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Original Article

Effectiveness of an Educational Program of Cardiopulmonary Resuscitation on Knowledge and Practice among the Security Personnel in Selected Tertiary Hospital, Meghalaya

Alila Jamir[1], Namita Sinha[1], L. Anand[2], Badondor Shylla[3]

[1]Department of Medical Surgical Nursing, College of Nursing, NEIGRIHMS, Shillong, Meghalaya, India, [2]Department of Medical Surgical Nursing, College of Nursing, AIIMS, Bhubaneswar, Odisha, India, [3]Department of Public Health, Indian Institute of Public Health Shillong, Shillong, Meghalaya, India

Abstract

Introduction: In a situation of sudden cardiac arrest, time is one of the most critical elements between life and death. If cardiopulmonary resuscitation (CPR) is performed correctly within critical timelines, it increases the chances of survival of the victim. Hence, it is imperative that the early responders should be aware of the correct procedure and critical timelines. A structured education program of CPR to security personnel can help in increasing awareness and improve the sensitivity of handling sudden cardiac arrest emergencies.

Aim of the Study: The aim of this study was to assess the effectiveness of an educational program of CPR among the security personnel.

Methodology: One group, pre-test, post-test design, quasi-experimental study was used. The data collection period was 1 month. Simple random sampling technique was used to select 72 samples. Data were collected using structured questionnaire and checklist.

Results: The mean knowledge score in pre-test was 17.3 and in post-test was 24.3. The standard deviation (SD) for pre-test is 3.75 and SD for post-test was 4.35. Paired *t*-test value is −13.54 ($P < 0.01$) with confidence interval (−8.07 and −6.00). The mean practice score in pre-test is 0.069 and in post-test is 12.86. The SD for pre-test is 0.254 and SD for post-test is 2.45. Wilcoxon's signed-rank value is −7.37 ($P < 0.01$), which shows that there is a significant difference in knowledge and practice score after the education program. Chi-square results show no association of demographic variables with knowledge and practice score.

Conclusion: Effectiveness of the training program was found. The program was useful to the security personnel, which will enable them to take prompt decisions, perform cardiopulmonary resuscitation, and save many lives of out-of-hospital cardiac arrest victims.

Keywords: Cardiopulmonary resuscitation, educational program, effectiveness, security personnel

Introduction

According to the WHO, heart disease is the world's foremost killer claiming approximately 17.5 million lives every year. About every 29 s, an Indian dies of heart problem. As many as, 20,000 new heart patients develop every day. In India, 9 crore people suffer from heart disease and 30% more are at high risk. Sudden cardiac arrest is a major public health problem. Various studies have estimated that, by 2020, close to 60% of cardiac patients worldwide will be Indian. Moreover, cardiovascular diseases will be 30% of all deaths caused in India.[1,2]

About 70% of all out-of-hospital cardiac arrests happen at home and victims die before reaching the hospital.[3] Only 46% of out-of-hospital sudden cardiac arrest victims receive bystander cardiopulmonary resuscitation (CPR).[4] If CPR is started within 3–5 min of collapse, a person has 49–75% more chance of survival.[4] In most cases, the time interval from

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Address for Correspondence:
Badondor Shylla, Epidemiologist and Project Coordinator, CSCMI, Indian Institute of Public Health Shillong, Lawmali, Pasteur Hill, Shillong - 793001, Meghalaya, India. Phone: +91 9774567798/0364 2592014. E-mail: badonshylla14@gmail.com