ORIGINAL RESEARCH ORİJİNAL ARAŞTIRMA

Determining the Relationship Between Attitudes and Perceived Stress Levels of Nursing Students Towards Their First Clinical Practice: A Descriptive-Cross-Sectional Study

Hemşirelik Öğrencilerinin İlk Klinik Uygulamalarına Yönelik Tutum ve Algılanan Stres Düzeyleri Arasındaki İlişkinin Belirlenmesi: Tanımlayıcı-Kesitsel Çalışma

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ABSTRACT Objective: Clinical practice has a key role in nursing education and offers students the opportunity to use and experience the scientific knowledge learned in theoretical courses in patient care. Students who enter an environment where real patients and healthcare teams are present during clinical practice experience many problems. **Material and Methods:** This study aims to determine the relationship between nursing students' attitudes toward their first clinical practice and their perceived stress levels. A descriptive, cross-sectional study. The study was conducted in the nursing department of a university between February 2023 and February 2024. 254 students going into clinical practice for the first time participated in the research. Data were collected through a face-to-face survey using the "Descriptive Characteristics Form", "Attitude Towards Clinical Practice Scale", and "Perceived Stress Scale for Nursing Students". **Results:** The total score average of the students' Attitude Towards Clinical Practice scale was 110.20±15.28. The total score average of the Perceived Stress scale is 71.32±26.15. The relationship between the Attitude Towards Clinical Practices and the Perceived Stress scale and its subscales was not statistically significant (p>0.05). **Conclusion:** Research findings show that nursing students develop positive attitudes and experience moderate levels of stress in their first clinical practice. It is stated that the increase in satisfaction with the nursing department positively affects the attitude towards clinical practice and reduces the stress level. In addition, for the first time, high school graduation and gender were found to be variables affecting stress during clinical practice.

Keywords: Nursing student; first clinical practice;
                  perceived stress; attitude

ÖZET Amaç: Klinik uygulama, hemşirelik eğitiminde önemli bir role sahiptir ve öğrencilere teorik derslerde öğrendikleri bilimsel bilgiyi hasta bakımında kullanma ve deneyimleme fırsatı sunar. Klinik uygulama sırasında gerçek hastaların ve sağlık ekiplerinin bulunduğu bir ortama giren öğrenciler birçok sorun yaşarlar. **Gereç ve Yöntemler:** Bu çalışma, hemşirelik öğrencilerinin ilk klinik uygulamalarına yönelik tutumları ile algılanan stres düzeyleri arasındaki ilişkiyi belirlemeyi amaçlamaktadır. Tanımlayıcı, kesitsel bir çalışma. Çalışma, Şubat 2023 ile Şubat 2024 tarihleri arasında bir üniversitenin hemşirelik bölümünde yürütülmüştür. Araştırmaya ilk kez klinik uygulamaya giren 254 öğrenci katılmıştır. Veriler, "Tanımlayıcı Özellikler Formu", "Klinik Uygulamaya Yönelik Tutum Ölçeği" ve "Hemşirelik Öğrencileri İçin Algılanan Stres Ölçeği" kullanılarak yüz yüze anket yoluyla toplanmıştır. **Bulgular:** Öğrencilerin Klinik Uygulamaya Yönelik Tutum Ölçeği toplam puan ortalaması 110,20±15,28'dir. Algılanan Stres Ölçeği toplam puan ortalaması 71,32±26,15'tir. Klinik Uygulamaya Yönelik Tutum ile Algılanan Stres Ölçeği ve alt ölçekleri arasındaki ilişki istatistiksel olarak anlamlı değildir (p>0,05). **Sonuç:** Araştırma bulguları, hemşirelik öğrencilerinin ilk klinik uygulamalarında olumlu tutumlar geliştirdiklerini ve orta düzeyde stres yaşadıklarını göstermektedir. Hemşirelik bölümünden duyulan memnuniyetin artmasının klinik uygulamaya yönelik tutumu olumlu yönde etkilediği ve stres düzeyini azalttığı belirtilmektedir. Ayrıca, lise mezuniyeti ve cinsiyetin klinik uygulama sırasında stresi etkileyen değişkenler olduğu ilk kez bulunmuştur.

Anahtar Kelimeler: Hemşirelik öğrencisi; ilk klinik uygulama;
                  algılanan stres; tutum

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The nursing profession is an applied discipline that consists of a combination of knowledge and skills. Professional nursing education consists of the application process that provides theoretical knowledge and skills.[1,2] Clinical practice is a process that enables the transition from theory to practice.[3] In this process, students are expected to contribute to patients' healthcare problems with analytical approaches, by using the knowledge, attitudes, and skills they have learned throughout their education life.[1,4]

Nursing education in our country consists of theoretical, clinical, and field practices in 4-year undergraduate education following the European Union criteria.[5] Clinical and field practice periods are at least twice the theoretical course hours.[6] Nursing students start their first clinical practice in the spring semester of their first year at the earliest.[5] Clinical practice has a key role in nursing education, and thanks to clinical practical training, students can use and experience the theoretical scientific knowledge they have learned in patient care.[7] Since clinical practices prepare students for professional nursing, the place of clinical practice in nursing education is indisputable.[2,7]

