# Pet owners' perception and satisfaction of surgery services and outcomes at the Ashanti Regional Veterinary Clinic, Kumasi, Ghana


## Abstract

**Aim:** To study pet owners' perception of surgery services and client satisfaction in Ghana in order to improve the quality of surgery services.

**Method:** Self-administered questionnaires were administered to owners of pets that were presented for surgery at the Ashanti Region Veterinary Clinic (ARVC). Data generated were presented in percentages with their standard error of means.

**Result:** 80% of the respondents were satisfied with the cost of surgical management, while 92% were satisfied with doctors' staff attitude.

**Conclusion:** The study revealed an overall client satisfaction of veterinary surgical services at the ARVC however surgeon–client communication need to be improved with respect to knowledge of surgical procedure prior to surgery. Periodic evaluation of veterinary services by service consumers should be encouraged to facilitate service improvement toward better animal healthcare delivery in Ghana.


**Key words:** pet owners, attitude, surgical services, outcomes, Kumasi

Pet owner assessment scores for surgery performed on their pets are important client satisfaction indicators, for evaluating the perception of the quality of the veterinary surgical service delivery in a veterinary practice (Verbeek et al, 2001; Turkson, 2008). It is a measure of pet owners' perception of the surgeon's ability to successfully manage a pet's surgical conditions not only during surgery, but also during restoration to normal function, and with respect to cost and staff attitude. When such feedback responses are encouraged, it motivates a practice to improve on the quality of service delivery necessary for increased clients' patronage (Moreau, 2007). Pet owners often experience mixed feelings of fear and confidence when seeking veterinary surgery services. Such fears are related to anaesthetic risk, surgery complications, the possibility of pets maintaining cherished, attractive features, ease of pets' return to normal functions, and likelihood of death during surgical procedures. Occasionally, unmet expectations could lead to litigation between pet owners and surgeons resulting in strained owner–veterinary practice relationships (Serpell, 1996). Provision of adequate veterinary services of acceptable standard or quality has been a major challenge in veterinary health service delivery in some parts of Africa (Cheneau, 2004).

To combat the challenges in veterinary healthcare delivery possibly due to shortage of veterinary professionals in Ghana (Turkson, 2003; Eyarefe and Dei, 2014), Kwame Nkrumah University of Science and Technology established a School of Veterinary Medicine, and upgraded Ashanti Regional Veterinary Clinic (ARVC), Kumasi, to serve as a training centre for clinical students (Eyarefe and Dei, 2014). Since the upgrading of the facility and concomitant improved patronage, there was a need to evaluate the pet-owners' assessment of surgical service delivery. This study was therefore designed to evaluate pet owners' perceptions of surgical service delivery at the ARVC, Kumasi, Ghana; the information derived could serve as a template, and be extrapolated for improving veterinary healthcare delivery in Africa.

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## Materials and methods

The ARVC is a major animal healthcare delivery facility located in Kumasi city, Ghana. At the establishment of the School of Veterinary Medicine (SVM), Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, in 2009, this facility was upgraded to cater for clinical training of SVM students. The increased numbers of professionals available for patient management and improved patient management skills and facilities have resulted in a yearly increase in clientele, and case referrals from neighbouring cities, and regions of the country.

### Survey instrument design

A questionnaire was developed to explore owners' perception and experience of having their dog undergo surgery at the ARVC, Kumasi. The questionnaire was pre-tested by a few veterinarians and dog owners, and based on their comments, the questionnaire was modified slightly. The final version consisted of two parts. Part A (four sections) was to be filled in immediately after the surgery, while part B (two sections) was to be filled in when the patient was presented for suture

# Pet owners' perception and evaluation of surgical outcome questionnaire

## Section A: To be filled on the day of surgery

PETS BIODATA

Name .....Species .....Sex .....

Surgical Procedure .....

.....

PET OWNER BIODATA

Nationality .....

Age.....

Occupation.....

Numbers of Dogs .....Cats .....possessed

Educational Background.

Primary School.....

Secondary school.....

Post secondary.....

University.....

and Degree.....

