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*Evaluation of first aid application skills among soldiers
of primary military service*

Immediate and proper application of first aid, even restricted to the basic actions such as an appropriate restoration of upper airways patency, effective artificial respiration as well as indirect cardiac massage or placing unconscious person in the lateral position, which enables breathing and blood circulation can resolve the survival chances of casualties (8, 6). Even the most advanced emergency systems allow for a slight chance of immediate application of resuscitation by professional services. The arrival time of ambulance service most frequently exceeds 3–5 minutes (2). Therefore, it is of great significance for accident witnesses or participants to introduce life-saving actions in the most immediate and correct way (6). One of the groups most exposed to the possible injuries and life-threatening events is constituted by soldiers of primary military service who deal with heavy military equipment, weapon and perform numerous activities which are potentially dangerous on a daily basis (7, 12).

The aim of the survey was to examine the approach of soldiers who start their military service to the issue of first aid application as well as to evaluate their preparation for basic first aid application.

MATERIAL AND METHOD

The survey comprised a group of 184 soldiers starting primary military service in the troops of Polish Armed Forces in the voivodships of Lublin and Podkarpacie selected at random. The survey was carried out by means of a self-made anonymous questionnaire that consisted of 30 single choice questions and two multiple choice questions. The questions were divided into three parts. The first part included the questions concerning demographic data such as age, residence and education. The second part included questions aimed to determine the approach of patients to the issue of first aid application, while the third part was concerned with the evaluation of first-aid application skills among the respondents.

The survey results underwent statistical analysis by means of the Statistica programme. On the basis of the analysis of the data, no statistically significant relationship was found between demographic data and answers given by the respondents.

RESULTS

All the soldiers under survey were male. The largest group was constituted by soldiers aged 22–23, who accounted for 41.3% (76 people). Demographic data of the subjects are presented in Figure 1.

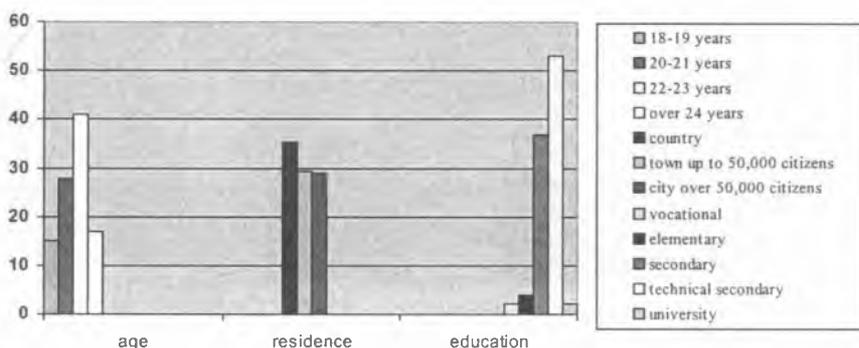


Fig. 1. Demographic data of respondents

The first questions of the second part of the questionnaire were concerned with first-aid training. 27.7% of the survey group (51 soldiers) admitted that they had never participated in first-aid trainings. Among 133 people (72.3%) who answered they had participated in such trainings, 108 people (68.4%) attended such a course at school, while 65 people (48%) as part of their driving licence course. As many as 119 people (64.1%) admitted having a driving licence.

More than a half of the respondents (70 people – 52.6%) who gave positive answers to the question concerning participation in first aid training admitted that the training involved both practical and theoretical parts. On the other hand, 63 respondents (47.3%) claimed their training had been restricted to theory. Exactly 73 subjects (54.9%) attended first-aid trainings run by school teachers, while 60 people (45.1%) by professional medical staff, including 50 people (83.3%) trained by doctors and 10 (16.7%) by nurses. As many as 157 respondents (85.3%) found first-aid training during military service necessary, while 8 subjects (4.34%) found it useless. The remaining respondents (19 soldiers – 10.36%) expressed no opinion in this matter. Exactly 129 respondents (70.1%) agreed that basic first-aid training should be obligatory, including 100 soldiers (77.5%) who claimed that such training should be obligatory for all citizens. The remaining soldiers found obligatory first-aid trainings useful for certain professional groups such as doctors, policemen and firefighters. At the same time 53 people (28.8%) claimed that only people who want it should attend such a training. Two respondents expressed the opinion that first aid training is needless for the whole society.