Students who enter the environment with real patients and healthcare teams for the first-time face different clinical stressors during clinical practice.[4,7-9] Clinical stressors of nursing students reported in the literature include caring for patients with pain and suffering, fear of malpractice, problems arising from clinical staff and faculty, and lack of practical knowledge.[4,10-12] In addition, students' sociodemographic characteristics such as age and gender, income and education level, personal characteristics, their liking for the nursing profession, and their willingness to join the department.[2,10,13] The timing of clinical placement, the environment in which students practice, and the excessive workload are also reported to affect stress levels.[8,12,14] In addition, new e-learning methods that have recently been included in the education curriculum and the effort to adapt to these methods can create stress for students.[14]

High levels of stress affect students' health and cause physical and psychological symptoms, while sleep problems may lead to depression and burnout.[2,9,13,15] Stress also reduces academic success by impairing problem-solving skills.[4,10,15] Since nursing students' clinical attitudes and stress levels are influenced by various factors, identifying and addressing problems in the clinical environment supports their professional development. Instructors recognizing stress factors and developing awareness will strengthen student support.[12] This study aimed to assess nursing students' attitudes and stress levels during their first clinical practice, the influencing factors, and their relationships. As no prior research specifically focuses on stress levels and perceptions in this context, the findings are expected to contribute to the literature and provide practical insights for addressing clinical practice challenges.

Research Questions

1. What are nursing students' attitudes toward their first clinical practice experience?

2. What is the level of perceived stress among nursing students during their initial clinical practice?

3. Is there a significant relationship between nursing students' attitudes toward clinical practice and their perceived stress levels?

4. Do sociodemographic factors influence nursing students' attitudes toward clinical practice and their perceived stress?

MATERIAL AND METHODS

This study is a planned descriptive-cross-sectional study. Strengthening the Reporting of Observational Studies in Epidemiology checklist was used in reporting the study. The research was conducted with 2nd-year students at a university's nursing department. At the institution where the study took place, students begin their first clinical practice in the fall semester of their 2nd year. The research involved 261 students starting clinical practice for the first time in the 2022-2023 and 2023-2024 academic years. Participants included those aged 18 and older who voluntarily agreed to join. No sample size calculation was performed; instead, a convenience sampling method was utilized. Although the aim was to include the entire population, the study concluded with 254 students due to 3 absentees and 4 incomplete surveys.

Descriptive Characteristics Form: This form comprised 6 questions designed to assess participants' sociodemographic characteristics, including age, gender, high school graduation, satisfaction with the nursing department, general academic grade point average, and the clinic where they practiced.[2,4,5,7,8]

Attitude Scale Towards Clinical Practice for Nursing Students (ASTCPNS): The scale developed by Akdeniz Uysal and Yeşil Bayülgen measures students' attitudes toward clinical practice using a 5-point Likert format.[3] It comprises 4 sub-dimensions: beliefs and expectations towards clinical practice, positive approach towards clinical practice, negative approach towards clinical practice, and personal development. Scores range from 26 to 130, with higher total scores indicating a more positive attitude toward clinical practice. Items 9-12, 22, 24, 25 in the scale are reverse-coded. The internal consistency reliability of the ASTCPNS and its sub-dimensions was examined with Cronbach's alpha coefficients, which indicated high reliability.

Perceived Stress Scale for Nursing Students (PSSNS): The scale developed by Sheu et al. measures students' perceived stress levels and was adapted from Karaca et al.[16,17] It consists of 29 items, each using a 5-point Likert format. Scores range from 0 to 116, with higher scores indicating increased stress. Karaca et al. reported a Cronbach alpha reliability coefficient for the scale ranging from 0.67 to 0.93.[17] It consists of a total of 6 subscales: stress caused by lack of professional knowledge and skills, stress experienced while caring for the patient, stress from homework and workload, stress from faculty members and nurses, stress caused by the environment, and stress from peers and daily life. There are no reverse-coded items in the scale.[17] As a result of the reliability analysis of the PSSNS, the Cronbach alpha internal consistency coefficients for each subscale and the total score were found to be high in our study. The Cronbach's alpha values of the subscales and the overall scale ($\alpha=0.971$) indicated high internal consistency, demonstrating that the scale is highly reliable.

DATA COLLECTION

Data were collected from students immediately after their first clinical practice to reduce the effect of end-term homework and exam stress. Participants who met the inclusion criteria were informed about the study, and written and verbal consent was obtained. The online survey took about 10 minutes and was administered and collected in the clinical setting by the course researchers. Data were stored digitally with access limited to the researchers.

ETHICAL CONSIDERATION

Before the study commenced, permission was obtained from the university's non-invasive research ethics committee (date: February 8, 2023, no: 2023/02-09) and the nursing department (February 17, 2023). All participating students provided written and verbal consent. Personal information remained anonymous, ensuring confidentiality of the collected data. The research was conducted in accordance with the Declaration of Helsinki principles 2008.

