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The opinions of senior nursing students about forensic nursing

Emine Tuğba Topçu*  and Ebru Erek Kazan

Abstract

Background: Today, the increasing number of crime and violence cases is defined as a universal health problem and nurses are the first healthcare personnel to encounter victims and offenders in hospitals, emergency units, intensive care, and services, even at polyclinics or on-scene; therefore, it is important that nurses receive education in forensic nursing.

Methods: This study was conducted as a descriptive study to determine the opinions of senior nursing students about forensic nursing. This study was conducted with 95 students and its data were collected via a questionnaire that contains descriptive features and opinions about students' forensic nursing education.

Results: The results revealed that 94.7% of students believed that both forensic nursing should be an area of specialization and that nurses should receive forensic nursing education, 42.1% of them stated that this education should be given as an elective course in school, and 40% of the students stated that they wanted to become a forensic nurse when they graduated.

Conclusions: The findings suggest that senior nursing students' knowledge about forensic nursing was insufficient and that they were untrained in this area.

Keywords: Critical care, Education nursing, Forensic medicine, Forensic nursing, Nursing student

Purpose

This study was conducted as a descriptive study to determine the opinions of senior nursing students about forensic nursing.

Background

The modern world's increasing number of crime and violence cases is defined as a universal health problem, and nurses are the first healthcare personnel to encounter victims and offenders in hospitals, emergency units, intensive care, services, even at polyclinics or on-scene (Sunmaz et al. 2008; Sharma 2003). Nurses are generally the first healthcare personnel to observe patients, communicate with patients' family/relatives, examine patients and request patients' laboratory samples (Lynch 2006; Stevens 2004). However, evidence may be missed, lost, or destroyed during treatment and care, especially if emergency services nurses are unaware of such evidence and do not know the

procedures and techniques for identifying, collecting, and keeping it. This situation can make forensic review difficult and may lead to courts failing or making wrong decisions (Özden and Yildirim 2009). These difficulties in recognizing offender or victims and increasing the number of victims of crimes who are referred to hospitals, the necessity of forensic nursing was revealed in the 1970s (Kent-Wilkinson 1999).

In forensic nursing; nurses use the education they have taken in forensics to examine the victims of violence, trauma, other criminal cases and death events. In addition they use this education make scientific investigations of this cases (Kent-Wilkinson 1999). In this respect, forensic nursing is one of the newest avenues of forensic science. Forensic nurses can work in emergency services, suicide prevention centers, rape crisis centers, crime scene investigations, death investigations, prisons, prosecutors' offices, law offices, forensic pathology laboratories, and at as expert witnesses in court (Lynch 2011; Pinar and Bahar 2011).

* Correspondence: tgbtpc@hotmail.com; ettopcu@ybu.edu.tr

Nursing Department, Yildirim Beyazıt University Faculty of Health Sciences, Ankara, Turkey

Studies on forensic nursing in Turkey started in 1995. In recent years, forensic nursing is offered as an elective course at the undergraduate level in few universities. These universities are only about 10% of the total nursing departments in Turkey. In Turkey, there are two universities have forensic nursing postgraduate program as well. Forensic nursing related certificate courses are organized by Association of Forensic Scientists and some universities. Forensic nursing course; Definition of forensic medicine, history, definition of forensic nursing, duties and responsibilities, legal responsibilities of nurses, forensic case types, case study, autopsy concept, changes after death. The fact that the forensic nursing course takes place at a very small number of universities, yet it is not clear that the awareness of forensic nursing in Turkey has not been developed yet, that adequate training is not given and that sufficient work has not been done in this area. Forensic nursing should be given and spread throughout all nursing degree programs.

Even though studies on forensic nursing have accelerated in our country in recent years, unfortunately forensic nursing is not defined legally yet. However, despite this fact, emergency nurses work as forensic nurses in forensic cases. Therefore, forensic cases are mostly assessed by emergency nurses who have not received special education (Yelken et al. 2004). Studies (Gökdoğan 2008; İlçe et al. 2010; Topçu 2015) show that the vast majority of nurses encounter forensic cases, their knowledge and practice of forensic cases is inadequate and they have educational needs that are related to forensic nursing. It is very important to start this education at the undergraduate level.

