

Article

Reasons Why Dog Owners Stop Feeding Raw Meat-Based Diets (RMBDs)—An Online Survey

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Abstract: Feeding raw meat-based diets (RMBDs) is becoming increasingly popular among dog owners. The concerns of veterinarians and scientists about this feeding method and its risks are topic of many publications. The present study aimed to determine why dog owners stop feeding raw diets and whether this change in diet is connected to health issues in dogs. The survey was conducted using an online questionnaire in the German language. The survey included questions about the signalment and health status of the dog, past RMBDs, and the reasons behind the change in the diet or discontinuation of an RMBD. Questionnaires answered by 802 pet owners, each describing a single dog, were included in the final analysis. The three primary reasons to stop feeding an RMBD were intolerance of the diet (24%, $n = 196/802$), which was expressed exclusively in gastrointestinal signs, disease (20%, $n = 163/802$), which was a gastrointestinal disease in 64% ($n = 104/163$) of cases (13%, $n = 104/802$), and an unwillingness to eat the raw diet (15%, $n = 117/802$). Overall, 37% ($n = 300$) of all participants terminated feeding an RMBD due to gastrointestinal problems. Gastrointestinal problems are a significant reason for discontinuation of the RMBD. In cases of gastrointestinal complaints, a detailed diet history should be asked for, and a diet change should be considered as a solution.

Keywords: bone and raw foods; gastrointestinal disease; nutrition



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1. Introduction

The raw meat-based diet (RMBD) is a feeding method that is particularly popular among dog owners. Another term for RMBDs is “BARF” which stands for “bone and raw food”. This specific feeding method claims to be particularly “species-appropriate”, “healthy”, and “natural” for dogs [1,2]. RMBDs typically include raw meat, offal, bones, fish, dairy products, vegetables, fruits, various oils, and other additives [3–5]. In the study by Dillitzer et al. (2011), 26% of RMBD feeders fed small amounts of carbohydrates such as noodles, potatoes, or rice. Over the years, various forms of RMBD/BARF feeding have emerged [5], which are usually named after their respective founders. Examples include Billinghamst BARF, Lonesdale BARF, Simon BARF, and Prey BARF. There are numerous scientific publications on the topic of RMBDs. These mainly focus on nutrient supply [3,6–10] and the occurrence of potentially pathogenic and zoonotic organisms in the food and excreta of RMBD-fed dogs [5,11–20]. Despite the risks of transmission and infection with pathogens and the risk of imbalances in nutrient supply highlighted in these studies, many dog owners continue to use this feeding method. The reasons for people choosing RMBDs as their feeding method include knowledge of ingredients; the possibility of individualized and varied feeding; the desire for species-appropriate, healthy, and natural nutrition; and medical problems [21,22]. As of today, there are no studies on the reasons for discontinuing raw feeding. The objective of this study was to determine the reasons for discontinuing feeding a raw meat-based diet and to identify possible diseases associated with this discontinuation.

2. Materials and Methods

2.1. Study Design

2.1.1. Questionnaire

The questionnaire was developed with the German online survey platform “SoSci-Surveys” via the university server of Ludwig-Maximilians University Munich and was completely anonymous. Participants answered at least 30 and a maximum of 42 questions by selecting checkboxes and providing free-text responses. The difference in the number of questions resulted from follow-up questions asked depending on certain answers. The questionnaire was divided into three parts. (1) The first part asked for the signalment (age, sex, and breed) and general health status of the dog. (2) In the following part, dog owners were asked about a previous RMBD. This included a detailed description of the previous RMBD’s composition, including all ingredients that were fed during the raw feeding period. Additionally, participants were asked about their reasons for choosing this feeding method in the past, what kind of expertise was used to formulate the diet, and whether a specific concept was followed. (3) In the final part, the authors addressed the main research question: the reasons for discontinuing this feeding method. This part was divided into two sections. Firstly, participants were asked to specify the primary or main reason why the feeding method was discontinued, with only one answer allowed. Secondly, additional reasons for discontinuing the feeding method were investigated, with the selection of multiple answers being possible.

