



A Study to Assess the Effectiveness of Video-assisted Teaching Program on Knowledge Regarding Selected Emergency Pre-cardiac Medications among Staff Nurses at Selected Hospital in Bangalore

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Abstract

Background: Coronary heart disease is now the leading cause of mortality worldwide and accounts for the death of 3.8 million men and 3.4 million women each year. In developing countries, coronary artery diseases have been recognized as a major public health problem. Cardiovascular emergencies account for at least 30% of all medical emergencies. During cardiovascular emergencies, the survival of the patient depends on a rapid response that provides high quality treatment based on latest guideline. Administration of the correct drugs is an important aspect of this process and among the health team members nurses are taking an increasingly important role. However, most of the studies done by the various researchers found that the majority of the nurses are unaware about the vital drugs used in the cardiac emergencies.

Methods: In the present study, one group pre-test and post-test research design was used to assess effectiveness of video-assisted teaching program (VATP) on knowledge of emergency drugs among 30 staff nurses by purposive sampling method working in selected hospital. Structured knowledge questionnaire was used.

Results: Finding revealed that the majority of respondents 70% had only average knowledge whose percentage of score ranged between (35 and 70). Only 10% of the respondents had good knowledge (70–100) and 20% of the respondents had poor knowledge (0–35) regarding emergency drugs.

Conclusion: Finding of the study showed that the post-test knowledge scores showed a significant increase in knowledge. The research was conducted with the VATP improved knowledge of the staff nurses on emergency drugs.

Keywords: Effectiveness, Video Assisted Teaching Program, knowledge, selected emergency pre-cardiac medications, staff nurses

INTRODUCTION

The human body works through complicated services of chemical reactions and process. Drugs are chemical that

are introduced into the body to cause some sort of change. When drugs are administered; the body begins a sequence of processes designed to handle the new chemicals.^[1] This process which involves, breaking down and eliminating the drugs, in turn, affect the body complex and series of chemical reactions.^[2] Understanding how drugs act on the body to cause changes and applying that knowledge in the clinical setting are important aspects of nursing practice, for many reasons, for instance, patients today often follow complicated drug regimen and review.^[3,4] Potentially toxic drugs, many also manage their own care at home. The nurse is in a unique position regarding drugs therapy. In all department, the heart of the hospital demands unique expertise to deal with patients

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requiring prompt comprehensive care. The nurses in the various departments are vital in the health team and must possess high degree of knowledge, skill, and experience.^[5] The standard care nursing continues to be a unique and challenging to the nursing care. The death forces are always battling in the critical care environment where nurses defend the patient. Administration of medication is a basic activity in nursing practice. As a result of the transition from hospitals and institutions to community-based services, an increasing number of nurses are practicing in a variety of settings.^[6] Nurses, therefore, must be knowledgeable about the actual drugs and their administration, client response, drug interactions, client allergies, and related resources. Hence, the researcher felt that there is a need to conduct video-assisted teaching program (VATP) on emergency drugs to improve and update nurse's knowledge, to minimize or prevent occurrences of medication errors and increase patient safety.^[7]

Problem statement

"A study was to assess the effectiveness of VATP on knowledge regarding selected emergency pre-cardiac medications among staff nurses at selected hospital in Bangalore."

Objectives of the study

The objectives of the study are as follows:

1. To assess the existing knowledge on emergency drugs among the staff nurses by using structured knowledge questionnaire.
2. To administer VATP on emergency drugs.
3. To find the effectiveness of VATP using same structured knowledge questionnaire.
4. To find out the association between the pre-test knowledge scores and selected demographic variables such as age and gender.

The review of literature is organized under the following headings

1. Literature related to nurses' knowledge on emergency drugs and medication administration
2. Literature related to Medication errors
3. Literature related to VATP.

MATERIALS AND METHODS

An evaluative approach with one group pre-test and post-test design was used for the study. The sample consisted of 30 staff nurses, selected by purposive sampling method. Data were collected by administering structured knowledge questionnaire on emergency drugs. After collecting base line data and pre-test, VATP was given to the respondents and on the 7th-day, post-test was conducted using the same questionnaire. The collected data were analyzed using descriptive and inferential statistics.

