CVJ CLUJ VETERINARY JOURNAL

Research article

Feline Overweight and Obesity: Feeding Practices, Owner Perceptions, and Body Condition Score Agreement

Sorana Daina[1], Anamaria Blaga-Petrean[2*], Silvana Popescu[2], Daria Antonia Dumitraș[1], Szakacs Andrei[1], Adrian Macri[1]

[1] Department of Animal Nutrition, Faculty of Veterinary Medicine, University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca, Calea Manastur 3-5, 400372 Cluj-Napoca, Romania; sorana.matei@usamvcluj.ro (S.D.); adrian.macri@usamvcluj.ro (A.M.); andrei.szakacs@usamvcluj.ro; antonia.dumitras@usamvcluj.ro (D.A.D.)
[2] Department of Animal Hygiene and Welfare, Faculty of Veterinary Medicine, University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Calea Manastur, 400372 Cluj-Napoca, Romania; anamaria.blaga@usamvcluj.ro (A.B-P.); silvana.popescu@usamvcluj.ro (S.P.)
* Corresponding author: anamaria.blaga@usamvcluj.ro

Abstract: This study investigated feeding practices and perceptions related to feline overweight and obesity among 164 questionnaire respondents in Romania (32 veterinarians, 35 veterinary students, 76 cat owners, and 21 non-cat owners) and evaluated agreement between owner-assigned and clinically assessed body condition scores (BCS) in a separate sample of 94 cats selected primarily because excess body condition was suspected. Questionnaire responses were analysed descriptively, and selected comparisons were performed using Fisher's exact test with Holm adjustment. Clinical agreement was assessed using weighted Cohen's kappa and paired statistical tests. Among cat owners, 56.6% reported free-choice feeding, 44.7% never measured food portions, and 97.4% expressed willingness to follow veterinary weight-management recommendations. Veterinary students recognised owner-related influences more frequently than cat owners (68.6% versus 40.8%; Holm-adjusted $p = 0.024$). In the clinical sample, exact BCS agreement was 29.8%, although 98.9% of paired assessments differed by no more than one point (quadratic-weighted $\kappa = 0.866$). No statistically significant directional difference was detected (Wilcoxon $p = 0.547$). At the BCS ≥6/9 threshold, classification agreement was 85.1%. Notably, ten of the 27 cats clinically scored 6/9 (37.0%) were assigned BCS 5/9 by their owners. These findings highlight the importance of practical portion-control guidance and owner education in recognising early excess body condition through standardised BCS assessment.

Keywords: feline obesity; body condition score; owners; feeding practices; weight management; nutrition.

Received: 03.11.2026
Accepted: 20.11.2026
Published: 23.11.2026

DOI:10.52331/v31i32b35

Copyright: © 2021 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).

1. Introduction

Feline overweight and obesity represent important nutritional and health concerns in companion animal medicine, with consequences for metabolic function, mobility, and overall welfare. Excessive accumulation of adipose tissue is associated with endocrine and inflammatory alterations that may contribute to insulin resistance, musculoskeletal disorders, and reduced quality of life [1]. Overweight and obesity are frequently reported in domestic cats, although their prevalence varies across populations and assessment methods [2]. The development of excess body weight is multifactorial, involving an imbalance between energy intake and expenditure, as well as physiological, environmental, and behavioural factors. Neutering may increase susceptibility to weight gain through changes in energy requirements and appetite [3], while housing conditions, physical activity, and owner-related behaviours also influence feline weight management [4].

Accurate assessment of nutritional status is essential for the early recognition and prevention of excess body weight. Body condition scoring (BCS) is a practical clinical tool that evaluates adiposity through visual inspection and palpation of anatomical landmarks. On the nine-point scale, a BCS of 5/9 generally indicates ideal body condition,

whereas scores of 6–7/9 indicate overweight and 8–9/9 indicate obesity [5-7]. Because body weight alone does not account for differences in body size, composition, or fat distribution, BCS provides complementary information for nutritional assessment. However, interpretation may vary between evaluators, particularly near the boundary between ideal and overweight condition [8]. Discrepancies between owner-assigned and veterinary assessments may delay recognition of excess body fat and the implementation of appropriate weight-management measures [9]. Wall et al. [10] reported discrepancies between visual and verbal owner-assigned BCS classifications, indicating that the assessment method may influence the identification of feline overweight.

