

Information about life expectancy related to obesity is most important to cat owners when deciding whether to act on a veterinarian's weight loss recommendation

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OBJECTIVE

To determine the relative importance of information communicated to cat owners during veterinarian-client obesity-related conversations.

SAMPLE

Cat owner participants recruited via snowball sampling.

METHODS

A cross-sectional online questionnaire was distributed to cat owners who owned cats of any weight status. A discrete choice experiment design was used to determine the relative importance of obesity-related attributes to cat owners when receiving information from a veterinarian.

RESULTS

A total of 1,095 questionnaires were analyzed. Participating cat owners resided primarily in Canada and the US. Impact on life expectancy was the most important attribute that would encourage participants to pursue weight management for a cat with obesity (relative importance, 32.66%), followed by change to cost of food (20.40%), future quality of life (20.38%), future mobility (14.40%), and risk of developing diabetes (12.15%).

CLINICAL RELEVANCE

Findings suggest that cat owners consider the impact on life expectancy to be most important when considering whether to follow a veterinarian's recommendation for their cat to lose weight. When veterinary professionals are communicating about obesity in practice, there is the potential to increase owner engagement in weight management efforts for cats by emphasizing the obesity-related information owners prefer to receive.

Keywords: feline, obesity, discrete choice experiment, veterinary, communication

Feline obesity continues to be of significant concern for the veterinary profession, with a recent 2022 US-based survey indicating an increased prevalence of overweight and obesity in cats of 61.0% compared to an estimated 59.5% in 2018.^{1,2} Obesity in cats has been associated with various health conditions including diabetes mellitus, neoplasia, urinary tract disease, skin disease,³ and others such as respiratory and orthopedic disease.^{4,5} Furthermore, obesity may increase the lifetime costs for owners⁶ while reducing life span for cats with severe obesity.⁷

The causes of obesity in pets are complex and include various genetic, metabolic, lifestyle, and environmental factors.^{4,8} Some of these factors can be influenced by pet owners; therefore, owner engagement and commitment to weight management plans for cats with excess weight are likely to be critical to the success of these interventions. Effective communication from the veterinary team about a cat's overweight or obese condition and treatment planning with clients may improve the outcome of weight management programs for cats with obesity.

Previous research has identified several opportunities to enhance communication between veterinary professionals and clients related to obesity. A thematic analysis of recorded feline appointments found that veterinarians typically did not discuss weight gain with clients beyond reporting a weight

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increase and did not offer dietary or weight management recommendations.⁹ Similarly, an observational study of veterinarian-client interactions found that clear weight management recommendations were provided to clients in less than half of obesity-related conversations for dogs and cats, and the overall time spent discussing weight was often brief.¹⁰ It has been suggested that, due to the implications of obesity for animal health and welfare, veterinarians have a professional obligation to address obesity each time it is encountered in practice.¹¹ Pet obesity advocates have also suggested that veterinarians may be reluctant to discuss obesity with clients for fear of causing offense or otherwise harming the veterinarian-client relationship and acknowledge that obesity is a challenging and sensitive topic to broach.¹²

In a focus group study,¹³ a number of participating veterinarians discussed their perception that most clients are not willing to discuss or receptive to discussing pet weight, particularly in cases of a pet with obesity. The perceptions of pet owners when presented with a diagnosis of overweight or obesity for their pet are less clear, though it may be pertinent to distinguish any negative feelings associated with an obesity diagnosis from pet owners' willingness or readiness to pursue treatment. In a survey, only 17% of pet owners reported feeling embarrassment or discomfort when being told a pet needed to lose weight,² yet a preliminary investigation into pet owners' readiness to change to address obesity in their cat or dog found overall low readiness to change.¹⁴ Recognizing a client's current readiness and exploring the perceived barriers to pursuing weight management that exist for individual clients may help veterinary teams create personalized, feasible plans, yet little is known about the information that cat owners find important or would prefer to receive, or that would encourage them to take action to address their cat's obesity.

