



International Journal of Emergency Services

Death in the Spanish fire services: a curriculum development study

Juan Pablo Leiva Santos, Helena García-Llana, Victor Pablo, Maya Liébana, Allan Kellehear,

Article information:

To cite this document:

Juan Pablo Leiva Santos, Helena García-Llana, Victor Pablo, Maya Liébana, Allan Kellehear, (2018) "Death in the Spanish fire services: a curriculum development study", International Journal of Emergency Services, <https://doi.org/10.1108/IJES-04-2017-0020>

Permanent link to this document:

<https://doi.org/10.1108/IJES-04-2017-0020>

Downloaded on: 02 January 2018, At: 08:03 (PT)

References: this document contains references to 30 other documents.

To copy this document: permissions@emeraldinsight.com

Access to this document was granted through an Emerald subscription provided by

Token: Eprints:ETIFQFJBMJXSZJ6DSZXF:

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Death in the Spanish fire services: a curriculum development study

Death in the Spanish fire services

Juan Pablo Leiva Santos

*Palliative Care, Hospital de Manacor, Mallorca, Spain and
FIT for CARE, Madrid, Spain*

Helena García-Llana

Nefrología, Idi-PAZ, Hospital Universitario La Paz, Madrid, Spain

Victor Pablo

*Bomberos del Consorcio del Poniente Almeriense, Almería, Spain and
FIT for CARE, Madrid, Spain*

Maya Liébana

FIT for CARE, Madrid, Spain, and

Allan Kellehear

Faculty of Health Studies, University of Bradford, Bradford, UK

Received 21 April 2017

Revised 7 November 2017

Accepted 17 November 2017

Abstract

Purpose – The purpose of this paper is to understand the need and resources firefighters have to deal with death and dying (D&D) that they encounter whilst on duty and to present a curriculum to support D&D issues for firefighters.

Design/methodology/approach – A qualitative methodology involving focus groups was conducted in two fire stations in Spain. The sample was 38 male participants with a mean age of 46 y/o (range: 30-59 years) and an average tenure of employment of 18 years (range: 6-35 years). Data were subjected to a thematic analysis. Dual coding of the transcripts in addition to member checking enhanced analysis.

Findings – Nine themes emerged: witnessing D&D during rescue operations; memories about D&D and trauma; impact on firefighter's families; decision-making process under stress; teamwork; protective and self-support; inadequate D&D preparation and training; adequate technical and physical training preparation; relationship between equipment, legal-moral obligation, and victims' outcomes; communication issues; toward the victim and/or their relatives. These themes were subsequently framed into three basic domains: personal impact of D&D, team impact of D&D, and victim impact. Each domain, in its turn, is covered by three curriculum topics. The curriculum's pedagogy is primarily based on experimental-reflective activities during 16 study-hours.

Research limitations/implications – The absence of female participants. All fire stations were in cities with no more than 150,000 inhabitants.

Practical implications – Individuals who take this curriculum will: increase their ability for self-care and resilience; improve teamwork, leadership skills, and to decrease burnout; provide more effective care for victims; provide skills to cope with compassion fatigue; reduced the levels of post-traumatic stress disorders.

Originality/value – Understanding firefighters' needs with relation to D&D, and assessing the resources available to mitigate these issues will provide a comprehensive approach to their education and promote health both personally and professionally. A comparable curriculum or proposal has not been previously identified.

Keywords Leadership, Education, Firefighters, Spain, Teamwork, Death and dying

Paper type Research paper

1. Introduction

What are the needs and resources firefighters draw upon to face their encounters with death and dying (D&D) in their daily work? The Fire Services safeguard matters of great societal and moral importance: not only property and environment in the broadest senses, but also (and more importantly) people's lives and well-being. For this reason, firefighters are expected to expose themselves to substantial risks, including risks to their own safety and life (Sandin, 2009).



International Journal of Emergency Services

© Emerald Publishing Limited
2047-0894

DOI 10.1108/IJES-04-2017-0020

In Spain, firefighters are professionals and employed by the government administration. Firefighters are divided into three groups: urban firefighters, wildland firefighters, and airport firefighters. For some regions, urban firefighters provide support for the wildland services and also for mountain rescue operations. The present study involves urban firefighters who rendered the services described. According to the Annual Report of Victims caused by fire during 2015 (Asociación Profesional de Técnicos de Bomberos, 2016), there have been 143 deaths due to fires or explosions in Spain. There have been 136,007 actions concerning fires – an increase of 8 percent compared to 2014. Fatal events on roads are also part of the duty of firefighters in Spain, and in 2015 there were 1,018 fatal road accidents, in which 1,126 people died and a further 4,843 needed hospitalization as a result of their injuries (Nuevo mínimo histórico en el número de víctimas mortales por accidente desde, 1960). Furthermore, the experience of D&D is a common, recurring set of experiences for those for whom the fire services attempt to help. In 2015, 1,269 deaths concerning fire services were reported plus 4,843 people admitted to hospitals after road accidents. In summary, 6,112 people were in need of help from the fire services during 2015 in Spain (Asociación Profesional de Técnicos de Bomberos, 2016; Nuevo mínimo histórico en el número de víctimas mortales por accidente desde, 1960).