Feeding practices and owner behaviour play central roles in maintaining an appropriate body condition. Daily energy intake is influenced by diet composition, portion size, feeding frequency, treat consumption, and access to food. Feeding routines, including ad libitum feeding and scheduled meals, require consideration of individual energy requirements, appetite regulation, and activity levels [11]. Treats and additional foods may contribute to total energy intake and are often associated with emotional aspects of the human–animal relationship [12]. Consequently, successful weight management requires not only appropriate nutritional recommendations but also owner awareness, accurate portion control, and consistent household feeding practices. Effective communication between veterinarians and owners is particularly important for translating nutritional advice into practical changes [13].

Veterinary professionals play an essential role in assessing body condition, providing nutritional counselling, and monitoring changes in body weight. Nevertheless, body weight and BCS are not consistently recorded in routine veterinary practice [14]. Greater attention to feeding routines, environmental enrichment, and household management practices may support preventive strategies and facilitate individualised recommendations [15]. Improving owners' understanding of body condition assessment may be particularly valuable for recognising mild overweight before more pronounced excess adiposity develops.

In this context, the present study aimed to investigate perceptions of feline overweight and obesity and selected feeding and weight-management practices among questionnaire respondents in Romania, with particular emphasis on differences between cat owners and veterinary students. A separate clinical component aimed to evaluate agreement between owner-assigned and veterinarian-assigned BCS using the nine-point scoring system, including agreement in the classification of excess body condition. By examining these complementary aspects of feline weight management, the study sought to identify practical priorities for nutritional counselling, owner education, and the early recognition of overweight in cats.

2. Materials and Methods

2.1. Study population and data collection

The study was conducted between August 2025 and March 2026 and comprised two separate components: a questionnaire investigating perceptions of feline overweight and obesity and feeding-management practices, and a clinical comparison of body condition scores (BCS) assigned by cat owners and veterinary professionals. A structured electronic questionnaire was developed using Google Forms and distributed through social media platforms (Facebook and Instagram). Participation was voluntary and anonymous. A total of 164 respondents were included in the questionnaire analysis and divided into four groups according to their professional background and cat-ownership status: veterinarians (n = 32; 19.5%), veterinary students (n = 35; 21.3%), cat owners (n = 76; 46.3%), and non-cat owners (n = 21; 12.8%). This grouping allowed comparisons of obesity-related perceptions among respondents with different backgrounds.

2.2. Questionnaire design and investigated variables

The structured questionnaire comprised 104 questions organised into four sections using conditional branching. Participants were directed to questions relevant to their professional background and cat-ownership status; therefore, the number and content of questions varied between respondent groups.

The questionnaire investigated knowledge and perceptions of feline overweight and obesity, perceived contributing factors and health consequences, feeding practices, recognition of body condition, and attitudes towards weight-management recommendations. Veterinarians and veterinary students answered questions concerning obesity-related factors, nutritional assessment and management, and owner education. Cat owners provided information about their cats' characteristics, including neutering status, living environment, and perceived body condition. Owners of multiple cats were instructed to answer cat-specific questions with one selected cat in mind. Non-cat owners answered questions concerning general knowledge of feline obesity and its associated health risks. Feeding-related questions addressed diet type (dry, wet,

mixed, or home-prepared), feeding routines, free-choice access to food, portion measurement, and the provision of treats or human food. Additional questions investigated previous dietary or activity modifications, perceived influences on body weight, willingness to follow veterinary recommendations, and willingness to pay for a weight-management programme. The present analysis focused on selected questionnaire items related to obesity-related perceptions, feeding practices, portion control, treat provision, previous weight-management measures, and attitudes towards veterinary counselling. For questions allowing multiple responses, categories were not considered mutually exclusive. The questions were formulated according to the study objectives, and the questionnaire was informally pre-tested with cat owners and veterinary colleagues to assess the clarity and comprehensibility of the questions before distribution.

2.3. Clinical body condition assessment

A separate clinical assessment was conducted over five weeks in October and November 2025 at a veterinary clinic during routine consultations. The clinical sample comprised 94 cats selected primarily among those suspected of having excess body condition. Before receiving the clinical assessment, owners were asked to independently evaluate their cat's body condition using the nine-point BCS scale. Each cat was weighed, and body condition was subsequently assessed by the attending veterinarian through visual inspection and palpation of anatomical landmarks, including rib palpability, waist definition, abdominal contour, and subcutaneous fat deposits.