With origins in marketing, discrete choice experiments (DCEs) that capture consumer preferences have been applied to both human and veterinary medical research. In DCEs, respondents are presented with a series of repeated-choice tasks, each consisting of multiple sets of information about a product or service that share the same attributes but differ in levels within each attribute. Respondents are then asked to select their preferred option from the available sets. These repeated choices allow numerical scores to be calculated for the attributes and levels that are preferred by respondents compared to the other available options and can provide insight into the implicit trade-offs that respondents may be willing to make when selecting a product or service.¹⁵ In veterinary medicine, discrete choice methods (DCMs) have been used to evaluate the preferences of dog owners when selecting antiparasitic products¹⁶ and the factors related to preferences for antimicrobial treatments.¹⁷ A number of DCM studies have investigated the preferences for treatment of people with obesity to inform the development of management strategies and programs that may be more effective for these individuals,¹⁸⁻²⁰ and

a parallel opportunity exists in veterinary medicine to elucidate the preferences of pet owners to support veterinary teams in treating obesity.

The objective of this DCE study was to identify the obesity-related information that cat owners consider important from a veterinarian and that would encourage them to pursue weight management for their cat if it was identified as being overweight.

Methods

The present study is one of a series of independent DCM-based studies conducted via the same recruitment process, which has been previously described.²¹ A cross-sectional, questionnaire-based study of pet owners was conducted via an online survey platform (Sawtooth Software) between February 9 and April 18, 2023. The University of Guelph Research Ethics Board reviewed and cleared the study protocol (REB No. 22-09-019).

Questionnaire design

The anonymous pet owner questionnaire was developed in Lighthouse Studio (version 9.15.9; Sawtooth Software) and was offered in both English and French. Participants provided consent to participate by clicking "Agree" to proceed to the questionnaire. Consenting participants were randomly distributed to 1 of the 3 independent DCM studies; only participants who indicated ownership of at least 1 cat were eligible to be randomized into the cat obesity study reported here.

The questionnaire for this study consisted of 3 sections: the first collected demographic information about participants, the second was a discrete choice exercise to identify obesity-related information that was important to cat owners, and the third was a dichotomous question to elicit participants' previous experience receiving a diagnosis of obesity for any pet of their own (yes or no). The third section did not pertain specifically to the participants' present cat(s).

The following hypothetical scenario was presented to participants to set up the discrete choice exercise: "Imagine that you have taken your cat to the veterinarian for their annual wellness exam. The veterinarian mentions that your cat is overweight and makes a recommendation to have your pet lose weight. You will be presented with 3 sets of information your veterinarian could include in the discussion of your cat's weight. Given the information presented by the veterinarian, what set of information would encourage you to act on your veterinarian's recommendation?"

Following the scenario, participants were presented with a series of 12 task blocks, each of which contained 3 discrete sets of information (**Figure 1**). The sets included 5 cat weight-related items (attributes) that were presented with various combinations of characteristics (levels) shown within each attribute. The 5 attributes, and the order in which they were presented, remained consistent across all 12 task blocks, while levels systematically differed to create diverse sets. Participants were prompted to select the set of information from the 3 available sets

| | Set 1 | Set 2 | Set 3 |
|--|---------------------------------------|---------------------------------------|---------------------------------------|
| Future Quality of Life | No change to good | No change to good | Good to very good |
| Future Mobility | No change to good | Good to very good | Very good to excellent |
| Risk of Developing Diabetes (within a year) | Reduced risk | No change | Reduced risk |
| Impact on Life Expectancy | Up to 6 months longer | Up to 1 year longer | Greater than 2 years longer |
| Change to Cost of Food | + \$0.65 per day | No change | + \$0.16 per day |
| | <input type="button" value="Select"/> | <input type="button" value="Select"/> | <input type="button" value="Select"/> |
| | Do nothing | | |
| | <input type="button" value="Select"/> | | |

Figure 1—Example of a discrete choice task presented to cat owner participants. Participants were presented with 12 such tasks. Attributes, listed on the left, remained constant across tasks, while the levels presented in columns within each of the 3 sets varied across tasks to create diverse sets of information from which to choose. All 12 tasks included a “none” option.

in each task block that would most encourage them to follow a veterinarian’s recommendation for their cat to lose weight. If none of the 3 available sets of information in a given task block would encourage the participant to pursue weight management, they could select a fourth “none” option.

To achieve a high level of experimental design efficiency (**Supplementary Material S1**), which allows for information about choice to be gained from the least number of tasks presented to respondents, 300 versions of the discrete choice exercises were generated in Sawtooth Software’s Lighthouse Studio.