Because the experience of D&D is integral to the core purpose of emergency services in general it is logical to ask about the nature and scale of support for those who undertake this kind of work. Exposure to duty-related incident stressors in urban firefighters and paramedics were ranked and categorized by Beaton *et al.* (1998), from a sample of professional urban fire service personnel. In decreasing order incident stressors were described as: catastrophic injury to self or co-worker, gruesome victim incidents, rendering aid to the seriously injured, vulnerable victims, and minor injury to self and exposure to D&D.

Death anxiety is also an important issue to address relevant to the concerns of this study. Sliter *et al.* (2014) examined the impact of death anxiety in firefighters and the results highlight the importance of understanding death anxiety in the workplace, particularly in occupations where mortality salience cues are common. Based on their findings, they recommend death education and vocational counseling. Death anxiety has rarely been formally defined. A proposed definition is that death anxiety is the unpleasant emotion resulting from existential concerns that are provoked on contemplation of the death of the self or others (Nyatanga and de Vocht, 2006). In firefighters, death anxiety may be related to higher levels of absenteeism, a relationship sometimes mediated by burnout.

In line with Sliter's findings (Sliter *et al.*, 2014) and recommendations, an effective death education program should be long term, relatively intensive, and contain reflection and examination of attitudes rather than didactic methods about how to reduce death anxiety.

On the other hand, medical issues directly related to the increase of fatal events for firefighters have been widely studied and also require important consideration. In USA, for example, cardiovascular disease (CVD) is the most common cause of all on-duty firefighter deaths (Frattaroli *et al.*, 2013). Approximately 90 percent of CVD-related deaths result specifically from coronary heart disease. In order to understand death on duty events for firefighters, a comprehensive study of 644 firefighters' line-of-duty deaths (LODD) was performed in the USA between 2000 and 2005 (Moore-Merrill *et al.*, 2008). This study found that the dominant contributing factors for LODD are health/fitness/wellness (54 percent), personal protective equipment (19 percent), and human error (19 percent). This study cluster revealed that contributing factors frequently occurred together. In Spain, Martínez (1990) analyzed the use of self-breath camera on the fire training skills in Zaragoza, which identified physiological risks even while on training activities, and offered suggestions for the creation of a safety training course at a physiological and legal level (Martínez, 1990).

It is important to understand that LODD as a phenomenon with a cluster of co-contributing factors (Moore-Merrill *et al.*, 2008). Four main clusters were identified with these contributing factors. Cluster 1 included incident command, training, communications,

standard operating procedures, and pre-incident planning. Cluster 2 included vehicles, personal protective equipment, equipment failure, and human error. Cluster 3 included privately owned vehicles, accidental, and civilian error. Cluster 4 included company staffing, operating guidelines, and health/fitness/wellness. Cluster 4 alone independent of other clusters was shown to be responsible for more than 45 percent of all firefighters' on-duty deaths during the years studied. Cluster 4 combined with other clusters was shown to be responsible for an additional 16 percent of all firefighters' LODD during the years studied.

When clustered according to contributing factors the most prominent cluster is crew size, health/wellness/fitness/medical status of firefighters, and standard operating guidelines. Contributing factor clusters which were identified explain 98 percent of firefighters LODD in the USA between the years of 2000 and 2005.

The information revealed in this study imposes a considerable burden on decision makers and fire service leaders as well as firefighters themselves (Moore-Merrill *et al.*, 2008). However, firefighters are also exposed to serious chemical and physical hazards, to a degree that is unusual in the modern work force. The acute hazards of firefighting, primarily trauma, thermal injury, and smoke inhalation, are obvious (Guidotti and Clough, 1992). Volumes of literature have been published on acute pulmonary injury associated with inhalation of hot air and toxic constituents of smoke, particularly the combustion products of commonly used plastics (Moore-Merrill *et al.*, 2008; Martínez, 1990; Guidotti and Clough, 1992). The hazards of carbon monoxide and cyanide are particularly well recognized. The occupation has been studied intensively for evidence of chronic health effects. Interest in the health problems of firefighting increased considerably during the 1980s (Loke *et al.*, 1980). A substantial body of work is now available that may lead to a re-evaluation of many unresolved issues (Guidotti and Clough, 1992). The use of highly sophisticated firefighting equipment and the introduction of innovative firefighting techniques, safer personal protective equipment, and better communications and information systems, as well as healthier life-styles, have helped meet public demands for service and, at the same time, have provided a safer and healthier working environment for the firefighters (Ide, 2013). In spite of these advances, firefighting continues to be a very hazardous occupation.

