

# **EMOTIONAL LABOR OF EMERGENCY SERVICE PROVIDERS**

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## **Abstract**

### **Emotional labor of emergency service providers**

**Sami Oubari**

This research focuses on emergency service providers and their emotional labor. In their work, emergency service providers are subject to positive and negative emotions, ranging from mild to traumatic. This is due to the nature of their work where they face sickness, death and violent accidents. Workers have to keep a professional demeanor and to stay calm and confident despite their true emotions. The research studies the relationships between the emotions felt, their emotional labor and their resulting performance. We survey 90 emergency workers in the Montreal Fire Department and the Lebanese Red Cross First Aid Teams. Participants are asked to describe a recent emergency call, and their emotions, emotional display and performance during the call. An independent sample of 87 respondents also provides ratings of the emotional tone of the events described. Our results show, depending on the sub-sample studied, different correlation among the variables. Some of the findings in the overall sample are a negative relationship between positive emotions and emotional labor, and a positive relationship between positive emotions and performance. As for the sub-samples, among the results are a negative relationship between surface acting and performance for the firefighters, and a negative relationship between positive emotions and deep acting for the paramedics.

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To my friends and family who have not seen me for a while, I appreciate your patience...

To the one who has been around, your support was priceless...

*To my parents who have sacrificed for my education and are always giving  
without return...*

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## **Introduction**

In most public-service jobs, front-line employees are required to treat clients not only with courtesy but also with friendliness, empathy and care even though the clients are complete strangers to them. They are frequently enjoined to be “nicer than nice”, and most importantly to treat “the one-hundredth [customer] with the same sincerity as the first” (Guy & Newman, 2004).

This phenomenon has been described as the “emotional labor” that service workers are required to perform on the job while interacting with clients. While emotional expressiveness describes the use of “facial expressions, voices, gestures and body movements to transmit emotions” (Pugh, 2001, p.3), emotional labor is described as “the management of feeling to create a publicly observable facial and bodily display” and as “labor that requires one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others” (Hochschild, 1983, p.7). That is, emotional labor is performed in order to affect the emotional state of the clientele in an organizationally desired way, such as making them feel comfortable, welcome or safe. Emotional labor is most often seen in jobs that require face-to-face contact with the client. For example, some jobs require seriousness and toughness such as police officers (Martin, 1999), while others require solemnity and somberness like funeral directors (Turner & Edgley, 1990) and jobs like flight attendants (Hochschild, 1983) and waiters/waitresses (Paules, 1991) demand constant cheer.

The emotional labor literature has largely focused on commercial and customer-service related businesses; the goal of this study is to extend our understanding of emotional labor to a new population — the emergency service worker. The existing

research that has come closest to this field has studied the emotional labor of nurses, although these were not working in emergency rooms (Bishop, 2005; Guy & Newman, 2004; Lewis, 2005; Mann, 2005) as well as 911 emergency dispatchers (Shuler, 1997). Emergency workers experience a different set of emotions from those felt by employees of business services — disgust, fear and guilt may emerge during the stressful situations they constantly face. It is likely that this intense work environment makes it harder for emergency personnel to perform emotional labor when interacting with frightened victims. Workers have to act calm and confident in order to make the patients and their families feel safe and secure, and have to show that they are in control of the situation.

In this study, we shall first explain the key elements of the emotional labor construct, then we shall apply these elements to an investigation of the feelings and behavior of emergency service workers. It is vital to expand our understanding of this population, so this study will partially fill a gap in the literature, as no past research on emotional labor has focused on extreme situations such as those encountered in the emergency response service. Equally important is the practical implication of this research that could provide recommendations to improve the performance of community-based organizations that are responsible for providing emergency services, and thus enhance the quality of their services.

### **A model of Emotional Labor**

Many researchers introduced different models of emotional labor but Mann (2005) presents a model that is specifically tailored for health care professionals who are considered a close match to first aid workers. The model consists of four parts which are the inducing events, the emotional conflict type, the emotional labor

performance and the positive and negative outcomes. The inducing events include dealing with different customer needs as well as the uncertainties linked to the working environment. This can be thought of as the pain felt by patients or the sight of their body injuries due to accidents, creating unwanted emotions such as sadness or disgust. The second component of the model, emotional conflict type, is either emotional dissonance or emotional harmony. In the former, health care and emergency workers have to suppress emotions such as annoyance and fear that might arise during their work, and that conflict with the expected professional feelings. In the latter, the employees may empathize with patients, so that their emotions match those of patients, but they should detach themselves from the patient's suffering and create an emotional distance in order to protect themselves from emotional attachment. Finally comes the emotional labor itself in the form of surface or deep acting and the resulting consequences.

### **Emotional Labor: Surface Acting and Deep Acting**

Emotional labor has been qualified in a number of different ways such as “a covert resource, an invisible yet expected component of job performance, the act of complying with organizationally mandated display rules, and the effort, planning and control needed to express organizationally desired emotion during interpersonal transactions” (Mastracci, Newman, & Guy, 2006, p.125). While these emotions can come naturally and without any “labor”, most of the time organizationally-desired emotions are not felt genuinely which leads to emotional labor. Certainly, there is less effort needed when emotions felt are close to those desired, but the effort is still required to exert the acceptable form of emotion display.

Researchers have distinguished between two levels of emotional labor: surface acting and deep acting. Hochschild (1983) was the first to introduce this concept which was later developed by other researchers such as Morris and Feldman (1996) and Diefendorff (2005). Surface and deep acting occur in the absence of truly felt emotions matching the display rules, which represent organizationally desired emotions during interpersonal transactions (Pugh, 2001). Display rules or feeling rules are referred to as “normative role expectations surrounding how to feel in different contexts” (Hochschild, 1983) and which work to regulate emotions and to serve as a tool for social control. Examples of feeling rules include feeling happy at a wedding, sad at a funeral (Sharpe, 2005) or friendly and welcoming when working at a restaurant. However, whenever the job’s display rules clash with the real feelings, workers suffer from a state of discomfort and tension called emotional dissonance, a conflict between genuinely felt emotions and display rules (Middleton, 1989).

Surface acting is described as faking unfelt emotions and/or repressing felt emotions, or simulating emotions that are not actually felt (Morris & Feldman, 1996) and is often portrayed as “acting in bad faith” (Diefendorff, Croyle, & Gosserand, 2005, p.340). Deep acting, on the other hand, is described as “modifying felt emotions so that genuine display follows” (Diefendorff et al., 2005, p.340) or as an attempt to actually experience the emotions that are required to display (Morris & Feldman, 1996). It is thought that it requires more effort because the role player must actively attempt to summon thoughts, images, and memories to get the desired emotion (Morris & Feldman, 1996) and is often illustrated as “acting in good faith” (Diefendorff et al., 2005, p.340).

These two strategies can be considered as compensatory strategies for employees who cannot show the appropriate emotions on the spot, that is, to actually

feel the required emotion (Diefendorff et al., 2005). Previous research has shown that surface acting and deep acting have an impact on the interactions between service workers and their customers. Pugh (2001) in his study of 131 bank tellers found a positive relationship between the display of positive emotions by employees and customer positive affect, leading to a higher rating by these customers of service quality received. A survey of 64 restaurant servers (Grandey, Fisk, Mattila, Jansen, & Sideman, 2005) showed that the perceived authenticity of the restaurant server is positively related to customers' evaluation of his or her friendliness and that perceiving the service employee as inauthentic creates a less positive impression about the characteristics of that service provider. More importantly, authenticity uniquely predicted the overall satisfaction with the encounter while the predictors of satisfaction - task performance and perceived friendliness - were strongly interrelated. Collishaw et al., (in press) sampled the emotional display perception of fitness instructors by 132 clients. The results showed that a positive relationship exists between the instructor's deep-acted vitality and their clients' positive affect, between clients' perception and their satisfaction and between positive affect and satisfaction.

### **Emotions and emotional labor of emergency workers**

In the case of emergency workers, we may question whether the use of surface acting and deep acting would operate in the same way. Indeed they are unique service workers, as they deal with death and sickness on daily basis and under intense pressure of time. As they are the first to arrive on emergency scenes like road accidents and fires, they may have to make life or death decisions concerning the patients' lives as well as their own. This makes the nature of their emotions as well as their surface and deep acting very different from typical service workers especially

that work in the emergency field tends to be very unstructured with frequent unexpected events.

**Emotions of emergency workers:** A case study by Shuler (1997) of 17 emergency dispatchers and another one by Tracy and Tracy (1998) involving 20 emergency call-takers have shed light on the emotions experienced by one type of emergency workers that can share a lot with other emergency workers like paramedics or firefighters. They experience a range of “messy and overlapping” (Tracy & Tracy, 1998, p.400) emotional situations including sadness, anxiety, disgust, powerlessness, irritation, amusement and complex combinations of emotions (Tracy & Tracy, 1998). Sadness and distress are mostly experienced when they are confronted with the tragedies of others (Tracy & Tracy, 1998) that make them sympathize with the victims. Although they usually try not to get “too emotionally involved” (p.397), this does not stop them from feeling close and understanding of the people calling them as they are usually dedicated to helping people (Shuler, 1997), a reason behind their choice of job. Another major source of sadness is when they identify with the person calling them or with the incident taking place especially when the person calling is their age and comes from a similar background. Indeed they feel that these cases “hit close to home” (p.397), meaning that themselves or one of their friends or family members have previously had this particular incident, making them relive the same experience. In addition, emergency workers typically deal with disgusting and revolting situations (Tracy & Tracy, 1998) such as when hearing about or directly dealing with body fluids and secretions that most people would refuse to get close to. Stress and anxiety have been also seen by many researchers as highly present among emergency workers. Call-takers experience intense pressure and stress when they have to handle logistically-complicated calls, for they should act fast and precisely to

ensure that the victims get the proper help in the proper time, thus making critical life-or-death decisions. An experimental study by Gaines and Jermier (1983) of 169 policemen also presents police work as being highly stressful mainly because of the physical danger they encounter and its effect on themselves and their families. We can relate this to firefighters and paramedics as the former face dangerous fire situations and the latter risky combat situations, especially those who work in times of war. For example, until now, many Red Cross members have fallen while on duty in Lebanon, mostly in combat environments, with the last one dating only months ago (British Red Cross, 2006). Furthermore, Tracy and Tracy (1998) mention the feeling of powerlessness and identify it as a mixture of guilt, anger, sadness and stress. As some events are too hard or even impossible to handle, emergency workers cannot help but blame themselves for anything that goes wrong especially when human lives are on the line. This typically happens with call-takers since they have little power over the outcome of the call (Tracy & Tracy, 1998) and with other emergency workers when victims and patients die even though they got all the possible help. In addition, a major emotion felt by emergency workers is the excitement and “adrenaline rush” stemming from extreme situations that they encounter. Indeed Shuler (1997) describes them as “adrenaline junkies” who take pleasure in the element of unpredictability in their job that makes them hooked on the rush and excitement while one dispatcher describes this feeling as stemming from a “heightened level of danger that [...] gets your blood pumping” (p.166). In extreme cases, some emergency dispatchers wait and wish for what they call a “good call” in a hope of more interesting work, although “good calls” usually mean that other people are having a terrible experience, getting hurt or even dying. Typical exciting calls usually involve victims of real fire emergencies or ones that are “hanging on by a thread” (p.167); these calls push the

emergency workers to take decisive actions and life-or-death decisions. Finally, irritation stemming from uncooperative people also finds place in call-taker's feelings as they struggle to get the appropriate information while callers are just focusing on other non-critical information. Tracy and Tracy (1998) briefly mention how call-takers might actually feel amusement at times after receiving funny, non-serious calls from intoxicated or drunk people which become a source of jokes and anecdotes among the workers. They could also feel satisfaction and even happiness whenever they succeed in saving someone's life.

