

Exploring Confidence and Attitudes: A Study of Paediatric Trauma Patients Training Education among Final-Year Student Paramedics - Pilot Study.

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Background

- Paramedics respond to varied **paediatric trauma**, from minor injuries to life-threatening incidents (e.g. drownings and burns^{1,2}).
- Research reveals notable **knowledge gaps** and **low confidence** levels in attending paediatric patients^{3,4}.

Research Aim:

This study explores attitudes, confidence levels, and educational gaps in paediatric trauma training among final-year Australian paramedic students.

Materials and methods

- Participants:** Final-year paramedic students from accredited Australian programs.
- Survey:** Anonymous online survey with structured open- and close-ended questions, multiple-choice questions, and a 5-point Likert scale.
- Analysis:** Descriptive and inferential statistics using SPSS.

Results

- 66 participants
- Mean Age: 25.85 years (SD: 6.97)
- Gender Diversity: Various gender identities were reported: Female 62.1%
- Enrolment: 93.9% bachelor's degree undergraduate programs; 86.4% single paramedic degrees
- Clinical Placement: 25.8% completed placement
- Universities Represented: ACU (16.7%); ECU (13.4%); QUT (13.4%)
- Participants with Paediatric Trauma Exposure on placement: 52.6% (n=30)

Conclusions

- Targeted Training Needed:** Enhance skills and confidence in paediatric care.
- Focus on Younger Age Groups:** Address confidence and communication challenges with neonates and infants.
- Improved Outcomes:** Better training programs lead to improved care for paediatric trauma patients.

Table 1: Self-reported Confidence and Competence of final year Paramedic Students about their skills and attending Paediatric trauma patients by patient age groups

Age	Most Confident (%)	Least Confident (%)
NEO	Double and Triple airway manoeuvre: 68% Attending head strike patients: 48.50%	Managing serious haemorrhage: 29% Managing overdose patients: 42.40%
INF	Double and Triple airway manoeuvre: 62% Attending head strike patients: 40.90%	Managing serious haemorrhage: 26% Managing post-submersion and overdose patients: 40.90%
ECH	Ventilating patients: 52% Performing chest compressions: 54.50%	Attending asphyxiation patients: 31.80% Managing serious haemorrhage: 32%
MCH	Ventilating patients: 44% Attending head strike patients: 68.20%	Managing serious haemorrhage: 20% Performing chest compressions: 50.00%
ADL	Double and Triple airway manoeuvre: 55% Determining if sick or not sick: 56%	Managing serious haemorrhage: 21% Managing patients bitten by animals: 69.70%
NEO – Neonates; INF – Infant; ECH – Early Childhood; MCH – Middle Childhood; ADL – Adolescents.		

Literature cited

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A Literature Scoping Review: Paramedic Paediatric Readiness for Trauma: Self-Efficacy, Attitudes and Confidence (PARTSEAC)

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Introduction

- 📌 Children ≠ small adults¹⁻⁸
- 📌 Paramedics underprepared for paediatric patients (PP) with high-acuity, low-occurrence (HALO) emergencies⁹⁻¹³
- 📌 Paramedics' confidence varies with the child's age. As the age of the patient increases, so does their confidence¹⁴⁻¹⁷

Methods

Information sources: Databases, reference lists, Google Scholar.

CINAHL Complete EMBASE OVID EMCARE OVID MEDLINE
ProQuest Scopus Web of Science

Inclusion criteria: Studies evaluating paramedics' comfort, confidence, and attitudes towards critically ill paediatric patients.

Exclusion criteria: Studies not in pre-hospital environments or with less than 50% paramedic sample, not peer-reviewed articles, systematic reviews/meta-analysis

Screening and Quality Assessment:

- Quality assessed using JBI Levels of Evidence.

Research Aim: To explore paramedics' perspectives, including final-year students, on their knowledge, comfort, and confidence in attending critically ill paediatric and paediatric trauma patients.

Results

Articles Identified: 20^{8-14, 18-30}

Overall Methodology

Quantitative: n=9; 45%^{8, 10-12, 24-26, 28}
Qualitative: n=8; 40%^{9, 13, 14, 18, 20-23, 30}
Mixed Methods: n=3; 15%^{19, 27, 29}

4 Themes Identified:

📌 Theme 1: Paramedics' Comfort, Confidence and Knowledge^{8-15, 19-21, 23, 24, 27, 30}

- Lower comfort levels for paediatric care; limited exposure affects confidence and skills.
- Significant discomfort was reported, especially with critically ill paediatric patients.

📌 Theme 2: Paramedic Anxiety^{8-11, 13, 14, 19, 20, 23, 28, 30}

- Increased anxiety attending paediatrics.
- High anxiety in paediatric emergencies affects decision-making and care quality.

📌 Theme 3: Paramedic Paediatric Training and Education^{8-15, 19-25, 27-29}

- Limited initial training and exposure impact paediatric care quality; continuing education (CE) increases comfort more than paediatric-specific CE.
- Limited exposure impacts confidence and skills; simulation-based training (SBT) improves comfort, proficiency, and confidence.
- Training should include online education and SBT for realistic practice and feedback.
- Education barriers include training quality, cost, time, access, and infrequent paediatric interactions.
- More in-service training is desired.

📌 Theme 4: Paramedic Equipment^{8, 10-13, 15, 23-26, 28, 30, 31}

- Specialised paediatric equipment is crucial but often needs improvement or more availability.
- Proper equipment and training on its use are essential for effective paediatric care.

Conclusions

- 📌 Targeted Training Needed: Enhance skills and confidence in paediatric care.
- 📌 Focus on Younger Age Groups: Address confidence and communication challenges with neonates and infants.
- 📌 Improved Outcomes: Better training programs lead to improved care for paediatric trauma patients

Literature identified in the review

