Supplementary tables

to the article

Does age still matter? An age-group comparison of self-efficacy, initial interest and performance when learning bystander resuscitation in secondary schools

S1 Scales and items.

Table S1: SET-BLS and interest scales, specifically created for the circulatory system and BLS training. The original questionnaire is in the German language and has been translated into English.

Situational self-efficacy scale for the decision to initiate BLS/CPR

Fuchs & Schwarzer 1994, in adoption, distinct modifications

Instruction: Evaluate how confident you feel in a situation where you have to resuscitate someone.

Subdomain: psychological challenges (PSY)				**Subdomain: social challenges (SOC)**			
	I'm sure I can perform CPR even if...				*I'm sure I can perform CPR even if...*		
p1	...I'm afraid of causing harm to the person.			s1	...my companions urge me to move on.		
p2	...I feel sad about the emergency.			s2	...I am late for an appointment and friends are waiting for me.		
p3	...I feel overwhelmed by the sudden emergency situation.			s3	...no one around me offers to help me voluntarily.		
p4	...It disgusts me to have contact to or touch the person.			s4	...other people just continue walking by or do nothing.		
p5	...I don't feel that strong.						
N_{11-13}	**123**	**Cr. α_{11-13}***	**0.833**	**N_{11-13}**	**125**	**Cr. α_{11-13}***	**0.879**
N_{14-17}	**234**	**Cr. α_{14-17}***	**0.804**	**N_{14-17}**	**237**	**Cr. α_{14-17}***	**0.828**

Table S1 continued

Specific outcome expectancy scale for BLS/CPR behaviour							
(own development)							
Subdomain: positive value (PS)				**Subdomain: negative value (NG)**			
ps1	If I personally intervene in an observed cardiac arrest, then I can encourage other people to help. *[social]*			ng1	If I resuscitate someone, I can cause even more severe injuries. *[evaluative]*		
ps2	If I do chest compressions, I contribute significantly to the chances of survival. *[evaluative]*			ng2	If I have to do CPR, I'm requiring too much physical strength. *[evaluative]*		
ps3	If I cooperate with other bystanders, I may help the person who is affected better than acting alone. *[social]*			ng3	If I do mouth-to-mouth during a resuscitation, then I seriously risk an infection. *[evaluative]*		
ps4	If I just wait for the emergency medical services, it'll be too late. *[evaluative]*			ng4	When I start a resuscitation, other people will start to question me for it. *[social]*		
ps5	If I assign tasks to the others around me, then I save important time in helping. *[social]*			ng5	If I perform CPR to someone, there's a lot I can do wrong. *[evaluative]*		
N_{11-13}	**121**	**Cr. α_{11-13}***	**0.689**	**N_{11-13}**	**125**	**Cr. α_{11-13}***	**0.675**
N_{14-17}	**230**	**Cr. α_{14-17}***	**0.443**	**N_{14-17}**	**232**	**Cr. α_{14-17}***	**0.651**

* baseline measurement (t_0)

Table S1 continued

Situational interest in relevant issues of BLS education

(Wegner 2009, in adoption, distinct modifications)

Instruction: First you will be asked about how you value the issues "human circulation" and "resuscitation". Do you agree or disagree with the following statements?

Subdomain: interest in issues concerning "heart and circulatory system"				**Subdomain: interest in Basic Life support and chest compressions**			
circ1	I am very interested in the issue of 'heart & circulation'.			cpr2	I am very interested in the issue 'resuscitation'.		
circ4	I think the issue 'heart & circulation' is exciting, so I would like to know more about it.			cp4	I think the issue 'resuscitation' is exciting, so I would like to know more about it.		
circ5	The issue 'heart & circulation' makes me very curious.			cpr5	The issue 'resuscitation' makes me very curious.		
N_{11-13}	**127**	**Cr. α_{11-13}***	**0.872**	**N_{11-13}**	**125**	**Cr. α_{11-13}***	**0.915**
N_{14-17}	**233**	**Cr. α_{14-17}***	**0.915**	**N_{14-17}**	**236**	**Cr. α_{14-17}***	**0.916**

* baseline measurement (t_0)

S2 Time and age group comparisons of social scales (SET-BLS and situational interest)

Table S2.1: Time effect comparisons of social scales (SET-BLS and situational interest) (baseline vs. final).

