

Do Veterinarians Recognize a Role for Physical Therapists in Small Animal Physical Therapy and Rehabilitation?

Sue Ann S. Kalish, PT, DPT OCS

Professor

Courtney Charlesworth, Brittny Garrison, Brooke Terilli, Ashton Zambrowicz

Graduate student,

Department of physical therapy

University of North Georgia.

ABSTRACT

The role of physical therapy and rehabilitation of an injured or aging small animal offers great potential. The increase in the use of domestic small animals, particularly canines, as companion animals, service animals and for athletic competition, advances in medical and surgical techniques in veterinary medicine and personal experiences participating in physical therapy appears to have created a desire from owners regarding the animal's quality of life and quantity of years. There is little literature addressing small animal physical therapy rehabilitation and how such services might be accessed. We present an interview-based study to assess opinions of veterinarians to gauge whether they perceive a need for small animal physical therapy and rehabilitation. We further examine which health care professionals these veterinarians perceive are most qualified to render these rehabilitative services. Eight veterinarians from a rural, northeastern region of Georgia were interviewed. The results demonstrate that many veterinarians may not have received curriculum instruction in small animal physical therapy through veterinary school. Still, results reveal that veterinarians in this study support physical therapists playing a role in the rehabilitative treatment of small animals. This study further supports the need for interprofessional education and collaboration in the treatment of small animals and their physical therapy needs.

Key Words: *physical therapy, small animal physical therapy, veterinary rehabilitation physician, small animal rehabilitation*

INTRODUCTION

As society, at large, becomes more demanding of small animal rehabilitation for the benefit of companion and service animals, physical therapy as an alternative, or adjunct, to more conventional remedies, such as surgery, offers a less invasive, less expensive alternative. Animal rehabilitation gained momentum in the United States in the late 1980s.¹

The veterinarian, Dr. Janet Van Dyke, was a representative of the formative period of animal rehabilitation. The Canine Rehabilitation Institute, founded by Janet Van Dyke in 2003, is responsible for the majority of

rehabilitation licensing for animal physical therapy in the United States.² The field has grown immensely in the last 30 years, with 350 animal rehabilitation clinics currently available in the United States. The field growth has resulted in hundreds of certified animal rehabilitation specialists from both the veterinary specialty and the physical therapy specialty.^{3, 4} As an alternative to traditional veterinary surgical techniques, or euthanasia, veterinarians began to apply principles and techniques of human rehabilitation to animals⁵.

Some veterinarians believe that animal rehabilitation should only be performed by veterinary practitioners, because others are not knowledgeable in animal physiology and pathology and as such may overlook diseases and other medical conditions. While there is certainly a difference in animal and human anatomy and physiology, the basic principles of structure and function are the same from the standpoint of the work of the physical therapist. Many of the techniques used to treat humans are directly applicable to animals.^{1, 6, 7} Susan Bertram, DVM, notes that many veterinarians are considering the usefulness and benefits of physical therapy for their patients. She states “veterinarians wishing to institute a physical therapy program must... [acquire] knowledge of equipment, clinical indications for each modality, proper application and contraindications,” With the exception of animal anatomy and physiology, the majority of courses required for certification in small animal rehabilitation programs are offered in Doctorate of Physical Therapy programs.¹⁴ Dr. Bertram continues with “consulting with, employing or referring cases to a licensed physical therapist is a good way to tap into their unique knowledge and experience.”^{8, 9} Dr. Bertram is paralleling the veterinary medicine with the traditional human medical model with medical physicians (Orthopaedic surgeons, internists, and osteopaths as examples) treating surgical or disease processes and referring the human patient to physical therapy for rehabilitation to improve function and quality of life.

Jackie Woelz, PT, DPT, MS, CCRP is the founding therapist for UC Davis Veterinary School Physical Rehabilitation, and bases her approach on the idea that the objective of physical therapy treatments results in regaining functional ability. Dr. Woelz noted that the “... animal benefits parallel those seen in human medicine, [with improvements in] flexibility and improved postural control and balance.”¹⁰ As an added benefit, there are positive psychological effects observable not only in the animal, but also in the animal’s owner/caregiver following animal rehabilitation.¹⁰

