

## Effectiveness of a Video Vignette Intervention in improving caregivers' knowledge on accident prevention among under-five children at Government Rajaji Hospital, Madurai.

D. Ramya<sup>1</sup>, L. Selva Regi Ruben<sup>2</sup>, S. Rajeswari<sup>3</sup>

<sup>1</sup> Nursing Officer, Medicine department, Coimbatore Medical College and Hospital, Coimbatore.

<sup>2</sup> Associate Professor, College of Nursing, Madurai Medical College, Madurai.

<sup>3</sup> Assistant Professor, College of Nursing, Madurai Medical College, Madurai.

Received: 03.09.2025

Revised: 25.09.2025

Accepted: 28.09.2025

### Correspondence:

D. Ramya, L. Selva Regi Ruben, S. Rajeswari

### ABSTRACT

**Background:** Accidental injuries are a major cause of morbidity and mortality in children under five, most occurring at home. In India, the burden is high, and caregiver awareness on prevention remains inadequate. **Aim:** To assess the effectiveness of a Video Vignette Intervention in improving caregivers' knowledge on accident prevention among under-five children at Government Rajaji Hospital, Madurai. **Methods:** A true experimental pre-test post-test control group design was adopted with 60 caregivers, randomized into intervention (n=30) and control (n=30) groups. Data were collected using a structured questionnaire. The intervention group received video-based education, while the control group received none. Post-test was conducted on day five. Data were analyzed using descriptive statistics, paired t-tests, and chi-square tests. **Results:** Pre-test knowledge levels were similar between groups ( $p=0.80$ ). Post-intervention, 66.7% of caregivers in the intervention group attained above-average knowledge versus none in the control group ( $\chi^2 = 34.81, p=0.001$ ). The intervention group's mean score improved significantly from 8.27 to 13.73 ( $p=0.001$ ), while changes in the control group were minimal and not significant (7.97 to 8.30;  $p=0.06$ ). **Conclusion:** Video Vignette Intervention significantly enhanced caregivers' knowledge on accident prevention. Structured health education can play a vital role in reducing preventable childhood injuries.

**Keywords:** Accidental injuries, caregivers, awareness, Video vignette interventions.

## **INTRODUCTION:**

A child's world revolves around the home, school, and community. Every child has the right to grow up in a safe and healthy environment, and the first five years of life are particularly crucial for growth and brain development. During this period, children are completely dependent on caregivers, yet their increasing mobility and curiosity make them highly vulnerable to accidents. Globally, more than 656 million children are under the age of five, and India alone is home to over 116 million in this age group, one of the largest child populations in the world.

Childhood health goes beyond the absence of disease—it includes physical, mental, and social well-being. However, accidents have emerged as a leading cause of preventable injury, disability, and death among young children. Most incidents occur in or near the home, with falls, burns, drowning, choking, suffocation, and poisoning being the most common. In developing nations, where children make up a large share of the population, the risk is even greater. Globally, nearly one million children die from accidental injuries each year, with low- and middle-income countries accounting for 95% of these deaths. Although the home is meant to be a place of security, it is often where the greatest risks are found—stairs, kitchens, unsafe play areas, and household substances. Children's natural eagerness to explore, combined with their limited awareness of danger, increases their susceptibility to accidents. Research shows that boys are slightly more prone to injuries than girls, and that factors such as age, sex, and economic background influence the frequency and severity of accidents.

Encouragingly, up to 90% of these injuries are preventable. Safety measures such as child restraints in vehicles, helmets, safe home environments, and greater adult supervision can significantly reduce risks. Beyond practical steps, raising awareness, enforcing safety laws, and educating parents, teachers, and caregivers are vital. Every child deserves the opportunity to grow, play, and learn without fear, and ensuring their safety is both a responsibility and a shared social commitment.

## **NEED FOR THE STUDY:**

Unintentional injuries remain a leading cause of morbidity and mortality among children under five worldwide. Every day, thousands of children are admitted to emergency departments due to falls, drowning, suffocation, poisoning, and road traffic accidents. In India, child fatalities from accidents are alarmingly high, with 11,168 children reported dead from traffic accidents in 2019, translating to 31 deaths daily. Tamil Nadu alone recorded 1,153 deaths of children under five years in the same year. In Madurai, 3,564 children under five sustain accidental injuries annually, with around 864 cases treated at Government Rajaji Hospital. This reflects a significant local burden. Despite legislative measures such as the Motor Vehicle (Amendment) Act 2019, effective implementation and caregiver awareness remain critical gaps. Since most of these injuries are preventable through risk education, safe practices, and vigilant supervision, there is an urgent need to enhance caregivers' knowledge. Strengthening awareness

can play a vital role in reducing childhood accidents and fatalities, thereby improving child health and survival outcomes.

