

# Development of a questionnaire to evaluate the occupational stress in dog's shelter operators

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## Keywords

Shelter operators,  
Shelter dogs,  
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wellbeing,  
Occupational stress,  
Animal care.

## Summary

The Italian National Law on companion animals and stray dog population control prohibits euthanasia of shelter dogs if they are not dangerous or seriously suffering. Free roaming dogs are captured and housed in long-term shelters (LTS) until rehomed, adopted or dead. In this scenario, the sheltered dogs' welfare has become a community of scientific interest but few information is available about the human sphere in dogs' shelters. The aim of this study was to evaluate the social relationship between dogs and shelter operators (employees and volunteers) in Italian shelters and the impact of their job on their quality of life. A questionnaire addressed to shelter operators was developed by a multidisciplinary group of experts and it was structured in three main sections: general information, operators' skills and operators' welfare and emotional sphere. The questionnaire was distributed in 64 Italian shelters during the field application of the Shelter Quality protocol for the assessment of dogs' welfare in LTS (IZS 04/13 RC funded by Ministry of Health) that was used to assess the welfare of dogs housed in LTS. A descriptive analysis was carried out. These results show that Italian shelter operators have a positive perception of their job despite a stressful impact on their lives.

## Relazione cani-operatori dei canili: impatto sulla qualità della vita umana e sulla sua sfera emozionale

## Parole chiave

Operatori di canile,  
Canile,  
Benessere degli  
operatori di canile,  
Stress professionale,  
Cura degli animali.

## Riassunto

La Legge Nazionale Italiana "sugli animali da compagnia e sul controllo delle popolazioni di cani randagi" vieta l'eutanasia dei cani randagi a meno che essi non siano pericolosi o seriamente sofferenti. I cani vaganti vengono catturati e alloggiati in canili a lungo termine fino al momento del reinserimento, dell'adozione o della morte. In questo scenario, il benessere dei cani randagi è diventato una questione di interesse scientifico comunitario, mentre sono disponibili solo poche informazioni relativamente alla sfera umana di coloro che lavorano nei canili. L'obiettivo di questo studio è, pertanto, quello di valutare il rapporto sociale tra i cani alloggiati nei canili italiani e gli operatori (dipendenti e volontari) che vi lavorano e l'impatto che questo lavoro ha sulla qualità della loro vita. A tal fine è stato sviluppato da un gruppo multidisciplinare di esperti un questionario rivolto agli operatori dei canili. Il questionario è stato strutturato in tre parti principali: informazioni generali, competenze degli operatori e benessere degli operatori e sfera emotiva. Questo questionario è stato incluso nel protocollo Shelter Quality ed è stato utilizzato per valutare il benessere dei cani ospitati in canili a lungo termine ed è stato distribuito in 64 canili italiani. È stata condotta un'analisi descrittiva dei dati. I risultati del presente studio mostrano che, in generale, gli operatori dei canili italiani hanno una percezione positiva del loro lavoro anche se questo ha un impatto stressante sulla loro vita.

## Introduction

Dog is one of the most popular animal thanks to his significant role as companion animal, hunting partner, working assistant (i.e. drug dog) and also as model in comparative medicine for understanding human disease such as in oncology field where the dogs, considered as environmental sentinels, can help in the knowledges on tumor biology and in therapeutic trials (Porrello *et al.* 2006, Serpell, 2016).

Several studies have been carried out on the physical and psychological benefits of pet ownership and the human-companion animal interactions, reporting the capacity of pets to buffer the stress on their owners, to be an emotional support or to increase physical activity (Walsh 2009, Wells 2009). Alzheimer patients or people affected by psychiatric disorders can benefit from the contact with pets through Assisted Animal Activity (Baun and McCabe 2003, Cevizci *et al.* 2013). Moreover, there are evidences that the relation between children and animal increases their capacity to feel empathy (Barker and Wolen 2008).