The area of small animal rehabilitation is a new and relatively unexplored field. Because little research has been done to determine potential benefits of physical therapy on small animal rehabilitation, veterinary practice has no meaningful evidence to judge in making an opinion on the benefits of physical rehabilitation. The little literature available that consists mainly of expert opinion and little empirical evidence does not dispute a need for physical therapists in small animal rehabilitation. In fact, the ongoing debate is primarily over the extent to which the physical therapists should be involved in animal rehabilitation. The American Association of Rehabilitation Veterinarians’ (AARV) position on this matter is that animal rehabilitation is part of veterinary medicine and a veterinarian should be directly involved in an animal’s rehabilitation program. While AARV supports veterinary staff working with non-veterinary professionals in the rehabilitation process, it strictly opposes non-veterinary professionals having direct

access to animal patients. Likewise, some veterinarians worry about expanding state practice acts to include non-veterinary professionals.¹¹

Extensive effort researching small animal rehabilitation has highlighted the severe lack of scientific evidence pertaining to this topic^{12,13} The present investigation is focused on gaining a better understanding of how veterinarians in northeast Georgia view physical therapy as a potential for small animal rehabilitation. The investigation further questions which health care professionals, veterinarians or physical therapists, are qualified to render these rehabilitative services.

METHODS AND PROCEDURES

Data Sources

The literature search included the following databases: CINAHL Plus with Full Text, MEDLINE with Full Text, ProQuest Nursing and Allied Health Source, SPORT Discus with Full Text, PubMed, Google Scholar, The Veterinary Journal, Journal of Veterinary Science and Technology, and the American Journal of Veterinary Research. Due to the scarcity of citations, our inclusion criteria broadened to include not only research articles, but expert editorial opinions. Only studies of canine or feline animal rehabilitation were included in the present study. The databases used, while extensive, do not access all veterinary journals.

The bulk of the literature retrieved was not randomized control trials, but rather an overview of different modalities and rehabilitative protocols used on small animals with various neurologic or musculoskeletal conditions. These authors applied rehabilitative understanding, based on studies of humans with musculoskeletal or neurologic conditions, to the animal population they were treating with similar conditions.

Subjects

Purposive sampling identified eight licensed veterinarians in the tri-county area of rural northeast Georgia agreed to answer interview questions related to animal rehabilitation, education, and the role of physical therapists in small animal rehabilitation. Veterinarians answering the interview questionnaire were in private practice settings or shelter settings. They reported mean of 16.5 years experience in veterinary medicine, ranging from 4 to 30 years. All of the veterinarians who participated in the study worked in settings with a population mainly consisting of canines and felines, with an occasional pocket pet, such as a rabbits or Guinea pigs.

Interviews

Initially, a focus group consisting of veterinarians and veterinarian technicians was conducted to formulate questions for the interview process. The eight veterinarians were then interviewed to obtain deeper understanding of the role of physical therapy in small animal rehabilitation. One on one interviews were conducted in the offices of the participating veterinarians. Each interview lasted 15-40 minutes. A semi-

structured interview was used to solicit the veterinarians' expert opinions on the subject matter. Each interview was recorded and then transcribed by the research group. The initial inquiry involved conversation about each veterinarian's typical client population, followed by questions probing (1) treatment courses of various diagnoses and their outcomes, (2) educational and experiential background, (3) use and availability of rehabilitative services, and (4) knowledge of components of small animal rehabilitation and physical therapy in an attempt to understand the veterinarian's personal points of view on this small animal rehabilitation therapeutic concepts.

