



**American
Red Cross**

American Red Cross SAC Scientific Review Motivation to Attend Training

Scientific Advisory Council

Questions to be addressed:

- What motivations exist for individuals/populations who attended a “first aid” course compared to those who did not attend
- Identify factors motivating learners to seek education, information, and training to prepare to respond to emergencies from observational studies.

Introduction/Overview:

To improve first education dissemination, better understanding of the motives of learners to seek training is imperative for financial solvency and population saturation of knowledge, skills, and resources to respond to emergencies.

A review of the literature using a social ecological perspective is warranted to better understand the motives for the learners to seek first aid education. An improved understanding of learner motives could inform organizational and community-based decision making around first aid education dissemination. Tentative sources of research included:

- First Aid Education
- Health Promotion
- Health Education
- Bystander Education
- Social Media
- Marketing
- Disaster Preparedness & Education

Overall, there is limited low level evidence of poor quality to answer the specific question of what motivates people to attend first aid training. Most studies asked the question without any behavioral model or theory behind it or measures of validity.

Motivation to attend a course/first aid education has multiple social, ecological, and personal elements which are missing from the scholarship as essential elements. Moving beyond description and deeper in to motives will help prospective scholarship in the future contribute to the recruitment or self-identification for future first aid education.

Opportunity exists for internal analysis of Red Cross data on motivation to attend/seek training through theoretical lens to help establish psychological, social, and environmental motivations to increase future learning.

Search Strategy and Literature Search Performed

Key Words Used

- ("first aid") AND (motivation)

Inclusion Criteria (time period, type of articles and journals, language, methodology)

- English, observational or experimental design, outcomes

Exclusion Criteria (only human studies, foreign language, etc...)

- non-English, health professional level learners (medical, nurse, EMS)

Databases Searched and Additional Methods Used (references of articles, texts, contact with authors, etc...)

- EBSCO search tool (searched 99 databases)
- Data bases last searched: 11/2/18, 365 results, with duplicates removed

OpenAIRE	48
OAster	40
MEDLINE Complete	39
HeinOnline	39
Academic Search Premier	38
Academic Search Complete	38
Complementary Index	31
Directory of Open Access Journals	27
ELibrary.RU	21
Academic OneFile	20
Science Citation Index	19
Newspaper Source	17
ERIC	16
Medical Online-E	16
Supplemental Index	15
CINAHL Plus with Full Text	14
InfoTrac Health Reference Center Academic	14
Social Sciences Citation Index	13
Networked Digital Library of Theses & Dissertations	12
SocINDEX with Full Text	11
PsycINFO	10
Expanded Academic ASAP	9
SPORTDiscus with Full Text	8

