

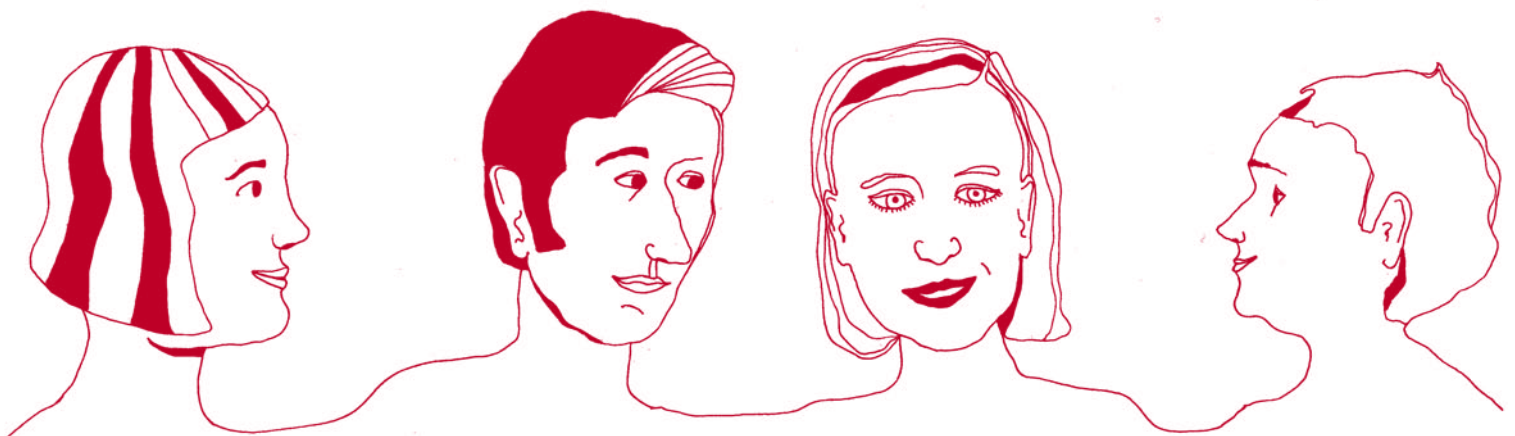
Does it matter where and when you will be trained
in cardiopulmonary resuscitation?
A study on CPR skills in Finland

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Master of Public Health

MPH 2005:9



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– Essay –

Title and subtitle of the essay				
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Date of approval			Supervisor NHV/External	
March 30, 2005			Professor Göran Löfroth	
No of pages	Language – essay	Language – abstract	ISSN-no	ISBN-no
28	English	English	1104-5701	91-7997-096-6

Abstract

The aim of the study was to look at the psychomotor skills in cardiopulmonary resuscitation and relate the results to sex, age and type of training. Place of training had three different categories: training at Finnish Red Cross (FRC) courses for general public, training at workplace or training at both places. The study was conducted on 310 trainees on different first aid courses and events in Finland. The psychomotor skills were evaluated by observation with help of a CPR evaluation standardized checklist with 11 moments. Age showed to have an impact on the skills. Age groups 20, 30 and 40 performed the skills better than the age group 50 and above. To explain the difference with anxiety is not likely, as 41.1 % of the trainees informed not to be afraid in a real situation and only 27.8% answered to be or did not know if they would be afraid. More likely the difference can be explained by self confidence to act as well as by the fact that different age groups need different teaching methods. Repeating has also a big role with the competence. Trainees with health care background or active at FRC succeeded to get better results. They also managed better with the essential moments like calling for help and opening the airways. Obvious is that those with 3-6 passed first aid courses managed to get better results than those with 0-2 courses. Motivation to have skills in CPR have an impact when comparing the skills and place where you got the training. All 11 moments right had 43.8% of the trainees who got their training at a FRC course, and 28.0% of those who were trained at workplace. Same difference can be shown when comparing skills with the essential moment, opening the airways. Out of the trainees at FRC courses 89.9% performed it right and 62.7% of trainees at courses at workplaces. When evaluating the skills it is just not enough to look at the right moments, but as well at the crucial, life saving, measures. In order to save more lives by CPR training an essential factor in the training is confidence to intervene in the event as well as repetition together with different teaching methods for different target groups. CPR skill tests are an important tool for the future development of the quality of the teachers.

Key words

cardiopulmonary resuscitation, CPR skill test, laypeople, Finnish Red Cross, workplaces

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ABBREVIATIONS

AHA	American Heart Association
ALS	Advanced Life Support
BLS	Basic Life Support
ECC	Emergency Cardiovascular Care
EMS	Emergency Medical Services
ERC	European Resuscitation Council
CPR	Cardiopulmonary Resuscitation
FRC	Finnish Red Cross

INTRODUCTION

Sudden cardiac arrest is one of the largest public health problems in the industrialised world. Among patients who die of coronary heart disease, this is the most common mode of death (Zheng et al. 2001). In Finland the overall incidence of out-of-hospital cardiac arrest was in 1994 79.8/100 000 inhabitants/year (Kuisma and Määttä 1996). In Helsinki bystander initiated cardiopulmonary resuscitation (CPR) received 22.1% of the bystander witnessed cardiac arrests (Kuisma and Määttä 1996). Reports from other countries show equal low figures with a variation from 12% up to over 50% in Europe and fewer than 30% in most American cities (Eisenburger and Safar 1999, Holmberg et al. 1999). In a study from five European regions in 1999 the figures of the bystander witnessed cardiac arrests show for example in Helsinki an increase from 22.1% up to 27% and in Stavanger bystander witnessed cardiac arrests as high figures as 67% (Herlitz et al. 1999).

