

# A Study to Assess the Effectiveness of Video – Assisted Teaching Regarding Dog Bite and its Management among Homemakers Residings at Karikalampakkam Rural Area, Puducherry

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## ABSTRACT:

**Background:** Dog bite is an important public health problem because delayed wound care and inadequate knowledge about post-exposure prophylaxis can increase the risk of rabies and other complications. Homemakers may be the first persons to respond to injuries within the family; therefore, improving their knowledge regarding immediate wound washing, medical consultation, vaccination and prevention is important. Video – assisted teaching (VAT) provides visual and auditory information and may be useful community health education strategy.

**Materials and Methods:** A quantitative research approach with a pre-experimental one-group pre-test and post-test design was used. Sixty homemakers residing in Karikalampakkam rural are, Puducherry, were selected by non-probability convenience sampling. Knowledge was assessed using a 20-items semi – structured knowledge questionnaire. A video –assisted teaching programme covering dog bite, first aid, wound care, anti-rabies vaccination, tetanus prophylaxis and preventive measures was administered after the pre-test. The post-test was conducted seven days later. Data were analyzed using SPSS Version 25 with frequency, percentage, mean, standard deviation, paired t-test and chi-square test.

**Results:** In the pre-test, 42(70.0%) participants had inadequate knowledge and 18(30.0%) had moderate knowledge; none had adequate knowledge. In the post-test, 49(81.7%) achieved adequate knowledge and 11(18.3%) had moderate knowledge, with none remaining in the inadequate category. The mean knowledge score increased from  $7.18 \pm 2.14$  to  $16.52 \pm 1.72$ , with

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a mean difference of 9.34. The paired t-test showed a highly significant improvement ( $t = 29.84$ ,  $df = 59$ ,  $p < 0.001$ ). Educational status, monthly family income and source of previous knowledge were significantly associated with pre-test knowledge.

**Conclusion:** Video – assisted teaching was effective in improving knowledge regarding dog bite and its management among homemakers. Community-based audiovisual education may be incorporated into nursing and public health programmes to strengthen awareness of first aid, rabies prevention and timely treatment.

**Keywords:** Dog bite, rabies prevention, video –assisted teaching, knowledge, homemakers, community health nursing, Puducherry.

“Awareness is the key driver for success of communities to engage in effective rabies prevention.”

-World Rabies Day Theme (2026)

## Introduction

Dog bite is a significant public health concern, particularly in communities where free-roaming dogs are common and access to timely post-exposure prophylaxis may be limited. Dog bite injuries can cause physical trauma, wound infection and psychological distress, while exposure to an infected dog can result in rabies, a fatal but preventable disease. Immediate wound washing, prompt medical assessment, appropriate vaccination and rabies immunoglobulin when indicated are central components of effective post-exposure management. The thesis notes that inadequate knowledge, traditional wound –care practices and delayed treatment – seeking can contribute to poor outcomes.

Homemakers are an important community population because they frequently care for children and other family members and may be involved in household activities that bring them into contact with domestic or community dogs. Improving their knowledge can support appropriate first aid and early referral following dog bite incidents.

Video – assisted teaching combines visual and auditory learning and can demonstrate practical steps such as immediate wound washing, appropriate medical consultation and adherence

to anti- rabies vaccination. The present study was undertaken to determine whether a structured video- assisted teaching programme could improve knowledge regarding dog bite and its management among homemakers in Karikalampakkam rural area, Puducherry.

## Materials And Methods

**Research approach and design:** A quantitative research approach and pre-experimental one – group pre- test and post – test design were adopted.

**Setting and participants:** The study was conducted among homemakers residing in Karikalampakkam rural area, Puducherry. The sample consisted of 60 homemakers selected using non- probability convenience sampling.

**Eligibility:** Participants were homemakers who were willing to participate, able to read and write Tamil, and available during data collection. Those unwilling, absent during data collection, or who had previously participated in an educational programme regarding dog bite and its management were excluded.

**Tool:** Selection A collected demographic information including age, religion, educational status, occupation, monthly family income, marital status, number of children and type of family. Selection B was a 20 – item semi –

structured multiple – choice knowledge questionnaire covering the meaning and causes of dog bite, risk factor, types of bites, signs and symptoms, first aid, wound care, anti – rabies vaccination, tetanus prophylaxis and prevention. Each correct response received one mark; the maximum score was 20. Scores of 0-7 were categorized as inadequate, 8-14 as moderate and 15- 20 as adequate knowledge.

**Validity and reliability:** Content validity was established through expert opinion from Community Health Nursing, Medical – Surgical Nursing and medical professionals. Reliability was established by the test – retest method, with a reliability coefficient of  $r = 0.81$ .

