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# Effectiveness of Video-Assisted Teaching on Knowledge of Strelnikova Breathing Exercises for Preventing Lower Respiratory Tract Infections in Children: A Study Among Nursing Officers

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**Abstract:** ***This study explores the effectiveness of video-assisted teaching in improving knowledge on Strelnikova breathing exercises for preventing lower respiratory tract infections (LRTIs) among children, targeting nursing officers at a pediatric hospital in Bengaluru. A one-group pre-test post-test design was employed with 100 nursing officers. The pre-intervention mean knowledge score was 33.08%, which significantly improved to 93.75% post-intervention. Statistical analysis indicated significant improvement ($p < 0.05$), validating the effectiveness of the intervention.***

**Keywords:** Strelnikova breathing, video-assisted teaching, lower respiratory tract infection, nursing officers, pediatric care.

## 1. Introduction

Lower respiratory tract infections (LRTIs) are a leading cause of pediatric morbidity and mortality, especially in developing countries. Proper respiratory care techniques like the Strelnikova breathing exercises can play a significant role in reducing the incidence and severity of LRTIs. Nursing officers play a crucial role in educating and applying such preventive techniques. This study investigates the effectiveness of a video-assisted educational intervention on enhancing their knowledge in this area.

## 2. Objectives

- To assess the existing knowledge regarding Strelnikova breathing exercises among nursing officers.
- To implement video-assisted teaching on Strelnikova breathing exercises.
- To evaluate the effectiveness of video-assisted teaching in improving knowledge.
- To determine the association between pre-test knowledge scores and selected demographic variables.

## 3. Methodology

The study adopted a pre-experimental one-group pre-test post-test design. The conceptual framework was based on King's Goal Attainment Theory. A purposive sample of 100 nursing officers at Vani Vilas Hospital, Bengaluru, was selected. A structured questionnaire was used to assess knowledge before and after the intervention. Data were analyzed using descriptive and inferential statistics, including paired t-tests and chi-square tests.

## 4. Results

The results indicated a significant increase in knowledge following the intervention.

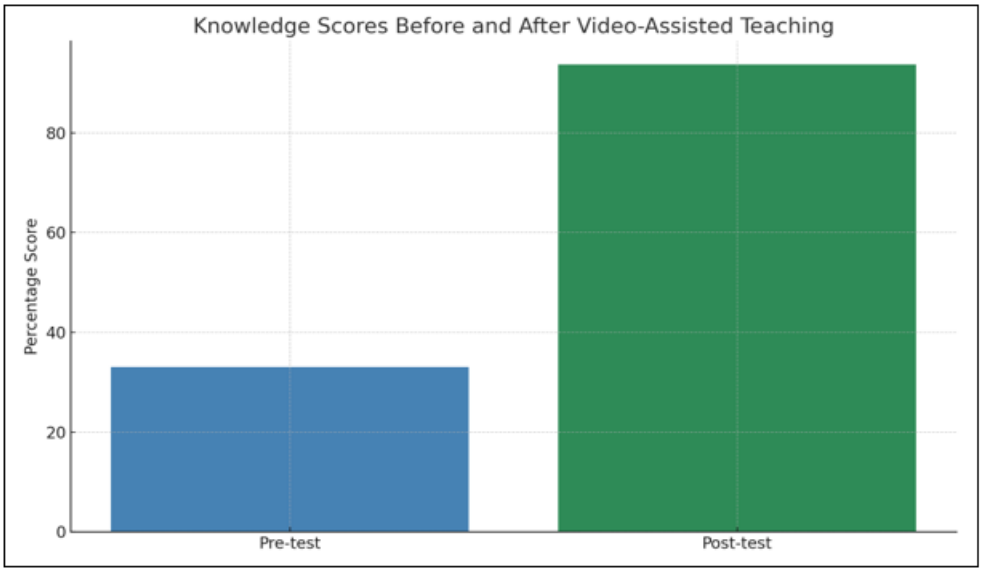



**Figure 1:** Knowledge Scores Before and After Video-Assisted Teaching

**Table 1:** Comparison of Pre-Test and Post-Test Knowledge Scores

| Test | Mean Score (%) | Standard Deviation | Improvement (%) |
|---|---|---|---|
| Pre-test | 33.08 | — | — |
| Post-test | 93.75 | — | 60.66 |

The improvement percentage in knowledge score is visualized below:

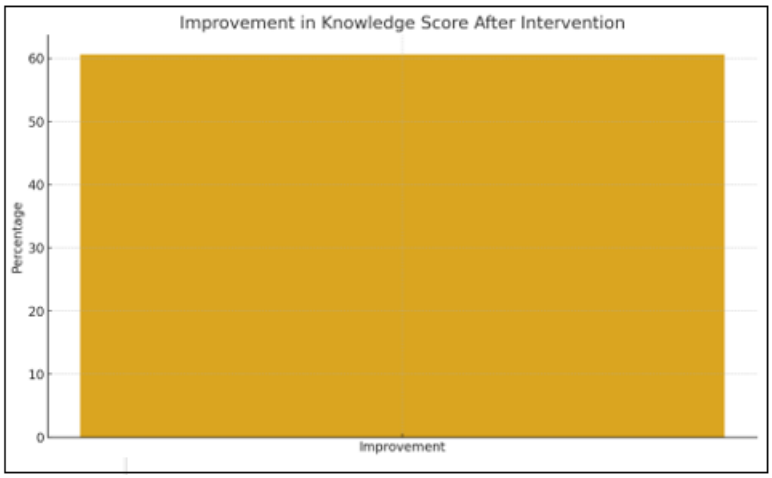



**Figure 2:** Improvement in Knowledge Score After Intervention

## 5. Conclusion

Video-assisted teaching is an effective educational strategy for improving knowledge about Strelnikova breathing exercises among nursing officers. This approach can be implemented in pediatric nursing settings to promote better preventive practices and reduce LRTI incidence in children.

## 6. Recommendations

- Conduct similar studies with control groups for enhanced reliability.
- Integrate video-assisted modules in nursing education and training programs.
- Explore long-term knowledge retention and behavior change post-training.

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