# LAY FIRST AID GIVING AS A SPECIFIC TRAUMATIC EXPERIENCE

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**Abstract:** Despite first aid process has mainly been considered a medical or technical issue; it seems obvious that psychological and social aspects play an important role too. As a pilot study we interviewed ten helping bystanders about their ideas and feelings during and after the first aid. Their reports were analysed, using a qualitative approach. There were various feelings and ideas respondents experienced – temporary blockade, limited ability to recall relevant information, performance decrease, time distortion, selective perception, strong subjective stress. After first aid people experienced doubts about their acts and decisions, quilt and failure feelings, specific relationship between the rescuer and rescued person, feeling of non-terminating, PTSD symptoms, strong need to share the experience. Our respondents reported long lasting discomfort, persisting even years after the experience. Psychological aspects of lay first aid giving are a crucial aspect influencing the efficacy of first aid process but also the future well-being of lay rescuers and should therefore be considered more.

**Keywords:** first aid; trauma; PTSD; BLS; training; bystander
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## I. Introduction

In modern society a death is pushed more and more aside. Since the 1960s many authors notice that there is a pathological fear of death in a modern society (Přidalová, 1998). Most of people die in hospitals, far away from their fellows. It is not unusual that a modern person lives his or her life without any direct experience with death (Přidalová, 1998). However there is one situation when people are faced with potential death and stay surprised and unprepared. Such situations are urgent health statuses – accidents, injuries, heart arrests… Bystanders – potential lay rescuers – have to cope with the situation when health or life of other person is at risk and an immediate action is required. Bystanders have to call the professional help and they often have to do some necessary medical activities to provide a basic life support. The risk of death is inherent and the need to take action and accept the responsibility is strong.

There are many situations where the help of bystanders is needed. According to American Heart Association and WHO statistics about 1.24 million people die each year as a result of road traffic crashes. 720 000 Americans have a heart attack every year. In EU heart attack causes 1.9 millions of deaths. American Heart Association states that 88% of

the cardiac arrests happen at home, so it is very probable that people that need help are fellows of lay rescuers.

Lay first aid seems to be one of important factors influencing the survival rates all over the world. 50% of traffic accidents victims die before they enter the hospital (IFRC, 2010). In case of sudden cardiac arrest, each 1 minute delay makes 10% decrease of survival chances (Pleskot et al., 2013). Permanent brain damage can occur within 4 to 6 minutes after breathing stops (IFRC, 2009). That means that in many cases it is only the lay bystander's action that can save lives. Czech Red Cross estimates that 10% of lives on the roads could be saved if people got proper first aid in time. First aid training and lay first aid skills development therefore seem to be a simple and obvious way to save lives.

In spite of this the level of lay first aid skills is still very low, even in the countries where there is a high percentage of people that have gone through first aid training. In Germany 80% of people passed the first training courses. However the research (Müller, 2008) shows that only 12,5 % of them are really ready to give a proper first aid. The research made by the Transport Research Centre in the Czech Republic (Zámečník, Kurečková, Böhmová & Šucha, 2014) showed that 92% of the novice drivers (that have recently passed the first aid training at the driving school) are willing to provide the first aid, but only 58% of them feel capable to do it. The test of knowledge identified that only 23% of the respondents have a basic knowledge about the traffic-accident first-aid procedure and less than 1% of them is able to identify the most urgent health conditions and know how to react properly.

Those numbers are alarming. They indicate that most of the bystanders are not prepared to give first aid. It might be connected with the lack of specific knowledge, but even if people have the knowledge, they fail anyway (Müller, 2008). That means there must be more aspects influencing the first aid competencies. Some experts agree that both the willingness as well as the ability to provide first aid cannot be improved, if psychological aspects are not involved in the training process (Van de Velde, Heselmans, Roex, Vandekerckhove, Ramaekers & Aertgeerts, 2009).

First aid has mainly been considered as a medical issue. However it seems more and more obvious that first aid giving is not only medical or technical but also a psychological issue. As well as death can be considered as a social harm (Gruen, 2014), first aid giving can be considered more as a social and psychological rather than a medical or technical process.

The psychological setup of lay first aid providers has a serious impact on the process of the first aid giving. We assume psychological preparedness of the first aid givers influences the fastness and efficacy of the action. The psychological processes that are in the progress during and after giving the first aid are a serious theme. Numerous studies (e.g. Davies, Maybury, Colquhoun, Whitfield, Rossetti, & Vetter 2008; Skora & Riegel 2001) show that feelings and attitudes of people giving first aid can be various. There are many thoughts and feelings people may have – doubts about their own abilities, differences between training situation and reality, various emotions – joy, pride, hope, sadness, fear. Riegel et al. (2006) remark that most of the first aid providers did not experience high level of stress (measured by self report). Meron, Frantz, Sterz, Müllner, Kaff and Laggner (1996) in their analysis of the emergency line records noted that 77% of the first aid providers seemed to be completely calm (based on the retrospective analysis of emergency calls records). Compared to this Ranse and Burke (2015) consider stress to be a relevant problem and found that stress coping should be considered during the first aid

training. Axelsson, Herlitz & Fridlund (2000) reported that many of the interviewees of their research felt powerless, perceived the situation as uncertain and were worried if what they do is right. Hasík (2003) propounds that emotions and feeling of insufficiency are the key barriers in the first aid process.