In the literature, there are few studies which examined the knowledge and opinions of nursing students about forensic nursing. In Turkey, only two studies (Şentürk and Büyükaşlan 2013; Kalaycı et al. 2014) have reported that students' knowledge of forensic nursing is inadequate. In these studies conducted in the field of forensic nursing, the knowledge of students about forensic cases and forensic nursing was carried out in different cities with different questions and with fewer sample groups. In a city with a high population, students are more likely to encounter forensic cases. During the training process, students are exposed to many forensic incidents by practicing in various hospitals. Therefore, it is thought that the study will be carried out in a city with more population and population, which will contribute to reveal the current situation. For this purpose, our study was conducted with Ankara as the capital of Turkey and with more sample groups.

This study was conducted to determine the information needs and opinions of students related to forensic nursing, which is a new field of specialization in our country, to determine the educational needs related to the subject, and to draw attention to the topic.

Methods

Design

The research was carried out as a descriptive study.

Participants

The study sample was 104 students who were in the final year of the 2015–2016 academic year during the spring semester at the Department of Nursing, the Faculty of Health Sciences of a state university in Ankara, Turkey. In total, 95 students who were accepted to participate in the survey were included.

Data collection

Data was collected via two questionnaire form that was developed by researchers parallel to the literature (Sunmaz et al. 2008; Sharma 2003; Pinar and Bahar 2011; Yelken et al. 2004). Totally it consisted of 21 questions. One of the data collection tools was a questionnaire (Form 1) (9 questions) developed to determine the sociodemographic characteristics of the nursing senior students, and a questionnaire (Form 2) (12 questions) to evaluate the opinions of the students about the forensic nursing. Form 1 is included the six question that were related to age, gender, mothers' and fathers' education level, mothers' and fathers' job the students' socio-demographic variables consisted of multiple-choice questions about students' sociodemographic characteristics, two questions were yes/no questions about the presence of someone interested in forensics in their family and sought to determine whether they followed forensic medicine cases in the media, the other one questions about publications you follow in the media. Form 2 is included six questions were aimed at the tasks of forensic nurses, the fields in which they worked, forensic nursing subjects, examples of forensic cases and the education of forensic nursing, which were designed so that students could mark multiple choices. One open-ended question that was included was about the definition of forensic nursing. The five questions regarding students' opinions about forensic nursing. One of them knowledge of forensic nursing, one question want to be a forensic nursing, the other one forensic nursing should be profession, forensic nursing education is need and the last one the cases in which they had encountered forensic cases were designed as yes/no questions.

Procedures

During the study's implementation phase, information was first given to students about the research's scope, and their written approvals were obtained. Then, a questionnaire was distributed to the students who had agreed to participate. After they completed the questionnaire form, these were collected by the researchers. Filling in the form took approximately 20 min.

Ethical considerations

The Research Ethics Committee's approval was required for the work to be done; this was taken from Ankara Yildirim Beyazit Ethics Committee of Social Sciences and Humanities. Written permission was obtained from the institution at which the study was carried out. Students who agreed to participate in the study were notified of the study and then their written approval was obtained.

Data analyses

The data were transferred to the computer program by researchers using Statistical Package for the Social Sciences (SPSS) 16.0. Number percentages and chi-square tests were used to evaluate the data.

Results

In the study, it was determined that the average age of the students was 22.2 ± 0.79 , 84.2% were female, 55.8% of their mothers had only graduated from primary school, 35.8% of their fathers had only graduated from high school, 81.1% of their mothers were housewives, and 30.6% of their fathers were retired.

It was determined that nearly all of the students (94.7%) had no family members interested in forensic medicine, 27.4% followed forensic science, forensic nursing publications/programs in the media, and it was determined that most of them who did so used the Internet (80.8%) for this. The majority of the students stated that they had no information about forensic nursing (77.9%) and almost all of them (98.9%) were untrained in forensic nursing.