**Feeling rules in the emergency field:** Emergency workers are expected to take control of the situation whether it is a telephone conversation or an actual rescue mission. Also they are supposed to show a calm and professional behavior at all time and not be emotionally involved (Tracy & Tracy, 1998). When taking a closer look at the feeling rules of call-takers, Tracy and Tracy (1998) note that although some of the feeling rules are internal (e.g., "don't get emotionally involved", "you can't take it personal"), the majority refers to the appropriateness of behavior and communication when processing a call (e.g., to display interest and care, to give sound advice). These rules shape the way in which emergency workers are supposed to show their emotions, giving special attention to keeping an emotional distance between them and the callers. In fact, informal rules stress on the need to deny or quickly forget the sadness and distress felt during the call, and to move on as soon as possible in order not to hinder the quality and effectiveness of their future work (Tracy & Tracy, 1998).

**Emotional labor of emergency workers:** On the emotional labor level, dispatchers often deal with calls that include a stressed and even frightened caller expecting to get the appropriate help from them (Shuler, 1997). In order to "take control" the dispatchers should be as professional as possible, meaning they should



detach themselves emotionally from the current situation, hide emotions such as fear and stress (Shuler, 1997), manifest a calm and professional demeanor (Tracy & Tracy, 1998) and not be emotionally involved. In summary, the researchers describe the complexity of the emotional labor performed by emergency workers as “double-faced emotion management” (p.407) where they have to handle the callers’ emotions like anger or fear while at the same time managing their own feelings like disgust or powerlessness. An example of this strategy is when call-takers provide practical advice to the callers, thus calming them down and at the same time reducing their own feeling of powerlessness (Tracy & Tracy, 1998). This strategy might not be limited to emergency call-takers. We propose that it might also apply to emergency workers who are dealing with clients in person, not just over the telephone. Emergency workers can calm down a hysteric victim and lead him/her to safety while at the same time feeling that they are accomplishing a significant act.

Comparing the emotions and the feeling rules of emergency workers with other types of employees offers us a clearer picture of the overall emotional labor process. For example, workers in the entertainment field, like adventure guides, have to show, among other feelings, cheerfulness, enthusiasm and calmness, regardless of their true feelings. They perform this in order to generate fun and to create a feeling of safety among their clients (Sharpe, 2005). Also, when considering the work context of belated bills collection, we can see that the employees are expected to act in a completely different way than what they are actually feeling and differently from other work contexts. Indeed, in a qualitative study performed in bill collection organization, Sutton (1991) presents the seemingly unusual role that bill collectors have to play and the emotional dissonance they experience. In order to force debtors to pay their money, they are required to show irritation and even anger when dealing

with sad debtors although they might actually feel sympathy towards them. Also when dealing with angry debtor they are expected to stay calm or neutral although themselves are feeling irritation and anger. At some points they purposely act mean and unpleasant so that the clients would feel obliged to pay to escape their constant hassle (Sutton, 1991). Contrasting bill collectors with typical customer-oriented employees in a retail store shows quite a difference in their behavior. As unpleasant as bill collectors are supposed to be, supermarket clerks have to be courteous, welcoming, polite and friendly even if they do not feel this way (Sutton & Rafaeli, 1988). After this comparison we can see that the same pattern is repeating although the work context is very different. Just as emergency dispatchers have to stay neutral when they are sad, as adventure guides have to generate fun when they are actually bored, as bill collectors have to show irritation and unpleasantness when they feel sympathy and as store clerks have to show warmth as they are having a bad day, emergency workers should follow the same pattern: showing confidence and calmness and neutrality when they are stressed, scared and sad. We believe that the difference between the emotions and the resulting emotional labor might be only due to the difference in work context and not to the content of their behavior. They all show feelings that are organizationally-desired instead of what they actually feel or believe in.

Considering the nature of the emotions felt by these emergency workers, we would speculate that they would act differently regarding the positivity or negativity of these emotions. Thus they would use less emotional labor (surface and deep acting) with positive feelings because these feelings are considered appropriate and are consistent with the feeling rules. Thus service providers would be actually

experiencing true emotions that match the feeling rules and do not need to cover them up. But when they have negative emotions such as sadness or disgust, they would use more surface acting to hide them as they are inappropriate.

H1 (a): The greater the positive emotions felt by emergency workers, the lower their surface acting will be

H1 (b): The greater the negative emotions felt by emergency workers, the higher their surface acting will be

In addition, we propose that they would use less deep acting when they feel negative emotions in order to keep a healthy emotional distance between them and the patients. If a patient is severely injured, and the emergency worker convinces him- or herself to believe that all will turn out well and the patient will be sure to recover, then if things go badly, the worker will be devastated. They might get a deep emotional trauma, maybe even causing depression. Thus, whenever the workers are faced with negative emotions, we hypothesize that they will deep act less. But whenever they are feeling positive emotions, we assume that they will not try to hide them as these emotions coincide with the feeling rules. Thus they will use less deep acting when experiencing positive feelings.

H2 (a): The greater the positive emotions felt by emergency workers, the lower their deep acting

H2 (b): The greater the negative emotions felt by emergency workers, the lower their deep acting

## **Other Dimensions of emotional labor**

Morris and Feldman (1996) list several other dimensions of emotional labor. The most important are the intensity of emotional labor, emotional dissonance, frequency, variety and duration of managing one's emotions.

Intensity refers to how strongly and with what magnitude an emotion is experienced or expressed, and is considered to be one of the most important factors affecting customers and is positively related to emotional labor (Morris & Feldman, 1996). This is due to the fact that people could be convinced or intimidated if the employee shows his/her emotions in a strong and deep way. It could also be considered as the most important dimension since firefighters working in a hazardous environment such as a fire have to show very intense emotions as it is the only way to create a bond among themselves as a team and between them and the victims. They have to prove strength of character and, in some extreme circumstances, they have to intimidate the victims in order to make them follow their orders under the stress and intensity of the situation.

The second dimension is characterized by the emotional dissonance that service providers feel when their felt emotions are different from what is required from them to show. Although it is considered to be a consequence of emotional labor, Morris and Feldman (1996) classify it as a dimension. Being empathetic and caring toward a physically and psychologically repulsive patient is not an obvious reaction, but health care providers have to overcome this emotional obstacle and make their patients feel as comfortable and loved as possible. Also emergency workers work most of the time in almost chaotic situations, though they should be able to show confidence and calm.

Frequency of emotional display is one of the most researched areas and has proven to be a key factor in emotional labor, as the more often employees are required

to show a certain feeling, the more they have to surface or deep act (Morris & Feldman, 1996), although a study by Diefendorff (2005) showed no support for any relationship between this factor and the different aspects of emotional labor. Emergency workers cover shifts from twelve to 48 hours a week in which they respond to up to fifteen calls a shift. This proves to be rather intense in terms of frequency of emotionally-filled interactions

Variety of emotions showed on the job, is positively related to the degree of emotional labor required by workers, as when they alternate through different emotions, they have to engage in active planning and conscious monitoring of their behavior (Morris & Feldman, 1996). The studied population has to deal with emotions relative to risky situations such as toughness, as well as comforting situations requiring one-to-one care and empathy with patients and victims, during a same mission.

Finally, duration of emotional display is another factor. As the interaction with a client becomes longer, workers are forced to bond more with clients and to exceed a simple thank you or a smile, for more personal socialization, leading to more labor (Morris & Feldman, 1996). Duration of tasks is seen as having a positive relationship with deep acting but has no supportive results for its relationship with surface acting and naturally felt emotions (Diefendorff et al., 2005) A first aid provider helps and cares for a patient for a period of time ranging between twenty minutes and one hour, depending on the circumstances of the call which highly exceeds a typical interaction between a store first-line staff and a customer.

In conclusion, after looking at the emotional dissonance as well as the intensity, duration, and variety of emotional labor in the daily work of emergency service providers, we can say that emotional labor is a major part of their work. Indeed as

these factors are directly related to surface and deep acting, we expect emotional labor to increase as these dimensions increase.

### **Antecedents of emotional labor**

The antecedents of emotional dissonance are the form of interaction, affectivity and job autonomy. Face-to-face interactions require more labor than phone interactions as they require facial and bodily control, while employees with higher autonomy will experience less emotional dissonance as they could more easily violate the organizational rules of emotional display (Morris & Feldman, 1996).

Antecedents of frequency of emotional display are the explicitness of display rules and the closeness of monitoring. That is if the display rules are clearly explained and the employees closely monitored, more emotional labor will be performed, as positive display rules are thought to be positively related to deep acting and negative display rules to be positively related to surface acting (Diefendorff et al., 2005). Display rules are usually informally but well explained in the emergency service field and workers are closely monitored by their leaders, especially when they lack experience. Also gender is considered to be moderating factor in the frequency of displayed emotions as women are thought to be more expressive than men.

The previously mentioned dimensions are all inter-related. Frequency of emotional display and attentiveness to required display rules are negatively related, while frequency of emotional expression and emotional dissonance are positively related.

Duration and intensity are positively associated with variety of expressed emotions. Also, duration and intensity are positively related to emotional dissonance.

Finally, variety of expressed emotions is negatively associated to emotional dissonance

In general, then, we might predict that emergency workers experience a great deal of emotional labor, because they experience, intense and varied rescue missions. These dimensions being inter-related, we conclude that emotional labor is an important part of emergency work.

### **Consequences of emotional labor**

#### **1. Effect on workers**

Researchers have examined many consequences of emotional labor, with somewhat contradictory findings, ranging from negative to positive. Hochschild (1983) linked it to problems such as drug and alcohol abuse, absenteeism, lower job satisfaction and self-esteem while other studies argued it is associated with heart problems, ulcers, back pain, high blood pressure, chronic fatigue (Shuler, 1997), poor self-esteem, depression, cynicism, role-alienation, self-alienation (Ashforth & Humphrey, 1993), role overload (Wharton & Erickson, 1993), lack of work identity (Van Mannen & Kunda, 1981) and feeling robotic and unempathetic (Albrecht & Zemke, 1985). Tolich (1993) performed a case study including 65 supermarket clerks and established that although they liked their job, many clerks suffered from burnout. Kahn's (1990) case study of 16 summer camp counselors and 16 firm members revealed that emotional labor caused lack of openness with co-workers among the studied sample.

Emergency workers suffered from psychological problems such as built-up anger, depression, emotional exhaustion, feeling of diminished personal accomplishment, depersonalization (loss of personal identity) and desensitization due to the extreme situations they have to deal with as part of their job (Shuler, 1997). Finally, one study found that employees who engage in frequent emotional labor reported lower job satisfaction and job performance as well as lower happiness and more depressive symptoms (Adelmann, 1989). Workers in low emotional labor occupations reported being more satisfied in their jobs than those in high emotional labor jobs. Also workers in high emotional labor contexts scored lower on well-being variables like self-esteem, happiness, depressive symptoms, health and anomie. The negative consequences generally stem from the fact that workers suffer from “feelings of estrangement and alienation from self” when their displayed emotions are different that the ones truly felt (Sharpe, 2005). Whenever an individual shows two emotions that are psychologically inconsistent, they suffer from emotional dissonance (Mann, 2005), especially among those who have lower job autonomy and job involvement (Wharton, 1993) as well as less experienced employees (Kruml & Geddes, 2000). Indeed Kruml and Geddes (2000) performed a field study on 427 service employees and found out that employees are more likely to experience emotional dissonance when they are older, less experienced, when customers exhibit negative emotions and when they have less autonomy in choosing how they express their emotions.

On the other hand, in her field study of 622 hospital and bank employees, Wharton (1993) found no evidence of emotional exhaustion resulting from emotional labor, and stated that emotional labor is positively related to job satisfaction, while other results showed increase in job involvement and control at work. Also, emotional labor has proved it could protect the health care providers from getting “too involved



and weakening their clinical judgment” (Mann, 2005, p.312) by letting them distance themselves cognitively by acting rather than experiencing the required emotion. Considering the significance of their job, emergency workers might get too involved in the relationship with their patients. Although this relationship is rather short, it is very emotionally filled especially when the victims are in a critical condition. Thus emotional labor (surface acting) is very important for them to distance themselves and keep themselves in a healthy position, whereas deep acting brings them emotionally closer to the patients, which is an unhealthy behavior.

## **2. Effect on clients**

Most importantly, the employees’ emotional labor can have a significant effect on the clients being served, whether they are patients, accident victims or customers. Indeed nurses providing reassurance, comfort and safety for their patients have directly affected their psychological and physical well-being and recovery (Mann, 2005). Other customers have showed that they enjoyed more positive effect with the display of positive emotions by workers and have rated the service received higher in quality (Pugh, 2001), while some have been impressed and by the level of control their guides showed in critical and decisive times which reflected in feeling of safety (Sharpe, 2005).