To save lives of people when breathing has ceased and the heart has stopped requires immediate cardiopulmonary resuscitation (CPR) as well as early defibrillation (Anonymous 2000a).

History for cardiopulmonary resuscitation

The earliest reference to mouth- to- mouth ventilation is considered to be in the Bible, when the prophet Elisha revived an apparently dead child. The first medical report of success was by Tossach in 1744. Attention was turned towards the manual methods such as described by e.g. Holger Nielsen (Handley et al. 1998).

The treatment of respiratory and cardiac arrest has developed to the present context during the last five decades. In 1958 Safar and co-workers confirmed the effectiveness of mouth-to-mouth ventilation technique by reading how midwives used the technique to resuscitate newly born infants (Safar et al. 1958). In 1960 Kouwenhoven et al. (1960) observed that forceful chest compressions produced respectable arterial pulses. Followed by a series of anaesthesia -induced cardiac arrest they confirmed that chest compressions alone could sustain life while awaiting for more definitive care.

Both Safar and Kouwenhoven and their co-workers saw the advantages of combining these two methods: closed-chest compressions and mouth-to-mouth ventilations, which was the start of the modern technique nowadays known as basic cardiopulmonary resuscitation (CPR). “Anyone, anywhere, can now initiate cardiac resuscitative procedures. All that is needed is two hands.” (Safar et al. 1958, Kouwenhoven et al. 1960).

Training of CPR

An extensive amount of scientific studies have been made on the epidemiology of sudden death, the pathophysiology of cardiac arrest and brain damage, resuscitation techniques, survival, and emergency medical services (EMS). Based on these studies consensus guidelines for the treatment of cardiac arrest have been produced.

The first conference on CPR in 1966 by National Academy of Sciences and National Research Council recommended training of medical, health and other professional personnel. The second National Conference on CPR in 1973 by American Heart Association, National Academy of Sciences and National Research Council extended the recommendations for the general public. In 2000 was the First International Guidelines Conference on CPR and ECC. For the first time a consensus document that explained evidence-based guidelines was published by American Heart Association, European Resuscitation Council, Heart and Stroke Foundation of Canada, Resuscitation Councils of Southern Africa, Australian Resuscitation Council and Resuscitation Councils of Latin America (Anonymous 2000a).

From the very beginning of resuscitation history, the aim to save lives of sudden cardiac arrest has relied on voluntary efforts on the community citizens' willingness to help, and this is still the case. Today community education programmes are initiated throughout the world, targeted towards strengthening the chain of survival: early access, early CPR, early defibrillation and early advanced life support (ALS) (Cummins et al. 1991).

Early and well performed CPR by laymen has often been the critical point in the early survival rates of cardiac arrests (Kuisma and Määttä. 1996, Herlitz et al. 2000). It is thus important to know who of the CPR trained laymen really have the CPR skills and how many of the trained have skills which are of no value when prospecting the outcome of the CPR performance.

Red Cross as a movement train millions of people in first aid all over the world. CPR is not necessary included in the training in every country, but together with the improvement of the emergency medical services, training of CPR has become of great importance.

The Finnish Red Cross (FRC) has approx. 1,700 first aid teachers, qualified nurses, who train more than 100,000 citizens annually on different Red Cross first aid courses (FRC 2003) and within the Finnish Defence Forces approximately 26,000 conscripts (Finnish Defence Forces 2003).

Though the proportion of citizens trained in CPR has increased during the last three decades, the frequency of CPR initiated by bystanders is still very low. According Holmberg and co-workers the figures varied between 15% and 54% (Holmberg et al. 2000). In Sweden figures show that 70% of the cardiac arrest was witnessed, 60% by bystanders and CPR was started in about 30% (Holmberg et al. 1999).

Quality assurance should be included in the training and for the teachers it is of great value to get to know the level of the skills of the trainees. Guidelines for laymen's training should be as simple as possible in order to increase the rates of bystander initiated CPR. Different kinds of checklists or skill sheets have been produced by the organisations training in CPR, like American Heart Association (AHA) and European Resuscitation Council (ERC). These checklists have then been used to evaluate the performance of the trainee. Finnish Red Cross has used a checklist adjusted to the Finnish training programmes (Laapio et al. 1996).

AIM OF THE STUDY

The aim was to study the trainee's retention of the psychomotor skills in CPR and to relate the results to sex, age and type of training.

MATERIAL AND METHODS

The study was performed on 310 trainees, 182 females and 128 males. The average age for the females was 33.3 (33.3 ± 12.0) and for the males 37.9 (37.9 ± 11.0).

The study was performed on different first aid courses and events nation-wide during end of 1998 up to early 2002 by Finnish Red Cross public health officers at district level and FRC first aid teachers. A briefing about the study was organised in October 1998.

The psychomotor skills were evaluated according the standard procedure during the FRC courses with a standardised manikin. The test was done with help of a Recording Resusci Anne, which gives a printed report of the ventilations and external compressions. Thus the prior evaluation of the psychomotor skills was done by observation by a person with help of a CPR evaluation standardised checklist with 11 moments to minimise the subjective evaluation (Laapio et al. 1996). The checklist is attached as Annex 1. In the year 2000 new guidelines were published and checking of pulse was taken out from the list and substituted with an observation for signs of circulation (Anonymous 2000b). This observation was taken into account at all checklists, no matter when the test was done.

The data was handled by EpiInfo (1995) and analysed with its statistical systems, mainly chi-squares on absolute numbers.