### **AIM OF THE STUDY:**

The aim of the study to evaluate the effectiveness of Video Vignette Intervention on prevention of accidents among caregivers of under five children at Paediatric Medical Ward, GRH, Madurai.

### **MATERIALS AND METHODS:**

#### **Study Design and Participants**

The study adopted a true experimental pre-test post-test control group design with randomization. A total of 60 caregivers of under-five children admitted in the Paediatric Medical Ward, Government Rajaji Hospital, Madurai, were selected, with 30 participants each in the intervention and control groups.

#### **Inclusion and Exclusion Criteria**

The study included caregivers of under-five children who were willing to participate, as well as caregivers of mentally challenged children. Caregivers who were visually impaired were excluded from the study.

#### **Tools**

Data were collected using a structured questionnaire that consisted of two sections. Section A included socio-demographic variables such as age, educational status, occupation, place of domicile, type of family, number of children, and source of information. Section B comprised a structured knowledge questionnaire on accident prevention among under-five children, with scores categorized as below average (0–6), average (7–12), and above average (13–18).

#### **Data Collection Procedure**

Formal approval was obtained from the Institutional Ethics Committee and concerned authorities. Samples were selected using systematic random sampling. After obtaining informed consent, a pre-test was conducted, followed by Video Vignette Intervention for the intervention group, while the control group received no intervention. A post-test was conducted on the 5th day using the same questionnaire. Confidentiality and participants' rights were ensured throughout the process.

#### **Data Analysis**

Collected data were organized, tabulated, and analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics. A paired 't' test was used to evaluate the effectiveness of the intervention, and a chi-square test was applied to find associations between post-test knowledge scores and selected socio-demographic variables.

## RESULTS

### Socio-demographic Variables

The intervention group had more participants aged 18–24 years (30%) and >35 years (26.7%), while the control group had more in the 25–34 age range (30% each for 25–30 and 31–34 years). Education levels were similar, though graduates were slightly higher in the intervention group (26.7% vs. 20%). Most caregivers were daily wage workers in both groups (36.7% vs. 40%), with more unemployed in the intervention group (30% vs. 20%) and more self-employed in the control group (33.3% vs. 26.7%). (Table 1)

### Level of Knowledge

In the pretest, 45.7% of caregivers in the intervention group and 50% in the control group had below-average knowledge, while 54.3% in the intervention group and 50% in the control group had average knowledge. None in either group had above-average knowledge. The Chi-square test ( $\chi^2 = 0.07$ ,  $p = 0.80$ ) showed no statistically significant difference between the groups. (Table 2)

In the posttest, 43.3% of caregivers in the control group had below-average knowledge, while none in the intervention group fell in this category. Above-average knowledge was seen in 66.7% of the intervention group compared to none in the control group. The difference was very highly significant ( $\chi^2 = 34.81$ ,  $p = 0.001$ ). (Table 3)

### Comparison of Mean score:

The mean knowledge score in the intervention group improved significantly from 8.27 (SD = 2.79) in the pretest to 13.73 (SD = 1.91) in the posttest, with a mean difference of 5.47 ( $t = 11.19$ ,  $p = 0.001$ , VHS). In the control group, the increase from 7.97 (SD = 2.40) to 8.30 (SD = 2.51) was minimal and not statistically significant (mean difference 0.33,  $t = 1.90$ ,  $p = 0.06$ , NS). (Table 4)

**Table 1: Sociodemographic variables of Caregivers of under five children.**

**N = 60**

S. No	SOCIO DEMOGRAPHIC VARIABLES		INTERVENTION GROUP		CONTROL GROUP	
			f	%	f	%
1	AGE	a) 18-24 years	9	30.0	6	20.0
		b) 25-30 years	8	26.7	9	30.0
		c) 31-34 years	5	16.7	9	30.0
		d) >35 years	8	26.7	6	20.0
2	EDUCATIONAL STATUS OF THE	a) Non formal education	4	13.3	5	16.7