Considering the positive and negative effects of emotional labor, it is important to examine whether or not a relationship exists between emotions, emotional labor and performance.

## **Emotions and performance**

The relationship between performance and emotions felt on the job is not researched a lot and has conflicting results. Some researchers have demonstrated that positive mood (a dimension of affect) facilitates problem solving and enhances creativity while others have found that negative mood fosters creativity while positive mood discourages it (George & Zhou, 2002).

On one hand, individuals who are artificially put in a positive mood perform better on creative, interpersonal, negotiation, decision making and problem-solving tasks, although the author notes that the direction of influence is inconclusive (Fisher & Noble, 2004). Also, Staw, Sutton and Pelled (1994), found that employees who had positive emotion on the job had more favorable supervisor evaluation and more supportive social context. They hypothesized that this is due to the fact that these employees become more likable and are more prone to helping others when they are in good mood. Older research (Isen, Daubman, & Nowicki, 1987) also shows that subjects in a positive-affect condition (created by showing them a short comedy film or a small gift) came up with more solutions for problems than control subjects, possibly through creating a complex cognitive context created by positive affect. Accordingly, positive feelings facilitate access to positive material in memory, which is considered to be more extensive and diverse than negative material.

On the other hand research by Totterdell (1999) showed that although professional cricket players were in more positive mood and they were more energetic, enthusiastic, and focused when they performed better, some of them performed better when they were feeling tenser. Indeed one study (Wright, Cropanzano, & Meyer, 2004) using the Positive and Negative Affect Scale (PANAS)

has found that negative mood was significantly related to job performance while no relation was found between positive mood and performance.

Finally, in the emergency field, performance is measured by the components such as the application of good rescue procedures or the controlling of the emergency scene. Emergency workers are expected to be alert, active, to control the variants in the field and to act decisively. Also they should apply what they have learnt in training, meaning that they use the right equipment in an effective way, to manage their team members and/or to follow the team leader's orders. Finally a clear and fast communication between them and their team members is crucial for any rescue mission to run smoothly.

We expect previous results to apply to the emergency work context as argued before. We expect performance to be positively related to positive emotions as suggested by the majority of past research, and following the same logic, we would assume that performance is negatively related to negative emotions. We expect that to be due to the improvement in the resulting interpersonal skills and the easier access to a greater amount of information in memory due to positive emotions, and the opposite in case of negative emotions.

H3 (a): The greater the positive emotions of emergency workers, the higher their performance will be

H3 (b): The greater the negative emotions of emergency workers, the lower their performance will be

## **Emotional Labor and Performance**

Despite all this research, only a few studies have focused on the relationship between emotional labor and performance and again, the results are equivocal. One study of 576 convenience stores (Sutton & Rafaeli, 1988) found a weak but significant negative relationship between displayed emotions and store sales. Another study of 318 employees in the service field (Gosserand, 2003) found that surface acting was insignificantly negatively related to customer service performance while deep acting was also insignificantly but positively related to customer service performance and more analyses revealed that job satisfaction mediated the relationship between surface acting and customer service performance. Grandey (1999), in a study of 600 university administrative assistants noted that performance of employees that surface acted had been rated lower than others', while deep acting was positively related to performance.

Considering these results, and taking in consideration the emergency work context, we expect surface acting to be negatively related to performance. Since most of the literature negatively related surface acting to performance, we hypothesize that surface acting requires a lot of energy and might distract the worker from the task, thus affecting the performance of emergency workers negatively. We also suppose that deep acting is negatively related to performance since it can ruin the defensive mechanism of the service provider as it removes the protective emotional distance between the workers and the patients. Here we are assuming that when they have positive emotions they do not need to surface or deep act (as explained earlier), thus the only emotional labor done is due to the presence of negative emotions.

H4 (a): The higher the surface acting of emergency workers, the lower their performance will be

H4 (b): The higher the deep acting of emergency workers, the lower their performance will be

## **The Research Sample**

In this study, firefighters and paramedics were asked to describe their emotions, emotional labor and performance. One sub-sample was made up of members of firefighters from the Montreal Fire Department while the other sub-sample consisted of the Lebanese Red Cross First Aid Teams. The Montreal firefighters are salaried workers and are responsible for covering fire emergencies as well as other non-fire related emergencies in the greater Montreal region. They are well equipped and trained by the city of Montreal and usually answer calls regarding fires, car accidents, hazardous materials as well as other emergencies. As for the Lebanese Red Cross members, they are all volunteer paramedics but they only differ from other emergency workers in the fact that they are not remunerated. Indeed they have to cover fixed weekly shifts in their respective centers, they are fully trained by the Lebanese Red Cross and adequately equipped with first aid material. Also they are responsible for answering a large part of the country's medical emergency calls, besides the government's Civil Defense services, and that is in time of peace and war. For example, during the July 2006 Lebanese-Israeli war, they evacuated 979 wounded persons, transported 7,097 medical cases and collected 394 bodies (International Committee of the Red Cross, 2006).

## **Research Hypotheses**

Based on the available literature on emotions in the workplace, emotional labor and their effect on performance, research hypotheses have been proposed. They focus on the relationship between positive/negative emotions and surface/deep acting, the relationship between positive/negative emotions and performance, the relationship between surface/deep acting and performance, and the relationship between age/experience and surface/deep acting. The following section lists the hypotheses that have been presented in this introduction:

H1 (a): The greater the positive emotions felt by emergency workers, the lower their surface acting will be

H1 (b): The greater the negative emotions felt by emergency workers, the higher their surface acting will be

H2 (a): The greater the positive emotions felt by emergency workers, the lower their deep acting

H2 (b): The greater the negative emotions felt by emergency workers, the lower their deep acting

H3 (a): The greater the positive emotions of emergency workers, the higher their performance will be

H3 (b): The greater the negative emotions of emergency workers, the lower their performance will be

H4 (a): The higher the surface acting of emergency workers, the lower their performance will be

H4 (b): The higher the deep acting of emergency workers, the lower their performance will be



## **Method**

### **Participants**

Two emergency response departments participated in the study between Canada and Lebanon: The Montreal Fire Department (Canada) and the Lebanese Red Cross First Aid Teams. Most of the respondents were chosen according to their physical proximity to the researcher since they had to be visited in order to get the highest response rate.

The scale was first pre-tested by five firefighters from the Montreal Fire Department and five first aid providers from the Lebanese Red Cross. They were asked to complete the survey, and then comment on the meaningfulness, difficulty and relevance of the questions, based on their work experience. Some modifications were introduced afterward.

In order to get official permission to approach the Montreal firefighters, the department of Communication and Media Relations was contacted and the responsible of communication granted the permission to visit four fire stations in the downtown area. The questionnaire was then translated into French by a professional translator and distributed to four centers, each comprised of four different teams. The firefighters were asked to complete the surveys and store them in individual envelopes (for the purpose of confidentiality) before an appointed pick-up date by the researcher, one week later. They were also called several times later during the week in order to remind them to participate in the study. Unfortunately this sampling approach was not fruitful. A second attempt was made, but this time the researcher visited all teams in the centers and asked them to complete on the spot, copies that he had brought with him, and this proved to be more successful.

Approaching the Lebanese Red Cross First Aid Teams was aided by the researcher's previous involvement in this department which insured him entry into the different centers. The questionnaire was translated into Arabic and the respondents were given the choice to answer in the language of their choice (Arabic, French or English) and were assisted by the researcher when they had vocabulary issues. All the centers were visited and the participants asked to fill the questionnaires on the spot as this has previously proved to be the most efficient way with the Montreal firefighters.

Four downtown centers of the Montreal Fire Department agreed to complete the surveys whose population consisted of 157 firefighters, of whom 41 responded, resulting in a 26 % response rate.

All the respondents were male. Their average work experience was around 15 years, ranging from 1 to 32 years and their age average was 38, ranging from 26 to 52 years.

As for the Lebanese Red Cross First Aid Teams, Five centers in and around Beirut were visited and consisted of 128 paramedics, of whom 49 responded for a 38 % response rate.

Their average work experience was around 3 years, ranging from 4 months to 10 years and they were on average 24-year-old, with the youngest being 17-year-old and the eldest 32. They were 69 % men and 31 % women.

Therefore, the total number of participants was 90 consisting of a 32 % response rate.

## Measures

In the questionnaire, participants were asked to keep in mind one memorable emergency call in the last six months. Participants were asked for a brief description of the emergency call and they were asked a series of questions about their feelings, their emotional labor and their performance during this event. Three scales were developed to measure **Emotions**, **Emotional labor** and **Performance**.

### 1. Emotions scale

This was a list of thirty-six positive and negative emotions describing one's feelings. It is mainly based on the previously used and validated PANAS scale by Watson et al. (1988) with some modifications made, based on the recommendations provided by the pre-testing sample. The following points were taken verbatim from the original scale: *Very slightly*, *A little*, *Moderately*, *Quite a bit* and *Extremely*. Almost half of the adjectives used to describe emotions had been taken from the same scale: *Enthusiastic*, *Determined*, *Excited*, *Alert*, *Active*, *Strong*, *Proud*, *Attentive* (positive emotions), *Scared*, *Afraid*, *Upset*, *Distressed*, *Nervous*, *Ashamed*, *Guilty*, *Irritable* and *Hostile* (negative emotions). The following had been added to fit the nature of the feelings experienced on duty by emergency service personnel, as suggested by many respondents of the pre-testing sample: *Calm*, *Satisfied*, *Enjoyed*, *Optimistic*, *Pleased*, *Happy*, *Content* (positive emotions), *Helpless*, *Pessimistic*, *Anxious*, *Unhappy*, *Disappointed*, *Disgusted*, *Frustrated*, *Embarrassed*, *Depressed*, *Discouraged*, *Angry* and *Worried* (negative emotions). Also based on the pre-testing recommendations, three adjectives that were found to be unrelated to the emergency service context were removed (*interested*, *inspired* and *jittery*). The adjectives were concentrated in one question (*Describe your emotions during this emergency call*) but

randomized between positive and negative feelings. The internal consistency reliability of the positive emotions scale was  $\alpha = .906$  and for the negative emotions scale was  $\alpha = .916$ .

In another approach to measuring the emotions experienced by the emergency workers, we analyzed the emotional tone of their qualitative descriptions of the event, examples of which, are the following: *I Performed CPR for the first time in my life and the patient died and I felt really depressed, A truck hit a 9-year-old boy his head was crushed and his brain and heart were thrown out of his body.* A two-dimensional scale was created based on Watson and Tellegen (1985) two-factor structure of affect. The first dimension looked at the “Pleasantness” and “Unpleasantness” of the events based on a five-point Likert scale ranging from *Very Unpleasant* to *Very Pleasant*. The other dimension, labeled by “High arousal” and “Low arousal”, looked at the self-arousal of the emergency workers in what they had experienced. It is also coded according to a five-point Likert scale ranging from *No adrenaline-rush* to *High adrenaline-rush*, instead of the term “arousal” which could be misinterpreted. The qualitative descriptions collected from the questionnaires were first translated to English then coded by 87 undergraduate university students for the pleasantness scale and 68 students for the arousal scale. The difference in the number of raters is due to the fact that 19 raters chose not to completely answer the questionnaire. Every description by the emergency workers was rated on the Pleasantness/Unpleasantness and High arousal/Low arousal scales and each description was given an average score based on the ratings. The internal consistency reliability of the pleasantness scale was  $\alpha = .953$ , while the internal consistency reliability of the arousal scale was  $\alpha = .976$ . The goal of introducing this external and different rating procedure is to overcome the

common methods variance due to the fact that the same participants rated the whole questionnaire. This way it validates the participants' ratings of their own emotions and emotional labor.