Authorization and Analytic Procedure

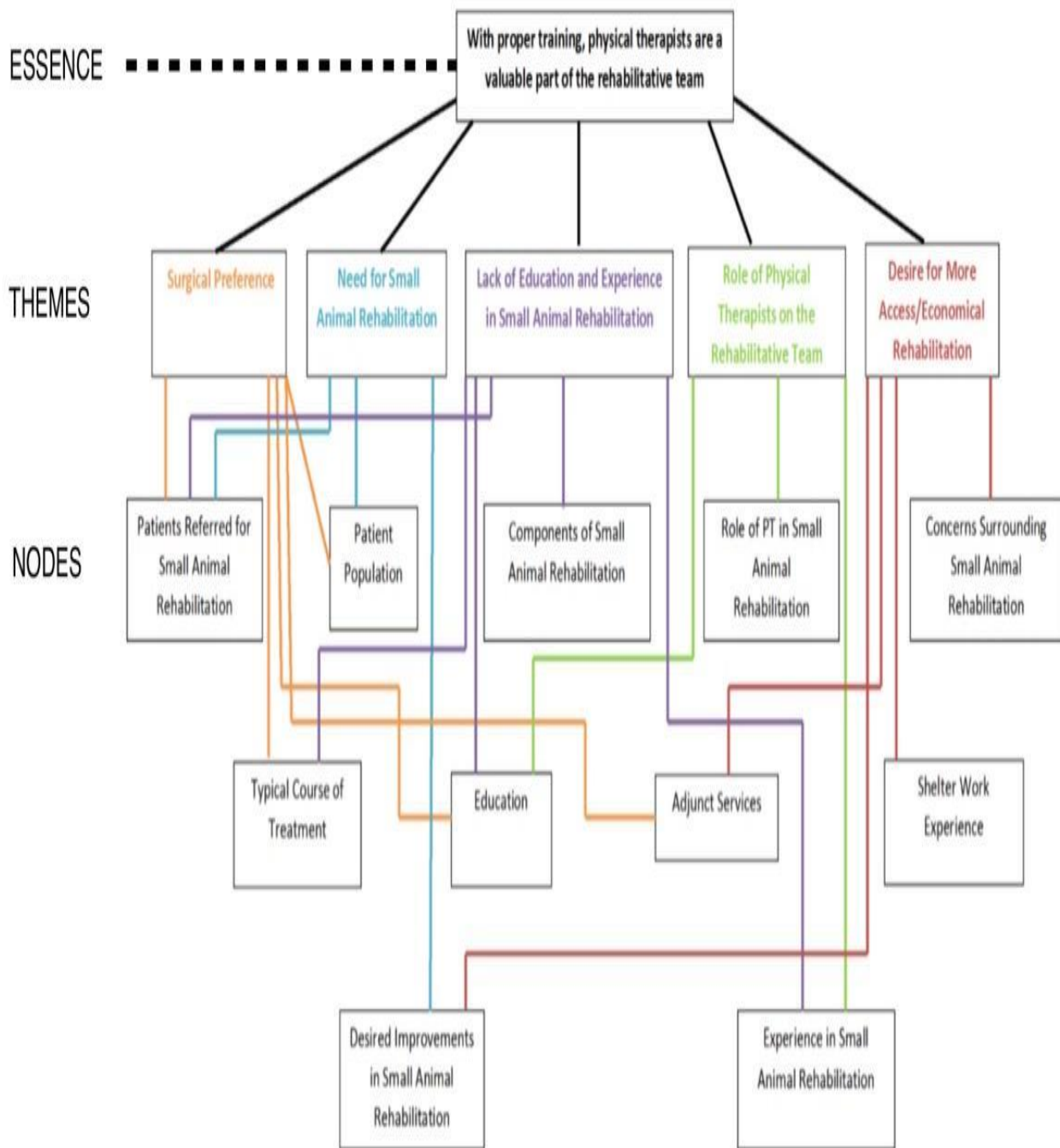
Prior to data collection, the study was approved by the University of North Georgia Investigational Review Board (IRB) committee. All transcripts were uploaded to NVivo Software for Data Analysis and nodes were created in search of repeated thoughts and ideas from each of the interviewed veterinarians. Each researcher then assessed the nodes and themes were determined from the nodes (Table 1). Once themes were discovered, a common, implicit idea, qualitative research labels as "essence", was established to bring meaning to the research endeavor. The common, implicit idea, or essence, derived from this research paper concluded that physical therapists, with proper training, are a valuable part of the small animal rehabilitation team.

