




# The Effect of the Orientation Program Performed for First Year Nursing and Midwifery Students on Their Clinical Stress

## Birinci Sınıf Hemşirelik ve Ebelik Öğrencilerine Yapılan Oryantasyon Programının Klinik Stres Üzerine Etkisi

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### ABSTRACT

**Objective:** This study was conducted to determine the effect of an orientation program performed for first year nursing and midwifery students on their clinical stress and to identify their experiences.

**Methods:** The mixed method was used in this study, quasi-experimental and phenomenological type. The population of the study consisted of first-year students (n=117) in the nursing and midwifery department of a university in the 2018-2019 Spring Semester, and the sample consisted of first year students in the nursing and midwifery departments who agreed to participate in the research (n=94). The data were collected using student information form, Clinical Stress Questionnaire and a semi-structured form in which students could write their experiences.

**Results:** It was determined that there was a significant difference between the sociodemographic and academic characteristics of the students and their clinical stress levels, the stress level was highest on the last day of clinical practice (28.39±6.97), and the difference was significant (p<.05). After the orientation program, the Threat subscale of clinical stress had the lowest (4.97±3.47), clinical stress total (28.39±6.97), Challenge (14.86±4.60), Loss (2.65±2.14), and Benefit (4.78±1.84) subscales of clinical stress. It was observed that it was the highest on the last day of the application and the difference between the groups was significant (p<.05). The students stated that "they got tired and excited" on the first day of the clinical practice and "they gained experience, their fear toward the profession decreased, and they controlled their excitement" on the last day.

**Conclusion:** It was determined that the department (satisfaction, willingly choosing) and graduated high school affected the clinical stress level of the students and the orientation program only reduced the threat sub-dimension of the clinical stress score.

**Keywords:** Educational, midwifery, first year nursing students, clinical stress, orientation program

### ÖZ

**Amaç:** Bu çalışma, birinci sınıf hemşirelik ve ebelik öğrencilerine uygulanan oryantasyon programının klinik stres üzerine etkisini ve öğrencilerin deneyimlerini belirlemek amacıyla yapılmıştır.

**Yöntem:** Yarı deneysel ve fenomenolojik türdeki bu çalışmada karma yöntem kullanılmıştır. Çalışmanın evrenini 2018-2019 Bahar Yarıyılında bir üniversitenin hemşirelik ve ebelik bölümündeki birinci sınıf öğrencileri (n=117), örneklemini ise araştırmaya katılmayı kabul eden hemşirelik ve ebelik bölümlerindeki birinci sınıf öğrencileri oluşturmuştur (n=94). Veriler, öğrenci bilgi formu, Klinik Stres Anketi ve öğrencilerin deneyimlerini yazabilecekleri yarı yapılandırılmış form ile toplanmıştır.

**Bulgular:** Öğrencilerin sosyodemografik ve akademik özellikleri ile klinik stres düzeyleri arasında anlamlı farklılık olduğu, klinik uygulamanın son gününde stres düzeyinin en yüksek olduğu (28.39±6.97) ve aradaki farkın anlamlı olduğu belirlenmiştir (p<.05). Oryantasyon programı sonrasında, klinik stresin Tehdit alt ölçeğinin en düşük (4.97±3.47), klinik stres toplam (28.39±6.97), Zorluk (14.86±4.60), Kayıp (2.65±2.14) ve Fayda (4.78±1.84) alt ölçeklerinin ise klinik uygulamanın son gününde en yüksek olduğu ve gruplar arası farkın anlamlı olduğu görülmüştür (p<.05). Öğrenciler, klinik uygulamanın ilk gününde "yorulduklarını ve heyecanlandıklarını", son gün ise "deneyim kazandıklarını, mesleğe karşı korkularının azaldığını ve heyecanlarını kontrol ettiklerini" belirtmişlerdir.

**Sonuç:** Bölüm (memnuniyet, isteyerek seçme) ve mezun olunan lisenin öğrencilerin klinik stres düzeyini etkilediği ve oryantasyon programının sadece klinik stres puanının tehdit alt boyutunda azalma sağladığı belirlenmiştir.