	CAREGIVER	b) Primary school	9	30.0	10	33.3
		c) Higher Secondary	9	30.0	9	30.0
		d) Graduates and above	8	26.7	6	20.0
3	OCCUPATION	a) Unemployed	9	30.0	6	20.0
		b) Coolie	11	36.7	12	40.0
		c) Self Employed	8	26.7	10	33.3
		d) Govt. employee & Professionals	2	6.7	2	6.7
4	PLACE OF DOMICILE	a) Rural	15	50.0	12	40.0
		b) Urban	11	36.7	11	36.7
		c) Suburban	4	13.3	7	23.3
5	TYPE OF FAMILY	a) Nuclear	11	36.7	12	40.0
		b) Joint	14	46.6	13	43.3
		c) Extended family	5	16.7	5	16.7
6	NUMBER OF CHILDREN	a) One	7	23.3	9	30.0
		b) Two	19	63.3	11	36.7
		c) Three	4	13.3	9	30.0
		d) More than three	0	0.0	1	3.3
7	SOURCE OF INFORMATION	a) Television	16	53.3	19	63.3
		b) Radio	2	6.7	3	10.0
		c) Newspaper	3	10.0	5	16.7
		d) All of the Above	9	30.0	3	10.0

**Table 2: Frequency and percentage distribution of pretest knowledge among caregivers of under five children in intervention group and control group. N = 60**

Level of Knowledge	Intervention		Control		$\chi^2$ "P" value
	n	%	n	%	
Below Average	14	45.67%	15	50%	$\chi^2 = 0.07$  p= 0.80 (NS)
Average	16	54.33%	15	50%	
Above average	0	0%	0	0%	
Total	30	100%	30	100%	

\*Significant at  $p < 0.05$ , NS= not significant.

**Table 3: Frequency and percentage distribution of posttest knowledge among caregivers of under five children in intervention group and control group. N = 60**

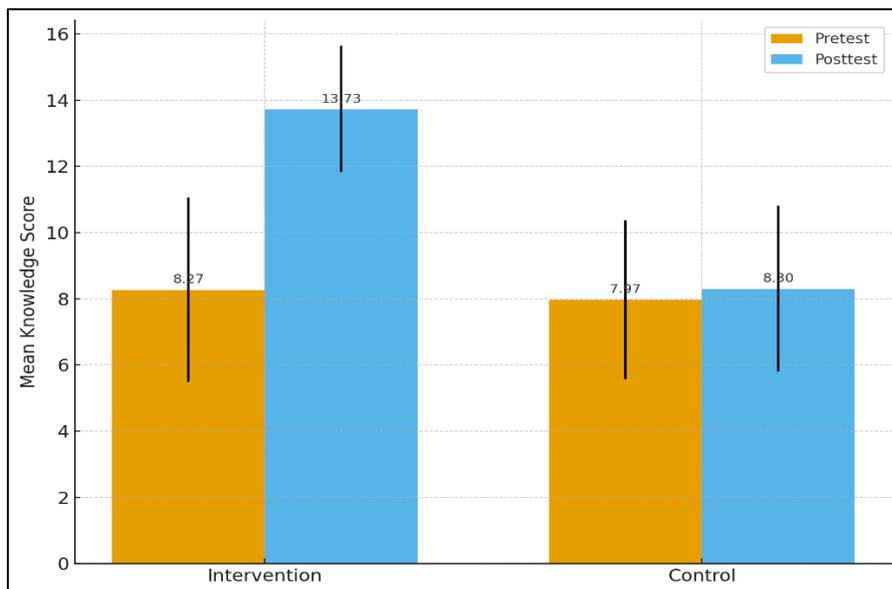
Level of knowledge	Intervention		Control		X <sup>2</sup> “P” value
	n	%	n	%	
Below Average	0	0%	13	43.33%	χ <sup>2</sup> =34.81 p=0.001***(VHS)
Average	10	33.33%	17	56.67%	
Above average	20	66.67%	0	0%	
Total	30	100%	30	100%	

\* Significant at p<0.05, VHS- Very Highly Significant.