2.1.2. Acquisition of Participants

The questionnaire was addressed to dog owners that stopped raw feeding in the past and was primarily advertised via social media (Facebook, Instagram). However, the authors also distributed flyers in veterinary practices, clinics, and parks around Munich. On social media, the survey was shared primarily in dog-related groups. Some 55 groups dealt with the general topic of dogs and animals, 38 groups discussed dog breed-related content, and 7 groups focused on dog-specific diseases.

2.2. Participants

A total of 1129 people began answering the questionnaire, and of these, 845 submitted a fully completed questionnaire. Of these 845 fully completed questionnaires, the authors were able to include 802 in the study. Questionnaires were excluded when people had not stopped feeding a raw diet or completed the questionnaire incorrectly.

2.3. Statistics

Microsoft® Excel® for Microsoft 365 MSO Version 2307 was used for descriptive statistics and the graphic visualization of the data. Main calculations were conducted with R statistical software (R version 4.3.1 (16 June 2023)). The proportions of gender categories were equally distributed, with ca. 25% of data in each of four gender categories. Since we did not have exactly 25% of data in every gender category, we used a binominal test with the assumption that the probability of success is 0.25 to confirm that groups were equally distributed across our sample size. The chi-square test was used to explore the association between the gernered distribution and the presence of gastrointestinal diseases. Comparison of the study population and the German average [23] was made using the two-proportions z-test. The probability of illnesses was estimated by univariable logistic regression. Results of univariable logistic regression were obtained, with the existence of illness as the primary reason (yes or no) as a response variable (outcome) and type of disease as a single predictor (risk factor) with different disease types. The contrasts (differences) between odds of specific illnesses and between new diets was calculated with the “emmeans” R Package. Tukey correction of *p*-values for multiple testing was applied in order to reduce the probability of type I error. Statistical significance was associated with a *p*-value of less than 0.05.

3. Results

3.1. Dog Population

The dog population ($n = 802$) showed a balanced sex ratio with no significant difference, which is shown in Table 1.

Table 1. Sex distribution. The exact binominal test showed that non-identical numbers of animals in different gender categories (n) were statistically similar, because the null hypothesis that every gender category has 25% of data (the probability of success is 0.25) could not be rejected (due to high p -values). ($n = 802$).

| Predictor | % (95% CI ¹) | p -Value |
|-----------------|--------------------------|------------|
| male | 26.3 (23.3–29.5) | 0.37 |
| male neutered | 25.5 (22.6–28.7) | 0.71 |
| female | 23.3 (20.4–26.4) | 0.28 |
| female neutered | 24.8 (21.8–27.9) | 0.94 |

¹ CI = Confidence interval.

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The dogs' age ranged from 0.4 to 17.0 years with an average age of 6.3 years (median: 6.0 years, standard deviation (SD) ± 3.6). The weight of the dogs ranged from 2.0 to 73.0 kg with an average weight of 24.9 kg (median: 24.0 kg, s(SD) ± 13.6). A comparison between the dogs' weight and the German average is shown in Table 2. The shoulder height of the dogs was recorded in categories. Almost half of the dogs (47%, $n = 378/802$) were between 41–60 cm tall, followed by a quarter of the population (25%, $n = 197/802$) who were between 61–70 cm tall. The remaining dogs were smaller than 40 cm (21%, $n = 167/802$) or larger than 70 cm (7%, $n = 60/802$).

Table 2. Comparison of weight classes between the study population shown and the German average (determined by Ohr 2019).

| Bodyweight | Study Population n (%) | German Average n (%) (Ohr 2019) | p -Value |
|------------|--------------------------|-----------------------------------|------------------|
| <10 kg | 120 (15%) | 1057 (23%) | <0.001 |
| 10–25 kg | 329 (41%) | 1930 (42%) | 0.79 |
| 26–40 kg | 265 (33%) | 1333 (29%) | 0.02 |
| >40 kg | 88 (11%) | 322 (7%) | <0.001 |

Significant results are in bold.

Overall, 106 different breeds were reported. In descending order, the following breeds were stated most frequently: mixed breeds (17%, $n = 140/802$), Labrador Retrievers (6%, $n = 50/802$), Border Collies (5%, $n = 39/802$), Rhodesian Ridgebacks (5%, $n = 38/802$), Australian Shepherds (4%, $n = 35/802$), French Bulldogs (4%, $n = 35/802$), and German Shepherds (4%, $n = 31/802$). A comparison of mixed and pedigree dogs between the study population and the German average is shown in Table 3. Slightly more than half of the dogs were the only dog in the household. A comparison with the German average is shown in Table 4.