## **2. Emotional labor scales**

This was a scale with a total of 11 items and two dimensions, rated on a five-point Likert scale (*Strongly Disagree* to *Strongly agree*) describing different levels of emotion control. It was based on well-validated scale by Diefendorff et al. (2005) with minor modifications: the term “customers” had been replaced by “victims or team members” in order to fit the emergency service context. It was divided into two dimensions, describing “Surface acting” and “Deep acting” but the statements reflecting each dimension had been randomized and mixed with the performance scale in one part. The surface acting measure had seven questions: *I faked the emotions I showed when dealing with victims or team members, I showed feelings to victims or team members that are different from what I felt inside, I just pretended to have the emotions I needed to display during the emergency calls, I put on a “show” or “performance” when interacting with victims or team members, I put a “mask” in order to display the emotions I needed during the emergency calls, I faked a calm mood when interacting with victims or team members and I put an act in order to deal with the situation in an appropriate way.* The seven items had an internal consistency reliability of  $\alpha = .763$  in the current study.

The “Deep acting” dimension had four questions and was characterized by the following statements: *I worked hard to feel the emotions that I needed to show during the emergency calls, I made an effort to actually feel the emotions that I needed to display toward the victims or team members, I tried to actually experience the*

*emotions that I must show during the emergency calls and I worked at developing the feelings inside of me that I needed to show to victims or team members.* It had an internal consistency reliability of  $\alpha = .801$  in the present study.

### **3. Performance scale**

This was a behavior-based, five-point Likert scale of 12 items, with a list of behaviors describing the workers' performance in the field. It was a tailor-made measure, completely conceived by the researcher, based on his previous experience in the first aid field, as no existing scale fitted the context of the study. The statements covered issues such as communication, nature of feedback, and good application of previous training. The following are the twelve questions that were used: *I communicated well with my team members, I gave the right orders/I followed the orders well, I communicated well with the victims, I applied well what I have learnt (theoretically and practically), I was alert and active, I received positive feedback from my team members/team leader, I was thinking clearly, I used the right equipment, I controlled all the variants, I acted decisively, I managed the situation well and I used the equipment needed effectively.* The internal consistency reliability of this scale was  $\alpha = .926$ . The statements describing performance were randomized and mixed with the statements describing emotional labor, as stated above. Also the same five-point rating was used which varies between *Strongly disagree* and *Strongly agree*.

Finally, commonly used demographic questions were used to get information about the years of experience of the participants as well as their age.

## **Data preparation**

In order to verify that the data was entered correctly and that no evident mistakes were done, a descriptive statistics table was made showing the minimum and maximum values and the total number of variables.

After all the questionnaire items had been coded, a single variable was created for every multi-dimensional construct consisting of the mean of its items.

## **Results**

As a first step, we conducted a factor analysis to validate the factor structure of the emotional labor and performance scales in this sample of emergency workers.

The results of the analysis are presented in Table 1, which shows that the items within each of the three scales were related as expected. Thus we concluded that the emotional labor scales work the same for emergency workers as in the other contexts found in the literature.



*Table 1: Factor analysis of emotional labor and performance scales*

	Component		
	1	2	3
Surface acting 1	-.155	<b>.648</b>	-.140
Surface acting 2	-.312	<b>.616</b>	.355
Surface acting 3	-.118	<b>.804</b>	.112
Surface acting 4	-.351	<b>.769</b>	.092
Surface acting 5	-.326	<b>.499</b>	.219
Surface acting 6	-.197	<b>.495</b>	.390
Surface acting 7	-.240	<b>.728</b>	.228
Deep acting 1	.114	.029	<b>.616</b>
Deep acting 2	.036	.220	<b>.797</b>
Deep acting 3	.078	.093	<b>.809</b>
Deep acting 4	-.053	.100	<b>.769</b>
Performance 1	<b>.778</b>	-.045	.006
Performance 2	<b>.817</b>	-.197	.109
Performance 3	<b>.581</b>	-.246	.277
Performance 4	<b>.782</b>	-.238	.011
Performance 5	<b>.789</b>	-.127	.012
Performance 6	<b>.693</b>	-.184	-.093
Performance 7	<b>.629</b>	-.358	.079
Performance 8	<b>.636</b>	-.205	.103
Performance 9	<b>.672</b>	-.080	-.131
Performance 10	<b>.739</b>	-.216	-.024
Performance 11	<b>.784</b>	-.262	-.070
Performance 12	<b>.803</b>	-.270	.062

*Note.* Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

Next, tests for multicollinearity were performed for constructs that could be interrelated, but only age and experience had been found to be highly related (VIF = 11.004). This is considered normal and was expected as experience typically increases with age. Surface acting and deep acting had a VIF of 1.078 and positive and negative emotions a VIF of 1.144.

Using the five-point emotions scale with five being the highest, participants had rather more positive emotions on average ( $M = 3.39$ ,  $SD = .869$ ) than negative emotions ( $M = 1.91$ ,  $SD = .736$ ). On the five-point emotional labor scales, they scored less than the mid point on surface acting ( $M = 1.74$ ,  $SD = .734$ ) and more than the mid point on deep acting ( $M = 2.71$ ,  $SD = .973$ ). Finally, they had highly rated themselves on the five-point performance scale, with a mean of 4.266 and a standard deviation of .587.

### **Differences between sub-samples**

Next we controlled for the type of emergency workers to verify the differences between the two sub-samples, the paramedics and the firefighters. Independent sample t-tests were conducted with surface acting, deep acting, positive emotions, negative emotions and performance. We found that there was no significant difference between the two groups in deep acting ( $t = .476$ ,  $p = .318$ ) and positive emotions ( $t = .398$ ,  $p = .346$ ) and that there was a marginal difference in performance ( $t = 1.762$ ,  $p = .041$ ). Significant differences existed in surface acting ( $t = 5.368$ ,  $p < .01$ ), negative emotions ( $t = 2.608$ ,  $p = .006$ ), age ( $t = 13.143$ ,  $p < .01$ ) and experience ( $t = 9.966$ ,  $p < .01$ ). Indeed, in surface acting, firefighters ( $M = 1.35$ ,  $SD = .572$ ) scored lower than paramedics ( $M = 2.08$ ,  $SD = .692$ ) and firefighters also showed less negative emotions ( $M = 1.69$ ,  $SD = .804$ ) than paramedics ( $M = 2.09$ ,  $SD = .629$ ). Table 2 lists the mean differences among the overall sample and the two sub-samples. More specifically, the three highest rated positive emotions among the overall sample were *Determined* ( $M = 4.19$ ), *Active* ( $M = 4.13$ ) and *Attentive* ( $M = 4.05$ ), while the three highest rated negative emotions were *Anxious* (2.92), *Worried* ( $M = 2.83$ ) and *Unhappy* ( $M = 2.25$ ).

After comparing the two sub-samples, we found that firefighters were mostly *Determined* (4.3), *Attentive* (4.13) and *Active* (4.0) while their highest ranked negative emotions were *Worried* (2.68), *Nervous* (2.31) and *Anxious* (2.15). On the other hand, the paramedics scored the most on being *Enthusiastic* (4.26), *Active* (4.23) and *Determined* (4.09) and their highest ranking negative emotions were *Anxious* (3.58), *Worried* (2.96) and *Distressed* (2.65). Finally firefighters were older ( $M = 38$ ,  $SD = 7.187$ ) and more experienced ( $M = 14.81$ ,  $SD = 7.903$ ) than paramedics (age:  $M = 23.55$ ,  $SD = 2.534$  and experience:  $3.071$ ,  $SD = 2.162$ ). Table 3 summarizes the means of the highest ranking emotions in the overall sample and the two sub-samples. Considering these results, the sample is divided into two sub-samples of firefighters and paramedics. We will report the results of the overall sample as well as the two sub-samples and use a 10% significance level due to the subsequent small samples sizes.

*Table 2: Mean difference between the sub-samples on the major variables*

	Overall sample	Firefighters	Paramedics	t	p
Positive emotions	3.39	3.35	3.43	.398	.346
Negative emotions	1.91	1.69	2.09	2.608	.006
Surface acting	1.74	1.35	2.08	5.368	< .01
Deep acting	2.71	2.76	2.66	.476	.318
Performance	4.27	4.38	4.17	1.762	.041
Age	30.13	38	23.55	13.143	< .01
Experience	8.42	14.81	3.07	9.966	< .01

*Table 3: Means of the highest ranking emotions in the overall sample and the two sub-samples*

	Overall sample	Firefighters	Paramedics
Positive emotions			
1.	Determined: 4.19	Determined: 4.3	Enthusiastic: 4.26
2.	Active: 4.13	Attentive: 4.13	Active: 4.23
3.	Attentive: 4.05	Active: 4.0	Determined: 4.09
Negative emotions			
1.	Anxious: 2.92	Worried: 2.68	Anxious: 3.58
2.	Worried: 2.83	Nervous: 2.31	Worried: 2.96
3.	Unhappy: 2.25	Anxious: 2.15	Distressed: 2.65

### **Hypotheses testing**

Finally, the hypotheses were tested using bivariate correlations and regression analyses to analyze the relationships among the different variables studied, starting with the overall sample and proceeding to the sub-samples.

#### **1. Emotions and emotional labor:**

Hypothesis 1 proposed that surface acting would decrease when the emergency workers experienced positive emotions and would increase with negative emotions. In the overall sample, the zero-order correlation showed that there was a weak negative link between the experience of positive emotions and the level of surface acting as hypothesized ( $r = -.283$ ;  $p < .01$ , one-tailed). Furthermore, the experience of negative emotions had a strong direct correlation with the extent to which the workers were

surface acting ( $r = .315$ ;  $p < .01$ ). Next we conducted a regression analysis with amount of positive and negative emotions as the independent variables, and surface acting as the dependent variable. The overall regression equation was significant ( $F = 6.083$   $p = .003$ ). Both variables made a significant contribution to variability in surface acting; which was marginally significant for positive emotions ( $\beta = -.191$ ;  $p = .086$ ) and more significant for negative emotions, ( $\beta = .242$ ;  $p = .03$ ). Thus emergency workers who were experiencing positive emotions, for example, who were feeling determined, active and attentive, were marginally less likely to say that they were putting on an act for the victims. On the other hand, emergency workers who were experiencing negative emotions like anxiety, worry or unhappiness were more likely to put on an act, displaying false emotions to the victims.

In the 41 firefighters sub-sample, the zero-order correlation showed a marginal negative relation between surface acting and positive emotions ( $r = -.265$ ,  $p = .052$ ) and a marginal positive relation between surface acting and negative emotions ( $r = .234$ ,  $p = .076$ ). The overall regression equation was significant ( $F = 1.666$ ,  $p = .204$ ). The analysis showed no relationship neither between positive emotions and surface acting ( $\beta = -.231$ ,  $p = .182$ ) nor between negative emotions and surface acting ( $\beta = .126$ ,  $p = .461$ ). Thus the pattern in the overall data did not recur in this sub-sample as those the hypothesis was not validated.

In the 49 paramedics sub-sample, the correlation showed a negative relationship between surface acting and positive emotions ( $r = -.455$ ,  $p = .001$ ) and a slight positive relationship between surface acting and negative emotions ( $r = .202$ ,  $p = .084$ ). The overall regression equation was significant ( $F = 5.884$ ,  $p = .005$ ). It showed that they had a negative relationship between surface acting and positive emotions ( $\beta = -.468$ ,  $p = .004$ ) but no relationship between negative emotions ( $\beta = -.028$ ,  $p = .857$ ).

The pattern in the overall data was similar in respect of positive emotions among first-aid workers. Those who felt emotions like enthusiasm were less likely to fake their emotions. However, the other relationship between negative emotions and surface acting was not confirmed.

Hypothesis 2 posited that deep acting would decrease when workers experienced positive and negative emotions. Results of the correlation in the overall sample showed a negative relationship between positive emotions and deep acting ( $r = -.222$ ,  $p = .019$ ) and between negative emotions and deep acting ( $r = .042$ ,  $p = .350$ ). Furthermore, we performed a regression analysis with the level of deep acting as the dependent variable and the positive and negative emotions as the independent variables. This equation was marginally significant ( $F = 2.981$ ,  $p = .056$ ), although positive emotions were significantly negatively related to deep acting ( $\beta = -.273$ ,  $p = .018$ ). Negative emotions, on the other hand, were not seen to be related to deep acting ( $\beta = -.053$ ,  $p = .644$ ). So, emergency workers who were having positive emotions like strength and satisfaction were less likely to try to actually experience the emotions that they must show during the emergency calls. But the opposite relationship does not stand for those having negative emotions.

