

# Academic League of Urgency and Emergency Nursing as A Health Educational Tool: Experience Report

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## ABSTRACT

**Introduction:** Academic leagues are created with the proposal of expanding the studies on certain fields as an educational tool. **Objective:** Describing experience of nursing students as member of activities in a Nursing Urgency and Emergency League in a Public University of Minas Gerais State, Brazil. **Methodology:** Exploratory and descriptive study of the type experience report of nursing student participating in the League of Urgency and Emergency in Nursing called "LUREEN", within the scope of the Federal University of Uberlandia (UFU). **Results:** Nursing students have taught by two professors. One of them has multiprofessional degree (nurse, physician and dental surgeon, besides master degree) and other is PhD in Nursing. A total of 20 students make up league team, most female (n=14; 70%) with a mean age of 23.80±4.10 years and attending the 6th period of nursing course (n=6; 30%). The main activities performed were: Classes and realistic clinical simulations through educational methodologies as Team-Based Learning (TBL), Problem Based Learning (PBL) and Case-based learning (CBL); Health Continuous Education; Extra hospital activities and Coverage of cultural and sportive events by league. **Final Considerations:** The outcomes presented in that experience report show a great way to improve and increasing learning of nursing students in undergraduate trough an academic league as well as one of the best methodologies to provide real training in urgency and emergency situations. It is expected that future studies approach similar issues to improve nurse education courses.

**Keywords:** Education; Nursing; Health; Emergency Relief.

## Introduction

Emergency services aim to attend occurrences as quickly as possible after exposure of the victim to agents that cause injury to health. Clinical, surgical, traumatic, obstetric, psychiatric among others are considered urgent. Emergency medical service in Brazil are composed of basic team as physician and nursing staff (BRASIL, 2019).

Surgical situations are frequent demands in pre-hospital emergency services. Traumas responsible for nine deaths every minute around the world and are defined as high energy transfer or barrier in the normal flow of energy (mechanical, chemical, thermal, radiation energy, electrical) from an object to the human body (NAEMT, 2017).

Knowledge building of professionals who will work in emergency services begins at undergraduate. Educational tools such as active teaching methodologies learning and involvement of students in activities related to the area are fundamental for the construction of knowledge regarding trauma care. One of these tools is academic study teams calls “*Liga Acadêmica*” in Brazil (NAEMT, 2017).

The academic leagues are created with the proposal of expanding the studies on certain topics seen during graduation in a more specific way, they are an extracurricular extension activity that has the participation of students and teachers, who are responsible for guiding the activities carried out in the leagues (DANTAS, 2017).

These activities involve any league-related content, such as classes, lectures, training, and scientific events. As practices allow to deepen the knowledge of students, which improves the teaching-learning process in the university sphere and collaborates with the professional training of the academic (DANTAS, 2017).

In urgency and emergency field, academic leagues allow the recognition of risk situations by the student and future professionals through the association between what is studied in theory and what is applicable in practice. In addition, the leagues also have importance in relation to the community, as health education activities are carried out focused on the conducts necessary in certain kind of traumatic situations (SOUZA, 2014).

Another aspect that is important to emphasize is that in addition to the leagues being of great importance in the education of the academic, they enhance the training of nurses, help in the development of critical reasoning and improve the decision-making capacity which are essential aspects in care related to urgency and emergency (QUEIROZ, 2014).

In that way, showing importance of academic leagues in the teaching learning process, this study aims to describe the experience of nursing students as member of activities in a Nursing Urgency and Emergency League in a Public University of Minas Gerais State, Brazil.

## Methods

### Type of Study

Exploratory descriptive study of the type experience report. The experience report aims to describe how the experience in a particular work environment or study is, therefore, contributes to the training of

the nursing professional, besides promoting perceptions and reflections in relation to what is witnessed (QUEIROZ, 2014).

This type of study is a document that describe a period of activities during a period of time of graduation, it should present on the subject reported with bibliographic data, exposing its objectives and bringing a general overview on the subject. During the development of experience report, is necessary to use theoretical bases and scientific data that relate the theme and compare with other scientific researches. It should also be detailed the activities performed according to the report in order to be able to meet the objectives of the study, and to evidence the positive and negative aspects of the study (CESCAGE, 2014).

