Effectiveness of Structured Teaching and Demonstration Programme on Knowledge and Performance of BLS among Care Givers of MI Patients

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ABSTRACT

Introduction: Cardiac arrest is one of the leading causes of death in India. Over 80% of deaths in India are due to heart diseases and 50% of people who suffer cardiac arrest die as they are not able to reach the hospital within an hour.[2] The chances of survival after cardiac arrest is increased when the event is witnessed and bystander initiates Basic life support before the arrival of emergency services.[1]

Methodology: A quasi experimental post test only design was used. Purposive sampling technique was used to select 40 care givers of MI patients, 20 each in experimental and control group. A structured teaching and demonstration programme was administered to the experimental group. On 5th day knowledge and performance was assessed in both the groups.

Results: The mean knowledge and performance score of experimental group was higher than the control group and t value was significant at 0.05 level.

Conclusion: The structured teaching and demonstration programme on BLS for care givers of MI patients was effective. The health professionals educate all care givers of cardiac patients on basic life support. So that life saving effort can be initiated at home itself before shifting to the hospital,.

Key words: Basic life support (BLS), Care givers, Myocardial infarction (MI) patients.

INTRODUCTION

Cardiac arrest is one of the leading causes of death in India. Over 80% of deaths in India are due to heart diseases and 50% of people who get heart attack die as they are not able to reach the hospital within an hour.[2] To improve the outcome of sudden cardiac arrest one must initiate early reorganization of warning signs, early activation of emergency medical system, early initiation of cardiopulmonary resuscitation (CPR) and early defibrillation.[3]

Basic life support (BLS) involves the external support of circulation and ventilation for a patient with cardiac or respiratory arrest through cardio pulmonary resuscitation (CPR). If cardiac arrest occurs out-of-hospital settings, the chances of survival are very less. In such situation, if an early initiation of cardio pulmonary resuscitation is done by individuals, the survival rate can be improved substantially.[4]

Basic life support (BLS) is the provision of treatment designed to maintain adequate circulation and ventilation to the patient with

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cardiac arrest without the use of drugs or specialist equipment.[5] It is a first level of resuscitation that can be used in an emergency situation until victims are placed into the care of medical professionals. A proper first aid management, in the right time will save the valuable life. Every year a huge number of deaths occur around the globe due to lack of emergency management in sudden cardiac death. Good knowledge on Basic Life Support and emergency management during cardiac arrest will save the life of many people. A study conducted at west-mead, Australia on knowledge and attitude towards pediatric resuscitation among 348 care givers showed that, their knowledge was poor and 64% of them were willing to perform CPR on a stranger.[6] The present study was under taken evaluate the effectiveness of structured teaching and demonstration programme among care givers of MI patients.

Objectives

1. To assess the knowledge of Basic Life Support among care givers of MI Patients.
2. To assess the Performance of Basic Life Support among care givers of MI patients.
3. To evaluate the effectiveness structured teaching and demonstration program on knowledge and performance of BLS among care givers of MI patients.
4. To find out the association between knowledge and performance scores on BLS among care givers of MI patients with their selected socio-demographic variables.

METHODOLOGY

This study was based on Ludwig Von Bertalanfy's general system theory. The design used for the study was quasi experimental post test only design. Tools used for the study were a structured knowledge questionnaire and a performance check list on steps of basic life support. It was translated to Kannada since the study participants communication and understanding were only in Kannada. The tools were validated by eight subject and research experts for its adequacy and appropriateness. After obtaining an ethical clearance from an institutional ethical committee, permission was obtained from the administrator of R.L.Jalappa Narayana Hrudayalaya hospital and research centre, Tamaka, Kolar. Purposive sampling technique was used to select 40 care givers. They were randomly allocated to experimental (20) and control (20) group. The inclusion criteria of care givers included those within the age group of 21 to 60 years, able to understand Kannada language and willing to participate in the study. Care givers belonging to medical and paramedical profession and who had undergone BLS training were excluded from the study. Informed consent was taken from caregivers. Care givers in experimental group were given teaching and procedure of BLS was demonstrated by using black board, charts, flash cards and CPR manikin. No teaching was provided to the control group. On the fifth day knowledge and performance of Basic life support was assessed in both experimental and control group. The collected data were analyzed manually.

RESULTS

I. Socio-demographic variables of care givers

Majority (45% in experimental and 35% in control group) of care givers belonged to the age group of

31-40years, most (55% in experimental and 85% in control group) were married, majority (60% in experimental and 65% in control group) came from rural area and 90% of care givers in the experimental and 75% in control group belonged to nuclear family (Table 1).

