



Forensic Science: An Emerging Scope in Nursing in Indian Scenario

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Abstract

Introduction: Forensic Nursing was developed in the 1980s for the treatment of patients suffering from crime-related injuries. It is the legal procedure of investigating of death related to abuse, trauma and examining forensic dead. There is an enormous rise in the rate of crime and violence cases in this modern era and nurse are first healthcare personal to provide care to the victims and offer the first aid either clinical nursing her in the Emergency Unit, Intensive Care Unit or any immediate services on the scene. The scope of Forensic Nursing practice has been directly applied for clinical nursing by concentrating on both living and dead persons.

Aim: Aim of study to Assess the Knowledge Regarding Forensic Nursing among Undergraduate Nursing Students

Methods: A cross sectional design is used and a total of 134 Undergraduate students were selected using Purposive sampling technique from selected setting.

Result: Majority of students (64.17%) average knowledge regarding forensic Nursing even through 98.50 % didn't have any previous training on forensic nursing

Conclusion: Forensic Nursing has good scope in clinical practice and most of them are Instructed in this particular area.

Keywords: Forensic nursing, Violence, Crime, Undergraduate, Nursing, Students

Introduction

Forensic science is a branch of criminal investigation governed by the legal standards of admissible evidence and criminal procedure. The Forensic Science is the broad field that include DNA analysis, fingerprint analysis, blood stain pattern analysis, firearms examination, ballistics, tool mark analysis, serology, toxicology, hair and fibre analysis. Forensic science is also concerned with entomology, questioned documents, anthropology, odontology, pathology, epidemiology, foot wear and tire thread analysis, drug chemistry, paint and glass analysis, digital audio video and photo analysis.

There is an enormous rise in the rates of crime and violence cases in this modern era and nurses are the first health care personnel to encounter these victims and offer the first aid either in the Emergency Unit, Intensive Care Unit or any immediate services on the scene. These nurses are also the first health care professionals to provide care to the community, society and the family members of the victim and the victims are examined and taken care of their needs ^[1]. However, some of the evidences can be missed or destroyed during the care and treatment of patient specifically if emergency service nurse is not aware of the Importance of such evidences and not familiar with the certain methods or tactics for locating, gathering and preserving it. In these circumstances, forensic analysis may be challenging and court may fail to take right decision ^[2].

The scope of Forensic Nursing Practice has been directly applied for clinical nursing by concentrating on both living and dead persons. It focuses on numerous new roles evolving in hospitals, communities and thrust research areas like patient advocacy which is a prime concern in psychosocial nursing with an ability to empathize as it is an important qualification highlighted in nursing profession. Secondly, public relations are an upcoming scope of this area of Forensic science in Nursing ^[3].

American Nurses Associated Congress of Nursing Practice had recognized Forensic Nursing as a formal speciality and in 1997 the standard and scope of Forensic Nursing practice were published. Virginia A. Lynch, a forensic clinical nurse specialist is recognised as the founder of Forensic Science. She was fundamental in the certain of Forensic Nursing speciality and she developing the standards of forensic nursing she is ambition to established the conceptual model storage units. The arrival of the Forensic pathologist, intake notes will be presented in the incisive report that includes the condition of the body, hospital care, police description as well provide security of any personal property ^[4]. The role of the Forensic Nurse evolved out of the practice of Clinical Forensic medicine, a subspecialty of Forensic medicine defined as the application of Forensic Medical knowledge and techniques to living patients ^[5]. The nurse having skills are providing emotional support, comfort and education to their family member speciality during Interview, History collection or Physical examination. once the necessary evidence and material has been collected the nurse then treated the patient and refers to patient further care ^[6]. In the present day so many crimes can happen. the forensic nurse speciality investigation of death and crime scan during post-mortem. forensic nurse can play important role in in the mortuary they help to receiving death bodies, maintain records of MLC patient and legal document a Forensic Nurse also serve as a forensic pathology associated during dissection, as well collection of biological samples. In the present-day inquiry of death has respectable job and demeaned profession to satisfy the patient need and their requirement.

Need of study:

In the emergency department every day skilled full Nurse are required to provide the care of the various patient condition like trauma, motor vehicle crashes, missile injuries, mass disasters, interpersonal violence. Most of these patients survive some do it. Emergency Department Nurse uniquely skill to identify, evaluate and medically treat these patients and preserve and collect any potential forensic evidence that may be on or with the patient.

Experienced Emergency Nurse more succinctly forensically trained nurse provide care to patients whose reasons for being in the emergency department have the likelihood of ending up in civil or criminal proceeding and a legal hearing or arbitration. experienced Emergency Department nurses may choose to offer their skills to a legal process by being expert witnesses or content expert consultants. This area of forensic nursing is called legal nurse consulting. A growing number of experienced nurses are being trained and hired to be death scene investigators, yet another forensic nursing subspecialty.