Table 3. Comparison of the distribution of pedigree and mixed-breed dogs between the study population shown and the German average (determined by Ohr 2019).

| Breed | Study Population n (%) | German Average n (%) (Ohr 2019) | p -Value |
|---------------|--------------------------|-----------------------------------|------------------|
| Mixed Breeds | 140 (17%) | 2060 (45%) | <0.001 |
| Pedigree Dogs | 662 (83%) | 2517 (55%) | <0.001 |

Significant results are in bold.

Table 4. Comparison of the number of dogs in a household between the study population shown and the German average (determined by Ohr 2019).

| Dogs in Household | Study Population <i>n</i> (%) | German Average <i>n</i> (%) (Ohr 2019) | <i>p</i> -Value |
|--------------------|-------------------------------|--|------------------|
| one dog | 411 (51%) | 1049 (81%) | <0.001 |
| two dogs | 253 (32%) | 207 (16%) | <0.001 |
| more than two dogs | 138 (17%) | 39 (3%) | <0.001 |

Significant results are in bold.

3.2. Reasons for Discontinuation of an RMBD

To rank the relevance of the reasons for discontinuing the feeding method, participants were asked to indicate the primary reason for the change of diet. In a second question, they could select additional, secondary reasons for the change of diet. In the question about the primary reason, participants could only give one answer. In the question about additional reasons, multiple options could be selected.

3.2.1. Primary Reasons

All primary reasons that were mentioned by more than 1% of the respondents are shown in Table 5. Reasons mentioned less frequently, in 1% or less of surveys, were “new life circumstances of the owners” (*n* = 11), “fear of nutritional deficiencies” (*n* = 9), “poor quality of BARF food” (*n* = 9), “storage problems” (*n* = 9), “fear of infections” (*n* = 9), “fear of germs” (*n* = 8), and “blood values deviating from the reference range” (*n* = 5).

Table 5. Primary reasons for discontinuation of an RMBD, restricted to all reasons above 1%. (*n* = 719/802).

| Primary Reason | <i>n</i> (%) |
|--|--------------|
| intolerance | 196 (24%) |
| illness | 163 (20%) |
| lack of acceptance | 117 (15%) |
| preparing the diet was too much effort | 96 (12%) |
| too expensive | 45 (6%) |
| lack of time to prepare diet | 37 (5%) |
| weight loss | 22 (3%) |
| need for special diet | 16 (2%) |
| skin problems | 13 (2%) |
| weight gain | 14 (2%) |

3.2.2. Additional Reasons

A similar pattern emerged for the secondary reasons. The most cited reasons are shown in Table 6. Reasons mentioned less frequently, in 1% or less of surveys, were “new life circumstances of the owner” (*n* = 11), “fear of malnutrition” (*n* = 8), “poor quality of the raw food” (*n* = 7), “disgust with the food” (*n* = 6), “fear of germs” (*n* = 6), and “problems with hygiene in preparation” (*n* = 5).

Table 6. Additional reasons for discontinuation of an RMBD, restricted to all reasons above 1%. (with multiple answers possible; $n = 1147$ (150%)).

| Secondary Reason | n (%) |
|--|-----------|
| intolerance | 190 (24%) |
| preparing the diet was too much effort | 188 (23%) |
| illness | 131 (16%) |
| lack of acceptance | 114 (14%) |
| too expensive | 111 (14%) |
| other | 88 (11%) |
| lack of time to prepare diet | 86 (11%) |
| weight loss | 70 (9%) |
| skin problems | 61 (8%) |
| need for special diet | 44 (5%) |
| weight gain | 35 (4%) |
| storage problems | 16 (2%) |
| fear of infection | 13 (2%) |

3.2.3. Primary Reason: Illness of the Dog

The second most common primary reason mentioned by dog owners for discontinuation was a disease in their dog. Following this answer 1, participants were directed to further questions about their responses. First, they were asked to roughly classify the illness. This classification is shown in Figure 1.

