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A STUDY TO ASSESS THE EFFECTIVENESS OF A CARDIAC ARRHYTHMIA INTERPRETATION TRAINING PROGRAMME ON KNOWLEDGE AND ARRHYTHMIA INTERPRETATION SKILLS AMONG UNDERGRADUATE INTERN HEALTHCARE PROFESSIONALS WORKING IN INTENSIVE CARE UNITS IN DAMOH (M.P.)

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Abstract :

Electrocardiogram (ECG) interpretation is an essential clinical skill for healthcare professionals in intensive care units. Inaccurate interpretation of cardiac arrhythmias can result in delayed treatment and poor patient outcomes. This study aimed to assess the effectiveness of a structured Cardiac Arrhythmia Interpretation Training Programme (AIT) in improving the knowledge and arrhythmia interpretation skills among undergraduate intern healthcare professionals in Damoh (M.P.).

A pre-experimental one group pre-test post-test design was employed among 50 participants. Structured questionnaires and rhythm quizzes were administered before and after the intervention. The training programme included lectures, demonstrations, and practice sessions. Findings revealed a significant improvement in knowledge and interpretation skills following the programme ($p < 0.001$).

Index Terms – Cardiac Arrhythmia, ECG Interpretation, Training Programme, Nursing Education, Intensive Care

I. Introduction

Cardiovascular diseases are the leading cause of morbidity and mortality worldwide, and arrhythmias significantly contribute to adverse outcomes in critical care units. Nurses and healthcare interns play a vital role in recognizing and managing abnormal cardiac rhythms. However, research shows a gap in knowledge and competency in ECG interpretation among interns. This highlights the need for structured educational interventions.

II. Objectives

1. To assess the pre- and post-test knowledge levels regarding arrhythmia interpretation among healthcare professionals.
2. To evaluate the effectiveness of Arrhythmia Interpretation Training Programme (AIT) on knowledge and skills.
3. To correlate post-test knowledge with arrhythmia interpretation skills.
4. To determine the association of knowledge gain with selected demographic variables.

III. Methodology

Design: Pre-experimental, one group pre-test post-test design.

Sample: 50 undergraduate intern healthcare professionals working in intensive care units of Damoh (M.P.).

Tools: Structured knowledge questionnaire and rhythm interpretation quiz.

Intervention: Three-day structured AIT programme including lectures, demonstrations, and practice sessions.

Post-test: Conducted after one week.

IV. Results and Discussion

Findings revealed that the majority of participants had inadequate knowledge and skills before the training. Post-test results indicated a statistically significant improvement in both knowledge and arrhythmia interpretation skills ($p < 0.001$). A moderate positive correlation ($r = 0.237$) was observed between post-test knowledge and interpretation scores.

Table 1: Knowledge Level Before and After Training

Knowledge Level	Pre-test (n=50)	Post-test (n=50)
Adequate	0 (0%)	14 (28%)
Moderately Adequate	13 (26%)	36 (72%)
Inadequate	37 (74%)	0 (0%)

V. Conclusion

The study concludes that the Cardiac Arrhythmia Interpretation Training Programme significantly improved the knowledge and arrhythmia interpretation skills among undergraduate intern healthcare professionals. Such educational interventions should be integrated into regular training curricula to enhance clinical decision-making and patient outcomes in critical care units.

VI. Recommendations

1. Conduct large-scale studies with experimental designs for generalization.
2. Integrate arrhythmia training programmes into undergraduate nursing curriculum.
3. Organize refresher courses and workshops for continuous skill development.
4. Utilize simulation-based learning methods to improve clinical competency.

VII. References

1. Van Arsdale, J. (1998). Nursing care and ECG interpretation in critical care settings.
2. Lamb, L., & Henderson, R. (2020). Competency in ECG interpretation among healthcare professionals.
3. Drew, B., & Funk, M. (2018). Practice standards for ECG monitoring in hospital settings.
4. Keller, S., & Raines, T. (2019). Knowledge gaps in arrhythmia interpretation among critical care nurses.
5. Jang, H., et al. (2019). Blended learning program for ECG interpretation among nursing students.
6. Tubaishat, A., & Tawallah, N. (2021). Simulation-based teaching and knowledge retention in arrhythmia interpretation.
7. Johnson, R., & Robertson, P. (2020). Effectiveness of different modalities for ECG learning among nurses.
8. Summer, L. (2020). Knowledge retention of arrhythmia interpretation among staff nurses.