The firefighters results show that, according to the correlation, deep acting was related neither to positive emotions ( $r = -.061$ ,  $p = .356$ ) nor to negative emotions ( $r = -.052$ ,  $p = .376$ ). The overall regression equation was not significant ( $F = .349$ ,  $p = .708$ ). The regression analysis also confirmed that deep acting was not related to positive emotions ( $\beta = -.138$ ,  $p = .437$ ) or to negative emotions ( $\beta = -.089$ ,  $p = .615$ ).

The paramedics' results show that their deep acting was negatively related to positive emotions ( $r = -.436$ ,  $p = .001$ ) and marginally positively related to negative

emotions ( $r = .213$ ,  $p = .073$ ). The overall regression equation was significant ( $F = 5.290$ ,  $p = .009$ ). The regression showed that deep acting is negatively related to positive emotions ( $\beta = -4.37$ ,  $p = .007$ ) but not to negative emotions ( $\beta = -.001$ ,  $p = .996$ ). Hence, paramedics were less likely to work hard to feel the emotions that they needed to show when they experienced positive emotions like optimism and happiness.

## **2. Emotions and performance**

We hypothesized that performance increased with felt positive emotions and decreased with felt negative emotions (hypothesis 3). The overall sample zero-order correlation showed that positive emotions increased with performance as expected ( $r = .415$ ,  $p < .01$ ) and showed a significant negative relationship between negative emotions and performance ( $r = -.268$ ,  $p = .006$ ). The regression analysis of positive and negative emotions (independent variables) and performance (dependent variable) confirmed that a significant variability in performance is due to positive and negative emotions ( $F = 9.325$ ,  $p < .01$ ). However, most of this variability was due to the positive emotions felt by the emergency workers ( $\beta = .36$ ,  $p < .01$ ), thus supporting past research, while negative emotions did not account for any variability ( $\beta = -.138$ ,  $p = .198$ ). As a result, emergency workers who were having positive emotions were more likely to perform better, being alert and active.

The firefighters' performance was positively linked to positive emotions ( $r = .278$ ,  $p = .043$ ) but was not linked to negative emotions ( $r = -.095$ ,  $p = .283$ ). The overall regression equation was negligible ( $F = 1.354$ ,  $p = .272$ ). According to the analysis, performance had no relationship with positive emotions ( $\beta = .271$ ,  $p = .121$ ) or with negative emotions ( $\beta = .012$ ,  $p = .946$ ).

The paramedics' performance was positively related to positive emotions ( $r = .603$ ,  $p < .01$ ) and negatively related to negative emotions ( $r = -.297$ ,  $p = .020$ ). The overall regression equation was significant ( $F = 12.823$ ,  $p < .01$ ). The regression analysis showed that performance was also linked to positive emotions ( $\beta = .601$ ,  $p < .01$ ) but not to negative emotions ( $\beta = -.002$ ,  $p = .986$ ). Therefore, those who were having positive emotions were more likely to perform better and to be thinking more clearly.

### **3. Emotional labor and performance**

Hypothesis 4 speculated that performance would decrease with surface acting and deep acting, in the emergency field. In the overall sample, the zero-order correlation showed a negative relationship between surface acting and the level of performance ( $r = -.504$ ,  $p < .01$ ) but no relationship between deep acting and performance ( $r = .002$ ,  $p = .492$ ). Next a regression analysis was performed with performance being the dependent variable and surface and deep acting being the independent variables. The overall regression equation was significant ( $F = 16.237$ ,  $p < .01$ ), but only due to surface acting ( $\beta = -.544$ ,  $p < .01$ ) while deep acting was not responsible for any of the variability ( $\beta = .148$ ,  $p = .124$ ). Thus, emergency workers who were "putting on a show" while interacting with patients were less likely for example, to say that they had used the right equipment in an efficient way.

In the firefighters' sub-sample, performance was significantly associated with surface acting ( $r = -.535$ ,  $p < .01$ ) but not to deep acting ( $r = .171$ ,  $p = .143$ ). The overall equation was significant with an  $F$  of 10.256 and a  $p$  of less than .01. The regression showed that performance was significantly negatively related to surface acting ( $\beta = -.573$ ,  $p < .01$ ) and marginally positively related to deep acting ( $\beta = .256$ ,  $p$



= .060). As a result, firefighters who were pretending to have the emotions they had to feel, were less likely to perform well and control all the variants. On the other hand those who were working at developing the feelings inside of them to match what they needed to show, were more likely to act decisively in their work.

The paramedics' performance and surface acting were negatively correlated ( $r = -.461$ ,  $p < .01$ ) and so were performance and deep acting ( $r = -.294$ ,  $p = .021$ ). According to the regression, the overall equation was significant with a  $\beta$  of 6.155 and a  $p$  of .004. Performance was also negatively affected by surface acting ( $\beta = -.430$ ,  $p = .009$ ) but not by deep acting ( $\beta = -.057$ ,  $p = .721$ ). So, the paramedics who were putting on an act when showing their emotions, were less likely to perform better and apply what they had learnt in training.

#### **4. Supplementary analysis**

In addition, we were curious about the relationship between surface and deep acting on one side, and age and experience on the other. This was of interest since it is possible that over time, the experience of emotion and the use of emotional labour might change as workers become more skilled or more inured to the challenges of their job. In the overall sample, correlation results showed that surface acting of emergency workers was strongly and negatively related both to their age ( $r = -.382$ ,  $p < .01$ ) and to their experience ( $r = -.323$ ,  $p < .01$ ). A regression analysis was not performed due to the high correlation between age and experience. Thus emergency workers who were older and more experienced, were less likely to “put on an act” when dealing with patients.

As for the firefighters, surface acting was not linked to age ( $r = .008$ ,  $p = .481$ ) or to experience ( $r = .043$ ,  $p = .395$ ).

The paramedics' surface acting was also not related to age ( $r = .165$ ,  $p = .131$ ) and marginally positively correlated to experience ( $r = .195$ ,  $p = .092$ ). So, as they got more experience they tended to fake their emotions more.

In addition, the zero-order correlation analysis showed that neither age ( $r = -.057$ ,  $p = .298$ ) nor experience ( $r = -.040$ ,  $p = .354$ ) were related to deep acting in the overall sample.

The firefighters' deep acting was significantly negatively linked to age ( $r = -.272$ ,  $p = .043$ ) and marginally negatively linked to experience ( $r = -.224$ ,  $p = .079$ ). Thus they were less likely to try to feel the emotions they should show, as they got older and more experienced.

Finally the paramedics' deep acting was not linked to age ( $r = .147$ ,  $p = .159$ ) but was positively linked to experience ( $r = .332$ ,  $p = .011$ ). So as they got more experienced, they tended to try more to feel the emotions they had to show.

Tables 4 to 6 sum up the Cronbach's alphas and the intercorrelation among the variables in the overall sample and the two sub-samples, while table 8 lists the regression analysis summary for all the samples.

*Table 4: Cronbach's Alphas, and Intercorrelations among Variables in the overall sample*

	1	2	3	4	5	6	7
1. Positive emotions	<b>.906</b>						
2. Negative emotions	-.354**	<b>.916</b>					
3. Surface acting	-.283**	.315**	<b>.821</b>				
4. Deep acting	-.222*	.042	.269*	<b>.801</b>			
5. Performance	.415**	-.268**	-.504**	.002	<b>.926</b>		
6. Age	-.121	-.205	-.382**	-.057	.042	--	
7. Experience	-.066	-.195	-.323**	-.040	.040	.953**	-

*Note.* Diagonal elements in boldface represent coefficient alphas for each scale. Off-diagonal elements are correlations between measures.

\*  $p < .1$ . \*\*  $p < .01$  (1-tailed)

*Table 5: Cronbach's Alphas, and Intercorrelations among Variables in the firefighters sub-sample*

	1	2	3	4	5	6	7
1. Positive emotions	<b>.936</b>						
2. Negative emotions	-.303*	<b>.924</b>					
3. Surface acting	-.265	.234	<b>.690</b>				
4. Deep acting	-.061	-.052	.149	<b>.841</b>			
5. Performance	.278*	-.095	-.535**	.171	<b>.951</b>		
6. Age	-.175	.020	.008	-.272*	-.256	--	
7. Experience	-.117	-.010	.043	-.224*	-.218	.953**	-

*Note.* Diagonal elements in boldface represent coefficient alphas for each scale. Off-diagonal elements are correlations between measures.

\*  $p < .1$ . \*\*  $p < .01$  (1-tailed)

*Table 6: Cronbach's Alphas, and Intercorrelations among Variables in the paramedics sub-sample*

	1	2	3	4	5	6	7
1. Positive emotions	<b>.885</b>						
2. Negative emotions	-.490**	<b>.893</b>					
3. Surface acting	-.455**	.202*	<b>.823</b>				
4. Deep acting	-.436**	.213*	.553**	<b>.755</b>			
5. Performance	.603**	-.297*	-.461**	-.294*	<b>.885</b>		
6. Age	-.130	.073	.165	.147	-.026	--	
7. Experience	.151	.060	.195	.332*	.122	.524**	-

*Note.* Diagonal elements in boldface represent coefficient alphas for each scale. Off-diagonal elements are correlations between measures.

\*  $p < .1$ . \*\*  $p < .01$  (1-tailed)

*Table 7: Hypotheses results summary in the overall sample and the two sub-samples*

	Overall sample		Firefighters		Paramedics	
	$\beta$	p	$\beta$	p	$\beta$	p
Positive emotions → Surface acting	-.191	.086	-.231	.182	-.468	.004
Negative emotions → Surface acting	.242	.03	.126	.461	-0.28	.857
Positive emotions → Deep acting	-.273	.018	-.138	.437	-4.37	.007
Negative emotions → Deep acting	-.053	.644	-.089	.615	-.001	.996
Positive emotions → Performance	.36	< .01	.271	.121	.601	< .01
Negative emotions → Performance	-.138	.198	.012	.946	-.002	.986
Surface acting → Performance	-.544	< .01	-.573	< .01	-.430	.009
Deep acting → Performance	.148	.124	.256	.060	-.057	.721

## **Emergency workers' emotions, as perceived by independent raters**

We analyzed the ratings of the participants' qualitative responses (in the overall sample) completed by the independent raters. The qualitative data were coded by the raters on two different scales: Pleasantness/Unpleasantness and High arousal/Low arousal. Two examples of the descriptions are the following: *A building was on fire and people were jumping out the windows. We brought ladders and managed to help five people who had not jumped yet, and A mission during the war. We had to dig out corpses of children from the rubble.* On the Pleasantness/Unpleasantness scale, the description that was rated to be the most unpleasant was *Car accident. A woman got crushed by a truck and was pulled by the truck for over fifty feet. She was disfigured and was instantly killed* ( $M = 1.18$ ), while the least unpleasant one was *Road accident involving a paramedic and another person. This person died while we were on the scene and we could do nothing for him because he was stuck in the car* ( $M = 3.85$ ). On the High arousal/Low arousal scale, the description that was found to have the lowest average rating on adrenaline-rush was *We were stuck inside our center while angry demonstrators were surrounding us and breaking the windows and ambulances* ( $M = 2.68$ ) while the one with the highest adrenaline-rush was *We were caught in a building that was collapsing on us. The floor collapsed under my feet* ( $M = 4.26$ ).

### **1. Emotions and ratings**

First we looked at the correlation between positive emotions and pleasantness and arousal. According to the zero-order correlation, the ratings of pleasantness were positively correlated with the emergency workers' report of positive emotions ( $r = .392$ ,  $p < .01$ ). Next we examined the relationship between ratings of arousal and emergency workers' reports of positive emotions and found that it was not significant

according to the zero-order correlation ( $r = -.052$ ,  $p = .318$ ). Regression analysis was performed with positive emotions as the dependent variable and pleasantness and arousal as the independent variables. The overall equation was significant ( $F = 7.433$ ,  $p = .001$ ) and pleasantness was responsible for most of the variability ( $\beta = .391$ ,  $p < .01$ ). Arousal was not found to be linked to positive emotions ( $\beta = -.005$ ,  $p = .961$ ). Thus the reported positive emotions of emergency workers such as happiness or confidence coincided with the independent ratings of pleasantness.