**Anahtar Kelimeler:** Eğitim, ebelik, hemşirelik birinci sınıf öğrencileri, klinik stres, oryantasyon programı

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## Introduction

Nursing and midwifery undergraduate education is composed of two basic components (theoretical and clinical) and the faculties offer theoretical and clinical education simultaneously (Aydn Kartal and Yazici, 2017; Mankan et al., 2016). Clinical education is the acquisition of clinical skills, the integration of theoretical subjects into the clinic, the development of problem solving and critical thinking skills as well as professional skills, and the delivery of formal and informal professional principles to students through the socialization process (Nejad et al., 2019). In clinical education, it is aimed to train specialist nurses/midwives who care about patient-centered care and self-management, make a difference with their professional competence, and have high self-perception and self-confidence (Levett-Jones et al., 2015). An effective clinical education sets ground for successful clinical practices (Oktay et al., 2017). The clinical practices are highly correlated with academic achievement. Especially, the clinical practices during which the students are eager to learn how to apply the theoretical knowledge during the practicum is important particularly in the professional development (Nejad et al., 2019). However, clinical practices, which have an important place in learning, can cause students to experience stress and anxiety due to the lack of clinical experience, foreign areas, difficult patients, fear of making mistakes and being evaluated by instructors. Stress and anxiety experienced can negatively affect academic achievement (Baysan Arabacı et al., 2015). The clinical environment is reported as the main extrinsic predictor of stress for students (Wolf et al., 2015). In an integrative review, it was reported that the main sources of stress for nursing and midwifery students are clinical, academic and financial issues, but mostly stemmed from the clinical environment (McCarthy et al., 2018). In the literature have reported that the clinical experience leads students to experience a lot of stress (Aydn Kartal and Yazici, 2017; Rafati et al., 2017). This stress, in turn, may lead students to suffer from emotional and psychological fatigue as well as the impaired quality of education and clinical performance (Joolae et al., 2015). However, mindfulness in coping with stress has shown some promising positive results. Especially nursing and midwifery educators should be aware of this effect and provide students with appropriate support in both clinical and academic settings. Programs should be organized to develop relationships

between clinical nurses, educators and students, and new learning strategies should be included in the curriculum (McCarthy et al., 2018; Wolf et al., 2015).

There are studies which have examined mentorship, orientation education, biofeedback and awareness mediation to decrease the stress levels of students before their clinical practices (McCarthy et al., 2018; Ratanasiripong et al., 2015; Yılmaz Esencan et al., 2018) and the number of the studies examining the effect of an orientation program, performed for the first-year nursing and midwifery students, on the clinical stress experience is quite limited. This study would guide the orientation programs to be performed in the following years by determining the first clinical stress levels of the first-year nursing and midwifery students of the Health Sciences Faculty of a university and the effect of the orientation program on the clinical stress levels. This study was conducted to determine the effect of an orientation program performed for first year nursing and midwifery students on their clinical stress and to identify their experiences.

## Material and Method

The mixed method was used in this study with three follow-ups, quasi-experimental and phenomenological type. Phenomenological research are an easy-to-apply method that is widely used in health sciences to make sense of the experience about the phenomena that we are aware of but do not have a detailed and deep understanding of. They are research that reveal a theoretical explanation of process and action beyond description by emphasizing the common experiences of a group of individuals and creating theory (Tekindal and Uğuz Arsu, 2020).

### *Population and Sample of the Study*

The population of this study conducted in the Health Sciences Faculty of a university was composed of a total of 117 first-year students (72 nursing and 45 midwifery students), who continued their education in 2018-2019 Academic Year and would experience their first clinical practice. The study was completed with a total of 94 students (34 Midwifery students, 60 Nursing students) who the first-year students, before and agreed to participate in the study. The students who did not complete the follow-up tests were excluded from the study. The population %80.34 has been reached and the research has been completed.

*First year students*, in the first semester, anatomy, physiology, biochemistry, microbiology,

etc. takes basic lessons. In the second semester, they take the professional principles course in which their applications are explained and they take the hospital practice as well as theoretical and laboratory applications. Students' first clinical experience begins in the first year.

*In the second year*, they take the internal medicine and surgery course and apply to clinics related to the field.

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All the Students Meeting the Inclusion Criteria

Sample Group (n:94)

The first day of the clinical practice, in the morning (08:00) Pretest Application for the Sample Group (first follow-up)

Orientation Training on the first day of the clinical practice

The second follow-up application after the first day of the clinical practice (16:00)

The qualitative questions applied to determine the views of the students about their first clinical experiences

The third follow-up application on the last day of 56-hour clinical practice (16:00)

The qualitative questions on the views of the students

Assessment of the Questionnaires

Assessment of the Qualitative Findings

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**Figure 1:** Application Steps of the Study

### **Data Collection Tools**

The data were collected by using Student Information Form, Clinical Stress Questionnaire (CSQ), and Semi-Structured Interview Form and conducting the face-to-face interviews with the students. The Clinical Stress Questionnaire was applied for the nursing and midwifery students three times. For the first time, the Student Information Form and Clinical Stress Questionnaire were applied in the morning on the first day of the clinical practice. They were applied at the end of the first clinical practice day for the second time and on the last day of the 56-hour clinical practice for the third time. The Semi-Structured Interview Form was applied on the first day of the clinical practice for the first time and on the last day of the clinical practice for the second time. Data collection was carried out in the meeting room of the hospital.

