

**A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING  
SELECTED MEDICAL EMERGENCIES AMONG FINAL YEAR NURSING  
STUDENTS OF SELECTED NURSING COLLEGE OF PUNE CITY.**

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**ABSTRACT**

**Introduction:** This descriptive study focuses on to assess the knowledge of final year nursing students regarding selected medical emergencies in selected nursing colleges of Pune city. The study highlights the importance of emergency preparedness among nursing professionals and identifies knowledge gaps that could inform future training and curriculum improvement. **Background:** Medical emergencies can occur at any time and in any setting, requiring prompt and effective responses to prevent serious complications or death. Nurses, as frontline healthcare professionals, play a vital role in identifying, managing, and responding to these emergencies. Final year nursing students are expected to possess foundational knowledge and readiness to act appropriately during such situations, as they are on the verge of entering professional clinical practice. **Objectives:**1. To assess the knowledge regarding selected medical emergencies among Final Year Nursing Students of selected nursing college of Pune city. 2. To find out the association between selected demographic variables and knowledge regarding selected medical emergencies among final year nursing students. **Methodology:** Quantitative Research approach with Descriptive study design in Selected Nursing institute in Pune city . total 100 final year student were selected for study by non probability purposive sampling technique. A structured knowledge questionnaire was select to get the data in that includes section A- demographic variables includes, Age, Gender, Education and section B - 25 structures knowledge questionnaire were used to get the data. Validity and reliability of tools obtained by experts. The data was collected individually through paper and pencil test. The data collected were organised, tabulated and analysed using both descriptive and inferential statistics in terms of frequency, percentage, mean, standard deviation. **Result:** The findings of study shows that the score of knowledge regarding selected medical emergency, Mean was  $10.49 \pm 4.58$  Mean percentage score was  $29.98 \pm 13.09$  Mean, standard deviation and mean difference values are compared and 'o\p' test is applied at 5% level of significance. The tabulated value for  $n=100$  i.e. degrees of freedom (df-148) was 1.96. The calculated 'p' value i.e. 4.10 was much higher than the tabulated value at 5% level of significance for overall knowledge score of subjects which is statistically acceptable level of significance. In demographic variables, only Education, associated with demographic variables. **Conclusion:** overall study stated as knowledge regarding Selected Medical Emergency are average in final year nursing students in selected college of Pune City.

**Keywords:** Knowledge, Medical Emergency, final year, Nursing Students, Pune city

## INTRODUCTION

Final year nursing students are the degree holders who get registration after appearing final examination of nursing to do the skillful practice in hospital and deal with patient care.<sup>1</sup> In hospital there are many life threatening conditions are happening where immediate management and treatment with critical thinking is needed. The knowledge regarding right drug, route, there dilutions are very important as needed like early diagnosis.

In myocardial infraction and stroke required critical thinking and immediate response to treat this condition. Immediate care and prompt analysis is needed for hypertensive crisis and shock.<sup>2</sup> Medical emergency and maintenance of drug is required for treating with dehydration along with maintaining vital signs. Cardiac arrest occurs when the heart suddenly stops beating, preventing blood from circulating properly. This lack of blood flow to the brain and other organs can lead to loss of consciousness, brain damage, and even death if not treated immediately. Anaphylaxis management requires prompt action and often involves emergency medical care. The primary treatment is intramuscular epinephrine (adrenaline), followed by oxygen therapy, fluid resuscitation, and potentially other supportive measures. Long-term management focuses on identifying triggers, patient education, and developing an action plan for future reactions<sup>3-5</sup>

The common respiratory arrest definition is the cessation of breathing. Respiratory arrest is usually the endpoint of respiratory distress that leads to respiratory failure. Respiratory distress and failure have multiple causes, all of which, if left untreated, can deteriorate into respiratory arrest.

Regardless of the cause, respiratory arrest is a life-threatening situation that requires immediate management. When a patient goes into respiratory arrest, they are not getting oxygen to their vital organs and may suffer brain damage or cardiac arrest within minutes if not promptly treated.

