

ORIGINAL PAPER**Determination of the Frequency of Clinical Skills Implementation by Senior Nursing Students in an Emergency Department****Fatma Ilknur Cinar, RN, PhD**

Gulhane Military Medical Academy, School of Nursing, Etlik/ Ankara Turkey

Vesile Unver RN, PhD

Gulhane Military Medical Academy, School of Nursing, Etlik/ Ankara Turkey

Memnun Seven, RN, PhD

Assist. Prof. Koç University, School of Nursing, İstanbul-Turkey

Berna Eren Fidanci, RN, PhD

Assist. Prof. Gulhane Military Medical Academy, School of Nursing, Etlik/ Ankara Turkey

Hatice Sutcu Cicek, RN, PhD

Asoc Prof, Gulhane Military Medical Academy, School of Nursing, Etlik/ Ankara Turkey

Ayla Yava, RN, PhD

Asoc. Professor Hasan Kalyoncu University, Faculty of Health Sciences, Department of Nursing, Gaziantep, Turkey

Correspondence: Fatma Ilknur Cinar, Gulhane Military Medical Academy, School of Nursing. Gülhane Askeri Tıp Akademisi, Hemşirelik Yüksek Okulu 06010 Etlik/ Ankara Turkey. e-mail: icinar@gata.edu.tr, filknur@yahoo.com

Abstract

Aim: The aim of this study was to determine how often nursing students find an opportunity to observe and/or practice nursing skills during their training in an emergency department.

Background: Clinical education as an integral part of nursing education offers the nursing students opportunities to gain clinical experiences in the nursing skills and procedures and deepens the theoretical part of the nursing in a real-life clinical environment. However, it is unclear that at which level clinical practice is experienced by the students in a clinical setting by the time of graduation.

Methods: This descriptive study was conducted in the emergency department of a university hospital. The sample of the study was included total 67 nursing students who underwent practical training. The data were collected using the "Nursing skills evaluation form".

Results: It is determined that the most practiced nursing skills were to measure blood pressure, to measure body temperature and to inform patients about the medical practices that were done by the nursing students. The least practiced skills were to feed babies, monitor chest tubes and maintain endotracheal tube care.

Conclusion: The study results show that some nursing skills are practiced very often, while others are never practiced in the emergency department. Therefore, it is recommended to evaluate the frequencies of targeted nursing skills to give an each student an opportunity of practicing in more feasible clinical settings.

Keywords: Clinical Education, Nursing Education, Nursing Skills, Practice

Introduction

As a part of the nursing education, nursing students are required to practice in a clinical setting in order to be equipped with the necessary practical knowledge and skills while practicing in classroom lectures such as lecture, tutorial, workshop, seminar, and laboratory. Clinical practice is a period of transition in order to consolidate of knowledge and skills for students. In this respect, since nursing is a practice-based profession, clinical practice is an essential part of the undergraduate nursing education (Chan, 2002; Henderson et al., 2006; Raat et al., 2010). One of the most important aims of clinical education is to enable students to integrate their theoretical and practical knowledge to make them capable in terms of diagnosis, treatment and care activities (Akyüz et al., 2007).

Clinical education provides students with a experimental real-life environment in order to learn the nursing profession (Croxon & Maginnis, 2009; Henderson et al., 2006). Garrick & Kirkpatrick (1998) described that the theoretical underpinnings of workplace learning are based on theories of adult learning, incorporating 'reflection in action, critical reflection and experiential learning'. Nursing students are required, as part of their education, to practice 'genuine' nursing by undertaking the responsibilities in a clinical setting. Similarly, nursing students would like to practice the skills for their future roles, to learn clinical routines, to increase their awareness of the health system and to establish relationships with staff and patients as well (Croxon & Maginnis, 2009). In sum, clinical experiences should give opportunities to develop students' critical thinking, analysis skills, competence in psychomotor, and to increase self-confidence as a nurse (Lee et al., 2009).

The curriculum of nursing education should include well-defined testing and assessment methods to ensure the nursing students' clinical competency. Standards regarding nursing education at the national level should be determined and be included in the curriculum to produce graduates who are competent in terms of professional skills (Hughes, 2004). In order to promote clinical learning, students who are under training or participating in clinical activities should be guided by a clinical supervisor (a

training nurse) to qualify in their skills (Chapple & Aston, 2004; Hughes, 2004). In other words, the success of nursing education depends on a shared training responsibility by educators, training nurses and students, as well as on a structuring of nursing education in such a manner that theory and practice complement each other (Ay, 2007; Dalton, 2005). In this respect, evaluating the clinical settings is essential to ensure their capacity regarding the value of the clinical experience for students. However, some clinical settings are for observation purposes only and the rest of them should be for practicing of nursing skills. It is thought that evaluating the clinical settings, as a part of the clinical education, is important to rearrange the clinical settings that are included in the nursing curriculum. Therefore, it is necessary to determine how much opportunity the clinics give students to practice or observe the certain nursing skills? However, little study has focused on the level of practicing of nursing students' in certain clinical settings.