Furthermore, the positive effect of human contact on the welfare and behaviour of dogs has been documented (Valsecchi *et al.* 2007, Normando *et al.* 2009). The relationship between human and dog is characterized by emotions. Each individual feels pleasure and security when are together, distress when separated. Dog-human relationship can be considered as an affectional bond (Prato-Previde *et al.* 2003, Walsh 2009). Human interaction may be an effective means of reducing the stress level of dogs in shelter environment (Hennessy *et al.* 1999, Coppola *et al.* 2006, Bergamaco *et al.* 2010), in particular the training activity with sheltered dogs increases their adoptability (Luescher *et al.* 2009).

Despite dog plays a special place in the society and a strong bond develops between human and dog based on love and affection, many factors can negatively affect this relationship with consequently abandonment of the dog (Mondelli *et al.* 2004). Aggressive behaviours, owner moving, too high cost of care, lack of time or dogs may not meet the owners' expectations: that are the main reasons for dogs' abandonment (Patronek 1996).

The uncontrolled reproduction of these dogs, which become free roaming, due to their promiscuous nature and permitted by human beings who take care of them, combined with the irresponsible ownership, lead to canine overpopulation (Ortega-Pacheco and Jimenez-Coello 2011). As consequence, these dogs are confined in shelters with, in many cases, a negative impact on their welfare, due to poor environment, social deprivation, overcrowding and inappropriate management (Taylor and Mills 2007, Moesta *et al.* 2015).

In Italy there are currently 9,819,199 owned dogs and it has been estimated that the number of dogs that entered Italian shelters amounted to 100,194 in 2015 (Ministry of Health 2015). Sheltered and free-roaming dogs may experience poor health and welfare and can pose a significant threat to human health becoming a vehicle of serious zoonotic disease such as rabies, echinococcosis, toxocarosis, leishmaniasis, toxoplasmosis and bartonellosis (Fico 1994, Matter and Daniels 2000, Slater 2005). In addition to disease transmission, dog bites, urine and faeces in the environment and the possibility to cause road accidents, also pose a risk to human well-being (Fico 1994, Matter and Daniels 2000, Slater 2005). Several measures (movement restriction, reproduction and habitat control, removal, rehoming, trap-neutered-release) to control dog population are used in different areas. In many countries, such as USA and Australia, the euthanasia is a routine practice to control overpopulation, with a rate of 30%-60% (Marston *et al.* 2004, Bartlett *et al.* 2005, Rogelberg *et al.* 2007, Mohan-Gibbons *et al.* 2014).

The euthanasia of dogs and the prolonged exposure to suffering, combined with negative public perception of this work, work-to-family conflict, lack of support by friends and family, work environment (i.e. smells and mess) etc., can generate traumatic stress reactions with a negative impact on shelter workers' psychological and emotional well-being issues in those caring for animals (Figley and Roop 2006, Foster and Maples 2014). A study from Rogelberg and colleagues (Rogelberg *et al.* 2007) highlighted that euthanasia of dogs is perceived as greater stressful among employees due to the 'senseless killing of healthy animals'; particularly when alternative approaches of care or rehabilitation have not been explored (Arluke 1994). Research addressing occupational stress in animal shelter workers is almost exclusively limited to discussion of euthanasia related strain. However, unlike USA and Australia, some European countries such as Italy, Greece, Austria and Germany forbid the euthanasia of stray dogs except for those that are seriously suffering or dangerous.

In these countries the adoption of this "no kill" policy, besides to be economically demanding, can lead to the confinement of thousands of dogs in shelters that can become their final home, if not adopted. In this situation shelter workers spend significant amounts of time caring for and building a bond with these dogs almost in a surrogate owner role (Roberts 2015).

The impact of non-euthanasia related stressors on the psychological and emotional sphere and

<sup>1</sup> Italian Law n. 281/1991. Legge quadro in materia di animali di affezione e prevenzione del Randagismo. *Off J*, **203**, 30.08.1991.

wellbeing of operators working in dog shelters has been under-represented. Shelter operators have to face with an intense emotionally demanding job that put them at special risk to develop two severe forms of traumatic stress, namely compassion fatigue and perpetration-induced traumatic stress (MacNair 2002, Figley and Roop 2006, Potter *et al.* 2010, Bride *et al.* 2007) that are referred to as “costs of caring”. The costs of caring can lead to burnout (Kowalski 2002) namely physical, emotional and mental exhaustion (White 2006) with signs of anxiety, panic, depression, hypersensitivity.