Desmond (2009) analyses how the United States Forest Service (USFS) motivates wildland firefighters to participate in life-threatening activities. Drawing on ethnographic research and content analyses of official documents, USFS describes the process by which firefighters come to develop a specific disposition toward risk-taking, a disposition through which they view firefighting as an activity void of danger, and how this disposition maintains its shape, and even grows stronger, after confronting its biggest challenge: the death of a firefighter. The distinctive mark of a good firefighter is his ability to know – not to test – his limits (Grazian, 2009). Far from understanding risk as an avenue to a euphoric “adrenaline rush” or a route to acquiring a masculine character, firefighters are socialized to view risk as something that can be tamed, safety as something for which they are personally responsible, and death as completely avoidable through competence. The Forest Service acclimates firefighters to the perils of their profession by cultivating within them a belief that their job is no more dangerous than the next. When this belief meets its ultimate challenge – the death of a firefighter – the Forest Service reacts by minimizing hazards and exaggerating deviance, thereby allowing firefighters to distance themselves from the dead and the objective dangers of their job. On the other hand, wilderness firefighters differ from many other professional risk-takers on at least one important score: they can abandon their tasks if they feel threatened, and they are frequently encouraged to do so (Desmond, 2009; Grazian, 2009).

The main purpose of this paper is to understand the personal experiences of urban firefighters related to both the victims' deaths and the experiences of mortal risk to the firefighters. The analysis and understanding of both of these experiences is the basis of a proposed curriculum. This is in order to offer specific, pre-emptive, training to support firefighters during their work.

2. Research design and methods

This research project originates from the European Palliative Care Academy (EuPCA) and is a joint project of the Robert Bosch Stiftung, Germany and four related academic centers: The University Hospital of Cologne, Germany; Nicolaus Copernicus University Toruń, Poland; Hospice Casa Speranței, Brașov, Romania; and King's College London, Cicely Saunders Institute, UK. The EuPCA is implemented in collaboration with the European Association for Palliative Care. The Robert Bosch Stiftung, a major German charitable foundation associated with a private company, funds the EuPCA.

A qualitative study was designed to understand the needs, and resources that firefighters have regarding D&D in their everyday work settings. A focus group methodology was deployed between March and April 2016 in two different fire stations in Málaga, Spain: Marbella and Mijas districts. A focus group methodology was identified as appropriate in the case of firefighters because this occupational group is particularly accustomed to working in teams. This approach also provides them a safe and supportive group/team atmosphere in which participants can share their experiences regarding D&D. The project received approval from the "Centro Integral de Formación y Emergencias", Madrid. The participants signed an informed consent document, and the four group sessions were subsequently recorded. The groups were composed of 9, 8, 9, and 12 participants, bringing the total sample to 38. All participants were men. Their mean age was 46 y/o (range: 30-59 years) with an average tenure of employment of 17 years (range: 6-35 years). All sessions were planned and coordinated with the respective fire station's management and time schedules.

Two researchers conducted each focus group. The audio recording was made on an iPod and only two researchers were allowed access to the device and typed the transcription. The transcription was subjected to a thematic analysis (Fereday and Muir-Cochrane, 2006; Daly *et al.*, 1997) after which nine themes were identified. Those themes were checked and revised by peers, whilst a second review was conducted by a firefighter who took part in the research team to further check interpretative reliability. Three broad domains were extrapolated from these nine themes and these domains then became the basis of the proposed curriculum.

There are a couple of limitations to this study to note: first, all the firefighters participating in this study were men. The original plan was to do a focus group on a team that included female participants at a fire station, but there was a fatality on their team during the study; therefore, we decided not to run the focus group with that team. Second, this study was deployed in fire stations located in cities where the population was not over 150,000 inhabitants. For those cities, ambulance services normally arrive with medical staff at the emergency scene after the fire services. This does not occur in Spain's capital city, Madrid, where both ambulance and fire services commonly arrive together.

3. Results

The thematic analysis

It provides nine themes. These were:

- (1) Witnessing D&D during rescue operations.

This theme refers to witnessing the death of a victim while the firefighter is giving help and support:

The most shocking thing to me was a car crash, two vehicles involved. When we arrived, I went up first and approached the victim, one of the drivers. I was supporting him; meanwhile, my colleagues were working to take him out. I was telling him: "You are going to be OK [...] This is going to be over soon." He was watching me and saying some words and his speech was getting worse, weaker. When everything was done and ready to take him out of the car, he was dead [...] (Firefighter, 43 y/o).

(2) Memories about death, dying, and trauma.

This theme describes meaningful details around scenes when a victim was dead. This particularly refers to the kind of details that create a powerful and lingering memory about D&D:

All those things leave a mark. I remember the colour of the car, that the weather was cold, the number of guys that were in the car, and the doctor from the ambulance who couldn't do anything. Life was gone for those guys [...] (Firefighter, 46 y/o).

