

The Importance of the Training of Laypeople in Basic Life Support: An Integrative Review

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Abstract— The importance of qualification and training of lay people in Basic Life Support (BLS) leads to a reduction in deaths or irreversible sequelae in the population affected by a Cardiopulmonary Arrest (CPA), because in most emergency cases whoever is close is not a health professional. The purpose of this article is to analyze the importance of qualification and training in Basic Life Support for lay people. This is a descriptive, qualitative study carried out through an integrative literature review (ILR). To carry out the bibliographic review, searches were carried out in the following databases: repositories of Universities, Virtual Health Libraries, PubMed, Journals, Magazines, Federal Laws and Ordinances Scientific Electronic Library Online (SCIELO) and Online System of Search and Analysis of Literature Medical (MEDLINE). Articles related to the theme of the project, articles with Portuguese language, online and free access to the full text and from the year 2014 were included. The studies that constituted the units of analysis have a variety of authors, publication sources and countries of origin of the studies. The training and qualification of the BLS is of relevance for the knowledge of the lay population and should be applied even in the school phase, with

theoretical-practical methods and repeated annually, for a better effectiveness in the initial care of a victim in CPA.

I. INTRODUCTION

In Brazil, there are an estimated 200,000 cases of cardiorespiratory arrest (CPA) annually, where 50% of cases occur in the out-of-hospital environment (FERNANDES et al., 2014, p. 594). Basic Life Support (BLS) teaches initial care in emergency situations, includes learning Cardiopulmonary Resuscitation (CPR) maneuvers in patients in cardiac arrest, the use of Automated External Defibrillator (AED) and airway opening maneuvers to foreign body clearance (CHEHUEN NETO et al., 2016, p. 444).

Second, CHEHUEN NETO et al., 2016, training and information from the BLS are important, as the first care can preserve life and reduce sequelae until the multidisciplinary team arrives at the event.

This factor leads to a reflection on the importance of knowledge for lay people, as a population well trained in BLS will contribute to the reduction of deaths from CRA, as well as the reduction of irreversible sequelae in the Brazilian population (MAIA et al., 2020).

Countries such as Portugal, India and the United States of America, already apply the knowledge and training of their students in the SBV in their schools and training centers, through theoretical-practical content, believing that the sooner this knowledge is applied, the better the results will be. results and the training of a lay population.

KuvaKi, Bahar says the training should be started in school age children for 2 hours every year and repeated annually, helping these children learn CPR better, thus saving more lives. In view of these findings, we ask: What is the importance of training the school community in BLS.

Through cardiopulmonary resuscitation (CPR) early and effective care can contribute to reducing mortality rates, as well as reducing neurological sequelae. The approach within this context becomes essential, since the initial maneuver used correctly and accurately after the CRA will increase the victim's chances of survival and prevent complications.

In addition, there are still some situations, such as when there is obstruction of the airways in conscious victims, in which the lay rescuer can reduce the chances of an eventual CRA. For this purpose, it is essential to know how to correctly apply the Heimlich maneuver (subdiaphragmatic pressure or abdominal pressure). In view of this, training projects for lay people in Basic Life

Support (BLS) are essential due to their relevance for rapid care for victims in an emergency situation, as it is currently represented as a policy strategy in the health care of populations.

According to the American Heart Association (2019), the BLS encompasses interventions that can be performed quickly by non-health professionals, provided they are trained, in this way, knowing the part of the population that is most vulnerable and by which factors it is affected makes if necessary for the organization to implement the practice of policies to prevent possible preventable deaths.

This work intends to seek evidence, through the available literature, about the effectiveness of BLS for laypeople, since knowledge, attitude and agility are essential to provide help to victims of CRA. Therefore, in view of the above and given that CRA is an emergency situation, the objective of this study is to analyze the importance of qualification and training in Basic Life Support for lay people.

II. METHOD

This is a descriptive, qualitative study carried out through an integrative literature review (ILR). To carry out the bibliographic review, searches were carried out in the following databases: repositories of Universities, Virtual Health Libraries, PubMed, Journals, Magazines, Federal Laws and Ordinances Scientific Electronic Library Online (SCIELO) and Online System of Search and Analysis of Literature Medical (MEDLINE).