RESULTS

1. Percentage distribution of staff nurses according to their age in completed years shows that the highest 80% of the respondents were in the age group, 21–25 years and

lowest 3.33% of respondents were between age group of 31–35 years and none of respondents from 36 years and above.

2. Distribution of staff nurses with respect to their gender shows that 70% of the respondents were females and 30% of the respondents were males.
3. Percentage distribution of staff nurses reveals that 50% of respondents were Christian, 40% of respondents were Hindu, and 10% of respondents were Muslim.
4. Percentage distribution of staff nurses reveals that 40% of respondents were GNM, 26% of respondents were B.SC, 24% of respondents were P.B.BSC, and 10% of respondents were M.SC.
5. Percentage distribution of staff nurses reveals that 46.67% of respondents were undergone in service education and 53.33% of respondents were not undergone in service education.
6. Percentage distribution of staff nurses according to their experience in completed years shows that the highest percentage 33.33% of the respondents were in the experience between ≥ 6 months and 1 year and also experience of 10% of respondents were more than 5 years.

The level of knowledge on emergency drugs among staff nurses working in Hospital.

Finding reveals that majority of respondents 70% had only average knowledge whose percentage of score ranged between (35 and 70). Only 10% of the respondents had good knowledge (70–100) and 20% of the respondents had poor knowledge (0–35) regarding emergency drugs.

The knowledge score of staff nurses on emergency drugs in pre-test and post-test reveals that post-test mean knowledge score found higher 65.67% (19.7) and SD of 0.8, when compared with pre-test mean knowledge score value which was 43% (12.9) with SD of 5.3. The mean effectiveness score was 35.73% with SD of 2.80 [Table 1].

Area-wise analysis of pre-test knowledge scores of staff nurses on emergency drugs

Area-wise highest mean percentage of knowledge scores in pre-test was 64.17% in the area of "morphine sulfate" with mean and SD 2.57 ± 0.97 . The least mean percentage of knowledge score in pre-test was 44.66% in the area of "general" with mean and SD 0.93 ± 0.74 . Area-wise highest mean percentage of knowledge scores in post-test was 93.33% in the area of "general" with mean and SD 1.87 ± 0.35 . The least mean percentage of knowledge score in post-test was 85% in the area of "dopamine hydrochloride" with mean and SD 3.4 ± 0.56 .

Table 2: shows the mean, standard deviation, and mean percentage of level of knowledge regarding emergency drugs in terms of pre- and post-test score. It was evident that pre-test had mean score 12.9 (43%) with SD of 5.3. In post-test had mean score 19.7 (65.67%) with SD of 3.8.

Table 1 : Pre-test and post-test score on emergency drugs among staff nurses area n=60

Area	Max. score	Mean	Mean %	SD	Paired 't' test
Pre-test	30	12.9	43	5.3	14.23*S
Post-test	30	19.7	65.67	3.8	
Effectiveness	30	6.8	13.7	2.67	

S-Significant at $P < 0.01$ level, df 59, t value 2.6

Table 2: Mean, SD, and mean percentage of the pre-test and post-test scores of staff nurses on emergency drugs

Domain	Max statements	Max score	Mean	Mean %	SD
Pre-test	30	30	12.9	43	5.3
Post-test	30	30	19.7	65.67	3.8

Table 3: Association between pre-test knowledge scores and demographic variables n=60

Demographic variables	χ^2 value	P value
Age group (years)	3.3 (NS)	$P > 0.05$
Gender	4.4* (S)	$P < 0.05$
Religion	1.9 (NS)	$P > 0.05$
Educational status	9.9* (S)	$P < 0.05$
In service education	10* (S)	$P < 0.05$
Years of clinical experience	1.5 (NS)	$P > 0.05$

S: Significant, NS: Non significant

Chi-square test was done to analyze the association between post-test knowledge scores and selected demographic variables [Table 3]. The study findings show that there is an association between pre-test knowledge score with demographic variable such as gender, educational status, and in-service education ($P = 0.05$). Hence, the significant association will be, by enhance, thus the null hypothesis was rejected.