Next we studied the relationship between negative emotions and the two dimensions of the qualitative responses. According to the correlation, pleasantness was seen to be significantly related to negative emotions ( $r = -.276$ ,  $p = .006$ ), but arousal was not ( $r = .043$ ,  $p = .348$ ). After conducting a regression analysis with negative emotions as the dependent variable and pleasantness and arousal as the independent variables, the overall equation appeared to be positive and significant ( $F = 3.381$ ,  $p = .039$ ). Pleasantness was accounted for most of the variations ( $\beta = -.274$ ,  $p = .012$ ), while arousal was not related to negative emotions ( $\beta = .015$ ,  $p = .888$ ). Hence, the reported negative emotions of emergency workers such as fear or stress coincided with the independent ratings of unpleasantness.

## **2. Emotional labor and ratings**

Furthermore we looked at the link between surface acting and the two dimensions. According to the zero-order correlation, pleasantness was significantly related to surface acting ( $r = -.238$ ,  $p = .014$ ), and so was arousal ( $r = .212$ ,  $p = .025$ ). Next a regression analysis was conducted (pleasantness and arousal as independent variables and surface acting as the dependent variable) where the general equation was significant ( $F = 4.192$ ,  $p = .018$ ). Pleasantness was significantly linked to surface

acting ( $\beta = -.217$ ,  $p = .042$ ) and so was arousal ( $\beta = .189$ ,  $p = .076$ ). Thus surface acting was seen to be negatively predicted by the pleasantness rating and positively predicted by the arousal rating (by the independent raters).

The fourth relationship looked at deep acting and the two dimensions. According to the correlation, pleasantness was not related to deep acting ( $r = -.080$ ,  $p = .233$ ) but arousal had a significant positive relationship ( $r = .220$ ,  $p = .042$ ). The regression analysis of the three variables (deep acting as the dependent variable and pleasantness and arousal as the independent variables) showed that the overall equation was significant ( $F = 2.260$ ,  $p = .111$ ). It also showed that pleasantness was unrelated to deep acting ( $\beta = -.057$ ,  $p = .599$ ) but that arousal was marginally positively related to deep acting ( $\beta = .214$ ,  $p = .050$ ). So the level of arousal in the descriptions predicted a positive link with deep acting of emergency workers.

### **3. Performance and ratings**

The fifth relation studied is the one between the two dimensions and performance. Pleasantness was not seen to be related to performance according to the correlation ( $r = .120$ ,  $p = .135$ ) and arousal was marginally negatively linked to performance ( $r = -.202$ ,  $p = .031$ ). According to the regression analysis, the overall equation was not significant ( $F = 2.216$  and  $p = .115$ ), pleasantness was not linked to performance ( $\beta = .100$ ,  $p = .357$ ), and arousal was marginally negatively linked to performance ( $\beta = -.191$ ,  $p = .079$ ). The level of arousal present in the qualitative description is therefore negatively related to the level of performance of the workers.

Finally we looked at the relationship between pleasantness, arousal and experience. According to the correlation, pleasantness was slightly related to experience ( $r = .141$ ,  $p = .097$ ) but arousal was not ( $r = .058$ ,  $p = .386$ ).

Pleasantness was also not related to age ( $r = .128$ ,  $p = .113$ ) nor was arousal ( $r = .044$ ,  $p = .343$ ).

Tables 8 and 9 list the correlation and the regression results for pleasantness and arousal with the other variables.

*Table 8: Intercorrelations of Pleasantness and Arousal with the other variables in the overall sample*

	Pleasantness	Arousal
Positive emotions	$r = .392^{**}$	$r = -.052$
Negative emotions	$r = -.276^{*}$	$r = .043$
Surface acting	$r = -.238^{*}$	$r = .212^{*}$
Deep acting	$r = -.080$	$r = .220^{*}$
Performance	$r = .120$	$r = -.202^{*}$
Age	$r = .128$	$r = .044$
Experience	$r = .141^{*}$	$r = .058$

\*  $p < .1$ , \*\*  $p < .01$  (1-tailed)



*Table 9: Regression results summary in the overall sample*

	$\beta$	p
Positive emotions → Pleasantness	.391	< .01
Positive emotions → Arousal	-.005	.961
Negative emotions → Pleasantness	-.274	.012
Negative emotions → Arousal	.015	.888
Surface acting → Pleasantness	-.217	.042
Surface acting → Arousal	.189	.076
Deep acting → Pleasantness	-.057	.599
Deep acting → Arousal	.214	.050
Performance → Pleasantness	.100	.357
Performance → Arousal	-.191	.079

*Note.* Age and experience were omitted due to their high intercorrelation.

## **Discussion and practical implications**

This research is meant to fill a gap in the emotional labor literature by examining the display of emotions in the emergency service field where previous research is lacking. It specifically looks at relationships linking emotional labor, performance and emotions.

To begin with, a primary goal was to explore the possibility that the concept of emotional labour and its relevance to job performance was a useful one in the context of emergency workers. We found that, despite the diversity of the sample, drawn from two different countries, different emergency tasks, different age ranges, and differences in the voluntary nature of the job, the standard measures of emotional labour worked in similar ways as in previous studies of service workers in non-emergency contexts. More specifically, the factor analysis of the emotional labor and performance scales reinforced our belief that the use of emotional labour in the emergency work context has commonalities with other service contexts. The surface acting and deep acting scales that were previously used and validated in completely different work contexts such as restaurant servers, bank tellers and supermarket clerks, maintained their factor structure with firefighters and first-aid workers. The scales were reliable and appeared to be appropriate to the new context.

### **Emotions and emotional labor**

The first hypothesis suggested that a high level of positive emotions among emergency workers would induce low levels of surface acting while a high level of negative emotions would force the workers to exercise more surface acting. In the overall sample and the sample of paramedics, we found that this hypothesis was

supported. We concluded that when these first aid workers were feeling active, determined, happy, and satisfied during a call, they did not have to suppress their feelings by surface acting, as these feelings coincided with the required display rules. Similarly, the overall sample's experience of negative emotions was linked to their increased use of surface acting. When emergency workers were feeling worried or nervous they had to put on an act because these feelings did not match the display rules. Given the small sample size of 90, these results are encouraging, but should be confirmed in a larger sample. On the other hand, the firefighters' results did not confirm the hypothesized link between emotions and surface acting. This could be due to the even smaller sample size of firefighters (41 participants); as such, the statistical test lacks power and the relationship is likely to be insignificant.

There may be other reasons why the relationship was supported for the first aid workers, but not supported for the firefighters. Perhaps the two samples could be behaving in different manners regarding the expression of emotions. What this means is that maybe the Montreal firefighters reflect a cultural characteristic of their society of not admitting or showing what they feel to a researcher, who might be considered as an outsider. In contrast, the Lebanese paramedics might not have as much difficulty in communicating what they felt and in being open about it, maybe reflecting an outgoing and extroverted trait of Lebanese people in general. Thus, they might have found it easier to report what they were feeling.

Finally it could be that the nature of the emergency service is that it is very difficult to achieve emotional distance due to the intensity of the experienced events. Indeed, the intensity of the incidents experienced, makes it very hard not to be emotionally affected by them. For example, watching someone dying, especially when the patient reminds them of family members or friends, is always a hard

experience to overcome, and there is a great chance that it leads them to be emotionally attached to and affected by this particular patient.

According to the second hypothesis, we expected emergency workers to engage less in deep acting, regardless of the nature of their emotions. In the paramedics' sample, the results confirm that when positive emotions are felt, the need for deep acting decreases. This confirms our belief that they do not need to deep act when they are feeling determined or confident as these feelings coincide with the organizational display rules. On the other hand, the firefighters' results did not confirm this hypothesis. This could be explained by the same concept as with the case of positive emotions, which suggested that the smaller sample size of firefighters and the cultural difference between the samples affected the results.

We also hypothesized that when emergency workers were feeling negative emotions such as anxiousness or nervousness, their deep acting would decrease. But this was not confirmed in any of the samples. There is an explanation why this did not happen. It could be that it is also very hard to deep act especially with the presence of body language since feelings like stress and fear may be hard to control, and apparent in the body language of workers. In order to appear calm or confident, they have to manage their voice, appearance and body language. For example, sweating or having shaky hands is seen as a weakness but at the same time it is very hard to control it. When they have these symptoms it would be very hard for them to convince themselves that they are confident. Thus, because of the intensity of the negative emotions, they might not be able to deep act.

## **Emotions and performance**

According to our third hypothesis, we posited that positive emotions would lead to better performance, while negative emotions would lead to lower performance among emergency workers. We found that whenever paramedics were feeling positive emotions such as happiness or satisfaction, they performed better, being more alert and better controlling the variables, thus supporting the majority of past research (Fisher & Noble, 2004; Isen et al., 1987; Staw, Sutton, & Pelled, 1994). It is thought that when they are having positive emotions, they are able to better process information and have better access to parts of their memory, leading to better performance (Isen et al., 1987). But this was not confirmed by the firefighters' sample. One explanation is that age is moderating the relationship between emotions and performance. Since firefighters are older (their average age is 38 as opposed to 24 for the paramedics), the effect of their emotional state on their performance might be reduced. That is, they might be able to better focus on their work regardless of their feelings, thus not letting their emotions stand in the way of their performance. Also, experience could be considered as another moderating factor, behaving in the same way as age. Indeed, the firefighters' average work experience is 15 years while the average work experience of the paramedics is 3 years, which could also mean that, as they get more experienced, the relationship between their emotions and performance decreases. We also hypothesized that negative emotions among emergency workers would lead to lower performance as other research has shown (Totterdell, 1999; Wright et al., 2004). But this hypothesis is not confirmed in any of the two samples. This could be explained by the assumption of Hanin and Syrja (1995) that different people react differently to the same negative emotions and consider them either as facilitating or as debilitating to their performance. The authors also state that people

have optimal levels of emotions, which when reached, can help them perform better (Hanin & Syrja, 1995). That is, depending on the persons and the nature and level of emotions felt, the performance of workers can widely vary. This might be the reason why no overall pattern is found between negative emotions and performance in this study. This is also confirmed by Fisher and Noble (2004) who found that performance, net of effects of the mediating variables used (skill, interest and effort) accounts for a high degree of variance in emotions.

According to these results linking emotions to performance, we recommend the creation of informal meetings at the end of each shift where members can share their emotional experiences. These meetings already occur in the Lebanese Red Cross, although they do not always cover the emotional side. This will make emergency workers more at ease whenever they face identical situations again and will allow them to deal better with them. When talking about their emotions, emergency workers will be better prepared to face such situations in the future. Furthermore, a positive work environment would greatly help ensure a better emotional preparedness to deal with any stressful events during emergency calls, and feeling positive emotions would greatly help the workers in their performance. Although the positive feelings felt before heading to a rescue mission can be countered by negative ones during the mission, we believe that the effect of negative feelings will be reduced, and thus performance will not decrease as much. Therefore, the creation of a friendly atmosphere among emergency workers is crucial.

### **Emotional labor and performance**

Our fourth hypothesis posited that performance would decrease when emergency workers used more surface acting and deep acting. The results of all the

samples validated our assumption that whenever emergency workers surface acted, their performance decreased. Also the relationship between deep acting and performance was marginally validated in the firefighters' sample.

Parenthetically, while in our research workers have self-rated themselves on performance, in Gosserand (2003) and Grandey's (1999) research, employees' performance was rated by colleagues. It might be that a positivity bias in our scales has reduced the correlations among the variables and prevented us from getting strong results for the link between deep acting and performance. In any case we conclude that, although surface acting is negatively related to performance, it should still be used as previous research has shown that it provides a protective emotional distance. Also since our results have shown a positive link between deep acting and performance, we would recommend using deep acting as a complementary technique to surface acting. Used together, they might be providing a better way of coping with negative emotions, since surface acting provides an emotional distance while deep acting provides authenticity towards the workers themselves, reducing their emotional dissonance. Thus, whenever they feel it is adequate, workers are using surface acting to distance themselves, and deep acting to keep a feeling of authenticity.