The information available in the literature on occupational stress experienced by personnel working in shelter workplace not directly related to euthanasia is even limited. The researches on occupational stress, compassion fatigue, and post-traumatic stress disorder in animal care community has been largely performed in the United States and to a lesser extent in the United Kingdom. There is still less literature that focuses on the positive aspect, including the emotional rewards or gratification received through the empathy and compassion, of those working in animal health care.

To date, no studies have been carried out in Italy in this field. The purpose of the present work is to investigate the social relationship between dogs and shelter operators (employees and volunteers) working in dog shelters located in Italy and the impact of their job on their quality of life.

## Materials and methods

### Participants

The questionnaire was distributed previously via e-mail to the operators and the volunteers worked in all shelters which have joined to the Shelter Quality project for the assessment of dogs' welfare in long-term shelters (IZS 04/13 RC funded by Ministry of Health). The participation was voluntary. The filled questionnaires were sent back via e-mail or in some cases, they were recollected at the moment of the visit in the shelters for animal welfare assessment.

### Questionnaire design

The questionnaire was developed through a multidisciplinary approach, with the collaboration of vets, psychologists and sociologists, and through a review of literature of the general occupational stress and with special attention on stress among animal shelter operators. The semi-structured questionnaire, containing both open-ended and closed ended questions, included thirty questions divided into three main parts: general information of the participants, information on the main tasks/skills

performed by the shelter operators and information on the quality of human-animal relationship and shelter operator wellbeing (welfare and emotional sphere). In particular, the first part of questionnaire included not only demographic information such as nationality, workplace type, gender, age, occupation, education level, and number of years of involvement in this work but also their general experience in an animal shelter, their perception of the dog shelter role, owning dog or other pets.

The questionnaire investigated the activities in the shelter (work schedule, main tasks, number of dogs to look after); the emotional sphere of operators and their relationship with dogs; their perception on physical and emotional stress, and satisfaction; the impact of the work on their life. This part of questionnaire, included structured questions, uses a Likert scale from 1 to 5 (1 means not at all and 5 means completely) to evaluate the level of physical or emotional stress, the level of satisfaction about specific aspects of their work in the shelter, the feeling at the end of the day, and the type of relationship with sheltered dogs. The questionnaire ended with two open-ended questions to give participants the opportunity to add anything else related to their work in shelter, or add comments and suggestions on the questionnaire.

### Data analysis

The answers of the questionnaires were insert in a database in order to perform a descriptive analyses followed by exploration of frequencies.

## Results

### General information

A total of 260 people working in 34 dog shelters (over the 64 involved in the Shelter Quality project) participated and completed the questionnaire.

About the type of shelters, twelve were public animal shelters managed by animal protection associations, six were private animal shelters managed by animal protection associations, five public and five private shelters, three owned by animal protection associations and three classified as 'other'.

The majority of respondents (78%) were volunteers and females (70%). Participants' age ranged from 18 (19%) to over 50 years, with the latter being the majority (31%) (Figure 1). The results showed that 54% of participants attended a training course on a voluntary basis in most cases (60%). Seventy-five percent of interviewees owned at least one dog that in the 74% of the cases was adopted from a shelter. The majority of shelter operators (79%) said

that entered the profession motivated by a love for animals (Figure 2).

The majority of respondents (54%) worked in the shelter for more than 3 years (Figure 3). Only 14% of interviewed had another working experience in a shelter and, among them, 38% affirmed to spend more than 3 hours in this shelter (Figure 4).

When asked to the participants what is the main role of dogs' shelters in the society, the 80% answered the nowadays a LTS is basically addressing stray dog control and animal abandonment issues, while respect to the question 'what role would you like shelter had in the society', 50% of answers highlighted that shelters should play an educational role for the community and a place to promote a human-animal relationship.

### Information about work in the shelter and main tasks performed

The main tasks performed with dogs by the shelter workers in the present study were: walking at leash, cleaning pens and feeding dogs.

Furthermore, employees spend more hours in the shelter respect to volunteers; in fact, 67% of employees pass from 6 to 8 hours working in the shelter, while 62% of volunteers only from 3 to 5 hours.