DATA ANALYSIS

In this study, descriptive statistics of the participants are given as number, mean, standard deviation, minimum, maximum, and median. The reliability of the scales used in the study was analyzed. As the first step of the statistical analysis, the normality assumption was checked with the Shapiro-Wilk test and the homogeneity of variance was checked with the Levene test. In cases where the normality assumption was not met, the Mann-Whitney U test was used to examine the difference between the means of 2 independent groups. Kruskal Wallis test was applied to compare the means of 3 or more independent groups that did not have a normal distribution. "post hoc" Bonferroni analyses were used to determine the group or groups that made the difference. Spearman correlation was used to measure the relationship between continuous variables that do not comply with normal distribution. Analyzes were carried out using IBM SPSS Statistics for Windows, Version 25.0 (IBM Corp., Armonk, NY, USA).

RESULTS

The descriptive characteristics of the students are listed in Table 1. Approximately two-thirds of the students (71.7%) are between the ages of 18-20, 70.9% are female. When high school graduations are examined, 73.6% are Anatolian graduates. The average age is 20.29±1.38 years (minimum 18, maximum 30) (Table 1).

The students' mean scores on the Attitude Towards Clinical Practice scale and its subscales are presented in Table 2. The mean score of beliefs and expectations towards clinical practices is 35.65±5.39, the mean score of positive approach towards clinical practices is 26.72±6.19, the mean score of negative approach towards clinical practices is 30.36±5.98, the mean score of personal development is 17.47±2.68, and the total score average is 110.20±15.28. Statistics of the Perceived Stress scale and its sub-dimensions are shown in Table 2. The average Stress caused by lack of professional knowledge and skills is 7.03±2.87, the average stress experienced while caring for the patient is 19.83±7.47, the average Stress from homework and workload is 12.33±4.80, the average stress from faculty members and nurses is 14.60±5.88, the average stress caused by the environment is 7.72±3.00, the average stress from peers and daily life is 9.81±3.98, and the total score average is 71.32±26.15 (Table 2).

Compare the descriptive characteristics of nursing students with their scores on the Attitude Towards Clinical Practice scale and its subscales. As a result of the analysis, the difference between the satisfaction level with the nursing department and the total scores of the beliefs and expectations towards clinical practices, positive approach towards clinical practices, negative approach towards clinical practices, and personal development sub-dimensions and the Attitude Towards Clinical Practices scale was determined to be statistically significant (p<0.05). In the Bonferroni analysis for beliefs and expectations towards clinical practices scores, significant differences were found between the groups "I am not satisfied", "I can't decide on this yet", "I think I am where I want to be" and "I am very satisfied" (p=0.016, p=0.002, p=0.019). Very satisfied students scored higher than

TABLE 1: Distribution of students according to their descriptive characteristics (n=254)		
Descriptive characteristics	**n**	**%**
Age (years)		
18-20 years old	182	71.7
21 years or older	72	28.3
Gender		
Female	180	70.9
Male	74	29.1
Type of high school graduated		
Anatolian high school	187	73.6
Science high school	28	11.0
Technical and health vocational education high school	21	8.3
General high school	18	7.1
How would you rate your satisfaction with the nursing department?		
I am not satisfied	11	4.3
I can't decide on this yet	127	50.0
I think I'm where I want to be	97	38.2
I am very satisfied	19	7.5
GAGPA		
2.50 or less	16	6.3
2.51-3.0	79	31.1
3.01-3.50	138	54.3
3.51-4.0	21	8.3
The clinic where the practice started		
Internal clinics	148	58.3
Surgery clinics	59	23.2
Emergency clinic	18	7.1
Outpatient units	20	7.9
Intensive care units	9	3.5

	Minimum	Maximum	Mean	Standard deviation	Median
Age	18	30	20.29	1.38	20

GAGPA: General academic grade point average

those who were "not satisfied", "undecided" or felt they were "where they want to be". Similarly, in the Bonferroni analysis for positive approach towards clinical practice scores, significant differences were observed between very satisfied students and others (p=0.000 for all comparisons). Students who are "very satisfied" with their nursing department experience scored higher than those who were "dissatisfied" or "undecided". In the Bonferroni analysis for negative approach towards clinical practice scores, a significant difference was found between the undecided group and those who felt they were where they wanted to be (p=0.000), with the latter scoring higher. For personal development scores, significant differences were observed between "I am very satisfied",

TABLE 2: Distribution and reliability analysis of students according to the Attitude Scale Towards Clinical Practices, Perceived Stress Scale, and its sub-dimensions (n=254)

