



Original Research Article

A study to evaluate the effectiveness of multidisciplinary educational approach on knowledge regarding code blue protocol management among nurses working at hospital, Koppal District

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ABSTRACT

Background: Code Blue is a unique commonly code used to sound code group for waning or cardiac arrest clients in hospital. Code blue is usually used to instruct a patient demanding restoration or in necessity of rapid medical attention, most frequently as the consequence of a respiratory or cardiac halt. Each hospital as an amount of its policies, sets a strategy to recognize which unit deals staffs of code blue attention. It is paramount for every trained nurse to have a satisfactory knowledge concerning the code blue procedure or protocol to lessen the mortality ratio particularly in critical care units.

Aim of the study: was to assess the multidisciplinary educational method on Code Blue protocol management amongst nurses employed at hospital.

Research design: In this study pre-experimental one group pre-test post-test design was used.

Sampling and sample size: Total of 60 subjects were selected by using non-randomized convenient sampling technique.

Data collection methods: Knowledge questionnaire regarding Code Blue protocol management was used to assess the knowledge of staff nurses.

Data analysis: The data were collected and analyzed by using descriptive and inferential statistics. The study result demonstrates that the knowledge before intervention was, 72% (43) of the nurses were come under poor level of knowledge, 23% (14) were represent under average level of knowledge and the minimum 5% (03) were goes under good knowledge level. Whereas after teaching, 85% (51) of the nurses were had good knowledge level, 12% (07) were got an average level of knowledge and simply 3% (02) nurses had poor knowledge. In case of association between the selected sociodemographic variables such as age, gender, educational qualification, area of working in the hospital, cadre of nurse and Mean Pre-intervention knowledge found to be non-significant at 0.05 level. Whereas in another category, i.e. in experience in nursing service found to be significant at 0.05 level, (chi-square=11.05) (p=0.025).

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1. Introduction

As a nurse employed on duty, there typically arises a time in which the ill-fated practice of patient bereavement occurs¹

and as challenging as a code blue could be, it is very significant for the staff nurses to distinguish and understand the appropriate steps that is essential to take place rapidly during emergency conditions.² A code blue is stimulated if a client found insensible or unconscious, pulseless, breathless. Nurses have an immense responsibility of identifying prompt variations in the client's status by using critical

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rational skills to support the client while the further team members shortly reach to support.^{3,4} A code blue consists of the nurse activating the code, sharing known clinical information to the team, performing chest compressions, monitoring the patient, and evaluating the entire code blue process.⁵ The strength of the client's is confidently bent on the stage passed between the cardiac stop to restoration and it's expected to be 3 to 5 minutes.⁶ Along with, till the team reaches, if possible, somebody shouting the Code Blue must commence basic life support procedure.⁷ The revitalization tools and specific medicines should be in emergency box along with the team.⁸ The healthcare professionals and hospital staff's knowledge about Code Blue and crisis circumstances would be primarily sufficient, if not, train them adequately and enhance it.⁹

2. Objectives

1. Measure the pre-intervention level of knowledge of staff nurses working at hospital regarding Code Blue protocol management.
2. Find the efficacy of Multidisciplinary Educational approach on knowledge of staff nurses about Code Blue protocol management.
3. Find the association between the mean pre-manipulation knowledge score on Code Blue protocol management among nurses and selected demographic variables.

2.1. Null hypothesis

1. H₀₁: There will be no significant change in level of knowledge of nurses between before and after intervention on Code Blue protocol management.
2. H₀₂: There will be no significant association between selected demographic variables and mean pre-manipulation knowledge score of staff nurse.

3. Materials and Methods

In this investigation, the investigator expected at estimating the efficacy of 'Multidisciplinary educational approach' on knowledge about 'Code Blue protocol management' among nurses. quantitative research approach and pre-experimental designed was preferred with one group pre-test and post-test was used in the current investigation. The research was done at selected hospitals. A total of 60 staff nurses working at all general and critical care units were selected by using non-probability convenient sampling technique. The researcher used two instruments for the relevant data collection i.e. selected socio-demographic variables and structured knowledge questionnaire on code blue protocol. Before the educational approach collected the data using the research tool followed by intervention and post-test was conducted on seventh day after the intervention using the same tool. Questionnaires were categorized into three

groups in the knowledge aspect poor, average, and good knowledge based on their score. The collected data were computed by descriptive and inferential statistical methods. The investigator obtained written permission from the concerned authority.

4. Results

Table 1: Frequency and percentage distribution of staff nurse according to demographic variables. [n=60]

Sl. no	Demographic variable	Frequency (f)	Percentage (%)
1	Age (in years)		
	22-25	13	22
	26-29	17	28
	30-33	12	20
2	Above 33	18	30
	Gender		
	Male	28	47
	Female	32	53
3	Educational Qualification		
	GNM	27	45
	B.Sc. (N)	19	32
	M.Sc. (N)	14	23
4	Are of working in the Hospital		
	General ward	36	60
	Critical Care Unit	24	40
5	Cadre of nurse		
	Staff Nurse	29	48
	Ward In charge	31	52
6	Experience in nursing service		
	1-5 years	22	37
	6-10 years	23	38
	Above 10 years	15	25

Illuminates that 30% (18) majority nurses fall in the above 33 years' age, 28% (17) nurses were 26-29 years, 22% (13) were 22-25 years and the smallest i.e. 20% (12) were in the of 30-33 years' age group. 53% (32) of nurses were female and 47% (28) subjects were male. Majority 45% (27) were completed their nursing education in GNM and remaining 32% (19) and 23% (14) had B. Sc nursing and M. Sc nursing qualification respectively. 60% (36) of nurses were working in general ward and 40% (24) were having their duty in critical care unit. 52% (31) were working as ward in charge whereas 48% (29) had their duty in the critical care unit. Majority 38% (23) of nurses were having 6-10 years of experience in clinical service and residual 37% (22) were having 1-5 years and 25% (15) of staff nurses were belongs to more than 10 years of experience.