Selection of attributes and levels for DCE tasks

Pet obesity literature was reviewed to identify the DCE attributes and levels (**Table 1**). Consideration was given to the plausibility of levels and their combinations as well as to the range of variation between levels within an attribute.²²

Table 1—Summary of the attributes and levels included in the choice tasks presented following a hypothetical scenario to identify information from a veterinarian that would most encourage pet owner participants to pursue weight management for a cat diagnosed as overweight.

| Attribute | Level |
|---|--|
| Impact on life expectancy | No change Up to 6 mo longer Up to 1 y longer > 2 y longer |
| Future quality of life | No change to good Good to very good Very good to excellent |
| Future mobility | No change to good Good to very good Very good to excellent |
| Risk of developing diabetes (within a year) | No change Reduced risk |
| Change to cost of food | No change +\$0.16/d +\$0.65/d |

Impact on life expectancy was chosen as an attribute due to the correlation between ideal body composition and life span in dogs.^{23,24} The relationship between life expectancy and body condition score (BCS) in cats appears to be more complex, with 1 study⁷ finding that cats with BCSs of 6 to 8 out of 9 had the greatest longevity, while BCSs of ≤ 5 and 9 were negatively associated with life span. Another recent study²⁵ found that a BCS of 5 on a 5-point scale was associated with a lower life expectancy for cats than those with a BCS of 3 or 4. While overweight may not be as detrimental to life span in cats as severe obesity, it is well associated with various, often chronic, health concerns that impact quality of life (QOL).

Future QOL was included as an attribute to reflect the impact of obesity-related diseases on the overall health and comfort experienced by affected cats. Weight loss has been shown to improve QOL in dogs with obesity,²⁶ and while a recent owner survey did not find a statistically significant difference in perceived QOL scores for cats with obesity compared to those at a healthy weight, the scores were numerically lower and had a larger range.²⁷

The attribute of future mobility was intended to reflect aspects of overall QOL associated with pain and ease of movement. Musculoskeletal conditions and arthritis, which can cause pain and lameness, are associated with overweight and obesity in cats.⁵

Due to the established association between diabetes mellitus and obesity in cats,^{3,5,28} the risk of developing diabetes attribute was chosen to reflect the impact of obesity and an associated chronic condition on a cat's future health and well-being. The treatment of diabetes in cats may also require significant owner commitment, which may be reflected in this attribute.

Change to cost of food was included to reflect cat owners' willingness to pay for weight management, which may include expenses related to dietary change on a veterinarian's recommendation. Price differences for this attribute were determined using the prices for suggested dry weight loss diets for overweight cats using a commercial pet food finder tool.²⁹ Three kibble diets were selected: a base cat food that is available at grocery stores (Purina Cat Chow; Nestlé Purina), a commercially available weight management diet (Purina ONE +Plus Healthy Weight Cat Food; Nestlé Purina), and a veterinary therapeutic weight loss diet (Purina Pro Plan Veterinary Diets OM Overweight Management Dry Feline Formula; Nestlé Purina). The presented price differences were calculated for the latter 2 diets (+\$0.16/d and +\$0.65/d, respectively) on the basis of a month's supply for a 5-kg cat with a BCS of 7/9 on a weight loss plan.

Participant recruitment

As previously described,²¹ snowball sampling via social media platforms (Facebook, Twitter, LinkedIn, Instagram) was used for recruitment in addition to sharing of the questionnaire link on public and private pet-oriented organizations that provided prior permission to share the study; these organizations included humane societies, veterinary clinics and colleges, pet stores, a commercial pet food company, pet-related social media influencers and newsletters, blogs, and clubs. The study

was described as an exploration of veterinary client preferences for information during veterinarian-client-patient interactions. Individuals who were at least 18 years of age, owned a pet, and possessed English and/or French language proficiency were eligible to participate. A draw for a CAD\$50 Amazon gift card was offered as an incentive for participation (odds of winning, 1 in 100), and participants who chose to enter the draw provided their email addresses via a secondary survey in Qualtrics that was not linked to the participants' study responses to maintain anonymity.

Statistical analysis

Respondents who did not report seeing a veterinarian in the past year, provided nonsensical responses, or selected "none" for all 12 choice tasks were excluded from analysis. Data quality was assessed via determining a time cutoff of 40% of the median total time taken by respondents to complete the survey, and respondents who fell below this time cutoff (3.53 minutes) were excluded from analysis.³⁰ An individual-level root likelihood (RLH) was also used to measure the internal consistency among respondents who appeared to provide less thoughtful or random responses. Respondents who fell below the 95th percentile cutoff based on RLH scores derived from randomly generated data (a minimum RLH threshold of 0.33 units) were excluded.

Descriptive statistics were calculated in Excel (version 16.49; Microsoft Corp) for demographic data. Mean, median, SD (SD), and range were calculated for continuous variables, and frequencies were calculated for categorical variables.