Reviewing the previous scientific studies within the area of CPR and lay people, a lot of studies about bystander CPR and its effects were made in late 1980's and 1990's before the First International Guidelines 2000 for CPR and ECC were published. Since year 2000 one of the central points in CPR became use of automated external defibrillators. In preparations for the coming conferences several studies have concentrated on the effectiveness of combining early defibrillation to the chain of survival and to improve

the reporting standards, guidelines, known as the Utstein style (Anonymous 2000a, Skrifvars et al. 2003).

ETHICAL ASPECTS

In connection with the test of the psychomotor skills, the trainees were asked to complete a questionnaire with 17 questions about their identity, age, profession, education and previous CPR training, where and when the basic first aid training took place, if the person had performed CPR in a real situation, if there had been any refresher courses and how the person felt about his own performance. The questionnaire is attached as Annex 2.

The participation in the test and answering the questionnaire was fully voluntary and the participants were informed in the questionnaires that their input would be valuable for the future development of CPR training. The trainees did not know about the test beforehand.

RESULTS

Background of the trainees

Age and sex

Totally 310 tests were collected, 182 females and 128 males. The age distribution was between 16 and 66. The age distribution is shown in Table 1. Twenty-two percent of the trainees were active in health care.

Table 1. Age and sex structure of the trainees.

Age years	Number of women	(%)	Number of men	(%)	Number of all	(%)
16-25	59	(19)	19	(6)	78	(25)
26-35	47	(15)	30	(10)	77	(25)
36-45	36	(12)	44	(14)	80	(26)
46-55	32	(10)	29	(9)	61	(20)
56-	6	(2)	6	(2)	12	(4)
Unknown	2	(1)	0	(0)	2	(1)
Total	182	(59)	128	(41)	310	(100)

Geographical distribution

The trainees were located according their postal codes.

00-09 Helsinki

10-19 Hämeenlinna and Lahti

20-29 Turku and Pori

30-39 Forssa and Tampere

40-49 Jyväskylä and Kouvola and Kotka

50-59 Mikkeli, Savonlinna, Lappeenranta

60-69 Seinäjoki, Vaasa, Kokkola

70-79 Kuopio, Pieksämäki

80-89 Joensuu, Ylivieska, Kajaani

90-99 Oulu, Kemi, Rovaniemi

The majority of the trainees were from the western part of Finland, Turku and Pori with 70 trainees. From the eastern and north eastern part of Finland, Joensuu, Ylivieska and Kajaani came 63 of the trainees, and from the central part, Kuopio and Pieksämäki, 43 of the trainees. The geographical distribution of the trainees is shown on Figure 1.

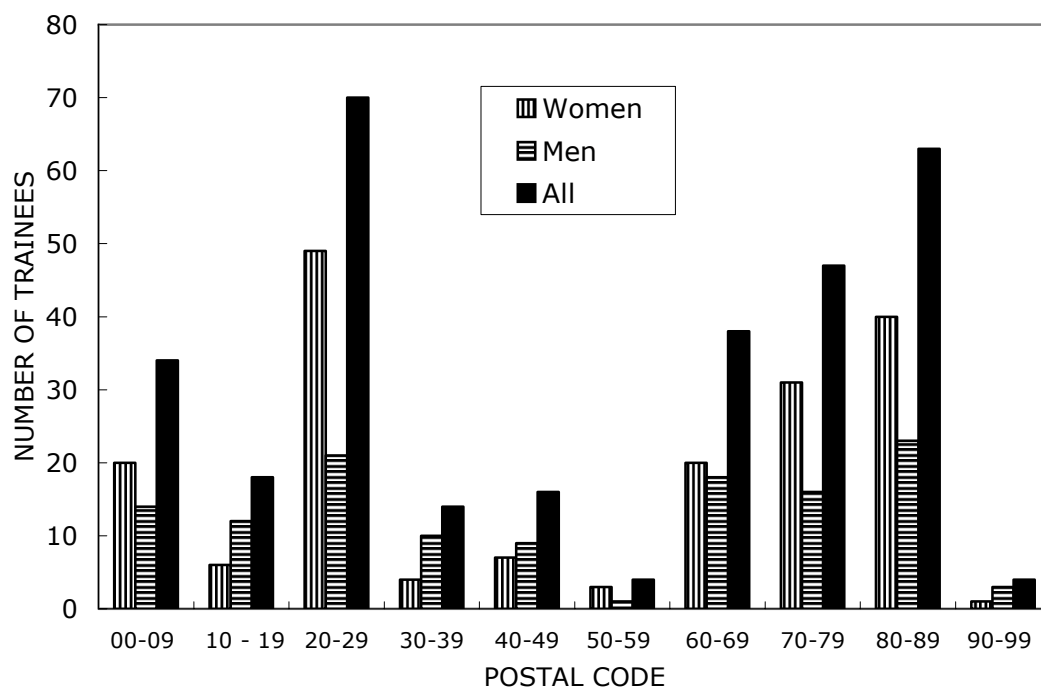


Figure 1. Trainees according to their geographical area.

Previous training

Only one of the tested trainees hadn't passed any first aid training at all before the test and one did not give any answer. In average passed courses were 3.1 for females and 3.2 for males. Only a short CPR course for 3 hours had 51/309 trainees. In addition 296/309 trainees had passed a basic first aid course for 16 hours, which is a standard course in Finland and is used at many workplaces and in schools. Out of 309 trainees 267 had passed advanced first aid course, which is also a common course, especially at workplaces.

