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Comparison of video-assisted and manual PLS training on the knowledge, skill retention, and confidence among B.Sc. nursing III year students

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Abstract
For nursing students, proficiency in pediatric life support (PLS) is essential. The efficiency of manual training is still a standard in nursing education, despite the growing use of video assisted training.
Problem statement:
A Comparison of Video-Assisted and Manual PLS Training on the Knowledge, Skill Retention, and Confidence Among B.Sc. Nursing III Year Students at a Selected Nursing College in Indore, M.P.
Objective: To evaluate the effects of manual and video-assisted PLS training on third year B.Sc. Nursing students-confidence, knowledge, and ability to retain skills.
Methods: A quasi-experimental study with a total of 50 students was conducted. The students were randomly divided into two groups (n=25 each): one received video-assisted training, and the other manual training. Pre-test and post-test evaluations were done for knowledge, skills (after 1 week and 1 month), and confidence.
Results: Students in the manual training group showed significantly greater improvement in knowledge scores (p=0.012), skill retention (p=0.003), and confidence levels (p=0.009) than those in the video-assisted group.
Conclusion: Manual PLS training is more effective than video-assisted training for enhancing knowledge, skill retention, and confidence in nursing students.

Keywords: Pediatric life support, manual training, video-assisted training, skill retention, confidence

Introduction

Paediatric emergencies demand rapid, efficient, and knowledgeable intervention. PLS training is part of essential clinical training for nursing students. This study seeks to determine which teaching method—manual or video-assisted—best prepares students in terms of knowledge, skill retention, and self-confidence.

Objectives

General Objective

To compare the effectiveness of video-assisted and manual PALS training on the knowledge, skill retention, and confidence of B.Sc. Nursing III year students.

Specific Objective

1. To assess the level of knowledge before and after the training in both groups.
2. To evaluate the skill retention at 1 week and 1 month after training.
3. To assess the confidence levels post-training.
4. To compare the results between the video-assisted and manual training groups.

Hypotheses

- **H0:** There is no significant difference between video-assisted and manual PLS training on knowledge, skill retention, and confidence.
- **H1:** Manual PLS training has a significantly greater effect on knowledge, skill retention, and confidence than video-assisted training.

Methodology

- **Design:** Quasi-experimental, post-test control group design.
- **Setting:** Selected Nursing College, Indore, Madhya Pradesh.
- **Sample Size:** 50 B.Sc. Nursing III year students (n=25 for each group).
- **Sampling Technique:** Simple random sampling using a lottery method.

Tools for Data Collection:

1. **Knowledge Questionnaire:** 20 MCQs on PALS.
2. **Skill Evaluation Checklist:** Practical exam observed and scored (Max = 50).
3. **Confidence Rating Scale:** 10-point Likert scale.

Procedure

- **Pre-test:** Knowledge assessment.

Training

- **Group A:** Manual training with demonstrations and practice.
- **Group B:** Video-assisted training using instructional videos.

Post-test: Immediate knowledge test, skill test after 1 week and 1 month, confidence scale after training.

Ethical Considerations

- Informed consent taken.
- Confidentiality assured.

- Ethical clearance obtained from the Institutional Ethics Committee.

Variable	Manual Group (n=25)	Video Group (n=25)	p-value
Knowledge (Post-Test)	17.6 ± 1.9	15.3 ± 2.1	0.012*
Skill Retention	44.8 ± 3.2	39.5 ± 4.1	0.003*
Confidence Score	8.5 ± 1.1	7.2 ± 1.3	0.009*

*Significant at $p < 0.05$

Discussion

The study revealed that students who received manual training outperformed their peers who received video-assisted training. Manual training allowed for real-time feedback, hands-on practice, and deeper engagement, resulting in improved knowledge retention, skill proficiency, and greater self-confidence. These findings align with prior research emphasizing the benefits of interactive learning in clinical education.

Conclusion

Manual PLS training is significantly more effective than video-assisted training in improving the knowledge, skill retention, and confidence of nursing students. Nursing institutions should consider emphasizing manual training methods in PLS modules to ensure clinical readiness.

Recommendations

1. Manual training should be the preferred method for life-saving skills like PLS.
2. Periodic refresher training should be provided for skill retention.
3. Blended methods (manual + video) could be explored in future studies.
4. Larger multicentre studies can enhance generalizability.

Limitations

- Small sample size (n=50)
- Study limited to one college
- Short follow-up duration (1 month)

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