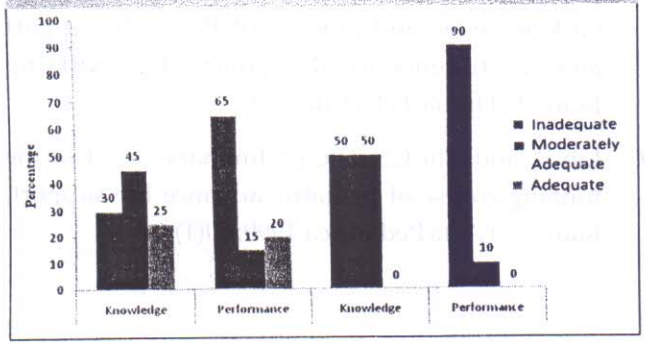
Table 1: The socio-demographic variables of care givers of M.I. patients n=40

Variables	Care givers of M.I. patients			
	Experimental group (n=20)		Control Group (n=20)	
	f	%	f	%
Age (31-40 yrs)	9	45	7	35
Male	12	60	14	70
Married	11	55	17	85
Rural area	12	60	13	65
Nuclear family	18	90	15	75
Patient spouse	11	55	7	35
Patient brother/sister	3	15	7	35
Secondary education	11	55	7	35
Private employee	5	25	10	50
Self employed	10	50	1	5

II. Knowledge and performance score on basic life support among care givers

Based on overall knowledge/ performance score obtained by care givers of MI patients, they were grouped under inadequate knowledge/ performance (who scored below 50%), moderately adequate knowledge/ performance (who scored 50 to 75%) and adequate knowledge/ performance (who scored 76% and above). Figure1

Figure 1: Distribution of care givers according to their level of knowledge and performance scores on BLS



III. Effectiveness of knowledge and performance of BLS among care givers of MI patients

The overall mean knowledge score of experimental group was apparently higher (M=9.3±2.79) than control group (M=7.6±2.31). Also the overall mean performance score of experimental group was higher (M=8.05±3.28) than control group (M=5.8±2.23). The obtained t value was greater than the table value indicating that, there were difference between experimental and control group scores which were statistically significant at 0.05 level.

Table 3: Mean, SD Independent t value of knowledge and performance scores of care Givers of MI patients n=40

Variables	Experimental group n=20		Control group n=20		Independent t value	$t_{(tab)}$
	Mean	SD	Mean	SD		
Knowledge	9.3	2.79	7.6	2.31	2.10	2.02*
Performance	8.05	3.28	5.8	2.23	2.75	2.02*

*Significant at 0.05 level

IV. Association of knowledge and performance scores with selected socio-demographic variables of care givers

There was no association between knowledge as well as performance score with selected socio-demographic variables like age, gender, marital status, place of residence, type of family, relation with patient and type of job except educational status which was significant at 0.05 level.

DISCUSSION

Present study was undertaken among care givers of myocardial infarction patients. The socio-demographic variables of care givers in this study were similar to the subjects in other similar

studies[7] with respect to the age, gender, marital status, educational status and occupation. It is interesting to know that majority (60% in experimental and 70% in control group) of care givers were male, aged between 31-40 years, most of the caregivers (90% in experimental and 75% in control group) belonged to nuclear family and were residing (60% in experimental and 65% in control group) in rural area.

The overall mean knowledge and performance score of experimental group was apparently higher than control group and t value was significant at 0.05 level indicating that structured teaching and demonstration programme on BLS was effective in increasing the knowledge and performance score among care givers of MI patients and the same was also observed in similar studies (8,9).

CONCLUSION

The present study concluded that, structured teaching and demonstration programme was effective in improving the knowledge and performances score on Basic life support among care givers of MI patients.

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Section –III: Association between level of knowledge on anemia and malnutrition with selected socio demographic variables.

Chi-square was used to determine the association between the level of knowledge score and selected socio demographic variables. It is found that there is no association between knowledge scores selected socio demographic variables.

4. Discussion

In present study total 06 socio demographic variables were there, out of 60 adolescent girls 40% adolescent girls are in the age group of 11 years,88.34% of adolescent girls diet pattern mixed diet, 60% of adolescent girls comes from nuclear family, 63.34% of adolescent girls mother educational status is less then SSLC and main occupation of their mother is 80% self employee and 36.66% of adolescent girls family income is>10000/month. Regarding level of knowledge 70% adolescent girls were having inadequate knowledge on anemia and malnutrition and prevalence of anemia out of 60 samples 24 of them were with moderate anemia and only 14 of them with normal HB%. With regard to malnutrition, out of 60 samples 14 members with normal weight for their age and 12 samples were with severe malnutrition.

It is found that from the entire socio demographic variable there is no association between knowledge scores with selected socio demographic variables. So null hypothesis (Ho2) was accepted for these variables.

5. Conclusions

The overall finding of the study reveals that early adolescent girls were having lack of knowledge regarding anemia and malnutrition, and prevalence of anemia and malnutrition is also high among this age group, hence there is a need to educate the adolescent girls regarding anemia and malnutrition to improve their knowledge and develop healthy life skills.

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