For sure this does not affect the work that I am doing at that moment, we don't have time for feelings. But sometimes after work, when all is done, faces come back to your mind, voices, sounds and the smell...that smell [...] (Firefighter, 52 y/o).

(3) Decision-making under stress.

This theme refers to the skills and abilities that firefighter have described as important in the D&D work scenes, such as during a triage decision, or the decision-making process under stress when they have to deal with other emergency services teams like emergency & ambulances (E&A):

That copter trip was a wedding gift. We reached the place before the E&A services did. We took her out first, and put her into the stretcher. She was still conscious, but in a serious condition. Then the E&A services arrived, the doctor decided to put her husband into the ambulance first because, according to him, he had a better chance of survival than her. I disagreed. She was begging us: "Please don't leave me here." Her husband also said: "Please, take her first, please." They took him first. It was too painful for me to see [...] (Firefighter, 48 y/o).

(4) Communication issues: to the victim and/or relatives' victim.

This theme refers to a number of situations when the communication toward the victim or to their family had been challenging. Sometimes this communication was described as the most difficult challenge in a D&D scenario:

The man kept asking: "My wife, how is my wife?" [...] I knew the two ladies had died, and the two men were alive. We were working in groups. I was trying to divert his attention the whole time. The man kept on asking the same question. I said: "my colleagues are supporting her, just worry about yourself!" This is what we were told to say during our initial training a long time ago. I felt inadequate in only being able to repeat the same answer, knowing what was behind my words. I was trying to keep-him calm (Firefighter, 52 y/o).

After that the police arrived soon, but meanwhile I did not know what to say to that mother and to her child. They were asking me, they could see on my face that something was wrong, but I had no idea of what to say [...] (Firefighter, 38 y/o).

(5) Teamwork: protective and self-support.

Firefighters identified teamwork as one of the biggest issues in the performance of their work. There are a number of tasks where the value of teamwork is highly appreciated. In the four focus groups, the firefighters were talking in terms of "we/us" for a number of significant topics related to D&D in their work. The team's leader plays a significant role while on duty:

I am the leader of this team, and I know very well where the weaknesses of the team members lie and I always try to avoid asking them to do something that can be overly challenging for them. I must know who the best man is to do or not to do something (Firefighter, 52 y/o).

Working together, we understand each other very well. The others easily understand the body language of any of us working in a risky situation. This understanding has developed over years of working together and provides a safe atmosphere to work in (Firefighter, 40 y/o).

In the riskiest of circumstances, when I can see nothing because of the smoke, and I am in a totally new place, when I am starting to feel unconfident with the situation, getting a touch from a mate beside me restores my courage and confidence again (Firefighter, 37 y/o).

On the team we can not all be friends, which is normal, but we should be great workmates (Firefighter, 48 y/o).

(6) Inadequate trainings for preparation to D&D scenarios.

A lack of preparation in facing D&D issues was commonly described. Among all the participants in the study, the recognition that preparatory training might be possible appeared as a slow, dawning awareness for first time during the focus groups interviews:

It was a burning building simulation, seriously real. For some reason, the fire became almost out of control. I forgot it was training. I felt I was going to die in that place [...]. After the practice, we analysed the technique, what we did or not to resolve that problem or the mistakes we made [...] We did not have the opportunity to analyse beyond technique. I did not have the opportunity to express the fear I had felt. Somebody might have told me: "Don't be silly, it's OK, it's a normal fear [...] or whatever" and perhaps this would have been helpful [...] I personally think that this is the ideal moment to talk about our personal experience and to receive some training about what skills we need to face death and dying (Firefighter 30 y/o).

(7) Adequate technical preparation and training increases control and decreases risk in the face of death.

Perhaps the most obvious theme for the participants was related to the fact about how good technical preparation and skills can avoid LODD. This theme is easily recognized as a key element in teaching newly incorporated firefighters, but also as a way for senior, more experienced firefighters to keep up-to-date:

When working on duty, there are often no clues about what is technically right to do, and you can see how the time goes by while the victim is getting worse and worse. This can give you a sense of being out of control and feeling how death is coming closer to the victim all the time. There is no room for hope or help in this situation – you can only witness death as it comes (Firefighter, 32 y/o).

Working out to keep yourself fit is a good way to remain safe and with a self-perception of control, even when things are going bad (Firefighter, 32 y/o).

I will feel unsafe if I know that my mate is unfit. Perhaps I might not want to work with somebody who refuses training to be fit (Firefighter, 30 y/o).

(8) Relationship between equipment, legal-moral obligation, and victims' survival.