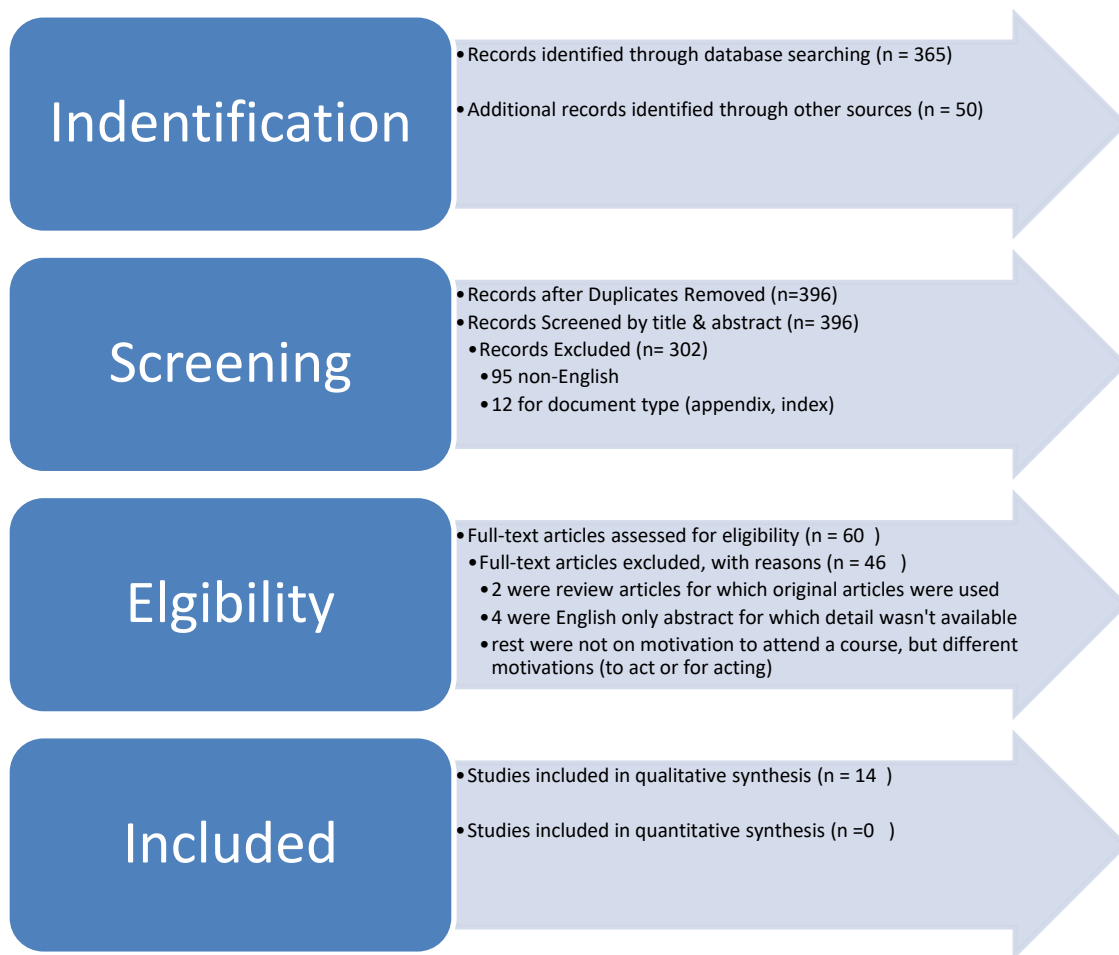
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Education Research Complete	8
National Criminal Justice Reference Service Abstracts	8
Research Starters	8
Business Source Premier	7
Business Source Complete	7
TOXNET TOXLINE	7
General OneFile	6
MasterFILE Premier	5
Psychology and Behavioral Sciences Collection	4
Women's Studies International	4
Gender Studies Database	4
ScienceDirect	4
InfoTrac Newsstand	4
Professional Development Collection	3
Education Full Text (H.W. Wilson)	3
British Library Document Supply Centre Inside Serials & Conference Proceedings	3
Food Science Source	3
Small Business Reference Center	3
OhioLINK Library Catalog – LR	3
Health & Wellness Resource Center	3
Business Insights: Essentials	3
KoreaScience	3
VLeBooks	3
IEEE Xplore Digital Library	3
Journals@OVID	3
MedicLatina	2
Teacher Reference Center	2
Health Source: Nursing/Academic Edition	2
MAS Ultra - School Edition	2
Computers & Applied Sciences Complete	2
Consumer Health Complete - EBSCOhost	2
Associates Programs Source	2
Human Resources Abstracts	2
Vocational Studies Premier	2
J-STAGE	2
JSTOR Journals	2
AGRIS	2
Airiti Library 華藝線上圖書館	2

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RCAAP	2
Scopus®	2
European Library	2
Middle Search Plus	1
Sociological Collection	1
Fuente Académica	1
EconLit	1
Vocational and Career Collection	1
Humanities International Complete	1
Library, Information Science & Technology Abstracts with Full Text	1
Mental Measurements Yearbook with Tests in Print	1
Criminal Justice Abstracts with Full Text	1
Environment Complete	1
Peace Research Abstracts	1
Readers' Guide Full Text Mega (H.W. Wilson)	1
PsycARTICLES	1
Business Abstracts with Full Text (H.W. Wilson)	1
Entrepreneurial Studies Source	1
Public Affairs Index	1
Opposing Viewpoints in Context	1
World History in Context	1
Science In Context	1
Bibliotheksverbund Bayern	1
HyRead Journal	1
Canada In Context	1
General Reference Center Gold	1
China Science & Technology Journal Database	1
Gale Virtual Reference Library	1
BiblioBoard	1
Index New Zealand	1
Erudit	1
African Journals	1
OpenDissertations	1
Europeana	1
Scholarly Blog Index	1
BrillOnline Reference Works	1
RePEc	1
FRANCIS Archive	1

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Scientific Foundation:

Extrinsic Motivations

- Legal/Required:
 - First Aid as a Job or School Requirement – Strong (Arbon, 2011; Cariou, 2017; Platz, 2000)
 - Duty to care in sports – Weak (Fortington, 2017)
 - Expired certification – Weak, Indirect Evaluation (Bouland, 2017)
- Moral/Ethical:
 - Help others – Weak, Indirect Evaluation (Cariou, 2017)
 - Prescription for education/Healthcare provider advice - Weak (Greenberg, 2012; Platz, 2000)
- Environmental:
 - High performance systems/safety culture – Neutral (Zacharatos, 2005)
 - Distance from help – Weak (Fortington, 2017)
 - Payment from work – Weak (Arbon, 2011)
 - Participation in sporting activity – Weak (Arbon, 2011)