All choice data analysis was performed in Sawtooth Software's Lighthouse Studio and Excel. A Markov chain Monte Carlo hierarchical Bayesian model was used to analyze the discrete choice data, with effects coding to estimate parameters in the form of part-worth utilities; these values represent the relative preference for individual levels within an attribute. To facilitate ease of interpreting relative preferences, part-worth utility values were probabilistically scaled to have a cumulative sum of 100.

Model fit was assessed using RLH and percent certainty (Supplementary Material S1). Attribute importance values were calculated as the difference in part-worth utilities of levels within an attribute over the total difference in ranges for the levels of each attribute to provide percentage values for each attribute that sum to 100.³¹

Results

Participant demographics

A total of 1,589 participants met the inclusion criteria for the study and completed the questionnaire related to cat obesity, and 1,095 questionnaires were included in the final analysis (**Figure 2**). The majority of participants identified as women (71.8% [786/1,095]), resided in Canada (55.0% [599/1,089]), and had a mean age of 37.2 years (SD, 13.9; median, 32; range, 18 to 89 years; **Table 2**).

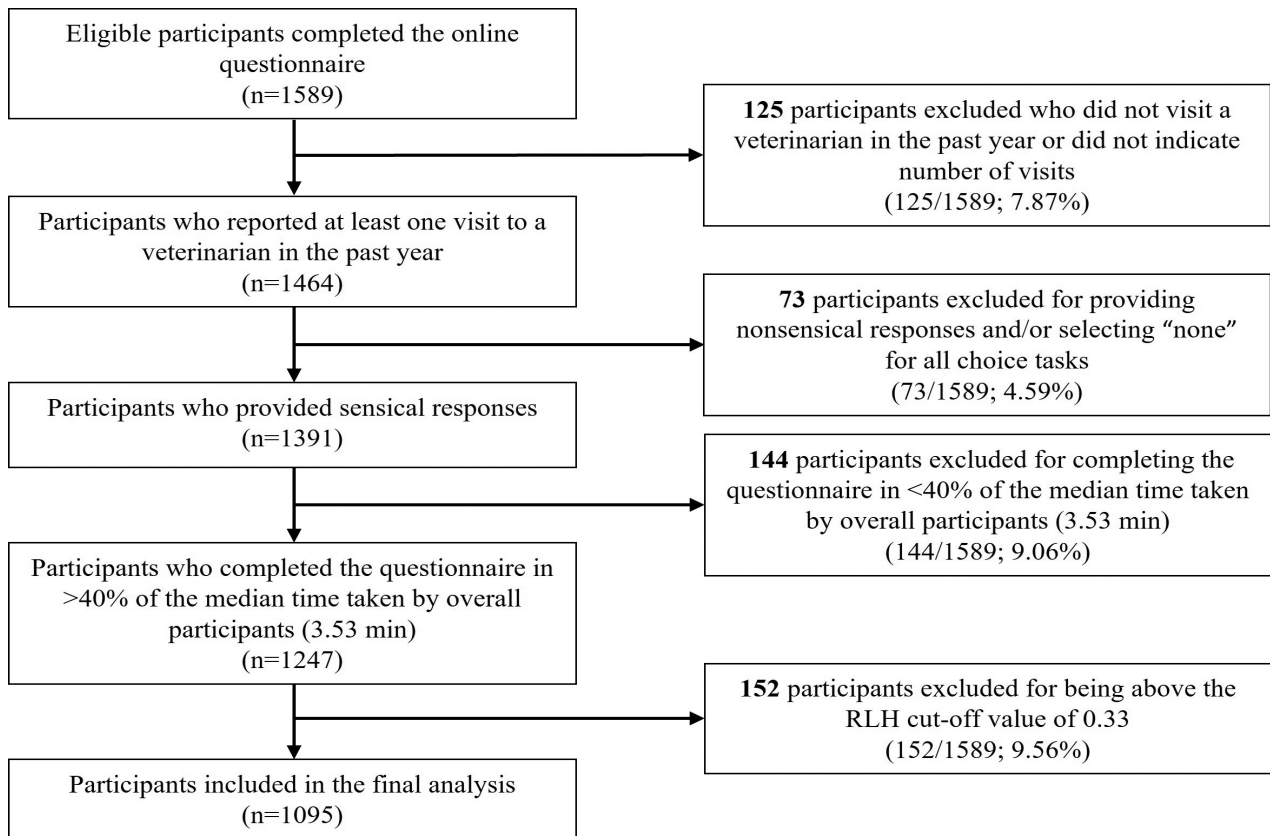


Figure 2—Reasons for inclusion and exclusion of participants' questionnaires. RLH = Root likelihood.