*Assessment of criteria for pet owner choice of veterinary clinic*

**Why did you bring your dog to this Clinic ?( please tick)**

1. The clinic is close to your house (100 meters).
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
2. You have always brought your dog here for medical attention.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
3. Someone told you, that you could get a good service here.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
4. You expected better medical services because the clinic has qualified and skilled veterinarians.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
5. You expected better services because it is a Government owned clinic.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
6. You expected the cost of surgical procedure to be lower.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
7. You just presented your dog without a strong personal reason.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

*Assessment of pet owners' knowledge of the surgical procedure their pet is to undergo*

**Did you have a prior knowledge of the procedure?**

8. You had a prior knowledge of the procedure before coming to the clinic.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
9. You had a prior knowledge from previous experience with other dogs.
   Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
10. You had a prior knowledge by reading on the internet.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
11. You had better knowledge of the procedure following the doctor's explanation.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

*Assessment of pet owner concerns and fears of likely complication and risk and cosmetic outcome of procedure*

**What are your worry about the procedure?**

12. You are afraid you might lose your dog.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
13. You are not afraid because of previous good outcome.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
14. You are afraid the dog might be deformed.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
15. You had confidence; the doctor would do a good job.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
16. You are ready to accept whatever outcome the procedure presents.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

## Section B: To be filled before the discharge of the patient

*Assessment of pet owners challenge in complying or coping with post-operative instructions and management.*

**Did you have any challenge caring for your dog after the procedure?**

17. You were able to care for your pet and complied with the doctor's instructions after the procedure.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
18. You could not comply with doctor's instructions for want of time due to job commitments.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
19. You could not adequately care due to pet's temperament alterations.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐
20. You would have preferred it if your dog was boarded after the procedure for care at the clinic.
    Strongly agree ☐ Agree ☐ Disagree ☐ Strongly disagree ☐

*Assessment of clinic team's attitudes by pet owners*

**What is your impression of the doctors and the clinic medical team and cost of the procedure?**

21. Score the doctor's attitude to you and your pet in the course of the treatment.
    Excellent ☐ Good ☐ Bad ☐ Very bad ☐
22. Give confident assessment of surgical care in this clinic.
    Excellent ☐ Good ☐ Bad ☐ Very bad ☐
23. What is your impression about the cost of your pet's surgical management at this clinic?
    Too expensive ☐ Expensive ☐ Moderate ☐ Low ☐

*Assessment of owners' satisfaction with post-surgical outcome and pet's performance*

24. Score your dog's appearance following the procedure?
    Excellent ☐ Good ☐ Bad ☐ Very bad ☐
25. Score your dog's performance after the procedure?
    Excellent ☐ Good ☐ Bad ☐ Very bad ☐

removal. The six sections comprise: pet and owner's vital bio-data; assessment of criteria for dog owner's choice of clinic; assessment of owners' knowledge of the surgical procedure; assessment of owners' apprehension about the pet undergoing the procedure; assessment of owners' immediate response to surgery outcome; assessment of owners' challenge with the pet's post-operative care; and assessment of owner's satisfaction with surgery outcome, general pets' welfare practice and cost of procedure. The Likert scale was adopted as respondents' indicators for the study.

### Instrument administration

Two members of staff were trained to administer the questionnaire to pet owners. Pet owners' consent was verbally sought and consent given before instruments were administered. Part A (four sections) was filled in immediately after surgery, while part B (two sections) was filled in when the patient was presented for suture removal or before final discharge.

### Enrolment criteria

Owners of dogs presented for surgery between July 2013 and July 2014 were enrolled in the study. Age of respondents was part of the demographic data obtained. For credibility of information, children and adolescents were excluded from participation as respondents. Owners of dogs who failed to present their dogs for suture removal and therefore could not fill in part B of the questionnaire or who sent drivers to bring their dogs to the clinic and could not fill in the questionnaire despite successful surgery were not enrolled. Respondent were able to communicate in English or any of the Ghanaian local languages which was translated by a trainee.

### Data analysis

The responses (pet and owner's bio-data, and questions) were coded and entered into Microsoft (windows version 10) excel spreadsheet. These were then imported into Statistical Package for Social Sciences (SPSS) Version 16.0 software for further analysis, cross tabulation and regression at 0.05 confidence level. Data generated within each category were presented in percentages with their standard error of means.

## Result

### Pet animals

Owners of 51 dogs and three cats (N=54) (66% male and 34% female) presented for surgery responded to the questionnaire. Dogs' breeds consisted of Mongrel (32%), Alsatian (16%), Rottweiler (2%), Bull mastiff (22%), Neapolitan mastiff (2), Terrier (6%), Boerboel (12%), other breeds (8%) (*Table 1*).

