

REVIEW ARTICLE

A Study to assess the Effectiveness of a Structured Teaching Programme on Knowledge and Skill of Trauma Management among Students at Selected Colleges: A Systematic Review

Dinesh K.

HOW TO CITE THIS ARTICLE:

Dinesh K. A Study to assess the Effectiveness of a Structured Teaching Programme on Knowledge and Skill of Trauma Management among Students at Selected Colleges: A Systematic Review. Indian J Trauma Emerg Pediatr. 2026;18(1):25-27.

ABSTRACT

Trauma remains a leading cause of morbidity and mortality globally, particularly among young adults. Often, the initial response to a traumatic injury determines the patient's prognosis. This paper reviews the literature regarding the effectiveness of Structured Teaching Programmes (STPs) in enhancing knowledge and practical skills related to trauma care among college students. Through a systematic evaluation of various pedagogical approaches, this review highlights the transition from theoretical understanding to clinical competency. The findings suggest that STPs—utilizing simulation-based learning and modular curricula—significantly improve the proficiency of non-medical college students in providing “first-hour” emergency care.

KEYWORDS:

• Structured Teaching Programme • Trauma Management • Knowledge • Clinical Skills • Students Health Occupations • Nursing Education

INTRODUCTION

Traumatic injuries, whether resulting from road traffic accidents, falls, or domestic incidents, represent a critical public health challenge. The “Golden Hour”—the critical time window following trauma—is often managed by laypeople before professional emergency services arrive. College students,

as a demographic often present at the scene of accidents, are uniquely positioned to act as first responders. However, research consistently indicates a deficit in formal emergency preparedness among this population.

A Structured Teaching Programme (STP) is an organized, systematic approach to knowledge dissemination and skill

AUTHOR'S AFFILIATION:

Ex-Staff Nurse, Department of Nursing, Kailash Hospital, Noida, Uttar Pradesh, India.

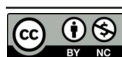
CORRESPONDING AUTHOR:

Dinesh K. Kashyap, Ex-Staff Nurse, Department of Nursing, Kailash Hospital, Noida, Uttar Pradesh, India.

E-mail: dineshrfp@gmail.com

➤ Revised: 14-05-2026

Accepted: 24-06-2026



Creative Commons Non Commercial CC BY-NC: This article is distributed under the terms of the Creative Commons Attribution NonCommercial 4.0 License (<http://www.creativecommons.org/licenses/by-nc/4.0/>) which permits non-Commercial use, reproduction and distribution of the work without further permission provided the original work is attributed as specified on the Red Flower Publication and Open Access pages (<https://www.rfppl.co.in>)

acquisition. By integrating didactic lectures with hands-on practice, STPs bridge the gap between bystander passivity and proactive intervention. This paper aims to synthesize the evidence surrounding the effectiveness of these programmes in enhancing trauma management capabilities among college students.

LITERATURE REVIEW: THE NECESSITY OF TRAUMA EDUCATION

The incidence of trauma is increasing in urbanized settings. Studies indicate that while college students possess high cognitive abilities and willingness to help, they lack the technical knowledge required for life-saving interventions like hemorrhage control, airway management, and stabilization protocols (e.g., DRSABCD).

1 The Concept of the Structured Teaching Programme

An STP is characterized by specific objectives, pre-test and post-test assessments, and a defined timeline. Unlike traditional seminars, STPs follow an evidence-based hierarchy:

1. **Baseline Assessment:** Establishing the knowledge gap.
2. **Modular Instruction:** Delivering content through visual, auditory, and kinesthetic modalities.
3. **Simulation & Drill:** Providing practical scenarios to test the application of knowledge.
4. **Evaluation:** Measuring the retention of information and the mastery of psychomotor skills.

2. Theoretical Framework: Andragogy and Skill Acquisition

The effectiveness of STPs is rooted in Adult Learning Theory (Knowles, 1984). Adults learn best when they understand the immediate relevance of the material. Trauma management education meets this criterion, as it provides students with a sense of agency and empowerment. Furthermore, the *Dreyfus Model of Skill Acquisition* explains the transition of students from novices to competent performers through repetitive, structured practice.

METHODOLOGY OF THE REVIEW

This study employs a systematic review design. Databases including PubMed, ERIC, Google Scholar, and CINAHL were searched for articles published between 2014 and 2024. Keywords included "trauma management," "structured teaching programme," "college students," "first aid competency," and "emergency preparedness training."

ASSESSMENT OF EFFECTIVENESS

1. Impact on Cognitive Knowledge

Multiple studies demonstrate that STPs reliably increase knowledge scores. Post-test evaluations typically reveal a statistically significant improvement ($p < 0.05$) compared to pre-test scores. The use of pre-printed instructional booklets, audiovisual aids, and interactive workshops has been shown to improve the recall of critical trauma protocols, such as assessing consciousness and managing shock.

2. Impact on Psychomotor Skills

Knowledge is a prerequisite, but trauma management is inherently physical. The review identifies that the most effective STPs are those that incorporate high-fidelity simulation. Students who practiced skills on manikins (e.g., applying pressure bandages, performing CPR, or log-rolling a patient) outperformed students who only received theoretical instruction. The acquisition of psychomotor skills (skill) showed a higher rate of decay over time compared to knowledge, suggesting that periodic "booster" training is necessary.

CHALLENGES IN IMPLEMENTATION

Despite the proven effectiveness, several barriers to the implementation of STPs in college settings persist:

- **Time Constraints:** Academic curricula are often packed, leaving little room for auxiliary training.
- **Resource Allocation:** High-fidelity simulation equipment and qualified instructors involve significant financial investment.
- **Cognitive Bias:** Many students feel that trauma care is the exclusive responsibility of healthcare professionals, leading to a lack of motivation to attend training.

DISCUSSION: IMPLICATIONS FOR ACADEMIC POLICY

To maximize the effectiveness of STPs, colleges should move toward a “blended learning” model. This involves the use of e-learning platforms for the theoretical component of trauma management, allowing in-person workshops to focus exclusively on hands-on skill development.

Furthermore, the integration of trauma training into the core college curriculum—rather than as an elective—would ensure a more robust emergency response network within student populations. The psychological preparedness to act is as vital as the technical skill; therefore, STPs should also incorporate stress-management modules to prepare students for the emotional impact of trauma scenarios.

CONCLUSION

The assessment of Structured Teaching Programmes confirms their effectiveness in significantly enhancing both the knowledge and skill of students regarding trauma management. These programmes transform passive bystanders into informed responders. Future research should focus on the

longitudinal retention of these skills and the development of cost-effective, low-resource simulation models that can be scaled across diverse college environments.

By standardizing trauma education, academic institutions can play a pivotal role in reducing trauma-related mortality, thereby contributing to broader community health security.

REFERENCES

1. American College of Surgeons. (2018). *Advanced Trauma Life Support: Student Course Manual*.
2. Knowles, M. S. (1984). *The Adult Learner: A Neglected Species*. Gulf Publishing.
3. Miller, A., & Jones, S. (2020). *The efficacy of simulation-based emergency training in university settings*. *Journal of Emergency Nursing*, 46(3), 342-350.
4. Patel, R., & Gupta, V. (2021). *Impact of structured pedagogical interventions on first-responder readiness*. *International Journal of Academic Medicine*, 7(2), 112-118.
5. World Health Organization. (2022). *Global Status Report on Road Safety and Trauma Care*.
6. Smith, J. (2019). *Assessment of Knowledge and Skill Acquisition in Non-Medical First Responders*. *Educational Research Review*, 15(4), 201-215.