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Opportunistic Motivations

- Cost:
 - Cost and length of course – Neutral (Pearn, 1980)
 - Training of peers/family with a free kit - Indirect Evaluation (Ikeda, 2016)
- Moral/Ethical:
 - Pay it forward - Weak, Indirect Evaluation (Ikeda, 2016)
- Environmental:
 - Convenience – Neutral (Platz, 2000)

Intrinsic Motivation

- Altruistic:
 - Helping family and friends – Strong (Arbon, 2011)
 - To be prepared just in case – Strong (Bouland, 2017)
 - Interest in helping others – Strong, Indirect Evaluation (Cariou, 2017; Kanstad, 2011)
 - Interest in helping others – Weak, Indirect Evaluation (Ikeda, 2016, Platz 2000)
 - Contribution to the community – Weak (Roberts, 2014)
- Environmental:
 - Helping a vulnerable family member– Weak (Bouland, 2017; Cariou, 2017; Kliegel, 2000; Platz, 2000)
 - Helping someone with cardiac disease – Weak, Indirect Evaluation (Huang, 2016; Ikeda, 2016; Kanstad, 2011)
 - Opinion of EMS/know what CPR is – Strong, Indirect Evaluation (Huang, 2016)
 - Self-Motivation – Weak (Arbon, 2011)

Overall, there is limited low level evidence of poor quality to answer the specific question of what motivates people to attend first aid training. Most studies asked the question without any behavioral model or theory behind it or measures of validity.

Recommendations and Strength:

Standards: none

Guidelines: none

Options: none

Knowledge Gaps and Future Research:

Motivation to attend a course/first aid education has multiple social, ecological, and personal elements which are missing from the scholarship as essential elements. Moving beyond description and deeper in to motives will help prospective scholarship in the future contribute to the recruitment or self-identification for future first aid education.

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Opportunity exists for internal analysis of Red Cross data on motivation to attend/seek training through theoretical lens to help establish psychological, social, and environmental motivations to increase future learning.

The collected references for this question also included sources for future analysis of motivation to act and motivation for acting.

Implications for ARC Programs:

Internal research and then scholarship to promote evidence based approaches to disseminating first aid education.

Attach Any Lists, Tables of List of Recommendations Created As Part of This Review

None.



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Summary of Key Articles/Literature Found and Level of Evidence/Bibliography:

(Please fill in the following table for articles that were used to create your recommendations and/or guidelines. For reference please use the American Medical Association Manual of Style and please only use abbreviations for journal names as listed in index medicus)

Author(s)	Full Citation	Summary of Article (provide a brief summary of what the article adds to this review including which question(s) it supports, refutes or is neutral)	Methodology	Bias Assessment	Indirectness/ Imprecision/ Inconsistency	Key results and magnitude of results	Support, Neutral or Oppose Question	Level of Evidence (Using table below)	Quality of study (excellent, good, fair or poor) and why
Kanstad, B.K. Nilsen, S.Aa. Fredrikse n, K.	Kanstad, B. K., Nilsen, S. A., & Fredrikse n, K. (2011). CPR knowledge and attitude to perform	investigate knowledge of CPR and attitude to performing bystander CPR among young Norwegians, we questioned secondary school students about CPR training, self-reported experience with cardiac arrest	Survey	High-recall from previous experience	Indirect	Previous BLS training was common (89%) in both genders, and 73% had obtained this at school. More than half of the respondents had attended BLS courses through	Neutral	3b	poor

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	<p>ing bystander CPR among secondary school students in Norway . <i>Resuscitation</i>, 82(8), 1053–1059. https://doi.org/10.1016/J.RESUSCITATION.2011.03.033</p>	<p>situations, and how they think they would react in given cardiac arrest situations.</p>				<p>organizations , work, or other providers. The majority (75%) said they would like to receive more BLS training, with female students showing significantly stronger commitment than male students (p < 0.001). The answers also suggest that female students express particular interest in attending BLS training outside school if such courses had been more avail-</p>			
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						able. The predominant motivation for more training was to prevent avoidable death (81%). The vast majority (86%) even supported compulsory BLS training in school, and only 1% expressed the view that BLS training should be an optional activity.			
Huang, Q Hu, C Mao, J	Huang, Q., Hu, C., & Mao, J. (2016). Are Chinese Students Willing	N=1407, students from middle-university, define the relevant reasons that influenced their willingness. Additionally, we surveyed	Survey	High	Imprecision-not done at actual training, recall	A logistic regression model for investigating the characteristics of respondents that influenced their	neutral	3b	fair