### **Student Information Form**

The form contains a total of 13 questions including 7 questions about socio-demographic characteristics of the participants (age, gender etc.) and 6 questions about views of the students on their departments and their views on nursing and midwifery profession.

### **Clinical Stress Questionnaire**

Clinical Stress Questionnaire (CSQ) was developed by Pagana in (1989) to determine the initial value of the stress which threatens students or requires their struggling during their first clinical practice experience. Turkish validity and reliability was done by Şendir and Acaroğlu (2015). This is a five-point Likert scale with 4 subscales (threat, challenge, loss, and benefit) and 20 items. While low score signifies low stress level, high score signifies high stress level. The scale can be applied in 5-6 minutes. Cronbach's alpha value is .700 in Şendir and Acaroğlu's (2015) study. The Cronbach's Alpha value of the questionnaire was determined to be .813 in this study.

### **Semi-Structured Interview Form**

The semi-structured questionnaire was prepared in line with the literature and consists of four questions (Aydın Kartal and Yazıcı, 2017; Mankan et al., 2016; McCarthy et al., 2018; Oktay et al., 2017). The interview form was prepared to assess "the experiences of the students on the first day of the clinical practice", "the experiences of the students on the last day of the clinical practice", "the factors increasing the adaptation in clinical practice", and "the factors decreasing the adaptation in clinical practice". The recording of the qualitative data was carried out in the form of writing answers to the questions in the semi-structured form.

The answers written in the semi-structured form were transferred to the computer by one researcher, the data transferred by both researchers were checked and the data were categorized.

### **Procedure/Application**

The orientation training on the first day was carried out with the training nurse of the hospital in the training hall of the hospital for a period of 60 minutes. During the subsequent 56-hour clinical practice, the students were constantly supported by a total of six instructors, four in nursing (teaching staff characteristics; two PhD, two PhD students), and two instructors in midwifery (teaching staff characteristics; one PhD, one PhD students). All questions that came to the students' minds were answered by the instructors and clinical nurses. And all interventional and non-interventional practices

were carried out in the company of lecturers and clinical nurses.

Before the Orientation Program; the student information form including questions about the socio-demographic characteristics of the students and their mood, readiness and expectations about the clinical practice as well as Clinical Stress Questionnaire were applied.

Content of Orientation Program; an orientation training was organized introducing the application, the hospital where the clinical practice would be performed, the personnel responsible for the nursing services of the hospital, the working hours and service protocols of the clinics in the hospital, and the clinic where students would practice, as well as

showing the changing sections and dining hall to the students and mentioning the problems experienced in the clinic, the cases experienced in the clinic, nosocomial infections, isolation methods, and waste management.

After Orientation Program; The researchers repeated Clinical Stress Questionnaire for the students by at the end of the first clinical practice and upon completion of the clinical practice. Also, they interviewed with the students so that they expressed their views and feelings and then qualitative data were obtained.