	Minimum	Maximum	Mean	Standard deviation	Median	Cronbach alpha
Attitude Scale Towards Clinical Practices						
Beliefs and expectations towards clinical practices	8.00	40.00	35.65	5.39	38.00	0.926
Positive approach towards clinical practices	9.00	35.00	26.72	6.19	27.00	0.931
Negative approach towards clinical practices	7.00	35.00	30.36	5.98	32.00	0.904
Personal development	5.00	20.00	17.47	2.68	18.00	0.858
Total score	33.00	130.00	110.20	15.28	112.00	0.934
Perceived Stress Scale						
Stress caused by lack of professional knowledge and skills	0.00	12.00	7.03	2.87	7.00	0.710
Stress experienced while caring for the patient	0.00	32.00	19.83	7.47	21.00	0.902
Stress from homework and workload	0.00	20.00	12.33	4.80	13.00	0.837
Stress from faculty members and nurses	0.00	24.00	14.60	5.88	15.00	0.893
Stress caused by the environment	0.00	12.00	7.72	3.00	8.00	0.740
Stress from peers and daily life	0.00	16.00	9.81	3.98	10.00	0.851
Total score	0.00	116.00	71.32	26.15	74.50	0.971

"I am not satisfied", "I cannot decide" and "I think I am where I want" groups (p=0.005, p=0.012, p=0.001). Very satisfied students scored higher than those who were dissatisfied or undecided. The scores of very satisfied students stating they are where they want to be were significantly higher than others. However, the total score of the Attitudes Towards Clinical Practices scale, and its sub-dimensions showed no significant differences based on age, gender, high school graduation, general academic grade point average (GAGPA), or clinical practice settings (p>0.05) (Table 3).

The Perceived Stress Scale and its subscale scores of nursing students were analyzed according to demographic characteristics, as shown in Table 4. Significant differences were observed between high-stress scores of students aged 18-20 and those aged 21 and over, particularly in Stress from peers and daily life subscale (p<0.05). Gender differences were also notable, with females scoring higher on the Perceived Stress Scale and its subscales (p<0.05). Significant variances were found in stress from faculty members and nurses, stress caused by the environment, stress from peers and daily life subscale among different high school graduates (p<0.05). Bonferroni analysis indicated that Anatolian high school graduates experienced significantly higher stress from faculty members and nurses subscale compared to

Technical and Health Vocational Education graduates (p=0.027). Similar patterns emerged stress caused by the environment scores (p=0.019, p=0.047) and stress from peers and daily life (p=0.034). The overall Perceived Stress Scale score revealed significant differences based on satisfaction with the nursing department (p<0.05). Notably, very satisfied students reported significantly higher stress caused by lack of professional knowledge and skills (p=0.004, p=0.000, p=0.005) and stress experienced while caring for the patient (p=0.015). Additionally, stress from homework and workload was significantly higher among very satisfied students compared to undecided peers (p=0.010), with similar findings for stress from practice instructors and nurses (p=0.003) and environmental stress (p=0.019). Overall, the differences in Perceived Stress Scale scores were significant between very satisfied and undecided students (p=0.005). However, no significant differences in stress related to lack of professional knowledge and skills, patient care, or workload were found based on age, high school type, GAGPA range, or clinical practice settings (p>0.05) (Table 4).

The relationships between nursing students' Attitudes Towards Clinical Practice and the Perceived Stress Scale and its subscales were examined. As a result of the analyses, the correlation between the Attitude Towards Clinical Practices scale and its sub-

TABLE 3: Distribution and comparison of Attitude Scale Towards Clinical Practices and subscale scores according to the descriptive characteristics of nursing students (n=254)