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<p>to Learn and Perform Bystander Cardiopulmonary Resuscitation? <i>Journal of Emergency Medicine</i>, 51(6), 712–720. https://doi.org/10.1016/j.jemermed.2016.02.033</p>	<p>students on their experience in CPR training and rescuing others using CPR</p>				<p>willingness to learn CPR revealed that being female (odds ratio [OR] = 1.91), educational level (OR = 1.89), family members having CVDs (yes vs. no, OR = 2.67), opinion of development of local medical emergency system (perfect vs. poor, OR = 3.15), having ever heard of CPR (OR = 2.43), would perform CPR (on family member, OR = 2.19; on stranger, OR = 1.83), and knowledge score (OR =</p>			
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						1.44) were independently associated with willingness.			
Roberts, Anne Nimegeer, Amy Farmer, Jane Heaney, David J	Roberts, A., Nimegeer, A., Farmer, J., & Heaney, D. J. (2014). The experience of community first responders in co-producing rural health care: in the liminal gap between citizen	Inquiry into experience of CFRs, long term volunteers, using FA training prior to Ambulance Arrival in distant communities	Qualitative interviews of voluntary Community First Responders (CFR)	High-	Indirectness-long term FA volunteers	Asked about their motivations, CFRs expressed enthusiasm for contributing to their community. They often stated their role as bridging the gap between health professionals and the community and providing support while awaiting ambulance arrival. Some had first	Neutral	3b	fair

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	<p>and professi onal. BioMe d Central. https://doi.org/10.1186/1472-6963-14-460</p>					<p>aid knowledge: “I became a first responder just to give something back to the community and also because I do basic life support training at work, to other people and I just thought it was a good way of maintaining it for myself and actually using it.” (Focus Group 2). just thought it was a good way of maintaining it for myself and actually using it.”</p>			
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						<p>(Focus Group 2). Experience of types of previous emergency situation influenced some: “My dad took a heart attack and I had no idea what to do I want to try and help somebody because you’ve “My dad took a heart attack and I had no idea what to do I want to try and help somebody because you’ve got no chance up here if you’re, say</p>			
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						<p>half an hour away doI want to try and help somebody because you've got no chance up here if you're, say half an hour away from the hospital.....that's the thing that pushed me got no chance up here if you're, say half an hour away from the hospital.....that's the thing that pushed me into doing it". (Focus Group 6).</p>			
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						<p>from the hospital.....that's the thing that pushed me into doing it". (Focus Group 6). "Well I joined because being a fire fighter you're helping the community, so it's just to, further help "Well I joined because being a fire fighter you're helping the community, so it's just to, further help for the community and, you never know</p>			
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						<p>when you need the service yourself'. (Focus Group 5). the community and, you never know when you need the service yourself'. (Focus Group 5). Most CFRs enjoyed the role and cited the opportunity to become emergency trained as an advantage. Supportive relationships amongst volunteers within their schemes and support from the</p>			
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						wider ambulance service staff were reported. A small number wanted to use their CFR experience to help in getting paid healthcare-related employment.			
Zacharatos, Anthea Barling, Julian Iverson, Roderick D	Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-performance work systems and occupational safety. <i>Journal of</i>	Study 1: determine whether a relationship exists between the high-performance work system described and occupational safety at the organizational level. Study 2: investigating the link between the high-performance		Medium: one company	indirect	Trust in management and perceived safety climate were found to mediate the relationship between an HPWS and safety performance measured in terms of personal-safety orientation	Supports	3a	good

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	<p><i>Applied Psychology VO - 90, (1), 77.</i> Retrieved from https://proxy.library.kent.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&AuthType=ip&db=edsfra&AN=edfra.16438905&site=eds-live&scope=site</p>	<p>work system and occupational safety at the employee level.</p>				<p>(i.e., safety knowledge, safety motivation, safety compliance, and safety initiative) and safety incidents (i.e., injuries requiring first aid and near misses).</p>			
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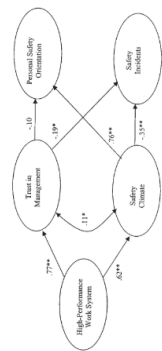


Figure 2. Standardized parameters for the fully restricted model. *p < .05. **p < .01.