In our country, there are a limited number of studies that include statistical findings about students' clinical activities. Therefore, the aim of study was to assess the frequency of nursing students' practical activities regarding certain nursing skills in an emergency department, which was selected as a study area. Some specific clinics are selected by drawing of lots among students as well as students who are under practical training in medical or surgical clinics at our college. However, all students get trained as a compulsory in the emergency department as a medical-surgical unit. It was therefore decided to conduct this study in the emergency department. The evaluation was achieved by considering the following research question: "How often do nursing students find an opportunity to observe and/or practice the clinical nursing skills during their training in the emergency department?"

Methods

Design and setting

This descriptive study was conducted in the emergency department of a research and training hospital in October 2010/June 2011. The sample of the study included senior nursing students who were under practical training in this emergency

department. Before become senior nursing students who are in their fourth year, they are educated through the committee system in the first, second and third years and get involved active teaching methods in the classroom lectures. During this period, skills education is also provided in laboratories and clinics. Faculty members determine the objectives of the committees at the level of knowledge, concept and practice. The nursing skills included in the educational program were identified based on the national nursing core curriculum program (HUÇEP, 2003). The 4600 hour program includes self-learning activities such as library hours, individual and group studies. For example, in "The respiratory system committee" the students have 39 hours for individual studying and, 12 hours for preparation before the course. In the last year of education, senior nursing student are under practical training.

In this school of nursing, the first-year nursing courses are mostly based on basic nursing concepts (i.e., the structure and nature of the human body, society and environment) and basic human needs. Courses in the second and third years are named by the systems of the human body (i.e., the heart and circulatory system, blood and the immune system). In the first three years of education, all nursing students take the following courses; basic human requirements for life, heart and circulatory system, blood and the immune system, respiration, excretion, digestive system and metabolism, mental development and behavior, military nursing activity in peacetime and extraordinary periods, movement need of human, sexual health and reproductive health, hormone control mechanisms, and body management and coordination. Nursing students also take these professional nursing courses integrated with basic medical courses, such as anatomy, physiology, and pathology, during the first three years of their undergraduate education.

The fourth year of nursing education is organized as a practical training. It is entirely based on clinical practice, and students take part in clinical activities for 32 hours per week. The objective of this program is to render the students competent in the cognitive, affective and behavioral skills that they should be learning during the first three years of their undergraduate education and that they are expected to have acquired by the time of their graduation.

During the practical training in the fourth year, all students are divided into five rotation groups, which are included five different clinical settings (internal medicine units, surgical units, intensive care units, emergency department and public health care activities). Students take part in clinical education in each of the rotation groups for 19 or 20 days. During the practical training in the emergency department which is one of the surgical units, students practice during two different shifts: the shift from 08:00 am to 03:00 pm and from 03:00 pm to 10:00 pm. Each group consists of eight or nine senior nursing students and two faculty members as supervisors. It is also an obligation that a faculty member or clinical education nurse guide all of the activities performed by the students.

Participants

The participants in the study were senior nursing students in a school of nursing. During the 2010-2011 academic year, when this study was conducted, there were a total of eighty-five senior nursing students. All senior nursing students were included in the study. However, seventeen senior nursing students were excluded from the study because they participated in the pre-application. Furthermore, one student was also excluded from the study because she could not complete her internship program. Therefore, the total 67 senior nursing students were included in this study.

Data collection form

The data for the study were collected through the administration of the "Nursing skills evaluation form". The skills in this form contain the nursing skills of first three years' courses. It has been developed by our school's lecturers and revised by the researchers. This form is not a scale and previously used. A total of ninety-one skills were included on the form. The form asks the students to indicate the nursing skills that they have practiced and/or observed during their practical training in the emergency department.

Procedure

The study was conducted following the approval of the institutional review board of both hospital and school of nursing. The senior nursing students also provided verbal consent after the aim and method of the study had been explained. All students were also informed about how the form should be filled out and how they record the

frequencies of the nursing skills provided on the list in terms of observation or/and practice of these skills in the emergency department. The authors checked whether the participants regularly filled out the form over the nineteen or twenty days of their internships. At the end of the internship program, these forms were collected.