The students were asked about the definition of forensic nursing in the study; half of them (50.4%) stated that they did not know what the forensic nursing was, while 17.9% defined forensic nursing as "nurses working and investigating in forensic cases" (Table 1). The students who participated in the study were asked about the duties of forensic nurses; 42.1% stated that they did not know what the duties of the forensic nurses were and the others stated "recording evidence" among the duties of forensic nurses (40.0%). Students selected "Forensic Science" (74.7%) among the subjects that the forensic nurses should know, 82.1% stated that forensic nurses should work in "forensic medicine institutions." It was determined that 93.7% of the students had not previously encountered forensic cases, and they mostly selected "sexual offenses" as forensic cases (81.1%) (Table 1).

Of the students, 94.7% stated that both forensic nursing should be an area of specialization and that nurses should receive forensic nursing education, 42.1% stated that this education should be given as elective course at school, and 40% stated that they wanted to be forensic nurses when they graduated (Table 2).

It was determined that the differences between the groups was not significant when the socio-demographic characteristics of the students were age, gender, parents' educational level, parents' jobs, presence of a person interested in forensic medicine in the family, independent follow-up on forensics in the media, and knowledge and views on forensic nursing ($p > 0.05$).

Discussion

Upon examining the educational status and jobs of the students' parents, they were moderate in terms of the sociocultural level. In our study, very few students stated that they had someone interested in forensic medicine among their family. However, it was determined that this did not affect students' knowledge level with regard to forensic nursing ($p > 0.05$). Similar to our study, in the study by Şentürk and Büyükaşan (2013) that sought to determine the knowledge and opinions of senior nursing students about forensic nursing, only 12% of them had a family member who was interested in forensic medicine. Most of the students had no one who was interested in forensics in their family, and it was thought that this situation might affect the level of knowledge and awareness about forensic cases.

Nurses are responsible for evaluating patients in a comprehensive manner, identifying problems intervention to solve problems and recording when the patients come to the emergency services due to health problems. These duties of nurses are also applicable in forensics cases. In addition, it is expected in forensic cases that nurses will collect forensic evidence and keep and give them to competent authorities (Green 1993). In our study, nearly half of the students stated that they did not know what forensic nurses' duties would be, and they chose the furthest "recording of evidences" among the duties of forensic nurses (Table 1). This finding suggests that the most important thing that students perceive as the duties of forensic nurses is limited to the recording of evidence.

Very few of the students defined forensic nursing as "nurses who work and study in judicial cases" (Table 1). In a study conducted by Kalayci et al. (2014) in which the knowledge levels of nursing students with regard to forensic nursing was evaluated, nearly half of the students who participated understood the true definition of forensic medicine. They defined forensic nurses as people who collect, keep, and send evidence to relevant units.

Health personnel are often confronted with forensic cases. Therefore, the lack of information about forensic cases prevents the recognition of such cases. Forensic nurses who encounter forensic cases should be able to diagnose them (Lynch 2011). The ratio of forensic cases encountered was very low for the students who participated in our study (Table 1). Similarly, in the study of

Table 1 Students' knowledge about forensic nursing ($N = 95$)

Knowledge on forensic nursing	Number	Percent
Knowledge on forensic nursing		
Present	21	22.1
None	74	77.9
Any training in forensic nursing		
Taking	1	1.1
Not taking	94	98.9
Definition of forensic nursing according to students		
S/He is the person who identifies, collects, stores, examines, records, provides the evidence delivery chain, and analyzes the evidence.	6	6.3
It is about crime, justice and criminal nursing.	5	5.3
They are nurses who work in judicial cases, conduct research and follow up.	17	17.9
Nurses working with the police in criminals and courts.	4	4.2
S/He is the person who identifies and reports suspicious deaths and dangerous situations.	3	3.2
It is the department that helps the nurse to defend her/his rights in problems s/he is experiencing.	1	1.1
S/He is the person who took part in the autopsy examination.	8	8.4
S/He is the person who helps in the resolution of the forensic cases.	3	3.2
I do not know	48	50.4
Duties of forensic nurses according to students ($N = 95$) ^b		
Collecting evidences	30	31.6
Conserving evidences	25	26.3
Identifying evidences	35	36.8
Recording of the evidences	38	40.0
Provision of evidence delivery chain	32	33.7
I do not know	40	42.1
Subjects that forensic nurses should know according to the students ($N = 95$) ^b		
Basic Health Sciences	67	70.5
Law	56	58.9
Forensic science	71	74.7
I do not know	22	23.2
Areas where the judicial nurses take part according to the students ($N = 95$) ^b		
Hospitals	52	54.7
Jails	14	14.7
Prisons	24	25.3
Forensic medicine institutes	78	82.1
Courts	33	34.7
Crime scene investigation	39	41.1
I do not know	12	12.6
The Case of encountering a forensic event before.		
Encountering	6	6.3
Not encountering	89	93.7
Forensic events according to students ($N = 95$) ^b		
Traffic accidents	43	45.3
Malpractice	36	37.9
Poisoning	52	54.7

