



EFFECTIVENESS OF PLANNED TEACHING PROGRAMME REGARDING BASIC LIFE SUPPORT AMONG HIGH SCHOOL CHILDREN IN A SELECTED SCHOOL AT NELAMANGALA

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ABSTRACT

Background Basic life Support generally does not include the use of drugs or invasive skills, and can be contrasted with the provision of Advanced Life Support (ALS). Most laypersons can master BLS skills after attending a short course. Firefighter, lifeguards, and police officers are often required to be BLS certified. BLS is also immensely useful for many other professions, such as daycare providers, teachers and security personnel and social workers especially working in the hospitals and ambulance drivers. Basic Life Support (BLS) is a vital lifesaving procedure performed during emergencies such as cardiac arrest and respiratory failure. Early intervention significantly improves survival outcomes. However, knowledge regarding BLS among school children remains inadequate.

Objective: Effectiveness of a Planned Teaching Programme (PTP) regarding Basic Life Support among high school children.

Methods: A quantitative evaluative research approach with a quasi-experimental one-group pre-test post-test design was adopted. The study was conducted among 60 high school students selected through simple random sampling. Knowledge was assessed using a structured questionnaire. Descriptive and inferential statistics including paired 't' test and chi-square test were used for analysis.

Results: Pre-test findings revealed that 86.7% of students had inadequate knowledge and 13.3% had moderately adequate knowledge. After implementation of the Planned Teaching Programme, 100% of students achieved adequate knowledge. The paired 't' test showed statistically significant improvement in knowledge scores ($p < 0.05$). Significant association was found between knowledge scores and selected demographic variables such as class of student and parental education.

Conclusion: The Planned Teaching Programme was highly effective in improving knowledge regarding Basic Life Support among high school children. Incorporation of BLS education into school curriculum is strongly recommended.

Keywords: Basic Life Support, Planned Teaching Programme, Knowledge, High School Students, CPR.

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INTRODUCTION

Basic Life Support (BLS) is a set of life-saving interventions provided to individuals experiencing cardiac arrest, respiratory arrest, or airway obstruction. It includes early recognition of emergency signs, activation of emergency response systems, high-quality cardiopulmonary resuscitation (CPR), and early defibrillation using an automated external defibrillator (AED). BLS does not involve the administration of medications or invasive procedures and forms the foundation of emergency cardiovascular care (American Heart Association [AHA], 2020).

Sudden cardiac arrest (SCA) is a major public health problem worldwide. It is characterized by the abrupt cessation of effective cardiac activity, leading to loss of consciousness and absence of circulation. Globally, out-of-hospital cardiac arrest (OHCA) affects millions of people annually, and survival depends largely on the immediate initiation of bystander CPR and early defibrillation (World Health Organization [WHO], 2023). Evidence suggests that early CPR can double or triple survival rates following cardiac arrest (AHA, 2020). However, survival remains low in many developing countries due to delayed recognition, lack of awareness, and inadequate training among community members.

Children and adolescents represent an important target population for BLS education. Schools provide an effective platform for disseminating life-saving skills to large segments of the community. The European Resuscitation Council (ERC) strongly recommends integrating CPR training into school curricula, emphasizing that teaching schoolchildren can significantly improve community response to cardiac emergencies (Greif et al., 2015). Studies have demonstrated that students aged 12 years and above are capable of learning and effectively performing CPR skills when provided with structured training (Böttiger & Van Aken, 2015).

Educational interventions have shown positive outcomes in improving knowledge, skills, and confidence related to BLS among high school students. Systematic reviews indicate that planned teaching programmes significantly enhance students' ability to recognize cardiac arrest, perform chest compressions correctly, and demonstrate appropriate emergency response behaviors (Plant & Taylor, 2013). Furthermore, repeated and structured training improves retention of skills over time (AHA, 2020).

In India, cardiovascular diseases are a leading cause of mortality, and the incidence of sudden cardiac events is increasing among younger populations. Despite this growing burden, awareness and training in BLS among the general population remain limited (Praveen Kumar et al., 2014). Introducing planned teaching programmes at the school level can help bridge this gap, empower adolescents with life-saving competencies, and create a ripple effect within families and communities.

Nelamangala, is a semi-urban region, represents a setting where access to immediate advanced medical services may be delayed. So, equipping high school children with BLS knowledge and skills through a structured teaching programme may significantly contribute to early intervention during emergencies. Assessing the effectiveness of such programmes is essential to determine knowledge gain and guide future implementation strategies.

