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Gotowość do udzielenia pierwszej pomocy przed i po kursie BLS AED

Streszczenie

Wstęp. W warunkach pozaszpitalnych dochodzi do około 60% zgonów związanych z chorobą niedokrwienną serca, a główną przyczyną śmierci jest nagłe zatrzymanie krążenia (NZK). Wczesne uruchomienie służb ratunkowych oraz szybkie podjęcie RKO przez świadka zdarzenia, wpływają na większą skuteczność zaawansowanych czynności resuscytacyjnych i znacząco polepszają szanse przeżycia pacjenta.

Cel. Celem badania było określenie gotowości do udzielenia pierwszej pomocy osób biorących udział w kursie BLS AED certyfikowanego przez Europejską Radę Resuscytacji i Polską Radę Resuscytacji, zarówno przed jak i po przeszkoleniu. Dodatkowo zwrócono uwagę na motywację i przyczyny udziału w tego typu kursach. Chciano również wykazać czy istnieje korelacja pomiędzy wiekiem, płcią, stanem cywilnym, wykształceniem kursanta, a gotowością do udzielenia pomocy przed, jak i po kursie.

Materiał i metody. Badaniu poddano 203 uczestników kursów BLS AED. Ankietowani na zakończenie kursu dostali do wypełnienia kwestionariusz zawierający pytania dotyczące podstawowych danych socjometrycznych, motywacji i przyczyn udziału w kursie oraz gotowości do udzielenia pierwszej pomocy zarówno przed, jak i po kursie BLS AED. W badaniu wzięło udział 114 kobiet i 89 mężczyzn.

Wyniki. Przed zajęciami 52,2% kursantów nie podjęłoby pierwszej pomocy, natomiast po kursie aż 96,1 % uczestników zadeklarowało, że ma na tyle dużą wiedzę, aby udzielić pomocy osobie z nagłym zatrzymaniem krążenia. Badanie wykazało również, że płeć żeńska wpływa na mniejszą gotowość do udzielania pierwszej pomocy.

Wnioski. Gotowość do udzielenia pierwszej pomocy przed kursem BLS AED jest niska. Kobiety znacznie rzadziej deklarują podjęcie pierwszej pomocy przed kursem. Udział w kursie BLS AED znacząco zwiększa gotowość do udzielania pierwszej pomocy. Konieczne jest dalsze prowadzenie szkoleń z zakresu pierwszej pomocy, w celu zwiększania świadomości społecznej, zwiększeniu gotowości do udzielania przez nich pomocy, a co za tym idzie do zwiększenia szans na przeżycie poszkodowanego z pozaszpitalnym zatrzymaniem krążenia.

Słowa kluczowe: nagłe zatrzymanie krążenia, pozaszpitalne zatrzymanie krążenia, resuscytacja krążeniowo-oddechowa, resuscytacja krążeniowo-oddechowa podjęta przez świadka zdarzenia, gotowość do udzielenia pierwszej pomocy.

Willingness to perform bystander CPR before and after the BLS AED course

Abstract

Introduction. Almost 60% of adult deaths connected with ischemic heart disease are out-of-hospital deaths, and the leading cause of death is sudden cardiac arrest (SCA) in ventricular fibrillation mechanism. Prompt activation of the ambulance service and immediate bystander cardiopulmonary resuscitation (CPR) have great influence on the success of resuscitation efforts and improve the chances of victims' survival.

Aim. The aim of this study was to determine the willingness to perform bystander CPR by the participants of the BLS AED courses, before and after the training. Moreover, researchers wanted get to know the reasons why the participants take part in such trainings. Researchers also wanted to find any possible correlation between age, sex, marital status, education and willingness to perform bystander CPR both before and after the course.

Material and methods. The survey was conducted among the 203 participants who took part in the BLS AED courses. The questionnaires contained questions about basic sociometric issues, reasons for taking part in the training and willingness to perform bystander CPR before and after the course, were distributed after the training. One hundred and fourteen women and 89 men took part in the survey.

Results. Bystander CPR would not be performed by 52.2% of the participants before the course. However, after the course, 96.1% of the participants declared that their first aid knowledge was good enough to provide a person in sudden cardiac arrest with help.

Conclusion. Willingness to perform bystander CPR before the BLS AED course is low. Women less frequently declare their willingness to provide first aid before the course. Taking part in such training visibly increases the chances of rendering first aid by the participants. Work-related but also personal issues were the main causes of taking part in BLS AED course. It is necessary to prepare more first aid courses in order to increase willingness to perform bystander CPR, and thus increase the chances of survival of victims in out-of-hospital cardiac arrest.

Key words: sudden cardiac arrest, out-of-hospital cardiac arrest, cardiopulmonary resuscitation, bystander CPR, willingness to perform CPR.

