THE STATUS OF THERAPEUTIC HORSEBACK RIDING IN AMERICA

A Thesis

Presented in Partial Fulfillment of the Requirements for the degree Master of Science in the Graduate School of The Ohio State University

by

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* * * * *

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To My Husband
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ABBREVIATIONS

THR: Therapeutic Horseback Riding
NARHA: North American Riding for the Handicapped Association
PT: Physical Therapist
OT: Occupational Therapist
Chapter I
INTRODUCTION

Problem Statement and Justification

Using horseback riding as a therapeutic tool to alleviate physical and psychological dysfunction began in Europe shortly after World War II. International attention resulted when Liz Hartel of Denmark won a silver medal in Dressage at the 1952 Olympic Games. Returning to horseback riding as part of her rehabilitation process following an attack of poliomyelitis, she won the silver medal despite her partial paralysis. By 1958, the Pony Riding for the Disabled Trust was established in England, the sole purpose of which was to teach horseback riding skills as a form of leisure to the handicapped.\textsuperscript{19,24}

West Germany distinguishes the use of the horse with the handicapped population into therapeutic purposes and recreation or sport purposes. The Kuratorium for Therapeutic Riding is an organization which coordinates regulations and certification of professionals involved in therapeutic riding in Germany.\textsuperscript{15} In the early 1960s, therapeutic riding programs began in Canada, followed closely by America with the establishment of the Cheff
Center for the Handicapped and the North American Riding for the Handicapped Association (NARHA) by 1970.24

With a thirty year history including definitions, divisions, and delineated roles for therapists, the use of the horse in therapeutic riding is well established in Germany. The Germans divide the use of the horse into medical, educational, and recreational divisions. In the medical division, therapists use the horse as a therapeutic modality to effect physical changes in the rider. The rider is a passive participant, that is the rider does not attempt to control the horse, rather the rider reacts to the horse's movement and activities as directed by the therapist. This is known as Hippotherapy. Riding Therapy allows the rider, still under the direction of a therapist, a more active role while riding the horse. For example, the rider may be expected to keep his/her balance on the walking horse while performing a specific stretching exercise.

The educational division incorporates the use of riding skills in achieving educational and behavioral goals. The rider is a totally active participant in that the rider learns how to control the horse using standard riding equipment ie, saddles and bridles. The purpose of therapeutic riding in the educational sense is to effect psychoemotional and educational changes in the rider by remediating or adapting riding skills to the rider's abilities. The recreational or sports division of
therapeutic riding involves the teaching of any equestrian activity to handicapped individuals in order to enhance their leisure skills and quality of life. The Germans place these divisions on a spectrum with very definite demarcations of skills and terminology (Figure 1)."}^{13}

With a twenty year history of therapeutic riding in America, the use of the horse is less established, however, changes are becoming evident. NARHA has recently published general therapeutic riding divisions similar to those adopted by Germany. These divisions are Sport, Education, and Medicine. Instead of being placed on a spectrum as in Germany, these divisions are diagrammed in a Ven Diagram model (Figure 2)."}^{24} The three components overlap indicating that each classification shares qualities of the other two. The problem with this type of representation is that those persons uniquely qualified in each of the three divisions may be tempted or even justified in making claims in other divisions. For example, a therapeutic riding instructor who is primarily involved in teaching riding skills to physically disabled riders may feel free to make the claim that his/her instruction is physical therapy because the riders' physical abilities improve. Since the Ven Diagram displays an overlap of sport onto medicine, this supposition is plausible. The literature confirms this supposition is plausible as several instances exist where the act of riding is associated with physical therapy, despite the lack of
Figure 1.
Spectrum of German Therapeutic Riding Divisions and Classifications

Adapted from B.L. Glasgow: Divisions of horseback riding for the disabled--the need for semantics

Figure 2.
Model of American Therapeutic Riding Divisions

Adapted from NARHA's membership directory
involvement by a physical therapist.17,21,29

As with any developing field or profession, the question remains whether or not those practicing in the field are ready to adopt specific terminology and classification of skills regarding their unique qualifications and training. If therapeutic riding instructors feel their role and activities constitute physical therapy, then the physical therapy and therapeutic horseback riding professions should be made aware of this in order to identify efforts needed for clarification of professional roles as this new medium develops.

The number of registered American therapeutic riding programs has nearly doubled from 220 in 1983 to 403 in 1989.20,24 With such growth, it is likely that physical therapists will become exposed to therapeutic riding in some manner be it through referral, request for consultation, or direct service. Based on this assumption, it would be helpful to have descriptors of American therapeutic riding programs including the perceived or desired role of physical therapists so that physical therapists can make informed decisions regarding their involvement with therapeutic horseback riding. If therapeutic riding instructors do not desire assistance from physical therapists, then physical therapists can choose to become involved in direct service, the medicine division of therapeutic riding. If therapeutic riding instructors do
want the involvement of physical therapists, then their perception of this desired role will inform physical therapists how best to approach their involvement as a consultant. How therapeutic riding instructors perceive classification and terminology of the field will also aid in determining the educational efforts needed to define the role of physical therapy as it relates to this new medium.

In each of these cases, the results of assessing the perceived and desired roles of physical therapists, as well as assessing knowledge of and attitudes toward terminology, will illuminate the direction needed to address therapeutic riding education efforts for all concerned. Through education of those in the field and the general populace, therapeutic horseback riding will be accepted as an alternate form of physical therapy and as a valid form of recreation for the handicapped population.

Purpose

As a contribution to the body of therapeutic riding knowledge, this study had three purposes: 1) to describe the characteristics of American therapeutic riding programs 2) to describe the involvement or role of the physical therapist and other professionals 3) to describe the perceptions and knowledge of those participating in therapeutic riding programs regarding the categorization and definitions used in the profession.
Objectives/Research Questions

The first objective of this study was to determine the demographics of therapeutic riding programs. The second objective was to determine the level of involvement of physical therapists and other professionals. The active and desired roles of physical therapists were specifically explored. The final objective of this study was to assess knowledge levels and attitudes of therapeutic riding instructors as related to key therapeutic riding terms and divisions.

