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The layperson in emergency situations*

O LEIGO EM SITUAÇÃO DE EMERGÊNCIA

PERSONAS IMPERITAS EN SITUACIÓN DE EMERGENCIA

Aline Maino Pergola¹, Izilda Esmeria Muglia Araujo²

ABSTRACT

The layperson's qualification to provide early care in emergency situations and basic life support (BLS) is fundamental to save lives and prevent sequels. The objective was to identify the level of knowledge of lay people about approaching an emergency victim. Structured interviews in non-technical language were used with a 385-subject sample, average age 35.4 (± 14.55) years, with more than 50% having a high school or university education. Over 55% of these observed situations with loss of consciousness, but only 31% called for specialized help. 34% underwent a first-aid course, but only 13% feel prepared. The most often cited place of learning was the driving school (DS), 35.9%. Other training places were higher when compared to the DS ($p = 0.048$). Almost 17% do not know how to recognize the presence of vital signs. Almost 31% do not know the telephone number of the emergency service. Laypersons have incomplete or incorrect knowledge about care for unconscious victims.

KEY WORDS

Emergencies.
First aid.
Cardiopulmonary resuscitation.
Training.

RESUMO

A capacitação do leigo para atendimento precoce em situações de emergência e ins-tituição do suporte básico de vida (SBV) é fundamental para salvar vidas e prevenir seqüelas. O objetivo foi identificar o nível de informação dos leigos sobre abordagem de vítima em emergência. Utilizou-se entrevista estruturada em linguagem não-técnica. Amostra foi de 385 sujeitos, com idade média de 35,4 ($\pm 14,55$) anos, sendo que mais de 50% cursaram ensino médio e superior. Mais de 55% destes sujeitos observaram situações com perda da consciência. Destes, apenas 31% chamaram socorro especializado. 34% realizaram curso de primeiros socorros, mas apenas 13% destes sentem-se preparados. O local mais citado foi o Curso de Formação de Condutores (CFC) 35,9%. Outros locais de treinamento foram superiores ao comparar com CFC ($p=0,048$). Quase 17% não sabem reconhecer presença de sinais de vida. Quase 31% não conhecem o número telefônico do serviço de emergência. Os leigos possuem conhecimentos incompletos ou incorretos sobre atendimento às vítimas desacordadas.

DESCRIPTORES

Emergências.
Primeiros socorros.
Ressuscitação cardiopulmonar.
Capacitação.

RESUMEN

La capacitación de personas imperitas en la atención precoz de emergencias y el establecimiento del soporte básico de vida (SBV) es fundamental para salvar personas y prevenir secuelas. El objetivo fue identificar el nivel de información de personas imperitas en casos de emergencia. Se utilizó la entrevista estructurada sin lenguaje técnico. La muestra 385 sujetos, edad media 35.4 (± 14.55) años. Más del 50% tenían educación secundaria y superior. Más del 55% observaron casos de pérdida de conciencia. De ellos, solo el 31% llamaron al auxilio especializado, 34% realizaron curso de primeros auxilios, sin embargo solo el 13% se sienten preparados. El lugar más citado fue el Curso de Formación de Conductores (CFC) 35.9%, otros lugares fueron superiores al ser comparados con CFC ($p=0,048$). Aproximadamente 17% no reconocen signos de vida y casi el 31% desconocen el número telefónico del servicio de emergencia. Estas personas tienen conocimientos incompletos o incorrectos para casos de víctimas inconscientes.

DESCRIPTORES

Urgencias médicas.
Primeros auxilios.
Resucitación cardiopulmonar.
Capacitación.

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INTRODUCTION

In emergency situations, the assessment of the victims and the care they will receive should be effective, with a view to the reduction of sequelae and prolonged survival⁽¹⁾. Therefore, when the sudden loss of consciousness of an adult individual is detected, the first action of the helper should be the activation of the emergency medical service⁽¹⁻²⁾. The Campinas region has two specialized emergency services: *Serviço Móvel de Urgência (SAMU)*, which is the emergency service of the national public health system, reached calling 192 or *Resgate*, the emergency service run by the fire department, calling 193⁽³⁾.