Out of the 310 trainees 72% had had a refresher course (theory) during the last 6 months and 56% of the trainees had had practical training during the last 6 months. Experience in CPR from a real situation reported 74/310 (24%) of all trainees. No significant difference was found between females (21%) and males (27%) with a $\chi^2=1.45$.

Out of the 310 trainees 178 obtained their training at FRC courses and 75 at workplace courses. Fifty-three had obtained training at both places. There was no information available from four of the trainees.

One of the questions was if the trainees would be afraid in a real situation or not. Out of the 310 trainees 192 informed they would not be afraid to start CPR when needed and 32/310 would be afraid. The number of those who did not know how to react in real situation or did not answer was 86/310.

In the questionnaire there was also one open question, where it was possible to add comments. One third of the trainees gave comments regarding training, like more practical training is needed.

Skills of the trainees

Age and sex

Assessment of the skills was done with help of a checklist with 11 different moments. Out of 310 trainees 39% of the women had all moments right and 32.8% of the men.

In Figure 2 it is shown that younger age groups (age groups 30 and 40) managed to have more right moments than the age group 50 and above. In the age group of 20 years, there is a remarkable difference with young men, but this is due to some trainees who had a lot of mistakes. The same observation was seen when comparing skills in percent of all right moments. There were no remarkable differences between sexes. This is shown on Figure 3.

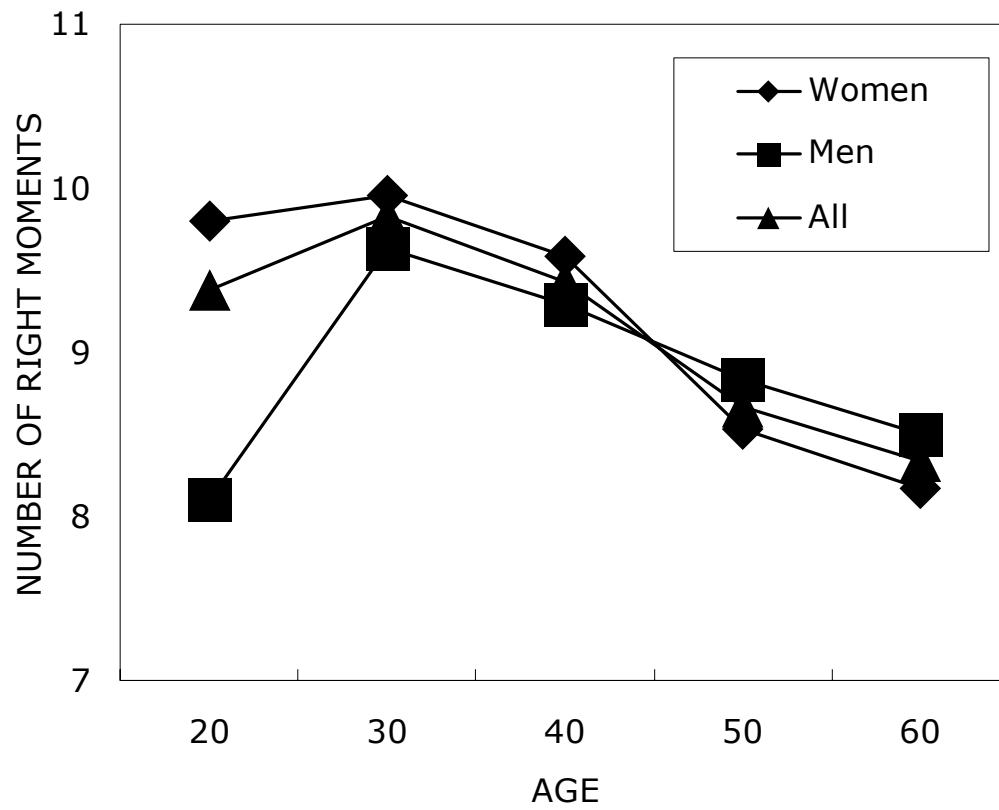


Figure 2. Number of right moments compared to age and sex.

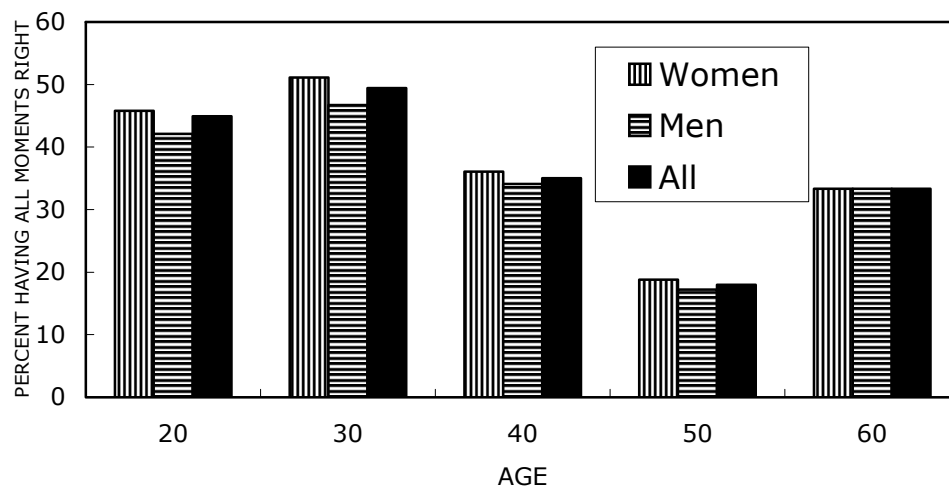


Figure 3. Percent of right moments compared to age and sex.

If the person had a health care background, 49.3% of the trainees managed to have all 11 moments at the practical test right, which is a significant difference from the laypersons where only 34.1% had all 11 moments right; $\chi^2=5.10$ with a p-value 0.024.

