Exploring the perceptions and practices of pet-owners and provision of food safety information regarding raw meat-based pet diets.

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Results

Introduction

In the UK, raw meat-based diets for pets is an increasing consumer trend. A number of studies have determined the presence of pathogens in commercial raw meat-based pet food (Chengappa, et al., 1993; Nemser et al., 2014; Baede, et al. 2017; van Bree et al., 2017; Fredriksson-Ahomaa et al., 2017).

It can be argued that handling and preparation of raw meat-based pet food may carry a health risk to pet-owners, especially if performed improperly. This was highlighted by the British Veterinary Nursing Association (Waters, 2017).

However, there is currently a lack of data detailing the food safety perceptions and practices of pet-owners who provide raw meat-based diets to pets. Furthermore, pet-owners may utilise social media to obtain information, regarding raw meat-based diets, therefore, it is essential to explore the provision of food safety information available relating to the consumer trend.

Purpose

To explore pet-owners' perceptions and self-reported food-safety practices, related to raw meat-based pet diets, and to explore online provision of foodsafety information, regarding raw meat-based pet feeding.

Methods

In order to achieve the aims, this research project incorporated three phases of data collection:

- A netnography study, using a content analysis approach was used to analyse archive posts from 'Pet Forums Community' (the UKs most popular pet owner social media site), relating to 'raw feeding' and 'food safety' (n=308).
- An online-questionnaire, regarding food-safety perceptions and practices was completed by pet-owners reporting to provide raw meat-based diets for pets (*n*=174).
- Manufacturer/supplier websites (n=33) were reviewed for provision of foodsafety guidelines for pet-owners on raw meat-based diets for pets.

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Netnography study of pet-owner perceptions

The review of the forum posts (n=308) revealed that most commonly expressed attitude among pet-owners is that raw pet food is 'natural' for pets and was perceived to be 'safer' and 'better' than manufactured pet food (See comments 19 and 01).

> "Who knows what they put in those pouches and cans at the factory." (Comment 19)

"Made for human consumption chicken, so from the supermarket, I feel there would be little chance of there being any bugs in it."

The risk of illness was perceived to be associated with direct contact between pets and humans and a lack of hygiene (Comment 117), many did not perceive risks associated with raw pet food (Comment 86).

> "There is a risk to human family members if the dog licks human faces or the human ingests bacteria via their hands." (Comment 117)

"All this paranoia about germs is for the most part just nonsense." (Comment 86)

Those that expressed concern regarding raw pet food in forum posts did so in relation to their pets or their children, but not their own safety (Comment 12). Whereas pet-owners with compromised immunity, or those who had previously experienced foodborne illness were most aware of potential risks (Comment 201).

"I have a compromised immune system so it's important for me to avoid such risks." (Comment 201)

"I am worried about bacteria with the raw as I have young children." (Comment 12)

Pet-owners mentioned various pathogens that may be associated with raw pet food, however forum posts indicated potential confusion regarding how to minimise the risks (Comment 83). Although some forum members indicated appropriate food safety precautions were taken (Comment 10 and 72), others indicated a sense of optimism regarding pathogens (Comment 18), and in some cases forum members shared potential malpractices that may cause cross-contamination (Comment 7).

"The only way a cat would get salmonella from chicken is if it isn't cooked properly but if you are raw feeding you have no need to cook raw food." (Comment 83)

"I don't care about what gross things dogs get up to if left to their own devices, their bowls are cleaned after every meal." (Comment 72) "The process and precautions I take in handling raw food that I am going to cook for myself are the same ones I take in preparing my cats' raw food." (Comment 10)

"A few germs here and there won't hurt as long as you are generally clean and tidy."(Comment 18)

"Rinse meat well with water, you can also cook it lightly on the outside, just a little, to kill the surface bacteria." (Comment 7)

Self-reported food safety practices of pet-owners

An online questionnaire was completed by pet-owners (n=174), who provide raw meat-based diet to their pet.

The majority (95%) reported confidence that their raw pet food was safe. Pet-owners reported having researched food safety information, regarding raw meat-based pet feeding (Figure 1). The most reported method was speaking to other pet-owners, using social media and searching online. Online-forums and social media were cited as 'trusted' sources of information.



Figure 1. Methods of obtaining food safety information, regarding raw meat-based feeding, reported by the pet-owners (n=174).

While respondents reported knowledge of pathogens that may be present in raw meat-based diets, and reported awareness of food safety practices; many did not report implementing appropriate food safety practices consistently. Furthermore, food safety malpractices, such as rinsing raw meat (27%) and lack of segregation (52%), were also reported.

Almost all pet-owners (90%) were confident in their ability to prepare their pets' raw meat-based diet without potential risk to themselves or their family members, the vast majority (84%) had full confidence in their cleaning and sanitizing routines.

Although 51% of pet-owners reported that foodborne illness may be severe, only 36% were aware that it could lead to a lethal outcome. The risk of foodborne illness, associated with raw meat-based feeding was perceived to be low by 89% of pet-owners.

It was determined that the pet-owners that participated in the questionnaire perceived low susceptibility to foodborne illness, but high self-efficacy, which may be an indication of 'optimistic bias'.

Review of raw pet food supplier websites

The review of raw pet food manufacturer websites (n=33) revealed that 61% of websites did not provide any consumer safety and hygiene guidelines, regarding raw meat-based feeding.

Of the websites that provided food safety information (n=13) guidance relating to 'hand washing', 'refrigeration' and 'freezing and thawing' were most frequently included (Figure 2). Considerably fewer provided instructions regarding 'segregation'. Manufacturers seldom referred to foodborne pathogens associated with raw meat.



Figure 2. Provision of food safety information regarding raw meat-based feeding, on raw pet food manufacturer websites (n=13).

Although food safety information was provided by 39% of manufacturers, the majority of information was not sufficient. Only five websites provided "Excellent guidance", the most comprehensive food safety information was provided by manufacturers approved by the UK Pet Food Manufacturers Association.

Table 1. Inclusion and quality of food safety information provision of reviewed raw pet food manufacturer/supplier websites (n=33).

Quality of food safety information	Manufacturer websites
"No Guidance" – No inclusion of food safety information	61%
"Poor Guidance" – Websites that mention food safety and hygiene but do not provide instructions.	9%
"Good Guidance" – Websites that providing correct information regarding food safety with some missing information regarding specific practices.	15%
"Excellent Guidance" – Websites that provide correct information and consumer instructions, with regards to raw food safety and hygiene, safe storage, thawing, freezing and cleaning and sanitizing procedures.	15%

Cumulatively, manufacturers do not provide pet-owners with consistent or reliable information regarding foodborne pathogens associated with raw pet food and fail to provide sufficient food safety guidance and information for pet owners to mitigate potential risks when providing raw meat-based diets for pets.

Significance of study

Given the lack of data about pet-owners perceptions and practices regarding raw pet feeding, this study has revealed some important findings. Although pet-owners indicated awareness of food safety, potential malpractices were also reported. Moreover, pet-owners were shown to underestimate the potential severity of foodborne illness, indicating 'optimistic bias'. Additionally, the provision of appropriate food safety information from manufacturers of raw pet food was particularly lacking.

Recommendations

- Future observational studies are necessary, in order to determine the actual food safety practices of pet-owners when providing raw pet food.
- There is a need for comprehensive and reliable food safety instructions for pet-owners, practicing raw meat-based pet feeding.

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