Problem Statement: Assess the Knowledge Regarding Forensic Nursing among Undergraduate Nursing Students

Objectives:

- 1) To assess the knowledge regarding forensic nursing among undergraduate nursing student.
- 2) To find the association between selected demographic variable and knowledge regarding forensic nursing among undergraduate nursing students.

Hypothesis:

H₀: There is no association between selected demographic variable and knowledge regarding Forensic Nursing among undergraduate nursing students.

Ethical Aspect: Ethical aspect of the research survey has been taken care by taking Inform consent from samples

Methodology:

Research approach:

A Qualitative approach was considered for present study.

Study Design:

A cross sectional design is used to assess the knowledge Regarding Forensic Nursing among Undergraduate Nursing Students.

Population:

In the present study, it consists of undergraduate nursing students from MGM New Bombay College of Nursing

Sample:

In this study, the sample consists of 124 undergraduate nursing students who are study at MGM New Bombay College of Nursing.

Sampling Technique:

In this study, the sampling technique used was the probability Purposive sampling technique.

Description of the data collection Tool

Section A: Structured questionnaire is used to collect the socio demographic data

It included of academic year, age, gender and sample knowledge on Forensic Nursing

Section B: Self reporting technique has been used by online structural questionnaires administrating to consult students.

There are a total of 20 multiple choice questions given to assess the knowledge regarding forensic nursing. In the 20 MCQ, 1 score is delivered for a right answer and 0 is given for the wrong answer.

Section C: Consist of question to assess the legal responsibilities.

In the 10 MCQ, 1 score is delivered for a right answer and 0 is given for the wrong answer.

Result

Descriptive statistics and interference statistics will be used for data analysis.

- Demographic characteristics analysed using frequency and percentage.
- Knowledge of nursing students regarding forensic Nursing analysed using frequency and percentage, mean and standard deviation of scored received.
- χ^2 is used for finding out the selected demographic data and knowledge regarding Forensic Nursing

Distribution of Samples Based on Demographic Variables

Table 1: Distribution of Samples Based on Demographic Variables

n=134

Demographic Variables	Frequency (f)	%
Gender		
Male	11	8.87
Female	123	91.79
Age (in Years)		
20	48	35.82
21	57	42.53
22	29	21.64
Training Regarding Forensic Nursing		
Yes	2	1.49%”
No	132	98.50%

Table 1 shows that 98.50% of participants didn't take training in Forensic Nursing. The mean age group was 21 years.

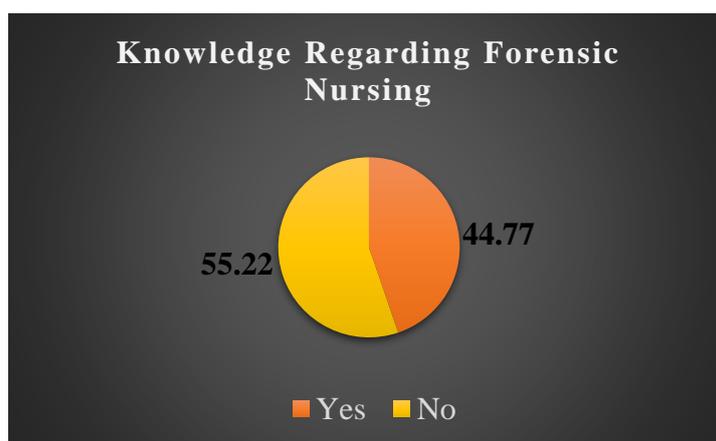


Figure 1: Previous knowledge regarding Forensic Nursing

Figure 1 shows that even those 98.50% didn't have any professional training, 55.22% of students have some information about forensic Science

Table 2: Items wise analysis of knowledge regarding Forensic science

n = 134				
Sr. No	Items	f	%	
1.	Meaning of Forensic sciences	108	80.59	
2.	Scope of forensic nursing	33	24.62	
3.	The term used to indicate elements of physical evidence	27	20.14	
4.	Area of collecting evidence	25	18.65	
5.	The area for treatment	34	25.37	
6.	Example of Evidence	81	60.44	
7.	Example of Trace evidence	40	29.85	
8.	Example of hair Strands	63	47.01	
9.	Manual Strangulation	29	21.64	
10.	Injury by sharp object	20	14.92	
11.	Elongated hole on body by bullet	17	12.68	
12.	Interview of the forensic patient	57	42.53	
13.	Physical abuse among children	13	9.07	
14.	Frequent physical abuser of children.	13	9.07	
15.	Domestic Violence	49	36.56	
16.	Critical element in date rape	20	14.92	
17.	Threat to inflict death	61	45.52	
18.	Galvanic skin response	17	12.68	
19.	Trial point	88	65.67	
20.	Evidence from crime scene	73	54.47	

