International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

Effectiveness of Video-Assisted Teaching on Knowledge Regarding Cardiopulmonary Resuscitation Among Volunteers in Selected Non-Government Organizations, Bengaluru

Mailari Karabeer[1]

[1]M.Sc. Nursing, Department of Medical-Surgical Nursing, Government College of Nursing, Fort, Bengaluru – 560002, Karnataka, India
Email: *mailarikarabeer[at]gmail.com*

Abstract: ***Background: Cardiopulmonary Resuscitation (CPR) is a vital lifesaving procedure that can double or even triple survival rates following cardiac arrest if administered promptly. Despite its importance, awareness and competency levels among laypersons remain low. This study aimed to assess the effectiveness of a Video-Assisted Teaching Programme (VATP) on improving knowledge regarding CPR among volunteers in selected non-government organizations (NGOs) in Bengaluru. Methods: A pre-experimental one-group pre-test post-test design was used. Sixty volunteers were selected through convenient sampling. A structured knowledge questionnaire assessed CPR knowledge before and after the intervention. The VATP included audiovisual demonstrations based on the American Heart Association (AHA) guidelines. Data were analyzed using descriptive and inferential statistics, including paired t-tests and chi-square tests. Results: The mean pre-test knowledge score was 17.8%, which improved significantly to 72.1% in the post-test after the intervention, showing a 54.3% gain in knowledge. The calculated t-value was 24.62 ($p<0.001$), indicating a statistically significant difference between pre-test and post-test knowledge scores. No significant association was found between pre-test knowledge and demographic variables such as age, gender, family type, and income. Conclusion: The findings revealed that the video-assisted teaching programme was highly effective in enhancing knowledge regarding CPR among volunteers. Integrating visual and interactive learning strategies in community education initiatives can substantially improve preparedness for cardiac emergencies.***

Keywords: Cardiopulmonary Resuscitation, Video-Assisted Teaching, Volunteers, Knowledge, CPR, NGOs

1. Introduction

Cardiopulmonary Resuscitation (CPR) is a crucial lifesaving technique employed during cardiac arrest to maintain cerebral and coronary perfusion until spontaneous circulation can be restored. The World Health Organization (WHO) identifies cardiovascular diseases as the leading cause of mortality worldwide, accounting for an estimated 17.9 million deaths annually. In India, approximately 4.77 million deaths are attributed to cardiovascular disease each year. Early CPR initiation by bystanders can increase survival rates by two to three times; however, lack of knowledge and hesitation often delay prompt intervention.

Volunteers in Non-Government Organizations (NGOs) frequently engage in community service and emergency support, positioning them as critical responders in out-of-hospital emergencies. Video-Assisted Teaching Programmes (VATP) offer a dynamic educational approach that combines auditory and visual elements, enhancing comprehension and retention of CPR skills. This study was designed to evaluate the effectiveness of a VATP on knowledge regarding CPR among volunteers in selected NGOs in Bengaluru.

2. Objectives

1) To assess the existing knowledge regarding cardiopulmonary resuscitation among volunteers in selected NGOs, Bengaluru.
2) To evaluate the effectiveness of a video-assisted teaching programme on knowledge regarding CPR among volunteers.
3) To determine the association between pre-test knowledge scores and selected demographic variables.

3. Materials and Methods

Research Design: The study adopted a pre-experimental one-group pre-test post-test design.

Setting: Selected Non-Government Organizations in Bengaluru.

Population: Volunteers aged 18–50 years associated with NGOs.

Sample Size: 60 volunteers selected through convenient sampling.

Tool: Structured knowledge questionnaire on CPR based on AHA 2020 guidelines, comprising 30 multiple-choice questions.

Intervention: A 45-minute Video-Assisted Teaching Programme that demonstrated CPR steps, compression techniques, and emergency response sequence.

Data Collection Procedure: Pre-test was conducted, followed by the VATP session. A post-test was administered after seven days.