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INTRODUCTION

Cardiovascular diseases are the leading cause of death among adults [1]. About 60% of deaths associated with ischemic heart disease occur out-of-hospital and the main cause of death is sudden cardiac arrest (SCA), mostly in ventricular fibrillation mechanism [2]. "The chain of survival", consisting of four links: early diagnosis of life-threatening emergencies and the call for emergency services, early cardiopulmonary resuscitation (CPR), early defibrillation and post resuscitation care, effectively illustrates the particular steps that must be taken in case of a victim in sudden cardiac arrest, so that they have any chances of survival [1]. The effectiveness of advanced resuscitation procedures and the patient's chances of survival depend largely on the moment of activation of emergency services. The victim has a much greater chance of survival when emergency services are launched even before cardiac arrest starts [3]. Also, bystander CPR in case of out-of-hospital cardiac arrest significantly increases the chances of their survival [3-9]. In some research, victims on whom bystander CPR was performed had up to five times greater chances of survival [2]. The administration of bystander CPR also influences the victim's quality of life (QOL) after sudden cardiac arrest [6]. Unfortunately, as studies show, only in 30% of cases of sudden cardiac arrest, bystander CPR is performed while waiting for emergency services to arrive [4,5,10]. Studies also show, that for victims of sudden cardiac arrest in ventricular fibrillation mechanism, defibrillation is vitally important as well [11-13]. Such defibrillation can be carried out by emergency services with the use of manual defibrillators, but also by bystanders with the use of Automated External Defibrillator (AED). For a bystander to be able to use such a defibrillator, the following conditions must be fulfilled: first of all – there must be an AED present at the scene, secondly – the person giving first aid has to know that they can use such a device, and also when and how to do it.

In a study carried out by a Public Opinion Research Centre (OBOP) in July 2003, 13% of the respondents stated, that they would not give first aid. In 94% of cases, their decision was motivated by the lack of appropriate skills [14].

Among the most common reasons for not performing bystander CPR, the following factors can be named: fear of disease, visible bleeding, victim's poor hygiene, sense of danger [8], and also: panic, fear of doing harm, belief that the victim is dead, necessity of doing mouth to mouth breathing to a stranger and fear of legal sanctions [4]. In the study by Cho and others which was carried out on the citizens of South Korea, it was shown the people taking part in the training declared their reluctance to perform CPR before the course due to fear of possible legal consequences, poor knowledge and CPR skills and the fear of infection [9]. Fears of legal consequences and infection remained even after the course [7].

A bystander is more willing to take proper action if they know the victim, if it is certain that the victim is not likely to survive unless CPR is performed and if they have necessary CPR skills [8]. Additionally, the study showed, that people more willing to perform CPR constitute the following type: young men, in a relationship, smokers and organ donors [4,5,8]. Willingness to perform CPR also depends on whether a respondent has attended first aid training and their experience [4,7,8].

In order to increase victims' chances of survival in case of out-of-hospital cardiac arrest, it is important to promote bystander CPR [7], and also to organize CPR training courses, which will teach laypersons how to properly assess a victim's condition, recognize the necessity to call for help and provide them with chest compressions and mechanical ventilation skills, and also the application of AED.

The purpose of this study was to determine the willingness to give first aid by the participants of AED CPR course certified by the European Resuscitation Council and The Polish Resuscitation Council, both before and after the training. In addition, the researchers wanted to show what the motivation and reasons for participating in such courses are. Also, they wanted to demonstrate whether there is a correlation between age, gender, marital status, education, and the readiness to give first aid before and after the course.

MATERIAL AND METHODS

The study involved 203 participants of the BLS AED courses certified by the European Resuscitation Council and the Polish Resuscitation Council. The courses took place in 2009 in Cracow within the AED Cracow Program "THE IMPULSE OF LIFE" by the National Centre for First Aid Education and Safety. The courses were financed by the city council in Cracow, so the participants did not bear any costs. Most of the participants signed up on the courses on a voluntary basis, some were referred by their employers. The course lasted 5 hours, and the classes were divided into two thematic modules. The first one concerned basic life support procedures, and the second one Automated External Defibrillation. The classes were in a form of a short lecture and phantom practice. Six students were assigned to one instructor.

When the course ended, the participants were handed a questionnaire to fill in which contained questions about basic sociometric data, motivation and reasons for participating in the course and readiness to give first aid both before and after the BLS AED course.

The study involved 114 women (56.2%) and 89 men (43.8%). The largest group constituted those aged 30-39 (38.4%), and the smallest – people aged 60-69 (3.9%). The remaining age groups were as follows: people aged 20-29 constituted 18.7% of respondents (n=38), 40-49 23.6% (n=48) and 50-59 15.3% (n=31). Among the respondents, 126 people (62%) were those with higher education, 53 people (26%) with secondary education. The remaining were those with post-secondary education, higher vocational education, incomplete higher education and basic vocational education. The largest group (n=137) consisted of married people. The other groups were as follows: singles (n=48), divorcees (n=14), widows and widowers (n=4).