The best treatment is knowing and understanding the signs and symptoms of respiratory distress and respiratory failure so interventions can be initiated and respiratory arrest averted altogether. Let's take a look at the difference between respiratory distress, failure, and arrest and how to treat respiratory arrest.<sup>6</sup>

## NEED OF STUDY

Medical emergencies can occur at any time and in any setting, requiring prompt and effective responses to prevent serious complications or death. Nurses, as frontline healthcare professionals, play a vital role in identifying, managing, and responding to these emergencies. Final year nursing students are expected to possess foundational knowledge and readiness to act appropriately during such situations, as they are on the verge of entering professional clinical practice. Cardiopulmonary resuscitation (CPR) training is crucial for nursing students as future nurses are the first responders in the ambulatory and hospital care chain.<sup>7</sup> Disasters and emergencies can overwhelm healthcare systems, making it essential for nurses to be equipped to respond effectively. A study on student nurses' readiness can help tailor educational programs to better prepare them for these challenging situations, ensuring a more resilient healthcare workforce.<sup>8</sup> Anaphylaxis is a life-threatening allergic reaction that requires immediate recognition and treatment. Insufficient knowledge among future nurses can lead to delays in appropriate interventions, potentially with severe consequences.<sup>9</sup> the stroke and respiratory failure is also the life-threatening conditions.

Pune, being a city with a growing healthcare infrastructure, has a significant demand for skilled nursing professionals. However, studies have shown that there may be gaps in knowledge and preparedness among nursing students regarding emergency management. These gaps can negatively impact patient outcomes if not addressed through targeted training and curriculum enhancements. This study focuses on assessing the current level of knowledge among final year nursing students in selected colleges of Pune city concerning selected medical emergencies such as cardiac arrest, anaphylaxis, stroke, and respiratory failure. Understanding their knowledge level will help in identifying areas where further education and practical training are required. There are many conditions where trainee nurses cannot able to manage these crucial conditions therefore its is important to assess the knowledge regarding students for managing the life-threatening conditions during emergencies.

#### **AIM OF THE STUDY**

1. To find out the knowledge regarding selected medical emergencies among final year nursing students.
2. To find out the association between selected demographic variables and knowledge regarding selected medical emergencies.

#### **OBJECTIVES:**

1. To assess the knowledge regarding selected medical emergencies among Final Year Nursing Students of selected nursing college of Pune city
2. To find out the association between selected demographic variables and knowledge regarding selected medical emergencies among final year nursing students.

**Research approach:** Quantitative Research approach

**Research design:** Descriptive design

**Research setting:** Selected Nursing institute in Pune city.

#### **Population:**

- Target population: final year nursing students
- Accessible population: final year GNM and B.Sc. Nursing students

**Sample size:** 100 samples

**Sampling method:** Non probability – purposive sampling

#### **Sample selection criteria:**

- **Inclusion criteria:** sample who are

Willing to participate in study

Who are available during data collection.

Final year appearing GNM and B.sc. Nursing students

- **Exclusion criteria:**

Who are not available at the time of data collection.

**MATERIAL:** The instrument used in the study for data collection is structured knowledge questionnaire. The questionnaires consist of 25 multiple choice questions. Each knowledge question score has 4 options, out of which only one is correct option and remaining 3 are wrong. Each correct option is awarded a score of 1(one) and all incorrect or unanswered option awarded as 0 (zero). The possible range of knowledge score varied between 0-25. Based on total score, grading of the knowledge is levelled in 5 categories such as poor, average, good, very good and excellent based on total scores of the questionnaire. Feasibility of study is

conducted by paper pencil test on 10 nursing students of final year and questionnaire was found to be understandable, feasibility and unambiguous. In order to obtain content validity, the structured knowledge questionnaire was given to 7 experts and consultation with the guide some modifications were made in framing the items and same were incorporated in the tool. Reliability of structured knowledge questionnaire by test re- test method using Karl Pearson’s coefficient formula. The correlation and coefficient ‘r’ of the questionnaire was 0.98 which is more than 0.80. hence the questionnaire was found to be reliable. Pilot study was conducted on 20 nursing students of final year regarding knowledge about medical emergencies who are studying in selected nursing college of Pune city. The finding of the study indicated that students has inadequate knowledge regarding Medical Emergencies.