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<p>Arbon, P Hayes, J Woodman, R</p>	<p>Arbon, P., Hayes, J., & Woodman, R. (2011). First aid and harm minimization for victims of road trauma: a population study. <i>Prehospital and Disaster Medicine</i>, 26(4), 276–282. https://doi.org/10.101</p>	<p>Internet-based survey was distributed to a potential population of 12,500 road users and a total of 773 responded.</p>	<p>Survey</p>	<p>High-higher educate, employed, government workers</p>	<p>A contamination of healthcare workers, mostly nurses were in this survey, but surveyed about first aid outside of work</p>	<p>Motivation for participating in a first aid course are listed in Table 1. Assisting family and friends (236, 31.1%) along with Motivation for participating in a first aid Assisting family and friends (236, 31.1%) along with being a pre-requisite for work (248, 32.6%) were the most com- Table 1. Assisting family and friends (236, 31.1%) along with being a pre-requisite</p>	<p>Neutral</p>	<p>2b</p>	<p>poor</p>
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	<p>7/S104 9023X1 100652 2; 10.101 7/S104 9023X1 100652 2</p>					<p>for work (248, 32.6%) were the most common reasons provided. The responses for “other” reasons for par-being a pre-requisite for work (248, 32.6%) were the most common reasons provided. The responses for “other” reasons for participating in a first aid course were examined separately. Being mon reasons provided. The responses for</p>			
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						<p>“other” reasons for participating in a first aid course were examined separately. Being a work requirement (89, 47.3%) was the most common, followed by participating in a first aid course were examined separately. Being a work requirement (89, 47.3%) was the most common, followed by being part of a course curriculum (50, 26.6%). a work requirement (89, 47.3%) was the most</p>			
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						common, followed by being part of a course curriculum (50, 26.6%).																			
Pearn, J Dawson, B Leditschke, F Petrie, G	Pearn, J., Dawson, B., Leditschke, F., & Petrie, G. (1980). Who accepts first aid training? <i>Australian Family Physician</i> , 9(9), 602-605.	Test cost and time variables for offering FA/CPR to new pool owners in a city in Australia. 4wk- 8:3hr sessions @ 13 cost units or 50 cost unit; single evening (3hr) course @ 3,13, 50 cost units. From N=700, 68 participated.	Randomized study of recent pool owners		indirect	<table border="1"> <thead> <tr> <th>TIME COMMITMENT</th> <th>COST*</th> </tr> </thead> <tbody> <tr> <td>One 3-hour training session</td> <td>3 cost units</td> </tr> <tr> <td>4-week course (Eight 3-hour sessions)</td> <td>13 cost units</td> </tr> <tr> <td></td> <td>14/100</td> </tr> <tr> <td></td> <td>20/200</td> </tr> <tr> <td></td> <td>50 cost units</td> </tr> <tr> <td></td> <td>2/100</td> </tr> <tr> <td></td> <td>10/200</td> </tr> </tbody> </table> <p>*1 COST UNIT = Price of a standard loaf of bread.</p>	TIME COMMITMENT	COST*	One 3-hour training session	3 cost units	4-week course (Eight 3-hour sessions)	13 cost units		14/100		20/200		50 cost units		2/100		10/200	Neutral	1b	fair
TIME COMMITMENT	COST*																								
One 3-hour training session	3 cost units																								
4-week course (Eight 3-hour sessions)	13 cost units																								
	14/100																								
	20/200																								
	50 cost units																								
	2/100																								
	10/200																								
Kliegel, A Scheinecker, W	Kliegel, A., Scheinecker,	190 survivors out of 1153 cardiac arrest patients	Qualitative Survey: pre/post CPR training of	High	Indirect	The interest in further courses was significantly	Support	2a	poor																

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<p>Sterz, F Eisenburger, P Holzer, M Laggner, A N</p>	<p>W., Sterz, F., Eisenburger, P., Holzer, M., & Laggner, A. N. (2000). The attitudes of cardiac arrest survivors and their family members towards CPR courses . <i>Resuscitation</i>, 47(2), 147–154.</p>	<p>were asked about their own and their family members interest in a 1-day CPR course. Control group passer-bys in hospital.</p>	<p>Cardiac Arrest survivors and a control group</p>			<p>higher in the target group than in the control group and also varied between the age groups (Fig. 2). It was highest among the older persons. Of all the participants, 87 vs. 81% said (P=0.08), that they would try to motivate their family members to attend CPR courses. Courses being offered in home was higher in target group.</p>			
<p>Charlier, Nathalie</p>	<p>Charlie r, N., &</p>	<p>This study aimed at assessing the</p>	<p>Randomized control study</p>	<p>Medium- 120</p>	<p>Indirect</p>	<p>Descriptive statistics</p>	<p>Neutral</p>	<p>1b</p>	<p>fair</p>

