

Defining the concept of animal welfare: integrating the opinion of citizens and other stakeholders

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Abstract

Animal welfare is a complex and multidimensional concept and there is little consensus about how it ought to be defined. This project aims to develop a definition of farm animal welfare based both on science and on consensus among citizens and stakeholders such that animal welfare becomes a more workable concept in politics and society. The study consisted of both qualitative and quantitative research. Firstly, a list of 73 aspects, considered to be important for animal welfare, was produced based on focus group discussions with citizens and on a literature review. Secondly, these aspects were condensed into a set of five mutually exclusive welfare-dimensions and the relative weight of these dimensions was quantified based on a survey among Flemish citizens. Thirdly, the list of welfare dimensions and their weights was discussed with stakeholders during focus group discussions and in-depth interviews. This study gives insight into the attitudes of the different stakeholders in society towards the welfare of farm animals. Moreover, the list of dimensions and their relative weights is believed to be invaluable for the aggregation of various welfare indicators into a comprehensive assessment of the general state of welfare.

Keywords

Animal welfare, Farm animals, Definition, Citizens, Stakeholders

Introduction

Animal welfare is a complex and multidimensional concept (Mason & Mendl, 1993; Fraser, 1995). Many definitions have already been conceptualised. In general, distinction can be made between objective and subjective definitions of welfare (Bracke, 2001). The former relates welfare directly to measurable parameters and emphasizes the importance of biological functioning (e.g. Broom, 1986); the latter defines welfare in terms of subjective emotional states of animals (e.g. Duncan, 1996). Dispute between the two views still exists, however there is overall agreement about sentience being a necessary condition for welfare (Bracke, 2001) and feelings being an important part of the concept of welfare (Anonymous, 2001).

The probably best known description of what animal welfare is all about, originates from the Farm Animal Welfare Council (1992) and is based on five dimensions, 'the five freedoms': freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury or disease; freedom to express normal behaviour and freedom from fear and distress. As these freedoms overlap, Capdeville & Veissier (2001) subdivided them into 16 mutually exclusive basic needs. This corresponds to Bracke (2001) stating that animal welfare can be decomposed into a set of needs. In addition, Keeling & Veissier (2005) defined a set of 12 mutually exclusive dimensions (or 'welfare criteria') which were selected by scientists and discussed with stakeholders. This set of dimensions meets a number of theoretical and practical requirements, based on Bouyssou (1990): (i) the set must be exhaustive, i.e. containing every important viewpoint; (ii) the set must be minimal, i.e. containing only necessary

dimensions; (iii) the dimensions should be independent of each other; (iv) the set should be agreed by the stakeholders; and (v) the number of dimensions should be kept to a minimum.

Under the authority of the Flemish government this project aims to develop a definition of animal welfare based both on science and on consensus among Flemish citizens and stakeholders such that animal welfare becomes a more workable concept in politics and society. The first objective of this study was to list a complete set of aspects of animal welfare based on qualitative research and a literature review. The second objective was to condense these aspects into a comprehensive list of mutually exclusive dimensions and to quantify the relative weights Flemish citizens allocate to each of these welfare-dimensions.

Methods

The study consisted of both qualitative and quantitative research. Qualitative research took place during March 2006 through four focus group discussions with 29 participants in total. Each focus group consisted of six to nine participants of the same sex but differing in age and place of residence (rural/urban). Meat consumption was homogeneous within each group. Three groups consisted of females (vegetarians, heavy meat users and low meat users) and one group of males (vegetarians). This exploratory research gave insight into the different aspects citizens consider as important for the welfare of farm animals. The list of aspects, mentioned during the focus group discussions, was revised and completed based on literature review. For this purpose papers, focusing on animal welfare assessment on-farm (Striezel *et al.*, 1994; Bartussek, 1999; Anonymous, 2001; Bracke, 2001; Capdeville & Veissier, 2001; Sørensen *et al.*, 2001; Whay *et al.*, 2003; Keeling & Veissier, 2005)) and on welfare problems during transport and slaughter (Hall & Bradshaw, 1998; Broom, 2000; Grandin, 2000; Knierim & Gocke, 2003; Delezie *et al.*, 2005; Keeling & Veissier, 2005; Simmonds, 2005), were selected. Each aspect in the list was phrased such that it was comprehensible to the average citizen. Moreover, the list was discussed with the project steering committee consisting of scientists and members of the Ministry of the Flemish Community. This resulted in a list of 73 aspects.

This list was used as input for the quantitative research by means of a questionnaire-type survey with 1081 Flemish citizens (i.e. citizens from Dutch-speaking Belgium) during April 2006. Prints and also a digital version of this questionnaire were distributed among friends and acquaintances, who on their turn distributed it further. In addition the questionnaire was also distributed among train passengers. First, the respondents were asked to score each of the 73 aspects, according to how important they considered them for animal welfare, on a five point Likert-scale ranging from 1 (not important at all) to 5 (very important). Second, we inquired for respondents' perception of the current state of welfare of farm animals in Flanders in general and for broiler chickens, laying hens, pigs, beef cattle and dairy cattle separately. Answering possibilities ranged from very bad to very good on a seven point Likert-scale. Third, information was gathered about the respondents' consumption of pork, beef, poultry, eggs, meat substitutes, fish and dairy products. Fourth, affiliation with animal husbandry was estimated by means of six yes/no questions. Principal component analysis was used to aggregate the aspects into a set of mutually exclusive welfare-dimensions. For this, the requirements of Bouyssou (1990) were taken into account. The relative weights of these dimensions were quantified by confirmatory factor analysis (LISREL).