	Attitude Scale Towards Clinical Practices				
	Beliefs and expectations towards clinical practices $\bar{X}\pm$SD (M.)	Positive approach towards clinical practices $\bar{X}\pm$SD (M.)	Negative approach towards clinical practices $\bar{X}\pm$SD (M.)	Personal development $\bar{X}\pm$SD (M.)	Total score $\bar{X}\pm$SD (M.)
Age					
18-20 years old	35.98±4.48 (37.5)	26.41±6.2 (26)	30.7±5.67 (33)	17.4±2.54 (18)	110.49±13.53 (111)
21 years or older	34.81±7.17 (38)	27.5±6.16 (28)	29.5±6.66 (32)	17.65±3.03 (19)	109.46±19.08 (114.5)
	U=6501.0 p=0.922	U=5901.0 p=0.216	U=5983.0 p=0.273	U=5882.0 p=0.192	U=6263.0 p=0.584
Gender					
Female	35.68±5.38 (38)	26.52±6.1 (26)	30.62±5.76 (33)	17.48±2.64 (18)	110.3±14.59 (111)
Male	35.58±5.44 (38)	27.19±6.45 (28)	29.72±6.48 (32)	17.46±2.8 (18)	109.95±16.94 (113.5)
	U=6509.5 p=0.774	U=6108.5 p=0.299	U=6146.5 p=0.326	U=6620.0 p=0.938	U=6594.5 p=0.902
Type of high school graduated					
Anatolian high school	35.64±5.31 (38)	26.47±6.31 (28)	30.36±5.85 (32)	17.32±2.73 (18)	109.78±15.56 (111)
Science high school	36.46±3.92 (37.5)	26.11±5.7 (25)	29.5±6.24 (31)	17.79±2.47 (19)	109.86±12.94 (112.5)
Technical and health vocational education high school	33.76±8.32 (37)	27.76±6.47 (27)	28.95±8.11 (32)	17.57±2.93 (18)	108.05±18.3 (108)
General high school	36.72±3.41 (37.5)	29.06±5.05 (27.5)	33.33±2.25 (33.5)	18.5±2.09 (20)	117.61±9.95 (116.5)
	X^2=0.892 p=0.827	X^2=3.591 p=0.309	X^2=5.376 p=0.146	X^2=4.259 p=0.235	X^2=4.777 p=0.189
How would you rate your satisfaction with the nursing department?					
I am not satisfied	33.36±6.58 (35)	20±7.29 (19)	26.91±7.52 (29)	15.91±3.08 (17)	96.18±20 (102)
I can't decide on this yet	35.34±4.91 (37)	24.87±5.7 (25)	29.21±6.39 (31)	16.94±2.78 (17)	106.36±14.57 (108)
I think I'm where I want to be	35.91±5.36 (38)	28.92±5.19 (30)	31.99±4.77 (34)	18.03±2.33 (19)	114.85±12.87 (118)
I am very satisfied	37.74±7.3 (40)	31.74±5.88 (35)	31.68±6.53 (34)	19.05±2.25 (20)	120.21±15.61 (126)
	X^2=14.695 p=0.002*	X^2=49.433 p<0.000*	X^2=23.595 p<0.000*	X^2=23.379 p<0.000*	X^2=40.785 p<0.000*
GAGPA					
2.50 or less	36.38±5.25 (38.5)	27.56±8.02 (31.5)	30.38±5.55 (33)	17.88±3.12 (20)	112.19±19.31 (119.5)
2.51-3.0	34.8±6.35 (37)	25.87±6.81 (26)	29.01±6.89 (31)	16.86±3.06 (17)	106.54±18.4 (109)
3.01-3.50	35.92±4.48 (38)	26.95±5.59 (27.5)	30.92±5.43 (33)	17.64±2.41 (18)	111.43±12.39 (111.5)
3.51-4.0	36.52±6.88 (39)	27.71±6.11 (28)	31.71±5.53 (35)	18.33±2.18 (19)	114.29±14.79 (118)
	X^2=3.667 p=0.300	X^2=2.057 p=0.561	X^2=5.563 p=0.135	X^2=6.403 p=0.094	X^2=5.770 p=0.123
The clinic where the practice started					
Internal clinics	35.9±4.79 (38)	26.47±6.26 (27)	30.55±5.45 (33)	17.45±2.69 (18)	110.36±14.71 (112)
Surgery clinics	34.66±6.84 (37)	26.17±6.6 (26)	29.93±6.94 (32)	17.29±2.83 (18)	108.05±17.56 (108)
Emergency clinic	34.78±6.03 (37)	28.56±6.36 (30.5)	28.78±7.4 (31)	17.61±3.07 (18.5)	109.72±18.32 (113.5)
Outpatient units	36.3±4.89 (38.5)	29.05±4.76 (29)	30.45±6.38 (32)	17.65±2.16 (17)	113.45±11.4 (111.5)
Intensive care units	38.33±2.06 (39)	25.56±3.47 (24)	33±2.74 (34)	18.44±1.88 (19)	115.33±7.53 (117)
	X^2=3.868 p=0.424	X^2=5.874 p=0.209	X^2=2.837 p=0.585	X^2=1.433 p=0.838	X^2=2.127 p=0.712

*p<0.05; SD: Standard deviation; M.: Median; U: Mann Whitney U test; X^2: Kruskal Wallis test; GAGPA: General academic grade point average

TABLE 4: Distribution and comparison of Perceived Stress scale and subscale scores according to the descriptive characteristics of nursing students (n=254)

