Journal of Veterinary Behavior 26 (2018) 48–60

Contents lists available at ScienceDirect

Journal of Veterinary Behavior

journal homepage: www.journalvetbehavior.com

Questionnaire survey on the use of different e-collar types in France in everyday life with a view to providing recommendations for possible future regulations

Sylvia Masson [a,*], Isabelle Nigron [b], Emmanuel Gaultier [c]

[a] Clinique de la Tivolliere, Voreppe, France
[b] Clinique vétérinaire Nigron André, Roanne, France
[c] FERCEA, Cabrieres d'Avignon, France

ARTICLE INFO

Article history:
Received 7 July 2017
Received in revised form
23 April 2018
Accepted 20 May 2018
Available online 26 May 2018

Keywords:
dog
e-collar
training methods
dog welfare

ABSTRACT

Training with electronic collars/e-collars (e-stim, shock) is controversial, and regulations concerning electric collars vary from absence to bans across European countries. The main goal of this study was to characterize the everyday use of e-collars by dog owners, in France where there are currently no regulations on their use. A sample (n = 1,251) of dog owners were recruited using an online questionnaire. Data were collected using Google Forms. Factors associated with the use of e-collars were determined using a Chi-squared test. Twenty-six percent (n = 330) of the owners enrolled in this survey did use such devices; 11.9% (n = 149) of the owners reported the use of bark-activated collars, 4.5% (n = 56) reported the use of electronic boundary fence collars, and 14.2% (n = 178) reported the use of remote-controlled collars. E-collar use was found to be significantly associated with 3 factors: dogs weighing over 40 kg, non-neutered status, and dogs used for hunting or security activities. In addition, the data collected showed that e-collars were mainly used on young dogs (<2 years). The vast majority of e-collar users (71.8%) used the collar without professional advice, and 75% of e-collar users tried 2 or fewer other solutions before using the collar. Seven percent of the dogs on which the collar was used presented with physical wounds (n = 23). The efficacy reported was lower than that in many previous studies where conditions of use as specified were designed to be ideal as part of the experimental design (qualified trainer, perfect timing). All collar types were not equal: bark-activated collars appeared to be the least efficient and the most injurious type, whereas remote-controlled collars were mainly used for owner's convenience. In conclusion, this survey highlights a high ratio of e-collar use in a country without regulations. It also shows that real-life conditions are far from the idealized conditions in which experimental studies were undertaken, thereby putting dog welfare at higher risk than what is presented in scientific literature. In addition, this study reveals differences between collar types in terms of efficacy and effects on welfare. These factors should be taken into account to determine a precise regulation. Furthermore, this study shows the urgency to regulate this tool in Europe because dangers of use, which were already known, are proven to be aggravated in real-life situations.

Introduction

Canine training methods are in constant evolution. In the last decades, nonaversive training methods based on positive reinforcement and negative punishment started to appear in France. However, while such methods are expanding, traditional methods based on positive punishment and negative reinforcement are still commonly used.

The electric collar (EC) is an aversive training tool that follows operant conditioning rules, which is subject to controversy. It can act as a positive punishment, where the electric shock follows an undesirable dog behavior, reducing the probability for this behavior to reoccur, or, as negative reinforcement where the shock ends upon desired dog behavior, thereby increasing the probability for the behavior that stopped the shock to reappear. Three different types of electric training devices exist (Polsky, 1994): the

* Address for reprint requests and correspondence: Sylvia Masson, Clinique de la Tivolliere, 37, rue des martyrs, 38340 Voreppe, France. Tel.: 0033 6 19 91 38 35.
E-mail address: s.masson@hotmail.com (S. Masson).

https://doi.org/10.1016/j.jveb.2018.05.004
1558-7878/

"bark-activated collar" (BAC) that is automatically activated by the barking of the dog, the "electronic boundary fence" (EBF) that is activated at a boundary line to keep the dog within a specific area, and the "remote-controlled collar" (RCC) that is activated manually via a remote control. In all cases, the dog is wearing a collar including a box with two electrodes that are in contact with the ventral surface of the dog's neck. The shock is delivered by the electrodes and can vary in duration and intensity.

Over the years, due to the possible deterioration of dog welfare, several European countries decided to ban ECs. In 2010, the Public Federal Service in Belgium established a scientific report in which the current legislation in European countries was edited. This document showed the variability that existed across Europe: for example, some countries like Denmark decided to ban the sale and use, others like Germany banned use but not sale, and others like the Czech Republic restricted the use to collars in accordance with Electronic Collars Manufacturers Association standards. In Sweden, the restriction of use did not apply to electric fences (Scientific report of the Belgian Animal Welfare Council, 2010).