Statistical analysis

SPSS for Windows (SPSS Inc., Chicago, IL, USA) software, version 15.00, was used for statistical analysis of the data collected in this study. The distribution of the data is showed as counts and percentages, while the descriptive statistics are presented using the arithmetic means and standard deviations, minimums-maximums, frequencies and percentages. For statistical tests, P-values less than 0.05 were considered to be statistically significant.

Results

All of participants in the study were female nursing students. The mean age of students was 21.79 ± 0.57 years old (min-max, 20-23). The status of practice or observation of the students to a nursing skill was separated into four categories: the first category shows students who neither practiced nor observed the nursing skill, the second category shows students who both practiced and observed the nursing skill. The third and fourth categories show the students who only practiced or observed the nursing skill during their training in the emergency department. Nursing skills are shown in the tables as separated in the committee such as heart and circulatory system committee and body management and coordination committee. Table 1, 2 and 3 show the frequency and percentage of the participants.

Table 1 shows that the majority of the participants both practiced and observed the skills of the preparation and use of intramuscular (IM) medications (92.5%), while 7.5% of them only practiced this skill. None of the participants practiced or observed the following two skills: applying medication to the ear or vagina (Table 1).

Table 2 shows the nursing skills that are included in five committees such as heart and circulatory

system committee, blood and immune system committee, digestive system and metabolism committee, excretion committee and respiration committee. The majority of the students both practiced and observed the skill of taking an electrocardiogram (ECG) (92.5%). In contrast, 7.5% of the participants only practiced this skill. The majority of the students both practiced and observed the skill of drawing venous blood (89.6%), while 7.5% of them only practiced it. The skill of applying a nasogastric catheter was both practiced and observed by 7.5% of the students. None of them observed or practiced the skills of applying and monitoring total parenteral nutrition (TPN), i.e., feeding a patient using a nasogastric tube. The skill of taking a urine sample was both observed and observed by 32.8% of the students, but just practiced by 4.5% of them. Also, 88.1% of the students both practiced and observed the skill of applying oxygen treatment (mask/nasal catheter). The participants neither practiced nor observed the skills of applying postural drainage or applying tracheostomy care (Table 2).

Table 3 shows the nursing skills, which are included in two committees in the curriculum (body management and coordination committee and mental development and behavior committee) as well as basic communication skills. It is found that 35.8% of the students both practiced and observed the skill of applying subcutaneous (SC) medication; 9.0% of them only practiced this skill. Regarding basic communication skills, 71.6% of the participants both practiced and observed the skill of informing the patients about a practice; 28.4% of them only practiced this skill (Table 3).

Table 4 shows the means of nursing skills that the students practiced least or most often during their emergency training. The most practiced nursing skills were measuring blood pressure (80.63 ± 59.36), measuring body temperature (75.94 ± 51.41) and informing the patient about a practice (59.99 ± 54.63). The least practiced skills were feeding a baby (0.01 ± 0.12), monitoring a chest tube (0.03 ± 0.17) and realizing endotracheal tube care (0.03 ± 0.17).

Table 1 Frequency and percentage of nursing skills practiced and/or observed by the students^a, n=67