In the group of trainees active at the Finnish Red Cross 43.9% had all 11 moments right compared with those who were not active (19.8%); $\chi^2=15.36$ with a p-value <0.00001.

Comparing number of trainees with wrong moments in Table 2, the poorest performance was moment 2, to call for help (109 trainees), and the next one moment 3, opening the airways (68 trainees). Both moments are very vital and particularly so moment 3 as the patient will be lost if the airways are not opened. The International guidelines of 2000 for CPR and ECC also emphasise the importance of early call for help, “phone first” (Anonymous 2000b).

A lot of poor performances were also at moment 7, which was within the first tests checking the pulse and when the new International guidelines were changed in 2001, it was called signs of circulation (Anonymous 2000b). Almost as many mistakes as moment 7 had moment 1 with checking for unresponsiveness.

Table 2. Number of participants with wrong moments.

Moment	Women	Men	All
1 Checking for unresponsiveness	28	32	60
2 Calling for help	65	44	109
3 Opening the airways	28	40	68
4 Checking breathing	22	24	46
5 Starting the resuscitation	8	6	14
6 Giving two breaths	19	14	33
7 Checking signs of circulation	36	25	61
8 Starting with chest compressions	7	13	20
9 15 chest compressions	9	14	23
10 Compression rate 100	34	24	58
11 Ratio 2:15	13	13	26

Health care in background

Comparing the skills at the moment 2, calling for help, when the trainee had a health care background or did not have, there was no remarkable difference between these groups. Comparing the same moment between the groups active at FRC or not, the difference was significant with $\chi^2=4.82$ and p-value 0.028.

Comparing the skills at the moment 3, opening the airways, there was a significant difference if the trainee had health care background or not. $\chi^2=16.87$ and p-value <0.001 . Comparing the same moment between the group active at FRC with those not active at FRC there was a significant difference with $\chi^2=46.94$ and p-value <0.001 .

Table 3. Comparing the outcome of all moments and moments 2 (calling for help) and 3 (opening the airways) with health care background and active at FRC.

Moment	Health care		FRC active	
	Yes	No	Yes	No
All 11 moments right, %	49.3	34.1	43.9	19.8
Moment 2 right, %	65.7	65.9	69.2	55.8
Moment 3 right, %	97.0	73.8	83.3	52.3

Skills compared with the type of training

Place of training

There were three alternatives for the place of training in CPR of the trainees. The training took place at a FRC course for general public, at work or trainees had got training at both places.

The results of the skills of the trainees show that when the trainees had been trained at FRC courses for general public, 43.8% performed all 11 moments correctly whereas only 28.0% and 22.6% did so if they had obtained training at the workplace or at the workplace as well as at FRC, respectively (Table 4). The differences between FRC and workplace training is significant with $\chi^2=5.54$ and $p=0.02$ and this is also the case when comparing FRC with mixed training with $\chi^2=7.70$ and $p<0.01$. Comparing moment 2, calling for help, the difference is not remarkable between those who were trained at FRC and those at workplaces. With moment 3, opening the airways, the difference is significant; $\chi^2=26.3$ with a p-value <0.05 . Table 4 displays the skills compared with the place of training.

Table 4. Skills compared with the place of training.

Moment	FRC courses (only)	Workplace courses (only)	FRC and work- place courses
All 11 moments right, %	43.8	28.0	22.6
Moment 2 right, %	69.1	61.3	56.6
Moment 3 right, %	89.9	62.7	58.5

In average trainees had 8.7 moments right if they had their training at FRC, and 9.00 moments right if they had it at the workplace and 9.6 moments right if they had it from both.

Courses

Comparing the skills with the amount of courses the trainees had got, there was a significant difference in the skills if the trainee had got one to two courses (3 hours CPR and/or 16 hours basic first aid course) compared to several courses (3-6 courses). In average trainees with 0-2 courses had 8.55 moments right and trainees with 3-6 courses had 9.64 moments right showing a significant difference with a p-value <0.001. Figure 4 displays the differences between those who had all 11 moments right, moment 2 (calling for help) right and moment 3 (opening the airways) right compared with the amount of passed courses.

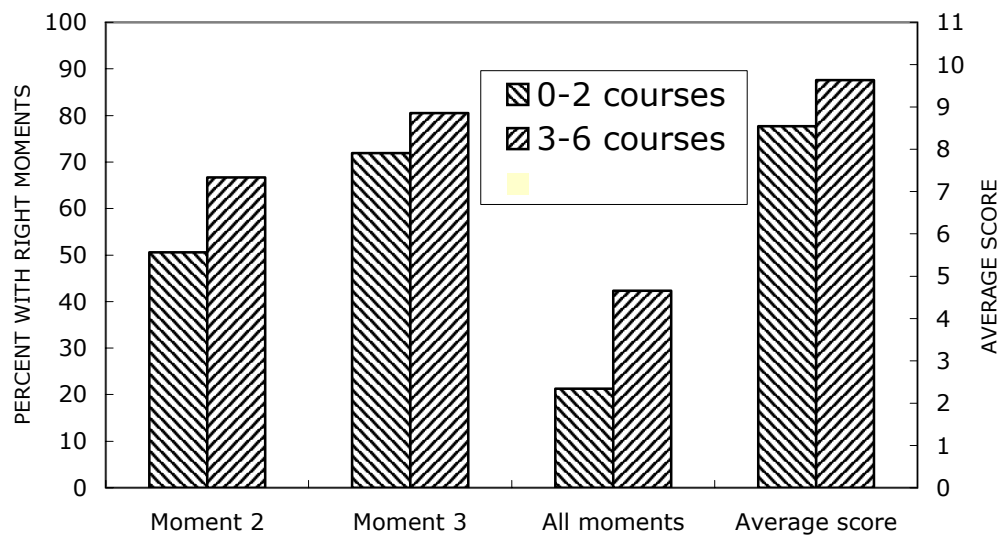


Figure 4. Right moments compared with number of first-aid courses and the average score with right moments.