**Table 1. Percentage distribution of surgical conditions and dog breeds presented for surgery**

| Surgical conditions | % | Breeds | % |
|---|---|---|---|
| Castration | 30 | Mongrel | 32 |
| Docking | 24 | Alsatian | 16 |
| Caesarian section | 2 | Rottweiler | 2 |
| Haematoma | 10 | Bull mastiff | 22 |
| Spaying | 6 | Neapolitan mastiff | 2 |
| Tumour | 6 | Terrier | 6 |
| Wounds | 16 | Boerboel | 12 |
| Fracture | 6 | Others | 8 |
| Total | 100 | Total | 100 |

**Table 2. Percentage distribution of dog owners' educational qualifications and numbers of dogs possessed**

| Educational qualifications | Percentage (%) | No of dogs in the household | Percentage (%) |
|---|---|---|---|
| Primary | 12.0 | ≤2 | 40.0 |
| Secondary | 14.0 | 3 | 20.0 |
| Diploma | 24.0 | 4 | 18.0 |
| BSc | 26.0 | 5 | 6.0 |
| MSc/PhD | 18.0 | ≥5 | 16.0 |
| Others | 6.0 | Total | 100.0 |
| Total | 100.0 | | |

### Pet owners

Pet owners were adult men and women (98% Ghanaians and 2% non-Ghanaians) with varying levels of educational attainments: primary school (12%), secondary school (14%), diploma (24%), graduate degree (BSc, B.Ed. 26%), masters and PhD (18%), others (6%) (*Table 2*). They also had varying numbers of dogs in their homes: 1–2 dogs (40%), 3 dogs (20%) 4 dogs (18%) 5 dogs (6%) and above 5 dogs (16%) (*Table 2*) and lived within and outside Kumasi city.

### Surgical procedures

Surgical procedures performed included: castration (30%), tail docking (24%), Caesarian section (2%), auricular haematoma repairs (10%), ovario-hysterectomy (spaying) (6%), tumor excision (6%), wound repairs (16%), Fracture repairs (6%) (*Table 1*).

### Assessment of criteria for dog owners' choice of clinic

The clinic was not near (0–100 meters radius) to the residence of 56% of respondents, and was not a contributory factor for clinic patronage, while relative nearness of residence to the clinic was a contributory factor for 44% of respondents' clinic patronage. Ninety percent (90%) of the pet owners had visited the clinic for surgical and

medical services previously, while 10% were new clients to the ARVC at the time of the study. Sixty-eight percent (68%) of respondent pet owners agreed that they made their choice based on information of better service delivery at the clinic from other clients, while 32% were not influenced by such information. Ninety-four percent (94%) of respondents chose the clinic because it was Government owned, and expected better service delivery, while 6% were not influenced by this consideration. Expectation of lower cost for surgical management influenced the choice of 77% of respondent pet owners, while cost of treatment was not a consideration for 20% of respondents. Availability of qualified veterinary surgeons influenced the choice of this clinic for 96% of respondents, while this was not a consideration for 4% of respondents.

### Assessment of owners' knowledge of the procedure

Fifty percent (50%) of respondent had some knowledge of the type of surgical procedure their pet was about to undergo, while 50% had little or no knowledge of the procedure. Sixty percent (60%) of respondent agreed that they had better understanding of the surgical procedure following the veterinary surgeon's explanation, while 40% of those that responded were satisfied with their previous knowledge despite the veterinary surgeon's explanation about the procedure.

### Assessment of owners' fears about outcome of surgery

Sixty-six percent (66%) of pet owners had some fear that they might lose their dog during the surgical procedure, while 34% of respondents were not afraid that their pets might die as a result of the procedure. Seventy-two percent (72%) of respondents were afraid their dogs might have some forms of deformity after the procedure, while 26% respondents had no fear of such occurring (the remaining 2% did not respond). Eighty-two percent (82%) of respondents were sure that surgeons would manage their dogs well, while 16% were unsure of their surgeon's ability (again 2% did not respond). Fifty-four percent (54%) of respondents were willing to accept whatever outcome the surgery provided, while 46% were only ready to accept a good outcome.