Scale/ Variable	Time	11 to 13 years[a]				14 to 17 years[b]			
		M (SD)	T (df)	p[c]	d[d]	M (SD)	T (df)	p[c]	d[d]
SE_Psy	baseline	3.13 (1.21)	-4.37 (126)	<0.001	0.40	3.12 (1.12)	-7.311 (237)	<0.001	0.47
	final	3.60 (1.15)				3.63 (1.05)			
SE_soc	baseline	3.67 (1.38)	-3.88 (126)	<0.001	0.35	3.70 (1.26)	-3.807 (237)	<0.001	0.26
	final	4.11 (1.10)				4.01 (1.14)			
OE_neg	baseline	2.39 (0.95)	0.91 (126)	0.915		2.35 (0.78)	2.16 (237)	0.096	
	final	2.32 (0.88)				2.22 (0.96)			
OE_pos	baseline	3.79 (0.80)	-4.32 (126)	<0.001	0.37	3.80 (0.83)	-3.94 (237)	<0.001	0.35
	final	4.09 (0.87)				4.04 (1.05)			
Int_circ	baseline	2.95 (1.12)	3.63 (126)	1.000		3.11 (1.20)	3.00 (237)	1.000	
	final	2.65 (1.12)				2.90 (1.27)			
Int_CPR	baseline	3.40 (1.12)	1.23 (126)	1.000		3.43 (1.23)	2.89 (237)	1.000	
	final	3.29 (1.20)				3.23 (1.27)			

Annotations:
a) n = 127;
b) n = 238;
c) one-sided p-values with Bonferroni-Holm correction;
d) effect size;
M: mean value; SD: standard deviation; T: t-test value; df: degrees of freedom.

Table S2.2: Age group comparisons of social scales (SET-BLS and situational interest) (11 to 13 years vs. 14-17 years of age).
Note: Groups were built based on recommendations and local regulations (cf. methods section) to assess age-related outcomes.

Scale/ Variable	Age-group	Baseline (t_0)				Final (t_1)			
		M (SD)	T (df)	p[c]	d	M (SD)	T (df)	p[c]	d
SE_Psy	11-13 y. [a]	3.13 (1.21)	0.09 (240.71)	0.930	-	3.60 (1.15)	-0.217 (236.72)	0.828	-
	14-17 y.[b]	3.12 (1.12)				3.63 (1.05)			
SE_soc	11-13 y. [a]	3.67 (1.13)	-0.22 (238.31)	0.828	-	4.11 (1.10)	0.843 (266.856)	0.400	-
	14-17 y.[b]	3.70 (1.26)				4.01 (1.14)			
OE_neg	11-13 y. [a]	2.39 (0.95)	0.42 (219.00)	0.672	-	2.32 (0.88)	1.00 (277.33)	0.320	-
	14-17 y.[b]	2.35 (0.78)				2.22 (0.96)			
OE_pos	11-13 y. [a]	3.79 (0.80)	-0.14 (265.09)	0.890	-	4.09 (0.87)	0.49 (301.67)	0.622	-
	14-17 y.[b]	3.80 (0.83)				4.04 (1.05)			
Int_circ	11-13 y. [a]	2.95 (1.12)	-1.22 (273.63)	0.226	-	2.65(1.12)	-1.92 (285.88)	0.056	-
	14-17 y.[b]	3.11 (1.20)				2.90 (1.27)			
Int_CPR	11-13 y. [a]	3.40 (1.12)	-0.22 (280.16)	0.823	-	3.29 (1.20)	0.35 (270.41)	0.725	-
	14-17 y.[b]	3.43 (1.23)				3.23 (1.27)			

Annotations:
a) n = 127;
b) n = 238;
c) (2-sided) p-values;
d) effect size;
M: mean value; SD: standard deviation; T: t-test value; df: degrees of freedom.