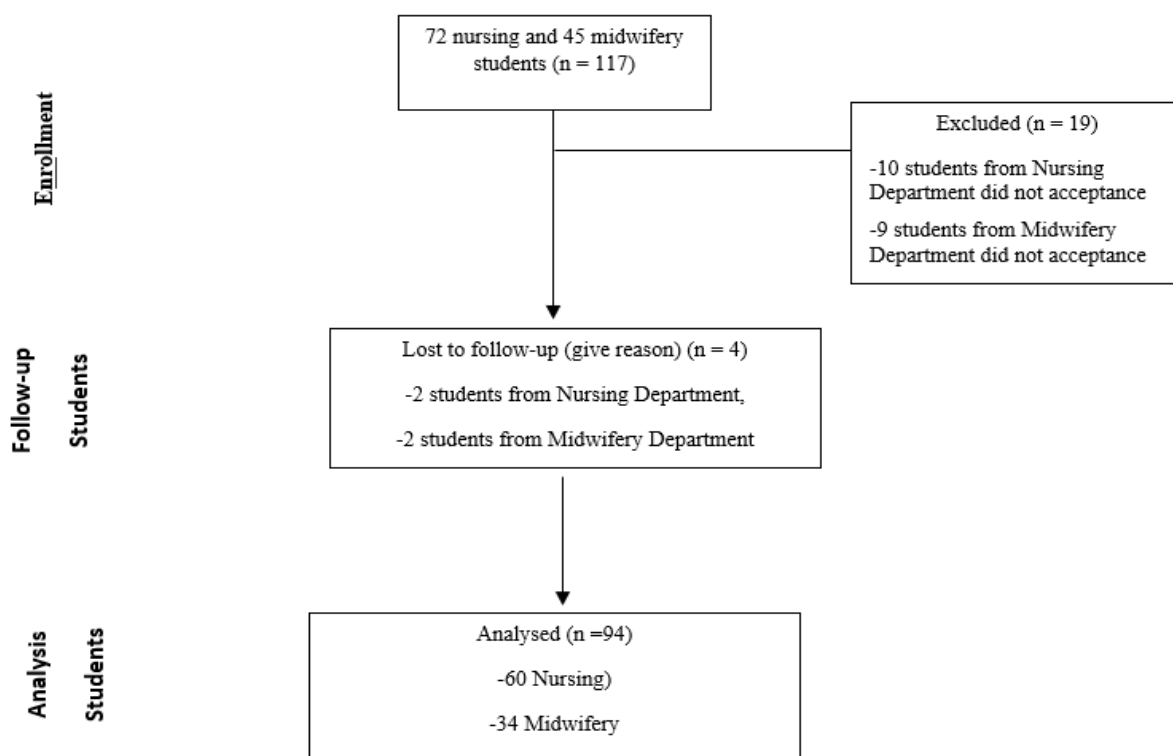


Figure 2. Study flow chart

**Statistical Analysis**

The data were assessed using IBM SPSS Statistics 22.0 (IBM Corp., Armonk, NY) statistical packaged software. Descriptive statistics were applied to assess the data. Frequency analysis was performed in description of the variables and mean values were calculated in order to assess the results of three follow-ups. When examining the differences between the groups, it was found that the

variables were normally distributed. Since there is more than one dependent variable, Type I to reduce the error rate and to analyze repeated measurement designs, the multivariate analysis of variance MANOVA technique was used. The relationship between MANOVA and dependent variables is taken into account. Mauchly sphericity test measurement value has been checked. When the sphericity assumption is provided, the univariate

approach is used. On the other hand, multivariate approach was used in those where the assumption of sphericity was not met. In the study, the value of  $p < .05$  was accepted as significant.

The qualitative data on the experiences and views of the students related to the first and last days of the clinical practice were analysed using descriptive analysis method. During assessment of the qualitative data, the feelings of the students on the clinical practice were tried to be understood. While analyzing the expressions of the students, groupings were made according to the similarity of the expressions given, and the statements were analyzed in accordance with 4 main headings. A code name (name-surname initials) was given to each student interviewed, and the most striking statements obtained after the interviews with the students were included.

## Results

### Quantitative Results

Information about the sociodemographic and academic characteristics of the students is given in Table 1. When CSQ total scores of the students were compared for the three follow-ups, it was determined that there was a significant difference between their scores, and the difference was caused by the third follow-up (Table 2). Their stress level increased on the last day of the clinical practice. When their total scores for Threat, Challenge, Loss, and Benefit subscales of CSQ were compared for the three follow-ups, a significant difference was determined between the scores. The Threat subscale score was significantly lower in second follow-up compared to the first and third follow-ups. The Challenge and Loss subscale scores were significantly higher in third follow-up compared to the first and second follow-ups. The Benefit subscale score was higher in second follow-up than the first follow-up and the score was higher in third follow-up than the first and second follow-ups. There is a significant difference between third follow-up and second follow-up. CSQ and Challenge subscale mean scores in the third follow-up are significantly higher than the second follow-up. The difference in Threat, Loss and Benefit subscales is due to the second and third monitoring. Second follow-up threat subscale mean score is significantly lower than the first follow-up, second follow-up loss and benefit subscales mean scores are significantly higher than the first follow-up. Third follow-up score averages are significantly higher than the second follow-up (Table 2).

The differences between students' academic information such as department, department satisfaction and willingness to choose the department, high school graduation status and CSQ average score are shown in Table 3.

**Table 1.** Socio-demographic and academic characteristics

Characteristics		$\bar{X} \pm SD$	Min Max
Age		19.65±1.98	18- 29
		n	%
Gender	Female	80	85.1
	Male	14	14.9
Department	Nursing	60	63.8
	Midwifery	34	36.2
Graduation	High School and Anatolian /Science	70	74.5
	High School Vocational School of Health	24	25.5
Request a department	Yes	74	78.7
	No	20	21.3
Reason for Section Preference	Having a job	23	24.5
	Love to help people	16	17.0
	Having health care profession	11	11.7
	Ease of finding a job	15	16.0
	Family wish	5	5.3
	Feeling close to the job	17	18.1
	Multiple options	7	7.4
Satisfaction	Partially satisfied	41	43.6
From Section	Satisfied	53	56.4
Request to work as a nurse / midwife after graduation	Yes	88	93.6
	No	6	6.4

### Qualitative Results

In the qualitative stage of the study, the answers of the students for the themes prepared after the in-depth interview performed with 94 students are presented below. The data obtained as a result of the interviews performed on the experiences and views of the students about the clinical practice were discussed in "the experiences of the students on the first day of the clinical practice", "the experiences of the students on the last day of the clinical practice", "the factors increasing the adaptation in the clinical practice", and "the factors decreasing the adaptation in clinical practice" themes.