Table 2 shows that out of the 20 items of knowledge question regarding the meaning of the Forensic Science sample, they achieved the highest (80.59) score than the other items of knowledge question. A very minimum (9.07) of samples could correct the question related to the paediatric age group. The example of evidence, Trace evidence, hair strands sample achieving maximum score. The Interview of forensic patient achieved average (42.53)

Table 3: Items wise analysis on Legal Responsibilities of Forensic Science**n = 134**

Sr. No	Items	f	%
1.	Health staff have legal authority about forensic case declaration	58	43.28
2.	Forensic Nursing use for scientific knowledge and method to answer legal question	70	52.23
3.	Forensic Nursing deal with abuse, trauma criminal case, death events	68	50.74
4.	Forensic Nursing is important filed in medical Education	68	50.74
5.	Clinical forensic Nurse, forensic nurse investigator, sexual assault nurse examiner, Nurse attorney are different role of forensic nursing	57	42.53
6.	Individual evidence is type pf Real evidence	25	18.65
7.	Alcohol, drugs and sexual perversion are a common denominator of violent sociopath	61	45.52
8.	Forensic testing is the gathering of data for analysis and for use in legal proceedings, depending on the law of particular jurisdictions	62	46.26
9.	Fingerprint are unique and, if left at a crime scene, they can help identify a suspect	70	52.23
10.	Neglect is most common type of adult abuse	18	13.43

Table 3 shows that out of the 10 items of Legal Responsibilities of Forensic Science, the highest score was achieved (52.23) in crime scene and scientific knowledge and method. And the minimum score achieved for neglect is one type of crime. The sample has average knowledge regarding the legal responsibilities of forensic science as compared to knowledge regarding forensic science.

Table 4: Distribution students' knowledge regarding Forensic Nursing

n = 134

	f	Percentage
Poor (0-7)	21	15.67
Average (8-15)	86	64.17
Good (16-23)	25	18.65
Excellent (24 -30)	2	1.4

Table 4 Showing that the distribution of knowledge score range was calculated based on percentage. The average score of samples was 64.17 and excellent knowledge was 1.4% regarding Forensic Science.

Table 5: The overall mean Knowledge score in relation to knowledge regarding forensic nursing

n = 134

Knowledge	Mean	Standard deviation
Knowledge score	11.8	4.57

Table 5 The mean was 11.8 there was very less students having very less knowledge regarding forensic science

Table 6: Association between selected demographic variable and knowledge regarding forensic nursing among undergraduate nursing students

n = 134

Demographic Variables	Knowledge				X ²	df	p-Value
	Poor	Average	Good	Excellent			
Previous knowledge on forensic Nursing							
Yes (44.77)	6	40	13	1	2.884	3	7.82*
No (55.22)	15	46	12	1			

(* p value is non-significant and p value is > 0.05)

Table 6 show the X² Value is 2.884 at p= 7.82 the null hypothesis accepted. There for there is no association between previous knowledge regarding Forensic Science and current knowledge score.

Discussion:

In this present study it was found that the majority 64.17% students having average knowledge regarding Forensic Science Whereas 15.67% students having poor knowledge regarding forensic nursing. Statistically proved that the mean score was 11.8 knowledge regarding Forensic Science and the standard deviation was 5.47 of the study. Chi square test show that association between selected demographic variable and knowledge regarding forensic nursing among undergraduate nursing students. Whereas, there is no association between previous knowledge regarding Forensic Science and current knowledge score.

Similar study supported this result was A descriptive study conducted in Portugal. To assess Forensic nursing practice used of knowledge questionnaires. The result of study good level score 40% and 23.7% have sufficient knowledge There was a deficit knowledge of Forensic Practice^[7].

A descriptive cross-sectional study conducted to Assess the knowledge regarding the need of forensic nursing in emergency department among the staff nurses. The result of the study knowledge level of staff nurse were 53.3% had inadequate knowledge, 46.6% were having moderate knowledge there was a deficient Knowledge regarding the Need of Forensic Nursing^[8].

Conclusion:

The study was assessing the knowledge regarding forensic nursing among undergraduate nursing students. The data was collected from 124 undergraduate nursing students from MGM New Bombay college of nursing through the self-structured questionnaires. We came to understand that majority (64.17) were having average knowledge regarding forensic nursing. The present study there is no association between previous knowledge regarding Forensic Science and current knowledge score. It has found that students are require training regarding the forensic nursing that can improve knowledge and practice regarding the forensic nursing

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