The next questions of the questionnaire were concerned with the knowledge of first-aid rules among the soldiers. The majority of the respondents, namely 156 people (84.8%), stated that they know the rules of first-aid application, but 81.4% of the group assessed their skills as poor, while 18.5% – as good. The answers of the respondents to the question: ‘Would you be able to apply first aid to a person in need?’ are presented in Figure 2. The reasons for refusal to apply first aid to a person in need mentioned by the respondents are illustrated in Figure 3.

As many as 97 persons (52.7%) of the total population under survey maintained that not applying first aid to a person in need is the crime according to Polish legal system, including 47 people (48.5% of the group) who claimed that penal responsibility refers only to people whose profession is connected with first aid application, while 63 subjects (34.2%) were convinced that not applying first aid does not entail any penal consequences. The remaining 24 people (13%) did not express their opinion in

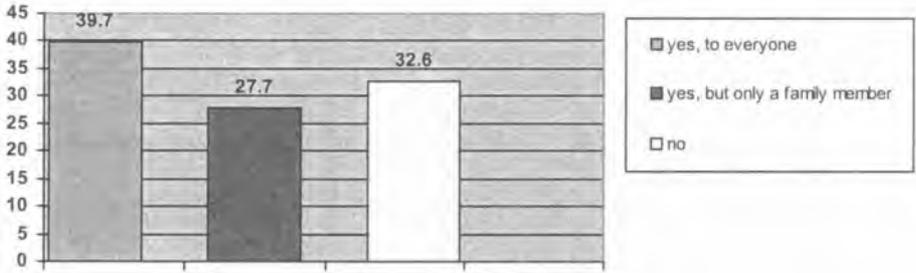


Fig. 2. "Would you be able to apply first aid to a person in an emergency?"

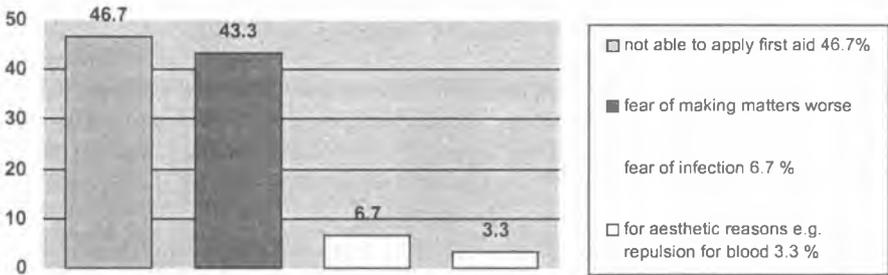


Fig. 3. Reasons for refusal to apply first aid

this matter. The question "Have you ever applied first aid?" was answered positively by 32 people (17.3%). Another group of questions was concerned with evaluation of respondents' first aid skills. The answers to the question when first aid should be initiated in an emergency were as follows: 103 (55.9%) soldiers claimed it should be applied as soon as possible; 54 (29.3%) maintained that such actions should be taken only if the waiting time for professional emergency service is long; 13 respondents (7.2%) answered that in such situations one should always wait for the arrival of an ambulance, while 14 people (7.6%) admitted they did not know.

As many as 138 subjects (75%) claimed to know the definition of lateral position, while 33 respondents (17.9%) admitted they would not be able to examine the pulse of a casualty. 152 subjects (82.6%), on the other hand, claimed they knew how to use individual dressing properly.

The correct answers to the remaining questions concerning the knowledge of first aid application rules are presented in Figure 4.

