“Dare to save a life at school”: implementation of a CPR+AED sequence in the PE curriculum

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- ✓ Few people are able to react effectively to a sudden cardiac arrest, whereas early CPR + AED increases dramatically survival rates
- ✓ School-based programs are recommended to teach resuscitation to population, but are not compulsory in the French-speaking part of Belgium
- ✓ Physical education (PE) teacher could instruct life-saving techniques and contribute to educate responsible citizens

1 min

Background

- Europe : 500,000 cardiac arrest/year, 5 to 10% survival rate ¹
- Bystander CPR: survival rate x 2-3 ¹
- Bystander CPR + AED: Survival rate x 5-7 ¹
- Less than 20% effective bystanders ²
- School CPR training is recommended, provided by the existing teaching staff such as PE teachers ³
- Concrete meaning to learning Responsible citizens High motivation level ⁴

Aims

- ✓ Develop and evaluate the relevance of a PE teacher training to teach a CPR+AED sequence to secondary school students
- ✓ Assess the impact of a CPR+AED sequence on theoretical knowledge and practical life-saving skills of the students

Methods

Results and discussion

- ✓ 11 teachers (6 ♀ 5 ♂; 39.4 ± 7.9 y)
 - Satisfaction about the training: 9.3/10
 - Confidence to teach to students: 8.5/10
- ✓ 307 students (166 ♀ 141 ♂; 17.1 ± 0.8 y)

Knowledge about CPR + AED

	Score /20	σ	[min-max]/20
T0	6.82/20	±3.59	[0.5-17]
p	$p_{T0vsT1} < 0.000$ ²		
T1	15.86/20	±3.19	[5-20]
p	$p_{T1vsT2} = 0.64$		
T2	15.92/20	±2.97	[5.5-20]
p	$p_{T0vsT2} < 0.000$ ⁵		

Practical CPR + AED skills

	Score /20	Ventilation volume(ml)	Compression rate (n/min)	Compression depth (mm)	Hands-on position (%)	Full release (%)
T1	15.3 ± 1.96	590.01 ml ±343.22	104.15/min ±7.82	43.32 mm ±4.36	74% ±31	97% ±11.58
T2	14.5 ± 1.83	332.717ml ±215.82	105.09/min ±6.91	41.43 mm ±5.22	76% ±28	98% ±10.42
P	0.17	<0,000 ⁷	0.53	0.32	0.21	0.46

- ✓ Encouraging improvements of the knowledge, abilities and confidence of the students ⁷

- ✓ PE teachers felt valued and able to contribute autonomously to this major public health challenge
- ✓ Equipment issues are highlighted by teachers (AEDs), as students ask for additional first aid teaching