

# Study on the level of disaster preparedness among veterinary practitioners

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# Introduction

- ▶ **Disaster resilience** characterized the **ability of the population to predict, to cope with and to recover from disastrous events.**
- ▶ Common in all disaster situations were issues related to the functioning of an early warning system; **food and water provisions; health and decontamination;** collection and proper disposal of waste; ensuring sustainable **shelters; power supply; information, communication** and transport infrastructure.
- ▶ Studies on awareness and the role of population in managing disasters and crises at local level - relatively good but **still insufficient level of awareness** and understanding of the concepts of civil protection and crisis management among the respondents concerning indicators such as **evacuation, hygiene, communication** (Taha *et al.*, 2014).
- ▶ Natural and technical disasters could **affect every professional group in society** - studies on the knowledge, attitude and practices available for disaster management among **dental practitioners and academics** (Pandita *et al.*, 2016), **nurses** (Veenema *et al.*, 2016), **pharmacists** (Ford *et al.*, 2013), **employees in emergency health centres** (Dunnick *et al.*, 2016) and in **public health system** structures (Kohn *et al.*, 2014).
- ▶ In Bulgaria - survey on **public awareness as an element of the general mechanism for disaster risk reduction** (Slavova *et al.*, 2016).
- ▶ Reasonable to examine the **available resources of the private veterinary sector** in Bulgaria, necessary for **ensuring the safety of staff and practice and the preparedness to maintain business continuity** in case of disastrous situation.

# Materials and methods

- ▶ **Questionnaire with open and closed questions** was prepared, using the methodology of the empiric sociological survey (Orloev, N., 2002).
- ▶ The questionnaire was sent in 2018 from July to December to **134 veterinarians throughout the country personally or via e-mail**.
- ▶ The completed and returned questionnaires were **32 in total (response rate – 23.89%)**.
- ▶ Statistica for Windows, Release 7.0, Copyright StatSoft, Inc., 2004, using
  - ▶ **descriptive statistics** (frequency distribution tables),
  - ▶ **correlation analysis** (Pearson correlation coefficient) and
  - ▶ **Student's t-test** (t-test for independent samples).
- ▶ The results from the analysis (at  $p < 0.05$ ) were used to formulate conclusions relevant for the veterinary practitioners in the country.

# Results

- ▶ Distribution by **sphere of professional activity and by status as employees or business owners** (Fig. 1). The largest share of respondents, **58.33 %**, worked with **companion animals** (mainly representatives from big and medium sized cities in the country, some of them – administrative centres), followed by **mixed type of practice** – **33.33%**, while **practitioners working with production animals were 8.33%** (located mainly in the small towns and rural areas).
- ▶ Study showed that **65.52 %** of the respondents appeared to be **owners or partners** in the veterinary practice where they worked at. They were in fact **decision-makers and managed all activities carried out in their practice**, including planning, preparation, response during a disaster and recovery after that.
- ▶ The **remaining share of 34.48%** were **employees**, veterinarians who were part of the practice staff and participants in the implementation of the plan for disaster preparedness and response.