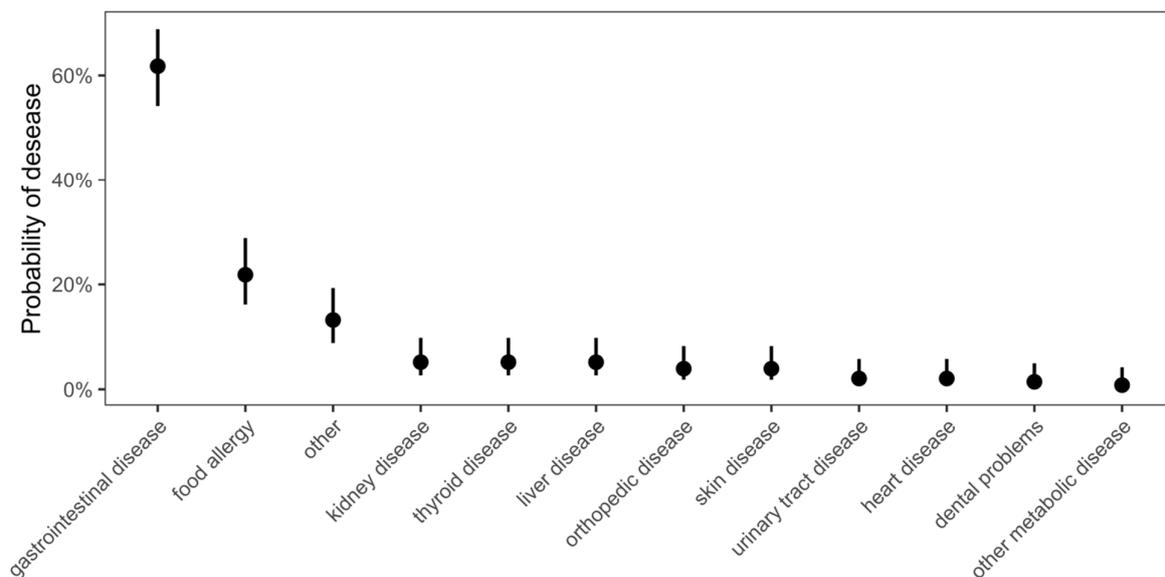


Figure 1. Probabilities of diseases calculated by the univariable logistic regression, with the existence of illness as primary reason (yes or no) as a response variable (outcome) and type of disease as a single predictor (risk factor) with the different disease types as categories. The total number of observations was 1944. ● = Percentage of illness among all participants who cited illness as a reason for quitting RMBD.

In comparison, gastrointestinal diseases were mentioned significantly more often than all other diseases, as shown in Table 7.

Table 7. Gastrointestinal diseases in comparison to all other diseases and results of univariable logistic regression with the existence of illness as primary reason (yes or no) as a response variable (outcome) and type of disease as a single predictor (risk factor) with the different disease types. The total number of observations was 1944.

| Predictor | OR ¹ (95%CI ²) | p-Value |
|--------------------------|---------------------------------------|---------|
| Illness | | |
| gastrointestinal disease | - | - |
| food allergy | 0.17 (0.11–0.28) | <0.001 |
| other | 0.09 (0.05–0.16) | <0.001 |
| kidney disease | 0.03 (0.02–0.07) | <0.001 |
| thyroid disease | 0.03 (0.02–0.07) | <0.001 |
| liver disease | 0.03 (0.02–0.07) | <0.001 |
| orthopedic disease | 0.03 (0.01–0.06) | <0.001 |
| skin disease | 0.03 (0.01–0.06) | <0.001 |
| urinary tract disease | 0.01 (0.00–0.04) | <0.001 |
| heart disease | 0.01 (0.00–0.04) | <0.001 |
| dental problems | 0.01 (0.00–0.03) | <0.001 |
| other metabolic disease | 0.01 (0.00–0.03) | <0.001 |

¹ OR = odds ratio; ² CI = confidence interval. Significant results are in bold.

Primary Reason: Gastrointestinal Disease

After categorizing the diseases, participants provided the exact name of the disease in a free-text field. In descending order, the specific diseases the owners mentioned for gastrointestinal diseases are shown in Table 8.