DISCUSSION

Section-1: Findings related to demographic characteristics

Percentage distribution of staff nurses according to their age in completed years shows that the highest 80% of the respondents were in the age group, 21–25 years and lowest 3.33% of respondents were between age group of 31–35 years and none of respondents from 36 years and above. Distribution of staff nurses with respect to their gender shows that 70% of the respondents were females and 30% of the respondents were males. Percentage distribution of staff nurses reveals that 50% of respondents were Christian, 40% of respondents were Hindu, and 10% of respondents were Muslim. Percentage distribution of staff nurses reveals that 40% of respondents were GNM, 26% of respondents were B.SC, 24% of respondents were P.B.BSC, and 10% of respondents were M.SC. Percentage distribution of staff nurses reveals that 46.67% of respondents were undergone in service education and 53.33% of respondents were not undergone in service education. Percentage distribution of staff nurses according to their experience in completed years shows that the highest percentage 33.33% of the respondents were in the experience between ≥ 6 months and 1 year and

also experience of 10% of respondents were more than 5 years.

The first objective was to assess the knowledge level of staff nurses regarding selected emergency pre-cardiac drugs among staff nurses.

Finding revealed that the majority of respondents 70% had only average knowledge whose percentage of score ranged between (35 and 70). Only 10% of the respondents had good knowledge (70–100) and 20% of the respondents had poor knowledge (0–35) regarding emergency drugs.

Rajendra D. Lamkhede (2014) conducted an evaluative approach with one group pre-test and post-test design among 30 staff nurses, selected by convenient sampling method. Data were collected by administering structured knowledge questionnaire on emergency drugs. The study resulted that the percentage distribution of staff nurses according to their age, the highest 80% of the respondents were in the age group, gender 70% of the respondents were females, according to their experience, the highest percentage 33.33% of the respondents were in the experience between ≥ 6 months to 1, 46.67% of respondents were undergone in service education and 53.33% of respondents were not undergone in service education, 30% of respondents were undergone critical care training, and 70% of respondents were not undergone critical care training. Assessment of the level of knowledge on emergency drugs among staff nurses working in CCU finding revealed that the majority of respondents 70% had only average knowledge whose percentage of score ranged between (35 and 70). Only 10% of the respondents had good knowledge (70–100) and 20% of the respondents had poor knowledge (0–35) regarding emergency drugs. The study concluded that Video teaching program is an effective strategy for providing information and improving the knowledge of respondents.^[8]

The second objective was to evaluate the effectiveness of VATP on knowledge regarding selected emergency pre-cardiac drugs among staff nurses.

The knowledge score of staff nurses on emergency drugs in pre-test and post-test which revealed that post-test mean knowledge score found higher 65.67% (19.7) and SD of 3.8, when compared with pre-test mean knowledge score value which was 43% (12.9) with SD of 5.3. The mean effectiveness score was 35.73% with SD of 2.80.

Vinil Upendra babu (2018) conducted a pre-experimental study to assess the effectiveness of structured teaching program on knowledge regarding emergency cardiac medications among 30 nursing students at Rama College of nursing. The study reported that the total mean post-test knowledge score (17.5) was significantly higher than the mean pre-test score (11.5). Hence, the study concluded that the structured teaching program was effective in imparting knowledge regarding emergency cardiac medication.^[9]

The third objective was to find out the association between the pre-test knowledge score and the selected demographic

variables such as age, sex, type of family, and family history of cardiac problem.

Chi-square test was done to analyze the association between pre-test knowledge scores and selected demographic variables. The study findings show that there is association between pre-test knowledge score with demographic variable such as gender, educational status, and in-service education ($P = 0.05$). Hence, the significant association will be, by enhance, thus the null hypothesis was rejected.

Sheilini was conducted descriptive survey design to assess the knowledge of critical care nurses on cardiac medications among 108 critical care nurses were selected using convenient sampling technique. The data collection instruments were: Demographic proforma and structured knowledge questionnaire on cardiac medications. It was found that there was no significant association between the knowledge of critical care nurses on cardiac medications and education ($\chi^2 = 2.295$, $P = 0.317$) and clinical experience ($\chi^2 = 8.551$, $P < 0.200$).^[10]

CONCLUSION

Finding of the study showed that the knowledge of staff nurses after pre-test and before VATP was not satisfactory; the VATP helped them to learn about emergency drugs. The post-test knowledge scores showed significant increase in knowledge. Hence, VATP is an effective strategy for providing information and improving the knowledge of respondents.

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CONFLICT OF INTEREST

The author has none to declare

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