**Table 2.** Comparison of total CSQ scale and subscale scores obtained from three follow-up

Scale and Subscale		$\bar{x} \pm SD$	Min-Max
CSQ	1. follow-up	23.30±9.21	9-55
	2. follow-up	24.54±7.64	8-41
	3. follow-up	28.39±6.97	12-46
			F=18.880 <i>p</i> <.001 Tests of within-subjects contrasts: (2-3)
Threat	1. follow-up	5.88±3.88	0-19
	2. follow-up	4.97±3.47	0-17
	3. follow-up	6.08±3.79	0-16
			F=5.390 <i>p</i> =.006 Tests of within-subjects contrasts: (1-2), (2-3)
Challenge	1. follow-up	12.94±5.29	4-24
	2. follow-up	13.56±5.17	3-24
	3. follow-up	14.86±4.60	2-24
			F=8.960 <i>p</i> <.001 Tests of within-subjects contrasts: (2-3)
Loss	1. follow-up	1.19±2.34	0-13
	2. follow-up	1.67±2.03	0-12
	3. follow-up	2.65±2.14	0-11
			F=17.026 <i>p</i> <.001 Tests of within-subjects contrasts: (1-2), (2-3)
Benefit	1. follow-up	3.28±1.95	0-8
	2. follow-up	4.32±2.00	0-8
	3. follow-up	4.78±1.84	0-8
			F=29.444 <i>p</i> <.001 Tests of within-subjects contrasts: (1-2), (2-3)

*F value*; A multivariate *F* value based on a comparison of the error variance/covariance matrix and the effect variance/covariance matrix

**Table 3.** Comparison of academic characteristics and CSQ scale scores obtained from three follow-up

Characteristics		CSQ			Test value <i>p</i>
		1. follow-up	2. follow-up	3. follow-up	
Department	Nursing	20.18±8.19	22.10±7.41	26.71±7.45	F=15.814 <i>p</i> <.001
	Midwifery	28.82±8.37	28.85±6.05	31.35±4.82	F=3.595 <i>p</i> =.033
Satisfaction From Section	Partially satisfied	20.09±8.87	22.56±8.55	27.73±7.38	F=21.348 <i>p</i> <.001
	Satisfied	25.79±8.76	26.07±6.54	28.90±6.65	F=6.135 <i>p</i> =.003
Willingly Choosing the Department	Yes	24.10±8.68	24.60±7.15	28.93±7.08	F=14.862 <i>p</i> <.001
	No	20.35±10.66	24.30±9.47	26.40±6.29	F=5.793 <i>p</i> =.006
Graduation	Normal High School and Anatolian/Science High School	24.11±9.81	25.35±7.26	28.58±6.95	F=12.015 <i>p</i> <.001
	Vocational School of Health	20.95±6.83	22.16±8.39	27.83±7.14	F=14.206 <i>p</i> <.001

*F value*; A multivariate *F* value based on a comparison of the error variance/covariance matrix and the effect variance/covariance matrix

**Theme I.** "The experiences of the students on the first day of the clinical practice"

The students used following statements while expressing the feeling they felt about the first day of the clinical practice such as "it was tiring, I felt sorry for the patients, my self-confidence increased, I was afraid of performing practice, I got excited, it was good to help people, and I felt myself as a nurse/midwife".

- "It was tiring, I felt sorry as I did some malpractices. I felt bad for the critically ill patients. I wish I had done more practices. Anyway, it was good when considering it was the first day. I liked internship. It was good to know the patients" (Mrs. E.K).

- "Today, it was very nice for me. I felt excited and afraid at the first hours. Then, this excitement and fear gave its place to happiness. Although it was tiring on the first day, it was completely forgotten when I saw the smile in the faces of the patients. I felt myself like a real nurse today" (Mr. İ.K).

- "I experienced all the feelings together. I was afraid, got excited and was affected. I felt very good as I helped somebody. The hopeful glances of those elderly people made me think that I luckily chose this profession" (Mrs. G.A).

- "Since I performed the practices, which I performed on models until today, on people, I like my profession more. I felt happy for helping people. I was born to be a nurse" (Mr. E.E).