Table 8. Primary reason: gastrointestinal disease, divided into all diseases mentioned (*n* = 100/104; 4 of the participants did not make any statement about the type of disease).

| Primary Reason—Gastrointestinal Disease | <i>n</i> (%) |
|---|--------------|
| IBD | 44 (44%) |
| gastritis | 19 (19%) |
| pancreatitis | 17 (17%) |
| EPI | 11 (11%) |
| unknown | 5 (5%) |
| dysbiosis | 2 (2%) |
| gastric torsion | 2 (2%) |

IBD = inflammatory bowel disease. EPI = exocrine pancreatic insufficiency.

3.2.4. Primary Reason: Ration Was Not Well Tolerated/Intolerance

If the dog owners indicated that the raw diet was not well tolerated, they were asked for further information, especially about the signs that occurred. In descending order, these signs are shown in Table 9. Except for “poor hair coat,” all signs refer to the gastrointestinal tract. Additionally, since “poor hair coat” was only mentioned in combination with other signs, all of these diets were discontinued due to gastrointestinal signs.

Table 9. Primary reason: intolerance, divided into the different signs shown ($n = 196$).

| Primary Reason—Intolerance | <i>n</i> (%) |
|----------------------------|--------------|
| diarrhea | 131 (67%) |
| vomiting | 69 (35%) |
| licky fits | 38 (19%) |
| flatulence | 26 (13%) |
| abdominal pain | 16 (8%) |
| constipation | 10 (5%) |
| borborygmi | 9 (5%) |
| poor hair coat | 6 (3%) |

Licky fits describe a symptom complex of lip smacking, licking, and belching. Borborygmi are rumbling or gurgling noises made by the movement of fluid and gas in the intestines.

3.3. Duration of Feeding the RMBD

The participants were also asked about the duration for which they had been feeding RMBDs to their dogs. They reported the answers in number of years. The shortest duration was under half a year (all results < 0.5 years), and the longest was 18.0 years. The median duration was 2.0 years (s(SD) ± 3.1). When considering the duration of feeding a raw diet in relation to the reasons for discontinuing, some differences were observed and are presented in Table 10. Participants who indicated “lack of acceptance” as the primary reason for discontinuation had the shortest duration of feeding an RMBD (median: 1.0 years). Those who fed these diets for the longest duration indicated weight gain as the primary reason for discontinuing the diet (median: 5.0 years).

Table 10. Primary discontinuation reasons and correlation with the duration of feeding raw diets.

| Characteristic | Lengths in Years ¹ |
|------------------------------------|-------------------------------|
| lack of acceptance ($n = 117$) | 1.0 (1.0, 2.0) |
| weight loss ($n = 22$) | 1.0 (1.0, 2.8) |
| too much effort ($n = 96$) | 1.5 (1.0, 4.0) |
| vegetarian/vegan ($n = 4$) | 1.8 (0.4, 3.8) |
| skin problems ($n = 13$) | 2.0 (1.0, 3.0) |
| intolerance ($n = 196$) | 2.0 (1.0, 4.0) |
| too expensive ($n = 45$) | 2.0 (1.0, 4.0) |
| not enough time ($n = 37$) | 3.0 (2.0, 5.0) |
| need for special diet ($n = 16$) | 3.0 (1.8, 5.0) |
| illness ($n = 163$) | 3.0 (1.0, 4.5) |
| fear of infection ($n = 9$) | 4.0 (3.0, 5.0) |
| other ($n = 70$) | 4.0 (2.0, 6.0) |
| weight gain ($n = 14$) | 5.0 (1.0, 6.0) |

¹ Median (IQR).

3.4. New Diet

Most participants reported switching to dry food as their new feeding option (65%, $n = 519/802$). The second most common option was transitioning to wet food (44%, $n = 354/802$), and about one third switched to a home-cooked diet (26%, $n = 207/802$). A very small proportion reported “other” as their feeding option (1%, $n = 5/802$). When reporting “other”, people mentioned some kind of special soft food, which is a semi-moist manufactured food.

When further specifying the new feeding option, the majority of participants fed their dog commercial adult food after the switch (58%, $n = 461/802$), followed by an allergen-free or a hypoallergenic food (12%, $n = 95/802$), a self-prepared diet (7%, $n = 55/802$), a gastrointestinal diet (6%, $n = 45/802$), senior food (4%, $n = 35/802$), a pancreas diet (4%, $n = 28/802$), and junior food (3%, $n = 20/802$). When considering the choice of a new feeding option in relation to the reported primary reasons for discontinuing the raw food diet, some significant differences emerged, as presented in Table 11.