Table 1 Students' knowledge about forensic nursing ($N = 95$) (Continued)

Knowledge on forensic nursing	Number	Percent
Suicide	75	78.9
Sex crime	77	81.1
Domestic violence	66	69.5
Gunshot injuries	75	78.9
Drill-cut tool injuries	67	70.5

A student stated that s/he took it as a course at school

^bN has been multiplied because it has been answered more than once

Şentürk and Büyükaslan (2013), it was determined that very few of the students had met forensic cases. It is thought that the students' inability to identify legal cases, their lack of education in the school, and the fact that they had not seen enough of such cases in their clinical practice are effective.

When we examine the frequency of forensic cases in Turkey in order of prevalence, traffic accidents is first, followed by penetrating-cutting tool injuries, falls, firearm injuries, and sexual crimes (Türkiye İstatistik Kurumu 2006-2015). However, most of the students in our study reported "sexual offenses" as primary forensic cases (Table 1). In the study conducted by Kalayci et al. (2014), 32.2% of students described "malpractice" cases as primary forensic cases. It is thought that the students being more likely to encounter such stories in the media is effective in this situation. While trying to determine the knowledge levels of healthcare staff working in emergency services with regard to common approaches to forensic cases, almost all healthcare personnel described "firearm injuries"

and "sexual assault" cases as forensic cases. It is thought that the reason for the different definitions between students and nurses with regard to forensic cases is that students will identify forensic cases mostly from the media and nurses will correctly identified them based on the most frequently encountered pathways in clinics.

It is crucial that healthcare staff receive training in forensic cases in terms of crime and criminal findings, the elimination of victimization of the victim, and contribution to justice (Lynch 2006; Stevens 2004). The majority of students stated that they had no information about forensic nursing and that they were not trained in forensic nursing (Table 1). Today, the Crime Scene Investigation (CSI) TV series seems effective at creating social awareness of forensic science (Yakupoglu et al. 2016). Thus, the duties and expectations of such professionals are increasing. In our study, very few of the students stated that they followed publications/programs related to forensic medicine/forensic nursing in the media and that they mostly used the Internet for this purpose. It was also determined

Table 2 Students' views on forensic nursing ($N = 95$)

Students' views on forensic nursing	Number	Percent
According to the students, nurses receive forensic nursing education		
Necessary	90	94.7
Not necessary	5	5.3
Level of forensic nursing education ($N = 95$) ^a		
Must be given as a few hours of lessons in vocational courses at school	19	20.0
Must be given as a compulsory course in school	25	26.3
Must be given as elective course in school	40	42.1
Must be certified education after graduation	29	30.5
Must be given as post-graduate education after graduation	16	16.8
Should forensic nursing be an area of specialization?		
Yes	90	94.7
No	5	5.3
Do you want to be a forensic nurse when you graduate?		
Yes	38	40.0
No	13	13.7
Not sure	44	46.3

^aN has been multiplied because it has been answered more than once

in our study that students following publications/programs related to nursing in the media had no effect on information about forensic nursing ($p > 0.05$). Similar results were obtained when we examined studies conducted with the students related to the subject. In the study of Şentürk and Büyükaslan (2013), it was determined that most of the students had no knowledge about forensic nursing; the very few who did had obtained information from seminars, magazines, and the Internet. When we examined the studies conducted with nurses related to the subject, İlçe et al. (2010) investigated the knowledge and applications of healthcare personnel working in emergency departments for the protection and preservation of evidence in forensic cases; they stated that more than half of the 44 healthcare staff who participated in the study had not received any training with regard to forensic nursing. Caliskan and Ozden (2012) conducted a study with 233 people to determine the level of knowledge of healthcare personnel in Turkey with regard to forensic evidence; they found that 73% of the personnel had not received training on forensic cases, and 17.5% of participants who had received training in this area reported that such training had been insufficient. It is believed that the reason for this lack of information is not to include forensic nursing as a course in our country's undergraduate curriculum.

