



Research Article

A Comparative Study to Assess the Knowledge and Expressed Practice of Staff Nurses and Student Nurses regarding Crash Cart in a Selected Hospital of New Delhi

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A B S T R A C T

Background: A crash cart is a cart stocked with emergency equipment's, medicines and is frequently used by the health professionals especially nurses and the student nurses. If they don't have adequate knowledge about crash cart and its utilization and maintenance, quality patient care will be affected and it may even risk the life of patient in emergency. The objectives of the study were to assess and compare the knowledge and expressed practice of staff nurses and student nurses regarding crash cart and to develop and disseminate information booklet on crash cart.

Materials and Methods: Quantitative Research with descriptive comparative research design was used. Structured questionnaire and checklist were used to assess the knowledge and expressed practice respectively. Convenience sampling technique was adopted to select 50 staff nurses and 50 student nurses from a selected hospital and a college of nursing in Delhi respectively. Data was analyzed using Descriptive and Inferential statistics.

Results: The findings showed that 60% of the staff nurses and only 10% student nurses had adequate knowledge on crash cart. 80% of the staff nurses had adequate practice score and 60% student nurses had inadequate practice score on crash cart.

Conclusion: The present study revealed that most of the staff nurses had adequate knowledge about crash cart whereas most of the student nurses had inadequate knowledge about crash cart. The study thus implies that nursing staff and students should be taught and demonstrated the arrangement and use of crash cart. There should be clear instructions about the use of crash cart in each and every unit.

Keywords: Crash Cart, Expressed Practice, Knowledge



Introduction

A crash cart is cart stocked with emergency medical equipment, supplies and drugs for use of health professionals especially during efforts to resuscitate a patient experiencing cardiac arrest. Adequate storage of medical equipment should be available in the crash cart as it functions to provide emergency management to the patient present with a wide variety of critical, urgent and semi-urgent conditions.¹

Nurses and doctors, the first in line to provide life support and resuscitation should always be clearly aware of the placement of the emergency cart and their contents and their use. Staff must be familiar with the location of all resuscitation equipment within their working area A "Crash Cart" is a mobile, compact cart, equipped with various medical aid tools (used mainly for cardiac emergencies). The cart consists of items such as a defibrillator, medications, a suction pump, and other life-saving equipment. The function of crash carts is to provide a mobile station within the hospital that contains everything needed to treat a life-threatening situation. The advantage of mobility is that it allows the treatment to come to the patient when needed. It is often the nurse's role to undertake the routine checking of the resuscitation trolley and cardiopulmonary equipment. As nurses play a major role in the provision of health care, it is the nurses who frequently discover patient with cardiac arrest and it is necessary for them to restock the crash cart after every shift, verifying the presence and expiry date of every item. Nurses play an integral role in the management of cardiopulmonary arrests. In inpatient facilities, nurses are at the patient's bedside 24 hours/day and are likely to be the first to respond and manage initial treatment during an emergency.²

A study was conducted by Paramesha et al. to assess the

effectiveness of Self Instructional Module in terms of knowledge on utilization of emergency crash cart system in hospital among 4th year B. Sc Nursing students of selected nursing colleges in Mysore and findings of pretest revealed that 4th year B. Sc nursing students were having low level of knowledge with a mean score of 18.35.³

According to another study conducted by Lamkhede RD to assess the effectiveness of planned teaching programme on knowledge of emergency drugs among staff nurses revealed that the knowledge of staff nurses in pre-test and before planned teaching programme was not satisfactory.⁴ Therefore, investigators felt a need to conduct this study and to enhance the knowledge, information booklet was disseminated.

Materials and Methods

Quantitative Research with Descriptive Comparative design was used to assess and compare the knowledge and expressed practice of staff nurses and student nurses regarding crash cart in a selected hospital and College of Nursing, Delhi. Researcher selected 50 staff nurses and 50 student nurses by Convenient sampling. A Structured Questionnaire comprising of 30 questions related to crash cart was prepared to assess the knowledge of staff nurses and student nurses. An observation checklist comprising of 20 items was prepared to assess the expressed practice of staff nurses and student nurses regarding crash cart. The tool was given for content validation to 7 experts from the field of nursing for its completeness, contents, and language clarity. Assessment of the tool for reliability was done by using Karl Pearson Correlation coefficient formula. Result of reliability test was 0.98 and tool was found reliable. Formal administrative approval was obtained from the concerned authority to conduct the final study and the data was collected using the structured tools. Data was analyzed using descriptive statistics and inferential statistics.