In general, the majority of shelter volunteers takes care of a low number of dogs (from 1 to 10), the number of dogs cared by employees seems to be higher compared to that of voluntaries (Figure 5).

### Human-animal relationship shelter operators wellbeing and emotional sphere

The majority of respondents (75%) declared to have a friendly/social relationship with the majority/totality of dogs and 83% of operators, when approaching the pen, perceived that the emotional state of dogs was happiness (Figure 6). Concerning the exposure to risks, 43% of participants was bitten by a dog in the shelter and 46% of them needed medical care because of the injury. In relation to this episode, 72% of respondents felt indifferent, 13% sad, 8% frustrated and 7% worried. After this episode, 33%

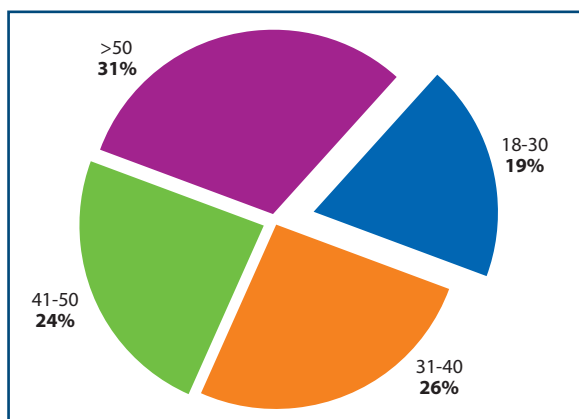


Figure 1. Age distribution of dog-shelter operators responding to the questionnaire.

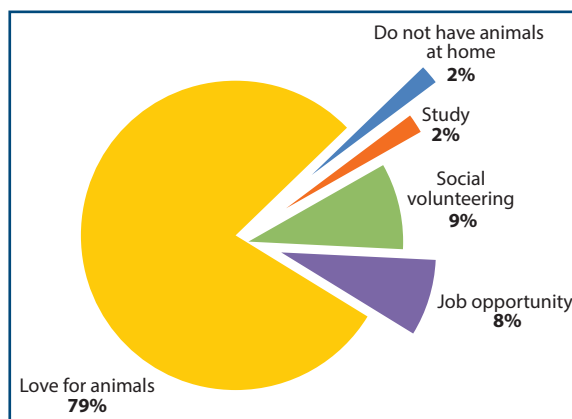


Figure 2. Main reasons for working in a shelter as resulting from a questionnaire amongst dog-shelter operators.

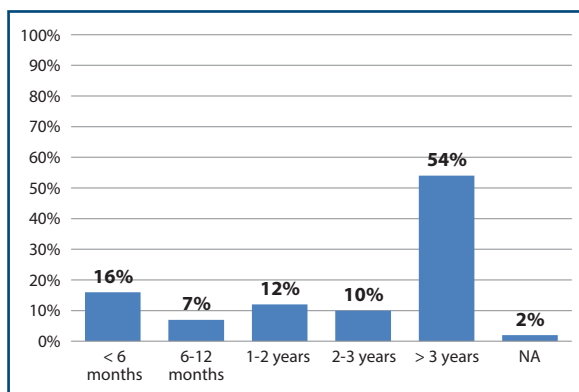


Figure 3. Time spent in the current shelters as resulting from a questionnaire amongst dog-shelter operators.

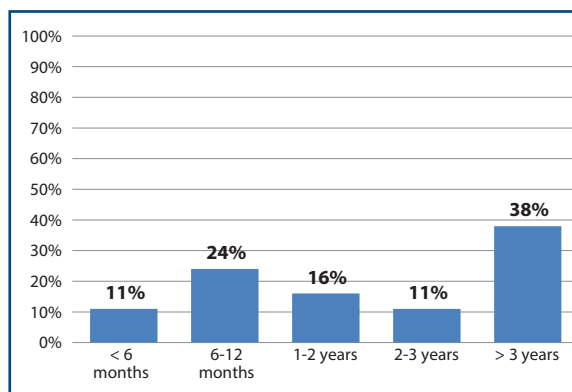


Figure 4. Time spent in other shelters as resulting from a questionnaire amongst dog-shelter operators.