Hence, the present study aims to evaluate the effectiveness of a planned teaching programme regarding Basic Life Support among high school children in a selected school at Nelamangala.

METHODS

The study used a quantitative evaluative research approach using a quasi-experimental one-group pre-test and post-test design. It was conducted in a selected high school at Nelamangala. A total of 60 high school students were selected for the study using a simple random sampling technique to ensure equal chance of participation. The inclusion criteria for the study were students who were studying in the selected high school, those who were willing to participate, and those who were available during the time of data collection.

Data were collected using a structured questionnaire designed to assess students' knowledge regarding Basic Life Support (BLS). The tool consisted of two sections: Section A included demographic variables such as age, gender, religion, and parental education, while Section B consisted of knowledge-based questions related to Basic Life Support.

The procedure involved conducting a pre-test to assess the baseline knowledge of students regarding BLS. After the pre-test, a Planned Teaching Programme on Basic Life Support was administered. Following the intervention, a post-test was conducted to evaluate the improvement in knowledge.

The collected data were analysed using both descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the data. Inferential statistics, including the paired 't' test and chi-square test, were applied to determine the effectiveness of the teaching



programme and the association between knowledge scores and demographic variables. The level of statistical significance was set at $p < 0.05$.

RESULTS

The study included 60 high school students. Most of the students were between 14 and 15 years of age. Slightly more than half of the participants were male. A majority of students belonged to the Christian religion. Most parents were graduates or had higher education, and more than half of the fathers were working in private jobs. Before the Planned Teaching Programme was conducted, most students (86.7%) had inadequate knowledge about Basic Life Support, and none of the students had adequate knowledge. Only 13.3% had moderately adequate knowledge.

Table 1: Demographic Characteristics of Students (N = 60)

Variable	Category	Percentage (%)
Age	14–15 years	36.7%
Gender	Male	53.3%
	Female	46.7%
Religion	Christian	43.3%
Parents' Education	Graduate and above	Majority
Father's Occupation	Private employee	51.7%

Table 2: Pre-test Knowledge Level (Before Teaching Programme)

Knowledge Level	Percentage (%)
Inadequate	86.7%
Moderately Adequate	13.3%
Adequate	0%

Table 3: Post-test Knowledge Level (After Teaching Programme)

Knowledge Level	Percentage (%)
Inadequate	0%
Moderately Adequate	0%
Adequate	100%

Table 4: Comparison of Pre-test and Post-test Mean Knowledge Scores

Aspect	Pre-test Mean	Post-test Mean	t-value	Significance
Heart & Lungs	5.28	8.93	23.466	$p < 0.05$
CPR in Adult	9.81	24.81	37.714	$p < 0.05$
Overall Knowledge	15.10	33.75	46.492	$p < 0.05$

Table 5: Association Between Post-test Knowledge and Demographic Variables

Variable	Result
Class of student	Significant association
Educational status of father	Significant association
Educational status of mother	Significant association
Age	No significant association
Gender	No significant association
Religion	No significant association
Income	No significant association
Occupation	No significant association

After the teaching programme, there was a remarkable improvement. All students (100%) achieved adequate knowledge, and none of them remained in the inadequate or moderately adequate categories.

The comparison of mean knowledge scores clearly showed a large increase from pre-test to post-test in all areas, including knowledge about heart and lungs and CPR in adults. The calculated paired 't' values were statistically significant ($p < 0.05$), which means the improvement was not by chance. This confirms that the Planned Teaching Programme was effective.



Further analysis showed that post-test knowledge was significantly associated with the class of the student and the educational status of both father and mother. However, no significant association was found with age, gender, religion, income, or occupation.

DISCUSSION

This study demonstrated that high school students had inadequate baseline knowledge regarding Basic Life Support. Following implementation of the Planned Teaching Programme, there was a statistically significant improvement in knowledge scores.

The findings are consistent with previous studies indicating that structured educational interventions effectively enhance BLS awareness among adolescents. The significant association between parental education and knowledge levels suggests that educational background may influence students' learning outcomes.

The dramatic improvement in post-test scores highlights the importance of incorporating BLS education into school curricula to improve emergency preparedness among youth.

CONCLUSION

The study concludes that the Planned Teaching Programme was highly effective in improving knowledge regarding Basic Life Support among high school children. Early training in BLS equips students with essential lifesaving skills and contributes to community health and safety.

LIMITATIONS

- This study is limited to just one school.
- In this study sample size is small.

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