Research questions relating to the final objective of knowledge and attitude were as follows:

1) What was the level of knowledge of therapeutic riding instructors concerning established divisions and terminology of therapeutic riding?

2) What were the educational needs of this population as indicated by the knowledge findings?

3) What were the attitudes of therapeutic riding instructors regarding the therapeutic riding terms and divisions?

4) What changes were indicated by instructor attitudes regarding the establishment of divisions and terminology?
Variables

Demographic Variables

The demographics of therapeutic riding programs explored were:

1. "program size" as defined by the number of handicapped riders served per week of operation (small, medium-large, large),
2. "program operation" as defined by the months of the year the programs operate,
3. "program format" as defined by the types of disabilities served and the focus of the therapeutic riding instructors' method of instruction as it relates to the NARHA Ven Diagram model (Figure 2.).

Demographics relating to the educational background of the riding instructors included the highest level of general education completed, participation in therapeutic riding continuing education, and participation in formal equine training. Demographics relating to instructors' horsemastership background was defined as number of years riding, number of years spent in taking lessons, and number of years teaching therapeutic riding, and riding expertise.

Role of Physical Therapists

The variable "role of the physical therapist" was defined as active or perceived. The active role was defined three ways. The first level of the active role was defined
as referral source; the physical therapist refers riders to
the therapeutic riding program. The second level of the
active role was defined as consultant in programming; the
physical therapist consults with the therapeutic riding
instructor regarding special procedures needed for the rider
during the riding session. The third level of the active
role was defined as direct service provider. Direct service
means the physical therapist provides a physical therapy
treatment program using the horse as a therapy tool, and the
physical therapist may or may not do so with assistance from
the therapeutic riding instructor.

The perceived role of the physical therapist was
defined as those levels of the active role the subjects did
or did not desire in their program.

Knowledge

Knowledge as defined by Patton relies on the assumption
that certain things are considered to be known and are not
opinions or feelings.\textsuperscript{28} Knowledge of therapeutic riding
classifications and terminology was defined as the score on
a 16 item instrument of the researcher's design. The
knowledge items addressed: 1) the three divisions of
therapeutic riding: sport, education, and medicine 2) the
term and practice of hippotherapy 3) other therapeutic
riding terms and classifications described in the
literature: riding therapy, developmental vaulting, and
remedial riding.
Attitudes

Attitude as defined by Ary, Jacobs, and Razavieh is a positive or negative affect toward a particular concept.\(^1\) The concept or thing the subject has an attitude about is called an attitude object.\(^1,31\) Attitude objects addressed in this study were hippotherapy, riding as a form of therapy, therapeutic horseback riding (THR) classifications, role definitions, and therapeutic horseback riding terminology. Attitudes toward therapeutic riding divisions and terminology were defined as the score on a 15 item instrument of the researcher's design.

Limitations of the Study

The primary limitation for this descriptive survey research, was the fact the information gathered represents what the subjects were feeling at the time the survey was administered. In other words, the information gathered represented a "slice in time." For this particular study two other limitations existed. One, the subjects were only those people practicing THR while simultaneously being a member of NARHA. The survey did not reach those persons practicing THR who were not members of NARHA. Two, the target population was fairly small (N=400), and it would have been very interesting to do a census survey. Unfortunately, the budget did not allow for this type of sampling.
Chapter II

LITERATURE REVIEW

Introduction

Since THR is still in its infancy when compared with other longtime professions, little written information exists, either empirical or descriptive. In an attempt to describe the THR definitions as they exist today, the following material was taken from the few existing landmark writings of the field.

Definitions

The three main divisions of therapeutic horseback riding (THR) are medicine, education, and sport.\textsuperscript{6,13,15,24} This nomenclature is derived by assessing how the horse is used to achieve therapeutic outcomes.

In medicine, the horse is used to effect specific positive changes in the rider's physical function or psychological well-being. Physical or psychological outcomes are intended to transfer to the rider's environment apart from the horse. In medicinal THR, the horse becomes the medium for treatment.\textsuperscript{6,13,15} Being used as a treatment modality would indicate the need for the involvement of
related professionals such as physical/occupational therapists and clinical psychologists.

In the education division of THR, the purpose of riding is to effect positive changes in the rider's cognitive and social abilities.\textsuperscript{6,13,15} The aim here is to enhance knowledge and life skills such as they are taught in the educational setting. The horse and its surroundings become another educational medium in which to learn or to reinforce what is being taught to the rider in his/her educational setting. With the emphasis on education, one would expect related education professionals to be involved such as special education teachers and speech/language pathologists.

The sport division of THR consists of equine activities that promote quality of life enhancement and the acquisition of horse handling skills.\textsuperscript{6,13,15} The ultimate aim of Sport THR is to provide pleasure and/or competitive opportunities in the chosen equine activity to the handicapped population.

The three THR divisions are shared by the Germans and the Americans. The Germans have an established curriculum and delineations for classifications within the division system.\textsuperscript{13,15} The Americans are currently developing further delineations beyond the three ring model of Sport, Education and Sport (Figure 2.).\textsuperscript{6,24} A discussion of THR terms and delineations within the German and American models and how they relate to the research problem follows. Refer to Figure 1. for the description of German THR.
German (G) THR Divisions

Medicine/Hippotherapy (G)

The German division of medicine includes the classifications of hippotherapy and riding therapy. The term hippotherapy is derived from the Greek "hippo" meaning horse and "therapy" meaning treatment in the medical sense. Present day meaning is "treatment with the help of the horse." Hippotherapy is a passive form of THR where the rider sits astride the horse and accommodates to the three dimensional swinging movement of the horse's back while the horse proceeds at a walking pace. The rider does not attempt to control the horse in any way. By reacting to the symmetrical and rhythmical stride of a well-balanced horse, a horse that has a smooth gait and bends equally well to the left and right, the rider can develop equilibrium reactions and postural control. Mobilization of the pelvis, spine and hip joints, as well as normalization of muscle tone also occurs. Since the purposes of hippotherapy include normalizing muscle tone, increasing joint mobility and improving postural control, it is considered a physical therapy treatment and as such should be carried out by a physical therapist trained in its use.