On the nine-point scale, BCS 5/9 was considered approximately ideal, scores of 6–7/9 indicated overweight, and scores of 8–9/9 indicated obesity [5–7]. Body weight (kg), owner-assigned BCS, and clinically recorded BCS were documented for each cat. All 94 complete paired assessments were included in the statistical analysis. The clinical assessments were analysed independently of the questionnaire responses.

2.4. Statistical analysis

Questionnaire data were compiled using Microsoft Excel and summarised as absolute frequencies (n) and percentages (%). Where only aggregated percentages were available, corresponding frequencies were derived from the relevant group denominators when the reported values permitted an unambiguous reconstruction. Selected proportions were accompanied by Wilson 95% confidence intervals (CI). Differences in selected obesity-related perceptions between respondent groups were examined using Fisher's exact test. For the three comparisons between cat owners and veterinary students presented in Figure 1, the Holm procedure was applied to adjust p-values for multiple testing. Between-group differences in proportions were expressed in percentage points, with unadjusted 95% confidence intervals calculated using Newcombe's method. Clinical analyses were based on 94 complete paired owner-assigned and veterinarian-assigned BCS assessments. Body weight and BCS values were summarised as mean ± standard deviation (SD). For each cat, the difference between assessments was calculated as:

$\Delta BCS = BCS_{owner} - BCS_{clinical}$

Negative values indicated underestimation by the owner, positive values indicated overestimation, and zero indicated exact agreement.

Agreement between owner-assigned and clinical BCS was evaluated using the proportion of identical scores, the proportion of paired scores differing by no more than one point, and linear- and quadratic-weighted Cohen's kappa coefficients. For the binary classification of excess body condition, BCS values were categorised as below 6/9 or at least 6/9. Agreement between owner and clinical classifications was assessed using the observed proportion of agreement and unweighted Cohen's kappa. McNemar's exact test was applied to examine discordance between paired binary classifications. Differences between paired BCS values were additionally examined using the Wilcoxon signed-rank test and the exact sign test. Spearman's rank correlation coefficient was calculated to investigate the association between body weight and the absolute scoring difference ($|\Delta BCS|$). Statistical analyses were performed using Python (version 3.13.5), with the SciPy (version 1.17.0), scikit-learn (version 1.8.0), and statsmodels (version 0.14.6) libraries. All statistical tests were two-sided, and statistical significance was defined as $p < 0.05$.

3. Results

The questionnaire included 164 respondents: 32 veterinarians, 35 veterinary students, 76 cat owners, and 21 non-cat owners. Among the cats described by their owners, 89.5% were neutered, while 55.3% were perceived as having ideal body condition and 35.5% as overweight or obese.

Free-choice feeding was reported by 56.6% of cat owners, while 44.7% never measured food portions. Although 97.4% expressed willingness to follow veterinary weight-management recommendations, fewer than half reported having previously modified their cat's diet or activity. Further details on feeding practices and weight-management attitudes are presented in Table 1.

Table 1. Selected feeding practices and weight-management attitudes reported by cat owners (n = 76).

Item	n/76	%	95% CI (%)
Free-choice feeding	43	56.6	45.4–67.1
Fixed mealtimes	29	38.2	28.1–49.4
Dry food (multiple response)	60	78.9	68.5–86.6
Wet food (multiple response)	24	31.6	22.2–42.7
Mixed feeding (multiple response)	20	26.3	17.7–37.2
Treats / human food: occasionally	41	53.9	42.8–64.7
Treats / human food: regularly	10	13.2	7.3–22.6
Never measure portions	34	44.7	34.1–55.9
Measure portions at each meal	23	30.3	21.1–41.3
Previous diet / activity changes	35	46.1	35.3–57.2
Would follow veterinary advice	74	97.4	90.9–99.3
Weight-management fee: price-dependent	47	61.8	50.6–71.9
Weight-management fee: definitely willing	9	11.8	6.4–21.0

CI = confidence interval calculated using the Wilson method. Percentages were calculated using the total number of cat owners (n = 76). Multiple responses were permitted for diet-related items.

Feline obesity was considered an important health issue by 84.2% of cat owners and 66.7% of non-cat owners, without a statistically significant difference between groups (Fisher's exact test, $p = 0.116$). Among cat owners, 72.4% identified both diet and lifestyle as factors influencing their cat's body weight.

Veterinary students recognised owner-related influence more frequently than cat owners (68.6% versus 40.8%; Holm-adjusted $p = 0.024$). Differences concerning unsuitable diet and neutering were not statistically significant after adjustment for multiple comparisons (Figure 1).