S3 Time and age group comparisons of CPR performance

Table S3.1: Time effect comparisons of the performance (scenario test) according to Perkins et al. (2015) ERC guidelines.

Scale/ Variable	Time	11 to 13 years[a]				14 to 17 years[b]			
		M (SD)	T (df)	p[c]	d	M (SD)	T (df)	p[c]	d
Mean depth [mm]	baseline	31.48 (16.53)	-11.32 (63)	**<0.001**	1.51	45.89 (15.97)	-12.10 (121)	**<0.001**	1.65
	final	53.88 (12.49)				62.59 (10.86)			
Mean rate [min^{-1}]	baseline	74.75 (47.38)	-5.16 (63)	**<0.001**	0.85	97.56 (31.95)	-5.72 (121)	**<0.001**	0.68
	final	105.98 (17.49)				111.38 (19.96)			
Correct depth [%]	baseline	13.67 (29.02)	-9.89 (63)	**<0.001**	1.32	42.69 (44.61)	-11.58 (121)	**<0.001**	1.72
	final	59.09 (38.13)				88.81 (23.78)			
Correct rate [%]	baseline	11.02 (20.34)	-5.39 (63)	**<0.001**	0.98	20.03 (29.09)	-4.52 (121)	**<0.001**	0.77
	final	36.38 (30.64)				38.43 (36.50)			
Correct release [%]	baseline	87.14 (31.53)	-0.76 (63)	0.449	-	95.23 (14.45)	1.58 (121)	0.942	-
	final	90.56 (22.33)				92.52 (18.04)			

Annotations:
a) n = 64;
b) n = 122;
c) one-sided p-values with Bonferroni-Holm correction;
d) effect size;
M: mean value; SD: standard deviation; T: t-test value; df: degrees of freedom.

Table S3.2: Age group comparisons of the performance (scenario test) according to Perkins et al. (2015) ERC guidelines.
Note: Groups were built based on recommendations and local regulations (cf. methods section) to assess age-related outcomes.

scale/ variable	age-group	Baseline (t_0)				Final (t_1)			
		M (SD)	T (df)	p[c]	d	M (SD)	T (df)	p[c]	d
Mean depth [mm]	11-13 y. [a]	31.48 (16.53)	-5.72 (124.28)	**<0.001**	0.82	53.88 (12.49)	-4.72 (113.64)	**<0.001**	0.73
	14-17 y.[b]	45.89 (15.97)				62.59 (10.86)			
Mean rate [min^{-1}]	11-13 y. [a]	74.75 (47.38)	-3.46 (93.87)	**0.002**	0.53	105.98 (17.49)	-1.90 (143.54)	0.110	-
	14-17 y.[b]	97.56 (31.95)				111.38 (19.96)			
Correct depth [%]	11-13 y. [a]	13.67 (29.02)	-5.35 (175.56)	**<0.001**	0.83	59.09 (38.13)	-5.68 (89.38)	**<0.001**	0.88
	14-17 y.[b]	42.69 (44.61)				88.81 (23.78)			
Correct rate [%]	11-13 y. [a]	11.02 (20.34)	-2.46 (169.25)	**0.037**	0.38	36.38 (30.64)	-0.41 (148.79)	0.545	-
	14-17 y.[b]	20.03 (29.09)				38.43 (36.50)			
Correct release [%]	11-13 y. [a]	87.14 (31.53)	-1.95 (77.17)	0.110	-	90.56 (22.33)	-9.61 (107.00)	0.545	-
	14-17 y.[b]	95.23 (14.45)				92.52 (18.04)			

Annotations:
a) n = 64;
b) n = 122;
c) one-sided p-values with Bonferroni-Holm correction;
d) effect size;
M: mean value; SD: standard deviation; T: t-test value; df: degrees of freedom.