Table 11. New food in addition to the primary reason for stopping the raw meat-based diet.

| Predictor | OR ¹ (95% CI ²) | p-Value |
|---------------------------------------|--|-------------------|
| Primary reason: lack of acceptance | | |
| Cooked diet/dry food | 0.24 (0.13–0.42) | <0.0001 |
| Cooked diet/wet food | 0.22 (0.12–0.39) | <0.0001 |
| Dry food/wet food | 0.92 (0.51–1.67) | 0.9508 |
| Primary reason: weight loss | | |
| Cooked diet/dry food | 0.04 (0.01–0.24) | <0.0001 |
| Cooked diet/wet food | 0.56 (0.11–2.87) | 0.6831 |
| Dry food/wet food | 12.97 (2.45–68.6) | 0.0009 |
| Primary reason: too much effort | | |
| Cooked diet/dry food | 0.04 (0.02–0.09) | <0.0001 |
| Cooked diet/wet food | 0.14 (0.06–0.33) | <0.0001 |
| Dry food/wet food | 3.73 (1.76–7.91) | 0.0001 |
| Primary reason: skin problems | | |
| Cooked diet/dry food | 0.73 (0.13–4.07) | 0.9061 |
| Cooked diet/wet food | 0.54 (0.10–2.96) | 0.6768 |
| Dry food/wet food | 0.74 (0.12–4.43) | 0.9185 |
| Primary reason: intolerance | | |
| Cooked diet/dry food | 0.31 (0.19–0.50) | <0.0001 |
| Cooked diet/wet food | 0.51 (0.32–0.83) | 0.0038 |
| Dry food/wet food | 1.67 (1.03–2.68) | 0.0322 |
| Primary reason: too expensive | | |
| Cooked diet/dry food | 0.02 (0.00–0.08) | <0.0001 |
| Cooked diet/wet food | 0.31 (0.08–1.12) | 0.0822 |
| Dry food/wet food | 16.44 (4.68–57.7) | <0.0001 |
| Primary reason: not enough time | | |
| Cooked diet/dry food | 0.09 (0.03–0.31) | <0.0001 |
| Cooked diet/wet food | 0.33 (0.10–1.11) | 0.0809 |
| Dry food/wet food | 3.70 (1.19–11.5) | 0.0187 |
| Primary reason: need for special diet | | |
| Cooked diet/dry food | 0.15 (0.03–0.78) | 0.0195 |
| Cooked diet/wet food | 0.65 (0.12–3.39) | 0.8110 |
| Dry food/wet food | 4.31 (0.78–23.7) | 0.1102 |
| Primary reason: illness | | |
| Cooked diet/dry food | 0.43 (0.25–0.73) | 0.0005 |
| Cooked diet/wet food | 1.08 (0.64–1.83) | 0.9409 |
| Dry food/wet food | 2.51 (1.48–4.27) | 0.0001 |
| Primary reason: fear of infection | | |
| Cooked diet/dry food | 0.05 (0.00–0.57) | 0.0110 |
| Cooked diet/wet food | 0.85 (0.10–7.60) | 0.9840 |
| Dry food/wet food | 16.96 (1.21–238) | 0.0322 |
| Primary reason: other | | |
| Cooked diet/dry food | 0.17 (0.07–0.40) | <0.0001 |
| Cooked diet/wet food | 0.40 (0.18–0.92) | 0.0276 |
| Dry food/wet food | 2.39 (1.06–5.37) | 0.0323 |
| Primary reason: weight gain | | |
| Cooked diet/dry food | 0.11 (0.02–0.72) | 0.0163 |
| Cooked diet/wet food | 0.11 (0.02–0.71) | 0.0159 |
| Dry food/wet food | 1.00 (0.18–5.55) | 1.0000 |

¹ OR = odds ratio; ² CI = confidence interval. Significant results are in bold.

4. Discussion

This study was designed to examine the reasons behind the abandonment/discontinuation of RMBDs by dog owners. The primary reasons for abandoning raw meat feeding were intolerance, disease (especially gastrointestinal disease), and lack of acceptance.