	Those neither practiced nor observed		Those both practiced and observed		Those only practiced		Those only observed	
	n	%	n	%	n	%	n	%
<i>Movement need of human committee</i>								
Preparation/use of intramuscular (IM) medications	-	-	62	92.5	5	7.5	-	-
Turning the patient	6	9.0	49	73.1	11	16.4	1	1.5
Realizing the supine position	5	7.5	47	70.1	15	22.4	-	-
Use of patient transfer techniques	11	16.4	46	68.7	6	9	4	6
Realizing the Fowler's position	16	23.9	38	56.7	13	19.4	-	-
Washing the hands in a hygienic way	10	14.9	35	52.2	18	26.9	4	6
Opening sterile tools	19	28.4	33	49.3	8	11.9	7	10.4
Preparation and use of oral medications	15	22.4	32	47.8	20	29.9	-	-
Realizing the prone position	24	35.8	31	46.3	12	17.9	-	-
Use of bandages	21	31.3	30	44.8	1	1.5	15	22.4
Using sterile gloves and aprons	19	28.4	29	43.3	7	10.4	12	17.9
Realizing the lateral position	26	38.8	27	40.3	11	16.4	3	4.5
Realizing Sim's position	44	65.7	17	25.4	6	9	-	-
Realizing perineal care	45	67.2	10	14.9	5	7.5	7	10.4
Realizing the dorsal recumbent position	56	83.6	9	13.4	-	-	2	3
Applying medications to the skin	58	86.6	7	10.4	1	1.5	1	1.5
Realizing the orthopneic position	59	88.1	6	9	2	3	-	-
Realizing the trandelenburg position	56	83.6	6	9	4	6	1	1.5
Realizing range of motion (ROM) exercises	59	88.1	6	9	1	1.5	1	1.5
Realizing the knee-chest position performed	61	91	2	3	2	3	2	3
Realizing the lithotomy position	61	91	2	3	3	4.5	1	1.5
Applying medication to the nose	61	91	2	3	4	6	-	-
Applying medication to the eyes	61	91	2	3	2	3	2	3
Applying medication to the rectum	64	95.5	1	1.5	-	-	2	3
Applying medication to the ear	67	100	-	-	-	-	-	-
Applying medication to the vagina	67	100	-	-	-	-	-	-

^aThe order of the skills is organized based on the most frequently observed and practiced skills to the least frequently observed and practiced skills.

Table 2 Frequency and percentage of nursing skills practiced and/or observed by the students as the committees^a, n=67

	Those neither practiced nor observed		Those both practiced and observed		Those only practiced		Those only observed	
	n	%	n	%	n	%	n	%
<i>Heart and circulatory system committee</i>								
Taking an electrocardiogram (ECG)	-	-	62	92.5	5	7.5	-	-
Taking part in cardiopulmonary resuscitation(CPR) practice	-	-	62	92.5	5	7.5	-	-
Measuring the blood pressure	-	-	53	79.1	14	20.9	-	-
Taking peripheral pulses	3	4.5	51	76.1	13	19.4	-	-
Monitoring patients	18	26.9	41	61.2	7	10.4	1	1.5
Evaluating edema	20	29.9	35	53.7	6	9	5	7.5
Administration blood transfusion	49	73.1	2	3	3	4.5	13	19.4
<i>Blood and immune system committee</i>								
Drawing venous blood	2	3	60	89.6	5	7.5	-	-
Applying intravenous medication/liquids	-	-	59	88.1	8	11.9	-	-
Opening vessel access	4	6	57	85.1	6	9	-	-
Preparing medication for IV infusion	1	1.5	57	85.1	8	11.9	1	1.5
Measuring temperature	7	10.4	49	73.1	11	16.4	-	-
Preparing parenteral medication	13	19.4	42	62.7	10	14.9	2	3
Checking bleeding	35	52.2	22	32.8	6	9	4	6
Caring for peripheral venous catheter	41	61.2	16	23.9	7	10.4	3	4.5
Caring for a central catheter	61	91	3	4.5	1	1.5	2	3
<i>Digestive system and metabolism committee</i>								
Applying a nasogastric catheter	50	74.6	5	7.5	-	-	12	17.9
Removing a nasogastric catheter	57	85.1	5	7.5	-	-	5	7.5
Administering an enema	45	67.2	3	4.5	2	3	17	25.4
Caring for a colostomy	61	91	1	1.5	1	1.5	4	6
Feeding a baby	65	97	1	1.5	-	-	1	1.5
Application a rectal tube	63	94	1	1.5	-	-	3	4.5
Administration and monitoring total parenteral nutrition (TPN)	67	100	-	-	-	-	-	-
Feeding a patient with a nasogastric tube	67	100	-	-	-	-	-	-
<i>Excretion committee</i>								
Taking a urine sample	28	41.8	22	32.8	3	4.5	14	20.9
Placing a permanent bladder catheter	27	40.3	16	23.9	2	3	22	32.8
Removing a permanent bladder catheter	47	70.1	5	7.5	4	6	11	16.4
Applying lavage	51	76.1	3	4.5	1	1.5	12	17.9
Practicing bladder irrigation	63	94	1	1.5	-	-	3	4.5
<i>Respiration committee</i>								
Applying oxygen treatment (mask/nasal catheter)	3	4.5	59	88.1	2	3	14	20.9
Applying medication through inhalation	8	11.9	51	76.1	7	10.4	1	1.5
Practicing respiration/cough exercises	42	62.7	11	16.4	13	19.4	1	1.5
Applying cold exhalation	51	76.1	9	13.4	4	6	3	4.5
Caring for an endotracheal tube	59	88.1	3	4.5	-	-	5	7.5
Fixing an airway	49	71.6	2	3	2	3	14	20.9
Monitoring a chest tube	61	1	1	1.5	1	1.5	4	6
Applying postural drainage	64	95.5	-	-	1	1.5	2	3
Caring for a tracheotomy	64	95.5	-	-	-	-	3	4.5

^a The order of the skills is organized based on the most frequently observed and practiced skills to the least frequently observed and practiced skills.