### Assessment of owners' challenge with post-operative care

Twenty percent (20%) of respondents could not give adequate post-operative care due to altered dog's temperaments, while 80% gave adequate post-operative care because their dog was comfortable and cooperative. Twenty percent (20%) of respondents would prefer their dog was hosiptalised in the clinic for the period of post-operative management, while 80% would prefer their dog was managed as an out patient.

### Assessment of owner's satisfaction with surgeical outcome, the clinic's general pet welfare practice and the cost of procedure

Ninety-eight percent (98%) of respondents were satisfied with the appearance of their dog at the time of suture removal or final discharge, while 2% were unsatisfied. All respondents (100%) were satisfied with their pet's performance post surgery. All respondents (100%) were satisfied with the veterinary surgeon's and other clinic staffs' attitudes, the clinic's healthcare services, and were willing to patronise the facility again when the need arises. Twenty percent (20%) of respondents rated the cost of surgical management as expensive, 76% rated it as moderate and 4% rated it as low (*Table 3*).

## Discussion

The results of the study show that pet owners who patronise the ARVC were satisfied with surgery services at this animal healthcare facility. The service beneficiaries-oriented approach adopted in this study is a credible method for animal healthcare studies recommended by other investigators (McCrindle, 1996; Turkson, 2008). In contrast with previous studies, which were field surveys of livestock farmers' perception of veterinary services in Africa (McCrindle, 1996, Turkson, 2008), this study focused on companion animals, especially dogs, whose roles in modern security, especially in towns and cities, have been elucidated in previous studies (Eyarefe and Dei, 2014). Companion animal surgery utilises similar clinical principles to human paediatric surgery (Slatter et al, 2003) where parents express satisfaction on surgical management on behalf of patients; hence, the need for appropriate feedback on surgical skill, anaesthesia and medicine which often have accompanying risk of complications. The results of evaluation of surgical service by pet owners should be seen as evidence-based responses and used to improve service delivery. The reason for pet owners' choice of the ARVC revealed an array of complementary influences including: accessibility to clinic; affordability of services; past records of quality clinical services; good relationship with clients; Government ownership; and availability of qualified and proficient veterinary practitioners. These are consistent with previous studies that hypothesised that clients' patronage of healthcare services would be influenced by satisfaction with service accessibility, availably, charges, effectiveness, efficiency, quality of service and meeting client needs (Andaleeb, 2001; Turkson 2011). Eighty percent (80%) of respondents were satisfied with the cost of surgical management, while 92% were satisfied with veterinary staff attitudes.

**Table 3. Percentage responses of pet owner's to surgical patients and practice assessment queries**

| | Strongly agree | Agree | Disagree | Strongly disagree | Std Error of Mean |
|---|---|---|---|---|---|
| Proximity of clinic | 20 | 24 | 30 | 26 | ±0.15 |
| Regular client | 69 | 21 | 5 | 5 | ±0.13 |
| Information of good service | 32 | 36 | 24 | 8 | ±0.13 |
| Govt. clinic provide good service | 62 | 32 | 6 | 0 | ±0.09 |
| Anticipated Low cost | 34 | 44 | 18 | 2 | ±0.11 |
| Qualified competent doctors | 72 | 24 | 2 | 2 | ±0.05 |
| Prior knowledge of procedure | 34 | 16 | 34 | 16 | ±0.16 |
| Knowledge after doctors' explanation | 18 | 42 | 26 | 14 | ±0.13 |
| Fear of pet's death | 38 | 28 | 24 | 10 | ±0.14 |
| Fear of deformity | 46 | 26 | 20 | 6 | ±0.14 |
| Confident of doctor's skill | 62 | 20 | 6 | 10 | 0.14 |
| Willingness to accept outcome | 20 | 34 | 36 | 8 | ±0.13 |
| Preferred pet boarded after procedure | 6 | 14 | 46 | 34 | ±0.12 |
| Care less after surgery because of dogs bad temperament | 14 | 6 | 36 | 44 | ±0.15 |
| Cheerfully willing to patronize clinic | 94 | 6 | 0 | 0 | ±0.03 |
| | **Excellent** | **Good** | **Poor** | **Very bad** | |
| Pet's appearance | 58 | 40 | 2 | 0 | ±0.08 |
| Pet's performance | 52 | 48 | 0 | 0 | ±0.07 |
| Doctors and staff attitude | 82 | 10 | 8 | 0 | ± |
| Clinic surgical healthcare | 80 | 20 | 0 | 0 | ±0.06 |
| | **Too expensive** | **Expensive** | **Moderate** | **Low** | |
| Cost impression | 18 | 2 | 76 | 4 | ±0.11 |

In Africa and many developing countries, government health establishments, especially institutional teaching hospitals, provide the best healthcare facilities, with quality services and more qualified personnel because of government financial support which enables them to maintain both facilities and personnel (Choo, 2010), this further justifies the establishment of the Kwame Nkrumah University of Science and Technology School of Veterinary Medicine to train veterinarians and enhance the quality of veterinary healthcare delivery in Ghana.