Thus, the report allows the future nurse a more detailed and directed view in relation to hospital and extra-hospital emergency services (QUEIROZ, 2014).

### **Study Site**

The study reports the experience of the nursing student participating in the League of Urgency and Emergency in Nursing called “LUREEN”, within the scope of the Federal University of Uberlandia (UFU), with the purpose of developing learning and motivating the members of the academic league through research and extensions in the area of nursing in urgency and emergency.

LUREEN has created in 2009. Among the activities provided by the league are the short courses, classes, lectures and practical activities of LUREEN members in the hospital and extra-hospital areas, which are carried out in partnerships with companies that work in the emergency and emergency services.

LUREEN has student members and two coordinator professors. who are also responsible for teaching classes on urgent and emergency issues. In order to student get in league, a test is prepared by LUREEN members is carried out. The test contains multiple choice questions and addresses about pre-hospital care.

In addition to the objective test, an interview of the candidates with the effective members of the league is also conducted to assess whether they have the appropriate selection criteria for the interests of the league. To join LUREEN, it is necessary that candidates have been approved in the discipline of nursing fundamentals, which is taught in the 4th period of nursing undergraduate, being able to perform some of the necessary procedures in clinical practice and internships.

## **EXPERIENCE REPORT**

Nursing students have taught by two professors. One of them has multiprofessional degree (nurse, physician and dental surgeon, besides master degree) and other is PhD in Nursing. A total of 20 students make up league team, most female (n=14; 70%) with a mean age of  $23.80 \pm 4.10$  years and attending the 6th period of nursing course (n=6; 30%). The table below presents a brief profile with continuous and categorical quantitative data about LUREEN students.

Table 1. Profile of the participants of the League of Urgency and Emergency in Nursing of the Federal University of Uberlandia - MG, 2020.

Variable	n	%	Minimum	Maximum	Mean±SD
<b>Gender</b>					
Male	6	30	-	-	-
Female	14	70	-	-	-
<b>Nursing course Stage</b>					
3rd	1	5	-	-	-
4th	1	5	-	-	-
5th	1	5	-	-	-
6th	3	15	-	-	-
7th	4	20	-	-	-
8th	2	10	-	-	-
9th	6	30	-	-	-
10th	2	10	-	-	-
<b>Age</b>	-	-	19	36	23,80±4,10

During the participation of the student as an effective member of LUREEN, several activities based on the pillars of teaching, research and extension were carried out. The results include activities related to expository classes in which the student actively participated as a listener, in order to optimize the learning process about themes inherent to the league, as well as processes of continuing education in health, practical experiences in urgency and emergency and scientific events promoted by the league

### Classes and realistic clinical simulations

The lectures are a form of didactic strategy that has as its main characteristic the exposure of a content by someone who has knowledge about a particular subject (LEAL, 2009). At LUREEN meetings, the lectures are held at the time of the weekly meetings, with a variable duration according to the available time of the participants, which lasts approximately one hour.

Such classes are of the expository type dialoged and also use active methodologies such as *Team-Based Learning (TBL)*, *Problem Based Learning (PBL)* and *Case-based learning (CBL)*. At this time, the other members can make contributions, questions, suggestions and debate on the theme being taught. The active methodologies mentioned facilitate the interaction between students and teachers, placing the learner as a teaching center (MUSSELIN et al., 2020).

The teacher responsible for preparing and teaching the classes is the same one who accompanies LUREEN meetings, being able to identify which subjects are most in need of being treated and the relevance in the professional training of nursing students in the context of urgency and emergency. The members of the league also contribute to their own experiences experienced during the undergraduate periods, both in practical classes and in internships, about situations and conducts taken in the face of some scenarios witnessed in the profession.

Extensive content about the types of shocks (loss of oxygenation of the cells of the body caused by absence of tissue perfusion, which leads to loss of vital energy production for humans) and their clinical approaches were given to students. The team was able to differentiate the main types of shock (hypovolemic, distributive and cardiogenic) as well as the main clinical approaches in the management of each emergency situation (NAEMT, 2017).