Qualitative research was carried out once again in May 2006. Three focus group discussions were conducted for producers, retailers and animal rights organisations separately. In addition in-depth interviews were performed with ethicists. Besides talking about what is important for farm animal welfare, participants were also confronted with the survey results. This qualitative research gave insight into the perception of animal welfare by other stakeholders (producers, retailers, animal right organisations, ethicists) and the differences in the opinions of these stakeholders and citizens.

Results

Focus group discussions (citizens)

Participants' knowledge of current animal husbandry practices was limited. Animal welfare was rarely mentioned spontaneously as an important food selection criteria, still most participants agreed that too little was known about it "... *that is the problem, information is not sufficiently available ...*". A

minority expressed no interest in animal welfare. 56 aspects, mentioned by at least one of the participants as important and relevant for the welfare of farm animals, were listed. Most of the participants however mentioned that they had insufficient knowledge of what really matters to the animal from the animal's point of view. This list was revised into a list of 73 aspects following a review of relevant literature on farm animal welfare. This final list was used for the survey.

Survey

Data were collected during the first three weeks of April 2006, resulting in a gross response of 1081 respondents and a valid response of 834, of which respectively 27 % and 73 % via printed and digital versions. At the time of writing, the analysis of the survey results was not finished, so only some preliminary results are mentioned. Final results were presented and discussed at the conference. The following preliminary results were based on 423 digital questionnaires. The age of respondents ranged from 17 to 75, with a mean of 34.5 years. The number of female and male respondents was nearly equal (respectively 45.5 % and 54.5 %). 39.5 % of respondents had an urban place of residence, 60.5 % lived on the countryside.

Based on the first question, the list of 73 aspects could be condensed into five main dimensions, i.e. (i) *natural behaviour and housing*, (ii) *transport and slaughter*, (iii) *feeding and housing climate*, (iv) *animal suffering* and (v) *human-animal relationship*.

Respondents' perception of the current state of farm animal welfare in Flanders was moderate to rather good. The perception differed significantly between men and women ($P < 0.001$) and was better for male than for female respondents. Perception also differed depending on the place of residence ($P < 0.001$), with city dwellers perceiving the welfare of farm animals as worse compared with people from rural areas. No correlation was found between the age of respondents and their perception of farm animal welfare ($r = 0.091$; $P = 0.06$). Perception of animal welfare also differed according to species and was lowest for poultry (rather moderate to moderate; laying hens lower than broiler chickens), and highest for cattle (rather good to good; dairy cattle higher than beef cattle). Pig welfare was scored intermediately (moderate to rather good). Men and city dwellers gave higher scores than women ($P < 0.001$) and rural people ($P \leq 0.001$) respectively.

Focus group discussions (other stakeholders) and in-depth interviews

At the time of writing, the focus group discussions and in-depth interviews were not yet completed. Results were presented and discussed at the conference.

Discussion

Based on the focus group discussions 56 aspects found important for animal welfare, could be listed. After literature review the list was revised into a list of 73 aspects. So, although participants stated that they only had limited knowledge of what matters to the animal, a large part of the final aspects was mentioned by them.

The preliminary results indicate that farm animal welfare can be divided into five main dimensions: (i) *natural behaviour and housing*, (ii) *transport and slaughter*, (iii) *feeding and housing climate*, (iv) *animal suffering* and (v) *human-animal relationship*. These first results indicate that citizens strongly associate the expression of natural behaviour with the housing conditions of the animals. This makes sense as the expression of natural behaviour is more likely when animals are housed in a way that resembles their natural living conditions. Animal suffering and human-animal relationship were grouped as separate dimensions, which is in line with the recently developed scientific view of animal feelings being important when considering animal welfare (Anonymous, 2001).

In general, the citizens' perception of farm animal welfare in Flanders was moderate to rather good. However, welfare was perceived to differ between the five species, with the welfare of laying hens being worst, dairy cows best and pigs in between. In the Eurobarometer (2005) similar results were found: 26 % of the Belgian respondents gave a positive opinion about the welfare of laying hens, 79 % of them perceived dairy cow welfare as positive and 46 % had a positive perception of pig welfare. City dwellers were more critical about farm animal welfare in comparison to people living in a rural area. This was also the case for dairy cows and pigs, but not for laying hens, in the Eurobarometer (2005). Women were more negative than men which correspond to Köhler (2001) who reported that

women rate the acceptability of farm animal treatment lower than men. No relationship between respondents' age and their perception of farm animal welfare was found.

After completing the study, insight will be gained into the attitudes of the different stakeholders in society towards the welfare of farm animals. Moreover, assessing welfare concerns evaluating different dimensions (or 'criteria') of welfare and the first step in creating a welfare assessment model is to define this set of dimensions on which the model can be built (Bouyssou, 1990). Consequently, the final list of dimensions and their relative weights is believed to be invaluable for the aggregation of various welfare indicators into a comprehensive assessment of the general state of welfare.

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