**Procedure:** After obtaining ethical approval, administrative permission and written informed consent, the pre- test was administered. The video-assisted teaching programme was then provided, followed by discussion and distribution of informative pamphlets. The post-test was conducted after seven days using the same knowledge questionnaire.

**Ethical considerations:** Institutional ethics approval and local administrative permission were obtained. Written informed consent, confidentiality, anonymity and voluntary participation were maintained.

**Data analysis:** Frequency and percentage were used for categorical variables; mean and standard deviation were used for knowledge scores. A paired t-test assessed the difference between pre-test and post – test knowledge scores, while the chi-square test assessed associations between pre-test knowledge and selected demographic variables. Statistical significance was set at  $p < 0.05$ .

## Results

The collected data were computerized and analyzed using SPSS version 25. The data were analyzed using descriptive statistics (distribution, mean, standard deviation) and inferential statistics (chi-square value test). The result have been organized and present as given below.

**Section A: Description of the Demographic Variables among Home Makers.**

**Section B: Assessment of the Pre-test and Post-test Level of Knowledge Regarding Dog Bite and its Management among Home Makers.**

**Selection C: Evaluation of the Effectiveness of Video Assisted Teaching Regarding Dog Bite and its Management among Home Makers.**

**Selection D: Association between the Pre-test Level of Knowledge Regarding Dog Bite and its Management among Home Makers with Selected Demographic Variables.**

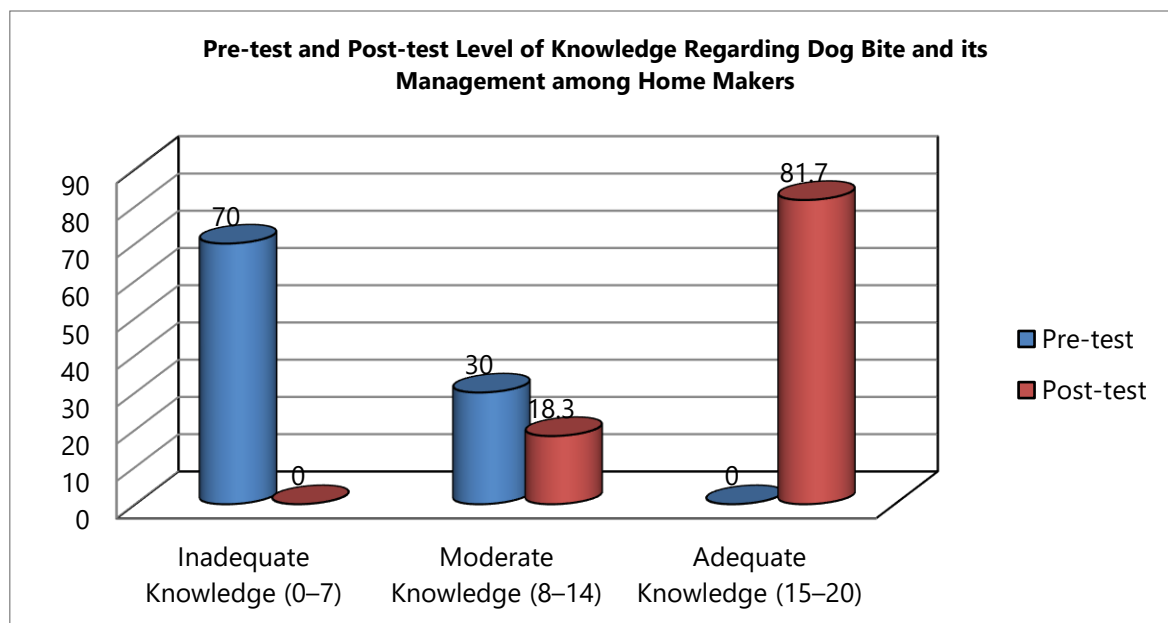
**Selection A: Description of the Demographic Variables among Home Makers.** Among the 60 homemakers, the largest proportion (36.7%) was aged 31-40years. Most participants were Hindu (80.0%), had secondary education (33.3%), were homemakers only (75.0%), had a monthly family income of ₹10,001-20,000(40.0%), were married (93.3%), had two children (50.0%), and belonged to nuclear families (65.0%). Television and absence of previous knowledge were each reported by 25.0% as the source of previous knowledge.