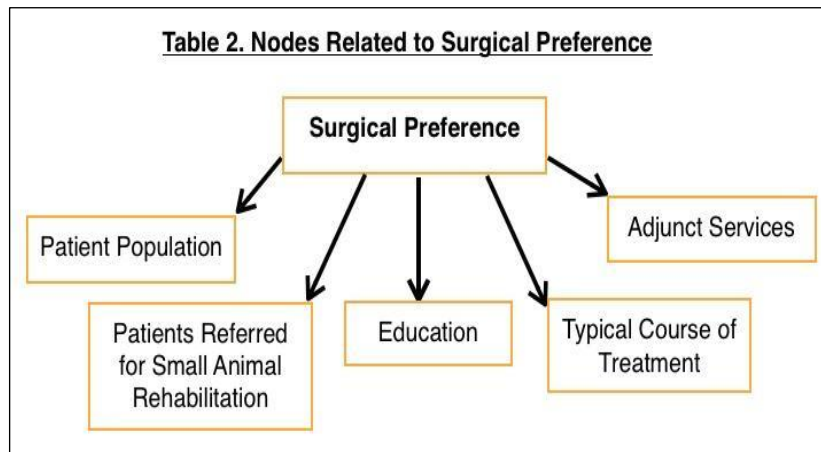
RESULTS

Thematic Correlations

Table one illustrates the different nodes and themes derived from the semi-structured interviews in this project. Each node represents the summaries of basic concepts derived from the discussion with the veterinarians. The nodes were then summarized into themes. Each theme is addressed separately in this paper. An major idea or essence was then formulated from the sum of the information provided by the veterinarians.

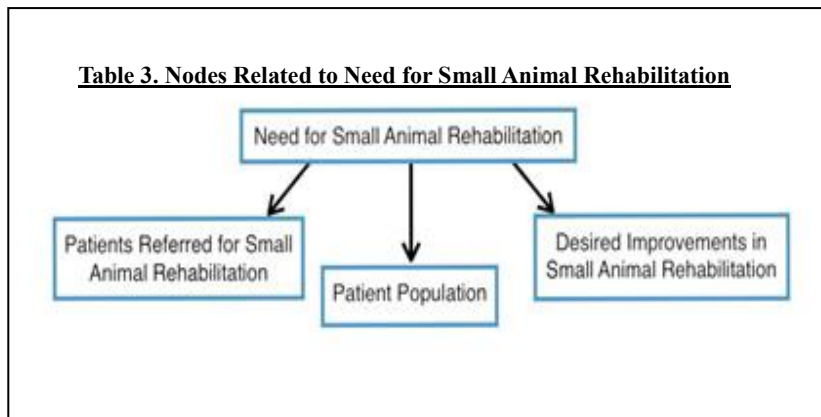
Table 1: Thematic Correlations





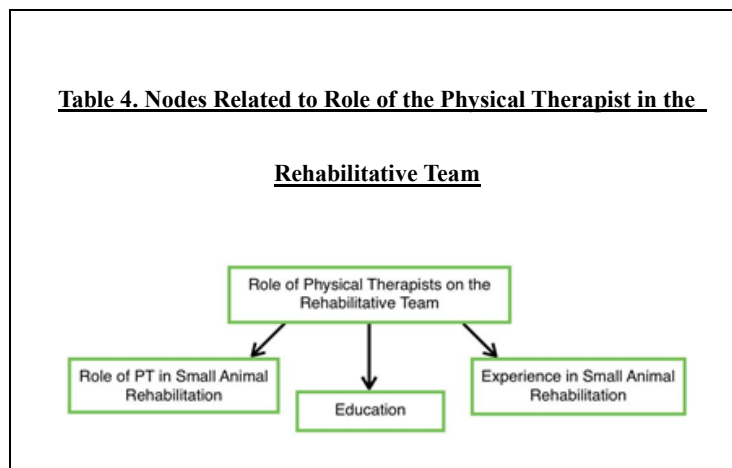
Surgical Preference

When asked about their tendency to refer their clients with orthopaedic or neurological impairments to rehabilitation, half (50%) of the veterinarians stated that they rarely, if ever, referred their patients out for rehabilitation, whether the case was a post op case or disease process such as arthritis and spine nerve root involvement. When asked to consider the clinical decision of performing surgery or conservative management of a disease process, most (63%) of veterinarians opted for surgical intervention that they could perform. The remaining veterinarians (37%) opted for cage rest and medication as their first choice for treatment for their clients with orthopaedic or neurological disease processes. Most veterinarians (67%) felt the need for a professional second opinion regarding a surgical situation. They often referred to a surgical referral service, which, if recommended and performed surgery, would then supply rehabilitation to the patient post-surgically . All (100%) of the veterinarians noted that, when indicated, preferred the surgical intervention to the rehabilitation intervention. The veterinarians were well schooled and skilled in surgical interventions and the subsequent outcomes. As previously identified earlier, physical therapy and rehabilitation management of small animals, to date, is poorly investigated with unpredictable outcomes measured.