	Perceived Stress Scale						
	Stress caused by lack of professional knowledge and skills X̄±SD (M.)	Stress experienced while caring for the patient X̄±SD (M.)	Stress from homework and workload X̄±SD (M.)	Stress from faculty members and nurses X̄±SD (M.)	Stress caused by the environment X̄±SD (M.)	Stress from peers and daily life X̄±SD (M.)	Total Score X̄±SD (M.)
Age							
18-20 years old	7.13±2.81 (7)	7.13±2.81 (7)	12.44±4.77 (13)	14.69±5.87 (15)	7.8±3.05 (8)	10.12±3.84 (10)	72.19±26.14 (76)
21 years or older	6.76±3.01 (7)	6.76±3.01 (7)	12.07±4.9 (12)	14.39±5.95 (14.5)	7.5±2.9 (7)	9.01±4.26 (8)	69.11±26.25 (67.5)
	U=6103.0 p=0.392	U=6127.0 p=0.420	U=6210.0 p=0.517	U=6315.5 p=0.653	U=5963.5 p=0.262	U=5366.0 p=0.024*	U=5932.0 p=0.240
Gender							
Female	7.29±2.74 (8)	7.29±2.74 (8)	12.76±4.67 (13)	15.25±5.68 (16)	8.11±2.85 (9)	10.26±3.82 (11)	74.33±25.18 (77)
Male	6.38±3.09 (6)	6.38±3.09 (6)	11.31±4.99 (11)	13.03±6.12 (13)	6.77±3.16 (7)	8.7±4.17 (8)	64±27.19 (63.5)
	U=5414.0 p=0.018*	U=5120.5 p=0.004*	U=5426.0 p=0.020*	U=5170.0 p=0.005*	U=5012.5 p=0.002*	U=5182.5 p=0.005*	U=5044.5 p=0.002*
Type of high school graduated							
Anatolian high school	7.1±2.92 (7)	7.1±2.92 (7)	12.44±4.92 (13)	14.85±5.92 (15)	7.78±3.13 (8)	10.04±4.06 (10)	72.47±26.84 (76)
Science high school	7.36±2.21 (7)	7.36±2.21 (7)	12.79±3.79 (13)	15.36±4.82 (15)	8.21±1.93 (8)	9.64±3.18 (9)	73.43±18.89 (69.5)
Technical and health vocational education high school	5.81±3.4 (6)	5.81±3.4 (6)	9.62±5.27 (10)	10.57±6.49 (12)	5.81±3.01 (6)	7.24±4.33 (8)	54.29±28.57 (57)
General high school	7.17±2.43 (7)	7.17±2.43 (7)	13.67±3.29 (13)	15.56±4.8 (16.5)	8.5±2.15 (8.5)	10.61±2.93 (10.5)	76±19.2 (77.5)
	X²=2.993 p=0.393	X²=7.674 p=0.053	X²=7.039 p=0.071	X²=8.814 p=0.032*	X²=9.888 p=0.020*	X²=8.682 p=0.034*	X²=8.820 p=0.032*
How would you rate your satisfaction with the nursing department?							
I am not satisfied	8.18±2.23 (8)	8.18±2.23 (8)	13.73±4.69 (15)	15±6.24 (12)	7.36±3.14 (8)	9.64±6.04 (8)	76.55±26.08 (67)
I can't decide on this yet	7.39±2.8 (7)	7.39±2.8 (7)	12.97±4.52 (13)	15.7±5.97 (17)	8.01±3.06 (8)	10.55±4.1 (11)	75.24±26.13 (76)
I think I'm where I want to be	7.04±2.54 (7)	7.04±2.54 (7)	12.2±4.29 (13)	14.16±4.43 (14)	7.88±2.35 (8)	9.45±2.87 (9)	70.51±20.69 (73)
I am very satisfied	3.89±3.41 (3)	3.89±3.41 (3)	8±6.8 (5)	9.26±8.41 (7)	5.16±4.32 (5)	6.74±5.18 (6)	46.21±37.13 (35)
	X²=17.658 p=0.001*	X²=10.550 p=0.014*	X²=10.977 p=0.012*	X²=14.869 p=0.002*	X²=9.047 p=0.029*	X²=13.253 p=0.004*	X²=11.783 p=0.008*
GAGPA							
2.50 or less	7.31±2.8 (7.5)	7.31±2.8 (7.5)	14.31±4.36 (15)	16.44±5.29 (18)	8.19±2.74 (8)	11.25±3.89 (11.5)	80.13±23.8 (86.5)
2.51-3.0	6.73±3.13 (7)	6.73±3.13 (7)	11.95±5.06 (12)	14.58±6.51 (15)	7.85±3.16 (8)	10.23±3.97 (11)	70.63±28.19 (75)
3.01-3.50	7.18±2.69 (7)	7.18±2.69 (7)	12.47±4.6 (13)	14.38±5.5 (14.5)	7.62±2.92 (8)	9.41±3.94 (9.5)	71.03±24.91 (73)
3.51-4.0	6.9±3.18 (6)	6.9±3.18 (6)	11.38±5.24 (13)	14.76±6.43 (15)	7.48±3.25 (8)	9.71±4.28 (9)	69.1±28.44 (73)
	X²=0.743 p=0.863	X²=3.051 p=0.384	X²=4.425 p=0.219	X²=1.815 p=0.612	X²=0.881 p=0.830	X²=3.681 p=0.298	X²=2.206 p=0.531
The clinic where the practice started							
Internal clinics	7.17±2.84 (7)	7.17±2.84 (7)	12.49±4.79 (13)	14.73±5.8 (15)	7.88±2.82 (8)	10.01±3.8 (10)	72.55±25.89 (75)
Surgery clinics	7.15±2.82 (7)	7.15±2.82 (7)	12.56±4.69 (13)	14.93±5.35 (14)	7.66±3.19 (8)	9.81±4.11 (9)	71.85±25.21 (73)
Emergency clinic	5.67±3.65 (5.5)	5.67±3.65 (5.5)	9.72±5.8 (10)	11.28±8.11 (12)	6.22±3.78 (6)	7.83±5.53 (8.5)	56.56±34.12 (57.5)
Outpatient units	6.8±2.33 (8)	6.8±2.33 (8)	12.6±3.6 (13)	15.4±4.98 (17)	8±2.71 (9)	9.75±3.23 (10)	72.2±20.71 (81)
Intensive care units	7.11±2.93 (7)	7.11±2.93 (7)	12.89±5.23 (14)	15.22±6.57 (14)	7.78±3.42 (9)	10.56±3.75 (10)	75.22±26.01 (67)
	X²=2.840 p=0.585	X²=4.878 p=0.300	X²=4.379 p=0.357	X²=3.699 p=0.448	X²=3.724 p=0.445	X²=2.251 p=0.690	X²=4.171 p=0.383