Table 3 Frequency and percentage of nursing skills practiced and/or observed by the students as the committees ^a, n=67

	Those neither practiced nor observed		Those both practiced and observed		Those only practiced		Those only observed	
	n	%	n	%	n	%	N	%
<i>Body management and coordination</i>								
Applying subcutaneous (SC) medication	28	41.8	24	35.8	6	9	9	13.4
Applying neurological treatment	30	44.8	11	16.4	1	1.5	25	37.3
Applying intradermal (ID) medication	53	79.1	8	11.9	3	4.5	3	4.5
Applying a cold-wet compress	60	89.6	4	6	3	4.5	-	-
Applying a hot-wet compress	62	92.5	2	3	3	4.5	-	-
Applying thermoforming (hot-dry)	65	97	2	3	-	-	-	-
Applying a local cold-wet compress	59	88.1	1	1.5	6	9	1	1.5
Applying an ice pack (dry cold)	55	82.1	1	1.5	8	11.9	3	4.5
<i>Mental development and behavior committee</i>								
Interviewing a person with a psychiatric disorder	48	71.6	6	9	4	6	9	13.4
Observing a person with a psychiatric disorder	58	86.6	3	4.5	-	-	6	9
<i>Basic communication skills</i>								
Informing the patient about a practice	-	-	48	71.6	19	28.4	-	-
Calling patients by their name	2	3	46	68.7	19	28.4	-	-
Maintaining empathic communication	2	3	44	65.7	20	29.9	1	1.5
Developing proper and sufficient communication with team members	-	-	45	67.2	22	32.8	-	-
Introducing himself/herself in a proper manner	1	1.5	42	62.7	24	35.8	-	-
Following the related patient-interviewing principles	8	11.9	39	58.2	19	28.4	1	1.5
Explaining the reason for being in the clinic	2	3	37	55.2	27	40.3	1	1.5

^a The order of the skills is organized based on the most frequently observed and practiced skills to the least frequently observed and practiced skills.

Table 4 Frequency of nursing skills practiced most and least often during internships at the emergency unit, n=67

	X±SD	Min; Max
<i>The nursing skills at most practiced</i>		
Measuring the blood pressure	80.63±59.35	2;283
Measuring the body temperature	75.94±51.41	0;285
Informing patients about a practice	59.99±54.63	2;280
Washing the hands hygienically	57.85±67.94	0;274
Calling patients by their name	53.19±50.84	0;254
Introducing himself/herself in a proper way	52.91±52.19	0;254
Communicating with team members properly and sufficiently	47.33±47.31	1;254
Taking an ECG	39.91±21.19	1;86
Following the patient admission procedure	37.75±44.70	0;254
Preparing medications for IV infusion	33.94±23.02	0;115
<i>The nursing skills at least practiced</i>		
Feeding a baby	0.01±0.12	0;1
Monitoring a chest tube	0.03±0.17	0;1
Realizing endotracheal tube care	0.03±0.17	0;1
Monitoring a patient with a psychiatric disorder	0.06±0.23	0;1
Realizing the lithotomy position	0.13±0.48	0;2
Applying lavage	0.16±0.66	0;5
Removing a permanent bladder catheter	0.21±0.66	0; 4
Applying central catheter care	0.55±2.85	0;18
Applying intradermal (ID) medication	1.16±3.93	0;24
Observing cardiopulmonary resuscitation(CPR) activity	1.91±5.98	0;40

X±SD:Mean±Standard Deviation; Min;Max:Minimum;Maximum

Table 5 Frequency of nursing skills observed most and least often during internships in the emergency unit, n=67

