METHODOLOGY OF THE FIRST AID CADET TRAINING AT VASIL LEVSKI NATIONAL MILITARY UNIVERSITY

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Abstract: *First aid is the implementation of measures of the immediate care taken of the lives of people with traumas and illnesses until they are given professional medical assistance. It consists of a series of simple, but sometimes life-saving, medical techniques that can be performed with minimal equipment and by military personnel who are generally free of special medical education. This report examines the methodology of the first aid cadet training at Vasil Levski National Military University.*

Keywords: first aid, cadet training, methodology

1. Introduction

In the conditions of the military-professional activity the threats to life and the harm to the health of the military personnel are integral parts of their professional environment [1]. Readiness to provide first aid is of higher importance in saving life, relieving pain and preventing further injuries or infections of the soldiers. First aid is the responsibility of every soldier [2]. It can be provided as self- or mutual first aid [3]. In this regard, in the cadet training, special attention needs to be paid to the development of their knowledge of and skills in giving first aid.

The main purpose of this research is to describe the methodology of the First aid cadet Training at Vasil Levski National Military University. As a secondary purpose, the author accepts to discover the multidisciplinary relationships between other military subjects in the cadet curriculum.

The object of this study is the cadet training. The subject of the research is the First Aid Cadet Training, as integral part of

the professional training.

To achieve the main goal of the research, the following research tasks were developed:

1. Analysis of the First Aid Training role in the process of development of the fundamental professional readiness of the military personnel.
2. Description of the implemented First Aid Training methodology.
3. Analysis of the multidisciplinary subject relationships.

Research methodology includes some of the fundamental scientific methods – analysis and synthesis, observation, scientific literature review, etc.

At the end of the article some conclusions have been formulated on the basis of some of the research results.

2. Analysis of the First Aid Training role in the cadet training process.

It is not easy to describe the overall role of first aid in the process of forming professional readiness. In the course of their training as soldiers, cadets receive basic

knowledge of the military profession and develop a range of professional skills to act in extreme social conditions. It is hard to choose a more appropriate term for the military profession than the term “extreme

social conditions”.

Therefore, when analyzing the role of First Aid Training, we should focus on the structure of professional readiness for action in extreme social conditions. (Fig.1)

Figure 1: Structure of professional readiness for action in extreme social environment

The **professional readiness** of the military personnel for action in extreme social environment is a complex of psychophysical, technical and tactical knowledge and skills aimed at carrying out professional tasks in overcoming the impact of external and internal environment factors in order to preserve the health, life and fighting capacity of the staff [4].

Psychological readiness is a major factor for reaction in urgent situations through performing adequate first aid actions.

Physical readiness includes the strength, endurance, speed, flexibility and agility necessary for the performance of various actions in the practical activities.

The term “**psychophysical readiness**” represents the mobilization of all psychophysical systems of the body to ensure effective performance of the activities.

Technical readiness ensures the optimal realization of complex actions to achieve focus, economy and precision.

Tactical readiness represents the optimal variant of systematic, conscious, purposeful

first aid actions to protect life, based on a tactical program including: a tactical first aid conception, a tactical first aid plan and tactical first aid actions.

As a result of the first research tasks, we can underline that the First Aid Training has a specific role in the process of forming of cadets’ professional readiness for acting in extreme environment, providing opportunity for development of fundamental individual skills in the whole professional readiness spectrum – psychophysical, technical and tactical individual readiness, even in the emergency situations with mass casualties [5].

3. Methodology of First Aid Cadet Training.

The methodology of the First Aid Cadet Training consists of a theoretical component, a practical component and a control-checking component.

Within a few years, the First Aid Training course material was gradually and continuously enriched in two directions: on

the one hand, with theoretical knowledge and, on the other hand, with practical knowledge and practical first aid techniques [6,7,8,9].

In the search for suitable material on the topic for the needs of the cadets, theoretical material was selected, which presents the students with basic information about methods and forms of First Aid and additional information about mutual assistance and treatment of the Bulgarian traditional medicine [10,11,12,13]. Methods and techniques of phytotherapy and homeopathy have been selected and implemented [14,15,16]. As a practical homework task each of the cadets also has the task to prepare a folk medicine recipe and, within the second stage of training, to present it and report its applicability, the order of preparation and the methods of using the prepared medicine.

Trainees' interest encourages the instructors to further develop the subject matter by providing appropriate techniques and techniques for self-help and mutual assistance in the field of integrative medicine, and combined in the module "Integrative Medicine" [17].

Integrative medicine is a new perspective in medicine, combining on a scientific basis the excellence of formal medicine in the 21st century and its proven effectiveness over the centuries, alternative methods (folk medicine) for the prevention, diagnosis, treatment and recovery of human health [18].