In the area of urgency and emergency, it is of great importance that professionals and students know how to recognize the types of shock and which conducts should be taken. During the lesson, the teacher brings examples of situations that may occur or that have already happened in care. These examples serve as a starting point for discussions and develop clinical reasoning, which is essential in the nursing profession. It was also discussed in the class about shock, which approaches should be made immediately during hospital care. The students make suggestions of different behaviors and the teacher leads to mistakes and correct answers.

Another topic that generated a lot of curiosity and interest among the student team was the topic of discussion of acute coronary syndrome (a clinical condition that may involve ischemia and acute myocardial infarction, which coincides with a high risk of death and sequelae to the patient) (ANDRADE, 2014).

In this item, the responsible teacher performed clinical simulations using the league members themselves. The teacher simulated a situation of a victim with chest pain and how the care should be in this scenario. This type of methodology stimulates the decision-making and clinical reasoning of the student, besides being made in a safe and controlled environment, where situations can be placed in a way that prepares the future professional for patient care (FERNANDES, 2019).

The use of simulation as a teaching strategy promoted the development of teamwork to the members of the league, since in the professional environment this form of care is common place and necessary for good clinical outcomes (SILVA, 2018).

In addition to the simulation being used to teach the class about acute coronary syndrome the coordinating professor also used it to address the subject of immobilizations and evaluation of the scene of a possible trauma (evaluation of the scene, and immobilization of the victim). University health skills laboratories were used to enrich the practice.

The evaluation of the scene is one of the first steps performed by the rescuer before performing a care, from the collection of information in pre-hospital care itself made to promote the safety of the scene, identify the causes of the incident and observe the behavior of the people around the occurrence. Safety and situation are the main points of the scene evaluation, where it becomes possible to analyze the context of the occurrence and the conditions of the site. In this way the professional can better conduct the care and prevent the patient's condition from worsening, as well as the safety of the professional who is at the scene. During the practical class, the students screened victim lying on the floor and performed cervical spine stabilization and cervical collar use, as one of the protocols for the care of basic life support in trauma (GALA; CRANDALL, 2019).

The concepts addressed in this practical class contribute to the fact that students know how to proceed in the face of an occurrence similar to that which was simulated. This reinforces the need to

reconcile the lectures with the practical training to improve performance and decision-making in hospital practice.

### **Health Continuous Education**

One of LUREEN's goals set out in the statute created together with the league's foundation is to provide contact between under graduate students and local community. LUREEN carries out continuing education and health education activities to promote knowledge about urgent and emergency situations and how the population should act in such situations.

Health education is defined as the practice of activities aimed at changing behavior in relation to health, based on evidence-based analyses on the subject addressed (SANTOS, 2018). LUREEN used health education to promote training for professionals in the "*Casa da Árvore*" Learning Community in Uberlandia, Minas Gerais.

The objective of this training was to prepare teachers working in the institution to act appropriately in situations that may occur in daily life, both with community students and with professionals. The activity was planned in a meeting with the league members.

It was decided that four LUREEN participants were responsible for conducting the activity in question, the themes were selected according to the Pre-Hospital Support of Life in Trauma (PHTLS) and dealt with basic life support, a set of conducts and procedures without the use of invasive devices, in order to identify situations of laughter to life and provide a viable condition for the victim until she was transported to a hospital (PEREIRA , 2019).

In relation to the methodology used for the work, slide shows were elaborated on the themes: Airway Obstruction, Cardiopulmonary Resuscitation (CPR), Fractures and Falls, Bites, Burns, Epistaxis and Seizures. The dynamics for conducting the subjects dealt with was in conversation wheel, to promote interaction between the members of the league and the professionals of the Community, lasting approximately one hour. After the presentation of the content and clarification of doubts, a part of practical simulations on cardiopulmonary resuscitation and obstruction airway were conducted with the dolls manufactured by LUREEN itself in the project "*Recycle to Revive*".

The project "*Recycle to Revive*" was carried out by the league in order to make the dolls themselves from recyclable materials, since the value to acquire a cardiopulmonary resuscitation training dummy is high, but the material is necessary for LUREEN practices and trainings. The materials used in the making of dolls are used clothes, disposable bottles, paper and lines that together allow the training of various clinical maneuvers.