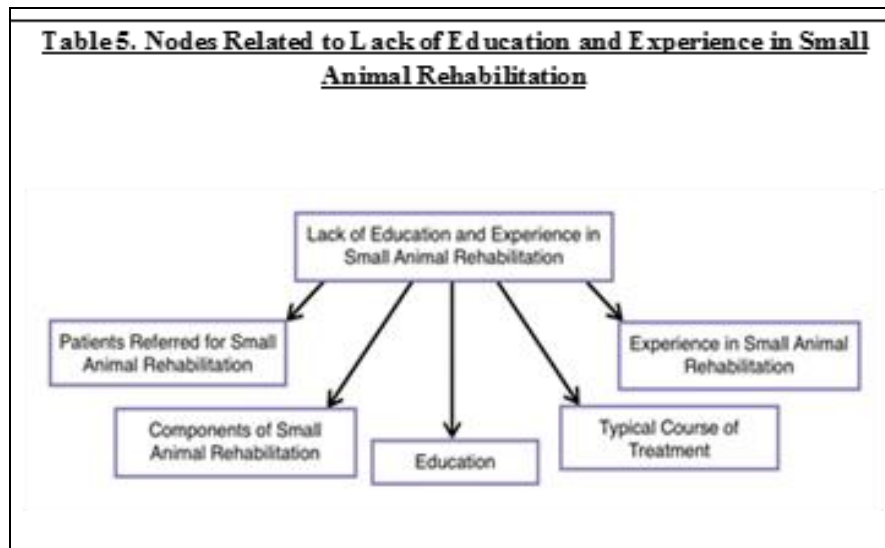
Need for Small Animal Rehabilitation

The two veterinarians working in shelter settings agreed that they would prefer rehabilitation as an option to avoid elective surgeries, and to offset the high cost of surgery. However, due to economic burdens, they both agreed, that shelter settings would not have the means to offer advanced rehabilitation techniques and modalities to small animals.



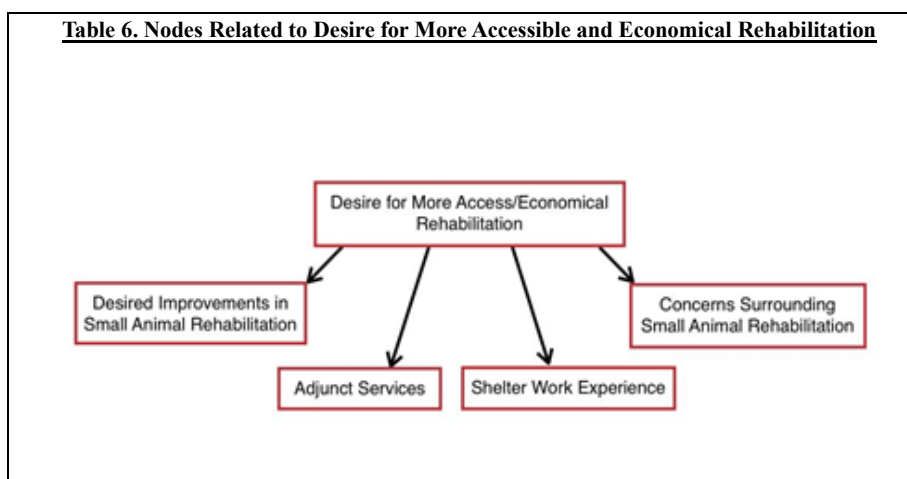
Role of the Physical Therapist in the Rehabilitation Team

Most (67%) veterinarians agreed it would be easier for the PT to learn about animal anatomy & physiology, due to similarities to human anatomy & physiology, than it would be for veterinarians and vet techs to learn rehabilitation techniques. Most (67%) veterinarians would support a physical therapist taking a lead role on the rehabilitative team of small animals, as long as therapists worked in conjunction with the veterinary team.



Lack of Education and Experience in Small Animal Rehabilitation

All (100%) of the veterinarians reported no exposure to rehabilitative techniques in professional school , though a few (37%) gained exposure through continuing education classes and current journal articles . All (100%) of the veterinarians stated that courses in small animal rehabilitation provided during veterinary school would increase their confidence in recommending these services to their clients by increasing their knowledge of rehabilitation efficacy and techniques.



