Junior Savior: The Impact of Basic Life Support Program Instruction on Student's Knowledge and Confidence in Riyadh Schools

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ABSTRACT

Sudden cardiac arrest in school environments is preventable when trained lay responders act promptly, but information from Saudi Arabia schools remains scarce. Our study which conducted by Heart Health Center at King Saud Medical City affiliated with Riyadh First Cluster aims to investigation assess whether a brief instruction of Basic Life Support (BLS) intervention can raise essential competencies among school communities. A pre-post observational design was used in several randomly selected primary education schools in Riyadh in 2025. Primary education school students and teachers who attended a 90-minute basic life support session were eligible. The class followed the 2020 American Heart Association recommendations and blended video instruction, live demonstration, and manikin practice supervised by certified instructors. The questionnaire recorded familiarity with BLS, recognition of cardiac arrest symptoms, knowledge of the circulation, airway, breathing sequence, perceived ability to respond, and confidence immediately before and after training. A total of 212 participants completed both assessments. Recognition of emergency symptoms improved from 79 participants (41.1%) pre-training 212 (100.0%) following the course. Correct identification of the BLS sequence increased from just 30 participants (14.5%) to 212 (100.0%) following the course. Regarding perceived improvement, only 77 participants (36.5%) initially reported significant improvement, compared to 212 (100.0%) after training. Confidence also improved markedly, before training, only 49 participants (23.6%) felt very confident, while after the course, all 212 participants (100.0%) reported very high confidence. A statistically significant improvement in participants' knowledge and perceived training effectiveness was observed after the BLS course. The mean knowledge score increased from 1.28 before training to 4.00 after training (p = 0.001). Similarly, the mean training effectiveness score rose from 4.63 to 600 (p=0.001). Following the BLS training, 174 participants (96.1%) were able to perform chest compressions correctly, and 167 (88.8%) correctly identified the compression-to-breathing ratio. Only 13 participants (9.0%) practiced using an AED. While most participants (82.7%) reported no difficulty understanding the training method, the same percentage (82.7%) found the training facilities adequate for hands-on practice. A strong majority (189, 93.6%) supported making BLS training mandatory in schools. A ninety-minute classroom based BLS program produced substantial improvements in knowledge and self-efficacy among students and staff. Integrating such training into routine school schedules may strengthen community first responder capacity.

Keywords: Basic Life Support; Confidence; Knowledge; Saudi Arabia; Students.

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