

Procedural experience, confidence, and self-reported perceived competence among medical undergraduates: A study from a metropolitan university in Sri Lanka

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Bedside procedures are a vital component of patient care. Evidence from medical schools across the world reveals a lack of exposure to bedside procedures among medical undergraduates. Our objective was to ascertain medical students' experience, confidence, and competence in performing bedside procedures. An anonymous, electronic survey was conducted among medical undergraduates of the Faculty of Medicine, University of Kelaniya, Sri Lanka. The participants were from years three to five, who are engaged in clinical clerkships. Students were asked how often they were exposed to 20 common medical procedures, their anticipated level of self-confidence, and assumed self-competence in performing the procedure independently. Statistical analysis included student t-test, Chi-square test, and comparisons of means. In total, 178 students out of 250 replied to the questionnaire. Most respondents had not observed airway manoeuvres (48.8%), arterial puncture (44.3%), defibrillation (50%), paracentesis (55.6%), and trauma primary survey (56.1%) during their clinical attachments. Students were not confident to perform several bedside procedures either independently or under supervision: nasogastric tube insertion (91.5%), blood culture (69.6%), lumbar puncture (96.0%), cardiopulmonary resuscitation (59.5%), arterial puncture (85.9%), wound dressing (80.8%), and paracentesis (96.0%). Venipuncture, cannulation, and Foley catheter placement were the only procedures that greater than 50% of students had performed more than 5 times during their clinical attachments. Respondents assumed they were able to perform venipuncture (32.5%), cannulation (19.1%), and Foley catheter insertion (13.4%) independently. A significant correlation was observed ($r = 0.8$) with higher experience, confidence and assumed competence. The present study demonstrates that medical students are underexposed to vital bedside procedures and feel uncomfortable performing such procedures. Level of experience appears to significantly improve the levels of confidence as well as self-reported perceived competence among medical students. Due diligence needs to be given to improve procedural competence in undergraduate medical education.

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