Medicine/Riding Therapy (G)

The second classification of the German Medicine division is riding therapy. In riding therapy, the rider is
passively influenced by the horse's movement as in hippotherapy, and in addition, the rider performs active exercise specific to his physical dysfunction. These can include relaxation, stretching and strengthening exercises.\textsuperscript{15} Since riding therapy addresses an individualized exercise program based on the individuals' physical needs, it is also considered physical therapy treatment.\textsuperscript{15}

In both hippotherapy and riding therapy, controlling the horse is not a goal. Because of this, the equipment often used is a bareback pad and a surcingle [a large girth strap with handle(s); see Appendix A], although saddles may be used. Conditions that benefit from hippotherapy/riding therapy are central nervous system deficits such as cerebral palsy, multiple sclerosis, stroke and spinal disorders.\textsuperscript{13,15}

Education Division (G)

The German division of education includes the classification of therapeutic vaulting which is used with behaviorally disturbed children. Vaulting is the performance of movement skills on the horse's back as the horse proceeds in a cantering pace. A group of up to six riders work with one horse. The goals of this form of vaulting are to diminish anxiety, to learn trust, to learn correct self-evaluation, and to build self-esteem.\textsuperscript{15}
Sports Division (G)

The third German division of THR is termed sports riding. Components of sports riding include any equestrian activity such as competition, pleasure/trail riding, driving, jumping, drill teams, etc. The purpose of sports riding is to enhance the rider's quality of life. The rider's individual disability is viewed with regard to general riding ability and the riders are grouped accordingly. Riding instruction is imparted based on standard riding schools of thought.\textsuperscript{15}

The German sports riding division has the most in common with its American counterpart. The following discussion of the American divisions of THR will illuminate the similarities and differences in each of the divisions and will refer to Figure 2.

American (A) THR Divisions

Sport Division (A)

American sports riding is the adaptation of equine activities to the physical, mental and psychological needs of the individual rider. It includes any equestrian activity the able bodied population encounters such as jumping, dressage, driving and vaulting.\textsuperscript{6,13} Therapeutic riding instructors are responsible for the design and implementation of the instruction of these activities. The purpose of sports riding is to improve the rider's quality
of life and to realize beneficial side effects of the riding instruction in therapeutic and educational terms.\textsuperscript{6,13}

Education Division (A)
Remedial Riding (A)

The American education division provides for skill acquisition in the chosen equine sport (riding, vaulting, driving), and in addition, it provides for skill acquisition in the educational, behavioral and psychological domains. This area is also known as remedial riding.\textsuperscript{13} Riding skills are taught with adaptation to meet the individual rider's physical and psychoemotional needs. Educational, psychological and physical goals are built into the riding program and are realized through the teaching of the adapted equine activity.\textsuperscript{6,13,26} The primary purpose of remedial riding is the achievement of the educational, psychological and physical goals, rather than the sole achievement of specific riding skills.\textsuperscript{6,26} These additional goals may include sequencing skills, left to right progression, and socialization skills. Since controlling the horse is a factor, saddles and bridles are used with appropriate equipment adaptations to meet individual physical needs. Therapeutic riding instructors along with educational and related specialists are involved in designing and implementing the program.\textsuperscript{6,26}
Medicine Division/Equine Facilitated Therapy (A)
Hippotherapy (A)

The American division of medicine (also known as equine facilitated therapy) exhibits the most evolution from its German counterpart and also the most evolution when compared with the American sport and education divisions. Hippotherapy, which is defined as treatment with the help of the horse, remains a primary classification within the division. As in German THR, the rider passively responds to the horse's movement, and the goal of treatment is to improve flexibility, postural control and function. When the rider faces forward and responds to various directions and speeds of the horse under the direction of the therapist, this is known as classical hippotherapy. An alternative form of hippotherapy, known as developmental hippotherapy, occurs when the therapist places the rider in an alternative posture on the horse. For example, the rider may face backwards or balance on all four extremities, and the therapist may ask for rider movement within this newfound position (See Appendix A). The most recent literature combines both classical and developmental hippotherapy into the one term of hippotherapy, and both physical and occupational therapists are identified as the service providers.
Riding Therapy (A)

Riding therapy also remains as a classification in the medical division. As in Germany, the rider performs specific activities under therapist direction to achieve certain therapeutic goals. In addition, functional riding skills or a particular part of a skill are used to meet the specific therapeutic goal but not for the goal of learning to ride.\textsuperscript{4,26} In Germany only physical therapists provide riding therapy. In America, riding therapy may be provided by medical professionals who are defined as physical therapists, occupational therapists, psychiatrists, physicians, nurses, speech therapists, audiologists, psychologists, and social workers.\textsuperscript{26} The inclusion of so many professionals in riding therapy can provide for animal facilitated therapy to meet therapeutic goals derived from human-animal bonding.\textsuperscript{26}

Developmental Vaulting (A)

Developmental vaulting or developmental equine facilitated therapy is the third classification in the American medicine division. Developmental equine facilitated therapy is the most recent term developed to describe therapy based movement exploration on the horse.\textsuperscript{26} Specific therapeutic goals are developed by the medical professional involved; these goals are met through equine activities that involve movement exploration on the horse's
back in various developmental motor sequences.\textsuperscript{26} Bareback pads and surcinges (see Appendix A) are used to allow an ample surface for the rider to explore and support his/her body.

Relation of Definitions to Literature Usage

Although the Germans have pioneered the field of THR and developed it to their level of expectation and acceptance, the Americans, in their own pioneering spirit, are deciding what is best for the THR field in this country. As the references suggest, role definition and terminology development are in a current state of evolution. To what degree this information has been disseminated to THR practitioners remains in question. Reviewing relevant professional and lay literature, it was evident that discrepancies existed between accepted terminology definition and their use in publication.

Terminology Usage

Appropriate use of the therapeutic riding terms hippotherapy and remedial vaulting (remedial riding) based on the current definitions were found in recent editions of SPORT ILLUSTRATED, THE CHRONICLE OF THE HORSE, PHYSICAL THERAPY BULLETIN, and OCCUPATIONAL THERAPY FORUM.\textsuperscript{3,4,8,10} Unfortunately, indiscriminate use of THR terminology or the association of such terminology with the concept of physical
therapy treatment was more prevalent.