Table 2—Demographic characteristics of cat owner participants. Discrepancies in denominators are due to missing values.

| Participants (n = 1,095) | | n (%) | Mean (SD), median, min-max |
|---|-----------------------------------|--------------|----------------------------|
| Preferred language (n = 1,095) | English | 1,060 (96.8) | |
| | French | 35 (3.2) | |
| Gender (n = 1,095) | Woman | 786 (71.8) | |
| | Man | 281 (25.7) | |
| | Prefer to self-describe | 3 (0.3) | |
| | Prefer not to say | 25 (2.2) | |
| Age (n = 1,086) | | | 37.2 (13.9), 32, 18-89 |
| Country (n = 1,089) | Canada | 599 (55.0) | |
| | US | 488 (44.8) | |
| | Other | 2 (0.2) | |
| Area (n = 1,089) | Urban | 637 (58.6) | |
| | Suburban | 310 (28.5) | |
| | Rural | 139 (12.8) | |
| No. of veterinarian visits (n = 1,095) in the past year | | | 4.7 (5.8), 3, 1-120 |
| Education level (n = 1,094) | Less than high school | 8 (0.7) | |
| | High school diploma or equivalent | 95 (8.7) | |
| | Some college or university | 153 (14.0) | |
| | College degree | 288 (26.3) | |
| | Bachelor's degree | 370 (33.8) | |
| | Graduate degree | 140 (12.8) | |
| | Professional degree | 40 (3.7) | |
| Household income (n = 1,093) | < \$20,000 | 36 (3.3) | |
| | \$20,000-\$34,999 | 85 (7.8) | |
| | \$35,000-\$49,999 | 143 (13.0) | |
| | \$50,000-\$74,999 | 272 (24.9) | |
| | \$75,000-\$99,999 | 297 (27.2) | |
| | \$100,000-\$150,000 | 163 (14.9) | |
| | > \$150,000 | 97 (8.9) | |
| No. of each species owned (n = 1,095) | Cat | | 1.8 (2.2), 1, 1-40 |

