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Human Aspects of Firefighting Operations Managing Victims of Disasters

Abstract

In many cases the firefighters face that the behavior of people affected by an accident is different from the usual. On one hand, it is a natural phenomenon, but on the other it can mean obviously both hazards and risks for the affected people. The author wishes to point out these anomalies. In addition to studying relevant literature, the author built his opinion mainly on his own firefighting practice, as well as teaching experience acquired during his carrier. Author presented some detailed unusual behavior patterns of the affected people in case of emergency and gave a systematic summary. Moreover some simple procedures, which are usually used during the practice, were described.

Key words: firefighting, human behavior, unusual human behavior in emergency

Aspekt ludzki podczas akcji ratowniczo-gaśniczych, sposoby obchodzenia się z ofiarami katastrof

Streszczenie:

W wielu przypadkach strażacy doświadczają, że zachowanie ludzi dotkniętych nieszczęściem jest różne od tego na co dzień. Z jednej strony, jest to zjawisko naturalne, z drugiej zaś może ono oznaczać większe ryzyko i niebezpieczeństwo dla zagrożonych ludzi. W niniejszym artykule autor wskazuje powyższe anomalie. Oprócz studiowania odpowiedniej literatury, autor opierał się głównie na swoim

własnym doświadczeniu w praktyce pożarniczej, jak również doświadczeniu pedagogicznym nabytym w swojej karierze. Rezultaty: Autor przedstawił szczegółowo kilka wzorów zachowań poszkodowanych osób i usystematyzował je. Co więcej, opisał kilka procedur, jakie są zazwyczaj używane podczas ich wystąpienia.

Słowa kluczowe: pożarnictwo, ludzkie zachowanie, niezwykle zachowania w razie niebezpieczeństwa

1. INTRODUCTION

In many cases the firefighters face that the behavior of the people affected by an accident, fire or disaster is clearly different from the usual in everyday life. It could be studied different problems in different fires in mass residence facilities like theaters (Kerekes, 2015; Pasztor, 2015) or concrete storages (Balazs, 2013; Czoboly, 2015) but also the effect of strange situations for human behavior of soldiers during military actions (Fejes et al., 2013; Korodi, 2013) or during helping disaster management (Padanyi, 2013) or the problems of firefighters face to face to injuries (Pantya, 2014). On the one hand, it is a natural phenomenon, but on the other hand it might pose dangers for the affected. The opposite is also possible: although the changed behavior may not be visible externally, actually he may be in trouble (Zellei, 2000; Rabovszki, 2008; Martin, 2015). Recognizing these phenomena in time may prevent the victims from harming themselves or others. In addition, it makes interventions safer and more successful, thus, on the whole, more effective.

Special events are generally shaped by three main factors: the type of the triggering event (the effect of a gas explosion is different from that of a flood or the release of a dangerous material), the features of the scene (population density, the types of dwellings or wind force and direction) as well as the behavior of the victims (the reactions of the population, the intervention team and outsiders). Based on experience, the general opinion of the victims is that fires develop too quickly, they are too widespread and often difficult to grasp. The unexpected speed results in an initial feeling of fright, while the large scale makes the victims feel afraid and lack of help. The difficulty of grasping the emergency can be expressed by its incomprehensibility and the need for an immediate explanation of the events. The author studies

human behavior change in emergencies while taking into account the factors above – with simplicity in mind.

2. PHENOMENA FOLLOWING INITIAL FRIGHT

2.1. *First minutes after the onset of the event*

Fires and damages develop all of a sudden for most victims, who are just ordinary people. Thus, naturally the most frequent reaction is fright. This so-called *initial fright-reaction* may take rather unusual forms with certain people: they get paralysed and experience sensory and cognitive impairment, perhaps they even lose touch with reality temporarily. Fortunately, this immediate reaction stops within a short time and after about 30 minutes the majority of the uninjured victims become helpful again (Bilkei, 2012).

2.2. *The period after initial fright*

Once the immediate effects of the triggering event have passed, the extent of the damage, the dependence on help and further vulnerability can be assessed, which gives rise to *inertia* in the short term, while in the long term it causes *fear*. Most people can overcome the depressive feelings of inertia and fear with more or less effort, so their ability to act returns (Berek and Grósz, 2007). However, for some this feeling can be so overwhelming that overcoming this inner tension exceeds their abilities. These victims become trapped in their own feelings (Czige, 2000). Their behaviour is mostly unusual: they become helpless, aimless and probably indifferent, they lose control and they are unable to protect themselves and to cooperate with others. The confusion might last for hours or even for days until they are ready to cope with the demands of the situation.

