

# Effectiveness of Video Assisted Teaching Program (VATP) Regarding Knowledge on Road Safety Measures Among School Age Children

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## Abstract

In the hectic world, the children are prone to meet with the accidents, consequently it will affect the children's life such as loss of limbs, depression etc., Therefore, it is imperative to protect the children from the road traffic accidents the quasi experimental research design was adopted. Through randomization method, 60 school age children were selected based on the inclusion criteria. The pre-test data collected through 30 self-administered questionnaires related to knowledge on road safety measures followed by video assisted teaching Program and video show for 45 minutes. After 4 weeks, the post-test data was collected with same questionnaire. In the results, the pre- test mean score of knowledge among the children was  $10.94 \pm 6.16$  and the post-test mean score was  $24.54 \pm 2.75$ . The calculated paired *t*-value of  $t = 13.38$  found to be statistically significant at  $p < 0.001^{***}$  level. It depicts that, the VATP had a significant impact on the knowledge on the road safety measures among the school age children.

**Keywords:** Effectiveness; Knowledge; Video assisted teaching program; Road safety measures & school age children.

## Introduction

In the worldwide, the school age children represent about 25% of the total population. The health care needs of this school children can contribute to the overall health status of the country.<sup>1</sup> The health and well-being of this population have become high profile issue, lying at the heart of numerous government initiatives and policies make to the considerable public attention.<sup>2</sup> The road traffic injuries were responsible for the maximum

mortalities, i.e. 38.4% among the children and adolescents when compared with other reasons. There was more than two-fold increase in injury-related mortalities from the childhood to adolescence (1:2.3). In gender wise, the mortalities are high in males, i.e. 45.2% and 37.4% in females.<sup>3</sup> Nirmala AS et al. (2015) stated that, 2.5 million people are hospitalized, 8–9 million people were suffered with minor injuries and nearly 1030 of the hospital registrations are due to road traffic injuries. The study suggests a clear road safety policy, a central coordinating agency, allocation of adequate resources, strict implementation of proven interventions and reliable information systems are urgently required.<sup>4</sup>

## Need for the study

The number of deaths on the world's roads remains unacceptably high, with an estimated 1.35 million people dying every year. The road traffic injuries are 8<sup>th</sup> leading cause of mortality for all the ages and number one causes for the children and young adults aged 5–29 years, However, it also indicates that progress to realise Sustainable Development

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Goal (SDG) target 3.6 which emphasis for a 50% reduction in the number of road traffic deaths by 2020.<sup>5</sup>

In India, according to National survey on the road traffic accidents, every year, nearly million people are injured and mortality rate of more than 70,000 people; this needs to be recognized as an important public health issue. The other traffic violations such as jumping and red lights at intersections have increased.<sup>6</sup> In Tamilnadu, the incidence of road traffic accidents in 2016 was, the children between 5–9 years fatality rate was 448, 10–14 years injured rate was 30% among them 69.4% were males and 30.6% female children. The major causes for the accidents are 44% due to two-wheeler crashes and 36% falls. The Pedestrian road traffic injuries among the children and adolescents are most important cause of death and disability.<sup>7</sup> Therefore, it is very much important to protect the life of the children and to provide safer environment.

## Materials and Methods

The necessary ethical and administrative permission was obtained. The Quasi experimental, pre and posttest research design was carried out in government schools in vellore district. Based on inclusion criteria, the non-randomized convenient sampling technique was used to select the samples of 60 school age children.

### Description of instrument

The structured interview questionnaire was prepared, based on the extensive review of literatures, the expert's opinions and the investigators personal experiences. The Performa has III sections.

**Section I:** It consists of demographic variables of the students age, gender, level of education, education of father & mother, father's occupation, family income, type of family and residence

**Section II:** It comprises of the background variables of, source of information, playing outdoor games and mode of travelling to school.

**Section III:** This section deals with 30 open ended questionnaires related to the knowledge on road safety measures among school age children. The each correct answer given a score of one and the Wrong answer scored as (0) zero. The knowledgescore was interpreted as follows, Inadequate ( $\leq 50\%$ ) Moderately adequate (51–75%) and adequate (75% and above).

### Data collection procedure

The Pre-test was conducted on the knowledge regarding road safety measures and on the same day, the students were engaged with video assisted teaching program with power point presentation and video show for 45 minutes. After the intervention, within period of 4 weeks the post level of knowledge was assessed.

## Results and Discussion

The collected data were analyzed by using descriptive and inferential statistics and based on objectives, the results were discussed below.

### Regarding the demographic and background variables

Among 60 samples, the majority of 64% were aged 9–10 years, 66% were males and 64% were studying in 5<sup>th</sup> level of class, Regarding the educational qualification, the majority 80% of mothers has no formal education whereas fathers nearly half of i.e., 49% completed the high school of education. Considering the occupation of fathers the majority 64% were working as for daily wages, 84% belongs to nuclear family and half of them living in urban area. Considering the source of information, the majority of 82% of teachers has been the source of information, (14%) used to play outdoor games, most of the students 32 (64%) are travelling through cycle to school, 8(16%) are travelling by walk to the school, 10 (20%) are travelling through public transport to the school.

