic practice fields combined with the intensive program of theoretical courses might cause students to experience emotional problems such as insufficiencies in coping and stress. The results showed that students' emotional intelligence and learned resourcefulness levels are not at the desired level to cope with these problems. In addition, the increase in students' learned resourcefulness levels with the increase in their emotional intelligence level revealed that practices about these concepts require the investigation of the two concepts in tandem.

Conclusion and Recommendations

The results showed that nursing students' emotional intelligence levels were "low", their learned resourcefulness levels were close to the scale mean score and a little higher, and there was a positive, strong and significant relationship between the learned resourcefulness and emotional intelligence total and sub-scale scores. In addition, emotional intelligence level of females and students in upper class years was found to be higher.

Further research is needed to examine changes in emotional intelligence and learned resourcefulness scores in students throughout the nursing education, and to compare students enrolled in other professional fields including health and non-health-related departments. Also, future research may take a longitudinal and qualitative approach to study the cause and effect of different levels of learned resourcefulness. This study provided basic data for further studies. In the light of these studies, it is thought that it would be beneficial to organize training programs and to conduct experimental studies in large groups where the effectiveness of these programs is evaluated.

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