



## People's perception on animal welfare: why does it matter?

María Fernanda C. De la Fuente<sup>1\*</sup>, Antonio Souto<sup>2</sup>, Christini B. Caselli<sup>1</sup>, Nicola Schiel<sup>1</sup>

### ABSTRACT

Understanding people's perception on animal welfare is vital to promote people awareness and changes in attitudes towards this subject. Here we present a short review on public perception of animal welfare in different instances and the factors influencing each one of them. While the great public concern towards farm and laboratory animals resulted in increased efforts to assess animal welfare in these instances, less attention has been given to pets, captive wild animals and their use for entertainment purposes. Irrespective of the instance under consideration, public perception on animal welfare depends on a myriad of biological and sociocultural factors, ranging from people's gender and age to their own experiences and values. The knowledge on people's perception will help to refine the message to different audiences, which in turn may increase the pressure on decision-makers to promote positive welfare in animals.

**Keywords:** Pets; Farm Animals; Laboratory Animals; Wild Animals

<sup>1</sup>Laboratório de Etologia Teórica e Aplicada, Departamento de Biologia, Universidade Federal Rural de Pernambuco. Rua Dom Manoel Medeiros s/n, Dois Irmãos – Recife, PE, 52171-900, Brazil

<sup>2</sup>Laboratório de Etologia, Departamento de Zoologia, Universidade Federal de Pernambuco. Avenida Professor Moraes Rego, 1235 - Cidade Universitária – Recife, PE, 50670-901, Brazil

\* Corresponding author. E-mail address: MFCD ([ferni211@yahoo.com.ar](mailto:ferni211@yahoo.com.ar)), AS ([asouto.labet@gmail.com](mailto:asouto.labet@gmail.com)), CBC ([ccaselli@gmail.com](mailto:ccaselli@gmail.com)), NS ([nschiel@yahoo.com](mailto:nschiel@yahoo.com))

### INTRODUCTION

Animal welfare is a multi-dimensional concept related to the state of an animal regarding its attempts to cope with the environment (George et al. 2016). It can vary from very poor to very good, depending on animals' ability to attend its own needs (Broom 2010). Besides being a moral obligation toward animals, promoting good

animal welfare is important for the sustainability of production systems and acceptance of practices involving animals (Broom 2010; Broom 2011). The rising social and scientific concern regarding animal welfare has increased and already produced changes in legislation around the world (Broom 2010), such as the EU animal welfare legislation for farm, laboratory, and traded wild animals (Broom 2017). In fact,

public concerns translated into political pressure gave the UK the world-leading position on this matter (Main and Mullan 2017). In a global scale, despite the recognition of the importance of an intergovernmental legislation, we are only slowly moving in this direction. However, initiatives such as FAO's studies on animal welfare legislation, especially on farming practices (Stevenson et al. 2014; Vapnek and Chapman 2010), are noteworthy. To increase people awareness to this subject, and to promote a global change in peoples' attitudes towards the importance of it, one first step is to understand how people perceive this topic.

Public perception on animal welfare depends on peoples' own experiences, values, norms, convictions, and interests (Boogaard 2006). Other factors like gender, age, demographic, educational level, and religious affiliation, can also influence on peoples' perception and attitude toward animals and their well-being (Ohl and van der Staay 2012; Phillips and McCulloch 2005; Signal and Taylor 2006; Wells and Hepper 1995). In addition, animal welfare value to society also depends on the kind of relationship between people and the animal, the purpose of animal use, and the costs and benefits involved (Wolfensohn and Honess 2007). For example, while promoting good welfare to companion animals seems reasonable, lower levels of welfare may be tolerated for farm animals (Howell et al. 2016; Wolfensohn and Honess 2007). Here we present a short review on the diverse public perception of animal welfare in different instances (pet, farm, laboratory, and wild animals), and the factors influencing each one of them.