- "We do not experience much anxiety or fear as we perform the practices using models at school. A bit afraid as sometimes people may get harmed when we perform the practices on them in the hospital. It is a step toward the profession... (Mrs. S.B).

**Theme II.** "The experiences of the students on the last day of the clinical practice"

It was observed that the students expressed their feelings about the last day of the clinical practice through following statements; "I gained experience, I got rid of my prejudices, I liked my profession more, my fears about the profession decreased, I controlled my excitement, my self-confidence increased, I felt happy, and it was good to help the patients".

- "When I first came for internship, I did not know what I would encounter with and what to do" (Mrs. T.Y).

- "My prejudices related to hospital decreased during my internship, my fear disappeared. The fact that the people looked at us hopefully and I helped them made me like the profession" (Mrs. G.A).

- "I was very anxious when I started my internship and my self-confidence was lack. As I continued my internship and I performed the practices, my self-confidence increased. I felt very satisfied with helping other people" (Mrs. D.İ).

- "As I improved myself day by day, my internship days were exciting and nice" (Mrs. M.Ç)

- "I was very excited at first but as long as I participated in the practices and provided care to patients, my excitement gave place to adaptation period. I liked the practices more as long as I participated in them" (Mrs. T.B).

**Theme III.** "Factors increasing the adaption in clinical practice"

When the students were asked about the factors increasing adaptation in clinical practice, they expressed following statements; "supporting the instructors responsible from the clinic, friend support, support of the clinic nurses, and the positive feedback of patients".

- "My instructors helped me very much to get relaxed, not to feel anxious and be sociable" (Mrs. A.K).

- "Getting along with the nurses and talking about the information about the patients. When our instructors informed us about the diseases and asked us questions..." (Mrs. B.T).

- "When the nurses behaved us warmly, they behaved us in an informative manner, and the patients' relatives relied on us" (Mrs. S.U).

- "When the nurses and instructors relied on me during the practices and supported me in performing the practice, this increased my interest toward the profession and my self-confidence" (Mr. E.E).

- "The friends supporting each other. The nurses supporting you and showing you what to do even if you do not know what to do. Enough knowledge makes you self-confident" (Mrs. S.B).

**Theme IV.** "Factors decreasing the adaption in clinical practice"

When the students were asked about the factors decreasing the adaptation in clinical practice, they stated "the negative attitudes of the clinic nurses and patients, feeling incompetent, clinics with a great number of patients".

- "The nurses who thought that I did not know the practices since I am a first-year student decreased my adaptation a bit" (Mrs. E.K).

- "When I did not know some information, this made me disappointed, demoralized me, and decreased my adaptation" (Mrs. A.K).

- "When some patients do not want us to perform practice as we are students" (Mrs. B.T).

- "When nurses sometimes behave unconcerned and rude" (Mrs. Ş.A).

- "Negative behaviours of the nurses and excessive workload" (Mrs. Y.K).

\*As the students performed their first clinical practices in the general clinics, they passed the time mostly with the nurses among the healthcare professionals. For this reason, they mentioned about nurses in their expressions.

### Discussion

Before the clinical practice, the students may have excitement, fear and anxiety about the practice area and they may also be afraid of having a negative experience during the practice (Baysan Arabacı et al., 2015). The students suffering from anxiety and stress may encounter with reduction in social relations and coping with the problems. Also, it is thought that stress affects skill development and clinic performance of students. For this reason, it is important to determine the anxiety and stress levels of the students and the influencing factors in every stage of the clinical learning experiences (Aydın Kartal and Yazıcı, 2017).

In the previous studies, it was determined that the students who experienced their first clinical practice had moderate and high level of stress (Atay and Yılmaz, 2011; Baysan Arabacı et al., 2015; Bektas et al., 2018; Taşdelen and Zaybak, 2013). In the study, the students experienced the highest stress mean in the Challenge subscale and the lowest stress mean in the Loss subscale in all three follow-ups during clinical practice. The same findings were obtained in the previous studies (Aydın Kartal and Yazıcı, 2017; Mankan et al., 2016). In other studies, it was stated that the students had the highest stress mean in the Challenge subscale and the lowest stress mean in the Benefit subscale (Bektas et al., 2018; Taşdelen and Zaybak, 2013). In their study, Atay and Yılmaz (2011) determined that the students experienced a high level of clinical stress in the Threat and Loss subscales. Different study results may be associated with the curriculum changes in the schools where the studies were conducted, difference in orientation program content, internship duration, follow-ups the number of instructors and different hospitals where the practices were performed.