### **Supplementary analysis**

We did not find any relationship between age and experience and surface acting. One reason behind this might be that emergency workers do not realize the benefit of surface acting although they have gained more experience in the field. Also, it could be that their training does not cover such topics and thus fails to encourage them to use more surface acting. If this is the case, then we would recommend the

introduction of a formal and explicit training on surface acting to be given to all emergency workers.

Finally we perceived a positive relationship between deep acting and age and experience of workers in the firefighters' sample only. This might be due to the fact that the first aid providers' sample is restricted in age and experience. Their age ranges from 17 to 32 (as opposed to 26 to 52 for firefighters), while their experience ranges from 4 months to 10 years (as opposed to 1 to 32 years for firefighters), thus reducing the correlation.

In summary, the differences in results between the firefighters, paramedics and the overall samples can be related to the many factors differentiating them. First the small size of the sub-samples unsurprisingly returned insignificant results. Although some of the relationships directions are as hypothesized, they do not have much statistical power to back them up. Also although firefighters and paramedics are both emergency service providers, they have demographic as well as contextual differences. The Red Cross workers are first of all volunteers and all have different occupations in their daily lives, whereas the Montreal firefighters are salaried workers and firefighting is their everyday profession. Also age and experience are major differences as the Red Cross members are much younger (age average is 24 years as opposed to 38 years) and much less experienced (average experience is 3 years as opposed to 14.8 years). The firefighters do not have any female workers in the sample, while there are 31% female workers in the sample of paramedics. Furthermore, the fact that they operate in different countries, with different political situations can affect them. Indeed Lebanon has witnessed a devastating war in the summer of 2006 in which the Lebanese Red Cross was heavily involved while the



firefighters of Montreal have probably never witnessed such an event nor worked in such intense conditions. Finally cultural differences can affect the way people express themselves and report their feelings, maybe affecting the way the participants reported their emotions and their emotional labor.

In summary, then, the factor analysis suggests that the measures of emotional labor work well in both sub-samples, but various organizational, demographic and cultural differences may mean that the relationships between emotions, emotional labor and performance are not the same in our two groups.

### **Emergency workers' emotions as perceived by independent raters**

Now we address the descriptions of the emergency events as seen by the independent raters. As suggested by emotion theory, we looked at two dimensions: how unpleasant and how arousing the emergency calls had been. Results showed a positive correlation between the rated pleasantness of emergency missions and the reports of positive emotions by the emergency workers themselves, and a negative correlation with their reports of negative emotions. It would appear, therefore, that independent raters could accurately perceive the affective tone of the descriptions provided by the firefighters and paramedics. On the other hand, the independent ratings of the level of arousal portrayed by the descriptions were not related to the emergency workers' reports of their positive and negative emotions. Thus "observers" could see whether workers had had pleasant or unpleasant feelings, but they could not tell whether the workers had experienced an "adrenaline rush" or not.

One explanation of this might be that the general public does not often understand the excitement that emergency workers feel at the sight of an emergency event; indeed Shuler (1997) describes them as "adrenaline junkies" (p.166). Hence the

layperson is likely to underestimate the level of arousal inherent in the description of an event. It is also possible that there is more interpersonal variability in feelings of arousal than in feelings of pleasantness. Thus the same event could be seen as highly exciting by one person and less exciting by another, even if they both agree about how pleasant or unpleasant the event is. Third, it may be likely that the PANAS measure taps primarily pleasantness, and not arousal.

Ratings of pleasantness were negatively linked to surface acting, that is, when the observers attributed more pleasant emotions, the workers were less likely to say they had “put on an act.” It is interesting to note that there also was a marginal relationship between ratings of arousal and surface acting — when raters saw more arousal in the description, emergency workers were more likely to tell us they had surface acted. Thus even though the arousal ratings were not linked to self-descriptions of emotions, they were able to predict surface acting to a certain extent. This may suggest that when workers experience an adrenaline rush, they are more likely to try to hide it from their clients. This certainly fits with expectations, since victims who are hurt or frightened would not appreciate the thought that the emergency workers are excited by their plight. This result should be validated in a larger sample. It might also be useful to include a self-report measure of arousal when operationalizing emotions in future research.

Ratings of arousal were positively related to deep acting, hence whenever the independent observers rated the workers as high on arousal, the workers were reporting deep acting. Here also, this suggests that when workers were feeling an adrenaline rush they would try harder to hide it from the patients in order not to appear as insensitive to their suffering. This also should be validated in a bigger sample for clearer and more significant results.

Finally, our results show a marginal negative relationship between the observers' ratings of arousal and the workers' self-rating of performance. That is, whenever the observers detected a feeling of arousal, the workers were performing lower than usual. Thus we can say that a higher level of arousal predicts a lower performance. This is due to the fact that whenever workers are overly excited, they might lose focus on their job, and thus their performance will decrease. Our recommendation is to coach emergency workers to control their level of arousal, and not merely hide it, and to act in a professional and calm way whenever they are faced with large-scale events. This can be achieved by performing realistic large-scale simulations of fires or road accidents that can give them a practical approach of these missions. Most importantly, this can let them have a real feel of the emotions that can be experienced at the spot, such as excitement, and thus learn how to control them.

### **Limitations and future research**

Although the hypotheses are partly validated, this research study has faced many limitations.

The samples used are not very large as these populations are difficult to access. Even after getting the permission to survey the participants, it was difficult to get the emergency workers to respond to the survey due to the nature of their job. Since they are always on call during their duties, they might have to leave while in the middle of completing the questionnaire. For example, on many occasions the firefighters or the paramedics had to answer an emergency call and leave the questionnaires uncompleted, never finishing them later on. A better approach would be to get permission to sample the workers during off-duty times where they can give the researcher more time and attention. Also the sample is not representative of the whole population of paramedics or firefighters, since the participating centers were chosen according to their geographic proximity rather than following a random selection. Also the firefighters sample does not contain any women in it, which makes it harder to generalize the results, especially that women and men might have different emotions in the same experiences. Thus there is a need for future research to cover the issue of gender and emotions in greater depth and detail.

Furthermore, the self-rating performance score could be biased as participants are grading themselves instead of an objective observer grading them. This is likely to be the reason behind the relatively high scores recorded on this scale. Future studies should base their performance measures on an external source such as the supervisors' ratings that can overcome the subject biases. In our study, this was not achievable because of the nature of the questionnaire. We asked the workers to describe their

most memorable mission, but we could not ask their supervisors to rate their performance on these particular missions since it was very unlikely that the supervisors and the participants remember the same mission in detail. Since every worker is affected differently by different emergency calls, a memorable mission to one could be just a normal one for another. But this can be overcome by asking the workers to describe their most recent mission instead of the most memorable, and to ask their supervisors to rate their performance.

In addition, since this is a non-experimental design, the direction of causality cannot be clearly defined in this research, and there could be a reverse causality between many relationships.

First, the emotions-performance link could be suffering from this problem. In the emergency service field, performance is crucial and its effect on emotions is drastic. Comparing the effect of performance of emergency service providers to the performance of regular service providers like restaurant waiters illustrates the gap. Bad performance of a firefighter can mean putting the life of a fire victim in danger, while bad performance of a waiter merely means a customer will get the wrong order. Being under intense pressure to perform well, emergency workers' emotions can be strongly affected by the outcome of their work. We can expect that, depending on their experience, they will be depressed or even devastated if they feel that their bad performance caused the victim's death. On the other hand, they can feel extremely satisfied and proud if they believe their actions saved a human being's life. Thus it might be that the outcome of the call has affected their description of feelings when they were completing the questionnaire.

A second relationship that can be affected by reverse causality is the one between emotions and emotional labor. Indeed, it could be that the participants'

emotional labor during their missions affected them to such a degree that they misinterpreted their emotions ratings when completing the questionnaires. In other words, it is possible that, having deep-acted when the actual event occurred, the participants ended up believing that their emotions were calmer and more positive than they had actually felt at the time. This limitation can hardly be overcome as the nature of their job prevents us from measuring their actual emotions and emotional labor on the spot. Indeed, in order to do so, we would have had to be with them during the emergency calls and record their feelings and emotional labor. This would probably affect the quality of their job and would thus contradict our ethical standards.

Finally, there could be a third and unstudied variable that is responsible for some of the changes in the relationships, whether it is the personality, the psychological well-being of the workers or any other variable.

Moreover, the fact that members of the paramedics sample are all volunteers, might have slightly influenced the results, as they might be differently affected by emotions and emotional labor than professional paramedics or firefighters. This difference should be minimal because, as previously explained, their working conditions are very similar to that of salaried paramedics, and only differ in the fact that they are not bound by any written contract. Still, this detail might be affecting their feeling of job autonomy and according to Wharton (1993), workers with lower job autonomy experience more emotional dissonance.

In summary, although this study has focused on an area of research that was not covered enough by previous literature, there should be more research to fill the existing gap. Future research should focus on the relationship between gender and emotional labor (both surface and deep acting), which was not studied in this

research. Also future researchers should clarify the role between emotions, emotional labor and performance, checking for causality and moderating and mediating variables such as the workers' emotional well-being. Finally future research should focus on the difference between emotional labor performed by volunteers and non-volunteers in the emergency service field.

## **Conclusion**

This study has partially filled a gap in the literature, as no past research on emotional labor has focused on extreme situations such as those encountered in the emergency response service. We found that the concept of emotional labor is relevant to emergency work. Paramedics were likely to engage in surface acting when they were fearful or stressed, but surface acting was related to lower self-reported performance in both samples. Firefighters who deep acted had better performance. Higher levels of positive emotions were correlated with higher performance, though negative emotions were unrelated to performance. The practical implications of this research suggest recommendations such as the creation of informal debriefing meetings, or the parallel use of surface acting and deep acting to improve the performance of community-based organizations, namely first aid and firefighting organizations. Also since the studied two organizations are responsible for providing most of the emergency services in Lebanon and in Montreal, improving their performance and increasing the quality of their services will benefit a large part of their respective societies. Finally, following the recommendations of the study, the workers may be able to better deal with their emotions, which will improve their psychological well-being and performance.



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B. Briefly describe the emergency call

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C. Describe your emotions **during** this emergency call by rating each adjective on the following scale. Please write the appropriate number in the space provided:

1	2	3	4	5
Very slightly	A little	Moderately	Quite a bit	Extremely

___ Enthusiastic	___ Unhappy	___ Frustrated	___ Depressed
___ Nervous	___ Disappointed	___ Irritable	___ Ashamed
___ Excited	___ Anxious	___ Strong	___ Discouraged
___ Worried	___ Calm	___ Embarrassed	___ Satisfied
___ Active	___ Disgusted	___ Optimistic	___ Angry
___ Hostile	___ Guilty	___ Proud	___ Attentive
___ Helpless	___ Upset	___ Afraid	___ Pleased
___ Pessimistic	___ Distressed	___ Alert	___ Content
___ Scared	___ Enjoyed	___ Determined	___ Happy

D. Check the appropriate box for each statement using the following scale

1	2	3	4	5
<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neither agree nor disagree</b>	<b>Agree</b>	<b>Strongly agree</b>

	1	2	3	4	5
I communicated well with my team members					
I gave the right orders / I followed the orders well					
I worked hard to feel the emotions that I needed to show during the emergency calls					
I communicated well with the victims or team members					
I faked the emotions I showed when dealing with victims or team members					
The emotions I showed to victims or team members matched what I spontaneously felt					
I applied well what I have learnt (theoretically and practically)					
I was alert and active					
I made an effort to actually feel the emotions that I needed to display toward the victims or team members					
I showed feelings to victims or team members that are different from what I felt inside					
I received positive feedback from my team members / team leader					
I just pretended to have the emotions I needed to display during the emergency calls					
I was thinking clearly					
The emotions I showed during the emergency calls came naturally					
I put on a “show” or “performance” when interacting with victims or team members					
I used the right equipment					
I tried to actually experience the emotions that I must show during the emergency calls					

1	2	3	4	5
Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

I controlled all the variants					
I put a “mask” in order to display the emotions I needed during the emergency calls					
I acted decisively					
I worked at developing the feelings inside of me that I needed to show to victims or team members					
I faked a calm mood when interacting with victims or team members					
I managed the situation well					
I put an act in order to deal with the situation in an appropriate way					
The emotions I expressed during the emergency calls were genuine					
I used the equipment needed effectively					

**Thank you very much for your help!**



B. Décrivez brièvement les circonstances

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C. Décrivez vos émotions ressenties **durant** cet événement en évaluant chaque adjectif selon l'échelle de valeur suivante. Veuillez inscrire le numéro dans l'espace approprié.