This combination of the methods of modern medicine with the empirical methods of folk medicine provides much greater prospects and opportunities not only to successfully fight the diseases but also to prevent them [19].

Under the sub module "Individuals First Aid", the cadets are introduced to the personal wrapping package, the recommended contents of the individual first aid kit and the possibilities of preparing an individual herbal medicine [20].

An individual first aid kit (IFAK) for military personnel is intended for assistance and mutual assistance to prevent or reduce the impact of various factors of modern weapons. IFAK can be comprised of the following pieces: tourniquet; elastic bandage kit (this is similar to a field dressing); bandage; surgical adhesive tape; nasopharyngeal airway kit; surgical gloves; combat gauze dressing, etc [21].

Additionally the IFAK is offered to include - an antibiotic (for the prophylaxis of wound infection and the treatment of infectious diseases), an electrolyte sachet (for loss of body fluids and dehydration, antiseptic solution for the treatment of surface injuries), antidote (prophylaxis for the upcoming use of phospho-organic poisonous substances - tabun, sarin, zoman, VH gases), an anti-doping agent (in case of danger of radioactive exposure or immediately after the onset of nausea and vomiting), potassium iodide acute radiation illness) [22].

Under sub module "Assessing the Condition of Injured Persons", the cadets are trained in the implementation of an 8-step algorithm, which is defined as "Life Rescue ABC". After the necessary initial overcoming of the shock, airway patency, recovery techniques and normalization of respiration and blood circulation, check for bleeding, broken bones and rules for transportation of injured persons are checked.

Under sub module "First Aid", cadets are trained in practice-applied techniques related to self-help and mutual assistance in critical conditions, various types of injuries, breaks, bites, burns and poisoning with poisonous substances, as well as food poisoning. First part includes legal base, basic and specialized medical equipment. Radio communication and radio frequencies. Medical protocols. Medical reports. Observation of the vital life signs. Second part includes Respiratory system

anatomy, physiology and most common respiratory emergencies. Asphyxia, Chest trauma, haemo-, pneumothorax. cardiovascular system, anatomy, physiology and most common emergencies. Ischaemic heart disease CPR for adults and children. Shock. Types of shocks. Treatment of the shock. Abdominal trauma. Brain, neck and spinal trauma. Bone fracture. Immobilization. Special circumstances of the trauma cases. Control severe bleeding. Poisonings. Haz-Mat, Management of burns and wounds. Sexual assault. Third part includes Psychological first aid, psychological support. Burn-out phenomenon [23].

Upon completion of the theoretical module by the cadets, they are assigned individual tasks in order to consolidate the acquired knowledge and to develop the individual

skills for self-help and mutual assistance.

4. Analysis of multidisciplinary relationships.

To complete the third research tasks, we have to analyse the content of the Vasil Levski NMU Land Forces cadet training curriculum.

The curriculum of the specialization “Organization and Management of Military Units at Tactical Level” ensures the acquisition of a Bachelor's degree and the necessary professional competencies and qualities for realization as an officer from the regulated profession “Tactical Officer”, as well as training as a specialist in the scientific field of military science, defence, national and regional security.

Figure 2: Multidisciplinary relationships between First Aid Training and other military subjects

The Initial Cadet Military Training includes the following subjects (determinant S_{FAT}): S1. Formal duty training; S2. Armed Forces Legal Framework training; S3. Military medical training (10 hours only); S4. Fire protection training; S5. Initial NBC training; S6. Tactical training; S7. Small

arms training; S8. Engineer training; S9. Military topography and survival training.

As shown on Figure 2, the multidisciplinary relationships between First Aid Training and other military subjects found during the research can be arranged in two levels – direct and indirect relationships.

Figure 3: Implementation of Multidisciplinary Approach

The result of the analysis is the evaluation of the first level of direct relationships, which includes $S_{FAT} - S3 - S6 - S7 - S9$. The second level of multidisciplinary relationships includes $S_{FAT} - S1 - S4 - S5 - S8$.

The analysis shows that it is possible to apply the **multidisciplinary approach** to achieve better results.

Practically, it is possible to include and develop first aid medical tasks in the military subjects with direct relationships in order to refresh and reinforce the gained cadet's first aid skills and knowledge. In this way the professional readiness for acting in extreme social environment

(saving own or some colleagues' live) will be kept at the highest possible level.

6. Conclusions

The next research steps of the research team are related to the elaboration of a methodology for evaluation of the effectiveness of the First Aid Cadet Training in order to increase the professional abilities of the future officers of the Bulgarian Armed Forces.

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