Clarifying and training the population for heart arrest and emergency situations is of paramount importance, avoiding the helper's *paralysis* when deciding on the next step to take⁽²⁾. It is also added that the population should be capable of acting in any emergency situation by providing first aid care. First aid is defined as immediate care provided to the sick or wounded person and that may be performed by the general population⁽⁴⁾.

In emergency situations, the victim's assessment and the related care should be performed quickly, objectively and effectively, prolonging the survival and reducing sequelae. Basic Life Support (BLS) includes stages of help to emergency victims in situations that pose a threat to life and, in most cases, this care can be initiated in the pre-hospital environment⁽¹⁾.

BLS is defined as the initial approach of the victim, performed by capable laypeople or healthcare professionals, and includes covers unblocking the airways, artificial ventilation and circulation⁽⁵⁾. These resuscitation maneuvers are added to early access to emergency medical services, advanced care and early defibrillation⁽⁶⁾. BLS consists in sequential stages and includes, in each stage, one assessment and one intervention⁽²⁾.

Recently, a national study at a public hospital mapped the process of training nursing technicians and auxiliaries at Intensive and Semi-Intensive Care Units for adults in the field of cardiopulmonary resuscitation, as well as the costs of this process. This training program aims at qualifying staff and investing in people⁽⁷⁾.

It is also necessary to invest in BLS training courses for the lay population, since, although it is a reality, there are still large gaps for the start of basic maneuvers, due to the lack of awareness and also the fear of social reproach for a possible failure⁽⁸⁾.

Fast access to the emergency service is related to early diagnosis of unconsciousness, particularly when performed by lay helpers. Therefore, in unconscious people, the evaluation of vital or circulation signs is recommended, aiming at not delaying the CPR maneuvers^(2,9).

Helpers should initiate CPR procedures if the victim is unconscious (non-responsive), not presenting movement, breathing or coughing. However, it is worth noting that, in the first stages of cardiorespiratory arrest (CRA) there may be agonic breathing⁽⁹⁾.

Early-starting of BLS prolongs the survival and reduces the sequelae of CRA victims, comprehending stages that capable and informed laypeople can start outside the hospital environment^(1,8,10), revealing the fundamental importance of laypeople's participation in the recognition of CRA^(2,5,10).

Increasing survival rates are related to the early institution of the BLS stages, i.e. recognizing CRA, PCR maneuvers and quick access to advanced life support^(1,5-6,10-12). The simple action by a layperson who quickly recognizes a CRA and calls for specialized help prevents myocardial and brain deterioration⁽¹⁾.

Hence, if the survival of victims in emergency situations depends on how quickly the BLS maneuvers are instituted, we ask: how is first aid performed when done by laypeople? Is there any sort of information or training available to the communities? Are BLS maneuvers performed adequately by lay helpers?

It is believed that a considerable share of the population, without adequate training for first aid practice, helps emergency situation victims only out of solidarity, which can put rehabilitation at risk.

Therefore, it is relevant to verify how the BLS maneuvers are performed by non-qualified individuals. Moreover, it is important to identify the failures in the emergency healthcare performed by lay helpers, which will permit their correction, saving lives and avoiding sequelae.

OBJECTIVES

Identify the level of information, from a sample of lay population in a city of São Paulo State, Brazil, related to how to approach victims in emergency situations.

METHOD

Exploratory-descriptive study, performed on the streets of a city in the state of São Paulo, due to the large number of passersby and the population diversity. The sample was made up of subjects aged 18 or older, who agreed to participate in the research.

A pilot study was done (n=58 individuals) to calculate the population sample according to the evaluation of the correct and positive answers, which resulted in n=385 individuals, with a 5% level of significance ($\alpha = 0.05$) and sample error 5% ($d = 0.05$).

Individuals younger than 18 years old were excluded, as well as those with formal healthcare education (nursing team or physicians) or belonging to firefighter organizations. The justification for the determination of the age range covers the legal aspects for the authorization of the interview, while the aforementioned professionals are expected to know the subject.

The data collection instrument (appendix I) was elaborated after reading and analyzing the reviewed bibliography, which basically addresses the survival chain and the BLS sequence^(1,5,13), being divided into *identifying and approaching the victim*, made up of both multiple-choice and open-ended questions.