**Selection B: Assessment of the Pre-test and Post-test Level of Knowledge Regarding Dog Bite and its Management among Home Makers.**

**Table 01** Frequency and Percentage Distribution of Pre-test and Post-test Level of Knowledge Regarding Dog Bite and its Management among Home Makers

| Knowledge level  | Pre-test n (%) | Post-test n (%) |
|------------------|----------------|-----------------|
| Inadequate (0–7) | 42 (70.0)      | 0 (0.0)         |
| Moderate (8–14)  | 18 (30.0)      | 11 (18.3)       |
| Adequate (15–20) | 0 (0.0)        | 49 (81.7)       |
| Total            | 60 (100.0)     | 60 (100.0)      |

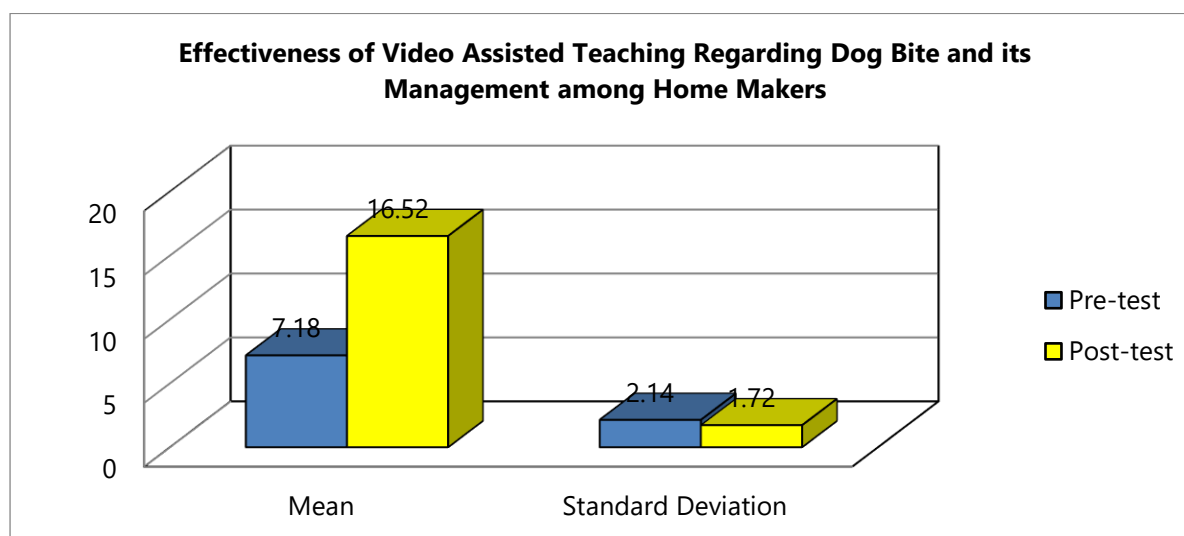
**Table 1** shows a marked shift in knowledge after the intervention. Before VAT, 70.0% had inadequate knowledge and no participant remained in the inadequate category.



**Table 02:** Mean and Standard Deviation of Pre-test and Post-test Knowledge Scores Regarding Dog Bite and its Management among Home Makers

| Assessment | Mean  | SD   | Mean difference | T     | df | p-value |
|------------|-------|------|-----------------|-------|----|---------|
| Pre-test   | 7.18  | 2.14 | 9.34            | 29.84 | 59 | <0.001  |
| Post-test  | 16.52 | 1.72 |                 |       |    |         |

Table 2 demonstrates that the mean knowledge score increased from  $7.18 \pm 2.14$  in the pre-test to  $16.52 \pm 1.72$  in the post-test. The mean difference was 9.34 and the paired t-test was highly significant ( $t = 29.84$ ,  $df = 59$ ,  $p < 0.001$ ), indicating an improvement following VAT.