*p<0.05; SD: Standard deviation; M.: Median; U: Mann Whitney U test; X²: Kruskal Wallis test; GAGPA: General academic grade point average

TABLE 5: Relationships between nursing students' Attitudes Scale Towards Clinical Practices and Perceived Stress Scale and its sub-dimensions (n=254)						
		Beliefs and expectations towards clinical practices	Positive approach towards clinical practices	Negative approach towards clinical practices	Personal development	Total score
Stress caused by lack of	r value	-0.064	-0.061	-0.050	-0.093	-0.064
professional knowledge and skills	p value	0.312	0.333	0.425	0.139	0.312
Stress experienced while	r value	-0.023	-0.023	-0.015	-0.026	-0.015
caring for the patient	p value	0.716	0.711	0.812	0.683	0.814
Stress from homework and workload	r value	-0.010	-0.008	-0.018	0.023	0.007
	p value	0.878	0.898	0.777	0.715	0.909
Stress from faculty members and nurses	r value	-0.020	-0.075	-0.062	-0.004	-0.046
	p value	0.746	0.232	0.329	0.945	0.464
Stress caused by the environment	r value	0.059	0.023	0.033	0.046	0.062
	p value	0.352	0.717	0.600	0.468	0.328
Stress from peers and daily life	r value	-0.036	-0.113	-0.099	-0.059	-0.083
	p value	0.572	0.073	0.117	0.349	0.188
Total Score	r value	-0.020	-0.048	-0.041	-0.019	-0.029
	p value	0.746	0.442	0.511	0.768	0.646

r: Spearman Correlation

dimensions and the Perceived Stress scale and its sub-dimensions is not statistically significant (p>0.05) (Table 5).

DISCUSSION

Nursing education is practical, with clinical practice bridging theory and practice. First-time clinical students face various stressors. This section discusses our findings on students' attitudes toward their initial clinical practice, their perceived stress levels, and the relationship between the two, in light of the literature.

DISCUSSION OF NURSING STUDENTS' ATTITUDES TOWARDS FIRST CLINICAL PRACTICE ACCORDING TO THEIR DESCRIPTIVE CHARACTERISTICS

The findings revealed that nursing students starting their first clinical practice tended to have positive attitudes toward practice, and this was especially evident among students satisfied with the department. Satisfaction in nursing education plays a key role in coping with encountered problems. In a similar study, half of the 2nd, 3rd, and 4th year students reported being satisfied with clinical practice.[5] Factors such as clinical instructors, nurses, administrators, and evalua-

tion processes may influence satisfaction, and students also want to feel safe and cared for.[5,18] In our study, students' positive attitudes may be explained by feeling safe and receiving sufficient attention from the clinical team.

The results also showed that students highly satisfied with the nursing department had more positive beliefs, expectations, and general attitudes toward their first practice. No previous study was found examining this relationship specifically. However, Dursun Ergezen et al. emphasized that students who willingly chose the profession and were very satisfied perceived the clinical learning environment more positively.[5] Similarly, other studies report that satisfied students have higher clinical practice satisfaction[18] and that interest and enthusiasm positively affect adaptation and success.[19] These findings suggest that willing and satisfied students are more committed to the profession and show stronger clinical learning tendencies.

DISCUSSING THE PERCEIVED STRESS LEVELS OF NURSING STUDENTS ACCORDING TO THEIR DESCRIPTIVE CHARACTERISTICS

In line with the findings from our study, it was determined that nursing students experienced moderate

levels of stress regarding their first clinical practice. When the literature is examined, it is seen that there are a limited number of studies addressing the stress levels and affecting factors of nursing students for their first clinical practice in Türkiye.[20-23] These studies show that nursing students have low, medium and high level knowledge about the first clinical practice emphasizes that they experience stress.[20-24] The difference in study results is striking. When the international literature is examined, like our results, in the study of Hamaideh et al., the general stress levels of nursing students in clinical practice were stated to be mild to moderate.[25] It is thought that the difference in the literature may be due to the difference in the countries where the studies were conducted, their methodology, different measurement tools used, nursing programs, and intercultural differences. In addition, inappropriate working and clinical conditions, instructor-related problems, and the high number of students per faculty member increase the perceived stress in the clinic.[24]

In our study, it was determined that students experienced moderate levels of stress due to the environment in clinical practice. Students' study environments are related to their behavior. Positive clinical work environments for nurses and students support learning and provide room for development.[26] In our study, the difference in the relationship between the units where students practiced and their perceived stress level was found to be insignificant, as well as the moderate level of stress caused by the environment, which may be because it was the students' first clinical practice, and individual factors. Considering that professional commitment and participation in clinical learning are increased by improving the clinical learning environment, it is thought that stress caused by the clinical environment will also decrease.[27]

Admi et al. stated that the most important determinant of undergraduate nursing students' stress in clinical practice is gender, and female students experience more stress than males.[18] In our study, female students' perceived stress sub-dimensions and general stress scores for their first clinical practice were high. Karaca et al., study results similarly indicate that female nursing students experience more stress than males.[24] The fact that female university students have more responsibilities than men may have caused female nursing students to experience more stress regarding their first clinical practice and to be less inclined to exhibit appropriate coping behavior.