	X ± SD	Min; Max
<i>The nursing skills observed most</i>		
Measuring the body temperature	38.21±51.88	0;260
Measuring the blood pressure	34.84±44.82	0;200
Washing the hands hygienically	30.70±95.55	0;750
Drawing venous blood	30.22±24.52	0;97
Application of a peripheral venous catheter	25.10±20.30	0;71
Informing the patient about a practice	25.03±41.09	0;178
Taking an ECG	24.13±20.04	0;92
Calling patients by their names	23.00±34.43	0;168
Communicating with team members properly and sufficiently	23.12±33.13	0;124
Preparing medications for IV infusion	22.72±26.95	0;141
<i>The nursing skills observed least</i>		
Applying postural drainage	0.06±0.38	0;3
Realizing the knee-chest position performed	0.07±0.31	0;2
Applying a rectal tube	0.09±0.41	0;3
Monitoring a chest tube	0.12±0.53	0;4
Applying rectal touch	0.21±0.61	0;4
Applying lavage	0.39±1.02	0;6
Applying central catheter care	0.40±2.28	0;18
Administration of blood transfusion	0.58±2.15	0;16
Removing a permanent bladder catheter	0.63±1.49	0;8
Making a psychiatric observation	0.69±4.40	0;36

X±SD:Mean±Standard Deviation; Min;Max:Minimum;Maximum

Table 5 shows the means of nursing skills that the students have observed least or most often during their emergency training. Those nursing skills that were observed by the participants at most often were measuring body temperature (38.21±51.88), measuring blood pressure (34.84±44.82) and washing the hands hygienically (30.70±95.55).

The skills that were observed by the participants least were applying postural drainage (0.06±0.38), applying the knee-chest position performed (0.07±0.31) and applying a rectal tube (0.09±0.41).

Discussion

This section presents a discussion of the findings concerning the frequency of nursing skills that practiced and/or observed during clinical practice

of the senior nursing students in the emergency department.

Clinical practice is a vital requirement for gaining competence in nursing. Therefore, in addition to the formal classroom contact time, nursing students spend an enormous amount of time in clinical settings. Rendering nursing students more competent in terms of professional skills is clearly dependent on these skills being based on certain standards and not being randomly acquired by students. Feedback concerning the practice or observation of nursing skills during the students' clinical training is invaluable for the evaluation and improvement of the educational activities covered in a nursing education program. Hence there is a need to assess the students' experiences of the clinical practice

environment in order to facilitate and maximize student nurses' clinical settings.

In this study, ten nursing skills were found to be practiced most often during the training in the emergency department as follows: "measuring blood pressure," "measuring body temperature," "informing patients about a practice," "washing the hands hygienically," "calling the patients by their name," "properly introducing himself/herself," "proper communication with team members," "taking an ECG," "following the patient admission procedures" and "preparation of medication for IV infusion." In a study dealing with the frequency of skills practiced by nurses in Turkey, it was found that the most frequently practiced skills were measuring blood pressure, measuring body temperature and counting the pulse (Demirci & Khorshid, 2007). Hoseini (2009) it seems to be practiced sufficiently such as subcutaneous injection, intramuscular injection, serum preparation with ordinary infusion set and micro-infusion set, drawing blood, vascular access with angiocath device, dressing, intervention and observation record and control, oxygen therapy, air way suctioning and gavage for faculty and students. Therefore, it is thought that emergency department is one of the convenient clinical settings to practice certain skills for students. Similarly, practical training in an emergency department is considered to be one of the training activities that improve students' theoretical and practical competencies (Harrison et al., 2007; Heslop et al., 2001; Tosun et al., 2008).

In this study, however, there is a similarity between practiced skills and observed skills, some skills were only observed, such as "drawing venous blood" and "application peripheral venous catheter". Demirci & Khorshid (2007) reported that nurses mostly practice the skills of applying IV medication, drawing blood, placing a nasogastric catheter and placing a catheter into a vessel. However, in the current study, it was found that the students mostly practiced those skills that do not require invasive procedures. The reason for this finding could be that they do not feel competent to carry out such procedures. In a study that dealt with the factors facilitating or making more difficult the clinical activities of the nursing students, it was found that students mostly experience anxiety related to practice invasive procedures, but more practice with

related procedures reduces their anxiety. Therefore, it is recommended that some interventions such as supervising during clinical practice can be helpful for students to encourage them to practice those invasive skills.