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De Fraine, Bieke	De Fraine, B. (2013). Game-Based Learning as a Vehicle to Teach First Aid Content : A Randomized Experiment. <i>Journal of School Health</i> , 83(7), 493–499. Retrieved from http://search.ebscohost.com/login.asp	learning effectiveness and motivational appeal of a (board) game for acquiring FA knowledge, as compared to a traditional approach in the form of an interactive lecture giving a PowerPoint presentation, encompassing identical learning objectives and content but lacking the gaming aspect. Motivation to continue to learn can be instigated by forcing people into courses.		sample in 8 th grade group, hard to generalize		analysis indicated that most students (86% of game, 82% of traditional group) were motivated to learn first aid.			
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Yang, M. C. Fann, C. Y. Huang, C. M.	Yang, M. C., Fann, C. Y., & Huang, C. M. (1998). Evaluation on the trainees of the first aid and CPR training course offered by Taipei Municipal Depart	English only abstract, full text in Chinese- From a larger study on effectiveness of CPR courses, a sub question of motivation to attend was asked	Pre/post survey of CPR learners in Taipei (1995).	Not determined		The motivation for participating in the 8-hour course for the majority of trainees was to learn useful skill in case of facing an accident.	Neutral	3b	Not determined

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	ment of Health. <i>Chinese Journal of Public Health</i> , 17(1), 59–69.								
Bouland, Andrew J. Halliday, Megan H. Comer, Angela C. Levy, Matthew J. Seaman, Kevin G. Lawner, Benjamin J.	Bouland, A. J., Halliday, M. H., Comer, A. C., Levy, M. J., Seaman, K. G., & Lawner, B. J. (2017). Evaluating Barriers to Bystander CPR among	Laypersons attending community compression-only CPR training were administered surveys before and after community CPR training	Prospective pre/post survey of Compression only CPR classes, n=238	High: community level C-CPR, not certifying, which is usually why people go to cert classes as a req		the main motivation for learning CPR was “to be prepared/just in case” (n=182, 78.1%), with the next most popular responses being have an infant or child at home (18.5%) and job-related/work in the healthcare field (28%) (Table 1, Figure 1	Neutral	3b	Fair

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	Laypers ons before and after Compre ssion- only CPR Trainin g. <i>Prehos pital Emerge ncy Care, 21(5).</i> https:// doi.org/ 10.108 0/1090 3127.2 017.13 08605								
Ikeda, Daniel J Buckler, David G Li, Jiaqi Agarwal, Amit K	Ikeda, D. J., Buckler , D. G., Li, J., Agarwa l, A. K., Di	Video Self Instruction (VSI) – kits were distributed to at risk families; 345/653 participants shared their	Qualitative: 6- month post survey to identify who shared VSI and descriptions of why	High- single institutio n	Indirect as individuals who shared video/kit were given kit and then asked about sharing it with others	Among participants who shared- n=345, 96% reported feeling either “comfortable ” or “very	Neutral	3b	fair

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<p>Di Taranti, Laura J Kurtz, James Reis, Ryan dos Leary, Marion Abella, Benjamin S Blewer, Audrey L</p>	<p>Taranti, L. J., Kurtz, J., ... Blewer, A. L. (2016). Simulation and education: Dissemination of CPR video self-instruction materials to secondary trainees : Results from a hospital-based CPR education trial. <i>Resuscitation</i>,</p>	<p>materials with 1455 secondary trainees.</p>				<p>comfortable” sharing their VSI materials. Thematic analysis of answers to open-response survey questions revealed that the participants who shared VSI materials were motivated by “The power to save a life,” “The ability to help family members and friends with cardiac conditions,” and “The simplicity and portability of VSI</p>			
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	100, 45–50. Retrieved from http://10.0.3.248/j.resuscitation.2015.12.016					materials” (Table 3)			
Greenberg, Marna Rayl Barr, Gavin C. Rupp, Valerie A. Patel, Nainesh Weaver, Kevin R. Hamilton, Kimberly Reed, James F.	Greenberg, M. R., Barr, G. C., Rupp, V. A., Patel, N., Weaver, K. R., Hamilton, K., & Reed, J. F. (2012). Cardiopulmonary Resusci	Sought to determine if patients with, or at risk for, heart disease and their families were more likely to follow prescriptive advice to buy a CPR Any-time kit (American Heart Association, Dallas, TX) or to take a CPR class.	Prospective randomized pilot study. CPR-naïve participants aged > 44 years were randomized to one of two study arms. One group received a Rx for a CPR Anytime self-learning kit, consisting of a CPR mannequin and a 22-minute DVD. The comparator	Low		: At the IM office, 7/29 (24%), at the CD office 3/25 (12%), and at the ED 2/23 (9%) patients purchased the CPR kit. Across both investigational arms, 4 were lost to follow-up, yielding approximately 15% (12/77) who followed Rx advice to	Support	1b	fair