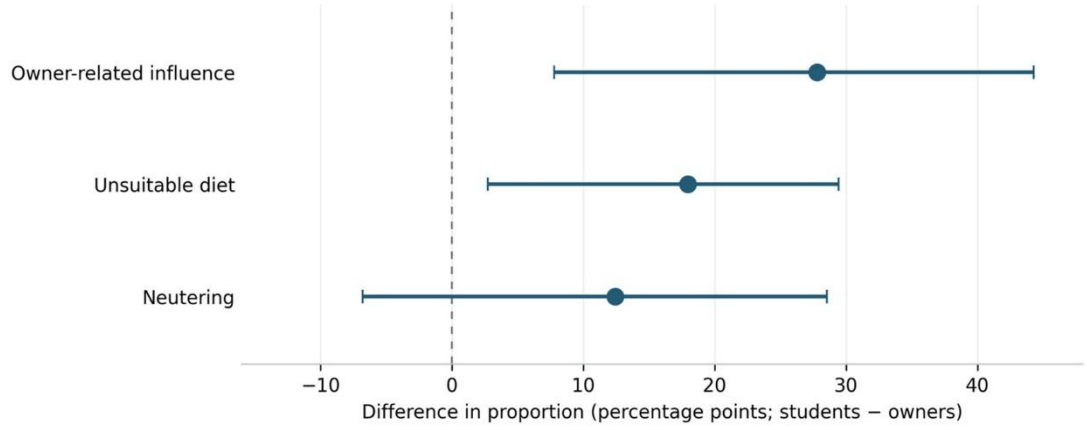


Figure 1. Differences in the recognition of selected obesity-related factors between veterinary students (n = 35) and cat owners (n = 76). Points represent differences in proportions (percentage points; students minus owners), and horizontal lines indicate unadjusted Newcombe 95% confidence intervals. Holm-adjusted *p*-values were 0.024, 0.063, and 0.282 for owner-related influence, unsuitable diet, and neutering, respectively.

Complete paired BCS assessments were available for 94 cats. Exact agreement between owner-assigned and clinical scores was 29.8%, although 98.9% of paired assessments differed by no more than one BCS point. Quadratic-weighted Cohen's kappa was 0.866, and no significant directional difference was detected between owner-assigned and clinical scores (Wilcoxon $p = 0.547$). Additional agreement measures are presented in Table 2.

Table 2. Agreement between owner-assigned and clinically recorded body condition scores (n = 94)

Statistical measure	Result
Body weight, mean ± SD (kg)	5.17 ± 1.73
Owner-assigned BCS, mean ± SD	6.41 ± 1.72
Clinical BCS, mean ± SD	6.36 ± 1.56
Exact score agreement	28/94 (29.8%)
Agreement within ±1 BCS point	93/94 (98.9%)
Agreement in BCS ≥6/9 classification	80/94 (85.1%)
Quadratic-weighted Cohen's κ	0.866
Linear-weighted Cohen's κ	0.610
Paired Wilcoxon signed-rank test	$p = 0.547$
Exact sign test	$p = 0.539$
Binary Cohen's κ (BCS ≥6/9)	0.599
Exact McNemar test (BCS ≥6/9)	$p = 0.180$
Spearman correlation: body weight vs |ΔBCS|	$\rho = 0.065$; $p = 0.531$

BCS = body condition score; SD = standard deviation; ΔBCS = owner-assigned minus clinically recorded BCS. Tests were two-sided.

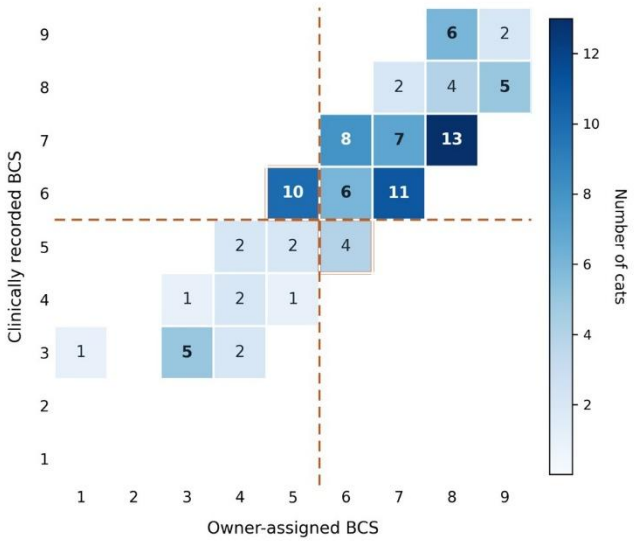


Figure 2. Cross-classification of owner-assigned and clinically recorded BCS in 94 cats. Cell values represent counts, with darker shading indicating higher frequencies. Dashed lines mark the threshold between BCS 5/9 and 6/9, and outlined cells identify assessments that differed in binary excess-body-condition classification.

