

# The use of realistic simulation in the training of lay people in Basic Life Support: experience report

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**Abstract**—Objective: to report the experience by students of an extension project in carrying out a realistic simulation on Basic Life Support with employees of a Higher Education Institution. Method: descriptive study, type of experience report. The practice of realistic simulation was adopted in November 2019 with employees of a private Higher Education Institution (HEI), in the city of Belem (PA) / Brazil. The present study emerged from the activities developed by nursing and medical students participants in an extension project of the

*aforementioned HEI, coordinated by an advisor, nurse, master and specialist in Urgency and Emergency situations, whose objective of the group is to train the staff Institution for Basic Life Support (BLS) situations, thus making them laymen with training to act through situations like, Cardio Respiratory Arrest, Obstruction of the Airways by Foreign Body, Episodes of Seizure, Fractures, Immobilization, among other situations. Results: It was observed that training it was of paramount importance for achieving the objective of the extension project. The strategy used by researchers facilitated the socialization of knowledge for employees and consequently a response positive to what had been accomplished. Conclusion: It is concluded that the method adopted to train the employees of the Institutions, facilitated the development of skills, not only from a practical point of view, but, above all, emotional and psychological, since the trained staff were able to familiarize themselves with various situations of day by day care involving BLS situations.*

**Keywords—** Nursing, Medicine, First Aid, Cardiopulmonary Resuscitation, Mentoring.

## I. INTRODUCTION

Basic Life Support (BLS) is a process of systematized care that meets a protocol that includes a set of steps and actions that permeate the evaluation and intervention immediately in each phase and has the objective of maintaining, by basic means, the arterial blood flow to the brain and other organs noble and vital human body to provide the spontaneous cardiac recovery (CER) [1], [2].

Cardiorespiratory arrest (CPA) is conceptualized as the interruption of cardiac activity that reflects in the clinical aspects of PCR which are the loss of level of consciousness, absence of central pulse and apnea or agonized breathing [3], [4].

Furthermore, it is estimated that it is not yet possible to accurate data collection of deaths caused by PCR, through various causes such as different definitions Sudden Cardiac Death (SCD), retrospective analysis death certificates and the fragility of the notification structured in several regions [5].

A set of actions and measures is also used systematized to assist a victim of PCR, who can include assessment and intervention in an agile and immediate way that are represented by the acronyms, C - Circulation, A -airway opening, B - breathing and D - Defibrillation precocious. This sequence is recommended by the guidelines of the International Liaison Committee on Resuscitation - ILCOR and American Heart's international scientific consensus Association (AHA) [1].

Quality CPR is known to have significant effects benefits, however, it is inferred that in a proportionality represented by three victims of CPA, only one receives properly assisting a lay person outside the hospital environment. In addition, it is estimated that approximately 200,000 cases of CRP occur annual in Brazil, with half of this value being triggered outside the hospital environment [6].

The use of realistic simulation is a strategy of teaching learning that enables communication and human relations, enabling the development of technical skills and competences [7]. In addition, realistic simulation represents an important methodology in the teaching-learning, which should be thought of as a real need [8].

In this perspective, this research is justified due to exposure to certain scenarios, such as PCR, which are not common in the various professional practice spaces. However, it is necessary to be prepared and act correct shipping to these situations. Simulated training allows training without risk of damage to the user and the opportunity to experience a real situation with greater trust and security [9].

So, the objective of this study is to report the experience by students of an extension project in carrying out a realistic simulation on Basic Life Support with employees of a Higher Education Institution.

## II. METHOD

This is a descriptive, report-type study experience. The first simulation practice was adopted realistic in November 2019 and target audiences chosen to participate in the training were the employees of a Private Higher Education Institution (IES), in the city of Belem (PA) / Brazil. It is reported that the present study emerged from the activities developed by an extension group, called Training in the care in Urgent and Emergency Situations (CASUR) of said IES, composed of students from nursing and medicine, coordinated by an advisor, nurse, master and specialist in emergency situations and Emergency, whose objective of the group is to train the of employees of the Institution for BLS situations, thus making them lay people trained to work through situations such as PCR, Obstruction of Road Areas by Foreign Body (OVACE), Seizure Episodes, Fractures, Immobilization, Trauma, among other situations.

The project came about when situations of medical emergency that needed immediate response of IES employees who were unaware of or were unable to provide first aid and need to create a safe environment through strengthening the survival chain, in this sense, medical school teachers conceived the project, primarily for academic nursing capacitors and medicine, using the “peer to peer” approach, to have the capacity to train the administrative body of the own IES in First Aid..

Thus, the following guiding question was raised: “What is the importance of using realistic simulation in formation of lay people in Basic Life Support?”. It was observed as a current problem: “the need to training lay people in basic life support for urgent and emergency situations”.

The extension group was created by the teacher, master and specialist in Urgency and Emergency. The entry of the discs in the project occurred through evaluation of the Lattes curriculum of the interested parties, 20 places available for the Bachelor's degree in Nursing and 20 places for the medical course, which would be occupied by students who obtained the best grades.

The selected students were trained and qualified to become instructors for a period of two months that had a seminal class load of 60 hours divided into expository-dialogued classes and practical training through realistic simulation. The students met with the teacher, coordinator of the Project, which coordinated and subsidized information important for improving skills cognitive, psychomotor, affective and attitudinal of the group to effectively meet the demands and instruct the employees from different situations and scenarios constructed clinical trials.