**Method of data collection:** The study proposal was approved by the Institutional Ethics Committee of the University. The researcher visited the selected nursing colleges of Pune city in advance and obtained the necessary permission from the concerned authorities. Investigator introduced herself to the student nurses, and explained the purpose of the study so as to ensure co-operation during data collection. The participant was collected in the class room available in college and structured knowledge questionnaire was administered. As the sample of study was 120 student nurses, it requires 8 days for collection of data. Data were collected approximately from 15 participants every day. Once the questionnaire was completed, researcher collected it back. The student nurses required 30 minutes to complete the structured knowledge questionnaire. The collection of data was completed within the stipulated time. After the data gathering process, the researcher thanked all the study samples as well as the authorities for their co-operation.

**Data analysis:** The data was decided to be analyzed, using descriptive and inferential statistics on the basis of objectives of the study.

**Table 1: Percentage wise distribution of subjects according to the demographic characteristics.**

n= 100

Demographic variables	Subjects according to demographic characteristics	
	Frequency	Percentage
<b>AGE</b>		
20-21 years	31	31%
21-22 years	62	62%
22-23 years	7	7%
<b>GENDER</b>		
Male	35	35%
Female	65	65%
Transgender	0	0%
<b>EDUCATION</b>		
GNM	40	40%

B.SC. NURSING	60	60%
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Table 1 depicts that most subjects 62% are from age group of 21-22 years, 31% from 20-21 years and 7% subjects were from age group of 22-23 years. With regards to Gender, Majority of subjects were female that is 65% and male were 35%. With regards to Education, majority of samples were B.Sc. Nursing that is 60% and 40% were GNM Nursing included in the study.

Table 2: knowledge score of subjects regarding Selected Medical Emergencies

n= 100

Level of Knowledge Score	Score Range		Knowledge Score Regarding Selected Medical Emergencies	
	Frequency (f)	Percentage(%)	Frequency (f)	Percentage(%)
Poor	1-5	0-20%	38	25.33%
Average	6-10	21-40%	84	56%
Good	11-15	41-60%	28	18.67%
Very Good	16-20	61-80%	0	0%
Excellent	20-25	81-100%	0	0%

Table 2 shows that, subject has poor level of knowledge regarding selected medical emergencies were 25.33%, average level were 56%, Good level were 18.67% and No subjects were having very good and excellent level of knowledge regarding selected medical emergencies. Thus it is reflected that knowledge regarding selected medical emergencies among final year Nursing Students from selected college of Pune city has poor, average and good level of knowledge.

Table 3: The association of knowledge score with demographic variables of subjects.

Associated demographic variables	P value	Association
Age	4.38 „p“=0.82, NS,p>0.05	Not Associated
Gender	0.45 p=0.15 NS,p>0.05	Not Associated
Education	36.83 p=0.0001 S,p<0.05	Associated

Table 3 Depicts that association of knowledge score with demographic variables of subjects.

The association of knowledge score with Age of subjects. The tabulated „ $\chi^2$ “ values were 15.51(df=8) which is much higher than the calculated „ $\chi^2$ “ i.e. 4.38 at 5% level of significance. Also, the calculated „p“=0.82 which was much higher than the acceptable level of significance, i.e. p“=0.05. Hence it is interpreted that the age of subjects is statistically not associated with their knowledge score. The association of knowledge scores with Gender of subjects. The tabulated „ $\chi^2$ “ values were 9.49(df=4) which is much higher than the calculated „ $\chi^2$ “ i.e. 6.65 at 5% level of significance. Also, the calculated „p“=0.15 which was much higher than the acceptable level of significance i.e. „p“=0.05. Hence it is interpreted that gender of subjects is statistically not associated with their knowledge score.

The association of knowledge score with Education of subjects the tabulated „ $\chi^2$ “ values was 21.03(df=12) which is much less than the calculated „ $\chi^2$ “ i.e. 38.87 at 5% level of significance.

Also, the calculated „p“=0.0001 which was much less than the level of significance i.e. “p”=0.05. Hence it is interpreted that Education of subjects is statistically associated with their knowledge score.