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	<p>tation Prescription Program: A Pilot Randomized Comparator Trial. <i>The Journal of Emergency Medicine,</i> 43(1), 166– 171. https://doi.org/10.1016/J.JEMERED.2011.05.078</p>		<p>a Rx for a CPR Anytime self-learning kit, consisting of a CPR mannequin and a 22-minute DVD. The comparator group was prescribed a CPR class.</p>			<p>purchase the CPR kit and 0% (0/79) who took a CPR class.</p>			
Platz, E Scheatzle, M D	Platz, E., Scheatz	family members of patients considered to be	A cross-sectional survey,	High: single		Of the 49 who had training: the	Neutral	3b	fair

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<p>Pepe, P E Dearwater, S R</p>	<p>le, M. D., Pepe, P. E., & Dearwater, S. R. (2000). Attitudes towards CPR training and performance in family members of patients with heart disease. <i>Resuscitation</i>, 47(3), 273– 280. https://doi.org/S03009572000</p>	<p>‘at risk’ for an OHCA presenting @ authors’ emergency department (ED).</p>	<p>prospective convenience sampling, of 100 family members of cardiac patients was conducted at a tertiary care emergency department over a 1.5- month period.</p>	<p>hospital ;</p>		<p>majority received training (59%) because of a school or job requirement. Another 12% sought training because the class was offered in a convenient setting and 10% simply because of personal interest. Although all respondents lived with a person at presumed risk for sudden cardiac death, only 8% (n=4) stated that this was their primary</p>			
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	02458 [pii]					motivation for training.			
Cariou, Guillaume Pelaccia, Thierry	Cariou, G., & Pelaccia, T. (2017). Are they trained? Prevalence, motivations and barriers to CPR training among cohabitants of patients with a coronary disease. <i>Internal and Emergency Medicine VO -</i>	The aim of our study was to document the prevalence of appropriate training among cardiac patients' cohabitants, as well as the motivations or obstacles to seeking training.	Qualitative: retrospective descriptive study of cohabitants of adult patients hospitalized for coronary heart disease between June 2012 and October 2012. 153 cohabitants of 127 patients who were hospitalized 1 year prior for confirmed coronary disease in a cardiology department (Paris, France) were phone interviewed using a structured questionnaire	High: Specific/ target of at risk family care givers in one hospital in France		The cohabitants had mostly received CPR training due to professional and military duties (65.5 %) (Table 4). Only two (3.5 %) undertook training because they resided with a cardiac patient. The families of patients with additional risk factors for OHCA, or who were concerned by events that they judged to be of relevance,	Neutral	3b	fair

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	12, (6), 845. https://doi.org/10.1007/s11739-016-1493-8		between October 2013 and March 2014.			had not received training more often than the others (22 vs. 38.3 %, P = 0.8 and 34 vs. 39.6 %, P = 0.5, respectively).			
Fortington, Lauren V Bekker, Sheree Morgan, Damian Finch, Caroline F	Fortington, L. V, Bekker, S., Morgan, D., & Finch, C. F. (2017). "It Doesn't Make Sense for Us Not to Have One"- Understanding Reasons Why	for wider implementation of AEDs, additional funding opportunities for, targeted awareness of these opportunities, and continued promotion of AED importance are recommended.	Qualitative- Individual face-to-face interviews were conducted with 14 participants by the lead author in December 2016. Interviewees firstly provided written informed consent. Interviews were semi-structured with open-ended questions and prompts	High, participants were required to submit someone because they received an AED grant; convenience sample	Qualitative (n=14)	opportunity to apply was the key determinant for participating in the program. A duty of care also emerged as a key driving factor, with recognition of AEDs as a valuable asset to communities broadly, not just the participants' immediate sports	Support	3b	fair

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<p>Community Sports Organizations Chose to Participate in a Funded Automated External Defibrillator Program.</p> <p><i>Clinical Journal Of Sport Medicine: Official Journal Of The Canadian Academy Of Sport Medicine</i></p>					<p>setting. Macro opportunity (free) --> awareness--> participation by organization-, the legal or moral duty of care held by their clubs/facilities emerged as a strong motivator in the decision to apply to the DSCF-program. This duty was perceived to extend to both club members and the general public attending club events or passing by the location. Assistance with the cost</p>			
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	<p><i>ne.</i> https://doi.org/10.1097/JSM.0000000000000524</p>					<p>of AED acquisition also emerged as a significant motivator contributing to decision to apply to the DSCF-program. A further motivator was simply the serendipitous opportunity to apply having come across their desk.</p>			
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American Red Cross SAC Scientific Review Motivation to Attend Training