In two articles relating to horses, physical therapy and hippotherapy were indiscriminately used. In the first, the act of riding was assigned the term "physical therapy" although the author did use the term therapeutic riding appropriately.\textsuperscript{17} In the second article, the author quoted her subject's use of the term hippotherapy in association with a remedial vaulting program. In addition, the subject was neither identified as a physical or occupational therapist but an education specialist and horseperson, nor was a physical or occupational therapist mentioned in the article.\textsuperscript{21}

In a NARHA newsletter article, the author associated the psychological value of riding a horse with hippotherapy and describes a program designed to improve self-esteem in alcohol and drug abusing youth.\textsuperscript{30} This particular article prompted an editorial response from one of THR's leading experts, Ms. Barb Glasgow, PT.\textsuperscript{12} In an excellent article describing a therapeutic riding program for behaviorally disturbed children, the description of the human animal bond to facilitate emotional growth was appropriate to definitions provided previously. Yet in this same article, physical therapy was associated with the act of taking control of the horse.\textsuperscript{29}

The professional literature had little to offer regarding empirical data on therapeutic riding except for a
recent study on THR and posture. Bertoti used the term therapeutic riding when in fact, she described developmental hippotherapy and riding therapy. Conversely, in another article describing Bertoti's program, hippotherapy was appropriately associated with developmental postures but inappropriately associated with games and sequencing activities. 

The final example of conflicting use of therapeutic riding terms was found in CLINICAL MANAGEMENT. The terms hippotherapy and riding therapy appeared throughout the article including the title when in fact, a therapeutic riding or remedial riding program was described in detail. This article also prompted an editorial response from Ms Glasgow, PT. 

Summary

It was evident that discrepancy of terminology usage is prevalent in public literature. However, it is not known to what extent indiscriminate use of terms is prevalent in the THR community. In other words, do the practitioners of THR use the accepted terminology appropriately in their daily use?

In addition to widespread discrepancies in the literature, it was my personal observation that some THR instructors freely associated the act of riding as "therapy" with or without the involvement of therapists. This
Observation was based on discussions with five operating centers in Ohio. This observation in addition to discussion with some THR experts leads me to believe that this practice may indeed be widespread throughout the THR community. Consequently, the primary focus of this study was to determine the degree of conflicting use of terms based on THR instructors' knowledge and attitudes toward these terms.
Chapter III
METHODOLOGY

Introduction

The design chosen for this study was descriptive research using a mailed survey to gather data. One advantage of survey research is that surveys can gather considerable information at one time. A mailed questionnaire was chosen to facilitate ease of data collection in the face of budget constraints. Since the study population was located nationwide, face-to-face interviewing was prohibited, and the funds available to the researcher did not allow for a telephone survey for the entire sample.

A discussion of subjects, instrumentation, procedures and data analysis follows.

Population and Sample

The target population was American therapeutic horseback riding instructors of NARHA approved THR centers. Riding instructors were chosen to represent the field of THR as they have the most experience in providing THR. As such, their knowledge and attitudes would most likely be
representative of the field of THR.

The sample population was randomly selected from the primary riding instructors of the 399 American therapeutic riding programs listed in NARHA's 1991 membership directory. Primary riding instructors were chosen to represent THR instructors in general as they would likely have the most experience and knowledge of THR. In addition, some centers have more than one instructor; the primary instructors would best comprehend their duties and the components of their own programs as they relate to the definitions of therapeutic riding.

Selection

The population frame was the 1991 NARHA membership directory. To reduce population frame error, the accuracy of this list was confirmed with NARHA. The mailing list of operating centers was purchased for $10 from NARHA in June 1991 and was used for selection purposes. To reduce sample frame error, the list was not purchased until just prior to mailing the instrument to allow for the most accurate and current listing.

The sample population numbered 399 as each operating center was assigned a number from 001-399. The estimated sample size was determined to be 200 by using Krejcie and Morgan's table for determining sample size. To have a 95% confidence level with one degree of freedom, a minimum
sample size of 196 was adequate for a population of 400.\textsuperscript{18}

A simple random sample was used to select the sample population using a table of random numbers. Prior to selecting the sample subjects, all centers that received a pilot test survey or whose addresses were cross-referenced with the expert list were eliminated from the sample frame. This was done to further eliminate frame error. The resultant number of possible subjects was 365. These centers were then assigned a number from 001-365. Using a table of random numbers, 200 centers were selected to receive the final instrument.\textsuperscript{1}

**Instrumentation**

Due to little existing empirical documentation in THR, no previously developed instruments were available. Therefore, a new instrument was developed for this study with regard to the research questions and purpose of the study. The survey consisted of five sections: knowledge, attitude, role of professionals, program demographics, and instructor demographics. Directions for completing the questionnaire were provided at the beginning of each new section to enhance the accuracy of survey completion. For the following discussion, refer to the instruments in Appendix B.
Knowledge

Knowledge questions were placed first in the survey for the following reason. Knowledge must be assessed prior to attitude assessment so that the impact of the knowledge base on the attitude can be determined. The knowledge questions were comprised of six true/false questions, seven multiple choice questions, two yes/no questions and one application question.