Realistic simulation was carried out with 20 employees, among general service assistants, concierge agents, librarians, administrative technicians, technical Information technology and security technicians work, which were divided into pairs to be instructed by an instructor student, a member of the extension and the project coordinator and IES teacher, who conducted the training.

The simulation room was chosen as the location of the action realistic in the HEI itself, used as a classroom for the students, because they have all the material necessary to facilitate and make training as reliable as possible. The organization of the content, the necessary material for training, as well as the construction of cases and scenarios lasted a month. With the creation of the simulation, the adaptation and programming of the scenarios to be applied during training.

Immediately before implementing a case, the student instructor informed employees about cynical history of the patient they would deal with. After each simulation, the HEI staff members were asked about the simulated situation, in which they could discuss, clarify doubts and improve best practices in relation to experienced situations, adapting behaviors, attitudes and posture.

This training aimed to include realistic simulation as didactic that facilitates the acquisition of knowledge, in a draped environment, where you can still commit errors and better clinical practice, in the perspective of minimize insecurities, strengthen knowledge bases, acting in a safe environment and thus minimize the problem found.

It is reinforced that the training had been done through a prior training (briefing) on the various situations already mentioned in this study, to guide employees on how to proceed in the best possible way by simulated scenario created, without intervention by the instructors, but that they were there to serve as support and support if requested.

At the end of each simulation practice, the instructor had the opportunity to perform a feed-back with the employees, summarizing the service, with a brief explanation of the key points, mistakes and successes (debriefing) favoring a critical-reflective discussion of the cases addressed.

### III. RESULTS AND DISCUSSIONS

It was observed that the training of the instructors was paramount importance for achieving the objective of the extension, as well as for the training of lay employees to be carried out as planned. The administration of contents in an expository and dialogued, practical training and simulation as didactic instrument among the students themselves, members the extension project, was essential to highlight the importance of training laypeople for Urgency and Emergency with provision of first aid.

During training, it was observed that the majorities of participating employees in fact were unaware or never had been trained in first aid. It was found although this was the first experience of employees trained in the practice of realistic simulation, even more being focused on emergency situations and Emergency, however, it was noted that employees perceived training as a short action importance due to the environment in which they work and given also the proportion that good BLS care can provide a victim if well cared for. Valley to emphasize that the strategy used by the researchers facilitated the

socialization of knowledge for consequently a positive response to the that had been realized.

The scenario created by a simulation allows the experience, in real time, real situations, even if created, within a simulated and controlled environment, which the performance in these scenarios take place safely and allow the consolidation of knowledge, being a tool for teaching that provides the acquisition of knowledge.

The practice of realistic simulation is a useful tool effective, of utmost importance for an effective, integral action and that resolves the problems [10].

It was found, in the reports of IES officials trained as a critical point before training simulated, emotional difficulties in the face of the exposed situations due to insecurity in carrying out the procedures and lack of skill and competence in support techniques.

It should be noted that care practices can cause feelings of anxiety, stress and anguish, through the inexperience with the care process, not knowledge of care practices, unpreparedness in execution of techniques, the fear of making painful mistakes health problems. Furthermore, training contributes to the building skills and competences, which provides competence and security to the learner [11].

Training is considered to be the performance of employees, through training, went beyond the skills development to deal with situations BLS with engine and technical actions. There was greater employees' capacity for participatory interaction and motivating, with a cynical criticism about situations of urgency and unexpected emergencies.

The teaching process requires willingness from a pedagogic planning involving learning with safety, didactic and that allows the adoption of resources needed to perform a service effectively, without risks with improving practice professional [12].

In the area of health, realistic simulation is an ally, given that it is a practice that involves planning and positively influences the training of professionals, improving the teaching-learning process. Also realistic simulation as a strategy that contributes to the training of professionals in the allowing the expansion of the possibility of acquiring of knowledge [13], [14].

It is also reinforced that the use of simulation the teaching process aims to meet the needs of assumptions of planned learning. Thus, teachers act as mediators of knowledge, which facilitate the acquisition and socialization of ideas, valuing self-directed learning, in which the student is the main element. Simulation

contributes to training humanized and acting safely and with the minimum of failures [15].

In this context, it is approached that several scenarios can set a stage for the teaching process and learning and development of care, through educational strategies favored by simulation realistic, which reproduces reality in an environment interactive [16].

It appears that simulated learning is a strand that raises the self-confidence of those who learn, besides to become a promising teaching strategy for the development of assistance practice, being an educational trend that corroborates for the development and improvement of skills and habits [17].

#### IV. CONCLUSION

It is concluded that the results found allow identify that the development of realistic simulation to train lay people about BLS situations, positively influence the acquisition of skills and skills to act through adverse situations to actions developed as a routine at work.

The initiative to train IES employees in first aid situations, reaffirms the extreme need to establish a survival chain providing greater security for trained people to make decisions and act correctly in front of these adverse everyday situations that will influence the victim's prognosis until seen by professionals specialized.

It is noteworthy that the use of this strategy as educational instrument can minimize errors and provide a better prognosis for the victims, besides reducing fears and insecurities in the face of these occurrences, given that meaningful learning, favors learning to learning and a critical-reflexive attitude.

The simulation experiments were able to generate positive results mediated by the interrelationship between theory and practice; also made possible a strategy different from learning by employees, through different perspectives, providing a reflection and reformulation of practice, instigating thinking and acting.

It is concluded that the method adopted to train the IES employees, facilitated the development of competences, not only from a practical point of view, but, above all, emotional and psychological, since trained staff were able to familiarize themselves with day-to-day situations involving the provision of care in BLS situations.

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