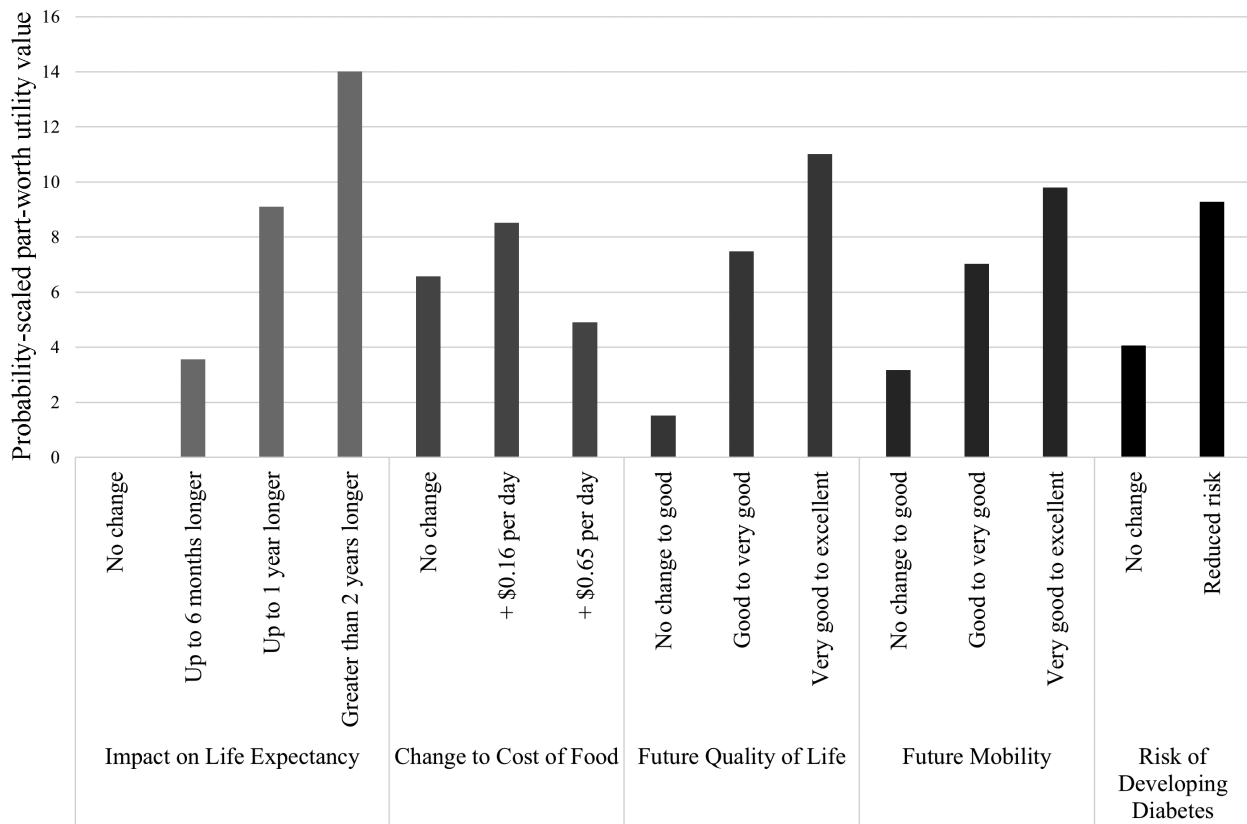


Figure 3—Probability-scaled part-worth utilities of the main effects model, arranged from attributes of greatest to least importance according to respondents. A higher part-worth utility value indicates a comparatively stronger preference relative to other test values.

Over half of participants indicated that they had previously had a veterinarian communicate that one of their pets was overweight (63.3% [693/1,095]), and the remainder reported never having received this diagnosis from a veterinarian (36.7% [402/1,095]).

Discrete choice experiment analysis and relative attribute importance

The relative importance to cat owners of each obesity-related attribute, from most to least important, was as follows: impact on life expectancy (32.66%), change to cost of food (20.40%), future QOL (20.38%), future mobility (14.40%), and risk of developing diabetes (12.15%). Relative preferences for each within-attribute level varied (**Figure 3**).

Discussion

Understanding what information clients value and that may encourage them to initiate and adhere to weight management plans for cats with obesity is essential to supporting veterinary teams in communicating effectively about obesity with clients. Results of this study suggest that, when compared to attributes including the change to cost of food, future QOL, future mobility, and risk of developing diabetes, it is most important for veterinary professionals to consider discussing information about the

impact of excess weight on life expectancy with clients who own a cat that is overweight or obese.

Cat owners participating in this study prioritized the impact on life expectancy over the other presented attributes. This is in line with dog owners in a related study,²¹ in which impact on life expectancy was also the most important obesity-related attribute relative to the others presented. An observational study¹⁰ of obesity-related interactions in companion animal practice found that life span was mentioned only rarely by veterinarians while discussing reasons for a pet to lose weight. Additionally, a discussion of the overall importance of weight management, the benefits of weight loss, or reasons to lose weight occurred in only 28% of these appointments.¹⁰ A qualitative study of feline appointments specifically found similarly absent or ambiguous messaging from veterinarians during both obesity-related and preventive weight conversations.⁹ This suggests there are opportunities for veterinary professionals to increase both the frequency of discussing the importance of maintaining or achieving an ideal weight with clients generally and the relationship between obesity and life span specifically.

Prevention of obesity, through establishment of healthy practices early on, is likely to benefit a cat's long-term health and is likely easier than disrupting unhealthy practices once obesity has been

established. This necessitates regular monitoring and discussion of body weight and BCS, yet there is evidence that suggests weight and obesity-related information-sharing between veterinary teams and cat owners may be limited; a large study³² of cat health records found that many cats had only 1 body weight recorded, and examination of medical records for cats in the UK found that BCS was recorded less than a quarter of the time and free-text areas of the records rarely contained words or phrases related to overweight or weight loss.³³ A similarly low prevalence of veterinarians recording dogs as overweight or obese has been reported, with only 1.4% of medical records from a large sample of consultations indicating overweight or obesity in text entries.³⁴ Utilizing weight trends in practice to monitor weight over a cat's lifetime can help detect divergences in weight early, yet use of trends can only be facilitated by regular recording of body weight and BCS. An observational study³⁵ found that veterinarians predominantly used weight trends reactively rather than proactively, suggesting that there are opportunities for veterinary teams to monitor trends and share this information with clients regularly as a preventive health measure. Additionally, an observational study of the talking physical exam found that when a pet's weight or BCS was assessed by the veterinarian and conveyed to the client, the impact of BCS on pet health was explained in under a third of interactions.³⁶ Missed opportunities to communicate weight management value to cat owners, including the impact of obesity on life span, may negatively impact cat owner weight management decision-making later. However, when suggesting increased proactive communication about weight and nutrition in practice, it should be recognized that small animal veterinarians have reported time and misinformation to be barriers to nutrition communication.³⁷ While effective solutions to help overcome barriers to nutrition communication are yet to be determined, possible solutions have been proposed, including empowering veterinary technicians and support staff to discuss nutrition.³⁷