Fifteen knowledge questions were written based on published and generally accepted definitions of THR. The knowledge question format was varied to allow for optimum responses. The first six questions were TRUE/FALSE. True or False questions are generally less threatening in nature than open ended questions, because the subject has a 50-50 chance of getting the correct answer. These questions were placed first to encourage the subject to continue answering the questions. The next three questions were "general awareness" questions. These too are less threatening than other question formats but useful in establishing knowledge levels. Questions 10-15 were multiple choice questions with one best answer and 2-3 distractors. These questions were placed last as they were more indepth and challenging than the previous 9 questions. The order and type of questions asked were based on principles presented by Sudman and Bradburn, experienced researchers in questionnaire design.
Attitudes

The attitude section immediately followed the knowledge section for two reasons. First, knowledge must be assessed prior to assessing attitude in order to determine knowledge impact on attitude.\textsuperscript{31} Second, knowledge and attitude were considered to be the most important information the instrument would be gathering. These two sections were placed first in the survey to increase the likelihood of completion.\textsuperscript{24}

The attitude section was designed to examine five areas considered essential to answering research question number three: what are the attitudes of THR instructors regarding THR terms and divisions? The five attitude objects (the concept or thing the subject has an attitude about)\textsuperscript{1,31} examined were hippotherapy, riding as therapy, THR divisions, THR role definitions, and THR terminology. For each attitude object there was a cognitive, affective and behavioral component. The cognitive component addressed what the subjects felt toward the object based on their knowledge of the subject. The affective component addressed what the subjects felt about the object either positive or negative. Finally, the behavior component addressed how the subjects perceived their behavior toward the object. All three of these attitude components need to be present when measuring attitudes to assist in making inferences toward the subjects' feelings and actions.\textsuperscript{31}
The attitude section was comprised of 15 items and a four point Likert response scale for each item. The available answers for each item were Strongly Disagree, Disagree, Agree, and Strongly Agree. The opportunity for a neutral response was not offered in order to compel the subjects to choose an attitude, positive or negative.\textsuperscript{31} Response answers were presented from most negative to most positive in a left to right progression to encourage the subjects to read each response and avoid a positive response set.\textsuperscript{23} Bracket headings designating the spelled out response with its associated anacronym were provided at the top of the response column and repeated on the following page to minimize confusion anacronyms can cause if left undefined and further reduce response error.\textsuperscript{7}

Demographics

The third section of the survey determined the level of physical therapist involvement and identified other professionals who may be involved in the THR program. The fourth and fifth sections identified program and instructor demographics as outlined in the variables section of Chapter I.

Procedures

Prior to conducting validity and reliability studies, approval for this research project and its methodology was
obtained from The Ohio State University's Human Subject Review Committee.

Validity

Content and face validity studies of the initial instrument were conducted in February of 1991. Procedures and changes made to the instrument follow.

Content validity of the instrument was confirmed by submitting the completed instrument to a panel of experts. The panel consisted of 11 professionals in the THR field were selected based on their participation in the Hippotherapy Curriculum Committee (NARHA). Experts' names and addresses were obtained from an operating center that provides continuing education seminars.

Each expert was sent a packet containing a cover letter explaining what was requested of them, a sample survey, and a return post-paid envelope. Samples of cover letters appear in Appendix C. Five experts responded, and their comments were considered when revising the instrument for the pilot test. Barbara Glasgow, PT, who is considered the foremost expert in the field,25 sent an extensive response to the request for input. All changes suggested by Glasgow were implemented. Most expert suggestions were included except for the one occupational therapist expert who insisted the survey include occupational therapists throughout the "role of professionals" section. The purpose
of this survey was to determine the level of physical therapists, therefore, occupational therapists were not included in this section. Occupational therapists were included in defining Hippotherapy since they are now formally included in its definition.

Face validity of the instrument was determined by sending a cover letter (Appendix C) and survey to ten randomly selected therapeutic riding instructors from NARHA's April 1990 membership directory. Four subjects responded; only one made additional comments stating that the wording was appropriate and that it took 20 minutes to complete the survey. Three of the four returned surveys were completely filled out in an appropriate manner. A note attached to the fourth survey indicated that it was completed by someone other than a riding instructor and therefore was not completed.

Reliability

Reliability coefficients of the revised instrument were determined through a pilot test. In the late spring 1991, thirty subjects were randomly selected from NARHA's April 1990 membership directory. This list was available to me through my individual membership in NARHA and was the most current published list at the time of the pilot subject selection. The American operating centers were assigned a number from 001 to 317. Using a table of random numbers, 30
centers were selected to receive the pilot test instrument.¹ Fourteen subjects responded from the initial mailing. The remaining pilot test subjects received telephone requests to return the survey. An additional 5 subjects returned the survey for a total of 19.

To determine the coefficient of internal consistency for the attitude portion of the survey, a Cronbach's alpha was used. A reliability coefficient was preset at .80 as this is commonly accepted as a desirable level.²⁷ The KR-20 was used to determine internal consistency for the survey's knowledge portion. A Cronbach's alpha is appropriate to use with Likert-type attitude scales and the KR-20 is appropriate to use with dichotomously scored items.²³ The pilot test responses were coded and entered into the data base at The Ohio State University. Using the Statistical Package for Social Sciences program (SPSS-X), reliability coefficients were obtained. The alpha values for the knowledge and attitude sections were .66 and .77 respectively. Although the resultant alpha for knowledge did not approximate the desired alpha, no changes were made in the knowledge portion of the instrument for the following reasons.

Two knowledge questions (#3 and #5) showed the most degree of variance. Number 3 (Medicine is one division of the therapeutic riding field in America.) as written is a true statement as defined in the NARHA's handbook and could
not be rewritten. The variance for this question's responses could reflect the differences of subject knowledge levels regarding THR divisions. Number 5 (Hippotherapy is a term used by therapists who have therapeutic riding training in treating movement disorders.) had been rewritten based on expert input prior to the pilot test. Hippotherapy as a term and as a practice is currently evolving and most likely remains a point of disagreement or confusion among THR service providers, hence the variance in responses. A possible third reason the resultant alpha was lower than desired could be from the ratio of the low number of respondents and the low number of questions asked. Because of this possibility, reliability coefficients were also obtained for the sample population to determine if the amount of random error reduced when the instrument was given to a larger number of subjects. Reliability coefficients are described in Chapter IV.