Axelsson, Herlitz & Fridlund (2000) find the intuitive acting be one of the important factors in the process of the first aid giving. However, competence, knowledge and "feeling of preparedness" were perceived as important.

Bystander phenomena and a diffusion of responsibility are a classic concept mentioned in connection with the first aid providing (Darley & Latané, 1968). Presence of other people reduces the initiative of an individual. People hope that others will help and rely on them. The possible social control of the bystanders also contributes on the inhibition of potentially helping people.

Very often people are worried about potential damage their action can cause, although if they help, their acts can have no real legal consequences. According to Czech law every citizen is obliged to help in an emergency. If people do not help, they might be charged up to 3 years of imprisonment. On the other hand, if any damage happens due to the first aid there are no legal consequences for lay rescuers. Not all of the helping people are aware of this and even if they are, it does not make their concerns less serious.

As we presented before, the previous research show those main phenomena the first aid responders may experience: Unawareness about what really is going on; Uncertainty, Helplessness; Lonely feelings; Strong subjective stress x No subjective stress; Worries about potential damage; Hope feelings; Duty feelings.

There are some considerations given to the psychological aspects that play role during the first aid giving. However there is another part of the problem – feelings and conditions first aid providers experience after the first-aid process is done. We assume that regardless of the actual first aid progression and results many lay first aid givers perceive the first aid giving as a traumatic situation that influences their well-being long time after the experience. This specific issue has not been investigated yet.

## II. Methods and Results

In the Czech Republic, we made a pilot exploratory study of the first aid giving process. Our aim was to understand better the psychological feelings and conditions first aid providers can experience during and especially after the first aid giving. Our basic question was: What is the experience of lay first aid providers with the first aid giving? What do they feel and perceive during and after the process? In our research, we examined ten persons. All of our respondents, as helping bystanders, have experienced an urgent status that required immediate action and treatment. Six of them were participants of first aid trainings realized by our institution, one of them was medical professional, first aid trainer, reporting about an experience with rescuing a closed relative, off duty, three of the respondents were clients of our post-accident psychological care. The time period past after the first aid experience varied between 2 months and 10 years, with most of the respondents more than 2 years had passed after the experience. Most of the respondents experienced a traffic accident; two of the respondents rescued a closely related person. We used individual depth interviews and asked the respondents about the first aid process, about their

ideas and feelings during the situation and afterwards. Their reports were analyzed, using a qualitative approach.

The mental processes of the first aid responders varied in many aspects.

### A. DURING THE FIRST AID GIVING

In the process of the first giving we noticed behavioral, cognitive as well as emotional aspects.

#### BEHAVIORAL CONSEQUENCES

All of our respondents experienced a blockade – a temporary inability to do anything – people feel too stressed to act promptly.

All of our respondents, lay rescuers, reported a decrease of the performance even with the simple tasks – mental as well as manual. One respondent, trained professional, reported a routine procedure, without any performance decrease, even in the situation when he was off-duty.

#### COGNITIVE ASPECTS AND PERCEPTION

Time distortion – time usually seemed to run much more slowly than usually. ("It seemed to me that it all lasted for hours, but it was minutes, actually…") That increased the subjective ineffectiveness and stress, as was reported by the bystanders.

Dissociation and derealization – for a limited time some of the respondents perceived the situation as unreal or they felt like they were not a part of the process.

Selective perception – inability to perceive all important information. That complicates the analysis of the scene as well as communication with the emergency line operators (telephone-assisted cardiopulmonary resuscitation). Many of our respondents have problems with understanding the telephone operators; they also were not able to check the whole scene and focused on minor details. The communication with the telephone assistants had a serious impact on the whole process – influencing both the effectiveness and well-being of lay rescuers during the first aid as well as afterwards.

Low ability to recall important information – lay rescuers reported limited ability to recall the relevant information they had learned before – some of the respondents were unable to recall the emergency numbers as well as the first aid procedures.

#### EMOTIONAL ASPECTS

Strong subjective stress and very uncomfortable feelings during the process – most of the respondents reported fear, panic and feeling of helplessness. Only one respondent, a trained paramedic, had no subjective feelings and followed the routine procedure. Also some other respondents reported a temporarily emotional detachment.

Influence of bystanders – the tendency to rely on the others, external help seeking, fear of the social control.

Strong attachment to the rescued person, rescuers felt a strong interconnection with the patients even if they had been strangers before.

