

A STUDY TO EVALUATE THE EFFECTIVENESS OF THE VIDEO-ASSISTED TEACHING PROGRAM ON ATTITUDE REGARDING CARDIOPULMONARY RESUSCITATION TECHNIQUES AMONG HIGH SCHOOL STUDENTS IN A SELECTED SCHOOL, IN KERALA.

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ABSTRACT

Training in first aid is a way to improve the initial response of bystanders in the event of a sudden injury or illness, prior to the arrival of medical professionals. Cardiopulmonary resuscitation (CPR) by bystanders is essential for increasing the survival rate and brain function of a cardiac arrest patient. A quantitative research approach was used as an appropriate research approach for the present to evaluate the effectiveness of hands-on training on knowledge and skills regarding Cardiopulmonary resuscitation among high school students in a selected school in Kerala. A one-group pretest-posttest experimental study design was adopted in the study. This study will be conducted in a selected higher secondary school. There are almost 250 students Population. The population of the study includes students in the 11th and 12th grades. The sample size for the present study is 100. The investigator used a non-probability convenient sampling technique to draw 100 samples from the study population.

Key Words : video assisted program, high school students, Cardiopulmonary resuscitation (CPR).

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INTRODUCTION

In 2015, the WHO endorsed "Kids Save Lives," a project to reduce cardiac arrest mortality, where children were taught CPR in schools, which led to higher rates of CPR and thus higher survival rates. (Merchant et al., 2020) Similarly, the AHA guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care (2020) highlighted CPR training in schools as an effective approach to improving bystander CPR rates. 2

("Importance and Implementation of Training in Cardiopulmonary Resuscitation and Automated External Defibrillation in Schools," 2011) In 2003, the International Liaison Committee on Resuscitation (ILCOR) strongly advised that CPR instruction be introduced into the curriculum. The advice was supported in part by the belief that CPR-trained children considerably increase the number of CPR-trained adults in a community over time. The anticipated direct advantage of increasing the number of CPR-trained individuals is an increase in the probability that an OHCA victim will receive CPR promptly. This suggests that bystanders trained in CPR are more likely to intervene than those who are not, a notion backed by data from research in which bystanders at the scene of OHCA were interviewed. Prior CPR training was a major predictor of whether bystanders performed CPR on the victim, as was CPR training within the past 5 years. 3

REVIEW OF LITERATURE

(Hung et al., 2017) In a tertiary college, a cross-sectional survey using convenience sampling was carried out. In the months of September through October 2015, 506 paper copies of a well-verified survey were delivered. In this research, the participants agreed that taking CPR classes was essential and had a strong desire to provide CPR when necessary. There are other ways than the traditional instructor-led, face-to-face skills training to learn CPR. Another idea for addressing the shortage of time for CPR instruction is self-directed online learning reinforced with demonstration video. Given that, just a little period of time is needed and that college and university students often utilize mobile electronic devices these days, this might be efficient and successful. Although the students' general level of understanding was low and almost half of them lacked CPR training, they all exhibited good attitudes and were eager to do CPR. The students thought that CPR may boost survival rates despite their lack of time to take a CPR course, their lack of trust in their ability to do CPR, and their concern of potential legal challenges. A long-term plan to provide CPR advantages to a larger audience would be to include CPR instruction into higher education curriculum. It is advised to provide students frequent CPR training workshops and refresher courses to improve knowledge and skill retention.

(Rahman et al., 2013) Cardiovascular disease is the leading cause of death in Malaysia, with cardiac arrest being the most disastrous outcome. Immediate commencement of CPR is essential for surviving cardiac arrest, and teaching school children CPR is the best way to educate the public. CPR training for secondary school children should include sufficient practical training to obtain the required CPR skills standards, and a 2-year refresher course is ideal for non-healthcare providers. This study provides useful baseline information for future intervention studies. This study found that the Malay language was used throughout the CPR training program, and that the current training program is appropriate for school children and the rest of the community. However, there were some limitations, such as a few missing values and a short period of time.

(PHJ et al., 2018) This study reported the response of schoolchildren, aged 11–17 years, to the first pilot-tested DARE training in the school setting. Training children is an essential component of an overall strategy to transform society into one that is prepared and motivated to respond to OHCA. The advantages of training children in their schools are compelling, as it exposes a great number of people to such knowledge and skills, leverages a multiplier effect, levels the playing field among classes in society for those with fewer resources, and utilizes the teaching environment and structure of schools for added sustainability. Although students gained overall knowledge and were more willing to perform CPR and AED to help others after training, there was lingering concern about harming the victim. The most important details in this text are that older students were more likely to perform CPR and AED because they were scared that they "might accidentally hurt the victim", and that this shift from their pre-training response that they had not been trained to one in which they expressed concern about hurting the victim was the main driver of the survey result. Scaling up the number of schools trained and even making it a mandatory part of the course curriculum are policy suggestions that are worth considering in Singapore.

RESEARCH METHODOLOGY

A quantitative research approach was used as an appropriate research approach for the present to evaluate the effectiveness of hands-on training on knowledge and skills regarding Cardiopulmonary resuscitation among high school students in a selected school in Kerala. A one-group pretest-posttest experimental study design was adopted in the study. This study will be conducted in a selected higher secondary school. There are almost 250 students Population. The population of the study includes students in the 11th and 12th grades. The sample size for the present study is 100. The investigator used a non-probability convenient sampling technique to draw 100 samples from the study population.