Scientific Advisory Council

Level of Evidence	Definitions (See manuscript for full details)
Level 1a	Experimental and Population based studies - population based, randomized prospective studies or meta-analyses of multiple higher evidence studies with substantial effects
Level 1b	Smaller Experimental and Epidemiological studies - Large non-population based epidemiological studies or randomized prospective studies with smaller or less significant effects
Level 2a	Prospective Observational Analytical - Controlled, non-randomized, cohort studies
Level 2b	Retrospective/Historical Observational Analytical - non-randomized, cohort or case-control studies
Level 3a	Large Descriptive studies – Cross-section, Ecological, Case series, Case reports
Level 3b	Small Descriptive studies – Cross-section, Ecological, Case series, Case reports
Level 4	Animal studies or mechanical model studies
Level 5	Peer-reviewed Articles - state of the art articles, review articles, organizational statements or guidelines, editorials, or consensus statements
Level 6	Non-peer reviewed published opinions - such as textbook statements, official organizational publications, guidelines and policy statements which are not peer reviewed and consensus statements
Level 7	Rational conjecture (common sense); common practices accepted before evidence-based guidelines
Level 1-6E	Extrapolations from existing data collected for other purposes, theoretical analyses which is on-point with question being asked. Modifier E applied because extrapolated but ranked based on type of study.

Extrinsic

- *Legal/Required*
 - *Duty to care*
 - *Weak (sport)*(Fortington, Bekker, Morgan, & Finch, 2017)
 - *Indirect/Weak- for CCPR learners* (Bouland et al., 2017)
 - *Expired CPR Cert*
 - *Job related/ work in health care field*
 - *Strong – for CPR as a Job or School Requirement* (Arbon, Hayes, & Woodman, 2011; Cariou & Pelaccia, 2017; Platz, Scheatzle, Pepe, & Dearwater, 2000)
- *Moral/Ethical*
 - *Indirect/weak- help others*(Cariou & Pelaccia, 2017)
 - *Weak- membership want to have resource*(Fortington et al., 2017)
 - *Weak- prescription for education*(Greenberg et al., 2012)
 - *Indirect/unknown- healthcare told them to* (Platz et al., 2000)
- *Environmental*
 - *Neutral- high performance systems—safety culture* (Zacharatos, Barling, & Iverson, 2005)
 - *Weak- Distance from help* (Fortington et al., 2017)
 - *Indirect/ unknown- FA games to motivate more learning* (Charlier & De Fraigne, 2013)
 - *Weak- sporting activity* (Arbon et al., 2011)
 - *Weak- allowance at work* (Arbon et al., 2011)

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Opportunistic

- *Cost*
 - *Neutral – cost of course (weak study)*(Pearn, Dawson, Leditschke, & Petrie, 1980)
 - *Neutral – length of course (weak study)* (Pearn et al., 1980)
 - *Indirect/weak – training peers/family w/ kit* (Ikeda et al., 2016)
- *Environmental*
 - *Neutral- convenience* (Platz et al., 2000)
- *Indirect/weak - Pay it forward* (Ikeda et al., 2016)

Intrinsic

- *Environment*
 - *weak- cardiac patient & vulnerable family member* (Bouland et al., 2017; Cariou & Pelaccia, 2017; Kliegel et al., 2000; Platz et al., 2000)
 - *Indirect/weak- helping family member with cardiovascular disease* (Ikeda et al., 2016; Kanstad, Nilsen, & Fredriksen, 2011)
 - *weak- past experiences with cardiac emergency* (Bouland et al., 2017; Fortington et al., 2017)
 - *indirect/strong – positive opinion of EMS* (Huang, Hu, & Mao, 2016)
 - *indirect/strong – heard of CPR* (Huang et al., 2016)
- *Altruistic*
 - *Strong- helping family & friends* (Arbon et al., 2011)
 - *Strong- to be prepared just in case* (Bouland et al., 2017)
 - *Indirect/Strong- Interest in helping others*(Cariou & Pelaccia, 2017; Kanstad et al., 2011)
 - *Indirect/weak- Interest in helping others* (Ikeda et al., 2016; Platz et al., 2000)
 - *Weak- contribution to community* (Roberts, Nimegeer, Farmer, & Heaney, 2014)
- *Weak- Self motivation* (Arbon et al., 2011)

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