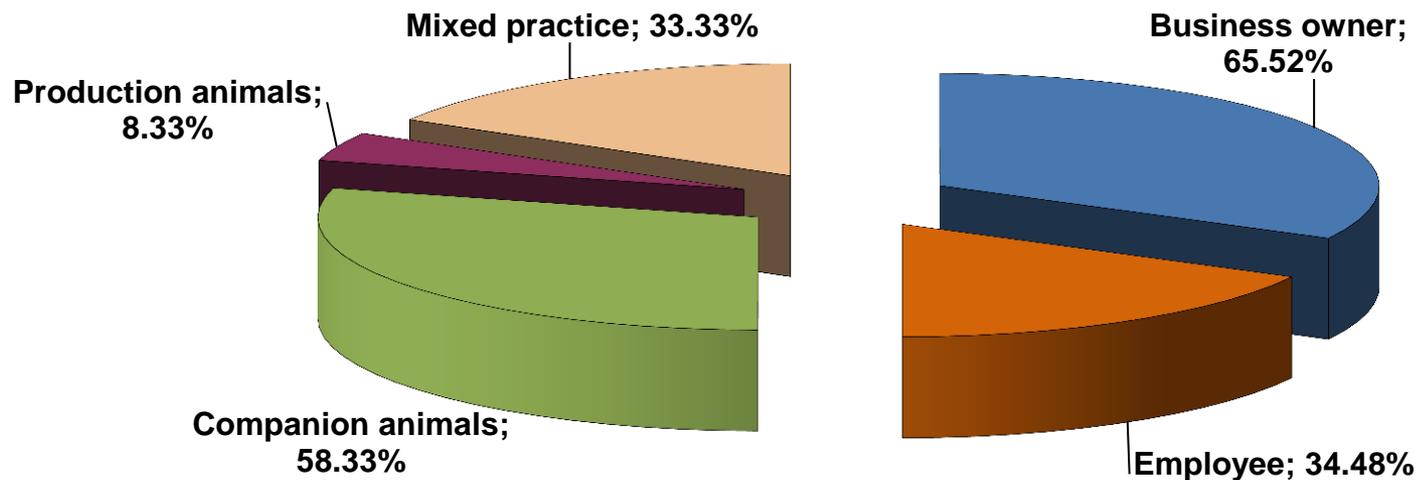


Fig. 1

# Results

- ▶ Within 62.50% of the veterinary practices there had been developed comprehensive action plans for disasters and emergencies.
- ▶ On the contrary, over half of the respondents – 53.13 % – declared lack of necessity to get prepared to respond to emergency situations (Fig. 2).
- ▶ Data also showed that there was a significant positive correlation between the share of the veterinarians who had developed action plan and the share of those who had arranged relocation of their business within an alternative practice ( $r=0.57$  at  $p<0.05$ ),
- ▶ and had stored personal medications for 3–5 days for the veterinarians and the other staff at the clinic ( $r=0.57$  at  $p<0.05$ ).

