

Comparison of Theoretical Knowledge and Psychomotor Performance Across Medical Specialties During Advanced Paediatric Life Support (APLS) Training

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Introduction - Doctors from various medical fields participate in the Advanced Paediatric Life Support course, an internationally recognized program designed to enhance theoretical knowledge and practical skills in managing paediatric emergencies. This abstract presents preliminary findings from a study titled “Comparison of theoretical knowledge and psychomotor skills during the APLS training course among different categories of medical doctors.” The objective was to examine whether doctors from different specialties demonstrate differences in theoretical and practical performance during the APLS program.

Methodology - A descriptive cross-sectional study was conducted among doctors attending the APLS program between April and November 2023. All 117 participants consented to participate, and 108 had complete datasets. Theoretical knowledge was assessed using multiple-choice questions (MCQs) administered before and after the course, while psychomotor skills were evaluated with a performance index (PI) derived from structured skill assessments. Participants were categorized into four groups (Anesthesia and Critical Care, Paediatric and Neonatology, Emergency Medicine, and other specialties) for analysis. Data were tested for normality using the Shapiro-Wilk test and were found to be non-normally distributed; hence, non-parametric Kruskal-Wallis H tests were applied to compare groups.

Results - Among the 108 participants, 36 (33.3%) worked in Anaesthesia and Critical Care, 29 (26.9%) in Paediatric and Neonatology, 25 (23.1%) in Emergency Medicine, and 18 (16.8%) in other specialties. The mean (\pm SD) scores were pre-course MCQ 69.06% (\pm 31.21), post-course MCQ 84.64% (\pm 7.89), and PI 66.35% (\pm 7.97). Kruskal-Wallis tests showed no statistically significant differences among the four groups for pre-course MCQ (Chi-square = 3.304, $p = 0.347$), post-course MCQ (Chi-square = 5.423, $p = 0.143$), or PI scores (Chi-square = 3.705, $p = 0.295$). Mean Ranks suggested a trend toward higher scores in the Anaesthesia and Critical Care group, but differences were not significant.

Discussion - Although participants in Anaesthesia and Critical Care tended to have slightly higher theoretical and practical performance, no statistically significant differences were observed among the four specialty groups. Overall, the findings suggest that APLS training provides comparable improvements in knowledge and skills across all medical specialties.