For content validation, the data collection instrument was analyzed by judges regarding the presence or absence of criteria related to coverage, objectivity and pertinence. Therefore, seven specialists and six laypeople were invited to analyze the questionnaire according to the information contained in the instrument's evaluation guide and by reading a synthesis of the research project. The specialists were three physicians, three nurses and one firefighter. The laypeople were two representatives of the three phases of formal education: elementary, high school and college level. The evaluation by laypeople discarded the possibility of using technical terms in the instrument, since it would make the comprehension of the questions difficult. After the analysis by the judges, the instrument was restructured according to their criticism and suggestions, which were accepted by the researchers.

Data were obtained through a structured interview after the required explanations and signature of the term of consent. The subjects were asked without the alternatives being read, so as to not to suggest answers, which were categorized according to the established alternatives and later considered correct, partially correct, incorrect or no answer, indicated by the alternative *I don't know*. The answers categorized as *other* correspond to those obtained that were distinct from the pre-established alternatives, and were considered according to their pertinence to the question. The correct answers to the interview questions were focused on the first two links of the survival chain: access and early CPR.

For questions 1, 2, 3 and 4, the answers were simply the grouping of similar, positive and negative answers, since they represent a particular opinion or experience of the respondent.

For question 5, answers were considered correct if at least one of the vital signs was mentioned correctly, and partially correct when one of the vital signs mentioned was correct and the others were not. It should be noted that the mention of *pulse* was considered correct, even though its verification is not an obligatory maneuver for laypeople, being understood as a sign of circulation. For question #6, alternative A was considered correct, while B and C were considered partially correct. The others were considered incorrect.

Alternative B in question 7 was considered correct and the others were considered incorrect. The alternative *other* that was answered as *check for vital signs* was also considered correct.

In question 8, the association of the telephone number with the respective service (*SAMU* and/or *Resgate*) was considered correct as it is, and the mention of the correct number with an incorrect name was considered partially correct. Mentioning only the telephone number for police emergencies was considered partially correct, since this is not exactly an emergency service, but it permits obtaining the necessary help.

Alternative B for question 9 is correct, while A and C are partially correct. For question 10, alternative A was considered correct, C was partially correct and the others were incorrect. In question 11, alternative B was considered correct and A was incorrect. The alternative *others* (immobilization) was considered partially correct because there is no assurance that a layperson knows how to immobilize a victim correctly.

In question 12, alternative A was considered correct, and the others were considered incorrect. In question 13, alternative B was considered correct and the others were incorrect. When the answer was *I don't move the victim*, it was also considered as *I don't know*, because it can imply the respondent's lack of knowledge.

The categorized and classified data were organized electronically, and the Chi-Square test was used for comparative analysis, establishing a 95% level of significance, with $p < 0.05$.

In the comparative analysis of the training facilities with the variables of interest, the Driving schools - *Cursos de Formação de Condutores (CFC)* – were isolated from other training facilities. This division of training facilities in two groups (Driving schools and other places) happened because, in accordance with the new Brazilian Traffic Code, Law #9,503/97, Resolution #50/98, taking a 30-hour theoretical course is part of the prerequisites for being granted a driver's license. Of these 30 hours, a total of six is about first aid⁽¹⁴⁾.

The project was submitted to the Ethics Committee of the institution, being approved through CEP review #552/2004.

RESULTS

The analysis by lay judges unanimously (6/6) gave positive answers for the three adopted criteria. In the analysis of the specialist judges, the evaluation of the instrument obtained the following results: *identification*, 6/7 (85.7%) considered it comprehensive, 7/7 (100%) considered it objective and 7/7 (100%) considered it pertinent. As for the questions about *approaching the victim*, 6/7 (85.7%) rated them as comprehensive, 4/7 (57.1%) as objective and 6/7 (85.7%) as pertinent.

The sample consisted of 385 interviewees, with an average age of 35.4 (± 14.55) years, mostly women 220/385 (57.1%), with a secondary 179/385 (46.5%) or higher education degree 134/385 (34.8%).

The distribution of the interviewees' occupations was wide-ranging. The most frequent occupations were: management 76/385 (19.7%), craftsmanship 60/385 (15.6%) and business 54/385 (14%).