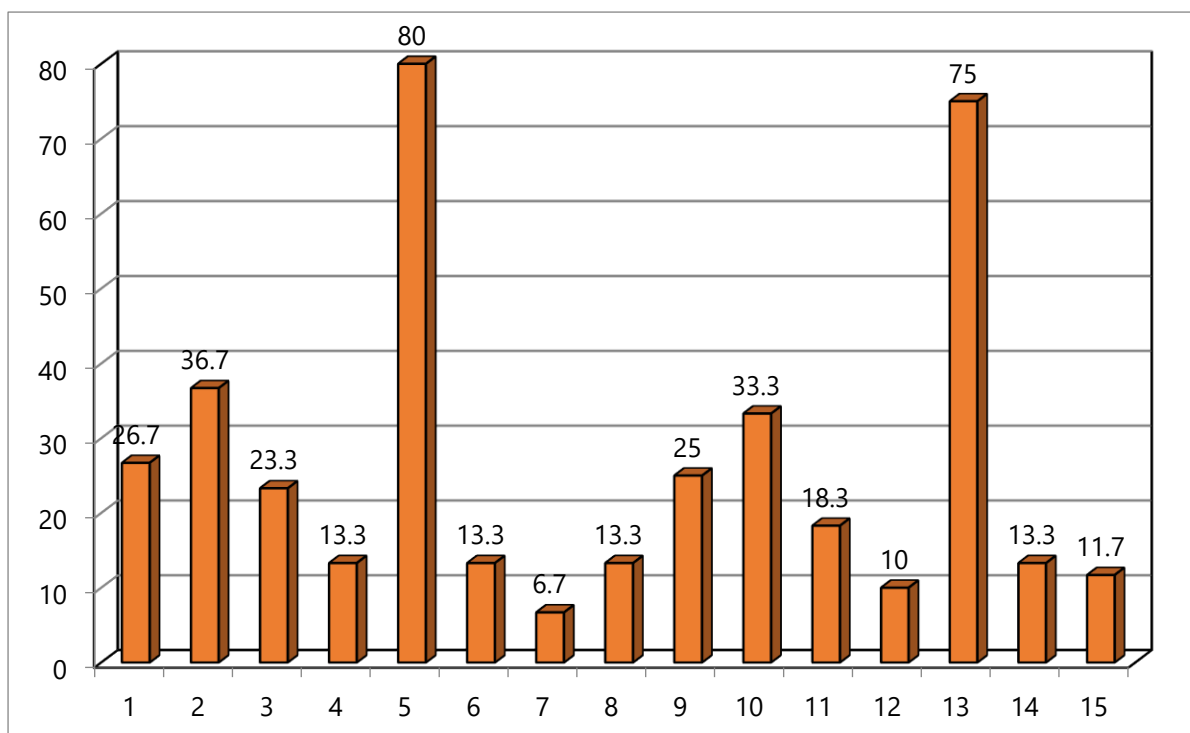


Selection D: Association between the Pre-test Level of Knowledge Regarding Dog Bite and its Management among Home Makers with Selected Demographic Variables.

**Table 3:** Association between Pre-test Level of Knowledge Regarding Dog Bite and its Management among Home Makers with Selected Demographic Variables

| Variable                     | $\chi^2$ | df | p-value | Interpretation  |
|------------------------------|----------|----|---------|-----------------|
| Educational status           | 16.284   | 4  | 0.003   | Significant     |
| Monthly family income        | 8.516    | 3  | 0.036   | Significant     |
| Source of previous knowledge | 4.214    | 1  | 0.040   | Significant     |
| Age                          | 4.281    | 3  | 0.233   | Not significant |
| Religion                     | 0.182    | 2  | 0.913   | Not significant |
| Marital status               | 0.042    | 1  | 0.838   | Not significant |
| Number of children           | 1.614    | 2  | 0.446   | Not significant |
| Type of family               | 1.043    | 1  | 0.307   | Not significant |

Table 3 indicates that educational status, monthly family income and source of previous knowledge were significantly associated with pre-test knowledge. Age, religion, marital status, number of children and type of family were not significantly associated with baseline knowledge.



## Discussion

The study demonstrated inadequate baseline knowledge regarding dog bite and its management among the majority of

homemakers. Before the intervention, 70.0% had inadequate knowledge and none had adequate knowledge. The findings indicate a need for community education focusing on immediate wound washing, appropriate wound care, anti-

rabies vaccination, tetanus prophylaxis and early medical consultation. Following the video – assisted teaching programme, knowledge improved substantially: 81.7% of participants achieved adequate knowledge and no participant remained in the inadequate category. The mean score increased by 9.34 points, and the paired t-test demonstrated a highly significant difference. The thesis discussion relates this improvement to the visual presentation, audio explanations, illustrations and demonstration of practical first-aid measures in the VAT programme.

The findings are consistent with the literature reviewed in the thesis, which describes improvement in knowledge following structured educational interventions concerning rabies, dog bite first aid and post-exposure prophylaxis. The association analysis also suggests that educational attainment, socioeconomic status and previous exposure to health information may influence baseline knowledge.

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The findings should be interpreted in light of the study design. Because the study used a one-group pre-test/post-test design with convenience sampling and a sample of 60 participants from one rural area, the results may not be generalizable to all homemakers or other populations. The improvement in knowledge is nevertheless substantial within the study group.

## Conclusion

Video-assisted teaching was effective in improving regarding dog bite and its management among homemakers residing in Karikalampakkam rural area, Puducherry. The significant increase in mean knowledge score and the paired t-test result support the effectiveness of the intervention. Community – based audiovisual education can therefore be considered a practical strategy for strengthening awareness of immediate first aid, wound management, rabies prevention and timely healthcare seeking.