RESULTS

When asked about the willingness to providefirst aid before the course, 21.7% out of 203 respondents said that they

would take proper action as they knew how to do it; 25.6% said that they would take action despite the lack of proper first aid knowledge; 43.8% would not give first aid due to the lack of skill; 8.4% would not take any action whatsoever despite having knowledge and skill; and 0.5% could not tell how they would behave in such a situation. However, after the BLS AED course, 96.1% of the respondents claimed that they knew how to give first aid and would use that knowledge and take proper action; 2% would take action despite still having no first aid knowledge; 1.3% said that despite first aid knowledge and skill would not take action and the remaining 0.5% of the respondents still could not tell how they would behave. After the course, however, there was noone who would not take action due to the lack of knowledge and skill (Figure1).

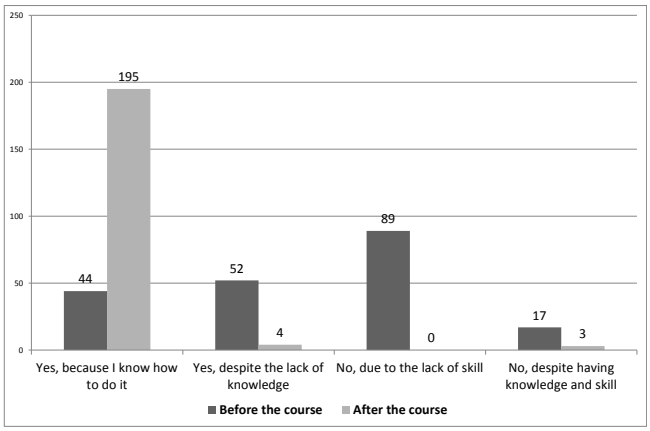

FIGURE 1. Willingness to render first aid before and after the course.

Among the reasons for attending the course, the respondents mostly named: being referred by their employer (49.4% of all answers), their own will (35.5%), 9.5% involved group decision to jointly take part in the course, 5.2% were persuaded by their nearest and dearest.

As motivation to attend the course, the respondents most often ticked: a profession, where there is a high accident risk (32.3%), desire to refresh their first aid knowledge (17.4%), willingness to verify the actions taken when providing a close person with such assistance (3.2%) and a stranger (6.6%), fear of death (3.2%), and an experience of a situation in which they were not able to help a stranger (1.9%) or someone close (1.3%).

Women reported significantly lower willingness to render first aid before the course. The correlation between female gender and the willingness to provide assistance reached statistical significance at the level of F=34.864, p=0.000. No such correlation was demonstrated for age, education and marital status of the respondents. Also, the motivation and reasons for participation in the course does not materially affect the willingness to provide first aid.

DISCUSSION

In the carried out research, 52.2% of the respondents stated that they would not give first aid before the course, regardless of whether it concerns someone close or strangers. It corresponds to the results of research conducted by Coons and Guy on the residents of Arizona, where 45% of the respondents stated that they would not perform CPR on a stranger [4]. However, Kuramoto and others in the Japanese population study found that only 13% of respondents would perform CPR on friends and family members, and 7% on a stranger [7].

After the course, 96.1% of the respondents stated their willingness to render first aid. These results are surprisingly good, especially when compared with the results of the South Korean study described by Cho and others, in which, after the course, only 55.7% of the participants would perform standard CPR on a stranger, whereas only 70% would perform only chest compressions on a stranger. No such relationship has been demonstrated with respect to CPR on someone close [9].

The study showed that CPR classes increase students' awareness and chances for them to perform CPR, which was also noted by Cho and others and Hamasu and others in the studies they carried out [6,9]. Hamasu has shown, however, that BLS classes do not reduce the fear of infection and legal consequences [6].

It was also shown that men would be more willing to provide first aid before the course. Similar results were obtained and Guy Coons and Axellson and others, as well as Johnston and others in the research they carried out [4,5,8]. However, the obtained by the aforementioned investigators correlation between age and marital status of the witness the event, and a readiness to provide assistance, was not reflected in this study.

The employer's referral of the participants to the training was pointed as the reason by 49.4% of respondents. Also the study conducted in Sweeden by Axellson and other shows that the main reason for participating in the course was referral from work, but also mentions the desire to develop interests and recertification [5].

CONCLUSIONS

1. Willingness to render first aid before the BLS AED course is very low.
2. Participation in the BLS AED course significantly increased the willingness to provide first aid.
3. Work aspects contribute to the participation in the course, but also personal ones.
4. Especially women should take part in first aid training because they are much less likely declare taking first aid action before taking such course.
5. Bystander who performed first aid should have chance to verify his actions at first aid course.
6. It is necessary to continue such first aid training courses, in order to increase public awareness, enhance the willingness to provide help, and thus to increase the chances of survival of the victim in out-of-hospital cardiac arrest.

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