As for their first aid training, 254/385 (65.9%) of the respondents had never received this type of training, while 131/385 (34%) had. Of these, 17/131 (13%) feel prepared, 19/131 (14.5%) feel partially prepared and 95/131 (72.5%) do not feel prepared to provide first aid. The distribution of the training facilities is found in Table 1. Driving schools, workplace and school/college were the most mentioned alternatives with 35.9%, 20.6% and 15.3%, respectively.

Table 1 - Distribution of the first aid training facilities used by the interviewees - Campinas - 2005

Training facilities	N	%
Driving School	47	35.9
Workplace	27	20.6
School / College	20	15.3
Training session / lecture	16	12.2
Army base	06	4.6
Security guard course	05	3.8
Others	10	7.6
Total	131	100.0

In a comparative analysis, it was verified whether those who were trained at driving schools felt more capable in relation to other training facilities, and it was observed that 85% did not. As for the subjects in other training facilities, 15.5% mentioned that they felt prepared and nearly 20% that they felt somewhat prepared. This difference was significant ($p=0.048$ – Chi-square).

Of the interviewees, 172/385 (44.7%) had never faced a situation with an unconscious victim, while 213/385 (55.3%) had. Table 2 presents the reported situations, and the three most mentioned were: no known cause (36.6%), epileptic attack/seizure (24.4%) and car/motorcycle accident (12.2%).

Table 2 - Presentation of the situations with unconscious victims witnessed by laypeople - Campinas - 2005

Situations	N	%
No known cause	78	36.6
Epileptic attack / seizure	52	24.4
Car/motorcycle accident	26	12.2
Trauma	15	7.0
Hypotension	08	3.7
Hypertension	04	1.9
Stroke	04	1.9
Heart attack	06	2.8
Cardiorespiratory arrest	03	1.4
Emotional cause	03	1.4
Hypoglycemia	03	1.4
Drowning	02	0.9
Coma	02	0.9
Others	07	3.3
Total	213	100.0

Table 3 presents the actions taken by the laypeople in the situation experienced: 31% called for specialized help, 18.8% reported that other people provided help and 15% did nothing.

Table 3 - Distribution of actions taken in situations with unconscious victims - Campinas - 2005

Answers	N	%
Called for specialized help	66	31.0
Other people helped	40	18.8
Did nothing	32	15.0
Helped to provide aid	14	6.5
Called for help	14	6.5
Held the victim's tongue	12	5.6
Took the victim to the hospital	11	5.2
Rubbed vinegar, alcohol or water in the wrist or nape or made the victim smell it	08	3.8
Lay the victim down	06	2.8
CPR	05	2.3
Lay the victim down on his/her side	04	1.9
Had a nervous breakdown	01	0.5
Total	213	100.0

For the verification of vital signs, 65/385 (16.9%) could not recognize them and 320/385 (83.1%) could. Of the 320 respondents who mentioned knowing the vital signs, 289/320 (90.3%) answered correctly. Table 4 shows the distribution of the vital signs mentioned by the interviewees. It is observed that 46.6% mentioned pulse, and 35.9% mentioned pulse and breathing.

Table 4 - Distribution of the laypeople's answers about knowledge of vital signs - Campinas - 2005

Alternatives	N	%
Pulse	149	46.6
Pulse and breathing	115	35.9
Breathing	18	5.6
Eye movement	12	3.7
Pulse, breathing and others	09	2.8
Breathing and others	07	2.2
Pulse and others	07	2.2
Others	03	0.9
Total	320	100.0

About the first action to be taken in a situation with an unconscious victim, 72/385 (18.7%) answered correctly, 185/385 (48%) answered partially correctly, 81/385 (21%) incorrectly and 47/385 (12.2%) did not know what to do. The absolute and relative frequencies of the alternatives were: *call for specialized help*, 109/385 (28.3%); *check for vital signs* 73/385 (19%), and *check for vital signs and call for specialized help* 72/385 (18.7%).

As for answers about the procedure before calling for help, 211/385 (54.8%) answered correctly, 19/385 (4.9%) partially correctly, 87/385 (22.6%) incorrectly and 68/385 (17.7%) did not know how to answer. Among the alternatives mentioned by the laypeople, calling for help immediately obtained 181/385 (47%), other types of responses 119/385 (30.9%) and almost 18% did not know the procedure.