2.3. *Typical forms of fright and fear*

Physical and psychological numbness

A typical symptom of physical and psychological numbness is that the victims become *motionless* or they become excessively *slow*, their face may become *a frozen mask*. Often they are unable to speak and to perceive real-

ity and imminent danger. In this case, the respondents may mistake these victims for those who do not need help, as neither their behaviour nor the external signs are conspicuous. Being motionless can be misunderstood as a sign of calmness and determination. However, experience shows that forcing this person to move may evoke a response of *angry defence*.

While the above mentioned physical signs are barely visible, the inner psychological changes are more significant. Behaviour changes, *thinking slows down, judgement is clouded, reaction time is longer, physical and mental paralysis* may take over the victims or they may as well lapse into *pessimistic resignation*.

Increased physical and mental activity

Increased physical and mental activity can take the following typical forms: the victim is *wandering around aimlessly* or starts *running around in confusion*, or even flies into a *rage* yelling, laughing or crying. An extreme form is *aggression* either against self or others. If activity is only slightly increased, it can manifest as an *eager but aimless activity* or even a *zealous, almost uncontrollable assistance*. All of these are often done unconsciously and following the event, the victim might experience memory loss (Martin, 2015).

The person in a leadership position within the affected community may give the impression of being disturbed with his tireless activity and inconsistent instructions. His activity is not targeted, in fact it hinders and encumbers assistance.

Childish behaviour

A few victims stand out from the others by doing anything extreme in the hope of getting help: they might even *cling* to a passer-by or anyone in their surroundings. Others show *childish carelessness* to the outside world or start *fidgiting* with an object. When they are disturbed, they take on a *defiant, hostile attitude*. Their *talk* is often childish, at times not continuous and articulate enough.

2.4. Help in fear and fright

Victims who have the above mentioned symptoms cannot cope with the situation by themselves. As they are not able to carry out activities intended

for their own or for others' protection, they definitely require outside help to escape from this confusion. This help – including first aid – can come from firefighters, depending on the type of the event and the task priorities. The first step of subsequent medical care is the same even if first aid proved to be effective.

Help consists of the following four steps in case of fear and fright:

- Remove the victim from immediate danger.
- Get in contact with the victim: encourage him to eat or drink. Offering them chewing gum or a cigarette is a very simple and effective method, or depending on the situation, hot tea and coffee might be useful as well, especially in cold weather. Physical contact can be achieved by putting our hand on the victim's shoulder or around his waist.
- The victim's confusion must be taken seriously: he may not deliberately act like he does. Responders have to listen to him, pay attention to him, let him pour out his heart and provide him information and hope. Helpers have to gain his trust.
- Allow him to do things which he is able to do: e.g. if he asks for a drink, let him hold his glass or if he is able to help, involve him in medical care or even in rescue operations.

Taking his condition seriously as well as taking advantage of the victim's remaining abilities is an integral part of his treatment. Immediate acceptance together with creating a challenge will probably make them more confident again. Regaining any degree of confidence can be important, as this is the only way for the victim to control fear, and finally cope with the situation.

As a result of the so-called *psychological infection*, fear and fright can appear collectively, which can lead to panic (Kéménczy, 1980; Fejes and Korodi, 2014a, b). Running around in confusion, wandering around aimlessly, pointless rage or even looting and other group phenomena can be observed. Panic itself leads to further deterioration. Fortunately, experience shows that panic as an emergency response is rather rare, so it is not analysed further here.

3. FORMS AND CONSEQUENCES OF DENIAL

The horrors of fires, damages and disasters – that might surpass any imagination – generally break ties with reality. Therefore, it becomes difficult to remain rational and grasp the situation. On the one hand, the victims are

not able to comprehend the experience, but on the other hand they require relevant information. The lack of any explanations results in the involuntary denial of the events (Davis, 1996).

3.1. Denial from inside

One form of denial is *denying the event or ignoring its impact*. Complete denial attempts to shield victims from miseries that have happened or can be expected, as if they did not even exist. Denial of vulnerability is difficult to tell and treat, because these victims reportedly present convincing reasoning.

At times they enter into fierce debates, in which they try to prove the unnecessary of preventive steps. This form of denial can be conscious more or less, which can suggest that the victim's dependence is under control. This phenomenon is present not only after the event but also during prevention. If vulnerability evolves gradually – e.g. floods – denial of the disaster can lead to the lack of preventive steps or even active resistance against them. Firefighters have often encountered this phenomenon when they try to evacuate residents or stop them from returning to their home before it is safe.