Data Analysis: Descriptive statistics (mean, standard deviation, percentage) and inferential statistics (paired t-test, chi-square) were applied using SPSS software.

4. Results

The findings of the study are summarized below:

Table 1: Comparison of Pre-Test and Post-Test Knowledge Scores on CPR (N=60)

Test	Mean Score (%)	Standard Deviation	t-value (p<0.05)
Pre-test vs Post-test	17.8 vs 72.1	4.32 vs 6.15	24.62*

*Significant at 0.001 level

Table 2: Distribution of Respondents by Level of Knowledge (N=60)

Level of Knowledge	Pre-test (%)	Post-test (%)
Inadequate	65.0	0.0
Moderate	35.0	25.0
Adequate	0.0	75.0

The analysis revealed a marked increase in knowledge after the intervention. The mean post-test knowledge score was significantly higher (M=72.1, SD=6.15) compared to the pre-test mean score (M=17.8, SD=4.32). The computed t-value (24.62) exceeded the critical value (p<0.001), confirming the effectiveness of the video-assisted teaching programme.

5. Discussion

The results demonstrated that the video-assisted teaching programme significantly improved knowledge regarding CPR among volunteers. This aligns with prior studies by Dixit et al. (2010) and Yildirim and Correia (2015), who found that structured educational interventions enhance CPR competency and retention. The increase in mean knowledge scores suggests that audiovisual methods promote better understanding and recall than traditional lecture-based methods.

The absence of a significant association between demographic variables and pre-test knowledge scores indicates that the intervention was effective across all subgroups, regardless of age, education, or background. These findings support the integration of video-based CPR training modules within NGO and community health programmes to foster widespread CPR literacy.

6. Conclusion

The study concluded that video-assisted teaching is an effective pedagogical strategy for enhancing CPR knowledge among volunteers. Post-intervention improvements indicate substantial gains in conceptual understanding and procedural awareness. Incorporating audiovisual aids into public health education can bridge gaps in knowledge dissemination and empower community responders to act confidently during cardiac emergencies.

7. Recommendations

1) Video-assisted teaching programmes should be incorporated into regular NGO volunteer training sessions.
2) Similar educational interventions should be implemented among school teachers, students, and the general public.
3) Future studies should assess the long-term retention of CPR knowledge and include skill-based evaluations.
4) Government health agencies should promote CPR training awareness campaigns using multimedia platforms.

References

[1] American Heart Association. (2020). Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation, 142(16), S337–S357.
[2] Dixit, S., Shukla, H., Bhagwat, A., et al. (2010). A study to evaluate mobile phone dependence among students of a medical college and associated health risks. Indian Journal of Community Medicine, 35(2), 339–341.
[3] Yildirim, C., & Correia, A. P. (2015). Exploring the dimensions of nomophobia: Development and validation of a self-reported questionnaire. Computers in Human Behavior, 49, 130–137.
[4] King, A. L. S., Valença, A. M., Silva, A. C., et al. (2013). Nomophobia: Dependency on virtual environments or social phobia? Computers in Human Behavior, 29(1), 140–144.
[5] Gezgin, D. M., Cakir, O., & Yildirim, S. (2018). The relationship between levels of nomophobia and social anxiety among university students. The Journal of International Social Research, 11(59), 176–183.
[6] Kouwenhoven, W. B., Jude, J. R., & Knickerbocker, G. G. (1960). Closed-chest cardiac massage. JAMA, 173(10), 1064–1067.
[7] Vu, T. T., Rydland, K. J., Achenbach, C. J., Van Horn, L., & Cornelis, M. C. (2021). Dietary behaviors and incident SARS-COVID-19 in the UK Biobank. Nutrients, 13(6), 2114.
[8] Habas, K., Nganwuchu, C., Shahzad, F., et al. (2020). Resolution of coronavirus disease 2019 (COVID-19). Expert Review of Anti-infective Therapy, 18(12), 1201–1211.