### To assess the level of knowledge among school age children before and after video teaching program

The (Fig. 1), shows in assessment score before video assisted teaching program the majority 35 (70%) were with inadequate knowledge and 15 (30%) were with moderate knowledge. Whereas after video assisted teaching program, 20 (40%) were with moderate and 30 (60%) were with adequate knowledge. The similar findings are seen in Mathew TA (2014) stated that, the pre-test showed 2% of children had the inadequate knowledge, 98% had moderately adequate and none of them had adequate knowledge. In post-test, none of them had inadequate knowledge, 4% had moderately adequate and 96% had adequate knowledge in experimental group.<sup>8</sup> It reveals that, the experimental group has more knowledge than the control group after the administration of structured teaching program.

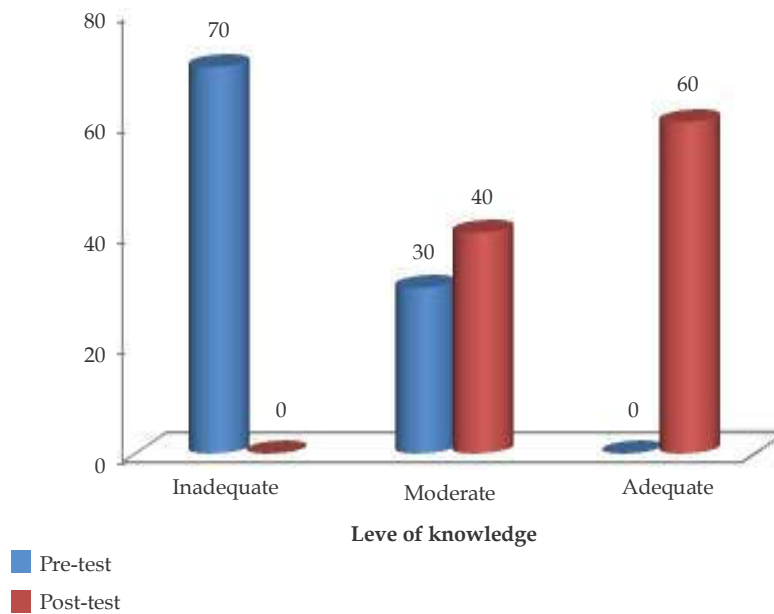


Fig. 1: Shows the level of knowledge among School age children before and after video teaching program

**To compare the pre and post-test score of the level of knowledge on road safety measures among school age children**

In Table 1 shows, the pre-test overall mean and SD score were  $10.94 \pm 6.16$  whereas in post-test were  $24.54 \pm 2.75$ . The mean difference of 13.6. It depicts that, the video assisted teaching was effective to improve the knowledge regarding road safety measures. The calculated paired *t*-value of  $t = 13.38$  found to be statistically significant at  $p < 0.001$  level. This clearly indicates that, the video assisted teaching imparted the road safety measures knowledge to

school going children. The results were similar with, Jayavel M (2014) in pre-test, 18% of children had inadequate knowledge, 82% had moderately adequate and none of had adequate knowledge. In post-test 4% of the children had the inadequate knowledge, 94% had moderately adequate and 2% had adequate knowledge. This reveals that experimental group has more knowledge than the control group after administration of structured teaching program reveals that the hypothesis of there is significant difference between the pre and post-test score was accepted.

Table 1: The pre and post-test mean score of knowledge regarding road safety measures

Knowledge	Pre-test		Post-test		Mean difference	t-value	p-value
Important	2.42	1.70	5.74	0.63	3.32	12.43	$p < 0.001^{***}$
Cause	1.34	1.00	3.52	0.50	2.18	14.77	$p < 0.001^{***}$
Impact	2.68	1.58	4.36	0.79	1.68	7.38	$p < 0.001^{***}$
Traffic sign and symbols	2.46	1.7	5.8	1.31	3.34	9.68	$p < 0.001^{***}$
Prevention	2.04	1.66	5.12	1.80	3.08	8.42	$p < 0.001^{***}$
Overall	10.94	6.16	24.54	2.75	13.6	13.38	$p < 0.001^{***}$

**Association between effectiveness of pre and post knowledge score with selected demographic variables**

There is no significant association between the selected demographic variables except the type of family since the  $p < 0.012^*$  shows that it's significant. Here, the nuclear family children were attained

more knowledge when compared to the joint family. It revealed that, there is significant association between pre and post-level of knowledge regarding road safety measures was accepted. The similar findings were seen with Malik M, Pradhan K S, identified that, the sex of the children and mode of transport are significantly had association with knowledge score.<sup>10</sup>

## Recommendations

1. The similar study can be replicated on a larger sample size to increase validity and generalization of findings.
2. The nurse investigator encourages the use of video assisted teaching Program for school health education Programs.
3. A similar study can be conducted in various settings like Community and hospitals.
4. The descriptive study can be done regarding attitude of road safety measures among school going children.

## Conclusion

The study findings reveals that there was a significant difference in the preand post-test level of knowledge on the road safety measures using the video assisted teaching. Hence, the video assisted teaching program had a significant impact on the knowledge on the road safety measures among the children studying in the selected schools. This study is focused on, protect the children from the road traffic accidents and bring - up the children in safer environment for their proper mental as well as physical growth and development.

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