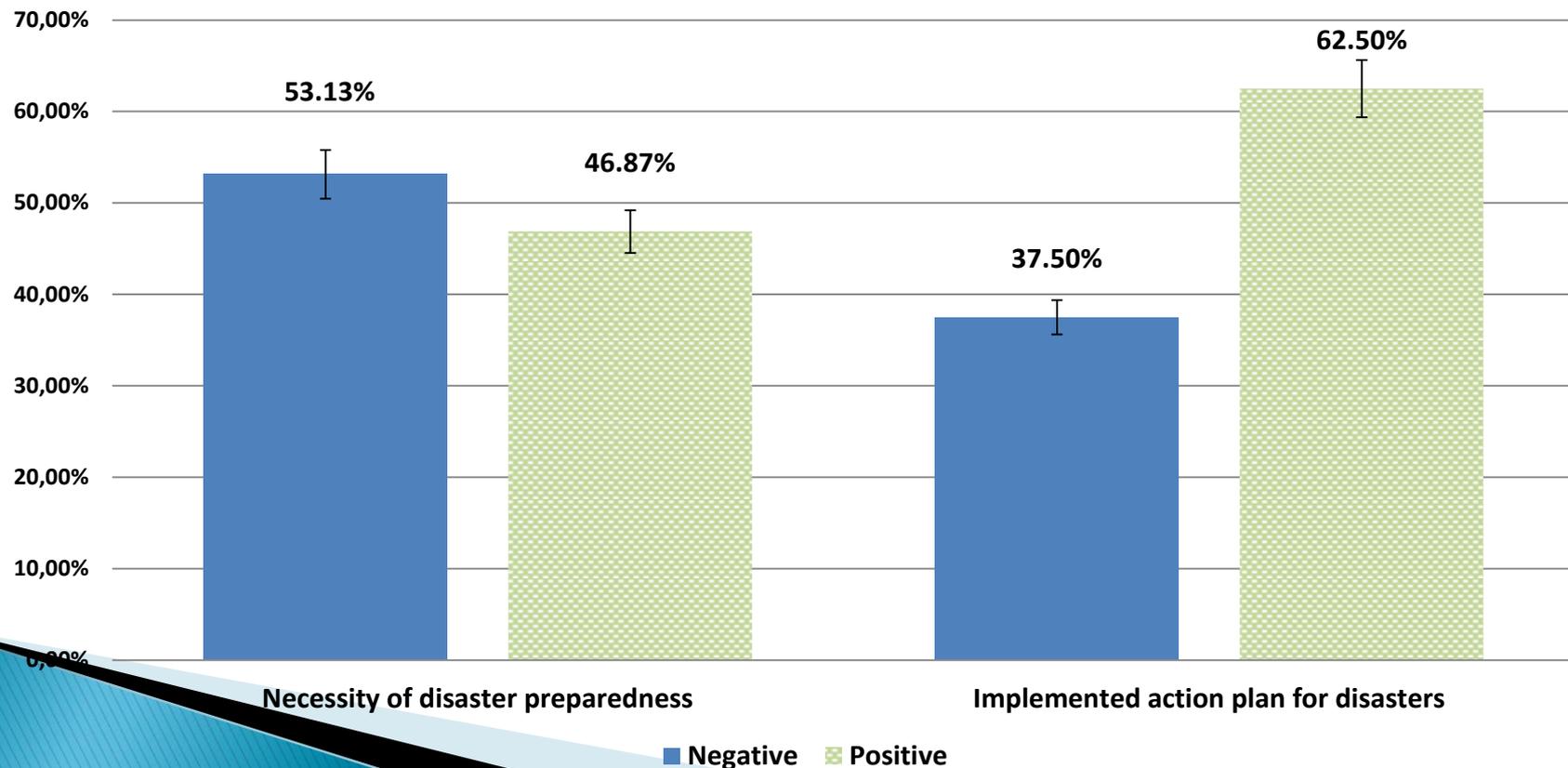


Fig. 2

# Results

- ▶ **Obligatory requirements for operation and exploitation of the enterprise, necessary for registration of veterinary practice (*Directive № 7 of 23.09.1999 on the minimal requirements for health and safety conditions at workplaces and the use of working equipment – MLSP, MH, 1999*):**
- ▶ **71.88% of respondents stated they were familiar with the specific requirements for safety,**
- ▶ **more than half of them – 53.13% – had drawn plan of the floor with marked fire-extinguishers, hazardous areas and evacuation routes on it, and**
- ▶ **the same proportion of respondents 53.13% had secured exits for evacuation in case of emergency (Fig. 3).**
- ▶ **In fact, a significant difference was found in favour of veterinary practitioners – business owners and the group of respondents who declared their awareness of the specific safety rules at the workplace ( $t[29] = -3.10; p < 0.05$ ).**