In the current study, the following nursing skills were found to be practiced the least: "feeding a baby," "monitoring a chest tube," "realizing endotracheal tube care," "psychiatric monitoring," "realizing the lithotomy position," "applying lavage," "removing a permanent bladder catheter" and "applying central catheter care." it is thought that these results are due to the patients' needs applying at the emergency department. Similarly, Demirci & Khorshid (2007) found that clinical nurses practice least the skills of applying medication to the vagina, rectum, ear and nose. Hoseini (2009) stated that some skills such as subcutaneous injection, blood transfusion, urinary catheterization, nasogastric tube insertion, lavage and enema with the least frequency have not met the expectations of faculty and students. Aydın & Argun (2010) found that students did not participate in practical activities because of physical insufficiency in the hospital and the lack of support from nurses. Moreover, 92.9% of the students reported that they could not find any opportunity to apply their theoretical knowledge, and 74.5% of them stated that they were not given opportunities to practice any of the theoretical knowledge they had learned in their courses (Aydın & Argun, 2010). Similarly, Dolmans et al., (2008) stated that successful clinical learning is negatively influenced by such factors as insufficient observation, lack of sufficient feedback and negative faculty attitudes toward students and education. However, finding sufficient opportunities to practice skills is a very significant and important experience for students. The conflicting results of the studies may have derived from each study having its own design and sample. Therefore, it is important to collect data particular to clinical settings that nursing students are under practical training.

None of the participants practiced or observed the following nursing skills during their internships in the emergency unit: applying medication to the ear or vagina, TPN practice and monitoring, feeding a patient using a nasogastric tube, postural drainage and tracheotomy application. The reason for this finding seems to be that the

students did not come across any patients who needed these procedures. Similarly, in the literature, it is stated that the skill improvement of the nursing students during their practical training might be affected by various factors such as frequent clinical rotations, the differences between theoretical knowledge and practical activities and the health care staff's indifference to the education of the students (Khorshid et al., 2007). One of the important factors in this regard is the reason of patients for attendance at the emergency department. Demircan et al. (2005) stated that the most common reasons for attendance at an emergency unit are chest pain, shortness of breath, conscious disorders, fever, abdominal pain and dizziness. In another study, it was found that people mostly apply to emergency units on Mondays between 11:00 a.m. and 11:00 p.m. One of the traumatic reasons that is a very common factor for attendance at an emergency unit is falling (Kılıçaslan et al., 2005). In this study, the practical training is provided in shifts that included two shifts. The second shift lasts by 10:00 pm and this provide the students opportunities to contact the patients with different health care needs.

As a conclusion, it was found that some nursing skills are practiced very often, while others are never practiced. It is also seems that there is an inequality among students related to practice or observe to the nursing skills in practice. In this study, it was assesses that the frequency of the nursing skills practiced or observed during the emergency training by senior nursing students. Therefore, it is recommended that to conduct another study to evaluate the reasons for the differences among students regarding practiced and observed skills.

There is no study that shows the contribution of clinical settings on nursing students. This study might be the first in this regard. Therefore studies might focus on the frequency of the practice or observation of these skills throughout the entire nursing education program in the future. It is also recommended that studies focusing on the relevance of clinical settings from the perceptive of the type of area such as intensive care, pediatrics, emergency department or maternal-child. It is thought that these studies will help to revising the nursing curriculum regarding which clinical settings should be included in a curriculum based on the level of opportunities

that are given to the nursing students to practice or observe the nursing skills. Such studies will also contribute to identifying the desired graduate profiles. This study will constitute a very useful source for the faculties who work at schools of nursing to assess their curriculum in respect of clinical settings for clinical training.

Limitations

There are a number of limitations inherent in this study and these findings cannot be generalized. Because the study was conducted in a school of nursing, which is the only school in Turkey that give committee-based nursing education. Also, there aren't any predefined number of skills need to be observed or carried out by the students. However all nursing skills during the practical training were practiced under the supervision of a faculty member or a staff nurse, the data that was collected in this study were based entirely on the participants' reports.

Conclusion

The study results show that some nursing skills are practiced very often, while others are never practiced in the emergency department. Therefore, it is recommended to evaluate the frequencies of targeted nursing skills to give an each student an opportunity of practicing in more feasible clinical settings.

Acknowledgement

We would like to thank to our nursing students and emergency unit's staff who participated in our study.