This theme was identified as a particularly sensitive issue for the teams. This involves administration and funding for the fire services. Questions about the adequacy, quality, and correct maintenance of equipment could be a source of lingering doubt among the firefighter, and it seems that this is not an easy topic to discuss among them:

I was visiting my teammate at the hospital. At that time, he did not know if he was going to walk again. From that day on, I have been frequently thinking about the decisions we take that can affect the members of our team [...] On the day of that accident, there were many questions about technical issues related to special materials, and we needed to work it out (Firefighter, 30 y/o).

(9) Impact on the firefighters' family life.

This was also a particularly difficult theme for firefighters to discuss. As one firefighter pointed out during a focus group session: "What I am going to say regarding my family is too hard to say and I know this is the case for all of you. We know that our

work affects our families, but it is not easy to recognize among us; so often we think that if we say this, it will make us weaker.”

If I find children in a car crash, it becomes horrifying to me because I also have children. It is impossible not to feel it as more challenging when children are victims [...] When I return home on days like this, I pretend that all is going as usual [...] but for some reason my wife always knows that it is not (Firefighter, 44 y/o).

Death in the Spanish fire services

4. Curriculum design

The curriculum is based on the creation of three broad domains that have been extrapolated from the nine preceding themes. Each domain has in its turn three topics to approach the learning process. The curriculum is designed to be spread across two full days of eight hours each (16 hours in total). Each domain will take five study-hours, spending 90 minutes studying each theme. Consistent with the needs and experiences of the firefighters as revealed in this study, the pedagogical approach should be experimental and reflective.

Topics within the domains' descriptions

This is a health promotion curriculum. Resilience and well-being are the expected outcomes for the firefighters after taking this curriculum. Resilience and well-being are the best way to protect against the social and physical morbidities of illness, sick-days, burnout and teamwork conflicts. These are described as targets for prevention or harm-reduction strategies in formulating health promotion outcomes. The curriculum outline is described in Figure 1.

Individuals who take this curriculum will:

- increase their ability for self-care;
- improve teamwork, leadership skills, and decrease burnout;
- provide more effective care for victims;
- provide skills to cope with compassion fatigue; and
- reduced the levels of post-traumatic stress disorders.

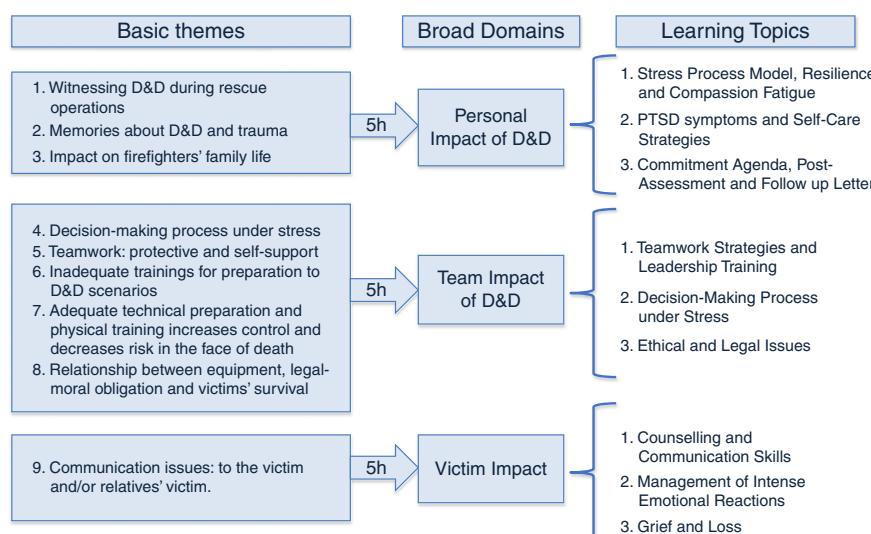


Figure 1.
Death and dying
(D&D) in fire services:
development of the
training program

The curriculum will be designed as a two-day intensive course for Spanish firefighting professionals working in emergency settings. The goal of the program is to increase participants' self-confidence with difficult situations when facing D&D in their daily work. The authors have designed the curriculum after more than eight years of documented, successful experience conducting training courses for healthcare professionals (García-Llana *et al.*, 2011, 2012, 2014, 2017). The fields from which our communication-skills programs have been derived include: counseling, stress-management, health promotion, D&D education, end-of-life care, as well as leadership and teamwork guidance (Kellehear, 2013; Kellehear and Fook, 2010; Leiva, 2006). Our training sessions will begin with a brief theoretical framework and every major topic section finishes with a role-play/ practical exercise, presenting an opportunity for participants to practice with a focus on observation and feedback. The theoretical content and assigned role-play are based on challenging situations that firefighting professionals must face regularly. This teaching method allows the participants to identify key aspects of communication and ethics. Using these shared observations, we provide key techniques for managing personal relationships that are revisited in a practical context to observe the participants' assimilation of the main concepts and techniques. In this way, we create an environment in which good communication is valued and participants feel supported in learning and practicing new skills.