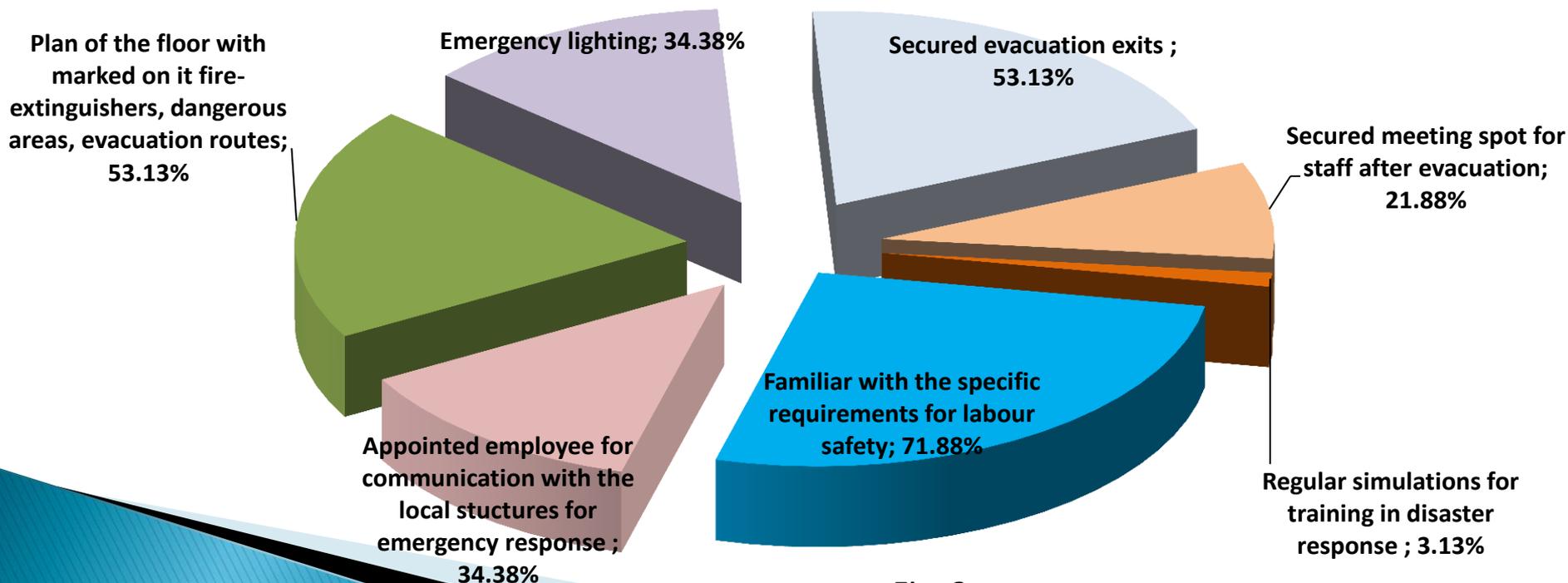


Fig. 3

# Results

- ▶ Analysis of the available resources for maintenance continuity of their professional activities (Fig. 4).
- ▶ Highest share of 75% get the veterinary practitioners who had secured the continuity of communications in any crisis situation. However, it appeared that they were less likely to prepare in advance a distant meeting place for the employees after evacuation – there was a negative correlation –  $r = -0.46$  ( $p < 0.05$ ).
- ▶ In case of closure 28.13% of the veterinarians shared they had provided reorganization and relocation of their business through equipment of an alternative site within the same residence.
- ▶ An additional option – a contract with a partnering veterinary practice situated in another village – preferred by 25% of the respondents.
- ▶ The decision for equipment of an alternative practice was statistically dependent on the ownership of the practice, as there was a positive correlation –  $r = 0.46$  ( $p < 0.05$ ), between this indicator and the position of the respondents as business owners.
- ▶ Student's t-test found significant difference in favour of veterinary practitioners – business owners and the group of respondents who declared to be able to maintain continuance in communication during and after disaster outbreak ( $t[29] = -3.43$ ;  $p < 0.05$ ).