### B. AFTER THE FIRST AID GIVING

When compared with the mental processes our respondents reported *during* the first aid, the feelings and thoughts *after* the first aid giving were generally less intense but more negative.

#### DOUBTS AND GUILT

Doubts about the acts and decisions – even in situations where the first aid had been given properly people have serious doubts if they performed right.

Guilty and failure feelings – even minor mistakes are overestimated, people feel guilty about anything that could potentially go wrong. This doubts and guilty feelings were certainly more intense in situations where some external authority (medical expert, friend etc.) qualified the performance of a lay first aid provider as inappropriate. Specifically, the telephone assistants and paramedics arriving to the scene are an important factor. In one of the case it seemed that the paramedic could act as an accelerant of distress and future serious guilty feelings. In this case the respondent reported an extremely stressful situation he experienced as a bystander of a traffic accident where his friend was deadly injured. This injured person with stridor was evacuated from the vehicle (which, based on actual first aid guidelines was a correct procedure), but afterwards, the paramedics told the lay rescuers that this maneuver may had caused a neck breakage and death. This information contributed to serious guilty feelings that eventually led to the intensive psychological treatment.

#### EMOTIONAL ATTACHMENT

Specific relationship between the rescuer and rescued person, even if they were strangers before, rescuers often felt specifically attached to the rescued person.

Feeling of non-terminating – in most of the cases lay rescuers had no information about what happened to the rescued person(s) after the professional help had been provided. Having more information about the actual effectivity of first aid intervention might contribute to the performance affirmation.

#### OTHER SYMPTOMS

Situation trauma – PTSD symptoms – intrusive memories, flashbacks, tendency to avoid the reminders of the trauma, remembering deficits, guilt, shame, self-blame.

Some of the respondents had a very strong need to talk about the experience right afterwards, some of them were not encouraged to talk about it even years after.

Some of the respondents perceived the situation as extremely stressful and reported lasting trauma consequences. All of the respondents, even a trained medical professional, admitted doubts about if they did right, stress and confusion, especially at the beginning of the process. The doubts about the procedure persisted even months or years after the first aid experience and in some cases they even increased. People doubted about their performance, no matter if it actually was right or wrong. Some of the respondents felt guilty because of the strong emotions they have experienced. By contrast one of the rescuers, professional paramedic, felt guilty about the fact that he had subjectively been feeling no emotions. We noticed no significant influence of the time that passed after the first-aid experience; the emotions our respondents reported stayed strong even years after.

## III. Discussion

Our research proved that first aid giving process is a complex psychological issue. During the first aid giving our respondents reported various behavioral, cognitive and emotional conditions. Our respondents reported various feelings that had already been described before – uncertainty, helplessness, doubts about their own abilities, worries about potential damage, strong subjective stress. Also other phenomena, as temporarily emotional detachments can correspond with some of the previous research findings where most of the lay first aid providers could seem calm and not very stressed. Contrary to some authors none of our respondents felt pride and joy and most of the feelings experienced during or after the first aid giving were negative.

Our research also indicated that not only the thoughts and feelings *during* the first aid, but also the thoughts and feelings *after* the first aid should be considered. There may be many psychological issues persisting long after the first-aid-giving experience which may influence both the well-being and future efficacy and motivation of lay first aid providers. After the paramedics take the injured people safely to the hospital, there are potentially psychically injured bystanders left on the scene. In some cases they may need a special treatment. Therefore, the special care about the bystanders is also an important problem.

Our research was only an entering pilot study of the issue. Due to this it has certain limitations. The methods of respondents recruitment were not covering all potential groups of first aid providers. We mainly focused on the traffic accidents that are a specific kind of an urgent status and may differ from other situations where first aid is needed. Most of our respondents are people with negative thoughts and emotions but there might be some people that have an opposite apprehension. There were some specific problems with the interviewing process too – the respondents could not remember exactly the first aid situations and were able to talk more about their thoughts and feelings after, rather than during the first aid giving.

It is obvious that there are many cognitive and emotional aspects that have to be investigated more. Subjective feelings, a decision making process, perception, priorities, previous training and experience, communication and interaction between the first aid provider and rescued person, bystanders, paramedics, emergency line dispatchers also play an important role in the process. When we understand the process better, we can better establish the system of first aid training, as well as the care about the first aid providers and the conception and training of the paramedics and telephone-assisted cardiopulmonary resuscitation system.

## IV. Conclusions

The first aid response is a potentially traumatic experience. Our pilot research suggests that lay first aid providers are a vulnerable element of the first giving process and may suffer a potentially serious psychical trauma. That means not only casualties and professionals but also lay rescuers and bystanders need a special treatment that should be incorporated into the system of the emergency care. Also the first aid training methodologies should consider this.

Further research of this issue is necessary both on the individual level as well as on the level of the population.

## LIST OF ABBREVIATIONS

PTSD – post-traumatic stress disorder
BLS – basic life support

## AVAILABILITY OF DATA AND MATERIALS

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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