## **DISSCUSSION**

The findings of study shows that the score of knowledge regarding Selected Medical Emergencies, Mean was  $10.49 \pm 4.58$  Mean percentage score was  $29.98 \pm 13.09$  Mean, standard deviation and mean difference values are compared and chi square test is applied at 5% level of significance. The tabulated value for  $n=150$  i.e. degrees of freedom (df-148) was 1.96. The calculated ‘p’ value i.e. 4.10 was much higher than the tabulated value at 5% level of significance for overall knowledge score of subjects which is statistically acceptable level of significance. In demographic variables, only Education is associated with demographic variables.

A similar study to assess the Knowledge and attitude toward its use among medical students of a medical college in North-West India, by Gupta, Rajiv Kumar; Raina, Sunil Kumar1,; Verma, Aruna Kumari; Shora, Tejali in June 1016, aimed at To assess the knowledge and attitude toward use of emergency contraceptives among medical students. A questionnaire seeking information on knowledge and attitude of undergraduate medical students was administered over a period of 4 weeks in the month of February and March 2014. Which results in The lack of appropriate in-depth knowledge of EC among future health care professional should alarm the medical teaching system as EC is the only method that can be used to prevent pregnancy after unprotected sex or contraceptive accident.<sup>10</sup>

A similar study conducted as a “Leadership and teamwork in medical emergencies: performance of nursing students and registered nurses in simulated patient scenarios” by Fiona E Bogossian, in 2014 which was aimed at To examine nursing students' and registered nurses' teamwork skills whilst managing simulated deteriorating patients. A Mixed methods study conducted in two universities and a rural hospital in Victoria, and one university in Queensland, Australia. The result stated that there is scope to improve leadership, team work and task management skills for registered nurses and nursing students. Simulation appears to be beneficial in enabling less experienced staff to assess their teamwork skills.<sup>11</sup>

## **RECOMMENDATION:**

- Study can be conducted to evaluate the effectiveness of lecture method verses practical skill on management of medical emergencies among student nurses studying in selected nursing colleges of Pune city.
- Formal educational programmed should be conducted in other nursing colleges regarding medical emergencies.
- The study can be replicated on large subjects; and on various settings, so that findings can be generalized to a large population.
- Such studies can be carried out using other teaching strategies like planned teaching, video assisted teaching, web based teaching on Medical Emergencies.
- Comparative survey can be carried out to assert the level of competency in management of Medical Emergencies.

Limitation: Following were the limitations of the study, it includes: The study was limited only to student nurses studying in selected Nursing colleges.

## **IMPLICATIONS OF THE STUDY**

### **NURSING PRACTICES:**

The findings of present study emphasis on knowledge regarding Medical Emergencies which can be put into enhance the practical skill regarding Medical Emergencies and to manage the life-threatening conditions.

### **NURSING EDUCATION**

The present study emphasis on need for more education and competencies related to Medical Emergencies.

### **NURSING ADMINISTRATION**

- Health administration plays a pivotal role in supervision and management of nursing professions. The nurse educator can utilize the present tool for assessing the level of competency of the students and implement implementation to manage high risk cases.
- The teaching faculty of Nursing college should take the initiative in organizing continuing education programs for student nurses in various aspects of management of medical emergencies.
- Appropriate teaching/ learning material needs to be prepared and made available for student nurses.
- Knowledge regarding medical emergencies of student nurses being concerned of medical health facilities programmed at hospital for prospective can be planned and implant country wide to manage high risk case in proper way.
- **NURSING RESEARCH**
- The findings of the present study can be utilized by nurse investigators to contribute to the profession to accumulate new knowledge regarding medical emergencies and can make professional accountability to educate and motivate the student nurses.
- The present study helps the students and other health care personalities to understand the level of knowledge and skill in management of medical emergencies among the student nurses.

### **CONCLUSION**

The study concluded that final year nursing students had average level (56%) of knowledge regarding cardiac arrest, anaphylaxis, respiratory emergencies and shock and only (28 %) had excellent level of knowledge in selected college of Pune city. The study is associated with only education status that is B.sc students (60%) had higher knowledge than GNM (40%) students.

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