According to our study findings, students between the ages of 18-20 experienced more stress in their first clinical practice due to their peers and daily life than those between the ages of 21 and over. There is no study in the literature comparing the ages of nursing students and their perceived stress levels in the first clinical practice, and studies mostly focus on the stress levels experienced by nursing students in different classes.[28] Gurková and Zeleníková stated in their study that individual stress sources vary depending on the working year.[29] Mazalová et al., study also supports this.[28] Dursun Ergezen et al., also report that as the grade level of nursing students increases, the perception of clinical experience decreases.[5] In addition, considering that the physio-psychosocial status of students and the individual year of study may affect clinical perception, it can be said that the stress level of the students in our study tends to decrease with increasing age.[28]

In our study, it was determined that students who graduated from technical and health vocational high schools had less stress due to instructors and nurses, the environment, and their peers. A limited number of studies have been found in the literature comparing the perceived stress levels of nursing students in the education program they graduated and their first clinical practice.[23] In a similar study conducted differently from our study results, it is stated that the first clinical practice stress of students graduating from other high schools, such as technical and religious high schools, is higher.[23] It is reported that past clinical experiences affect perceptions of the clinical environment.[5,23] According to the literature results, it is thought that the lower stress perception of students who graduated from health vocational high school can be explained, considering their previous experience in clinical practice. Details of the differences arising from students' different high school education may be the subject of future studies.

In our study, students who expressed high satisfaction with the nursing department reported lower perceived stress levels during their first clinical practice. Similarly, another study found that 2nd-year nursing students beginning clinical practice for the first time experienced lower stress levels when satisfied with their program.[18] Bilgic and Celikkalp noted no difference in stress scores among students who voluntarily chose nursing for their first clinical practice.[23] Additionally, some studies indicate no relationship between stress levels experienced due to nursing education and the voluntary choice of the profession.[11] Our findings suggest that the low stress levels among students who choose the nursing department willingly may stem from their positive evaluations of clinical learning and overall satisfaction with the profession.[5]

DISCUSSING THE RELATIONSHIP BETWEEN NURSING STUDENTS' ATTITUDES TOWARDS FIRST CLINICAL PRACTICE AND PERCEIVED STRESS LEVELS

According to our results, no correlation was found between nursing students' attitudes toward first clinical practice and perceived stress levels, and no study directly examining this relationship was identified. Although correlational studies have investigated the links between clinical practice satisfaction, clinical performance, clinical learning environment, and stress levels, some also addressed the relationship between attitudes toward practice and stress.[18,30,31] Admi et al. reported a negative relationship between satisfaction with clinical experiences and stress,[18] Ye et al. found a negative relationship between clinical performance and perceived stress,[30] and Mazalová et al. stated that students with low academic stress expressed satisfaction with all aspects of clinical practice.[28] Conversely, Jagoda and Rathnayake indicated that students with moderate to high stress had positive perceptions of the clinical environment.[31] These differences may be related to individual and cultural characteristics, curricula, and coping strategies, and should be further examined in future studies.

LIMITATIONS

The psychosocial states of the students participating in our study after clinical practice may have affected their responses to the measurement tools. The study was conducted in a province in our country, and the generalizability of the study is limited to cities and countries with different nursing education methods.

CONCLUSION

In our study, nursing students developed positive attitudes toward their first clinical practice, experienced moderate stress levels, and no relationship was found between these variables. Gender, high school graduation, and satisfaction with the nursing department affected perceived stress, while satisfaction with the department influenced clinical attitude. These findings may help identify students' needs before, during, and after their first practice, and providing a supportive clinical environment for instructors may assist students in developing appropriate coping strategies.

Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Necibe Dağcan Şahin, Burcu Nal, Selmin Şenol;* ***Design:*** *Necibe Dağcan Şahin, Burcu Nal, Selmin Şenol;* ***Control/Supervision:*** *Selmin Şenol;* ***Data Collection and/or Processing:*** *Necibe Dağcan Şahin, Burcu Nal;* ***Analysis and/or Interpretation:*** *Necibe Dağcan Şahin, Burcu Nal, Selmin Şenol;* ***Literature Review:*** *Necibe Dağcan Şahin, Burcu Nal, Selmin Şenol;* ***Writing the Article:*** *Necibe Dağcan Şahin, Burcu Nal, Selmin Şenol;* ***Critical Review:*** *Necibe Dağcan Şahin, Selmin Şenol.*

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