Desire for More Accessible and Economical Rehabilitation

All (100%) of the veterinarians agreed that they would be more likely to recommend rehabilitation services if these services were either more accessible and/or affordable. There is a lack of services in the small towns of North Georgia, so if veterinarians need to recommend services, patients will have to travel approximately fifty miles to the closest services. A few (37%) of the veterinarians also expressed the concern that offering rehabilitation services “in house” would entail a significant economic burden due to the high cost of equipment and perceived low demand for services.

DISCUSSION

When presented with a neuromuscular or orthopaedic abnormality involving a small animal, veterinarians, primarily opted for surgical intervention since surgery was emphasized in veterinary school and the veterinarians felt comfortable with their surgical abilities and outcomes. This curriculum deficit in the application of rehabilitation techniques, specifically physical therapy skills, is very much like the one observed in human medicine curriculum design. A study by Stanton, et al regarding the resident physician's knowledge of physical therapy, a questionnaire design method, confirmed the knowledge deficit of these resident physicians, regardless of the years of residency, of components of physical therapy treatment.¹⁵ Cherkin, et al, found similar results regarding physician's approach to the treatment of low back pain.¹⁶ Of particular interest in this study was the physician commitment to a certain mode of therapy, regardless of the evidence, and of competing treatments.¹⁶ The researcher concludes that veterinary medicine curriculum mirrors human medicine school curriculum in that both lack proper education for students regarding the benefits and components of physical therapy for their respective clients. Only the veterinarians that had experience with physical therapy, either human or animal, agreed that physical therapy might be a great addition to a protocol as a means of conservative treatment before opting for surgery, or as an option to be used post-surgically for improved functional outcomes and long term effects. Even after a personal experience in physical therapy, when asked to describe the components of small animal physical therapy rehabilitation, most of the veterinarians were unable to do so. Many of the veterinarians often stated they perceived the physical therapist's job was to improve quality of life and decrease pain. While this is true, none could articulate more specific applications and benefits of physical therapy. Only one veterinarian mentioned personally experiencing physical therapy treatments. This lack of knowledge of the benefits and components of physical therapy, even for humans, is a common problem in the general population as well. The American Physical Therapy Association (APTA) has dedicated healthcare provider and consumer educational materials to fill this gap of knowledge.

When describing common diagnoses, the veterinarians all had similar treatment plans, most of which involved cage rest and medications or steroid injections for pain relief. Short leash walking and passive range of motion were often incorporated for orthopedic diagnoses post-surgery. Return to function ranges varied depending on severity of the diagnosis and age of the patient. Therapeutic interventions, such as use of the underwater treadmill, acupuncture, and various other modalities were mentioned as something veterinarians had either seen used or had read about in current veterinary literature. Exactly how these components of animal rehabilitation should be delivered and outcomes assessed were not mentioned or discussed. This circles back to the basic premise that veterinarians are not fully aware of the complexity and comprehensiveness a physical therapy can offer their patients. These two components, strategic parts of the physical therapy educational curriculum, create the entire rehabilitation plan to restore the animal to full function.

While the private practice veterinarians acknowledged potential benefits of physical therapy, both conservatively and post-surgically, shelter veterinarians thought physical therapy would be an excellent addition to their practice, as it would increase their ability to care for more animals in a cost effective manner. If certified personnel were available to perform conservative care, such as physical therapy for

many of the shelter animals, surgery could be avoided in a large percentage of cases. In cases where surgery is cost prohibitive, rehabilitation services, delivered by a physical therapist, may improve the quality of life for an injured animal. However, due to the lack of trained volunteers and inconsistencies in treatment, small animal physical therapy and rehabilitation is not currently an option in the shelter setting.

A main concern voiced by all the veterinarians was the lack of accessibility and/or expense of referring clients to small animal rehabilitation. Currently, there are no practices offering small animal rehabilitation in northeast Georgia. The closest centers are located over an hour away from the populations in question. Because of the distance to these locations, referrals from the interviewed veterinarians were infrequent as many of their clients were unlikely to travel that far. When asked why their practices did not offer rehabilitation services, many said lack of demand from clientele. Veterinarians generally only referred clients to rehabilitative services at request of the owner and due to owner's having no financial restrictions.

METHODOLOGIC ISSUES

Semi-structured interviews are a common form of information gathering in qualitative research. In order account for biases, the research team participated in bracketing before data collection. These biases include the researchers' personal experiences as pet owners and animal enthusiasts and their status as doctorate of physical therapy students, because these may bias the perceived importance of physical therapists as the best practitioner concerning the research question. The small geographic area in a rural setting, as well as the small number of interviews conducted, may not be representative enough to promulgate generalizable information.

