

Basic Life Support is effectively taught in groups of three, five and eight students per tutor in a prospective, randomized and double-blind simulation study.

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Introduction: Teachers and students commonly believe that teaching in small groups is superior compared to teaching in larger groups. We investigated the impact of different group sizes on the training outcome of resuscitation skills.

Methods: Medical students ($n = 74$) were randomized to Basic Life Support (BLS) courses with three, five or eight participants per tutor. Students received a standardized BLS training while we video-recorded teaching observations. Before and after the training, all participants performed an Objective Structured Clinical Exam (OSCE). We analyzed the BLS quality using a checklist (pass level 75%) and measured the chest-compression parameters with a high-fidelity manikin.

Results: Checklist pass-levels were comparable between groups of three, five and eight students per tutor in the post-test (93%, 100% and 100%, respectively). Chest compressions showed comparable compression depths and rates. Students in groups of eight classmates asked fewer questions (0.5 (0.0 – 1.0) vs. 3.0 (2.0 – 4.0), median (interquartile range), $p < 0.001$), had less training time (2:16 min (1:15 – 4:55 min) vs. 4:07 min (2:54 – 5:52 min), median (interquartile range), $p = 0.02$), conducted more irrelevant conversations (17.0 ± 5.1 and 2.9 ± 1.7 , mean \pm standard deviation, $p < 0.001$) and had a lower self-assessment than groups of three students per tutor (7.0 (6.1 - 9.0) and 8.2 (7.2 - 9.0), median (interquartile range), $p = 0.03$).

Discussion: Although resuscitation checklist scores were comparable high for all group sizes, smaller groups had certain advantages in teaching interventions and effective learning time. However, these advantages could just provide “in-details” knowledge and might not be necessary to learn and perform relatively simple tasks as BLS skills. Our results suggest that BLS skills can be effectively taught in groups of three, five and eight students per tutor.