At the end of the simulation with the dolls, the league ended the activity with the clarification of new doubts and obtained feedback from the participants of the action. It was possible to notice that some of the concepts and situations portrayed on the day in question needed to be improved by the teachers, because they reported inappropriate conduct in the face of possible occurrences.

Thus, the need and importance of health training and education for the community is reinforced, because the information disclosed in these studies influences the general condition of the victim and enables a faster and safer recovery.

Following the same aspect of health education, LUREEN promoted, in the second half of 2019, the *1st Multiprofessional Symposium on Urgency and Emergency*, of the Federal University of Uberlândia, an event held by the members of the league with the coordination of guiding professors in order to address the most recurrent themes about urgency and emergency in the form of lectures, in addition to offering different short courses for the participants of the scientific event made by league members.

The topics covered in the lectures were: "*Manchester Classification*"; "*Psychiatric Emergencies and Emergencies*"; "*Assistance in outside hospital situations*"; "*Obstetric Emergencies and Emergencies*"; "*Pediatric Emergencies and Emergencies*"; "*Fracture Immobilization*"; "*Update on Advanced Life Support in Cardiology*".

The lecture on "Manchester Classification" addressed the Manchester Screening System, which is a form of clinical risk classification of patients to set priorities in care. This division is made through the colors red, orange, yellow, green and blue, each with an emergency determination, which suggests faster patient care (ANZILIERO, 2016).

Then, the exposition on "Psychiatric Emergencies and Emergencies" addressed different types of situations that can occur anywhere and how to identify a psychiatric emergency. The speaker used clinical cases as a form of interaction with the audience present. Psychiatric emergencies are a form of change in behavior, thinking or mood, it is common in cases of patients with psychiatric disorders and require professionals to know how to identify such occurrences (NASCIMENTO, 2019).

The last presentation in the morning was about outside hospital situation, identifying the main equipment present in an ambulance and its purposes. The lecture was conducted by one of the nurses working in a private emergency medical services company and had a realistic simulation within the presentation place of the lectures, in order to promote to the listeners a situation close to the real one of an occurrences.

In addition, another product of this event was the realization of short courses. Each short course had presentations on the subject addressed and practices on emergency situations, lasting approximately two hours. The responsible for conducting the classes were the teachers of the nursing course of the UFU and nurses invited by LUREEN, in addition to the participation of the Military Fire Department of Minas Gerais, in charge of ministering on CPR with the participants of the event.

The *1st Multiprofessional Symposium on Urgency and Emergency* was closed with presentations of papers that dealt with the main theme of the event, chosen according to the relevance to the subject. In general, the objectives proposed by LUREEN with the symposium were fulfilled, as it led to information that is useful in everyday life, not only of the students of the university, but also of all the people who were interested in the subject. After being sent a questionnaire to the participants about the positive and negative points of the event, it was noticed that the vast majority of those who answered found the event satisfactory and were able to learn more about urgency and emergency, which reinforces the importance of health education and promotion of scientific events at the university level.

### **Extra hospital activities**

According to Article number 5 of the statute of the League of Urgency and Emergency in Nursing, it is part of the objectives to provide practical activities to LUREEN members in the hospital and extra-

hospital area through partnerships, always aiming at learning. One of these partnerships is made with an emergency care company in Uberlandia, LUREEN members follow the occurrences with the supervision of the nurse who is scheduled to be on duty.

The division of students in the company is done by the availability of each member of the league, and can be individually or in pairs in the attendances. A scale was set up with interested academics lasting five hours per week.

In addition to the attendances witnessed, the company also promotes continuing education classes regarding rescues and immobilizations, which are provided by the company's coordinating nurse. One of these classes was taught to the Brazilian Army, in a mini-course of first responders to improve soldiers and cables working in regions near Uberlandia.

Among the types of care most performed by the team, which consists of a nurse, a first-aid driver and a doctor, are the transportation of patients who are discharged from hospitals, visits to employees of other establishments that maintain ties with the company, and rescues of domestic or automobile accidents from the population that requests the company's service.