Change to cost of food and future QOL had nearly equivalent relative importance values and were identified as the next most important attributes for cat owners when deciding whether to act on a weight management recommendation. Recognizing that, in this study, the cost attribute was relatively important to cat owners and willingness to pay varies for clients, veterinary teams should explore the role of cost when engaging clients in weight management decisions for cats. Recent research found that less than a quarter of recorded veterinary appointments included a discussion of cost and that veterinarians primarily framed cost around the time or service provided and not the value of that service to the health and well-being of the pet.³⁸ The study supports an ongoing opportunity for veterinary teams to discuss costs of care and the benefits associated with a recommendation, which may influence decision-making, before the client leaves the appointment. Qualitative studies also report clients' expectation that the costs of care be discussed up

front³⁹ and indicate that presenting options to clients may help to mitigate the perception that veterinarians' recommendations are financially motivated, specifically regarding nutrition.⁴⁰ Open discussions of weight management and dietary options for cats, as well as the costs associated with these options and the value of each, may be critical to improving client acceptance of veterinary recommendations to treat obesity. Therapeutic diets have been ranked by pet owners among the lowest of preferred methods to achieve pet weight loss and in terms of perceived efficacy,² yet these diets are relied on by veterinarians to ensure safe calorie restriction that will not result in nutritional deficiencies. Opportunities exist for client education and clear communication that speaks to the cost as well as benefits of therapeutic diets for safe and effective weight loss in cats.

Future QOL was a near equally important attribute for cat owners as the change to cost of food attribute. Obesity has been shown to diminish the QOL of dogs and QOL improved after weight loss,²⁶ though there are few investigations specific to the relationship between QOL and obesity in cats. One study²⁷ of owners of cats with obesity reported numerically lower QOL scores that were not statistically different from the scores for cats at ideal weight. Another recent study⁴¹ of cats on a prescribed weight loss plan found that owner-perceived QOL was significantly higher at the cats' last recheck compared to baseline. QOL assessments are used in veterinary practice to facilitate end-of-life decision-making, and similar tools, if developed to detect the impact of weight loss, could support veterinary professionals' discussion of QOL related to obesity with owners. Helping owners identify and recognize improvements to their cat's QOL that may occur because of weight loss may motivate client adherence to weight management plans. Cat owners have been reported as citing QOL as a motivator to pursue weight loss for their cats,²⁷ yet in the present study life span was relatively more important to participating owners than QOL. Aspects related to overall well-being, such as emotional disturbance and vitality, may be improved by weight loss in dogs²⁶ and were not explicitly included in the attributes selected for the present study; future studies may consider exploring the value cat owners place on these aspects of QOL for their pets. Further education of clients by veterinary professionals about observable QOL aspects might also be important for clients to recognize the impact of obesity on their cat.

Future mobility was the fourth most important attribute of the 5 presented in the current study, suggesting that cat owners may not associate mobility with overall QOL. This aligns with findings of an investigation of the items cat owners consider important for QOL, where items requiring mobility accounted for less than half of the most important items and there was no difference in importance scores between owners of healthy cats compared to those with diagnosed degenerative joint disease.⁴² Degenerative joint disease, including osteoarthritis, is very common in pet cats and has a clear

relationship with age,⁴³ yet clinical signs such as lameness are not often observed.^{44,45} Owners may find it challenging to relate a lack of observable behavior changes to the experience of pain that may be caused by a cat's joint disease or arthritis. While mobility and arthritis are among the reasons for a pet to lose weight that are most discussed by veterinarians,¹⁰ clients may not recognize subtle changes to a cat's mobility or may attribute a cat's "slowing down" to age above other factors such as excess weight. By shifting the focus of discussion to life expectancy and QOL, which have been observed as rarely discussed by veterinarians in obesity-related conversations,¹⁰ veterinary professionals may be able to target the reasons to lose weight that are most meaningful and motivating for cat owners.