Creation of the program

The aim of the program is to improve the skills of firefighting professionals when dealing with D&D. The training program is designed to address the needs identified by this study. The program was conducted as a workshop during two intensive training days. The provisional agenda and details of the program are described in Box 1. The program contents included various complex, paradigmatic situations during firefighting work such as answering, "difficult questions", a common but personally threatening situation for these professionals.

5. Discussion

Understanding the necessities and resources needed by firefighters to deal with fatal events is essential. For the most part, the current literature approaches D&D issues mainly through the lens of occupational health, as one would expect in addressing the risks and fatalities that firefighters experience (Moore-Merrill *et al.*, 2008). Another approach of D&D in this field is through analyzing technical issues to improve command of protocols, equipment, skills, and decision making (Weick, 1996). However, there are few suggestions about how to improve skills supporting resiliency based on leadership, teamwork, communication skills, self-care, self-regulation, decision-making surrounding fatality events (Ash and Smallman, 2010), ethical issues related to D&D (Sandin, 2009), or grief and loss. By learning from the experiences reported by the firefighters themselves in this study, we have identified an imbalance in the current offering of knowledge and training for skills to cope with D&D for firefighters. According to Kelvin Cochran (2009), the success of a fire service organization is determined to a great extent by its approach to leadership, communication and decision making.

The themes analyzed in this study support and underline the insight that when a leader makes a decision that impacts other personnel those impacted should be part of the decision-making process (Anonymous, 2013). Additionally, fire service leaders must consider whether decisions are ethical, legal, moral, safe, and above all health promoting. Good decisions always pass the ethical, legal, and moral test: Does the decision conform to the state code of ethics? Is it compliant with existing laws? Is it morally sound? (Anonymous, 2013). Support for training the firefighters on all those different aspects has been lacking, with precious few opportunities for training and education that attempt to address these important issues.

Box 1. Proposal of training curriculum agenda (16 hours)

Facilitators of the program: palliative care specialist and psychologist with expertise in teaching healthcare professionals.

The curriculum is designs for two 8 hours day agenda.

Day 1

First lesson: Welcoming, Presentation and Detection of Threatening Situations in Daily Practice:

- Description: pre-assessment, welcoming, presentation of the curriculum and identification of threatening situations for firefighters at daily practice.
- Objectives: to warm-up and to detect the needs of the group to adjust expectations if needed

Second lesson: Stress Process Model, Self-Care Strategies and Resilience.

- Description: explanation of the concept of stress and the importance of self-care as a protective factor to avoid stress suffering. Introduction to resilience and team-resilience.
- Objectives: to train different strategies based of mindfulness than can help us to keep calm in demanding clinical situations. To understand how training resilience support coping skills.
- Role playing and feedback: one-minute meditation and short mindfulness exercises to apply in emergency environments.

Third lesson: Shared-Decision Making Process under Stress. Ethical and Legal Issues:

- Description: presentation of the four models for healthcare professional-patient relationship, how do we explore values? How to adapt it for fire emergencies settings?
- Objectives: to train professionals in the core strategies to initiate “quick” shared-decision making process according to the four principles of modern bioethics.
- Role playing and feedback: “Alberto, the man who after a crush car wants his wife goes first in the ambulance to the emergency ward when not indicated.”

Fourth lesson: Teamwork Strategies and Leadership:

- Description: teamwork as a protective factor when dealing with death and dying. Leadership as essential. Training the ability to influence others to achieve common goals: Leadership.
- Objectives: to train participants in the main principles of conflict management (with different professionals and with their own colleagues).
- Role playing and feedback: “Multiple traffic accident: Antonio, the chief of the unit who needs to create a safety teamwork atmosphere after an argument on the trip to the accident.”

Day 2

Fifth lesson: Counseling and Basic Communication Skills:

- Description: overview of the guidelines of therapeutic communication skills.
- Objectives: to present basic skills for therapeutic communication in emergency settings: open-ended questions, empathy, validation, active listening and positive reinforcement.
- Role playing and feedback: “Fernando, the young man who after a motorbike accident asks about the health status of his girlfriend who is actually facing death.”

(continued)

Sixth lesson: Management of Intense Emotional Reactions: Crisis Intervention:

- Description: overview of aggressiveness (and other reactions) and its adaptive function in emergency situations.
- Objectives: to train the management of the aggressive victim or victim's relative.
- Role playing and feedback: "Juan, the old man who is really hostile because he had been waiting for too long to receive the firefighters service at his place for a minor accident."

Seventh lesson: Understanding Grief and Loss. Conclusion, Commitment Agenda, Post-assessment and Follow-up Letter:

- Description: understanding each person's loss is different. Seeking and accepting help. A main conclusion of the journey elicited by participants, commitment with the group and post-assessment.
- Objectives: to end the workshop with a public commitment made by every participant regarding what are their main strategy they are going to incorporate to the daily work. Participants will write a letter to themselves with these proposals. Letters will be post by the facilitators two months after the workshops as a reminder of the duty.