The transports are performed following the necessary recommendations of patient restraint to promote greater safety and well-being during the journey. The transport of the patient begins as soon as the patient is packed in the ambulance, this process has relevance in the recovery of the victim and is considered a fundamental aspect in the definitive treatment at the scene, since an injury can become more severe as time passes (NAEMT, 2017; GALA; CRANDALL, 2019).

On the other hand, the visits to employees of other companies are made according to the specific need of each case, such as headache, contractures and other spontaneous demands. In relation to the services provided to the population, the students were able to witness an occurrence on fractures, which are divided into closed and exposed. Closed fractures are those in which the broken bone does not pierce the integrity of the skin, and the exposed fractures are those that occur laceration of the muscle and skin due to the cutting end of the fractured bone (GALA; CRANDALL, 2019). The nurse responsible for the care performed the immobilization of the fracture with malleable splint, treatment of the patient's pain with morphine, movement in the victim's block for positioning on the board and transportation to a specialized orthopedic hospital.

At the end of the calls, the ambulance returns to the company's base, where all the occurrence data are archived and the material used is checked.

The experience of LUREEN students in partnering with the company's professionals allows the experience of real cases and how training and theoretical classes have applicability in practice. Thus, it is essential to socialize and exchange knowledge of the members of the league with nurses who work directly with first aid provided to patients, which contributes to the formation of the future nursing professional.

### **Coverage of cultural and sportive events.**

The UFU's Nursing Emergency and Urgency League also monitors the coverage of cultural and sporting events that are held in Uberlandia. Such events, most often, consist of musical shows or any kind of cultural and sporting event that causes crowding of people.



The organization responsible for the events hires the service of the company that has similarity with LUREEN, enabling the contact of the students of the league with this type of duty. The professional team starts from the company's base to the event site before its start and remains in a strategic place, according to the availability of the site, to facilitate the displacement of the team and arrive at the service more quickly and efficiently.

Any type of occurrences related to urgency are attended, of which were witnessed: dressings of abrasions generated by falls during races, measurement of vital signs after physical exertion and care for a patient in anxiety crisis during a race. All attendances are recorded to control the use of materials and notification of cases, as well as in occurrences attended outside the events.

During one of the races, the team provided an ambulance at the place of arrival for any assistance to participants, and a quad bike equipped with first aid materials to accompany the athletes along the route. Depending on the situation, the quad bike removes the patient from the race to the ambulance, and from there he is referred to a hospital. The dressings performed in sports events according to the appropriate semiology and semi technique (POTTER et al., 2018).

Regarding the anxiety crisis, the patient was treated at the place where the call to the ambulance was made, showing signs of hyperventilation, high blood pressure, difficulty speaking and agitation. The anxiety crisis is defined as a form of psychic suffering, due to nervousness or behavioral factors that can be aggravated in situations that offer danger (ANDRADE, 2019).

Throughout this activity, the nursing academic was able to experience techniques and conducts that are useful in the profession. It was possible to observe how the shifts in the events are organized and how communication is made between the health team and the organization of the event, because it is essential for the public to have security during the event.

LUREEN continues to encourage league members to participate in these events, as it strengthens the partnership that is already consolidated, in addition to generating experiences that can be shared with other participants of the league. This reinforces the need to experience out-of-hospital practices to contribute to the education and knowledge of the academic.

### **Final Considerations**

This study could describe some situations of urgency and emergency in health area in a student perspective. The outcomes presented in that experience report show a great way to improve and increasing learning of nursing students in undergraduate through an academic league as well as one of the best methodologies to provide real training in urgency and emergency situations. Moreover, health education has an important position about the responsibility of public universities and local community health assistance once scientific events and courses realized in LUREEN have potential do be applying in society. In that way, professional health's getting extra knowledge about urgency and emergency situations in undergraduate course are able to handle hard situations and decrease mortality rate in outside hospital context.

Furthermore, the LUREEN show evidences that just under graduate disciplines in that field are not enough to develop all student skills so academics leagues can help that leaning process. It is expected that future studies approach similar issues to improve nurse education courses.

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