Regarding knowledge of the telephone number of the emergency service that must be called, 118/385 (30.6%) did not know it and 267/385 (69.6%) did. Among the interviewees who knew it, 145/267 (54.3%) answered correctly, 73/267 (27.4%) partially correctly and 49/267 (18.3%) incorrectly. Among the services mentioned more often was SAMU, but the name was not always associated with the correct number. In the comparative analysis between receiving first aid training and knowing the telephone number of the emergency service, almost 36% of the interviewees who had not undertaken training mentioned not knowing the number of the service, while nearly 80% of those who were trained knew it ($p = 0.002$ – Chi-square tests). However, in the comparison between subjects who took and did not take training and the correct answer for the number of the emergency services, there was no significant difference ($p = 0.290$ – Chi-square test).

About the information related to the emergency service, 235/385 (61%) answered correctly, 75/385 (19.5%) partially correctly, 27/385 (7%) incorrectly and 48/385 (12.5%) did not know. The alternative *has vital signs* had the highest percentage, 218/385 (56.6%).

As for the need to provide first aid, 122/385 (31.7%) answered correctly, 235/385 (61%) partially correctly and 11/385 (2.8%) incorrectly. 17/385 (4.4%) did not know how to answer the question. The most mentioned alternatives included: *to avoid death*, 235/385 (61%) and *to avoid sequelae, guaranteeing the continuity of treatment and reduce discomfort* 122/385 (31.7%).

Regarding the action that should be taken in case of suspected spinal fracture, 330/385 (85.7 %) correct responses were obtained, 25/385 (6.5%) were partially correct, 11/385 (2.8%) were incorrect and 19/385 (4.9%) did not know the answer. 85.7% of the respondents answered that *the victim should not be moved*, or that *the victim should be moved in block, if necessary*.

However, when asked about the description of mobilization in block, 74/385 (19.2%) of the responses were correct, 8/385 (2.1%) were partially correct, 35/385 (9.1%) were incorrect and 268/385 (69.6%) did not know how this move is done.

Regarding the answers about the positioning of the victim, 101/385 (26.2%) were correct, 4/385 (1%) were partially incorrect, 192/385 (49.9%) incorrect and 88/385 (22.9%) did not know. Table 5 shows the received answers.

Table 5 - Distribution of the laypeople's answers about the positioning of the victim - Campinas - 2005

Alternatives	N	%
On their back	108	28.1
On their side	101	26.2
On their stomach	10	2.6
Any position	03	0.8
I don't know	88	22.9
Others	75	19.5
Total	385	100.0

On their back (28.1%) and *on their side* (26.2%) were the most frequent answers.

Out of nine possible correct answers to the interview questions, 143/385 (37.1%) had from zero to three correct results, 208/385 (54%) from four to six correct results, and 34/385 (8.8%) from seven to nine correct results.

DISCUSSION

In emergency situations, assessment of the victims and care for them should be effective, with a view to prolonging survival and reducing sequelae⁽¹⁾. Prolonging survival is related with the early installation of the stages of basic life support, including: activation of the emergency medical system, acknowledgement of the victim with sudden loss of consciousness and performing airway unblocking, breathing and circulation maneuvers, using the external automatic defibrillator, in addition to CPR maneuvers⁽²⁾.

Successful recovery of a CRA victim (or any other emergency situation) is the presence of a person qualified to initiate CPR maneuvers, as soon as its occurrence is detected^(6,8). Therefore, it is fundamental that the lay population participate in providing CRA^(2,6,10), reducing the time between the occurrence and the start of the interventions^(6,10-11). The importance of educating the lay community on the early detection of cardiovascular emergencies is thus justified⁽¹⁰⁾.

However, it was observed that only 34% of the studied sample undertook some type of first aid training, and that most of them (72.5%) do not feel prepared to deliver any type of care to unconscious people.

Among the training facilities most often cited are driving schools (35.9%), workplace (20.6%) and school/college (15.3%). According to the new Brazilian Traffic Law (resolution #50/98), it is mandatory for all citizens who want to have their first driver's license or recover a suspended license to attend a 30-hour theoretical course. At the driving school, first aid is among the themes addressed, with a six-hour program⁽¹⁴⁾. Nevertheless, the number of BLS courses is still insufficient, which can cause a large number of deaths⁽¹⁵⁾.