There is a significant difference when comparing all right moments with the number of courses as 21.3% of the trainees with 0-2 courses had all moments right and whereas of those with 3-6 courses 42.3% had. The difference is significant with $\chi^2=12.0$ and p-value <0.001 . Also with the moment 2 (calling for help) there is a significant difference comparing the trainees with 0-2 courses, 50.6% right, to trainees with 3-6 courses, with 70.5% right. $\chi^2=11.0$ and p-value <0.001 . With the moment 3 (opening the airways) there was no remarkable difference.

DISCUSSION

Many studies have shown that, among patients who suffer out-of-hospital cardiac arrest, the early initiation of CPR within a few minutes of collapse by a bystander is associated with an increase chance of survival. Too few victims still receive bystander-initiated CPR. (Cummins et al. 1985, Bossaert et al. 1989, Herlitz et al. 1994, Kuisma and Määttä 1996, Holmberg et al. 1999).

There are several reasons for people to attend CPR courses. Most common reasons are demands from the work, general interest and re-certification (Axelsson et al. 2000).

In this study the aim was to look at the level of the skills of the trainees and relate the results to sex, age and type of training.

Theoretical knowledge was excluded from this study, because the psychomotor skills are the needed outcome of CPR training.

On the basis of the results, age showed to have an impact on the skills. Younger age groups (20, 30 and 40 years) performed the skills better than the age groups 50 and above. Trainees in the age groups between 20 and 40 are usually the ones, who mainly represent the participants on different first aid courses and were also in this study the majority groups. Figures 2 and 3 display the skills between age groups. Reasons to perform more incorrect in the age group of 50 and above can be explained with the fact that elderly persons are less sure than younger persons of starting CPR. Their self confidence is not as high as it is in the age groups 20, 30 and 40. To explain the difference with anxiety is not likely as 41.1% of the trainees answered not to be afraid and 27.8% answered yes or did not know if they would be afraid in a real situation. In a study by Axelsson et al. (2000) the proportion of starting CPR is equal high within elderly as well as younger persons. Teaching methods might also be considered when looking at the results for the age group 50 and above. More time should be given for repeating and to find new methods in teaching.

Comparing the skills between females and males there were no remarkable differences. The capabilities of learning is not depending on the sex even if it could be possible to think that females could be more motivated to learn CPR especially among family members of cardiac patients. Probably among men a good confidence starting CPR brings the results in skills to equal level with females.

One third of the trainees managed to have right all 11 moments that were checked in the skill test. When looking at the moments with most wrong numbers, the poorest performance was with the moment to call for help (35% of the trainees) and the next one with opening the airways (22% of the trainees). Table 2 displays the numbers of participants with wrong moments. Equal results exist from other studies. Brennan et al. had a result with 12.2 % of the trainees who performed in their study 12 skills correctly, 60% of the trainees who failed to perform initial call for help, and 40 % in opening the airways (Brennan et al. 1995).

Single moments do not tell the truth of the quality of CPR performance that is of great importance for the outcome of the cardiac arrest victim. Poor performance in these two very essential moments, calling for help and opening the airways, decreases the survival rate for the persons suffering from cardiac arrest. Receiving incorrectly performed CPR is not better than when receiving no CPR at all. Most mistakes done by the trainees are possible to correct. The importance of early alert and opening the airways has to be stressed more during training. Filling in the checklist was done by a person and therefore entails a risk of misjudgement. Assessment needs to be done and instructors/teachers need instruments for their own quality control as well.

If the trainee had a health background, he/she succeeded in overall well in all 11 moments right. Table 3 displays the differences in skills when comparing the moment calling for help and opening the airways. It is more obvious for a FRC volunteer to call

for help than for a health care person or for a layperson. Volunteers are used to call for help in their training and their first aid duties outside official health care. Comparing the moment 3, opening the airways, the difference between the groups with health care background with those who did not have the health care background, the difference was significant (p-value <0.001). Better knowledge how essential opening the airways is for the survival of the patient has an influence on the results of the skills.

In the group of trainees active at the Finnish Red Cross, 43.9% performed all 11 moments right with a significant difference (p-value <0.00001) with those who were not active (19.8%). Figure 4 shows that the number of courses has an impact on results of right moments. If a person had 0-2 courses, usually 3 hours CPR course and/or basic first aid course the results were not as good as with those who had 3-6 courses. Theoretical knowledge is needed in order to understand why early performed CPR is important and why to do the different steps. To achieve better prepared and trained citizens frequent theoretical and practical training is needed and it also encourages for self-confidence to act in proper way and gives a chance to repeat the difficult parts of the programmes.

Good results for trainees with a health care background and active at Red Cross can have an influence on retention because of the motivation of the trainee. This can also be the explanation when comparing the skills and place where you got the CPR training. The results in study show that 43.8% of the trainees who got training at FRC courses for general public performed correctly all 11 moments, when again those who got their training at a workplace only 28.0% had all 11 moments right. If the trainee had got training from both places, 22.6% of the trainees performed all 11 moments right. Opening airways is an essential moment in CPR when saving the life of the patient. Out of the trainees at FRC courses 89.9% performed it right, 62.7% at the workplaces courses and 58.5% of those who were trained at both places. There was a significant difference between the skills and places where you got your training. Table 4 displays the differences. P-value was <0.001 when comparing training at the workplace with those who got training from both places and p-value <0.02 when comparing FRC training with training at the workplace. Trainees who need or might need the skills showed better results.