At the BCS ≥6/9 threshold, owner and clinical classifications agreed in 85.1% of cats. Notably, ten of the 27 cats clinically assessed as BCS 6/9 (37.0%) were classified as BCS 5/9 by their owners. All 14 discordant binary classifications occurred at the boundary between BCS 5/9 and 6/9 (Figure 2).

4. Discussion

The present study examined feeding practices, obesity-related perceptions, and agreement between owner-assigned and clinically assessed body condition scores (BCS) in cats. The findings highlight two complementary aspects of feline weight management: the importance of practical feeding recommendations and the difficulties owners may experience in recognising early excess body condition.

Feeding practices represent an important component of feline weight management. In the present study, 56.6% of cat owners reported free-choice feeding, while 44.7% never measured food portions. O'Halloran et al. [11] also documented considerable variability in feline feeding practices and the motivations underlying dietary choices. Previous investigations have identified associations between feline overweight and several owner-related, environmental, and management factors [10,16,17]. Although free-choice feeding does not necessarily lead to excessive energy intake, the absence of consistent portion measurement may complicate the adjustment of daily food allocation to individual energy requirements. Preventive nutritional strategies are particularly relevant following neutering, when susceptibility to weight gain may increase [3]. Furthermore, controlled dietary interventions have demonstrated that appropriate energy restriction can support weight reduction in overweight cats [18]. However, the present questionnaire findings describe reported feeding behaviours and do not establish an association between these practices and clinically assessed body condition.

Treat provision represents another aspect of feeding management. In the present study, 53.9% of owners reported occasionally providing treats or human food, whereas 13.2% did so regularly. In addition to contributing to daily energy intake, treats may fulfil emotional and social functions within the human–animal relationship, as described by Nielson et al. [12]. Household routines and environmental resource provision may also influence feline management practices [15]. These findings reinforce the importance of obtaining a comprehensive dietary history, including supplementary foods, feeding frequency, and portion sizes. Coe et al. [19] demonstrated that structured dietary history questions can improve the information obtained from pet owners during veterinary consultations. Differences in obesity-related perceptions between respondent groups provided further insight into owner awareness. Veterinary students identified owner-related influence as a contributing factor to feline overweight more frequently than cat owners (68.6% versus 40.8%), and this difference remained statistically significant after Holm adjustment ($p = 0.024$). In contrast, differences concerning unsuitable diet and neutering were not statistically significant after correction for multiple comparisons. These findings suggest that awareness of owner-related contributions to feline overweight may differ according to respondents' backgrounds. Nevertheless, recognition of obesity-related factors does not necessarily translate into appropriate feeding practices, and the present analysis could not establish a relationship between these perceptions and the nutritional status of individual cats.

Owner attitudes towards veterinary recommendations represent an additional consideration. Although 97.4% of cat owners expressed willingness to follow veterinary advice if weight reduction became necessary, only 46.1% reported having previously modified their cat's diet or activity. These findings reflect hypothetical willingness and previous management behaviours rather than directly measured adherence to a weight-loss programme. Sutherland et al. [13] demonstrated that information concerning the effects of obesity on life expectancy may influence owners' decisions regarding veterinary weight-management recommendations. Practical difficulties experienced by owners during feline weight-loss programmes have also been described [20]. In the present study, 61.8% indicated that their willingness to pay for a weight-management programme depended on its cost. These observations emphasise the importance of clear communication, realistic recommendations, and consideration of individual owner circumstances [21,22].