However, when the answers of the subjects are analyzed in relation to the question about feeling ready to perform first aid, a significant difference was observed in those who took the course in other places than the driving schools. Of the subjects who attended driving schools, 85% did not feel prepared to help a victim in any situation. On the other hand, 15.5% of participants who attended other training facilities felt ready to do so and almost 20% of them feel partially ready.

Greater awareness of the importance of educating laypeople is relevant, so as to provide prolonged survivals⁽⁶⁾, since early access to specialized service can be delayed by the incapacity of people to assess the emergency, diagnose CRA and activate specialized help⁽¹⁰⁾.

First aid training is essential for the preparation of the lay population to perform initial care in emergency situations⁽⁴⁾. It is noted, however, that this training should be performed by capable people, so as to permit the retention and application of this knowledge when necessary.

In this study, only 18.7% knew that they should check for vital signs and activate the emergency service as the first measure in a situation with an unconscious victim. Also, when asked about the procedure before calling for help, 47% recognized that they should ask for medical help immediately, while 30.9% believed that they should perform other procedures like *fanning the victim, making the victim smell alcohol or vinegar or rub alcohol on the victim's wrist*, showing lack of knowledge.

Assessment and care for an unconscious person should be performed quickly, objectively and efficiently in any emergency situation, including the activation of the emergency service⁽¹⁾, increasing survival levels^(1,6,10,13). Therefore, the survival chain, especially the two first links (early access and early CPR) should be widely taught to the lay population in a simple way, in order to be learned, retained and reproduced^(2,6,10-11,16).

Hence, in emergency situations where an adult victim is non-responsive (unconscious), apneic and not moving, the emergency service should be activated immediately^(2,9). The *call fast* attitude should be the first in any BLS algorithm, avoiding the helpers' indecisiveness about the next step to be taken⁽²⁾.

The early activation of this service allows for the quick dispatching of a mobile unit for basic or advanced support, and can provide directions to the helper, either trained or not⁽¹⁾. At the place where this study was performed, the population can activate two services by telephone – SAMU – 192 or *Resgate* – 193⁽³⁾.

As for recognizing the presence of vital signs, 83.1% (320/385) of the respondents mentioned that they knew how to do it, 90.3% (289/320) of whom answered correctly about the vital signs. However, only 35.9% of those who knew how to recognize the presence of vital signs mentioned pulse and respiratory movements, while 46.6% mentioned only pulse and 5.6% only breathing. However, the difficulty of lay helpers in determining the presence or absence of pulse in unconscious victims is arguable. Therefore, the verification of the following vital signs is recommended: breathing, coughing or movement^(1,9).

The activation of the emergency service, in addition to allowing a quick ambulance dispatch for basic or advanced support, as necessary, can provide orientations to the helpers, either trained or not, facilitating care for the victim⁽¹⁾.

Regarding the knowledge of the telephone number of the emergency services, this study revealed that almost 31% did not know it and 69.9% did. However, only 54.3% of those who did mentioned the correct number, and a great dissociation was verified between the service and the correct

number. It was also observed that 56.6% knew what should be informed to the dispatcher for adequate service. On the goals of first aid care, 61% believe that it avoids death and 31.7% believe that it avoids sequelae.

When comparing respondents who mentioned having taken training with those who knew the telephone number of the emergency service, 80% of trained laypeople knew the numbers and almost 36% of those who were not trained did not know the number, a significant difference. However, there was no significant difference between training or not among those who answered the correct telephone number. Hence, this aspect also shows no difference between those who were trained and who were not trained to provide first aid.

If a spinal fracture was suspected, 85.7% of the interviewees knew that they should not move the victim. However, it could not be evaluated whether they knew when to suspect the occurrence of such a fracture. Mobilization or moving in block is a term unknown to nearly 70% of the respondents.

When the unconscious victim is breathing spontaneously and there is no suspicion of spinal fracture, it is recommended that this victim is placed in a position of recovery^(1,2,5). The position of recovery allows draining liquids through the mouth, eases breathing and keeps the airways unblocked⁽¹⁾. However, for lay helpers, the lateral position is suggested, since it is more comfortable and easier to be learned⁽²⁾. In the answers about positioning the victim, only 26.2% would lay down unconscious victims breathing normally and without suspicion of a spinal fracture on their side, 28.1% would lie down the victims on their back and over 19% mentioned other positions, such as *sitting or with their head up*.