On the other hand when comparing the skills by the average of the right moments the results were the best by those who got training at both from FRC and workplace, in average 9.6 moments right, and 9,00 moments right by those who were trained by workplace and 8,7 moments right with those who were trained by FRC. But as shown before the average does not tell which moments were right. For the survival of the patient it is essential to alert help immediately, assess the breathing, to open the airways and to start with early CPR.

Those who attend FRC courses for general public may attend the course for a general interest of their own or they might be sent there from a workplace. Training at workplace may also be on a voluntary base, but it might also be that the trainee has been sent to attend the course, because the safety regulations and law of occupational health

demand certain amount of workers with first aid skills for the workplace or the trainee wants to update the previous skills. Axelsson et al. (2000) found out in their study that the most common reasons given for taking a CPR course were job requirement, general interest and re-certification. Only 1% had attended the course due to their own or a relative's cardiac disease. In spite of the fact that primary motivation for CPR training is the training for the work, the results in this study in Finland displays the fact that public CPR training resulted to better skills than those performed at workplaces.

The assessment of the skills was done with help of a standardised checklist together with a printed report of the ventilations and external compressions using a Recording Resusci Anne. Role of the instructor or teacher assisting the skills can be one of the further investigations when looking at the methodological challenges within the CPR training.

The study shows that motivated trainees, preferably with a health care background, can perform CPR correctly. The need is to train citizens to be ready to act and be prepared to give CPR whenever needed in order to save more lives. Early and well performed CPR by laymen is still the critical point. Not to forget the fact that CPR and defibrillation together are the key elements when improving the prognosis of the prehospital cardiac arrest population.

CONCLUSIONS

Teaching CPR in the community is necessary and feasible to improve the prognosis in the pre-hospital cardiac arrest population. Lay people can cope with this mission. Outside the hospital, all citizens must be trained and motivated to perform as first aids/first responders. Rapid response by laypeople integrated with properly trained and equipped health personnel will increase the survival rates from sudden cardiac arrests.

In preparing bystanders to dare to intervene in the event of cardiac arrest confidence ought to be an essential factor when training the laypeople.

This study did not have access of the skill level of the trainees at time of their initial training, which might have been low already at that time. Skills could be reviewed after the initial training, when one keeps in mind that for the trainee the participation is usually on voluntary basis and it should be also voluntary to participate in the test. In order to improve the quality of the teachers, a skill test combined with a simple checklist, should be included in the teaching programmes. Skill retention and comparison of various training methods at national level as well as international level enables the quality controls.

To maintain the skills on going and regular training, especially practical training sessions, is needed. Mistakes should be corrected in order to avoid the fact that you remember what you have done. Competence provides the opportunity to give

appropriate help and strengthens the laypeople by their attempt. Repeating together with new teaching methods should be considered when looking at different age groups, for instance at the age group 50 and above.

For all age groups it is obvious the simplified programmes enable to increase the number of people who want to learn CPR.

The most important finding is that public CPR classes have better skills in CPR than courses performed at workplaces.

ACKNOWLEDGEMENT

I want to thank Prof. Göran Löfroth for his great help, extensive amount of patience and for the encouragement I have got when preparing this study.

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PUHALLUS- JA PAINELUEVITYTYS/AIKUINEN
Hjärt-lungräddning / vuxen

Arvioi auttajan toimintaa

Auttaja

	Oikein	Väärin
1. Ravistelee ja puhuttelee <i>Tilltalar och skakar patienten/ kontrollerar medvetandet.</i>		
2. Kutsuu paikalle apua tai soittaa itse numeroon 112 <i>Kallar på hjälp eller gör nödanmälan.</i>		
3. Avaa hengitystiet <i>Öppna andningsvägarna</i>		
4. Tarkistaa, hengittääkö potilas <i>Kontrollerar att patienten andas.</i>		
5. Aloittaa puhalluselytyksen <i>Börjar med inblåsningsmetoden.</i>		
6. Puhalttaa onnistuneesti kaksi kertaa <i>Gör 2 inblåsningar.</i>		

7. Tarkistaa verenkierron merkit <i>Tittar efter tecken på blodcirkulation.</i>		
8. Aloittaa paineluelvytyksen: 15 painelua <i>Börjar med hjärtkompressionen; 15 kompressioner</i>		
9. Painaa 15 kertaa <i>15 kompressioner.</i>		
10. Painaa syketaajuudella 100 kertaa/min. <i>Kompressioner med frekvensen 100 gånger/minut.</i>		
11. Jatkaa elvytystä rytmillä 2:15 <i>Forstärker med rytmen 2:15</i>		

ANNEX 2, Finnish

Suomen Punainen Risti/ Keskustoimisto

ELVYTYSKOULUTUKSEEN LIITTYVÄT TAUSTATIEDOT KYSELY

Vastaa kysymyksiin rengastamalla se vaihtoehto, joka sopii kohdallesi tai kirjoittamalla vastauksesi sitä varten varattuun tilaan. Ystävällisesti pyydämme sinua vastaamaan kaikkiin esitettyihin kysymyksiin, sillä juuri Sinun lomakkeesta saadaan arvokasta tietoa elvytyskoulutuksen kehittämiseen.