The study included articles related to the theme of the project, articles with Portuguese language, free online access to the full text and from the year 2014. As exclusion criteria, scientific productions with English and Spanish language and that were not complete and outside the established year were discarded. The descriptors used in the research were: basic life support, cardiopulmonary resuscitation, lay people, training, education.

When crossing the descriptors SBV, PCR, in-service training and education with filters, several articles were found, of these eighteen (18) references followed according to the inclusion criteria and which present as a theme the importance of knowledge and training of the SBV for lay people, reducing the incidence of death and irreversible sequelae in case of cardiac arrest.

The steps for the analysis and selection of articles were: elaboration of a guiding question (What is the

importance of training lay people?); literature search; data collect; critical analysis of included studies; discussion of results and presentation of the integrative review. The results were analyzed through content analysis which, according to Bardin (2006), should be developed from

three phases: 1) pre-analysis, 2) material exploration and 3) treatment of results, inference and interpretation.

The definition of references considered information related to descriptors, authors, year, search location, research title, research type, subjects and the described results (Table 1).

Tabela 1: Referências utilizadas para elaboração da RIL

Nº	Autor	Título	Local de busca	Tipo de pesquisa	Descritores	Ano
1	MAIA, SRT.; LEMONS, AM.; FRUTUOSO, MS.; JUNIOR, CWMR.	Conhecimento dos leigos acerca da ressuscitação cardiopulmonar em pacientes adultos no Brasil	Brazilian journals / Research Gate	Pesquisa Bibliográfica	Conhecimento, Ressuscitação Cardiopulmonar, Educação em Saúde. Adulto e Brasil.	2020
2	SILVA, JK.; CONCEIÇÃO, DMM.; RODRIGUES, GM.; DANTAS, GSV.	Suporte Básico de Vida para Leigos: Relato de Atividades Extensionistas	Repositório Institucional UNESP Revista Ciência e Extensão Unesp	Relato de Experiência	Educação em Saúde, Parada cardiorrespiratória, Ressuscitação cardiopulmonar, Suporte Básico de Vida, Universidades.	2017
3	MONTEIRO, AMS.; MOSCOPF, FJ.; SCHAFFAZICK, F.; BONDAN, FB.; TURRI, G.; SILVEIRA, LF.; DALL'AGNOL, MM.; AVILA.	Cartilha para leigos sobre reanimação cardiopulmonar	Repositório UFSM	Livro	Leigos, Reanimação cardiopulmonar, Parada cardiorrespiratória	2017
4	MIRAVETI, JC.	Suporte básico de vida para leigos: um quase estudo experimental	Repositório USP	Estudo quase experimental, quantitativa com delineamento tempo- série	Parada cardiorrespiratória, ressuscitação cardiorrespiratória, suporte básico de vida, leigo	2016

5	FERREIRA, MGN.; ALVES, SRP.; SOUTO, CGV.; VIRGÍNIO, NA.; JÚNIOR, JNBS.; SANTOS, AF.	O Leigo em Primeiros Socorros: Uma Revisão Integrativa	Revista de ciências da saúde	Revisão Integrativa	Revisão, primeiros socorros, conhecimento	2017
6	SILVA, LGS.; COSTA, JB.; FURTADO, LGS.; TAVARES, JB.; COSTA, JLD.	Primeiros Socorros e Prevenção de Acidentes no Ambiente Escolar: Intervenção em Unidade de Ensino	Revista Cofen	Relato de Experiência	Educação em Saúde, Saúde Escolar, Primeiros Socorros.	2017
7	Ministério da Saúde	Política Nacional de Promoção da Saúde	Biblioteca virtual em Saúde do Ministério da saúde	Pesquisa Documental	Portaria Nº 2.446	2014
8	Presidência da República	Lei Lucas	Presidência da República	Pesquisa Documental	Lei Nº 13.722, de 4 De outubro De 2018.	2018
9	FALKENBERG, MB.; MENDES, TPL.; MORAES, EP.; SOUZA, EM.	Educação em saúde e educação na saúde: conceitos e implicações para a saúde coletiva	Scielo	Relato de Experiência	Educação em saúde; Educação continuada	2014
10	TAVARES, A.; PEDRO, N.; URBANO, J.	Ausência de formação em suporte básico de vida pelo cidadão: um problema de saúde pública? Qual a idade certa para iniciar?	Revista Portuguesa de Saúde Pública	Pesquisa Bibliográfica	Suporte básico de vida Parada cardiorrespiratória, Formação, idade	2015
11	BERNOCHE, C.; TIMERMAN, S.; POLASTRI, TF.; GIANNETTI, NS.; SIQUEIRA, AWS.;PISCOPO, A.; et al.	Atualização da Diretriz de Ressuscitação Cardiopulmonar e Cuidados Cardiovasculares de Emergência da Sociedade Brasileira de	Scielo	Pesquisa Documental	RCP, PCR, saúde	2019