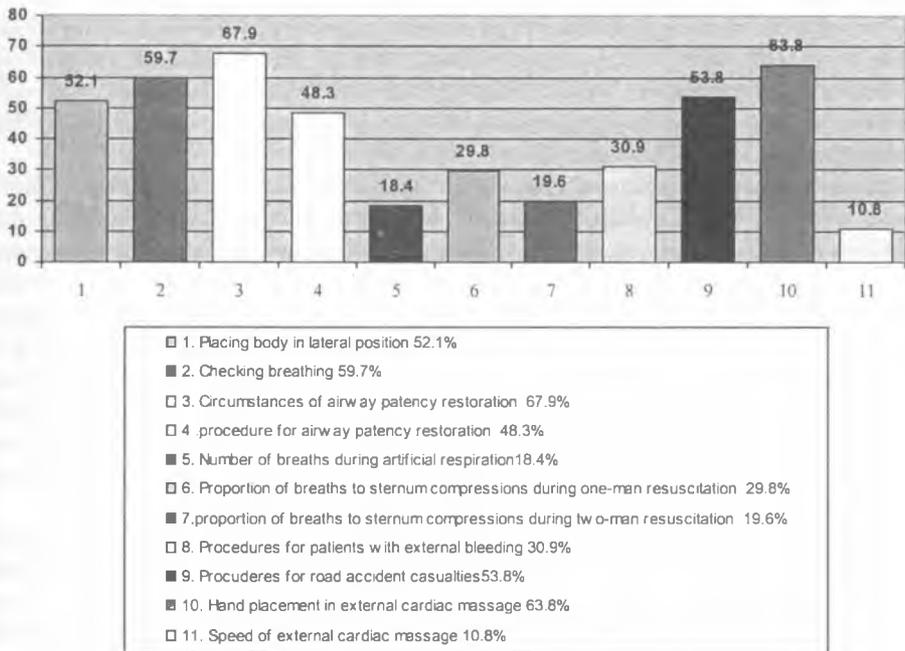


Fig. 4. Correct answers to questions concerning knowledge of first aid application rules

DISCUSSION

In the state of direct life threat, including cardiac or respiratory arrest, immediate aid is essential. Accident victims or participants have only four minutes' time for saving life. The vast majority of the survey group of primary military service soldiers claimed to have been acquainted with first aid rules. Only a few of them assessed their skills as good. The result is in accordance with the studies by other authors, where the majority of respondents assessed their ability to apply first aid at the scene of accident at an equally low level (1, 4).

Theoretically speaking, there are several million citizens of Poland who have attended different courses in first aid application, ranging from Military Education classes at schools, trainings held by LOK, ZHP, PZMot as well as other organizations to the safety and hygiene trainings at work and driving licence courses. A considerable number of the respondents admit having participated in first-aid trainings once or more (1, 3, 4). These people should be able to apply first aid to casualties. However, the reality is different. The studies by different authors prove that only a small percentage of people do apply first aid at the scene of accident. The results obtained by P. Jałowicki et al. (5) found that out of the total of 375 severely injured patients selected at random first aid was applied only to 20.2% of casualties. What is regarded as one of the most important reasons for such a low rate of first aid application in our country is poor training system. The majority of the courses in first aid application consists of theory only. Practical trainings still include practicing "Hippocratic cup" or dressing elastic bandage onto massive bleeding. This phenomenon brings about feelings of fear of taking immediate actions in accident witnesses and participants as well as lack of confidence in life-saving actions, fear

of making mistakes and, in consequence, it makes them remain passive onlookers (1, 8, 9, 10).

The results of this survey prove that the vast majority of the total of 184 soldiers starting primary military service have participated in first-aid trainings. These trainings were primarily parts of their school education run by teachers. These trainings were dominated by theoretical issues. What results from the survey analysis is an alarming fact that part of the soldiers who have driving licence did not attend any first-aid training during their driving course.

The consequence of inappropriate system of education is the development of feelings of fear of improper use of their first-aid knowledge or avoiding responsibility (4). Even though the majority of the respondents declared the knowledge of first-aid application rules, only approximately 40% of the subjects would be ready to apply such aid to every casualty in an emergency. The major reasons for the refusal to apply first aid include lack of knowledge of first aid application rules and fear of doing harm to the person who is given first aid. Applying first aid is frequently limited to calling an ambulance and waiting for emergency service to arrive (8, 10). The initiation of resuscitation by witnesses considerably increases chances of survival. Krajewski proved in his study that the application of life-saving actions within four minutes by accident witnesses or participants, or within 8 minutes by emergency services helps to save 43% of lives of patients who have been affected by cardiac arrest on the street. The percentage of survival is considerably lower, i.e. 19% when there is no reaction of accident participants or witnesses (6).

The study by Rasmus [9,10] included the question whether there is a need to introduce first-aid training in a wider range than until now, which was answered positively by 99% of the respondents. 82% of them would participate in such trainings, including 75% who would be eager to do it. The vast majority of the survey group of soldiers agreed that first aid training introduced during primary military service would be necessary. The same percentage of the respondents claimed that such trainings should be obligatory and involve the whole society.

Despite the penal code clauses concerning first aid application, only half of the respondents are aware of the fact that not applying first aid to a person in emergency is treated as a crime by Polish legal system. A considerable number of the subjects are convinced that these clauses refer only to people whose professions involve life-saving actions such as doctors and firefighters.