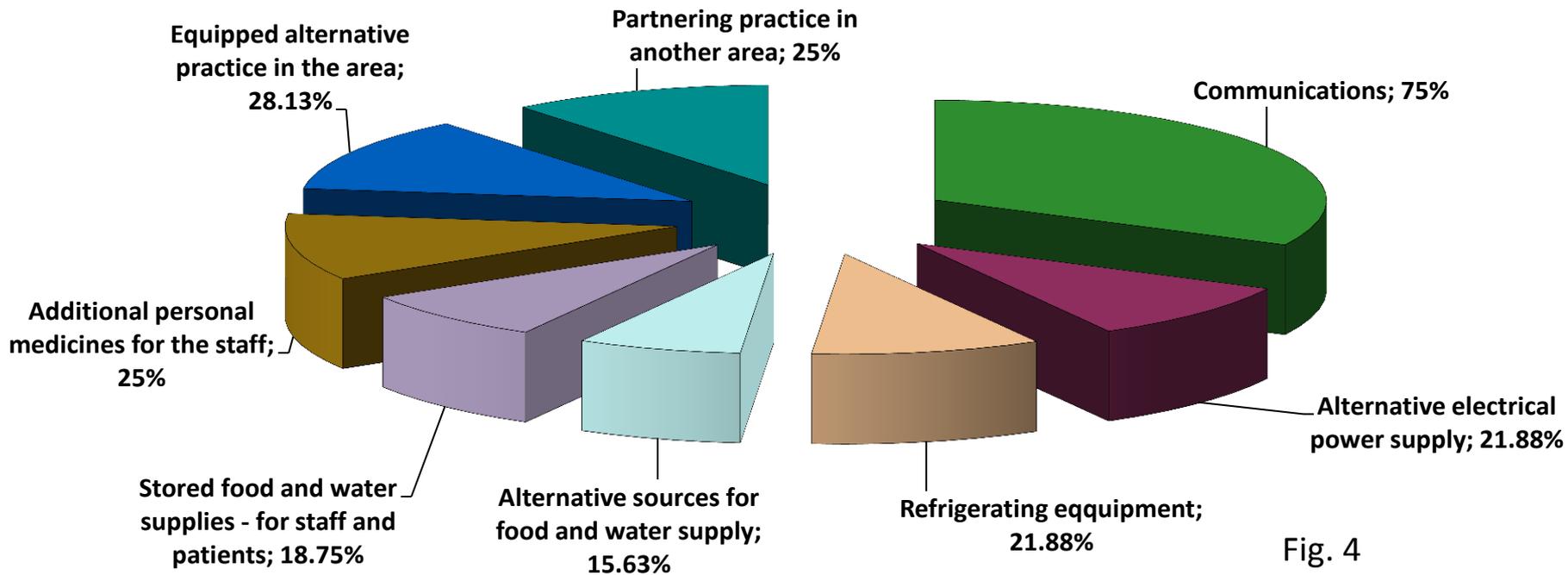


Fig. 4

# Results

- ▶ The survey showed that **ensuring the continuity of all manipulations and operations** within the clinic during a disaster was dependent on the **availability of certain facilities and supplies.**
- ▶ In regard to this, veterinary practices should have the following equipment:
  - ▶ – **Alternative electric power supply** within the practice and the staff should be familiar with the terms of its exploitation and maintenance. Veterinarians who had equipped their practices with a generator were **21.88% of the respondents;**
  - ▶ – **Reserve refrigerating equipment** at the clinic (for bioproducts, etc.) – available at **21.88 % of the practices;**
  - ▶ – **Stored personal medications for 3–5 days** for the veterinarians and the other staff at the clinic, regarding their personal health status – **25% of respondents;**
  - ▶ – **Stored food and water supplies for staff and patients for 3–5 days** – provided by **18.75% of the respondents;**
  - ▶ – **Alternative sources of food and water** for the staff and the patients in case of contamination of the existing ones – provided by **15.63% of the respondents.**

# Conclusion

- ▶ The study of the private veterinary sector showed that veterinarians as a part of the civil population in a disaster situation **should first of all take care for the safety of their own lives, staff and property**, which reaction is largely influenced by their **level of awareness, preparedness for evacuation and communication capabilities**.
- ▶ On the other hand, as **health professionals veterinary practitioners** appeared to be an important link in the chain for **providing resources to the community in order to overcome and recover from the disastrous event**, giving assistance in evacuation and rescue works, providing healthcare and advice to animal owners.
- ▶ This would **help the whole community to raise its sustainability to crisis situations by utilizing its own resources optimally**, as veterinary practices appeared to be part of these material and non-material resources.
- ▶ For this purpose, the **role of the veterinarians for disaster risk reduction should be legally determined and regulated**.
- ▶ On this basis various information and **teaching materials could be prepared for professional training**, enhancing the veterinary practitioners to perform more effectively in emergencies.

**THANK YOU FOR THE  
ATTENTION!**