The clinical component provided additional insight into the recognition of feline body condition. Exact agreement between owner-assigned and veterinary BCS was observed in only 29.8% of the 94 paired assessments, although 98.9% of scores differed by no more than one point. The quadratic-weighted Cohen's kappa of 0.866 indicated substantial agreement when the magnitude of scoring differences was taken into account. Underestimation and overestimation occurred in 31.9% and 38.3% of assessments, respectively, without evidence of a statistically significant overall directional difference. Therefore, the present findings do not support a predominance of owner underestimation within this clinical sample. In comparison, Blanchard et al. [9] reported underestimation of body condition by 24% of cat owners in a French veterinary hospital study. Differences in sampling and assessment procedures limit direct comparison between the two investigations. Graff et al. [8] also demonstrated variability in feline BCS assessment, particularly when visual evaluations were compared with clinical assessments incorporating palpation.

The clinical relevance of scoring discrepancies became particularly apparent when BCS was classified according to the threshold for excess body condition. Although owner-assigned and clinical classifications

agreed in 85.1% of cats, all 14 discordant classifications occurred between BCS 5/9 and 6/9. Among the 27 cats clinically assigned BCS 6/9, ten (37.0%) were classified as having ideal body condition by their owners. Conversely, four cats clinically scored 5/9 were assigned BCS 6/9 by their owners. No cats clinically classified as BCS 7–9/9 were assigned scores below the overweight threshold. These findings suggest that difficulties in recognising excess body condition were concentrated at the transition between ideal and mildly overweight condition. This observation is particularly relevant to veterinary nutritional counselling, as even a one-point discrepancy may alter whether a cat is recognised as overweight. The findings support the importance of explaining standardised BCS criteria and incorporating palpation alongside visual assessment during veterinary consultations [5,6,8].

No significant association was identified between body weight and the absolute difference between owner-assigned and clinical BCS (Spearman's $\varrho = 0.065$; $p = 0.531$). Although this result does not establish that body weight is unrelated to scoring accuracy, it reinforces the importance of interpreting body weight alongside other indicators of nutritional status. Established guidelines recommend combining body weight with BCS and muscle condition assessment [5,6], while longitudinal investigations have highlighted the relevance of monitoring changes in these parameters over time [23]. More recently, a distinction between adiposity classification and the diagnosis of clinically significant obesity has been proposed, although this framework requires further validation [24].

Several limitations should be acknowledged. Questionnaire participation was voluntary, and responses were self-reported, introducing potential selection and reporting biases. The availability of questionnaire information primarily as aggregated results restricted additional analyses of relationships between feeding practices and respondent characteristics. The clinical sample was selected primarily among cats suspected of having excess body condition and was therefore not representative of the general feline population. Furthermore, clinical BCS was based on the recorded veterinary assessments without an independent evaluation of interobserver agreement. The questionnaire and clinical datasets were independent and could not be linked at the individual level. Consequently, the findings do not establish causal relationships between feeding practices and body condition and cannot be used to estimate the prevalence of feline overweight or obesity in Romania. These limitations are consistent with the need for transparent reporting of non-interventional research, as outlined in the STROBE statement [25].

Despite these limitations, the study identifies practical priorities for veterinary nutritional counselling. Reported feeding practices highlight the importance of portion measurement, individualised food allocation, and consideration of supplementary foods. At the same time, the concentration of BCS classification disagreements at the boundary between ideal and mildly overweight condition emphasises the value of explaining body condition assessment criteria to owners. Integrating practical feeding advice with routine BCS assessment and owner education may facilitate earlier recognition and management of excess body condition in cats [5,6,14].

5. Conclusions

The present study highlights complementary challenges in feline weight management related to feeding practices, owner perceptions, and recognition of excess body condition. Although most surveyed cat owners expressed willingness to follow veterinary weight-management recommendations, inconsistent portion measurement indicated a need for more practical nutritional guidance. The clinical findings demonstrated that high weighted agreement between owner-assigned and veterinary body condition scores did not necessarily ensure accurate classification of early overweight. Notably, 37.0% of cats clinically assessed as BCS 6/9 were classified as having ideal body condition by their owners, highlighting the importance of the distinction between BCS 5/9 and 6/9. These findings support the integration of routine body condition assessment, clear explanations of scoring criteria, and individualised feeding recommendations into veterinary nutritional counselling. Particular attention to portion control and the early recognition of excess body condition may help strengthen preventive weight-management strategies in cats.