The data in the Table 2 shows that in the Pre-test knowledge score, 72% (43) of the staff nurses were having poor, 23% (14) were fall under average and 5% (03)

Table 2: Staff nurse's frequency and percentage distribution as per before and after intervention knowledge level [n=60]

Knowledge level	Score	Pre-intervention		Post-intervention	
		Frequency	Percentage	Frequency	Percentage
Poor	0-7	43	72	02	03
Average	8-14	14	23	07	12
Good	15-21	03	05	51	85
Total		60	100	60	100

Table 3: Comparison between mean pre and post-intervention knowledge scores of nurses regarding Code Blue protocol management. [n=60]

Level of knowledge	Mean	Mean difference	SD	Calculated "t" value	df	Critical Value	P value
Pre test	7.38		3.77				
Post test	16.97	9.59	3.52	-16.05	59	2.00	0.00001

Table 4: Association of nurse's knowledge before intervention and selected demographic variables.[n=60]

Sl. no	Demographic variable	(f)	Pretest level of knowledge			Chi square	df	P value	Inference
			Poor	Average	Good				
1	Age (in years)								
	22-25	13	12	1	00				
	26-29	17	10	6	1	4.39	3	0.221	NS
	30-33	12	09	2	1				
	Above 33	18	12	5	1				
2	Gender								
	Male	28	20	8	0	0.0015	1	0.969	NS
	Female	32	23	6	3				
3	Educational Qualification								
	GNM	27	22	4	01	4.68	4	0.32	NS
	B.Sc. (N)	19	14	4	01				
	M.Sc. (N)	14	07	6	01				
4	Area of working in the Hospital								
	General ward	36	29	05	2	4.48	2	0.10	NS
	Critical Care Unit	24	14	09	1				
	Cadre of nurse								
5	Staff Nurse	29	24	5	00	3.40	1	0.06	NS
	Ward In charge	31	19	9	3				
6	Experience in nursing service								
	1-5 years	22	19	2	1				
	6-10 years	23	18	4	1	11.05	4	0.025	S
	> 10 years	15	06	8	1				

S = Significant NS = Non-significant

were come under good knowledge level. In the Post-manipulation, 85% (51) of nurses were in the Good, 12%(07) were average and 3% (02) were having poor level of knowledge.

Data shown in the Table 3 describes the Mean score before manipulation was ± 7.38 and the standard deviation was ± 3.77 whereas after intervention Mean score was ± 16.97 and SD was ± 3.52 . The mean difference was ± 9.59 . The calculated 't' value ± 16.05 which is a greater value compared to the critical value i.e., 2 at the degree of freedom

59, which depicts that significance ($p=0.00001$) at the 0.05 level. Therefore, the first null hypothesis was rejected. This research result shows that the teaching strategy i.e. 'multidisciplinary educational approach' was having effect in enhancing knowledge of nurses on 'Code Blue protocol management.

The above that the association between the selected sociodemographic variables such as age, gender, educational qualification, area of working in the hospital, cadre of nurse and Mean Pre-test knowledge score found

to be non-significant at 0.05 level because each computed value of sociodemographic variables was smaller than table value. This result showed that null hypothesis was accepted. But experience in nursing service category was significant at 0.05 level, (Chi-square=11.05) ($p = 0.025$) this results showed that second null hypothesis was rejected.

5. Discussion

Code blue in the hospital is very much paramount to provide an emergency treatment to the critically ill patients.¹⁰ This study was aimed to appraise the knowledge of staff nurses about code blue using “multidisciplinary educational approach” and to associate the knowledge of nurses before manipulation and demographic variables. Pre experimental research design was used to evaluate the knowledge of nurses working in the hospitals. The results of the study revealed that the posttest knowledge was more comparing to the pretest knowledge. This completely showed that the multidisciplinary educational approach has a good impact on nurse’s knowledge. In other side of objective related to pretest knowledge and demographic variable revealed that, only the experience of the nurses is associated to it comparing to other selected demographic variables.

6. Conclusion

Nurses knowledge is very much important to provide effective care to the any type of patients.¹¹ There are many methods of teaching and learning in the educational sectors.¹² Among these methods multidisciplinary educational approach is foremost method in enhancing nurse’s knowledge related to code blue protocol management.¹³ This study represents that’s the more and more education using multidisciplinary approach is an important aspect of education in enhancing the nurse’s knowledge. So that the nurses will able to treat the critically ill patient effectively.¹⁴

7. Source of Funding

None.

8. Conflict of Interest

None.

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