The lack of practical skills in the field of first aid application accounts for another serious problem among the population of soldiers under survey. Proper application of first aid increases the chances of survival, prevents traumatic consequences and complications (6, 9). As results from the survey analysis, the only satisfactory factors in first aid include procedures in restoration of respiratory patency, checking breathing abilities and placing hands during cardiac massage. Other skills either have not been mentioned by the respondents or are unknown to the majority of the subjects. The largest percentage of incorrect answers concerned cardio-respiratory resuscitation and procedures applied in massive bleeding. These pose a serious threat to life, in which any delay of actions may lead to the death of a victim. These results confirm the data by other authors who consider Polish society not well-prepared for first-aid application, which may result in a high mortality of accident casualties (5, 6). The study by Rasmus (9, 10) concerning basic knowledge of Polish society about first aid application rules, shows that only 1% of the respondents answered correctly all the quiz questions concerning first aid.

On the basis of the survey among students Skowroński stated that the trainees lose their first-aid application skills within two years unless they are systematically revised (11). The results of this survey are especially important to the soldiers who start their primary military service. Nowadays, when the danger of terrorism becomes so real, and soldiers of the Polish Armed Forces more and more frequently take part in peace operations in the hottest spots of the world, they are increasingly exposed to the danger of injuries and direct life threat. Each of them should get acquainted with first aid application rules and be able to apply this knowledge in practice.

CONCLUSIONS

1. The knowledge of first aid application rules is not satisfactory among soldiers who start their primary military service, and the declared level of involvement in rescue actions is low.

2. The present system of first aid training does not fulfill its function. What is especially alarming is inability to put theory into practice.

3. Primary military service soldiers should attend obligatory first aid trainings.

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SUMMARY

Immediate and appropriate application of first aid by witnesses frequently influences the chances of survival of those who have suffered from severe injuries or, for example, sudden cardiac arrest. Therefore, the issue of educating the largest possible group of people in the field of first aid application

is of great significance. The aim of the survey was to evaluate the knowledge of the issue among the soldiers of primary military service who start their service. The survey comprised 184 soldiers, most of whom claimed to have acquired these skills, but only a small percentage assessed their knowledge as good. The analysis of results proves that less than a half of the respondents would be ready to apply first aid to everyone in need. Moreover, over a third of the respondents are not aware of the fact that not applying first aid to people in life-threatening situations is a crime in Polish penal code. The knowledge of the respondents must be assessed as insufficient since the average number of correct answers to the questions concerning practical skills was only 34.2% in the survey group, which clearly indicates their low level of knowledge, especially combined with nearly half of the subjects who claimed that such actions should not be taken in an emergency.

Ocena umiejętności udzielania pierwszej pomocy wśród żołnierzy służby zasadniczej

Szybkie i umiejętne udzielenie pierwszej pomocy przedlekarskiej przez przygodne osoby często warunkuje szanse przeżycia tych, którzy doznali ciężkich urazów czy też np. epizodu nagłego zatrzymania krążenia. Dlatego tak ważne pozostaje posiadanie przez jak największą grupę ludzi odpowiednich umiejętności w zakresie udzielania podstawowych zabiegów ratujących życie. Celem pracy było określenie stopnia znajomości zagadnienia wśród żołnierzy służby zasadniczej, rozpoczynających służbę wojskową. W przebadanej ankiecie, liczącej 184 żołnierzy grupie większość badanych stwierdziła, że posiada takie umiejętności, jednak niewielu określiło je jako dobre. W wyniku analizy odpowiedzi okazało się, że mniej niż połowa zapytanych jest gotowa udzielić pomocy każdemu potrzebującemu. Ponadto ponad jedna trzecia badanych nie ma świadomości, iż nieudzielenie pomocy osobie będącej w stanie zagrożenia życia jest w świetle polskiego prawa przestępstwem. Wiedzę ankietowanych należy ocenić jako niewystarczającą, gdyż średnia prawidłowych odpowiedzi z pytań dotyczących praktycznych umiejętności wyniosła w badanej grupie zaledwie 34,2%, co w połączeniu z prawie połową ankietowanych, którzy stwierdzili, że w sytuacji zagrożenia życia czynności takich nie należy podejmować natychmiast, świadczy dobitnie o niskim poziomie wiedzy, jaką posiadają.