of participants declared a changed in attitude toward dogs giving more attention and being more careful to dogs behaviour. Shelter operators felt sad or frustrated in relation to presence of sick dogs (92%), abnormal behaviour (77%), euthanasia (75%), facilities' inadequacy (75%), presence of aggressive dogs (70%), dogs confinement (64%) and social restriction in relation to their ethological needs (62%). Respondents felt angry or sad respect to unsuccessful adoptions in 66% of cases and respect to the presence of puppies in the shelter in 45%. Successful adoptions (95%), social activities with dogs (94%) and sterilizations (71%) are sources of satisfaction for the most of respondents.

Volunteers appeared to be more satisfied in relation to their job rather than employees, in fact 89% of volunteers affirmed to felt high satisfied respect to 69% of employees. Both emotional and physical stress appeared to be higher in employees (42%) rather than in volunteers (25%) (Figure 7). However, emotional stress appeared to be higher in female (32%) rather than in male operators (23%) while there were no relevant differences for the physical stress both in male (20%) and female (17%) workers (Figure 8). An high level of satisfaction was

perceived both in female (88%) and male (81%) interviewed (Figure 8).

Figure 9 shows that in all respondents (100%) physical stress increased with the increasing in the number of dogs. An high emotional stress was perceived by 40% of shelter employees and a similar percentage of employees felt medium emotional

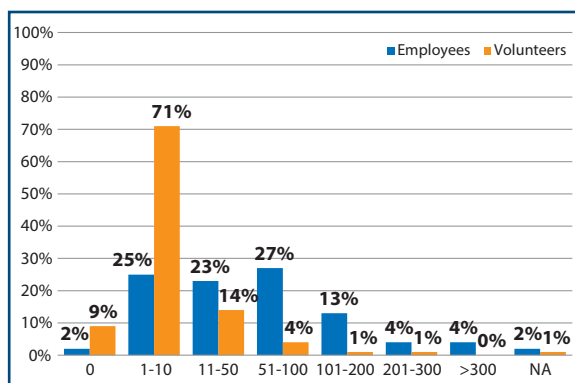


Figure 5. Number of dogs cared by shelter operators per day.

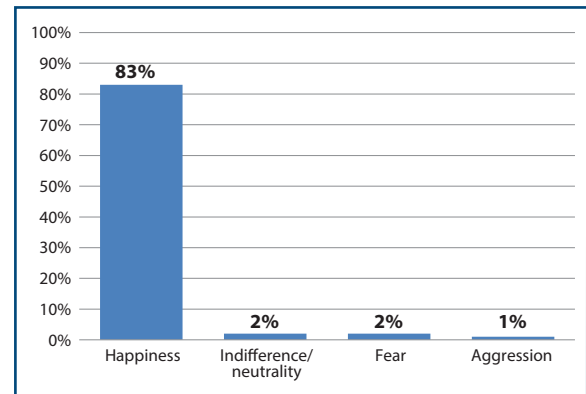


Figure 6. Dogs emotional state when shelter operators approach to the pen.

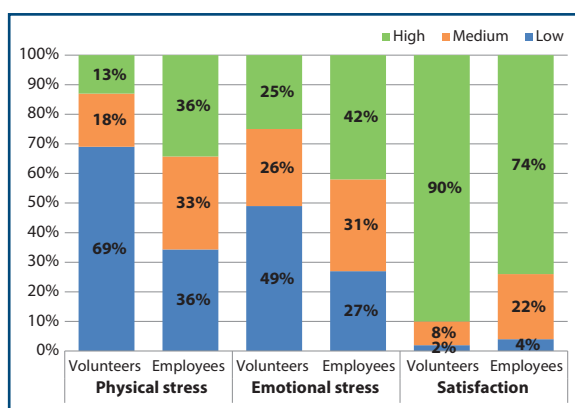


Figure 7. Emotional impact of dog-shelter operators according to their role in the shelter.