		Cardiologia – 2019				
12	NETO, J. A. C.; BRUM, I. PEREIRA, V. SANTOS, D. R.; L. G.; MORAES, S. L.; FERREI, R. E.	Conhecimento e Interesse sobre Suporte Básico de Vida entre Leigos	International Journal of Cardiovascular Sciences. 2016	Coleta de dados	Ressuscitação Cardiopulmonar, Coleta de Dados, Educação em Saúde, Serviços Médicos de Emergência	2016
13	FARIA, H. T.G.; SCHMIDT, F. M.Q.; GONÇALVES SILVEIRA, J. S. S;	Suporte básico de vida para alunos da rede municipal de ENSINO	Scielo	Relato de Experiência	Educação em enfermagem; Parada cardíaca; Ressuscitação cardiopulmonar.	2015
14	PEREIRA, K.C	A construção de conhecimentos sobre prevenção de acidentes e Primeiros socorros Por Parte do público leigo	BDENF	Estudo transversal	Prevenção de acidentes; primeiros socorros; Ensino.	2015
15	ROVISCO; et al	Assessment of Knowledge and Self Efficacy before and after Teaching Basic Life Support to Schoolchildren	Scielo	Estudo Prospectivo Longitudinal	Learning; Education; Cardiopulmonary resuscitation; Child	2020
16	Kuvaki, B.; ÖZBILGIN, Sule	School Children save Lives	PubMed CentralUS National Library of Medicine	Revisão Bibliográfica	School children, basic life support, education, cardiopulmonary resuscitation	2018
17	COUTO, C. S.; NICOLAU, A.	Conhecimento do público Geral em Suporte Básico de Vida: Um Estudo Piloto com uma Amostra Portuguesa	Acta Med Port	Transversal, exploratório e descritivo	Conhecimentos, Atitudes e Prática de Saúde; Reanimação cardiopulmonar/educação; Sistema de Suporte de Vida	2019
18	GONÇALVES, J. M., et al.	Ensino de Suporte Básico de Vida para Alunos de	Scielo	Longitudinal e prospectivo	Ressuscitação Cardiopulmonar, Educação, SBV, Estudantes do Ensino	2014

		Escolas Públicas e Privadas do Ensino Médio			Médio	
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III. RESULTS AND DISCUSSION

Among the references cited in table 1, in relation to the year of publication, there were three (3) articles from the year 2014 and three from 2015, in the years 2016, 2018, 2019 and 2020, two (2) articles from each year were found and four (4) articles from 2017. All the selected production is part of the health area, presenting diversity in relation to the research context, which involved the importance of qualification and training of lay people in the teaching of Basic Life Support (BLS), emphasizing special attention to community training. school, in the form of theoretical and practical training on the first care of a victim of cardiac arrest.

The reading of the entire scientific production chosen made it possible to contemplate the researchers' concern in the adoption and development of facilitating resources for the training of the school community and in the implementation of training as part of the first care for the victim of CRA and to reduce sequelae until the moment of arrival of a qualified professional.

The studies that constituted the units of analysis have a variety of authors, publication sources and countries of origin of the studies. As for the sources of publication, the concentration of articles in the journal "Resuscitation" stands out, where seventeen (94.4%) of the eighteen (100%) articles included in this study were found, only one article was found in the journal "American Journal of Emergency Medicine". The number of samples studied ranged from 09 to 823 subjects in studies that used applied methodology; in exploratory studies, 2932 subjects were investigated.

The study demonstrates that CPR is one of the most common causes of death in the world, affecting mainly adults with comorbidities or young people after trauma, and in children it is more associated with lack of oxygen due to respiratory problems (airway obstruction).

Lyra, Priscila et al; Monteiro Maria de Lourdes et al and Kuvaki, Bahar et al, believe that the earlier this knowledge and its applicability in Schools or Training Centers, the more effective the training will be, leading to a better awareness and acceptance of the population of the importance of this subject – save lives and reduce irreversible sequelae -. For this, this training must be applied annually for 2 hours and repeated every year with theoretical-practical classes.