## **Pet animals**

Even though people consider pets as being a family member and so are believed to experience higher levels of welfare relative to farm and laboratory animals, there is a lack of knowledge on what pets need to experience a proper welfare (Howell et al. 2016). Pet owners should promote animal welfare by practicing a responsible ownership, meeting their behavioral, environmental, physical needs and preventing them from aggressions, diseases or injuries risks (Costa et al. 2017). However, several misconducts of pet owners can result in negative welfare (Cardoso et al. 2017; Lue et al. 2008). Because owners may be unaware of what an ideal welfare is, they might not have a proper perception regarding nutrition, body condition, behavioral problems and health (Howell et al. 2016). The inappropriate knowledge on dealing with pets is even more concerning in cases of exotic or wild animals, which can result in abnormal behavior and stereotypes (e.g. spot picking in caged birds, corner scrabbling in captive gerbils), and health problems due to inadequate nutrition and housing (e.g. bone diseases in reptiles) (Engebretson 2006; Schuppli and Fraser 2000). Furthermore, people's perception is often influenced by the pet species or breed. For example, dogs are perceived as more friendly and entertaining, while there is a general perception that cats are more independent and can take care of themselves (Lue et al. 2008). As a result, dog owners exhibit greater attachment with their pets, and seek higher levels of veterinary care, promoting them a better welfare (Lue et al. 2008). Another important issue related to welfare in pets is the prevention of population decontrol and abandonment, which is also a concern of public health and can have environmental implications, such as predation or

competition with native fauna, and zoonosis dispersal in wild animal's populations from feral cats and dogs (Costa et al. 2017). Assessing public perception on pet animal welfare might be a powerful tool to promote responsible ownership and to develop pet population management programs. For instance, a study about dog owners' beliefs regarding rabies vaccination resulted in a series of recommendations for improving vaccine coverage in Grenada, where, despite the advertisements by vaccine clinics, the gratuity of vaccine and the extensive education of the general public, coverage rates were low (Thomas et al. 2013).

### **Farm animals**

Due to the growing demand for animal products, the intensification of farming systems to maximize productivity and profitability has strongly increased the societal concern on farm animal welfare. Nevertheless, the public, in general, have limited understanding of modern animal production practices and their impact on animal welfare (Clark et al. 2016). Insights into the public perception of farm animal welfare concept are relevant, as consumers are the animal production chain end-user and can play a significant role in welfare improvement. Although different stakeholders along the chain (e.g. farmers and consumers) refer to the concept of animal welfare as an important goal to achieve in farm animals (Vanhonacker et al. 2012), they have different perceptions and interpretations about its meaning and what are the relevant aspects to promote adequate levels of animal welfare (Tuytens et al. 2010). For instance, consumers' perception is often influenced by emotions, beliefs, moral issues, and interest in food

quality. Vanhonacker et al. (2008) found that consumers evaluated the current state of animal welfare as somewhat negative and attributed more importance to matters related to animal suffering and stress, freedom to move, and ability to engage in natural behavior. In turn, farmers have a more positive perception of farm animal welfare and their interests are rather economically centered, attributing more importance to aspects such as animal health and feeding (Vanhonacker et al. 2008; Vanhonacker et al. 2010). In addition, Tuytens et al. (2010) mention that besides the position along the production chain, other socio-demographic variables and local of residence (rural or urban) can influence public's perception. In general, it seems that women are more concerned about the animal use and welfare than men (Cornish et al. 2016), and younger individuals consider animal welfare more relevant than older ones, which perceives farm animals more as a product (Cornish et al. 2016; María 2006). The perception of animals as a resource may also influence rural residents' views about farm animal welfare, even having greater familiarity with this context than urban residents have. Vegetarians and people with a higher education level referred to animal welfare as an important topic that needs to be enhanced (Cornish et al. 2016; Tuytens et al. 2010). Public perception on farm animal welfare can yet be influenced by the beliefs about species' cognitive capacity. In this regard, mammals are perceived as more intelligent than other animals such as chicken and fish (Cornish et al. 2016; Phillips and McCulloch 2005). Overall, the assessment of the perceived condition of farm animals by all different stakeholders can provide information to develop strategies to improve animal welfare (e.g. Welfare Quality® Assessment Protocols for cattle,

poultry, and pork) and integrate the societal concern with market demands and food quality as already observed in EU (Broom 2017).