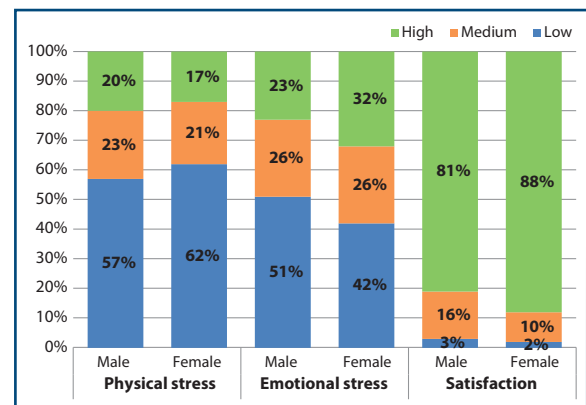


Figure 8. Emotional impact of dog-shelter operators according to their gender.

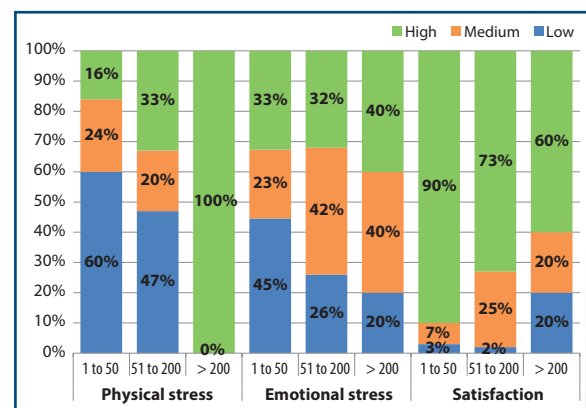
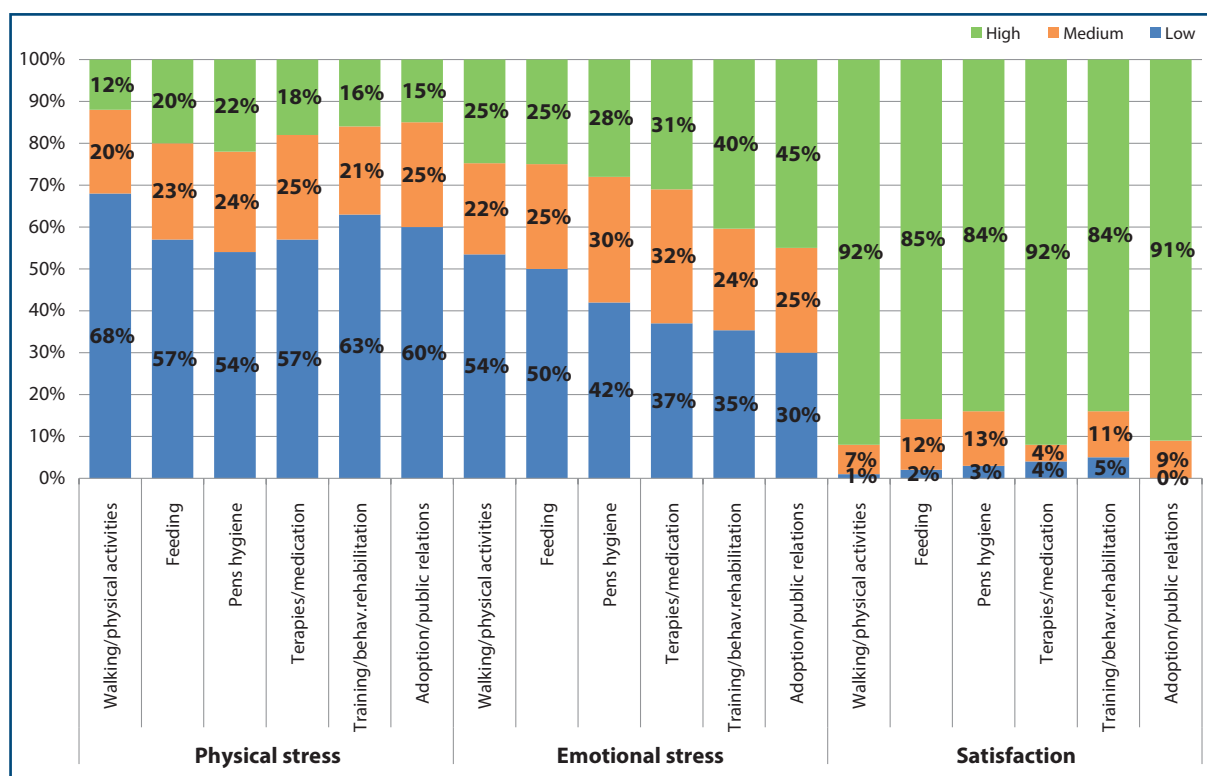


Figure 9. Emotional impact of dog-shelter operators according to their role in the shelter.