The dog population in the present study showed a balanced sex ratio and neutering status. A very similar distribution was also shown in other German studies [24]. The age distribution in the present study compared to the German average [23] shows slightly more dogs in the age category 3–5 years among the raw-fed dogs and slightly fewer in the categories 0–2 years and over 10 years.

The weight of the study dogs showed differences compared to the German average [23]. In the study population, there were significantly more dogs that weighed more than 40 kg and significantly fewer dogs weighing less than 10 kg. This shows that dogs that have stopped being fed raw diets tend to be bigger than the German average.

There were significantly more dogs in households with two or even more than two dogs compared to the German average [23]. On the one hand, this difference may be due to time, as the survey from Göttingen was conducted 5 years ago [23]. However, it is still possible that dog owners who prefer raw meat feeding are more likely to have more than one dog. It is also possible that bigger dogs and households with more than one dog are more likely to quit raw feeding because it's more expensive and time-consuming than for smaller or fewer dogs in the household.

Mixed-breed dogs were most frequently reported in the study, which is consistent with observations of the overall dog population in Germany. The breeds mentioned afterward fit with national statistics in terms of their popularity [23]. All in all, the study population reflects a representative German dog population.

Nevertheless, there were significantly fewer mixed breeds and more pedigree dogs compared to the national comparison. Therefore, pedigree dogs seem to stop being fed RMBDs more frequently than mixed-breed dogs. A study in cats showed that pedigree cats are more likely to eat a raw diet than others [25], so it could also be the overall population of raw-fed dogs that included more pedigree than mixed-breed dogs.

According to our results, the majority switched their feeding due to their dog's well-being and the food's impact on it. The most frequently mentioned primary reasons were intolerance, illness of the dog, or lack of acceptance of the food. Just after this, factors including financial considerations, logistical demands, and time constraints were cited as reasons for discontinuation. These factors predominantly pertain to the owner and their specific circumstances. Consequently, reasons for discontinuation were mostly dog-related.

Intolerance refers to gastrointestinal signs that occurred either in isolation or in combination with other signs. This is consistent with the study of Effenberger [13], who also found a higher rate of diarrhea in dogs that were fed raw meat-based diets than in dogs fed with cooked meat. Schmidt et al. [26] showed that dogs fed RMBDs displayed a higher dysbiosis index as well as some other changes in their fecal microbiome and metabolome compared to those fed with commercial dry or wet food. To what extent an altered microbiome is involved in the development of gastrointestinal diseases has been studied previously [27–31] and requires further research to make a clear statement.

One striking aspect of the results was the significantly higher occurrence of gastrointestinal diseases in comparison to all other mentioned diseases. When asked about the type of disease, 44% of owners who switched their feeding due to a gastrointestinal disease reported inflammatory bowel disease (IBD). This disease causes various gastrointestinal signs. Diagnosis and classification are made using biopsy samples from the gastrointestinal tract, from which the type of inflammation is determined [32–35]. It is questionable whether all dogs that were reported as having an IBD in the questionnaire received a confirmed diagnosis via endoscopy and biopsy sampling or whether some of them only had a suspected diagnosis. Even though the authors could not confirm all dogs had a confirmed diagnosis of IBD, these dogs experienced chronic gastrointestinal signs consistent with a chronic enteropathy (CE).

Overall, 37% ($n = 300$) of participants quit feeding a raw meat-based diet due to gastrointestinal signs ($n = 196$, 24%) or a gastrointestinal disease ($n = 104$, 13%). The prevalence of chronic enteropathies is not that easy to determine. The review of Dandrieux et al. [36] showed a prevalence ranging from 1% [37] to 17.8% [38]. In two studies looking for the prevalence of CE in dogs with predicted acute hemorrhagic diarrhea syndrome (AHDS) [39] or parvovirus infection [40], the control groups showed a prevalence of 12% [40] and 13% [39]. When considering just the gastrointestinal diseases of all dogs that stopped receiving raw food diets, the prevalence is 13%, which matches the control dogs in the aforementioned studies. Adding all the dogs with gastrointestinal signs, the prevalence rises to the aforementioned figure of 37%, which is between the prevalence for past AHDS disease (28%) and parvovirus infection (42%). Unfortunately, the authors do not know if all the dogs that had gastrointestinal problems in the present study really suffered from chronic enteropathy or if they only showed temporary gastrointestinal problems that led to a change of diet.