When disunity and disharmony exist in the fire station, the teamwork and the cooperation necessary to provide a highly efficient service can be eroded. Moreover, lack of camaraderie can even contribute to increased potential for injuries and LODD (Cochran, 2006).

Returning to Beaton's finding (Beaton *et al.*, 1998) we are reminded of the key "extremely stressful" incidents: catastrophic injury to self or co-worker, witnessing duty-related death of co-worker, co-worker fatality (not witnessed), sudden infant death incident, fire incident with multiple burn victims, rendering aid to adult stabbing victim, completed suicide by hanging, completed gunshot suicide, and attempted domestic homicide victim. The failure to provide adequate training for these above stressors is as important to ensuring the safety and well-being of firefighters as any failure to update a standard safety statement (Anonymous, 2013). This curriculum is framed in health promotion, and orientated to decreased post-traumatic stress disorders (Deppa, 2015).

Firefighters are not supposed to react badly to mortal experiences, and are even socially encouraged to make light of these situations, such as through the use of dark/gallows humor (Sliter *et al.*, 2014). We agree with Sliter's argument that an effective death education program has to be long term, relatively intensive, and contain reflection and examination of attitudes. On the other hand, we understand that the scheduling of learning programs for firefighters in Spain can be challenging for multiple reasons. All those challenges are addressed in the way (content and pedagogy) and in the timing (time allocation) of the curriculum proposed:

Historically the fire services have believed there is a great honour in dying in the line of duty, especially to save another firefighter, but the greatest honour in our proud profession is living together in the line of duty (Cochran, 2006).

6. Conclusion

We identified a substantial need for education regarding D&D issues for firefighters. To this end, a broad outline of a curriculum is suggested based upon the needs experienced and described by the firefighters participating in this study.

7. Suggestions for the future

The current study is as modest as it is exploratory. There is a need to test and assess the effectiveness of the current curriculum. An outcome evaluation of this curriculum after its implementation in the fire services at local or national levels will be mandatory. If effective in addressing the needs and resilience of firefighters, it will be important to replicate the study to police and ambulances populations. This generalized approach would also suggest the wisdom of replicating this study in other countries as budget, professional structures, and cultural issues will differ significantly. For our purposes in Spain, we intend to use these nine themes to construct a wider, more representative survey to further explore experiences of firefighters and other emergency workers for future health and education research and development.

For the more explicitly end-of-life care professions, such as palliative care, it is important to understand that D&D are not the sole province of hospice workers. Many other professionals whose work is not explicitly “end-of-life care” also work with D&D on a daily basis – in aged care, disaster management, or funeral services and emergency services. The need for a supportive death education for all these workers remains in its infancy. However, a fit-for-purpose health promotion curriculum (i.e. one guided by the everyday experiences of the emergency workers themselves) can be an insightful force for that on-going development.

References

Anonymous (2013), “Lessons must be learned from firefighter death”, *The Safety & Health Practitioner*, Vol. 31 No. 12, p. 20.

Ash, J. and Smallman, C. (2010), “A case study of decision making in emergencies”, *Risk Management*, Vol. 12 No. 3, pp. 185-207.

Asociación Profesional de Técnicos de Bomberos (2016), “Annual Report of Victims Caused by Fire During 2015 in Spain”, Fundación MAPFRE, Madrid.

Beaton, R., Murphy, S., Clark, J., Pike, K. and Corneil, W. (1998), “Exposure to duty-related incident stressors in urban firefighters and paramedics”, *Journal of Traumatic Stress*, Vol. 11 No. 4, pp. 821-828.

Cochran, K. (2006), “Stand together or fall apart. Leadership skills”, *Fire Rescue Magazine*, April, pp. 126-128.

Cochran, K. (2009), “Decisions. Decisions. Issue of Fire rescue”, Firefighter Nation, February.

Cochran, K. (2006), “The art of resiliency. Issue of Fire Rescue”, Firefighter Nation, March.

Daly, J., Kellehear, A. and Gliksman, M. (1997), *The Public Health Researcher: A Methodological Approach*, Oxford University Press, Melbourne.

Deppa, K.F. (2015), “Resilience Training for Firefighters: A Proposed Approach”, Master of Applied Positive Psychology (MAPP) Capstone Projects No. 82, University of Pennsylvania.

Desmond, M. (2009), *On the Fireline: Living and Dying with Wildland Firefighters*, University of Chicago Press, Chicago, IL.

Fereday, J. and Muir-Cochrane, E. (2006), “Demonstrating rigor using thematic analysis: a hybrid approach of inductive and deductive coding and theme development”, *International Journal of Qualitative Methods*, Vol. 5 No. 1, pp. 80-92.