Author Contributions: Conceptualisation, S.D., A.M.; methodology, S.D., A.B-P.; software, S.D.; validation, S.P.; formal analysis, S.D., A.M.; investigation, S.D., A.B-P.; resources, A.M.; data curation, S.D., D.A.D.; writing—original draft preparation, S.D.; writing—review and editing, A.B-P.; D.A.D.; visualisation, S.P.; supervision, A.M.; project administration, A.M. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was approved by the Research Ethics Committee (Approval No. 54763/21.09.2025). An informed consent form was provided alongside the questionnaire link, outlining the purpose of the study, data confidentiality, and participants' rights. Participation was voluntary and anonymous. For the clinical component, informed consent was obtained from cat owners for the use of body weight and body condition score data. All clinical assessments were performed non-invasively during routine veterinary consultations, without additional experimental procedures.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Wang, H.; Wang, W.; Zhang, Y.; Yao, J.; Liu, Y.; Pan, L.; Wang, R.; Wang, J.; Xia, Z.; Chen, L.; Xiong, W. From pathogenesis to prevention: An update on the management of obesity and its associated comorbidities in cats. Front. Vet. Sci. 2026, 13, 1797197. https://doi.org/10.3389/fvets.2026.1797197
2. Blanchard, T.; Hoummady, S.; Rouch-Buck, P.; Priymenko, N. Prevalence and factors associated with overweight and obesity in cats in veterinary hospitals in France during the COVID-19 pandemic. J. Feline Med. Surg. 2025, 27, 1098612X241305924. https://doi.org/10.1177/1098612X241305924
3. Godfrey, H.; Morrow, S.; Abood, S.K.; Verbrugghe, A. Identifying the target population and preventive strategies to combat feline obesity. J. Feline Med. Surg. 2024, 26, 1098612X241228042. https://doi.org/10.1177/1098612X241228042
4. Bjørnvad, C.R.; Mortensen, C.B.; Tams, M.L.S.; Jørgensen, F.K.; Sandøe, P.; Lund, T.B. Feline obesity is associated with stronger owner attachment, while indoor confinement increases risk of obesity at an early age in domestic shorthaired cats. Front. Vet. Sci. 2026, 13, 1757719. https://doi.org/10.3389/fvets.2026.1757719
5. Freeman, L.; Becvarova, I.; Cave, N.; MacKay, C.; Nguyen, P.; Rama, B.; Takashima, G.; Tiffin, R.; Tsjimoto, H.; van Beukelen, P. WSAVA nutritional assessment guidelines. J. Small Anim. Pract. 2011, 52, 385–396. https://doi.org/10.1111/j.1748-5827.2011.01079.x
6. Cline, M.G.; Burns, K.M.; Coe, J.B.; Downing, R.; Durzi, T.; Murphy, M.; Parker, V. 2021 AAHA nutrition and weight management guidelines for dogs and cats. J. Am. Anim. Hosp. Assoc. 2021, 57, 153–178. https://doi.org/10.5326/JAAHA-MS-7232
7. Bjørnvad, C.R.; Nielsen, D.H.; Armstrong, P.J.; McEvoy, F.; Hoelmkjaer, K.M.; Jensen, K.S.; Pedersen, G.F.; Kristensen, A.T. Evaluation of a nine-point body condition scoring system in physically inactive pet cats. Am. J. Vet. Res. 2011, 72, 433–437. https://doi.org/10.2460/ajvr.72.4.433
8. Graff, E.C.; Lea, C.R.; Delmain, D.; Chamorro, E.D.; Ma, X.; Zheng, J.; Zhang, Y.; Brinker, E.; Kittell, K.; Hicks, M.; Pfister, C.; Hamilton, H.; Li, Q.; Martin, D.R.; Wang, X. Inter-evaluator bias and applicability of feline body condition score from visual assessment. Front. Vet. Sci. 2025, 12, 1604557. https://doi.org/10.3389/fvets.2025.1604557
9. Blanchard, T.; Hoummady, S.; Banuls, D.; Roche, M.; Bynens, A.; Meunier, M.; dos Santos, N.; Tissaoui, E.; Rouch-Buck, P.; Fantinati, M.; Priymenko, N. The perception of the body condition of cats and dogs by French pet owners and the factors influencing underestimation. Animals 2023, 13, 3646. https://doi.org/10.3390/ani13233646
10. Wall, M.; Cave, N.J.; Vallée, E. Owner and cat-related risk factors for feline overweight or obesity. Front. Vet. Sci. 2019, 6, 266. https://doi.org/10.3389/fvets.2019.00266
11. O'Halloran, C.; Cerna, P.; Barnicoat, R.; Caney, S.M.A.; Gunn-Moore, D.A. How and why pet cats are fed the way they are: A self-reported owner survey. J. Feline Med. Surg. 2024, 26, 1098612X231209894. https://doi.org/10.1177/1098612X231209894
12. Nielson, S.A.; Khosa, D.K.; Verbrugghe, A.; Clow, K.M. Talking treats: A qualitative study to understand the importance of treats in the pet-caregiver relationship. Prev. Vet. Med. 2024, 226, 106163. https://doi.org/10.1016/j.prevetmed.2024.106163
13. Sutherland, K.A.; Coe, J.B.; Groves, C.N.H.; Shepherd, M.L.; Grant, L.E. 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. J. Am. Vet. Med. Assoc. 2024, 262, 798–807. https://doi.org/10.2460/javma.23.12.0703
14. Taylor, S.; Roberts, G.; Evans, M.; German, A.J. Recording of body weight and body condition score of cats in electronic health records from UK veterinary practices. J. Feline Med. Surg. 2022, 24, e380–e393. https://doi.org/10.1177/1098612X221117348
15. Taylor, S.; Mackie, I.M.; Heath, S.; Paramasivam, S.J. Feline management practices and resource provision in the UK: A questionnaire-based study of 565 caregivers. Vet. Rec. 2025, 197, e5561. https://doi.org/10.1002/vetr.5561
16. Courcier, E.A.; O'Higgins, R.; Mellor, D.J.; Yam, P.S. Prevalence and risk factors for feline obesity in a first opinion practice in Glasgow, Scotland. J. Feline Med. Surg. 2010, 12, 746–753. https://doi.org/10.1016/j.jfms.2010.05.011
17. Petrescu, S.-I.; Matei, M.; Radu-Rusu, C.-G.; Pop, M.-I. The influence of some endogenous and exogenous predisposing factors in overweight cats. Anim. Food Sci. J. Iași 2024, 81(5), 174–179. https://repository.iuls.ro/handle/20.500.12811/6346
18. Opetz, D.L.; Oba, P.M.; Lin, C.-Y.; Ren, P.; Swanson, K.S. Restricted feeding of weight control diets induces weight loss and affects body composition, voluntary physical activity, blood metabolites, hormones, and oxidative stress markers, and fecal metabolites and microbiota of obese cats. J. Anim. Sci. 2024, 102, skae335. https://doi.org/10.1093/jas/skae335
19. Coe, J.B.; O'Connor, R.E.; MacMartin, C.; Verbrugghe, A.; Janke, K.A. Effects of three diet history questions on the amount of information gained from a sample of pet owners in Ontario, Canada. J. Am. Vet. Med. Assoc. 2020, 256, 469–478. https://doi.org/10.2460/javma.256.4.469

