Effects of two retraining strategies on nursing students' acquisition and retention of BLS/AED skills: A cluster randomised trial
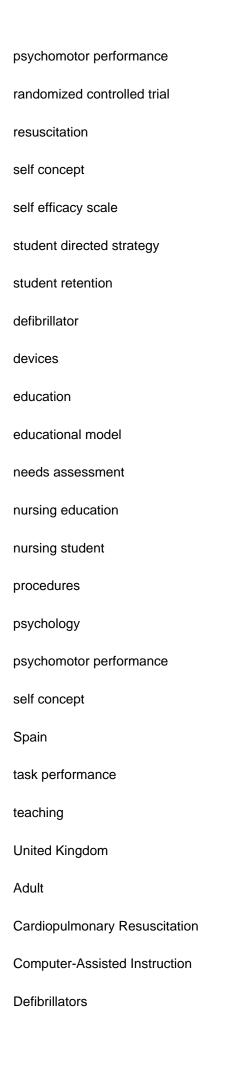
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Aim: To determine and compare the effects of two different retraining strategies on nursing students' acquisition and retention of BLS/AED skills. Methods: Nursing students (N=177) from two European universities were randomly assigned to either an instructor-directed (IDG) or a student-directed (SDG) 4-h retraining session in BLS/AED. A multiple-choice questionnaire, the Cardiff Test, Laerdal SkillReporter® software and a self-efficacy scale were used to assess students' overall competency (knowledge, psychomotor skills and self-efficacy) in BLS/AED at pre-test, post-test and 3-month retention-test. GEE, chi-squared and McNemar tests were performed to examine statistical differences amongst groups across time. Results: There was a significant increase in the proportion of students who achieved competency for all variables measuring knowledge, psychomotor skills and self-efficacy between pre-test and post-test in both groups (all p-values. <. 0.05). However, at post-test, significantly more students in the SDG achieved overall BLS/AED competency when compared to IDG. In terms of retention at 3 months, success rates of students within the IDG deteriorated significantly for all variables except ?70% of chest compressions with correct hand position (p-value = 0.12). Conversely, the proportion of students who achieved competency within the SDG only decreased significantly in 'mean no flow-time?5s' (p-value = 0.02). Furthermore, differences between groups' success rates at retention-test also proved to be significantly different for all variables measured (all p-values < 0.05). Conclusion: This study demonstrated that using a student-directed strategy to retrain BLS/AED skills has resulted in a higher proportion of nursing students achieving and retaining competency in BLS/AED at three months when compared to an instructor-directed strategy. © 2015 Elsevier Ireland Ltd.

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