**Figure 10.** Emotional impact of dog-shelter operators according to the main activities carried out.

stress when the number of assisted dogs increased at more than 200 (Figure 9). At the same time and coherently with these data, the level of satisfaction decreased with the increasing of the number of dogs to assist. Shelter employees (90%) felt high satisfaction when they had to take care of a low number (1-50) of dogs, 73% when had to assist from 50 to 200 animals and 60% felt satisfaction when dogs were more than 200 (Figure 9).

The daily activities carried out by shelter operators having negative impact on their emotional stress appeared to be mainly adoptions' management and public relations (45%) and administrative part (40%) (Figure 10). Despite this aspect, data show that the level of satisfaction in shelter operators was high in all activities they carry out with dogs (Figure 10).

## Discussion and conclusions

The stress in animal shelter worker is studied in general with the assumption that euthanasia is the most stressful part of this job. However, considering the prohibition of euthanasia in some countries, researchers suggested other kind of stressor such as negative public perception of their work, negative media, lack of understanding among friends and family, conflict among colleagues, and poor physical working conditions, could negatively affect the wellbeing of shelter workers (Reeve *et al.* 2005, Figley and Roop 2006). To date, there is still a lack

of information in Italy concerning stress in animal shelter workers and this study wants to be a first step to fill that gap and some interesting results deserve to be discussed in depth. The participants' age of this study, indicated that this job is not perceived as particularly physical demanding and therefore is not affected by an early retirement or changing of profession, contrarily to Foster and Maples (Foster and Maples 2014) which found a declining number of the veterinary support staff older than age 50, probably because of the physical and emotional demands of the job.

In the present study the majority of respondents worked for more than 3 years in the current or other shelters indicating therefore a low turnover among shelter workers and a low rate of job leaving. At the same time, the length of employment is a sign of enthusiasm for this work. These results are consistent with those reported by Foster and Maples (Foster and Maples 2014) which found that 52% of participants were involved in their job for more than 5 years. The dedication and deep passion for the work were underlined also by the participation to training courses on a voluntary bases in many cases. This may depend on whether in both employees and volunteers the desire to care for dogs, and not only the financial reward, was the motivation to enter this profession and work with animals. This result is confirmed by Taylor (Taylor 2010) who pointed out that the motivation to work in a dog shelter is 'for the animals'.

The majority of participants believes that nowadays a LTS is basically addressing stray dog control and animal abandonment issues and 50% of them affirmed also that shelters should play an educational role for the community and should be a place to promote a human-animal relationship. In Italy, there is the prejudice that dog shelters are merely places with ugly dogs having behavioural problems such as hyperactivity, destructiveness, excessive barking (Martson *et al.* 2004, Menchetti *et al.* 2015). It is however a fact that spatial and social restriction in shelters leads to stress related behaviours (Beerda *et al.* 1999) reducing accordingly the adoption success (Patronek *et al.* 1996). To increase adoption rate and change public opinion on shelter dogs' characteristics, several programs of socialization were implemented in Italy and other countries (Kogan *et al.* 2002, Normando *et al.* 2009, Braun 2011, Mohan-Gibbons *et al.* 2014, Menchetti 2015) encouraging people to visit, walk and play with dogs. The promotion of contact with human and dog training in these programs has been shown to positively affect welfare and increase desirable behaviours (e.g. sitting, being quiet, making eye contact) of dogs living in shelters (Protopopova *et al.*, 2012; Herron *et al.*, 2014), making them more attractive to visitors (Wells and Hepper, 2000; Conley *et al.*, 2014). Many times, the reluctance in adopting sheltered dogs derive also from a scarce knowledge of dog behaviour and physiology (Herron *et al.*, 2007; Mohan-Gibbons *et al.*, 2014). Provide an education on how to manage dog behavioural problems, on reproductive physiology and breed characteristics could also help to decrease the number of returns after adoptions. All these issues should be covered by the shelters as expected by the most of Italian operators involved in this study.