In an attempt to extrapolate the findings, with the exclusion of the four first questions, which represent opinions or particular experiences of the interviewee, a total of nine questions is obtained which, if answered correctly, would reflect an individual qualified for emergency care. However, when considering subjects with seven to nine correct answers as qualified, it was verified that less than 10% of the participants reached this number of correct answers.

Considering the findings of this study, the need for qualifying and training courses for the lay population is reinforced, so as to guarantee fast and adequate service in any emergency situation, allowing, at the least, the early activation of specialized help.

CONCLUSION

Based on these results, it is verified that the lay population has knowledge about care for unconscious victims, but this are either incomplete or incorrect, putting help at risk. Since they do not understand or know the fundamentals of BLS stages

adequately, lay people may provide incorrect help to the victim, damaging the reanimation. Only 70% of the sample revealed knowing the telephone number of the emergency service, but a mere 54.6% of these mentioned the correct number.

In many answers, the presence of common sense knowledge can be observed, without any theoretical basis, such as *fanning the victim, rubbing alcohol on the victim's wrist or lift the victim's head*. However, several helpers act on solidarity, without having adequate training.

Although there are several types of training for the community, some even mandatory, these do not qualify the subjects for care to unconscious people, since those who took the course do not feel prepared to provide help in any situation.

Therefore, given the high percentage of laypeople witnessing situations with unconscious victims, it is essential that the population be educated by means of memorization of simple sequences, which are easy to learn, retain and apply, providing adequate care with improved survival rates.

FINAL CONSIDERATIONS

This study allowed for the identification of the level of theoretical knowledge of the lay population about first aid. However, of the subjects who mandatorily attended driving schools, 85% did not feel ready to help the victim in any situation, which points to the necessity to verify how these courses are being taught. In view of this information, this topic demands further study.

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APPENDIX I

Data collection instrument - The lay person in emergency situations

Campinas, ____ / ____ / ____ # _____

I. Identification Initials: _____ Age: _____ years old
 Gender: () F () M Education: _____
 Hometown: _____ Occupation: _____

II. Approaching the victim

1. Have you ever had first aid training?

() yes () no

2. If so, where did this training take place? Do you believe you are prepared to provide first aid in any type of situation?

3. Have you ever seen an unconscious person in need of help?

() yes () no

4. If so, what was the situation and what did you do?

5. Do you know how to check for vital signs?

() yes () no Mention some: _____

6. What is the first action to be taken in a situation with an unconscious victim?

A () check for vital signs and call for specialized help

B () check for vital signs

C () call for specialized help

D () leave the neighborhood

E () take the victim to the hospital

F () I don't know what to do

7. Before calling for help, you think you should:

A () wait and see whether the person wakes up

B () I should call for help immediately

C () wait and see if someone will help

D () I don't call for help

E () I don't know

8. Do you know the telephone number for emergency services in Campinas? () yes () no Which one(s)?

() SAMU _____ () Resgate _____ () Police _____

9. What are the details to be observed in a victim and that should be informed to the first aid service during the call requesting for help?

A () if the victim is wounded

B () if the victim has vital signs

C () if the victim's heart is beating

D () I don't know what to look for

10. Why is it necessary to perform first aid quickly and with great precision?

A () to avoid sequels, guaranteeing the continuity of treatment and reduce discomfort

B () to guarantee a place at the hospital

C () to avoid death

D () because the victim may be in pain

E () I don't know

11. When a spinal fracture is suspected, what should be done?

A () Act normally, by helping the victim

B () not moving the victim, or moving the victim in block

C () I don't know

12. How is block movement performed?

A () moving the head together with the rest of the body, so that the spine remains unmoved.

B () normal movement

C () placing the victim on a stretcher

D () I don't know

13. If the victim is breathing, but unconscious, which is the position that the victim should be placed (at least the head) if spinal fractures are not suspected?

A () on the victim's back

B () on the victim's side

C () on the victim's stomach

D () any position

E () I don't know