Forty percent of pet owners had some knowledge of the surgical procedure their pet would be undergoing, probably because their pet had undergone such procedure previously, and benefitted from the veterinary surgeon's explanation. However, 60% felt they were better informed after the veterinary surgeon's explanation (*Table 3*). This further strengthens the need for proper surgeon–client communication prior to a pet's surgical procedure (Fossum et al, 2007). Such communication alleviates pet owners' apprehension, and makes them better prepared for the animal's post-operative outcome, including payment of bills and making adjustment in daily routine to accommodate post-operative care (Fossum et al, 2007, Turkson, 2011). Fear of surgery outcome, especially the possibility of some form of deformity following surgical procedure, is natural and common among seekers of surgical services (Väisänen, 2008). Despite 82% of respondents agreeing that they were confident in the veterinary surgeon's ability to manage their pet well, there were still inherent and expressed fear of some form of deformity by 72% of respondents. The chances of deformity are generally not associated with the veterinary surgeon's expertise but with the nature and type of surgical disease , chronicity of the condition, vital anatomical structures affected,

## Key Points

- Pet owners who patronise the ARVC were satisfied with surgery services at this animal healthcare facility.
- Pet owners' choice of the ARVC is informed by accessibility to clinic; affordability of services; past records of quality clinical services and availability of qualified and proficient veterinary practitioners.
- The establishment of the Kwame Nkrumah University of Science and Technology School of Veterinary Medicine will aid the training and enhance the quality of veterinary healthcare delivery in Ghana.
- Periodic evaluation of veterinary services by service consumers should be encouraged to facilitate service improvement toward better animal healthcare delivery.

and their chances of returning to normal function following surgical repairs (Gaynor et al, 1999). However, previous pet owners' experience of veterinary surgeons' surgical management skills towards ensuring minimal or no deformity always elicits maximum pet owner satisfaction and assured patronage.

In this study, 54% of respondents were willing to accept whatever the outcome of the surgery while 46% were only prepared for good outcome (*Table 3*). This emphasises the need for surgeons to obtain informed written consent from pet owners before performing surgery, as some owners may not be satisfied with surgery outcome, which may result in pets' abandonment at clinic or litigation by pet owners (Flemming, 2004). Eighty percent (80%) of pet owners prefer out-patient post-operative care while 20% of owners would have preferred their pet to have been treated as an in patient throughout the post-operative period. A surgical patient being treated as an in patient depends on the type of procedure (major or minor) that has been undertaken, if it requires more intensive care for perfect recovery, whether the owner is willing to 'let go' of the pet for the period and whether they are willing to pay for the charges associated with the pet's stay in the veterinary hospital. Owners' interests play a key role in some cosmetic surgical procedures, while the severity of a case at hand may dictate if being admitted as an in patient will yield a better post-operative outcome (Neumann, 2008). Most pet owners (98%) were satisfied with their pet's post-healing appearance and 100% were satisfied with their pet's post-operative performance and therefore willing to continue to patronise the facility.

Although the results of the study generally showed client satisfaction with current surgical services at the ARVC, the study is limited by the numbers of respondents which may be associated with the usual lower surgery case load, and the stringent study inclusion criteria. Future studies could cover a longer period of time and non-compliant clients could be tracked with phone calls to encourage their responses to the questionnaire.

## Conclusion

The study revealed an overall client satisfaction of veterinary surgical services at the ARVC however surgeon–client communication needs to be improved with respect to knowledge of the surgical procedure prior to surgery. Improved surgeon–client communication, coupled with specialist training for veterinarians and expansion of animal healthcare facility especially boarding kennel facilities to cater for patients who need prolong hospital stay, will enhance veterinary service delivery in Ghana. **VN**

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