20. Baptista da Silva, C.; Lyu, Y.; Ruiz-Suárez, N.; Pastoor, F.; Heip, L.; Wambacq, W.; Hottat, M.C.; Hesta, M. Survey of Belgian owners' perspectives on quality of life and difficulties during a weight-loss programme in obese cats. J. Feline Med. Surg. 2022, 24, e513–e523. https://doi.org/10.1177/1098612X221121920
21. Piazza, C.; Dominguez Cots, L.; Dye, C. Assessing pet owners' knowledge and comprehension of veterinary medical terminology. Vet. Rec. 2025, 196, e5163. https://doi.org/10.1002/vetr.5163
22. Kipperman, B.S.; German, A.J. The responsibility of veterinarians to address companion animal obesity. Animals 2018, 8, 143. https://doi.org/10.3390/ani8090143
23. Pye, C.R.; Dowgray, N.J.; Eyre, K.; Pinchbeck, G.; Biourge, V.; Moniot, D.; Comerford, E.; German, A.J. Longitudinal changes in bodyweight, body condition, and muscle condition in ageing pet cats: Findings from the Cat Prospective Ageing and Welfare Study. Front. Vet. Sci. 2025, 12, 1654002. https://doi.org/10.3389/fvets.2025.1654002
24. Ward, E.; Churchill, J. Should veterinarians apply a 2-step framework to classify adiposity and diagnose clinical obesity in dogs and cats? J. Am. Vet. Med. Assoc. 2026, Advance online publication. https://doi.org/10.2460/javma.26.06.0499
25. von Elm, E.; Altman, D.G.; Egger, M.; Pocock, S.J.; Gøtzsche, P.C.; Vandenbroucke, J.P. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. Prev. Med. 2007, 45, 247–251. https://doi.org/10.1016/j.ypmed.2007.08.012