References

- Akyüz, A., Tosun, N., Yıldız, D. & Kılıç, A. (2007) Reflection of the nurses on their responsibilities and the students' working system during clinical teaching. TAF Prevention Medicine Bulletin 6 (6), 459-464.
- Ay, F. (2007) That is a new approach for provide competence in the nursing education: guide nurse (mentorship) system. Fırat Sağlık Hizmetleri Dergisi 2 (5), 52-65.
- Aydın, M.F. & Argun, M.Ş. (2010) The expectations of hospital practices and faced problems of the students in Bitlis Eren University, Health School, Department of Nursing. Acıbadem Üniversitesi Sağlık Bilimleri Dergisi 1 (4), 209-213.
- Burns, I. & Paterson, I.M. (2005) Clinical practice and placement support: supporting

- learning in practice. *Nurse Education in Practice*, 5 (1), 3-9.
- Chan, D. (2002) Development of the Clinical Learning Environment Inventory: using the theoretical framework of learning environment studies to assess nursing students' perceptions of the hospital as a learning environment. *Journal of Nursing Education* 41 (2), 69-75.
- Chapple, M. & Aston, E.S. (2004) Practice learning teams: a partnership approach to supporting students' clinical learning. *Nurse Education in Practice*, 4 (2), 143-149.
- Croxon, L. & Maginnis, C. (2009) Evaluation of clinical teaching models for nursing practice. *Nurse Education in Practice* 9 (4), 236-243.
- Dalton, L. (2005) Use of clinical space as an indicator of student nurse's professional development and changing need for support. *Nurse Education Today*, 25 (2), 126-131.
- Demircan, C., et al. (2005) Profiles of the patients in the Emergency Internal Medicine Unit: one-year experience. *Uludağ Üniversitesi Tıp Fakültesi Dergisi* 31 (1), 39-43.
- Demirci, Y. & Khorshid, L. (2007) The investigation of the realizing frequency of nursing interventions of nurses working in different clinics. *Ege Üniversitesi Hemşirelik Yüksek Okulu Dergisi* 23 (1), 15-26.
- Dolmans, D.H., Wolphagen, I.H., Heineman, E. & Scherpbier, A.J. (2008) Factors adversely affecting student learning in the clinical learning environment: a student perspective. *Education for Health (Abingdon)* 21 (3), 32.
- Garrick, J. & Kirkpatrick, D. (1998) Workplace-based learning degrees: a new business venture, or a critical business? *Higher Education Research and Development* 17 (2), 207-227.
- Harrison, T.M., Stewart, S., Ball, K. & Bratt, M.M. (2007) Clinical Focus Program: enhancing the transition of senior nursing students to independent practice. *Journal of Nursing Administration* 37 (6), 311-317.
- Hemşirelik Ulusal Çekirdek Eğitim Programı (HUÇEP) (The National Nursing Core Curriculum). (2003). (Publication No 2003/5). Gulhane Military Medical Academy Press, Ankara.
- Henderson, A., Twentyman, M., Heel, A. & Lloyd, B. (2006) Students' perception of the psycho-social clinical learning environment: an evaluation of placement models. *Nurse Education Today* 26 (7), 564-571.
- Heslop, L., McIntyre, M. & Ives, G. (2001) Undergraduate student nurses' expectations and their self-reported preparedness for the graduate year role. *Journal of Advanced Nursing* 36 (5), 626-634.
- Hoseini, S.A., Islamian, J. & Bakhtiari, S. (2009) Basic clinical skills of nursing students: a comparison between nursing students', nursing graduates' and lecturers' viewpoints. *Iranian Journal of Nursing and Midwifery Research* 14 (3), 123-129.
- Hughes, S.J. (2004) The mentoring role of the personal tutor in the 'Fitness for practice' curriculum: an all Wales approach. *Nurse Education in Practice* 4 (4), 271-278.
- Khorshid, L., et al. (2007) The investigation of the opinions of graduated nurses about bachelor's degree education. *Ege Üniversitesi Hemşirelik Yüksek Okulu Dergisi* 23 (1), 1-14.
- Kılıçaslan, İ., Bozan, H., Oktay, C. & Göksu, E. (2005) Demographic properties of patients presenting to the emergency department in Turkey. *Turkish Journal of Emergency Medicine* 5 (1), 5-13.
- Lee, C. Y., White, B. & Hong, Y.M. (2009) Comparison of the clinical practice satisfaction of nursing students in Korea and the USA. *Nursing & Health Sciences* 11 (1), 10-16.
- Löfmark, A. & Wikblad, K. (2001) Facilitating and obstructing factors for development of learning in clinical practice: a student perspective. *Journal of Advanced Nursing* 34 (1), 43-50.
- Raat, J., Kuks, J. & Cohen-Schotanus, J. (2010) Learning in clinical practice: Stimulating and discouraging response to social comparison. *Medical Teacher* 32 (11), 899-904.
- Tosun, N., et al. (2008) Evaluation of the expectations of nursing students from the intern education program and of their acquisitions and suggestions at the end of the program. *Gulhane Medical Journal* 50 (3), 164-171.