3.2. Denial from outside

Another form of denial is when the victims *behave as if they were not part of the horrors surrounding them*. Seemingly, they act confidently at the scene of the fire, damage or disaster and attempt to carry out their ordinary activities. Instinctively they are reluctant to express and grief or vulnerability. Despite the fact that it is a special form of defence against the sudden surge of emotions, it seems unacceptable for outsiders. Such a behaviour that is against the accepted norm is likely to upset and appal the community. (Silver et al, 2002)

3.3. Other forms of denial

Euphoric lethargy and black humour

Striking differences between their own and other victims' losses fuel *confusion and/or anger* that can turn into *euphoric lethargy*. It also has its roots in instinctive denial. This special state makes it bearable for some

victims to tolerate the suffering. The appearance of *black humour* is also a typical symptom of euphoric lethargy.

Urge to return

The refusal to understand what happened and the denial of the unbearable reality can be proved by the fact that the victims rescued or evacuated feel *an urge to return to the scene*. The responders have to bear it in mind in each stage of the response and recovery. Both instinctive denial and the ignorance of the impact – beside other factors – affect returning. The latter can be explained by the fact that danger or the damages might seem slighter due to local knowledge. The restraining order is considered unnecessary by the victims and it even encourages them to return to the risk area.

Dependence

Typically, at the onset of damages and disasters – due to the delay in response – childish *dependence* takes over the community of victims, which goes hand in hand with the *need for a leader*. As the events cannot be grasped, most victims want to distance themselves from them and deal with them as little as possible. As a result, they lose their chance to help themselves – which would seem illogical for an outsider – and collectively need and expect to be led and managed.

The need for a leader sets a new task for the responders, because they have to adapt to another type of public behaviour in addition to the common recovery tasks. The phenomenon of dependence and the need for a leader always have to be considered in public information. If recovery is delayed, not only the rules of conduct (e.g. in disasters) have to be communicated but the type of danger also has to be described together with the possible ways to protect against it together. Thus, acting as a group is supported and in turn, it might discourage dependence.

4. NEED FOR AN EXPLANATION

The nature of the damage – especially at the beginning – is not easy to grasp. The incomprehensibility creates an *urgent need for the explanation of the events*. The explanation – the public information – must simplify the complexity of the events so that the victims can easily handle it.

4.1. Looking for a scapegoat

Anger is a natural reaction that can be expected from the directly or indirectly injured. This anger can be directed against fate or the person reliable for the event (fire, accident). However, the complexity of the events or the shortness of time often conceals the actual cause (Canetti, 1991). The lack of sufficient information soon generates a search for a scapegoat and ultimately, Draconian punishment. This behaviour is based on the following train of thought: sacrificing the scapegoat responsible for disturbing the community will bring back the former state of peace and quite. The scapegoat is viewed as a lightning rod, conducting the anger of the victims and clearing their conscience collectively (Chamber, 2011).

4.2. Survivor guilt

Following the euphoric moments of survival, the victims are likely to blame themselves for surviving. It is often expressed in guilt. They are looking for an answer for the pointless question of why they survived instead of others who would have deserved it more. It is especially common with victims who barely escaped death.

The previous overview included only the most common forms of behaviour changes in fires and damages. Neither the psychological aftermath of exceptional occurrences nor long-lasting anxiety are covered. The significance of most post-traumatic disorders has been only recently discovered, representing a field worth studying (Rabovszky, 2008; Berg et al. 2012).

5. SUMMARY

The author has reviewed behaviour changes that firefighters are most likely to encounter in special events. Being acquainted with them and recognising them at the scene might help the victims and reduce the long-term negative effects while increasing safety and efficiency of interventions.

Fires and damages develop all of a sudden for most victims, who are just ordinary people. Thus, naturally the most frequent reaction is fright. This initial fright-reaction may take rather unusual forms with certain people but this immediate reaction usually stops within a short time.

After the initial-fright other symptoms can be arise. A typical numbness is that the victims become motionless or they become excessively slow but it can be often seen the contrary, the increased physical and mental activity or childish behaviour.

The horrors of fires, damages and disasters generally break ties with reality. Therefore, it becomes difficult to remain rational and grasp the situation. It can cause denial from inside or from outside but other appearances also can be found like euphoric lethargy, black humour or dependence. Responders often face that victims require explanation for the tragedy but without its acceptable they can create their own version or create even scapegoat.

Despite the fact that the paper focuses on sudden-onset and small-scale fires and damages, the same might apply to disasters and delayed recovery. Thus, this paper attempts to contribute to basic knowledge about behaviour changes which can be found useful not only by firefighters but also anyone directly involved in disaster response in the broad sense.

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