**Table 4: Comparison of the mean score of knowledge regarding prevention of accidents among caregivers of under five children between the intervention group and control group. N= 60**

Group	Test	Mean	Standard Deviation	Mean Difference Mean	Student’s Paired t-test
Intervention	Pretest	8.27	2.79	5.47	t=11.19 p=0.001*** DF =29 (VHS)
	Posttest	13.73	1.91		
Control	Pretest	7.97	2.40	0.33	t=1.90 p=0.06 DF =29 (NS)
	Posttest	8.30	2.51		

\*\* Significant at p<0.05, VHS- Very Highly Significant., NS= not significant



**Figure:1 Comparison of mean knowledge between intervention and control group.**

## **DISCUSSION:**

The findings indicate that all caregiver groups were similar at baseline in socio-demographics and pretest knowledge, with no significant differences. After the intervention, however, the outcomes were striking: in the intervention group, 66.7% of caregivers achieved above-average knowledge posttest, whereas none in the control group did, and 43.3% of control caregivers remained below average ( $\chi^2 = 34.81$ ,  $p = 0.001$ ). The intervention group's mean knowledge score increased significantly from 8.27 (SD = 2.79) to 13.73 (SD = 1.91) (mean difference 5.47;  $t = 11.19$ ;  $p = 0.001$ ), while the control group showed only a minimal, non-significant change (7.97 to 8.30;  $p = 0.06$ ). These findings are consistent with Silva et al. (2016), who reported significant improvement in mothers' knowledge on accident prevention following educational programs, particularly regarding falls, drowning, and poisoning. Similarly, Kendrick et al. (2013), in a systematic review, concluded that educational interventions significantly enhanced parental knowledge and reduced risks related to unintentional childhood injuries.

## **CONCLUSION:**

The study concludes that structured educational intervention significantly improved caregivers' knowledge on accident prevention, whereas no such change was observed in the control group. Health education is thus an effective strategy to empower caregivers and reduce childhood accident risks.

## **RECOMMENDATION:**

Further research with larger populations and longitudinal approaches is recommended to evaluate the long-term effectiveness of nursing interventions. Additionally, comparative, community-based, and video vignette studies across different age groups could help broaden the scope and applicability of the findings.

## **REFERENCES:**

1. Jullien S. (2021). Prevention of unintentional injuries in children under five years. *BMC pediatrics*, 21(Suppl 1), 311.
2. Journal of Datta Meghe Institute Of Medical Sciences University Prevention of accidents, volume 15, issue 2, 2020.
3. RGUHS Journal of Nursing Sciences, Prevention of Home accidents, Volume: 10, Issue: 2, year:2020
4. International journal of advanced research in nursing, Prevention of Home accidents, Vol. 3, Issue 2, Part B, 2020.
5. Galore International Journal of Applied Sciences and Humanities Video Assisted Teaching Programme on Domestic Accidents 5(2):1-6, August 2021
6. Journal of emerging technologies and innovative research(JETIR), Teaching programme on

prevention of accidents Vol 8, Issue 9, Sep 2021.

7. Bulletin of Environment, Pharmacology and Life Sciences Bull. Env.
8. Pharmacol. Life Sci., Video assisted teaching on prevention of accidents and first aid management Spl Issue [4] 2022 : 90-92 ©2022 Academy for Environment and Life Sciences, India
9. Kendrick, D., Mulvaney, C., Ye, L., Stevens, T., Mytton, J. A., & Stewart-Brown, S. (2013). Parenting interventions for the prevention of unintentional injuries in childhood. *Cochrane Database of Systematic Reviews*, (3), CD006020. <https://doi.org/10.1002/14651858.CD006020.pub3>
10. Silva, E. C. d., Santos, J. M. J. d., Resende, A. P. C., Oliveira, K. F. d., & Coelho, A. C. (2016). Effectiveness of educational actions in mothers' knowledge about prevention of accidents in childhood. *Journal of Pediatrics (Rio J.)*, 92(1), 32–39. <https://doi.org/10.1016/j.jpmed.2015.03.007>

**Cite this article as:** Ramya D et al., (2025). Effectiveness of a Video Vignette Intervention in improving caregivers' knowledge on accident prevention among under-five children at Government Rajaji Hospital, Madurai. *International Journal of Nursing and Health Studies*, 1(7), 1-8.