Results

Table I. Frequency and percentage of staff nurses and student nurses as per their demographic characteristics

n1+n2=100

Variables	Staff Nurses		Student Nurses	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Age (in Years)				
20-25	27	54	50	100
26-30	15	30	0	0
31-35	5	10	0	0
Above 35	3	6	0	0
Gender				
Male	4	8	0	0
Female	46	92	50	100

Professional Qualification				
DGNM	26	52	0	0
B.Sc Nursing	16	32	50	100
Post Basic B.Sc Nursing	8	16	0	0
Any Other	0	0	0	0
Clinical Experience				
Less than 1 year	12	24	50	100
2-5 Years	29	58	0	0
5-10 years	4	8	0	0
Above 10 years	5	10	0	0
Workshop/ Seminar attended on crash cart				
Yes	17	34	0	0
No	33	66	50	100

Table 2. Mean Median, standard deviation and “t” value of knowledge scores of staff nurses and student nurses

	Possible range of score	Obtained range of score	Mean	Median	Standard Deviation	“t” Test (p-value)
Staff Nurses n1=50	0-30	9 – 24	16.56	16	2.46	8.493 (0.98)
Student nurses n2=50		5 – 17	11.5	12	3.42	

n1+n2=100

p-value >0.05 not significant at 0.05 level of significance.

Table 3. Category wise frequency and percentage distribution of staff nurses and student nurses by their knowledge scores on crash cart

Category	Staff Nurses		Student Nurses	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Adequate (>80%)	30	60	05	10
Inadequate (<80%)	20	40	45	90

n1+n2=100

Table 4. Mean Median, standard deviation and “t” value of expressed practice scores of staff nurses and student nurses

	Possible range of score	Obtained range of score	Mean	Median	Standard Deviation	“t” Test (p-value)
Staff Nurses n1=50	0 – 20	5 – 20	16.04	16	3.26	0.81 (0.815)
Student nurses n2=50		2 – 19	11.3	10	3.71	

n1+n2=100

p-value >0.05 not significant at 0.05 level of significance.

Table 5. Category wise frequency and percentage distribution of expressed practice scores of staff nurses and student nurses on crash cart

Category	Staff Nurses		Student Nurses	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Adequate (>80%)	40	80	20	40
Inadequate (<80%)	10	20	30	60

(n1+n2=100)

Discussion

In the present study, most of the student nurses had Inadequate knowledge score as well as Inadequate Practice score regarding crash cart and need to be improved as student nurses will be the Nursing officers of tomorrow and if they are equipped with the necessary knowledge and practice, health care system will be benefitted. A study was conducted on ICU nurses knowledge on crash cart trolley where 168 staff nurses were administered structured questionnaire and it was found that 57% staff nurses had adequate knowledge whereas in the present study it has been seen that 60% staff nurses had adequate knowledge regarding crash cart.⁵ In a study on assessment of critical care nurses knowledge regarding crash cart where 216 staff nurses were enrolled, it was observed that 48 % staff nurses had adequate knowledge which is even less than the findings of the present study.⁶

Conclusion

The present study revealed that most of the staff nurses had adequate knowledge about crash cart whereas most of the student nurses had inadequate knowledge about crash cart. The study thus implies that nursing staff and students should be taught and demonstrated the arrangement and use of crash cart. There should be clear instructions about the use of crash cart in each and every unit. Add implications for nursing practice

Implications

Several implications can be drawn from the present study. Every staff nurse and student nurse need to refine their knowledge and skills in managing crash cart. Nurse administrators must prepare and update protocols regarding crash cart and appropriate teaching learning materials need to be prepared and made available related to crash cart. Student nurses need to be adequately guided by the nurse educators in the use of crash cart. Research studies related to crash cart need to be conducted on a large scale.

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Conflict of Interest: None

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