Although the two knowledge questions were not changed prior to the final printing of the instrument, one more question was added to the Program Demographics section. Respondents were asked to describe all levels of THR their program provides in addition to choosing the one area that best described their program. This was done to further describe the percentages of THR types being provided.
Response Rate and Incentives

An overall desired response rate was set at 85%; 170 of the original sample of 200. The total number of desired responses was 170 or more. A response rate of 80% or better is deemed adequate for generalization to the target population.\(^9\)

Following Dillman's Total Design Method, the following incentives were used to improve the response rate.\(^7\) Each program received a postcard informing them of their selection to participate in the study and to look for the survey in the mail. In each survey packet, a return post-paid envelope was enclosed for convenience of returning the survey. A decorative mailing label depicting a horse in an early dawn pastoral scene was used on the return address of the packet and the return envelope. Horse sketches appeared on the postcard and survey; one each as a letterhead for the postcard and cover letter and another at the end of the survey. All sketches were neutral in appearance depicting generic horse types. The sketches were used to lend a professional appearance to the postcard and survey as well as to give a visual cue to the beginning and end of the survey. Using horses throughout the packet would also symbolize to the subjects my affinity for their profession and possibly decrease any threat posed by the researcher's role as a physical therapist. The final incentives were achieving NARHA support of the survey and a promise to
publish the results in the NARHA NEWS. NARHA's executive
director allowed his title and signature to appear on the
final cover letter, and the survey was constructed in a
booklet fashion. Samples of the postcard and survey cover
letter appear in Appendix C.

Data Collection

The data were collected during the summer and fall
months of 1991. Surveys were coded with a program number to
track respondents. In early August, respondents were
notified by postcard that they had been selected to
participate in this study. The questionnaire was mailed one
week after the postcard. Three weeks were allowed for
completion and return of the questionnaire. In early
September a second instrument was sent to nonrespondents.
Another three weeks was allowed for completion and return of
the second survey. A random sample of remaining
nonrespondents was selected to further control nonresponse
error. This sample was contacted by telephone and
interviewed using the same questionnaire.

Data Analysis

Using the Statistical Package for the Social Sciences
program (SPSS-X), descriptive statistics for frequency
distributions, means and standard deviations were obtained
for all subjects who responded to the survey. Data from
subjects who responded to the survey by the deadline and before the second survey was sent were grouped together and called early respondents. Data from subjects who responded to the second survey or telephone interview were grouped together and called late respondents. Statistics were obtained for both groups. To determine if any statistical significance existed between the two groups of early and late respondents, a t test was performed.
Chapter IV
RESULTS

Introduction

Results were obtained from the data of all returned surveys and data collected from telephone interviews. All data were coded and entered into the computer system at The Ohio State University. The Statistical Package for Social Sciences was used for all data analysis. For the discussions directly relating to the instrument, refer to Appendix B.

Response Rate

Of the 200 surveys mailed to the sample population, 81 were returned from the first mailing and 46 were returned from the second mailing. The telephone sample to control for non-response error numbered 8 and represented 12% of the non-response population. Provided no significant difference exists between respondents and non-respondents, Miller and Smith estimate that surveying 10-20% of the non-respondents will allow results to be generalized to the non-respondent population.\textsuperscript{22} Total surveys received numbered 135 for an overall response rate of 67.5%. Response rate results are listed in Table 1.
### TABLE 1

**Response Rate**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Survey 1</td>
<td>81</td>
<td>40.5</td>
</tr>
<tr>
<td>Survey 2</td>
<td>46</td>
<td>23.0</td>
</tr>
<tr>
<td>Phone</td>
<td>8</td>
<td>4.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>135</td>
<td>67.5</td>
</tr>
<tr>
<td>Non-response</td>
<td>65</td>
<td>32.5</td>
</tr>
</tbody>
</table>

### TABLE 2

**Reliability Coefficients**

<table>
<thead>
<tr>
<th></th>
<th>Knowledge</th>
<th>Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot Test (N=21)</td>
<td>α = .66</td>
<td>α = .77</td>
</tr>
<tr>
<td>Sample (N=135)</td>
<td>α = .59</td>
<td>α = .73</td>
</tr>
</tbody>
</table>
Reliability Results

Reliability studies were repeated for all of the sample surveys to compare with the results of reliability studies done to the pilot sample. The pilot alpha's were .66 for knowledge and .77 for attitude. The sample alpha's for the knowledge and attitude sections were .59 and .73 respectively. The drop in the reliability coefficient for knowledge was partly due to question K5 (Hippotherapy is a term used by therapists who have therapeutic riding training in treating movement disorders. [True]) If this question were removed the alpha level would increase to .62. The variance in responses is likely due to disagreement among THR instructors as to what hippotherapy means as a term. Table 2 depicts all reliability coefficient data.

Respondent Group Differences

To assist in determining the ability to generalize the results to non-respondents, respondents were grouped into early and late categories. Early respondents were those who mailed the first questionnaire back within the deadline or whose questionnaire arrived before the second questionnaire was mailed. If respondents mailed back the second questionnaire, or the first questionnaire arrived well after the second questionnaire was mailed, they were considered late respondents. The eight subjects who were telephoned were also grouped in the late category.
Results of the t test used to determine group differences appear in Table 3 (degrees of freedom equaled 133). The two groups did not differ significantly when attitude scores were compared (p > 0.05). The difference between the two groups for their knowledge scores was significant at a .05 level (p = 0.04). Responses from the telephone interview sample could be contributing to this significant difference. Not having the instrument in front of them could have affected their responses.

Program Demographics

Table 4 contains program demographic data determined for the variables of program size (number of riders served per week of program operation), program operation (the months of the year program operates), and program format (the type(s) of THR provided). For the variable of program format, data were broken down into two groups. The first group was the primary form of THR instruction provided. The second group was the distribution of other instruction formats offered.