Students on the first day of clinical practice; They dared to participate in practice, they feel fear and anxiety, as time goes by and they are more

comfortable to express application to attend an increase of courage joined by application supports quantitative data and literature studies. There is information in the literature stating that the students have anxiety, stress and fear about the practice before the clinical experience, they do not consider themselves as a part of the team, it will be useful to introduce the students to the team members on the first day to make them feel relaxed and feel themselves as a part of the team, and reducing the anxiety of the students in the clinical environment is important to increase education of the students and keep them within the nursing education (Baysan Arabacı et al., 2015).

As a result of the study, it was determined that there was a significant decrease in the Threat subscale of CSQ at the end of the first day of the orientation training. The fact that the students stated that they felt more comfortable at the end of the day compared to the morning of the first day of clinical practice supports the quantitative results. According to these results, it will be useful to inform the students about the clinic and organize orientation programs in the clinic to reduce the anxiety of the students before entering in the clinical environment (Baysan Arabacı et al., 2015; Yılmaz Esencan et al., 2018).

It was determined that the students who had first clinical practice experience had more stress and anxiety levels when they first come to the clinical environment compared to the time they left the clinical environment (Aydın Kartal and Yazıcı, 2017; Baysan Arabacı et al., 2015; Sü et al., 2018). In other studies, it was determined that the students had moderate (Taşdelen and Zaybak, 2013) and high levels of stress on the first day of the clinical practice (Atay and Yılmaz, 2011; Baysan Arabacı et al., 2015). In the study of Atay and Yılmaz (2011) it has been reported that promoting the hospital, providing information about the clinic's patient profile and the interventions made in the clinic, and teaching material locations reduce the clinical stress levels of the students. In their study, Bektaş et al. (2018) determined that CSQ total score were higher at the end of the clinical practice compared to those obtained before the clinic practice. In another study, it was reported that the level of stress experienced by nursing students during the first clinical practice was below the average and that the publicity of the hospital did not have any effect on this stress (Oktay et al., 2017). Although clinical stress is observed to increase gradually in the quantitative results of these studies, in the qualitative results, students; The



sentences expressing that their prejudices and stress levels about the hospital decreased, their fears disappeared, they came to the hospital more willingly and their self-confidence increased with the experience they gained supports the literature. The academic stressors reported by students were mainly associated with the academic environment, examinations and assignments (Zhao et al., 2015). It was considered that the stress levels of the students increased again a few days after the clinical practice since it was the final exam week and this situation reflected on the quantitative assessment. Also, the students had more knowledge about the clinic day by day and this may have increased this stress level. In their clinical experiences, it may be believed that the students had more stress due to their fear to lose their control as they faced many environmental stimuli about which they considered threatening /dangerous. The stress of the students in the first periods of the clinical practice may be associated with lack of caregiving experiences as well as the lack of professional knowledge and skills.

Caring for patients/clients is one of the main sources of stress for students in clinical practice (Chen and Hung, 2014; Zhao et al., 2015). Mankan et al. (2016) stated in their study that the students suffered from stress mostly due to patients. Taşdelen and Zeybek (2013) stated in their study that they had stress mostly due to nurses. Wolf et al. (2015) has been reported that students have difficulties in relationships with nurses and educators in the clinic. McCarthy et al. (2018) reported that nursing and midwifery students experience stress in the clinic, the importance of educators to recognize this stress and to provide students with appropriate support in both clinical and academic settings. In the qualitative results of this study, the students stated that their instructors, friends, patients and nurses were among the factors decreasing and increasing the adaptation in the clinical practice.

Also, in another study, the students stated that nurses were the first clinical stressor followed by the responsible instructors, physicians and patients (Taşdelen and Zeybek, 2013). Therefore, it is believed that clinical instructors and nurses would be aware that the students are affected by them and would contribute to the professional identity development and to the arrangement of the application environment for students (Polat et al., 2018). Also, it is important that the physicians, midwives and nurses working in the clinics, where the practices are performed, are professionally competent and positive role model in order to reach

the practice targets (Polat et al., 2018). In addition, the nurses working in clinics have major responsibilities due to the student density in the practice areas or the lack of the practice areas and instructors especially during the nursing undergraduate education (Çiğerci et al., 2016). Aydın Kartal and Yazici (2017) stated in their study that the fear of hurting patients had the highest rate among the stress factors stated by the students in clinical practice, which was followed by the attitudes of hospital staff and nurses and the fear of making a mistake in hospital procedures, respectively. Also, in this study, a continuous and significant increase was determined in the Loss subscale of CSQ. The results were supported by the fact that the students expressed that they were afraid and worried about confusing the patients' treatments and making wrong practices.

