



Learning CPR and defibrillation at school: comparison of different training strategies for a lay- public.

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PUBLIC PHD DEFENCE FOR THE DEGREE OF
DOCTOR IN MOVEMENT AND SPORT SCIENCES

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ROOM D0.08, CAMPUS ETTERBEEK

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ABSTRACT OF THE RESEARCH

The leading cause of death around the world is heart disease. The World Health Organization (WHO) reports a substantial increase in sudden cardiac arrest during the past decades. It stated that CPR training programs should be implemented at school to foster training of lay people in European countries. But important barriers for implementation are a lack of confidence of teachers, a lack of time and a lack of resources to provide training manikins. Additionally, training strategies for CPR and AED, do not fully suit the school context. On the other hand, the teachers' perceived competence to teach CPR at school is an important issue. Educational efficiency plays a major role in the quality of bystander CPR in the wider community. This study examines training strategies and their contribution to the educational efficacy of CPR training at school. The aim of this study is to evaluate learning outcomes of CPR and AED training at school, using blended learning methods and alternative and low-fidelity training tools, instead of manikins.

Each study included in this work aims to tackle one or more barriers for CPR and AED implementation at school and discusses results from an educational perspective. The first studies included in this work, address the use of low-cost training materials and pupils' perception of it to learn AED and CPR. Another study evaluates learning outcomes of an online training simulation, without hands on practice as a cheap alternative at school. The final study included in this work, compares the learning outcomes of traditional in class training or face to face training versus all kinds of alternatives using (online) self-learning and video instruction (face to screen).

Results of these studies suggested that the use of an AED and chest compression skills can be learned with cheap and accessible training equipment. Some basic lifesaving actions, such as the assessment of the victim, calling 112 and placing the AED pads, can be learned autonomously in an online self-training environment. The final part discusses the reasons why alternative material is a viable alternative and presents an adapted framework to increase educational efficiency of CPR and AED training at school.

CURRICULUM VITAE

Veerle Van Raemdonck (°12/06/1978) graduated in 2001 as a Master in Physical Education (PE) and in 2003 at the teacher training department at KUL. She started her professional career in sports management. After three years, she switched to the field of education. Since then, she worked as a teacher and researcher at the Erasmus University College Brussels (EhB) and at the Department of Movement and Sport Sciences (BESW) of the Faculty of Physical Education and Physiotherapy (LK) at the VUB. She started her PhD-study on CPR training strategies in school context at the VUB in 2010. Since September 2022, she works as learning and development designer at the Business Center of the VUB.

