



EFFECT OF STRUCTURED TRAINING MODULE REGARDING RESUSCITATION GUIDELINES ON KNOWLEDGE AND ATTITUDE AMONG HEALTH CARE PERSONNEL'S IN A VIEW TO IMPROVE QUALITY OF CPR: A PRE EXPERIMENTAL STUDY

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ABSTRACT

Cardio-pulmonary Resuscitation (CPR) is life saving measure which is needed for individuals who face sudden cardiac arrest. A pre experimental study was conducted to assess the effect of structured training module regarding resuscitation guidelines on knowledge and attitude among health care personnel's in a view to improve quality of CPR knowledge. The study was conducted among crash call team members (n=70). Study was conducted at Primary Health Care Centre's under Dubai Health Authority. After obtaining ethical clearance and written informed consent from study subjects; the researcher personally went to the workstation of the study subjects and got the knowledge questionnaire filled by the subjects who were recruited using non probability sampling techniques. An attitude scale was used to assess the attitude towards performing CPR effectively. Attitude on analysis revealed that majority of subjects have positive attitude towards CPR as a lifesaving procedure. The results revealed that the mean \pm SD of the overall knowledge scores on pretest was 11.45 ± 2.67 . A validated structured training module was provided with video assistance in group. After seven days of intervention post test was conducted using the same tools. Post test scores revealed a mean knowledge score of 16.73 ± 1.62 . There was no association between the knowledge scores of the respondents and 'age' (p=0.936) and 'gender' (p=0.539). However, there was a statistically significant association between the pretest knowledge scores and the year of experience of the respondents (p=0.013). The knowledge of the nurses was found to be adequate after training session.

KEYWORDS : Cardio-pulmonary resuscitation, Knowledge, training on CPR Nurses.

Introduction

Cardiac arrest is a medical emergency. If not treated immediately, it causes sudden cardiac death. With fast and appropriate medical care, survival is possible. SCA is classified as in-hospital and out-of-hospital. Cardiopulmonary resuscitation (CPR) is an evolving lifesaving technique of modern medicine that comprises a series of lifesaving actions that improve the survival rates following SCAs. In earlier days, CPR training was meant only for health care professionals. Later, it was noticed that many of these events occurred outside the hospital setting and that early CPR need to be performed by the bystanders who witnessed the event.

Doctors and nurses are an integral part of the healthcare system and are perceived to be knowledgeable in providing institutional care to the patients. Cardio-pulmonary Resuscitation (CPR) is an important medical procedure which is needed for individuals who face sudden cardiac arrest. It is a combination of rescue breathing and chest compressions which is delivered to the victims who are thought to be in cardiac arrest. In-hospital cardiac arrest carries a poor prognosis. Any delay in activating the crash call team due to multiple factors may jeopardize survival. Nursing staff often works at multiple sites and a sometimes lack in confidence and knowledge may contribute to delayed activation of the resuscitation team.

Hence, CPR is said to be a skill for all people. Quality of life is also found to be better for victims who immediately receive bystander CPR even in the absence of professional assistance. Studies have shown that immediate CPR after collapse due to ventricular fibrillation doubles or even triples the chances of survival. In contrast, survival chances decrease by 7%–10% for every min CPR is delayed.

Many times, the doctor may not be present near the patient and hence the nurses are expected to provide this emergency care. To perform the procedure in a meticulous manner, the nurses should be knowledgeable and they should have expertise in the procedure. Contrary to their roles, studies from different countries have reported a poor knowledge among

the nurses regarding CPR. As part of a PhD program researcher is doing this study to find out the effect of a structured training module on level of knowledge and attitude among crash call team members.

Materials and methods

This study adopted a pre experimental research design to assess the effect of structured training module regarding resuscitation guidelines on knowledge and attitude among health care personnel's in a view to improve quality of CPR knowledge. The study was conducted among crash call team members (n=70). Study was conducted at Primary Health Care Centre's under Dubai Health Authority. After obtaining ethical clearance and written informed consent from study subjects; the researcher personally went to the workstation of the study subjects and got the knowledge questionnaire filled by the subjects who were recruited using non probability sampling techniques. An attitude scale was used to assess the attitude towards performing CPR effectively. Attitude on analysis revealed that majority of subjects have positive attitude towards CPR as a lifesaving procedure. Inclusion and exclusion criteria considered as all crash call team members who were on available on duty during the study period were enrolled. A self-designed questionnaire was used in the study. The knowledge questionnaire had 20 questions. This questionnaire was developed by the researchers in consultation with an expert in BLS/ACLS training. Attitude was assessed with the help on an attitude scale with 13 items which reveals attitude as having positive and negative attitude towards the phenomenon. Content validity was carried out through discussion among the researchers and the experts. After obtaining ethical clearance and informed consent from study subjects; the researcher personally went to the workstation of the study subjects and got the questionnaire filled by the nurses. Adequate time (nearly 30 minutes) was given to each respondent for filling the questionnaire and attitude scale. A validated structured training module with latest resuscitation guidelines was provided with video assistance in group. The correct answers were given a score of '1' and wrong answers were given a score of '0', thus making the total possible score