Table 5 lists disabilities served by each program in rank order of frequency. In the survey section addressing disabilities, subjects were asked to identify the five most frequent types of disabilities they served from those listed. Those respondents that did not respond at all, or who identified more than five disabilities were not included
TABLE 3

Group Differences Between Early Respondents (Group 1) and Late Respondents (Group 2)*

For Knowledge and Attitudes

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>SD</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10.84</td>
<td>1.46</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10.17</td>
<td>2.07</td>
<td>2.07**</td>
</tr>
<tr>
<td>Attitude Objects</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hippotherapy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3.51</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3.37</td>
<td>.51</td>
<td></td>
</tr>
<tr>
<td>Riding As Therapy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2.34</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.32</td>
<td>.55</td>
<td>1.57</td>
</tr>
<tr>
<td>Divisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2.95</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2.84</td>
<td>.46</td>
<td>1.62</td>
</tr>
<tr>
<td>Role Definitions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3.24</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3.21</td>
<td>.45</td>
<td>.35</td>
</tr>
<tr>
<td>Terminology</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>3.33</td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3.35</td>
<td>.48</td>
<td>-.24</td>
</tr>
</tbody>
</table>

*d.f. = 133

**p<.05
TABLE 4

Frequency Distribution For Program
Demographic Variables I
(Variables of program size, program operation, program format)

<table>
<thead>
<tr>
<th>Riders Per Week</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10</td>
<td>29</td>
<td>21.5</td>
</tr>
<tr>
<td>11-49</td>
<td>81</td>
<td>60.0</td>
</tr>
<tr>
<td>&gt;50</td>
<td>22</td>
<td>16.3</td>
</tr>
<tr>
<td>No Response</td>
<td>3</td>
<td>2.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Months of Operation</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN.</td>
<td>53</td>
<td>39.3</td>
</tr>
<tr>
<td>FEB.</td>
<td>60</td>
<td>44.4</td>
</tr>
<tr>
<td>MAR.</td>
<td>83</td>
<td>61.5</td>
</tr>
<tr>
<td>APR.</td>
<td>111</td>
<td>82.2</td>
</tr>
<tr>
<td>MAY</td>
<td>121</td>
<td>89.6</td>
</tr>
<tr>
<td>JUNE</td>
<td>115</td>
<td>85.2</td>
</tr>
<tr>
<td>JULY</td>
<td>111</td>
<td>82.2</td>
</tr>
<tr>
<td>AUG.</td>
<td>104</td>
<td>77.0</td>
</tr>
<tr>
<td>SEPT.</td>
<td>118</td>
<td>87.4</td>
</tr>
<tr>
<td>OCT.</td>
<td>114</td>
<td>84.4</td>
</tr>
<tr>
<td>NOV.</td>
<td>92</td>
<td>68.1</td>
</tr>
<tr>
<td>DEC.</td>
<td>58</td>
<td>43.0</td>
</tr>
</tbody>
</table>

Primary Instruction Format
- Education: 49 (36.3%)
- Sport: 47 (34.8%)
- Medicine: 27 (20.0%)
- No Response: 12 (8.9%)

Other Formats Offered
- Sport, education, medicine: 61 (45.2%)
- Sport, education: 30 (22.2%)
- Sport only: 12 (8.9%)
- Education, medicine: 12 (8.9%)
- Education only: 7 (5.2%)
- Sport, medicine: 5 (3.7%)
- Medicine only: 3 (2.2%)
- No response: 5 (3.7%)
**TABLE 5**

Frequency of Types of Disabilities Served in Riding Programs

(Variable of program format, disabilities served)*

<table>
<thead>
<tr>
<th>Disabilities Served</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebral Palsy</td>
<td>113</td>
<td>83.7</td>
</tr>
<tr>
<td>Mental Retardation</td>
<td>81</td>
<td>60.0</td>
</tr>
<tr>
<td>Learning Disabilities</td>
<td>72</td>
<td>53.3</td>
</tr>
<tr>
<td>Developmental Delay</td>
<td>64</td>
<td>47.4</td>
</tr>
<tr>
<td>Down's Syndrome</td>
<td>55</td>
<td>40.7</td>
</tr>
<tr>
<td>Emotional Problems</td>
<td>34</td>
<td>25.2</td>
</tr>
<tr>
<td>Head Trauma</td>
<td>32</td>
<td>23.7</td>
</tr>
<tr>
<td>Spina Bifida</td>
<td>29</td>
<td>21.5</td>
</tr>
<tr>
<td>Autism</td>
<td>28</td>
<td>20.7</td>
</tr>
<tr>
<td>Visually Impaired</td>
<td>19</td>
<td>14.1</td>
</tr>
<tr>
<td>Hearing Impaired</td>
<td>13</td>
<td>9.6</td>
</tr>
<tr>
<td>Multiple Sclerosis</td>
<td>12</td>
<td>8.1</td>
</tr>
<tr>
<td>Stroke</td>
<td>10</td>
<td>7.4</td>
</tr>
<tr>
<td>Paraplegia</td>
<td>6</td>
<td>4.4</td>
</tr>
<tr>
<td>Amputation</td>
<td>4</td>
<td>3.0</td>
</tr>
<tr>
<td>Muscular Dystrophy</td>
<td>3</td>
<td>2.2</td>
</tr>
<tr>
<td>Scoliosis</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>7.4</td>
</tr>
<tr>
<td>Post-Polio Syndrome</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Neuromuscular Diseases</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Multi-handicapped</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

* N represents number of respondents who identified each disability as one of the five most often served in their program.*
in the calculations. The frequencies reported describe how often each disability appeared in this question.

Other disabilities reported in the write-in section of this question were post-polio syndrome, neuromuscular diseases, multi-handicapping conditions, seizure disorder, Alzheimer's disease, cystic fibrosis, and Klippel-Feil Syndrome.

Physical Therapist and Related Professionals Demographics

PT Involvement

Physical therapist involvement was established through the questions in the Role of Professionals section of the survey. Obtained data described whether or not a PT was involved with each subject's program and whether or not a PT was desired to be involved. Data for the level of PT involvement appears in Table 6.

Table 7 presents data on the roles defining PT involvement. These roles were referral source, consultant, and direct service provider. Programs with a PT involved indicated which role the PT was an active participant within the program. Using these same roles, all instructors could choose how they wanted the PT involved, as well as identify other ways they desired a PT to be involved.