Of the participants who cited gastrointestinal illness in their dogs as the primary reason for discontinuation ($n = 104$), a minority of 17% ($n = 18/104$) reported that a gastrointestinal disease already affected the dogs before starting an RMBD. Accordingly, most dogs (83%, $n = 86/104$) developed this disease during or after the feeding of raw meat.

The duration of feeding a raw diet also differed depending on the reasons for discontinuation. Dogs that refused the raw diet were fed for a shorter period than ones that gained weight or developed an illness over a long period of time, but there was no statistically significant difference. In particular, as weight gain is often a process that takes time and some RMBD packages are higher in fat and energy than declared (or the case of a homemade diet, difficult for owners to observe), it is not surprising that some dogs gained weight [41].

The new diet after a raw meat diet was most likely be a self-cooked ration if many of the reasons that were important to the owners—such as knowledge of composition, natural and species-appropriate feeding, and lack of trust in the pet food industry—were to be considered. However, the results show that a self-cooked ration was chosen only in about a quarter of the cases. Most participants switched to dry food. Looking at the choice of new food in relation to the reasons for discontinuation, the following things stand out. Home-cooked rations were fed less frequently than dry food in all cases and less frequently than wet food in almost all cases (excluding illness). A predominant transition from a raw to a home-cooked diet was observed neither for the entire population nor for individual dropout groups.

Dry food was fed significantly more often than wet food for reasons such as food being too expensive, too much effort, or taking too time. These results are consistent with our assumptions, as dry food is generally cheaper in terms of energy content per quantity than wet food and is also easier to feed and transport, e.g., when traveling or during holidays. In the case of intolerance and illness, dry food was also fed significantly more frequently. This could possibly be due to the larger range of dry formulated commercially available hydrolyzed and gastrointestinal diets.

In addition to a regular adult diet and a self-made ration, the switch was primarily to an anti-allergenic or a hypoallergenic diet and a gastrointestinal diet. These results again align with the results on discontinuation due to illnesses and intolerances.

Since the development of the raw meat feeding trend, veterinarians and scientists have expressed concerns regarding this feeding practice. The focus has primarily been on contamination with pathogenic microorganisms [5,11–20] and inadequate contents of trace elements, minerals, and vitamins [3,6–10]. The study's findings reveal a disparity between the reasons why the science community advises against this feeding method and the actual reasons why dog owners opt to discontinue it.

As the questionnaire was administered online, the authors surveyed dog owners with a high level of interest in their dogs and their dogs' feeding habits. This may have led to an overrepresentation of dog owners with considerable knowledge about dog feeding

and their dogs' health status. The questionnaire was only addressed to owners who had stopped feeding raw meat, so we cannot determine what percentage of the total number of owners feeding raw meat the study population represents. Naturally, the research is limited to dog owners who must have basic knowledge of technology and access to the technology itself, as well as be willing to participate in an online survey. The questionnaire was largely promoted through social media, with some breed- and disease-related groups also sharing it. This could have led to possible preconceptions among the participants. Since no further survey was conducted to ask people for their reasons for switching their pet's diet (besides switching from a raw diet), the authors lack a control group and a direct comparison. However, due to the broad distribution and numerous participants, the results should represent a realistic population. As the questionnaire did not ask for any demographic information from the owners, the authors cannot assure that all respondents live in Germany, neither do the authors know if there was a bias in the age, sex, or educational status of the respondents.

5. Conclusions

The primary reason for switching from an RMBD to another diet was intolerance, which was expressed exclusively in gastrointestinal signs, disease in the dog (which was a gastrointestinal disease in over 64% of cases), and a lack of acceptance of the raw diet. Overall, 37.4% of participants stopped feeding with an RMBD due to gastrointestinal problems. The reasons that dog owners stop raw feeding show a clear difference from those of veterinarians and scientists, who recommend not feeding dogs a raw diet because of the risk of infections or malnutrition. In the context of good veterinary practice, a comprehensive and detailed feeding history should always be queried, especially in patients with gastrointestinal symptoms and diseases. Additionally, a diet change should be considered if necessary.

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