

Cardiopulmonary Resuscitation (CPR) - An Urgent Need for Public Education in Iran as a Developing Country

Akilbekov Saken Dzhumatovich¹, Yerimova Nazira Zholdybayevna², Mehran Kouchek³, MirMohammad Miri^{3*}

¹ Associate Professor, Higher School of Medicine, Faculty of Medicine and Health Care, Al-Farabi Kazakh National University, Almaty, Kazakhstan

² Pediatrician, Assistant of the Department of Children's Diseases, JS "National Center of the Surgery n.a A.N Syzganov's", Almaty, Kazakhstan

³ Associate Professor, Department of Anesthesiology and Critical Care, School of Medicine, Imam Hosein Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

* **Corresponding Author:** MirMohammad Miri, Department of Anesthesiology and Critical Care, School of Medicine, Imam Hosein Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran Email: dr.mmmiri@gmail.com

Received: January 27, 2023; **Accepted:** February 08, 2023; **e-Published:** February 10, 2023

Keywords: Cardiopulmonary Resuscitation (CPR), Heart Disease, Education.

Dear Editor

Out-of-hospital cardiac arrest is still a major concern for public health. The cardiopulmonary resuscitation (CPR) technique, conducted by a skilled professional, greatly increases the patient's survival rate until the arrival of a medical team. Every second of that delays CPR brings the patient closer to disability and death.¹

CPR is so important that the American Heart Association (AHA) proposed universal training of this lifesaving technique at the community level in 1973. Following its implementation, millions of Americans have been trained theoretically and practically, and currently, high school students, are the largest group of people in the United States who receive CPR training each year.² In Sweden, 3 million people are trained in CPR every year. A study in Sweden has shown that the survival rate of patients, who suffered cardiac arrest outside the hospital and underwent CPR before the arrival of the skilled medical team, were increased.³ The experiences of other countries indicate that CPR training for different groups of people provides a useful human resource with the first one present at the scene of cardiac arrest. It is estimated that at least 15% of the general public in a community

should be trained in CPR in order to significantly increase the survival rate after cardiac arrest.⁴

Developed countries emphasize public education in the field of CPR. Iran, as a developing country in West Asia, has neglected this issue. So, the study conducted in Iran shows that young people (students) do not have the necessary knowledge and skills required to perform CPR.⁵ As of the date of this Letter, no public education program concerning CPR has been implemented in Iran although scattered workshops are held for special groups such as the military in Iran, CPR is not consistently taught in non-medical schools and universities. This issue becomes doubly important when we know that in Iran, cardiovascular accidents are the leading cause of death. In 2012 6442 people died due to cardiac arrest in Tehran city, the capital of Iran.⁶

It should also be noted that in addition to providing general education; it is important to pay attention to the sustainability and effectiveness of these trainings. Researchers believe that every training led to learning, but the depth and stability of learning is varied in different training methods, so the use of suitable methods for training CPR for different groups of people should be

evaluated. One study indicates that the repetition of CPR training workshops, at least once every six months, was stated as necessary because previous training and information retention declines significantly over time.⁷ Therefore, in addition to using standard educational methods, public education should consider repeating CPR presentations and the content should be updated to include new and standardized guidelines in the field of CPR as they arise to increase the community effectiveness and durability in combatting heart disease.

Acknowledgment

None.

Competing interests

None.

Abbreviations

Cardiopulmonary resuscitation: CPR;

American Heart Association: AHA.

Authors' contributions

The authors read and approved the final manuscript. They takes responsibility for the integrity of the data and the accuracy of the data analysis.

Funding

None.

Role of the funding source

None.

Availability of data and materials

The data used in this study are available from the corresponding author on request.

Ethics approval and consent to participate

None.

Consent for publication

By submitting this document, the authors declare their consent for the final accepted version of the manuscript to be considered for publication.

References

1. Matsuyama T, Scapigliati A, Pellis T, Greif R, Iwami T. Willingness to perform bystander cardiopulmonary resuscitation: a scoping review. *Resuscitation Plus*. 2020;4: 100043. doi:10.1016/j.resplu.2020.100043 PMID:34223318 PMCID:PMC8244432
2. Calicchia S, Cangiano G, Capanna S, De Rosa M, Papaleo B. Teaching life-saving manoeuvres in primary school. *Biomed Res Int*. 2016;2647235 doi:10.1155/2016/2647235 PMID:27957491 MCid:PMC5124447
3. Hasselqvist-Ax I, Riva G, Herlitz J, Rosenqvist M, Hollenberg J, Nordberg P, Ringh M, Jonsson M, Axelsson C, Lindqvist J, Karlsson T. Early cardiopulmonary resuscitation in out-of-hospital cardiac arrest. *New England Journal of Medicine*. 2015;372(24):2307-15. doi:10.1056/NEJMoa1405796 PMID:26061835
4. Wang J, Ma L, Lu YQ. Strategy analysis of cardiopulmonary resuscitation training in the community. *Journal of thoracic disease*. 2015;7(7):E160.
5. Davari F, Khanjari S, Assemi S, Haghani H. Basic Cardiopulmonary Resuscitation Training and Its' Effect on Knowledge And Skill Level of High School Students. *Iranian J Nurs*. 2004;17(39):57-63
6. Safdari R, Charkhsaz N, Montaseri MA, Montaseri N. Survey the effect of CPR simulation training software on the satisfaction of operating room and medical emergency students in Tehran University of Medical Sciences. *J Nurs Educ*. 2017;5(6):1-10. doi:10.21859/jne-05061
7. Karimi L. Participants' opinion about the necessity and quality of newborn resuscitation workshops. *Resuscitation* 2006; 70(2): 336 doi:10.1016/j.resuscitation.2006.06.123