The nursing students must perform the procedures that may severely hurt patients and this increases their fear of making a mistake (Atay and Yılmaz, 2011). Aydın Kartal and Yazici (2017) reported in their study that when the students were asked what they felt during their clinical experience, 35.7% of them stated they had anxiety and 18.6% were afraid.

In the qualitative data of this study, students reported that they experience many emotions such as anxiety, fear, and excitement together. The results are similar to previous studies. It is thought that this result is due to the fact that students are faced with many unknowns at the beginning of clinical practice. Within this context, it is recommended to evaluate closely the students before the first-year students clinical experience and assess the students, who are afraid, anxious and excited, as the risky group and support them. It is also very important to raise awareness on the thoughts underlying these feelings (Aydın Kartal Yazici and Yazici, 2017).

When the students were examined in terms of their departments, it was determined that the scores of CSQ were significantly different for the three follow-up results. The midwifery students had more stress compared to the nursing students. Chen and Hung (2014) study is similar to our study results, and it was stated that midwifery students experience more stress than nursing students. Also, Atay and Yılmaz (2011) stated in their study that midwifery students had more stress than nursing students was a significant difference between the departments in terms of CSQ score. This difference may be associated with the fact that all of the midwifery students were female. Bektaş et al. (2018) reported

that the clinical stress levels of the female students were higher compared to the male students.

The clinical stress scores of the students graduated from Vocational School of Health were found to be lower in all follow-ups.

CSQ first and second follow-up scores of the students who were Vocational School of Health graduates were significantly lower compared to the other students. Also, in their study, Aydın Kartal and Yazici (2017) found that the stress levels of the students graduated from Vocational School of Health were lower. Ergin et al. (2018) reports that improving students' clinical skills will increase their self-confidence and thus decrease the level of stress. It has been stated that clinical skills can be improved by increasing the number of applications in clinical and laboratory settings. Students who graduated from the health vocational high school have more information about the clinic and the laboratory compared to the students who graduated from other high schools. Students who graduated from the health vocational high school and studied nursing and midwifery at the undergraduate level can learn the correct clinical practices that combine the theoretical knowledge and practice that the undergraduate education adds to the course, clinical and laboratory knowledge that they are familiar with from high school education more easily than their other friends. For this reason, it can be said that they may experience less stress when they go to the clinic.

The CSQ scores of the students who chose their department willingly were higher compared to the students who preferred their departments unwillingly. It had similar results with the study by Bektaş et al. (2018).

### Conclusion and Recommendations

The stress level of the students increased further on the last day of the clinical practice. The students stated that "they got tired, their self-confidence increased and they got excited" on the first day of the practice and "they gained experience, their fear against the profession decreased and they controlled their excitement" on its last day. It was determined that the orientation program performed for the nursing and midwifery students was effective on their clinical stress and experiences.

In accordance with these results, it may be recommended;

-to provide the orientation training to the students before the clinical education,

-to involve coping with stress in the orientation program,

-to conduct studies for determining the reasons of the clinical stress of students,

-to conduct studies for identifying the main issues required by the students before clinical experience.

-Preparations can be made before clinical practice with methods such as drama or simulation.

### Limitations of the Study

As the study was conducted only with the first-year nursing and midwifery students of the Health Sciences Faculty of a university, the results were limited only with this faculty. They cannot be generalized for the nursing and midwifery departments of all the faculties. Another limitations of this study are that the orientation training was prepared and implemented based on the student groups and it was not individualized for each student. It should be kept in mind that internal validity may be negatively affected since the research is a Single Group Pretest-Post Test Pattern (the absence of a control group). It should be taken into consideration that there are other factors (student, clinic, clinical staff, educators, etc.) that will affect clinical stress other than the orientation program. The large number of samples according to the qualitative research design can be considered as a limitation.

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**Ethics Committee Approval:** In order to conduct the study, approval was obtained from Amasya University Noninvasive Clinical Trials Ethics Committee (07 March 2019, no: 09) and written permission was received from rectorship and the Health Sciences Faculty Deanship of the university where the study was conducted. The participation of the students was based on "voluntariness" and the students participating in the study were informed about the study. After the aim of the study was explained, the verbal consent of the students was received to conduct the study and they signed the Informed Consent Form.

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#### What did the study add to the literature?

- Although there are quantitative studies that determine the effect of the orientation program on clinical stress, it is thought that this study, in which a psychological condition such as clinical stress is evaluated in more detail, will make an important contribution to the literature with its qualitative results.
- While the stress level of the students decreased after the orientation training in the literature, it was determined in the study that the stress level of the students increased on the last day of the clinical practice.
- It was observed that the students supported by nurses in the clinic experienced less stress and were encouraged while performing the applications.
- It was determined that the orientation program provided improvement only in the threat sub-dimension of clinical stress.

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