Most authors analyzed that the lay population does not have sufficient knowledge about BLS or incorrect knowledge, which can lead to worse care and damage to life. Intensifying the importance and appreciation of educating a population about BLS for a better diagnosis of a patient in CRA and, therefore, a correct first care. They also report that everyone should be instructed that after the initial care they should call for help from a specialized support. When they present a correct sequence of care, the survival rate increases and consequently the risk of death.

Pergola, Aline et al; reports that many laypersons do not know how to position the victim for a correct external chest compression, as well as they are unaware of which region of the body to massage, further intensifying the need for training to act more effectively and increase survival.

Of the cited references, 18 (88.88%) cite that educational techniques with children and adolescents are exposed as measures to develop healthy behavior, which creates a field to be explored by health professionals. The advantage of training in BLS with children under fourteen is the fact that knowledge is introduced early, reducing their fear when performing maneuvers in an emergency situation in the community (FONTES; et al, 2010). In addition, 10 publications (55.55%) of the studies report that for adults, it was evidenced that training in basic life support reduces fear/anxiety, however, it is clear that practical updates need to occur regularly to preserve quality. of care with low retention of cardiopulmonary resuscitation knowledge and skills (CALLEGARO, 2018). The importance of training family members of cardiac arrest survivors was also highlighted, in order to seek to increase the safety and performance of cardiorespiratory resuscitation maneuvers.

In addition to the results obtained in the studies, there is evidence that a well-trained layperson can be as effective in cardiopulmonary resuscitation as any trained professional. In addition, they believe that courses lasting less than four hours are effective for training lay people, although studies highlight the need for periodic updates to maintain the skill (OLIVEIRA, 2018).

Of the publications mentioned in table 1, the majority state that the courses carried out in stages are more effective than the traditional ones where all the stages of the SBV are taught in a single class. In addition, theoretical-practical courses are more effective for training

lay people (CHEHUEN NETO; et al, 2016). The use of equipment with audible or visual alert, such as a dummy with software and an external automatic defibrillator with a visual or audible device, proved to be efficient for carrying out training after a theoretical course, and this fact contributes to the inclusion of citizens with hearing impairment.

According to Victorelli (2013) the training of lay people in basic life support is a concern of health agencies at an international level. The search for evidence of the effectiveness of BLS training presented by the researched studies becomes difficult to generalize due to the diversity among the populations studied. However, it should be noted that there are indications of effectiveness in the courses developed that were pointed out in the articles studied. Training in basic life support for the lay population increases their safety and attitude in the face of an emergency situation prior to the arrival of the professional team.

IV. FINAL CONSIDERATIONS

It is of fundamental importance to encourage and expand discussions for the creation of a subject in the curriculum of each country, on BLS. Thus, students would develop skills to face emergency situations (da Silva et al, 2017). This learning must be permanent, with theoretical-practical content and the construction of scenarios close to real situations. In order to further stimulate the teaching-learning process and absorption of lay people, by working and training various skills and competences of the public. (MAIA et al, 2020).

Health education is an instrument for exchanging knowledge between health professionals and the population. This leads to the search for the autonomy of the Being as a transforming element of its reality. This is a complex involving the biological Being and its social contexts. (PEREIRA et al, 2015).

The posture of an individual trained in BLS, in any emergency situation, will determine how the victim's recovery will be, making the difference between life and death. The importance of access to information on how to act in emergency situations and immediate care is concluded. (PEREIRA et al, 2015).

In view of the above, we can conclude that the knowledge and training of the population in BLS is of fundamental importance, to minimize the number of deaths and irreversible sequelae in case of CA. Such knowledge must be developed within the scope of the school community, which is the basis of education and training of

a Human Being, leading to a significant impact on the survival of the person who is suffering a CPA.

In this sense, qualified help with theoretical and practical training is necessary, including aspects related to the importance and way of functioning of assistance networks in case of emergency, such as the Mobile Emergency Care Service (SAMU). Bearing in mind that one of the principles of the Unified Health System (SUS) is popular participation for the promotion, prevention and maintenance of health, it is worth noting that training the population in first aid and risk assessment in emergency situations contributes significantly to the reduction of injuries and mortality of the very people who make up society.

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