In the current study, the positive reaction of shelter dogs towards care givers when they come to the kennel, is sign of a good quantity and quality of interactions with staff, such as shared activities (Bennett and Rohlf 2007, Arhant *et al.* 2010).

A positive attitude and positive handling increase the willingness of dogs to approach an unknown person (Arhant *et al.* 2014). In contrast, aversive training methods are instead correlated with aggressive or fearful dog behaviour toward humans (Hiby *et al.* 2004, Herron *et al.* 2009, Arhant *et al.* 2010) and, consequently, the animals are less interacting with strangers (Rooney and Cowan 2011). In addition, exploration of an unknown person by dogs can be considered as a positive emotional response and an indicator of dogs' good welfare (Boissy *et al.* 2007, Araujo *et al.* 2010).

Literature reports that caretakers who have been bitten or attacked by animals feel uncomfortable (Chang and Hart 2002) and tend to limit their care

activities. In the present study, many participants revealed to be injured by a dog and needed medical care but, unlike to what reported in literature, the event was accepted as a commonplace risk of this job, since the majority of them felt indifferent in relation to this episode and only a little part of them changed the attitude toward dogs giving more attention to their behaviour in order to prevent other bite accidents.

These preliminary results show that, in general, Italian shelter operators have a positive perception of their occupation and duties and enjoy them. This aspect results important because mentally and physically healthy workers are more productive workers (Davis *et al.* 2005). The interviewed participants' satisfaction was associated with activities with animals. Indeed, the positive interaction and bond with dogs might help to balance the negative effects of work in shelter (i.e. caring for the intensely ill or traumatized dogs) (Stamm 1999).

Volunteers appear more satisfied than employees even if they spend, on average, less hours (3-5) working in shelters than employees (6-8) (data not shown) and are, therefore, less involved in those interactions with animals under their care that lead to satisfaction. The choice to work voluntarily in the shelter could explain the great satisfaction of volunteers, there is probably a kind of gratification resulting from the activity carried out in the shelter (Taylor 2010).

The less satisfaction of employees could be explained by the study of Figley and Roop (Figley and Roop 2006), which found that the main causes of sadness and frustration in shelter operators are the low adoptions rate, dogs confinement and social restriction, the presence of abnormal behaviour over time, or the inadequacy of environment. All these causes could represent personal failures. In our study, employees spend more hours in the shelter respect to volunteers, developing as consequence a strong relationship with dog. However, this strong relationship might have a double-sided and play a double role intensifying the stressors, besides providing positive feelings. In addition, the increase of workload pressures decreases the level of satisfaction with a corresponding increase in stress. These findings support the idea that there are several other shelter stressors, besides euthanasia decision, experienced by animal shelter workers that could have an impact on their quality of life, wellbeing and mental health status (Scotney *et al.* 2015).

The present study revealed that women are more affected by emotional stress than men and might be at greater risk of secondary traumatic stress (Rohlf and Benner 2005). Literature findings showed that there are sex differences in the perception of post traumatic events (PTE's). However, much more research needed

to be done in this sense regarding how sex acts as a vulnerability factor (Tolin and Foa 2006).

The sample used in the current study may not be representative of the entire population of animal shelter workers. Therefore, this kind of limitation should be considered before drawing conclusions from the results of this study.

The information from this study represents an initial effort that would provide preliminary data on animal shelter worker stress in Italy. The development of this questionnaire protocol could provide also groundwork for future research in the area of animal shelter worker stress in Italy. The inclusion

of quantitative measures in the questionnaire is advantageous, compared to the only qualitative interview. It overcomes some limitations associated to the possibility to capture the thoughts and feelings of respondents only at one moment in time or to the influence of context on the respondents. Therefore, such kind of interview format provides opportunity for comparisons.

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