CONCLUSION

Overall, the idea of adding physical therapists to the small animal rehabilitative team was positively received, on two conditions: (1) that small animal rehabilitation physical therapists are trained in animal anatomy and physiology, and (2) that clients do not have direct access to small animal rehabilitation physical therapists, but require a veterinarian's referral. Because of the extensive educational background in rehabilitation theory and application, the addition of the physical therapist to the small animal rehabilitation team would provide a more comprehensive approach to small animal rehabilitation, offering the animal the best chance of restoration of function and quality of life.

Funding: No funding was used nor accepted for this study

Disclosures: The authors declare that no conflicts of interest exist.

REFERENCES

1. McGonagle L, Blythe I., Levine D. History of canine physical rehabilitation. In: Millis, DL, Levine D, eds. *Canine Rehabilitation and Physical Therapy*. 2nd edition. Philadelphia: Elsevier Saunders, 2014:1-7.

2. A Pioneer in Animal Rehab. <http://www.veterinarypracticenews.com/April-2009/A-Pioneer-In-Animal-Rehab-Education/> Posted May 22, 2008. Accessed March 11, 2017.
3. Canine Rehabilitation Institute. *Certification Programs*. <http://www.caninerehabinstitute.com/Overview.html>. Accessed February 12, 2017.
4. Canine Rehabilitation Certificate Programs. The University of Tennessee. <http://www.utvetce.com>. Accessed March 20, 2017
5. Canapp, Sherman et al. *Rehabilitation Therapy for Elbow Disorders in Dogs*. *Veterinary Surgery*. 2009. 38 (2): 301-307
6. Saunders DG. Therapeutic Exercise. *Clinical Techniques in Small Animal Practice*. 1096-2867/07/\$-see front matter ©2007 Elsevier Inc. All rights reserved. Doi:10.1053/j.crsap.2007.09.003
7. Hesbachm AL. Techniques for Objective Outcome Assessment. *Clinical Techniques in Small Animal Practice*. 2007 Elsevier. 22(4): 146-154. <https://doi.org/10.1053/j.ctsap.2007.09.002>
8. Bertram S. *Physical Therapy, Rehabilitation Gain Momentum: Post-surgical, degenerative joint disease and obesity cases among primary candidates for physical therapy*. *Veterinary Practice News*. 2000. <http://www.tops-vet-rehab.com/NewsArticles/VetPracticeNews012000.php>. Accessed March 28, 2017
9. Sharp, B. Physiotherapy in small animal practice. *In Practice*. 2008. (30),190-199
10. Woelz, J. Physical Rehabilitation Optimizes Recovery in Animal Patients. *Veterinary Medicine News*, UC Davis, Spring 2006. <http://www.vetmed.ucdavis.edu/vmnews/23-1/vmnews23-1p04.pdf>
11. American Association of Rehabilitation Veterinarians. *Model Standards for Veterinary Rehabilitation Practices*. 2009. <http://rehabvets.org/model-standards.lasso> Accessed April 24, 2015.
12. Boyle KL, Marcellin-Little DJ, Levine D. An Interdisciplinary Animal Physical Rehabilitation Course for Physical Therapy and Veterinary Students. *Innovations in Veterinary Education*. *JVME* 29(3) 183-185
13. Millis DL, Ciuperca IA. Evidence for canine rehabilitation and physical therapy. *Vet Clin North Am Small Anim Pract*. 2015 Jan;45(1):1-27. doi: **10.1016/j.cvsm.2014.09.001**
14. Commission on Accreditation in Physical Therapy Education (CAPTE). *Accreditation Handbook. PT Standards and Required Elements*. www.capteonline.org/accreditation_handbook/. Accessed March 11, 2017.
15. Alvarez LX, Fox PR, Van Dyke JB, Grigsby P. Survey of referring veterinarians' perceptions of and reasons for referring patients to rehabilitation facilities. *J Am Vet Med Assoc*. 2016; 249(7): 807-813. doi: **10.2460/javma.249.7.807**
16. Cherkin, DC, Deyo RA, Wheeler, K, Ciol M. Physician Views about Treating Low Back Pain: The Results of a National Survey. *Spine*. 20(1):1-8, January 1995.