Risk of developing diabetes was the least influential attribute for participants relative to all other attributes considered in this study. Interestingly, diabetes was the second most frequently mentioned reason veterinarians provided clients for an overweight or obese pet to lose weight, as observed in 150 recorded obesity-related interactions involving a dog or cat.¹⁰ The reasons for the lack of importance of diabetes relative to other attributes in the present study are unclear. It is possible that cat owners struggle to forecast the long-term impact of diabetes on their cats' health and QOL, as well as the impact of management on their own lifestyle and the associated costs. However, diabetes is a serious condition in cats that requires significant owner commitment to manage and can be costly to treat.^{46,47} In cats, diabetes can also result in euthanasia at the time of diagnosis,⁴⁸ and while prognosis may be fair for many cats, survival time is variable and mortality rates are high soon after diagnosis.⁴⁹ Considering the importance cat owners placed on life expectancy in this study, it may be beneficial for veterinary professionals to frame the potential impact of obesity-associated diseases such as diabetes in relation to the overall impact on a cat's life span when discussing obesity with clients. Pet owners' decision to treat diabetes in companion animals may be influenced in various ways by their individual human-animal bond with their pet, as well as by prior personal experiences of diabetes management in human health, either their own or of someone they know.⁵⁰ Drawing parallels between the experience of diabetes in humans and pets has been recommended as a potential way to support client understanding and act on the health issue,⁵⁰ yet further investigation is necessary to understand cat owners' perceptions of diabetes and how this factors into a decision about whether to address their cat's weight.

The present study elucidates what information may most encourage cat owners to pursue weight management when receiving a recommendation to do so, yet all of the attributes included in the choice tasks are worth being discussed by veterinary professionals when recommending weight loss for an overweight or obese cat. Additionally, it is important to note that the results of DCM studies must be interpreted within the context of the attributes and

levels chosen for the study. Here the attributes were selected on the basis of relevance and prior research involving both dogs and cats and can only be considered relative to one another. The relative importance values reported should not be extrapolated to suggest that the attributes considered most important by cat owners would be similarly important compared to possible attributes that were not selected for inclusion in the present study.

The hypothetical scenario used to contextualize the discrete choice tasks presents a limitation of this study, and results may not be representative of the real-life decision-making of cat owners. This study captured a large sample of English- and French-speaking respondents, yet generalization to the wider cat-owning population, particularly outside of Canada and the US, may be limited by pet owners' access and willingness to participate in an online survey. Another limitation was that participants' motivations or rationale for their selections were not captured in a quantitative survey. Qualitative research is recommended as a complement to DCEs to capture context along with preference data and facilitate a deeper understanding of the results,⁵¹ and future research based on focus groups or interviews could explore cat owners' perceptions of the importance of weight management for cats with obesity and what would motivate them to pursue it. Opportunities may also exist for DCEs to elicit cat owner preferences between different weight management programs themselves. The feasibility of proposed weight management programs, in addition to monitoring the progress of weight loss, may be of particular concern for cat owners. Recently, a survey study² found that only 58% of participating owners reported trying to get a cat to lose weight and only 19% of those participants reported success, with both values being less than what was reported by dog owners participating in the same survey. Future DCE studies to provide insight into client preferences may support veterinary professionals in addressing the challenges associated with cat weight loss, such as bringing cats to the clinic for rechecks, which may help to mitigate loss to follow-up and ensure patient safety in terms of appropriate rate of weight loss and dietary management.

Data from prior studies^{9,10,35} suggest there are missed opportunities for veterinary professionals to discuss healthy weight maintenance or healthy weight loss with cat owners. The present study's results suggest veterinary professionals should consider highlighting the impact of obesity on life span in hopes of moving cat owners toward action regarding excess weight management and prevention. These conversations should begin early in life, and by educating clients about the benefits of an ideal weight to their cat's future health and life expectancy, veterinary professionals may encourage clients to proactively maintain their pet's weight. Other factors may also influence cat owners' decision-making related to weight management, including financial costs, the impact of excess weight on a cat's QOL and mobility, as well as the increased risk for chronic disease

such as diabetes, and these should also be considered for discussion. Ultimately, eliciting individual clients' thoughts and preferences about their cat's weight and the outcome of management provide the starting point for developing a tailored weight-loss plan in which the client perceives value. This study offers initial insight into what cat owners consider important when deciding to pursue weight management and can be used by veterinary professionals to inform conversations with clients about weight management for their cat.

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