### Laboratory animals

The current debate about the use of animals in research is strongly rooted in questions related to public's perception of animals' welfare and suffering on one side, and research benefits on the other (Ormandy and Schuppli 2014; Clemence and Leaman 2016). Laboratory animals are perceived as those subjected to greater welfare violation and, as a natural consequence, people involved in researches that use animals are generally perceived to be unaware or unconcerned about this issue (Broida et al. 1993; Wolfensohn and Honess 2007). Public positioning regarding animal use in research varies according to the perceived importance of the kind of research, the kind of animal involved, peoples' personality, and the cultural environment (Ormandy & Schuppli 2014). Researches on medical problems that use animals, generally have more support than animal use in cosmetic testing (Bolser et al. 2009). Regarding the type of animal involved, the use of great apes, large monkeys, and companion animals, such as dogs and cats, usually receives less support than research involving rodents (Bolser et al. 2009; Ormandy and Schuppli 2014). People against animal experimentation are more likely to be feminine, less conservative, more empathic, more ecologically concerned, but also have less faith in science (Broida et al. 1993; Ormandy and Schuppli 2014). On the other hand, supporters of animal experimentation show a more authoritarian nature over other living things (Broida et al. 1993). Cultural experiences will also shape

public's perception, consequently, people's attitudes about animal use. For instance, the acceptance of animal use is greater for people with a rural background, while the opposite is generally true for urban people (Ormandy and Schuppli 2014). Regarding religion, there are different views across different Christian denominations. Traditional Protestants tend to accept more the use of animals for research than no religious persons or people affiliated with the Catholic Church (Bowd and Bowd 1989; Ormandy and Schuppli 2014). Considering that there are circumstances under which animal use is a scientifically relevant and ethical practice (Franco and Olsson 2016), it is important to assess public's perception on laboratory animal welfare to move society position from a rejection towards a more ethically acceptable use of animals in research.

### Wild animals

Research on public perception on wild animal welfare has mainly focused on captive animals, especially of those kept in zoos (Davey 2007; Hassan 2015; Melfi et al. 2004; Reade and Waran 1996). Studies have shown that people that do not visit zoos have a negative perception of zoo animals and their welfare conditions, while frequent visitors appears to have a more positive perception of animal welfare, naturalistic exhibits and environmental enrichment (Davey 2007; Reade and Waran 1996). On the other hand, entertainment shows have been heavily criticized by a number of people due to inadequate enclosures and cruel training techniques encouraging unnatural behaviors, causing suffering and affecting negatively the welfare of the animals (Shani and Pizam 2008). Ecotourism practices, which involves the observation and/or interaction with wild

animals, might also have negative effects on animal welfare. For example, feeding wild animals can modify their natural behavior and even generate a dependency on humans for food or simply disrupt natural life (Nevin and Gilbert 2005; Shani and Pizam 2008). In addition, motor boats used for dolphin watching can interfere with the foraging behavior of these cetaceans, possibly because of the noise produced by the vessels (Albuquerque and Souto 2013; Carrera et al. 2008). However, people's contact with wildlife can also have positive effects, especially during childhood, as the experience with nature can increase biophilia, fostering favorable perceptions, awareness, concerns, and efforts towards animal welfare and conservation (McIntosh and Wright 2017; Zhang et al. 2014). Historically, fascination about wildlife raised people's willingness to have closer contact and interaction with wild animals through different means like zoos, aquariums, ecotourism (e.g. safaris, animal-watching), documentaries, and even entertainment attractions like circuses and aquatic shows (Shani and Pizam 2008). In general, some of the factors that can influence public perception on wild animals and affect attitudes toward them are species type (e.g. rare, charismatic, detrimental), animal use purpose (entertainment, education, research, conservation), and type of human-animal interaction (e.g. observing dolphins in captivity vs. in the wild) (Hughes 2001; Shani and Pizam 2008). Overall, studies on public perception about wild animal welfare in different scenarios are scarce and special attention should be given to this topic.

## CONCLUSION

Over the last decades, the concerns of lay people and scientists about animal

welfare have increased and evolved. Nevertheless, when it comes to animal welfare research, most studies regarding people's perception and attitudes focus mostly on farm and laboratory animals. Understanding the public's perception about animal use and welfare in other instances and which factors influence this perception, can help stakeholders to evaluate in what society believes to be acceptable. This can be translated into actions to refine the message to the different publics to improve general population awareness and to increase the pressure over the decision-makers towards a large-scale intergovernmental recognition of the importance of animal welfare legislation. In small scales, the increase of public knowledge and, as consequence, its concerns on animal use, has already raised the political pressure to develop standards and policy on animal welfare in the EU and UK. A set of specific international laws, coupled with local effective regulatory enforcement, inspections and management programs, is an efficient way to promote and establish a better animal welfare. Thus, comprehend public's perception and promoting public awareness is the first step towards making animals' well-being a moral social obligation.