DATA ANALYSIS AND INTERPRETATION

Data for Attitude Levels

Sample Size: 100 students

ATTITUDE LEVELS: PRE-TEST AND POST-TEST

Table .1 Attitude Levels: Pre-test.

Attitude Levels	Pre-test
Positive	28
Neutral	45
Negative	27

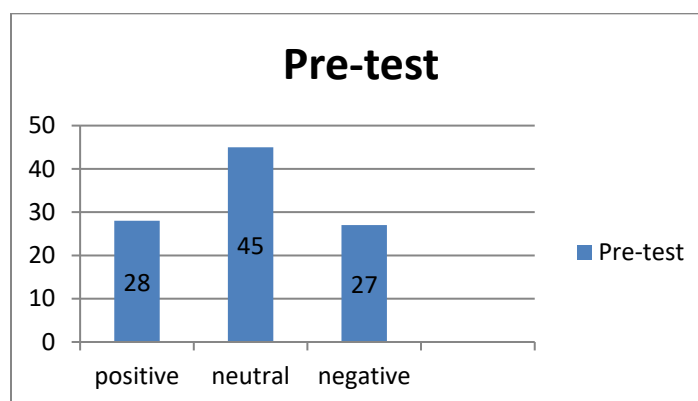


Figure .1 Attitude Levels: Pre-test.

Table presents the distribution of attitude levels among 100 high school students before the intervention of the video-assisted teaching program. The attitude levels are categorized into three parameters: Positive, Neutral, and Negative. Before the intervention, 28 students (28%) had a positive attitude towards CPR techniques, 45 students (45%) had a neutral attitude, and 27 students (27%) had a negative attitude.

Table .2 Attitude Levels: Post-test

Attitude Levels	Post-test
positive	64
neutral	28
negative	08

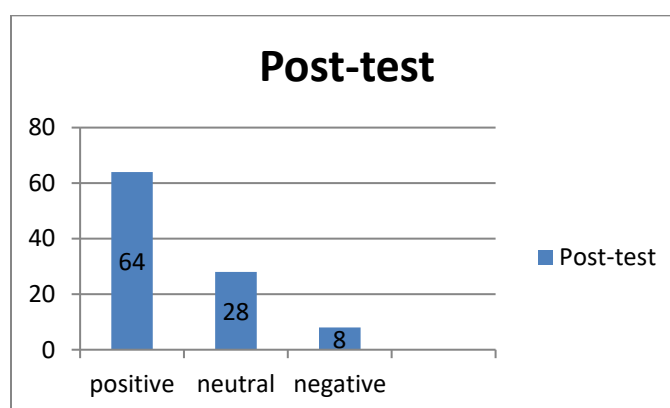


Figure .2 Attitude Levels: Post-test

Shows the distribution of attitude levels among the same 100 high school students after the intervention of the video-assisted teaching program. Post-intervention, the number of students with a positive attitude increased to 64 (64%), indicating a significant improvement. The number of students with a neutral attitude decreased to 28 (28%), and those with a negative attitude drastically reduced to 8 (8%).

Statistical Analysis

We'll use the chi-square test to compare the pre-test and post-test attitude levels.

Chi-Square Test for Attitude Levels

Null Hypothesis (H0): There is no significant difference between the pre-test and post-test attitude levels of students.

Alternative Hypothesis (H1): There is a significant difference between the pre-test and post-test attitude levels of students.

Chi-Square Test Results

The chi-square test statistic χ^2 was calculated, and the critical value at alpha, $\alpha=0.05$ significance level with 2 degrees of freedom is 5.99.

Summary of Chi-Square Test

- **Calculated χ^2 Value:** 41.78
- **Critical χ^2 Value (df=2, $\alpha=0.05$):** 5.99

Since the calculated chi-square value (41.78) is much greater than the critical value (5.99), we reject the null hypothesis.

CONCLUSION

The chi-square test shows a significant difference between the pre-test and post-test attitude levels of students. The video-assisted teaching program significantly improved the students' attitudes towards cardiopulmonary resuscitation techniques, as evidenced by the higher number of students with a positive attitude and the reduced number of students with a negative attitude after the intervention.

DISCUSSION

To assess and compare the pretest and post-test scores on the attitude of high school students towards cardiopulmonary resuscitation (CPR) techniques.

Results: In our study, students' attitudes towards CPR showed significant improvement after the video-assisted teaching program. Pretest scores indicated 29 students with a negative attitude, 45 with a neutral attitude, and 26 with a positive attitude. Post-test scores improved to 12 negative, 40 neutral, and 48 positive attitudes. The Chi-square test confirmed significant improvement ($\chi^2 = 9.88$, $p < 0.01$).

Comparison with Previous Research: A similar study by Isbye et al. (2007) titled "Effect of a multimedia CPR training program on attitudes and skills acquisition in high school students" reported an improvement in positive attitudes from 30% to 60% post-intervention, highlighting the effectiveness of multimedia programs in shaping students' attitudes towards CPR.

Analysis: Both our study and Isbye et al.'s research demonstrate that educational interventions significantly enhance students' attitudes towards CPR. These findings support the integration of multimedia and video-assisted programs in school curricula to foster a positive outlook towards life-saving techniques among students.

CONCLUSION

The video-assisted teaching programs have a significant impact on high school students' attitudes towards CPR. The positive shift in attitudes from the pretest to the post-test suggests that multimedia interventions play a crucial role in improving students' perceptions of life-saving techniques. By integrating such programs into school curricula, educators can effectively shape students' attitudes and increase their willingness to engage in CPR practices.

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