1	2	3	4	5
Très peu	Un peu	Modérément	Parfaitement	Extrêmement
___ Enthousiaste	___ Malheureux	___ Frustré	___ Déprimé	
___ Nerveux	___ Désappointé	___ Irritable	___ Honteux	
___ Excité	___ Inquiet	___ Fort	___ Découragé	
___ Préoccupé	___ Calme	___ Embarrassé	___ Satisfait	
___ Actif	___ Dégoûté	___ Optimiste	___ Fâché	
___ Hostile	___ Coupable	___ Fier	___ Attentif	
___ Démuni	___ Troublé	___ Craintif	___ Heureux	
___ Pessimiste	___ Tourmenté	___ Vigilant	___ Content	
___ Effrayé	___ Eu du plaisir	___ Déterminé	___ Joyeux	

D. A l'aide de l'échelle de valeur qui suit, cochez la case appropriée pour chacune des déclarations

1	2	3	4	5
<b>Tout à fait en désaccord</b>	<b>En désaccord</b>	<b>Ni en accord ni en désaccord</b>	<b>En accord</b>	<b>Tout à fait en accord</b>

	1	2	3	4	5
J'ai bien communiqué avec les membres de mon équipe					
J'ai donné les bonnes consignes / J'ai bien exécuté les consignes					
Je me suis forcé de ressentir les émotions que je devais montrer durant ces situations d'urgence					
J'ai bien communiqué avec les victimes ou les membres de l'équipe					
J'ai fait semblant de ressentir certaines émotions dans mes contacts avec les victimes ou les membres de l'équipe					
Les émotions que j'ai exprimées aux victimes ou aux membres de l'équipe étaient les mêmes que celles que je ressentais spontanément					
J'ai bien mis en pratique ce que j'avais appris (théorie et pratique)					
J'étais vigilant et actif					
J'ai fait un effort pour vraiment ressentir les émotions que je devais démontrer envers les victimes ou les membres de l'équipe					
J'ai exprimé aux victimes ou aux membres de l'équipe des sentiments différents de ceux que je ressentais à l'intérieur de moi					
J'ai reçu des réactions positives des membres de mon équipe/chef d'équipe					
J'ai fait semblant de ressentir les émotions que je devais montrer durant ces situations d'urgence					
Mes idées étaient claires					
Les émotions que j'exprimais devant ces situations d'urgence me venaient naturellement					

1	2	3	4	5
Tout à fait en désaccord	En désaccord	Ni en accord ni en désaccord	En accord	Tout à fait en accord

Je jouais un « rôle » ou je donnais un « spectacle » dans mes contacts avec les victimes ou les membres de l'équipe					
J'ai utilisé l'équipement approprié					
J'ai essayé de vraiment ressentir les émotions que je dois montrer dans ces situations d'urgence					
J'avais le contrôle sur tous les éléments de la situation					
J'ai porté un "masque" pour chaque émotion que je devais montrer durant ces situations d'urgence					
J'ai agi avec détermination					
J'ai travaillé à développer en moi les sentiments que je devais exprimer aux victimes ou aux membres de l'équipe					
J'ai fait semblant d'être calme dans mes contacts avec les victimes ou les membres de l'équipe					
J'ai bien géré la situation					
J'ai joué la comédie pour faire face à la situation d'une manière appropriée					
Les émotions que j'ai exprimées durant ces situations d'urgence étaient sincères					
J'ai utilisé l'équipement nécessaire d'une manière efficace					

**Merci beaucoup de votre aide!**

## Appendix C

[ 06-12-11 ]

أدعى سامي أوبري، طالب ماجستير علوم، في برنامج الإدارة، في جامعة كونكورديا - مونتريال - كندا. وأود أن تشارك معي في الدراسة التي أقوم بها مع المشرفة عليّ الدكتورة ليندا داير. تشكل هذه الدراسة جزءاً من أبحاث أطروحة الماجستير، وستشدد على نواحي عديدة من عملك مع فرق الإسعاف الأولي في الصليب الأحمر اللبناني، من خلال وصف مهمة لا تنسى قمت بها خلال الأشهر الستة الأخيرة. بصفتي عضو سابق في فرق الإسعاف الأولي، أنا على اطلاع بكافة التحديات التي يواجهها المتطوعون في الصليب الأحمر اللبناني. وسأكون شاكراً لك إن خصصت عشر دقائق من وقتك للإجابة على الأسئلة أدناه. وتجدر الإشارة إلى أن العمل الذي تقوم به يتسم بأهمية بالغة بالنسبة إلى مجتمعك، وعبر إتمام هذا الاستفتاء ستساعدنا على فهم هذه التحديات بطريقة أفضل، وبالتالي إلى تحسين الخدمات التي يقدمها الصليب الأحمر اللبناني.

الرجاء أخذ العلم أن إجاباتك الشخصية لن تحمل اسمك في أي من الأحوال، كما يمكنك وضع حد لمشاركتك في أي وقت كان، من دون أي شرط. سنطلع أنا والمشرفة عليّ وحدنا على هذه الإجابات. الرجاء وضع الاستفتاء في المغلف الذي نقدمه لك. نشكرك سلفاً على مساعدتك. وفي حال كان لديك أي سؤال حول حقوقك كمشارك، الرجاء الاتصال بالآنسة أديلا ريد على العنوان الإلكتروني التالي : [adela.reid@concordia.ca](mailto:adela.reid@concordia.ca)

### 1. الرجاء الإجابة على الأسئلة الإحصائية التالية

أ. كم مضى على انضمامك إلى فرق الإسعاف الأولي في الصليب الأحمر اللبناني ؟

----- سنوات

ب. كم تبلغ من العمر ؟ ---- سنة

ج. الجنس: ---- ذكر ---- أنثى

### 2. تذكر المهمة الأكثر أهمية والتي لا تنسى التي قمت بها خلال الأشهر الستة الأخيرة.

أ. منذ متى حصلت ؟

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[illegible]

5	4	3	2	1
شديد جداً	شديد	معتدل	خفيف	خفيف جداً
كآبة ----	إحباط ----	حزن ----	حماس ----	
خجل ----	سرعة الغضب ----	خيبة أمل ----	عصبية ----	
خيبة ----	قوة ----	تلهف ----	إثارة ----	
الرضى ----	ارتباك ----	هدوء ----	قلق ----	
غضب ----	تفاؤل ----	اشمئزاز ----	نشاط ----	
تنبيه ----	فخر ----	الشعور بالذنب ----	عدائية ----	
سرور ----	خوف ----	انزعاج ----	عجز ----	
اكتهاء ----	تيقظ ----	أسى ----	تشاؤم ----	
فرح ----	عزم ----	استمتاع ----	فرح ----	

د - اختر المربع المناسب عبر استعمال التصنيف التالي

5	4	3	2	1
أوافق بشدة	أوافق	لا أوافق ولا أعارض	أعارض	أعارض بشدة

5	4	3	2	1	
					تواصلت جيداً مع أعضاء الفريق
					أعطيت الأوامر المناسبة / طبقت الأوامر جيداً
					عملت جاهداً للشعور بالأحاسيس التي إبرازها خلال المهمات
					تواصلت جيداً مع المريض أو أعضاء الفرقة
					تظاهرت بالأحاسيس التي أبرزتها لدى التعامل مع المرضى أو أعضاء الفرقة
					الأحاسيس التي أبرزتها لدى التعامل مع المرضى أو أعضاء الفرقة كانت عفوية

5	4	3	2	1
أوافق بشدة	أوافق	لا أوافق ولا أعارض	أعارض	أعارض بشدة

5	4	3	2	1	
					طبقت جيداً المواد التي تعلمتها (النظرية والعملية)
					كنت متتبهاً ونشطاً
					بذلت جهداً للشعور بالأحاسيس التي كان عليّ إبرازها أمام المرضى أو أعضاء الفرقة
					أبرزت المرضى أو أعضاء الفرقة أحاسيس مختلفة عن تلك التي شعرت بها
					تلقيت تقييماً إيجابياً من أعضاء فرقتي / قائد الفرقة
					ادعيت أنني شعرت بالأحاسيس التي عليّ إبرازها خلال المهمات
					كنت أفكر بوضوح
					الأحاسيس التي شعرت بها خلال المهمات كانت طبيعية
					تصنعت عند التعامل مع المرضى أو أعضاء الفرقة
					استعملت التجهيزات المناسبة
					حاولت شعور هذه الأحاسيس التي عليّ إبرازها خلال المهمات
					سيطرت على النواحي كافة
					وضعت "قناعاً" لإبراز الأحاسيس التي احتاج إليها خلال المهمات
					تصرفت بشكل حاسم
					عملت في داخلي على تطوير المشاعر التي عليّ إبرازها أمام المرضى أو أعضاء الفرقة
					ادعيت الهدوء عند التعامل مع المرضى أو أعضاء الفرقة
					سيطرت على الوضع جيداً
					تظاهرت بالأحاسيس كي أتعامل مع الوضع بالطريقة المناسبة
					الأحاسيس التي شعرت بها خلال المهمات كانت حقيقية
					استعملت التجهيزات بفعالية

شكراً جزيلاً على مساعدتك !

## Appendix D

### An extended list of the descriptive data

- Car accident. A woman got crushed by a truck and was pulled by the truck for over fifty feet. She was disfigured and was instantly killed
- Big apartment building made of many towers. The fire was in two towers on different floors and the smoke alarm was going off in many floors.
- Fire with ten to 15 victims
- A fire in building killed many animals and prevented us from going inside the building to help the other ones because there was a risk of collapse.
- An incendiary bomb was thrown at a hotel at 5:15 am. The lobby, the stairs and the 1st floor were on fire. A person is stuck in the 2<sup>nd</sup> floor where the smoke was very heavy but we saved her and got her out the windows using a ladder.
- Car accident leaving a victim almost dead
- Woman hit by a truck
- A man lost consciousness in the bathroom and fell and hit his head
- A mission during the war. We had to dig out corpses of children from the rubbles
- Horrible car accident with one unconscious victim thrown out of the car and another one in great panic and fear
- A murder of a woman and her daughter (they were both shot)
- Evacuation of a hospital under air raids
- A truck hit a 9-year-old boy. His head was crushed and his brain and heart were thrown out of his body



- We were transporting a 1-year-old girl to a hospital after suffering a head injury from a fallen TV set. The road was very long and we had technical problems on the way, so we had to compensate by doing manual maneuvers and it was very tiring

- A patient's heart stopped and I had to perform CPR for the 1<sup>st</sup> time in my life. The patient was obese. This incident affected me a lot.

- Road accident involving a paramedic and another person. This person died while we were on the scene and we could do nothing for him because he was stuck in the car

## **Appendix E**

### **Cover letter for independent raters**

I voluntarily agree to participate in a research study being conducted by Sami Oubari and Dr Linda Dyer of the Department of Management. The purpose of the research is to understand the emotions experienced by emergency workers. I understand that my responses are anonymous, and that I am free to discontinue participation at any time.

The following statements were made by firefighters and first aid providers about events they experienced. In your opinion, does the way the person described the event suggest that for him or her it was a TRAUMATIC (unpleasant and high-arousal) experience? Please rate each statement, first in terms of how PLEASANT/UNPLEASANT the event sounds. Next you will rate the same statements in terms of how AROUSED (or thrilled) the person sounds, that is, they extent to which they may have experienced a strong adrenaline rush, or were relatively calm.

Please note the definition of the following terms:

CARDIAC ARREST: Sudden cessation of heartbeat and cardiac function.

CPR: Cardio-pulmonary resuscitation. An emergency procedure, often employed after cardiac arrest, in which cardiac massage and artificial respiration are used to maintain blood circulation.