as '20'. The SPSS version 21 was used to carry out the statistical analysis. Appropriate statistical test was used to compare the mean scores pretest and posttest with the respondent's demographic variables.

Results

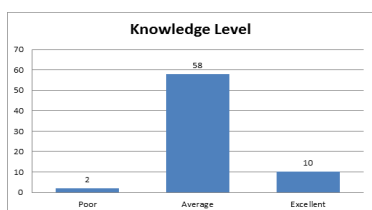
• Socio demographic data

Demographic details of the respondents: 70 of them filled the questionnaire and all of subjects were females. A high percentage (84.29%; n=59) of them belonged to the age group of 30-35 years and the mean ± SD age of the respondents was 22.07 ± 2.30 years. The duration of experience of the respondents varied and the mean ± SD duration of experience was 11.45 ± 2.67 month.

• Pretest level of knowledge regarding CPR among crash call team members and attitude towards CPR.

The mean ± SD of the overall total scores was 11.45 ± 2.67. There was no association between the knowledge scores of the respondents and 'age' (p=0.823) and 'duration of experience' (p=0.239). However, there was a statistically significant association between the knowledge scores and the area of work of the respondents (p=0.013). Regarding attitude as majority (93%) subjects had a positive attitude towards CPR.

Figure 1: Bar diagram showing level of knowledge among subjects in pretest. (n=70)



• Posttest level of knowledge

Post test was conducted seven days post intervention. Data was collected using the same knowledge questionnaire and attitude scale. Post test scores revealed a mean knowledge score of 16.73 ± 1.62. Paired t test was done to analyze the difference in scores and it revealed a statistically significant difference in pretest and post test scores. There was no association between the knowledge scores of the respondents and 'age' (p=0.936) and 'gender' (p=0.539). There was no further change in attitude as majority (93%) subjects had a positive attitude towards CPR. However, there was a statistically significant association between the pretest knowledge scores and the year of experience of the respondents (p=0.013).

Table 1: Mean, SD, t value and p value

Scores	Mean	SD	t value	p value
Pre test	11.45	2.67	13.86	0.031*
Post test	16.73	1.62		

*Significant at p value <0.05

Discussion

The present study evaluated the effect of structured training module regarding CPR guidelines on knowledge and attitude of crash call team towards CPR (a technique that needs to be mastered by any nurse) in health care settings in Dubai. In general, pretest knowledge was found to be good, as was suggested by a mean ± SD total score of 11.45 ± 2.67; the maximum possible total score being 20. After the training there was a significant improvement in level of knowledge. The findings showed a majority of subjects have average percentage of knowledge among the respondents. Nurses take care of the patients when the doctor is not present in the unit and also in the community settings, the nurses have to

play a major role in the emergency handling of the patients. Thus, CPR becomes a fundamental requirement of any nurse. In general, the knowledge scores of the crash call team were found to be low in pretest. Only very few nurses could answer the questions like the 'CPR ratio of an adult', the 'CPR ratio of an infant', etc. Our findings were similar to the findings from few other countries as well. A study from Bahrain (Marsooq, 2009) had documented a poor knowledge among the nurses regarding CPR. It was also found that the ones with less qualification and experience had poor knowledge.

Another study from the Hainan province of China (Gayath, 2007) evaluated the community nurses knowledge on CPR and found them lacking in the essential knowledge. The authors also found the nurses from the rural areas to possess a still lower knowledge. However, our study was conducted only in limited number of subjects and hence cannot be compared with the findings of this study.

The results of this study need to be discussed with the in-service educators and appropriate training in the vital areas has to be instituted for the practicing nurses.

Recommendations

The study results revealed an average level of knowledge among majority of health care members working in Health Centre's; however it will be beneficial for the facilitators if the training program with training module must continue in a regular basis instead of keeping it into a two year limited period. If the mock drill sessions, training programs and provision of instructional modules on a regular and mandatory basis it will be effective in upgrading knowledge, skill, attitude and practice of nurses and concerned staff along with an overall upliftment of health centres.

Conflict of Interest: Nil
Funding: Self

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