## REFERENCES

- Albuquerque NS, Souto AS (2013) **Motorboat noise can potentially mask the whistle sound of estuarine dolphins (*Sotalia guianensis*)**. *Ethnobiology and Conservation* 2 (5): 1-16 doi:10.15451/ec2013-8-2.5-1-15.
- Bolser DC, Garcia KD, Haywood JR, Leland SE, Miller L, Nelson RJ, Serpell J, Talcott MR, Whitney RA (2009) **Scientific and humane issues in the use of random source dogs and cats in research**. National Academy of Sciences doi:10.17226/12641.

- Boogaard BK, Oosting SJ, Bock BB (2006) **Elements of societal perception of farm animal welfare: a quantitative study in The Netherlands.** *Livestock Science* 104:13-22.
- Bowd AD, Bowd AC (1989) **Attitudes toward the treatment of animals: a study of Christian groups in Australia.** *Anthrozoös* 3(1):20-24.
- Broida J, Tingley L, Kimball R, Miele J (1993) **Personality differences between pro- and antivivisectionists.** *Society and Animals* 1(2):129-144.
- Broom DM (2010) **Animal welfare: an aspect of care, sustainability, and food quality required by the public.** *Journal of Veterinary Medical Education* 37(1):83-88.
- Broom DM (2011) **A history of animal welfare science.** *Acta Biotheoretica* 59:121-137.
- Broom DM (2017) **Animal welfare in the European Union.** Brussels: European Parliament Policy Department, Citizen's Rights and Constitutional Affairs, Study for the PETI Committee, pp. 24-27.
- Cardoso SD, Faraco CB, de Sousa L, Pereira GDG (2017) **History and evolution of the European legislation on welfare and protection of companion animals.** *Journal of Veterinary Behavior* 19:64-68.
- Carrera ML, Favaro EGP, Souto AS (2008) **The response of marine tucuxis (*Sotalia fluviatilis*) towards tourist boats involves avoidance behaviour and a reduction in foraging.** *Animal Welfare* 17:117-123.
- Clark B, Stewart GB, Panzone LA, Kyriazakis I, Frewer LJ (2016) **A systematic review of public attitudes, perceptions and behaviours towards production diseases associated with farm animal welfare.** *Journal of Agricultural and Environmental Ethics* 29:455-478.
- Clemence M, Leaman J (2016) **Public attitudes to animal research in 2016.** Ipsos MORI | Public Attitudes to Animal Research – 2016 Report, (July). Retrieved from <http://www.ipsos-mori.com/terms>.
- Cornish A, Raubenheimer D, McGreevy P (2016) **What we know about the public's level of concern for farm animal welfare in food production in developed countries.** *Animals* doi:10.3390/ani6110074.
- Costa ED, Martins CM, Cunha GR, Carapan DR, Ferreira F, Oliveira ST, Garcia RCM, Biondo AW (2017) **Impact of a 3-year pet management program on pet population and owner's perception.** *Preventive Veterinary Medicine* 139:33-41.
- Davey G (2007) **Public perceptions in urban China toward zoos and their animal welfare.** *Human Dimensions of Wildlife* 12:367-374.
- Engebretson M (2006) **The welfare and suitability of parrots as companion animals: a review.** *Animal Welfare* 15:263-276.
- Franco NH, Olsson IAS (2016) **Killing animals as a necessary evil? The case of animal research.** In: Meijboom FLB, Stassen EN (Eds) *The end of animal life: a start for ethical debate. Ethical and societal considerations on killing animals.* 1edn. Wageningen Academic Publishers, Inc., The Netherlands, pp.187-202.
- George KA, Slagle KM, Wilson RS, Moeller SJ, Bruskotter JT (2016) **Changes in attitudes toward animals in the United States from 1987 to 2014.** *Biological Conservation* 201:237-242.
- Hassan KH (2015) **Measuring visitors' observation and perception on animal welfare in National Zoo.** *Mediterranean Journal of Social Sciences* 6(6):33-39.
- Howell TJ, Mornement K, Bennett PC (2016) **Pet dog management practices among a representative sample of owners in Victoria, Australia.** *Journal of Veterinary Behavior* doi:10.1016/j.jveb.2015.12.005.
- Hughes P (2001) **Animals, values and tourism – structural shifts in UK dolphin tourism provision.** *Tourism Management* 22:321-329.
- Lue TW, Pantenburg DP, Crawford PM (2008) **Impact of the owner-pet and client-veterinarian bond on the care that pets receive.** *Journal of the American Veterinary Medical Association* 232(4):531-540.
- Main D, MULLAN S (2017) **A new era of UK leadership in farm welfare.** *Veterinary Record* 181(2): 49-50.
- María GA (2006) **Public perception of farm animal welfare in Spain.** *Livestock Science* 103:250-256.
- McIntosh D, Wright PA (2017) **Emotional processing as an important part of the wildlife viewing experience.** *Journal of Outdoor Recreation and Tourism* 18:1-9.