Frattaroli, S., Pollack, K., Bailey, M., Schafer, H., Cheskin, L. and Holtgrave, D. (2013), “Working inside the firehouse: developing a participant-drive intervention to enhance health-promotion behaviors”, *Health Promotion Practice*, Vol. 14 No. 3, pp. 451-458.

García-Llana, H., Bajo, M.A., Barbero, J., del Peso, G. and Selgas, R. (2017), “The communication and bioethical training (CoBiT) program for assisting dialysis decision-making in Spanish ACKD units”, *Psychology, Health & Medicine*, Vol. 22 No. 4, pp. 474-482.

García-Llana, H., Barbero, J., Remor, E., Celadilla, O., Trocoli, F., del Peso, G. and Selgas, R. (2012), “Beneficio de la realización de un taller en gestión emocional para enfermería nefrológica (Benefits of a workshop on emotional management for renal nurses)”, *Enfermería Nefrológica*, Vol. 15 No. 3, pp. 176-181.

García-Llana, H., Barbero, J., Remor, E., Díaz Sayas, L., Rodríguez-Rey, R., del Peso, G. and Selgas, R. (2011), "Impacto de un curso interdisciplinar de formación en Counselling y apoyo en la toma de decisiones a profesionales de un servicio de nefrología (Impact of an interdisciplinary training course on counselling and decision-making support for nephrology department professionals)", *Nefrología*, Vol. 31 No. 3, pp. 322-330.

García-Llana, H., Rodríguez-Rey, R. and Selgas, R. (2014), "Formación en asesoramiento psicológico (Counselling) y apoyo emocional a residentes de Nefrología: Estudio Piloto (Training on counselling and emotional support to nephrology fellows: a pilot study)", *Salud (i) Ciencia*, Vol. 20, August, pp. 362-367.

Grazian, D. (2009), "On the fireline", *Sociological Forum*, Vol. 24 No. 3, pp. 710-713.

Guidotti, T. and Clough, V. (1992), "Occupational health concerning firefighting", *Annual Review of Public Health*, Vol. 13, pp. 151-71.

Ide, C. (2013), "Survival of the fittest. The Safety & Health Practitioner", 10 ABI/INFORM Trade & Industry, October, pp. 52-54.

Kellehear, A. (2013), "Compassionate communities: end of life care as everyone's responsibility", *Quarterly Journal of Medicine*, Vol. 106 No. 12, pp. 1071-1076.

Kellehear, A. and Fook, J. (2010), "Bereavement care for the non-bereaved: a health promotion challenge", *Bereavement Care*, Vol. 29 No. 3, pp. 21-25.

Leiva, J.P. (2006), *FIT for CARE: A Compassionate Sports Community to Support Palliative Care in Three Countries*, European Association for Palliative Care, Marbella, available at: <https://eapcnet.wordpress.com/2015/07/13/fit-for-care- accompassionate-sports-community-to-support-palliative-care-in-three-countries/> (accessed November 6, 2017).

Loke, J., Farmer, W., Matthay, R.A., Putnam, C.E. and Smith, G.J. (1980), "Acute and chronic effects of firefighting on pulmonary function", *Chest*, Vol. 77, pp. 369-73.

Martínez, A.C. (1990), *Prevención laboral en entrenamientos para miembros del servicio contraincendios*, ISBN 84-404-7384-2, Universidad de Zaragoza, Zaragoza.

Moore-Merrill, L., Zhou, A., McDonald, S., Fisher, E. and Moore, J. (2008), *Contributing Factors to Firefighter Line-of-duty Death in the United States. Virtual Symposium on Reducing Firefighters Deaths and Injuries: Changes in Concept, Policy, and Practice*, Public Entity Risk Institute, Fairfax, VA.

Nuevo mínimo histórico en el número de víctimas mortales por accidente desde (1960), "Dirección General de Tráfico (DGT)", Ministerio del Interior, available at: www.dgt.es/es/prensa/notas-de-prensa/2016/20160104-nuevo-minimo-historico-numero-victimas-mortales-accidente-desde-1960.shtml (accessed November 6, 2017).

Nyatanga, B. and de Vocht, H. (2006), "Towards a definition of death anxiety", *Journal of Palliative Nursing*, Vol. 12, pp. 410-413.

Sandin, P. (2009), "Firefighting ethics: principlism for burning issues", *Ethical Perspectives*, Vol. 16 No. 2, pp. 225-251.

Sliter, M., Yuan, Z., Sinclair, R. and Mohr, C. (2014), "Don't Fear the Reaper: trait death anxiety, Mortality Salience, and Occupational Health", *Journal of Applied Psychology*, Vol. 99 No. 4, pp. 759-769.

Weick, K. (1996), "Drop your tools: an allegory for organizational studies", *Administrative Science Quarterly*, Vol. 41, pp. 301-313.

Corresponding author

Juan Pablo Leiva Santos can be contacted at: eliopabav@gmail.com

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com