Vastaajaa koskevat tiedot:

- 00 Päivämäärä _____
- 01 Nimi _____
- 02 Ikä vuosina _____
- 03 Sukupuoli 1. mies
2. nainen
- 04 Asuinkunta: _____ Postinumero _____
- 05 Peruskoulutus: 1. peruskoulu
2. ylioppilas
3. ammatillinen koulutus
4. korkeakoulututkinto
5. muu,
mikä _____
- 06 Ammattiryhmä 1. johtavassa asemassa/ ylempi toimihenkilö
2. alempi toimihenkilö
3. työntekijä
4. yrittäjä
- 07 1. Toimin terveydenhuoltoalalla
2. En toimi terveydenhuoltoalalla
- 08 1. Toimin SPR:n osastossa,
missä _____
2. En toimi SPR:n osastossa
- 09 1. Toimin työpaikan ensiapukoulutettuna,
missä _____
2. En toimi työpaikan ensiapukoulutettuna

- 10 Olen saanut elvytyskoulutusta:
1. 3 -tunnin elvytyskurssilla
 2. ensiavun peruskurssilla (ea 1)
 3. ensiavun jatkokurssilla (ea 2)
 4. ensiavun harjoituskurssilla (ea3)
 5. täydennyskoulutustilaisuuksissa
 6. muilla kursseilla, mitä tai millaista _____
- _____
7. en ole saanut elvytyskoulutusta
- 11 Elvytyskoulutuksen olen pääasiallisesti saanut:
1. SPR:n osastosta tai piiristä
 2. työpaikalta
 3. en ole saanut elvytyskoulutusta
- 12 Oletko itse koskaan elvyttänyt tai ollut mukana elvytystilanteessa?
1. kyllä,
vuonna/vuosina _____
 2. en ole
- 13 Osaatko mielestäsi antaa puhallus- ja paineluelvytystä oikein?
1. kyllä
 2. en, minkä vuoksi

 3. en osaa sanoa
- 14 Oletko kerrannut hengityksen ja verenkierron elvytystä teoriassa viimeisen 6 kuukauden aikana
1. kyllä,
miten _____

 2. en ole

- 15 Oletko kerrannut hengityksen ja verenkierron elvytystä käytännössä viimeisen 6 kuukauden aikana
- 1.kyllä,
miten _____
2. en ole _____
- 16 Pelottaisiko sinua auttaa sydänkohtauksen saanutta uhria, koska koet taitosi riittämättömiksi?
1. kyllä
2. ei
3. en osaa sanoa
- 17 Mitä muuta haluat kertoa hengityksen ja verenkierron elvytyskoulutuksen suhteen?
- _____
- _____

KIITOS VASTAAMISESTA!

Finlands Röda Kors/Centralbyrån

BAKGRUNDSUPPGIFTER OM UTBILDNING I ÅTERUPPLIVNING

FRÅGEBLANKETT

Svara på frågorna genom att ringa in det alternativ som är tillämpligt på dig eller genom att skriva ditt svar på det utrymme som är reserverat för detta. Vi ber dig vänligen besvara alla frågor. Din blankett är nödvändig för att ge oss den information vi behöver för att förbättra utbildningen i återupplivning.

Fakta om den som svarar:

00 Datum ____

01 Namn ____

02 Ålder ____

03 Kön 1. man

2. kvinna

04 Bostadsort ____ Postnummer ____

05 Grundutbildning 1. grundskola

2. studentexamen

3. yrkesutbildning

4. högskoleexamen

5. annan, vilken ____

06 Yrkesgrupp 1. ledande ställning/högre tjänsteman

- 2. lägre tjänsteman
- 3. arbetare, anställd
- 4. företagare

07 1. Jag är verksam inom hälsovården

2. Jag är inte verksam inom hälsovården

08 1. Jag är verksam inom en FRK-avdelning, var ____

2. Jag är inte verksam inom någon FRK-avdelning

09 1. Jag är verksam som första hjälpen-utbildad på min arbetsplats,
var ____

2. Jag är inte verksam som första hjälpen-utbildad på min
arbetsplats

10 Jag har fått utbildning i återupplivning:

1. på en tretimmars kurs i återupplivning

2. på en grundkurs i första hjälpen (fhj 1)

3. på en fortsättningskurs i första hjälpen (fhj 2)

4. på en övningskurs i första hjälpen (fhj 3)

5. på evenemang för fortbildning

6. på andra kurser, vilka eller hurudana ____

7. jag har inte fått någon utbildning i återupplivning

11 Min utbildning i återupplivning har jag främst fått

1. genom en FRK-avdelning eller ett FRK-distrikt

2. på arbetsplatsen

3. jag har inte fått någon utbildning i återupplivning

12 Har du själv någonsin återupplivat någon eller varit med i en
situation där man gör det?

1. ja,

år/åren ____

2. nej

13 Kan du enligt din egen åsikt utföra återupplivning på rätt sätt genom inblåsning och tryckning?

1. ja

2. nej, varför?

—

3. vet inte

14 Har du under de senaste 6 månaderna repeterat hjärt-lungräddningens teori?

1. ja På vilket sätt? ____

2. nej

15 Har du under de senaste 6 månaderna repeterat hjärt-lungräddning i praktiken?

1. ja På vilket sätt? ____

2. nej

16 Skulle du vara rädd för att hjälpa en person som drabbats av en hjärtattack, eftersom du upplever att dina färdigheter inte räcker till?

1. ja

2. nej

3. vet inte

17 Finns det något annat som du skulle vilja berätta om utbildning i hjärt-lungräddning?

—

TACK FÖR DITT SVAR!