It was determined that the difference between the socio-demographic characteristics of the students, whether their family members were interested in forensic medicine, and the opinions of students with regard to forensic nursing was not significant ($p > 0.05$). In the study by Şentürk and Büyükaslan (2013), the socio-demographic characteristics of the participating students, whether their family members were interested in forensic medicine, and their knowledge level regarding forensic nursing were compared, and no statistically significant difference was found between the groups ($p > 0.05$).

Strengthening forensic nursing education increases patient care quality, patient safety, access to services, the confidence and skill levels of nurses, and patient satisfaction, while reducing the burden on the health system (Simmons and Grandfield 2013). In our study, almost all students stated that training on forensic nursing should be taken and nearly half reported that there should be elective courses while at school (Table 2). In the study of Şentürk and Büyükaslan (2013), all participating students indicated that training related to forensic nursing should be given and more than half reported that this training was taken during basic vocational training. From here, we can see that students are aware of their lack of knowledge and want this to be remedied.

Forensic nursing is a collaborative field of medicine and law that requires both general health sciences and legal knowledge (Lynch 2006; Kent-Wilkinson 1999; Lynch 2011). In our study, students stated that forensic

nurses often needed knowledge of forensic science and basic health sciences, and very few students chose the law option. In the study by Şentürk and Büyükaslan (2013), most students (28.0%) stated that forensic nurses should have knowledge of basic health sciences (Table 1). It is believed that students often see forensic nursing related to health sciences, as they do not fully understand the definition of forensic nursing.

Forensic nurses have many areas of study such as hospitals, prisons, forensic medical institutions, judicial offices, detention centers and crime scene investigations (Kent-Wilkinson 1999; Lynch 2011). Most of the students who participated in our study stated that the working areas of judicial nurses were forensic medicine institutions. In the study by Şentürk and Büyükaslan (2013), approximately half of the students stated that the working areas of the forensic nurses were hospitals and very few students reported that their working areas were forensic medical institutions (Table 1). In the study conducted by Kalayci et al. (2014), the students stated that the forensic case studies were not only done by forensic medicine-trained colleagues. Many participants saw forensic nurses as working in forensic medicine or hospitals, suggesting that forensic nursing was only associated with the field of healthcare according to students' opinions.

Conclusions

In our study, senior nursing students' knowledge of forensic nursing was insufficient and they were not trained in this area. The data we have obtained in this study aiming to reveal the knowledge levels of nursing students about forensic phenomena show a general agreement with the results of similar studies.

In addition, most of the students stated that forensic nursing education should be suggested as an elective course at the undergraduate level and should be specialized. Therefore, addition of courses related to forensic nursing to the undergraduate curriculum in all universities, opening post-graduate training programs related to the subject, and increasing scientific activities such as congresses, seminars, and courses are recommended. Both a tendency towards the advancement of forensic nursing in the nursing profession and basic principles in undergraduate education should be acquired. Therefore, it is important to evaluate the students' perspectives on forensic nursing (Additional file: 1).

Additional file

Additional file 1: The Questionnaire form related to descriptive characteristics of the Nursing Students and the views of Senior Students in Nursing about Forensic Nursing. (DOCX 15 kb)

Abbreviations

CSI: Crime scene investigation

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Availability of data and materials

The dataset supporting the conclusions of this article is included within the article.

Authors' contributions

Study design: ETT, EEK; data collection: ETT, data analysis: ETT; preparation of the article: ETT, EEK. Both authors read and approved the final manuscript.

Ethics approval and consent to participate

Necessary ethical approval was obtained from the Turgut Özal University ethics committee. The committee's reference number 355. Written permission has been obtained from the students.

Consent for publication

Not applicable

Competing interests

The authors declare that they have no competing interests.

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