In France, even if Decree n° 2008-871 of 28 August 2008 related to companion animal protection, modifying the rural code (French Rural Code Article 214-24) states that « *Art.R. 214-24.*-Educational and training activities of a pet animal under conditions that inflict unnecessary injury or suffering are forbidden », EC are still allowed for both sale and use.

In England, Blackwell et al. (2012) reported that a fairly low proportion of dog owners chose to use electronic training devices. This study was published just after the EC (Anon, n.d.a) ban in Wales in 2010.

Several experimental studies tried to assess the consequences of using EC (Schilder and van der Borg, 2004; Cooper et al, 2014). Their experimental protocol included qualified trainers, low number of shocks, and no external stimuli. Schilder and van der Borg, (2004) reported a painful experience for the shocked dogs and a long-term association with the presence of the trainer even outside of the normal training context. Schalke et al. (2007) highlighted how the inappropriate timing of the shock increased the fear, insecurity, and anxiety of the dog. Salgirli et al. (2012) also showed that EC training induced less stress and had stronger learning effects when done by a qualified (proven proficiency) dog trainer compared to pinch collars or quitting signal applied by dog handlers. Hence, this article points out the importance of the handler's qualifications when assessing the effectiveness of training methods.

In 2014, Cooper et al. concluded that the routine use of EC, even in accordance with best practices (as suggested by collar manufacturers), presented a risk for the well-being of pet dogs. An increase in the level of this risk could be expected when use falls outside of this ideal. Thus, it seemed appropriate to assess the real conditions of use of EC and to compare the feedback from their use to already published data.

In France, there are no data available on the use of these devices; therefore, the main aim of this questionnaire survey was to collect a first set of information regarding ECs and their use.

Materials and methods

Questionnaire

A questionnaire was developed to collect data. It was divided into several sections: owner demographics, dog demographics, reasons for using or not an EC, training methods used by owners, dog behavior as perceived by owners, source of the collar, frequency of use, efficacy, and finally, perception of the current French legislation concerning the EC. Owners who had several dogs were asked to answer only once for their youngest dog. The questionnaire was available online for 3 months (from 23rd June 2015 to 14th September 2015). It was sent via e-mails to veterinarians practicing behavioral medicine through a private mailing list (Zoopsy). The veterinarians were asked to share it with their clients through social networks. The questionnaire was also sent to local dog training clubs, asking them to disseminate it. We tried to minimize a potential negative of the title of the survey by explaining in the e-mail that the questionnaire could be completed by every dog owner and was not specifically dedicated to owners who already used an EC on their dog.

The detail of the questionnaire is provided in Table 1.

Data analysis

Data were collected directly from Google Forms and imported in an Excel File.

Data were checked for errors, duplicates, and impossible answers. The age of the dogs was normalized by log transformation. Dog breeds were checked for spelling and homogenization.

We received 1,256 complete questionnaires. Three were excluded because they had been submitted twice; one was excluded because it was received after the end date, and one was considered nonvalid because the owner's answers were very implausible. Hence 1,251 questionnaires were kept for analysis.

Each possible factor associated with the EC was tested using a Chi-squared test of independence for all ECs and then for each EC type (e.g., BAC, EBF, RCC). A significance level of 0.05 was applied for all Chi-squared tests. Fisher exact test was applied when the use of chi-squared test was not valid (theoretical calculated data under five). All the tests were run using the online BiostaTGV software (https://marne.u707.jussieu.fr/biostatgv/?module=tests).

Sample characteristics

Owners' characteristics

Eighty-five percent of the completed questionnaires were obtained via social networks (Facebook) and 9% via owner's veterinarian. The remaining 6% came from e-mail (3%), other (2%), and canine training clubs (1%).

France is divided into 101 geographic areas called departments and classified with numbers. Those numbers were used to collect our geographic data, and results showed that the geographic origin of the respondents spread throughout the whole country. Three departments received no respondents and 2 (e.g., Isere and Rhône) received over fifty. Seven other departments had between 31 and 50 respondents and all others, 1 to 30 respondents.

In the study sample, 45% of owners were between the ages of 25-40, 28% were between the ages of 41-55, 17% between the ages of 15-24 and 10% were over 55 years of age. The number of owners above 70 years (5) was too low to be taken into account, so it was added to the 55-70 years age range, becoming the >55 years old category.

Dogs' characteristics

Fifty-four percent of the dogs were males and 46% were females. Among males, 37% were neutered, compared to 62% of females. Fifteen percent of owners reported a cross-breed. Other dogs (85%) were either pure bred with official documentation (50%) or coming from a single breed according to owners (35%), but without documentation.

All the "Société Centrale Canine" (SCC) breed groups were represented in the sample: 48 breeds with 5 dogs or more and 87 dogs were other breeds (e.g., 4 of them or less).

Half of the dogs (50%) had an official pedigree recognized by the French SCC.

The dogs included in the survey ranged in age from 1 to 14 years.