- Melfi VA, McCormick W, Gibbs A (2014) **A preliminary assessment of how zoo visitors evaluate animal welfare according to enclosure style and the expression of behavior.** *Anthrozoös* 17(2):98-108.
- Nevin OT, Gilbert BK (2005) **Perceived risk, displacement and refuging in brown bears: positive impacts of ecotourism?** *Biological Conservation* 121:611-622.
- Ohl F, van der Staay FJ (2012) **Animal welfare: At the interface between science and society.** *The Veterinary Journal* 192:13-19.
- Ormandy EH, Schuppli CA (2014) **Public attitudes toward animal research: A review.** *Animals* 4(3):391-408.
- Phillips CJC, McCulloch S (2005) **Student attitudes on animal sentience and use of animals in society.** *Journal of Biological Education* 40(1):17-24.
- Reade LS, Waran NK (1996) **The modern zoo: How do people perceive zoo animals?** *Applied Animal Behaviour Science* 47:109-118.
- Schuppli CA, Fraser D (2000) **A framework for assessing the suitability of different species as companion animals.** *Animal Welfare* 9:359-372.
- Shani A, Pizam A (2008) **Toward an ethical framework for animal-based attractions.** *International Journal of Contemporary Hospitality Management* 20(6):679-693.
- Signal TD, Taylor N (2006) **Attitudes to animals: Demographics within a community sample.** *Society & Animals Journal of Human-Animal Studies* 14(2):147-157.
- Stevenson P, Battaglia D, Bullon C, Carita A (2014) **Review of animal welfare legislation in the beef, pork, and poultry industries.** FAO Investment Centre, Directions in investment, Rome, Italy.
- Thomas D, Delgado A, Louison B, Lefrancois T, Shaw J (2013) **Examining dog owner's beliefs regarding rabies vaccination during government-funded vaccine clinics in Grenada to improve vaccine coverage rates.** *Preventive Veterinary Medicine* 110(3-4): 563-569.
- Tuytens FAM, Vanhonacker F, Poucke EV, Verbeke W (2010) **Quantitative verification of the correspondence between the Welfare Quality® operational definition of farm animal welfare and the opinion of Flemish farmers, citizens and vegetarians.** *Livestock Science* 131:108-114.
- Vanhonacker F, Verbeke W, Poucke EV, Tuytens FAM (2008) **Do citizens and farmers interpret the concept of farm animal welfare differently?** *Livestock Science* 116:126-136.
- Vanhonacker F, Poucke EV, Tuytens F, Verbeke W (2010) **Citizens' views on farm animal welfare and related information provision: Exploratory insights from Flanders, Belgium.** *Journal of Agriculture and Environmental Ethics* 23:551-569.
- Vanhonacker F, Verbeke W, Poucke EV, Pieniak Z, Nijs G, Tuytens F (2012) **The concept of farm animal welfare: Citizen perceptions and stakeholder opinion in Flanders, Belgium.** *Journal of Agricultural and Environmental Ethics* 25:79-101.
- Vapnek J, Chapman M (2010) **Legislative and regulatory options for animal welfare.** FAO Legislative Study 104, Development Law Service FAO Legal Office. Rome, Italy.
- Wells DL, Hepper PG (1995) **Attitudes to animal use in children.** *Anthrozoös* 8(3):159-170.
- Wolfensohn S, Honess P (2007) **Laboratory animal, pet animal, farm animal, wild animal: which gets the best deal?** *Animal welfare* 16(1):117-123.
- Zhang W, Goodale E, Chen J (2014) **How contact with nature affects children's biophilia, biophobia and conservation attitude in China.** *Biological Conservation* 177:109-116.

**Received:** 14 June 2017

**Accepted:** 08 August 2017

**Published:** 10 October 2017