Twenty-eight subjects used this opportunity to communicate their thoughts. Responses were grouped into seven categories. These were: education, management, board
### TABLE 6

Frequency Distribution For
Physical Therapist Involvement

<table>
<thead>
<tr>
<th>PT Involvement</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+)</td>
<td>105</td>
<td>77.8</td>
</tr>
<tr>
<td>(-)</td>
<td>30</td>
<td>22.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Desire PT Involvement</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+)</td>
<td>129</td>
<td>95.6</td>
</tr>
<tr>
<td>(-)</td>
<td>6</td>
<td>4.4</td>
</tr>
</tbody>
</table>

### TABLE 7

Frequency Distribution of Physical Therapist Roles Within THR Programs

<table>
<thead>
<tr>
<th>Roles of PT</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral Source</td>
<td>90</td>
<td>66.7</td>
</tr>
<tr>
<td>Consultant</td>
<td>93</td>
<td>68.9</td>
</tr>
<tr>
<td>Direct Service Provider</td>
<td>70</td>
<td>51.9</td>
</tr>
<tr>
<td>With Instructor</td>
<td>65</td>
<td>48.1</td>
</tr>
<tr>
<td>Without Instructor</td>
<td>4</td>
<td>3.0</td>
</tr>
<tr>
<td>No Response</td>
<td>1</td>
<td>.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Desired Roles of PT</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referral Source</td>
<td>112</td>
<td>83.0</td>
</tr>
<tr>
<td>Consultant</td>
<td>122</td>
<td>90.4</td>
</tr>
<tr>
<td>Direct Service Provider</td>
<td>115</td>
<td>85.2</td>
</tr>
<tr>
<td>Other</td>
<td>28</td>
<td>20.7</td>
</tr>
<tr>
<td>Education</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Board Member</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Team Member</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Horsemastership</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Documentation</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
member, team member, horsemastership, documentation, and more time.

In the education category, subjects wanted the PT to provide inservice training to other occupational therapists, PT's, instructors, and volunteers. This category also included continuing education for the involved PT's. The management category involved suggestions from public relations ideas to participating in the daily activities around the stable. The board member and team member categories indicated some desire for involvement on an advisory level as well as being able to work with other professionals related to the program. The horsemastership category recommended that the PT have some riding experience in order to relate to the rider's experience as well as relate to the THR instructor about horse related issues. The documentation and research categories involved having the PT write formal documentation on the riders from initial evaluation to progress reports as well as documenting the effects of THR. Finally one subject simply requested more time from his/her therapist than the once or twice a week he/she was currently receiving.

Related Professionals

Table 8 presents frequency data for the level of involvement of related professionals in THR programs. In addition to identifying professionals from the list given,
TABLE 8
Frequency Distribution of Related Professionals
Involved With THR Programs

<table>
<thead>
<tr>
<th>Professional Involvement</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+)</td>
<td>111</td>
<td>82.2</td>
</tr>
<tr>
<td>(-)</td>
<td>24</td>
<td>17.7</td>
</tr>
</tbody>
</table>

**Related Professionals**
- Special Education Teachers  79  58.5
- Occupational Therapists     67  49.6
- Speech Therapists           43  31.9
- Recreation Therapists       39  28.9
- Physicians                  33  24.4
- Psychologists               30  22.2
- Other                       26  19.3
  - Registered Nurses          6   
  - Horse Professionals        4   
  - Social Workers             3   
  - Veterinarians             3   
  - Art Therapists             2   
  - Miscellaneous             9   

---
instructors were given the opportunity to identify other professionals not listed. Twenty six subjects used this opportunity to write in responses. Other professionals identified were registered nurses, horse professionals, social workers, veterinarians, and art therapists. The following professionals were identified one per program: a regular education teacher, a psychotherapist, an attorney, an accountant, an emergency medical technician, a hearing impaired instructor, an adaptive recreation therapist, a rehabilitation/guidance counselor, and an exercise physiologist.

Instructor Demographics

Education

Table 9 relates data on the variables of instructor education and professional group status. The education data consisted of the highest level of general education completed, participation in THR continuing education, and participation in formal equine education. The equine and continuing education data demonstrated certain trends, and as such the data were grouped in the following manner.

Many subjects indicated that they had received their THR instructor certification from either NARHA or the few centers that offer certification. This information appeared in either the "other" category in the general education question, part b. of the continuing education question, or
<table>
<thead>
<tr>
<th>General Education</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>23</td>
<td>17.0</td>
</tr>
<tr>
<td>Associate's</td>
<td>17</td>
<td>12.6</td>
</tr>
<tr>
<td>Bachelor's</td>
<td>66</td>
<td>48.9</td>
</tr>
<tr>
<td>Master's</td>
<td>24</td>
<td>17.8</td>
</tr>
<tr>
<td>Doctoral</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>Professional</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>Other (Retired Army)</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>1.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>THR Education Participation</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+)</td>
<td>107</td>
<td>79.3</td>
</tr>
<tr>
<td>(-)</td>
<td>26</td>
<td>19.3</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>1.5</td>
</tr>
</tbody>
</table>

| THR Certification (+)       | 51 | 37.7      |

| Other Topics (+)            | 60 | 44.4      |
| No Response                 | 37 | 27.4      |

| Equine Education (+)        | 47 | 34.3      |
| (-)                         | 84 | 62.2      |
| No Response                 | 4  | 3.0       |

| School (+)                  | 31 | 23.0      |
| No Response                 | 91 | 67.4      |

| Professional Memberships Participation (+) | 92 | 68.1 |
| (-)                                         | 39 | 28.9 |
| No Response                                 | 4  | 3.0  |

<table>
<thead>
<tr>
<th>Membership Number</th>
<th>N</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43</td>
<td>31.9</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>16.3</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>12.6</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>No Response</td>
<td>47</td>
<td>34.8</td>
</tr>
</tbody>
</table>
in part b. of the formal equine training question. In order to expedite coding of certification, subjects received a 1 if they wrote in certification in part b. of either the continuing education or equine training questions. If they had participated in any other type of continuing education or supplied the name of a college/university that teaches equine topics, they received a 2. Respondents that did not fill in any information in either question received a 0. Consequently, the data described for continuing education and equine training reflects only those subjects who offered the information regarding certification, as well as, those who offered information regarding general THR topics. There was no question specifically related to certification, so no data can be presented as to how many subjects do not have certification.

Professional Group Status

Instructors indicated membership in professional groups as well as the number and type of groups. In addition to NARHA, examples of group memberships were Pony Club, American Horse Show Association, 4-H, and national horse breed organizations. Frequency data for this variable appear in Table 9.
Horsemastership

Categorical data gathered for horsemastership included the number of years the instructors have been riding, the number of years the instructors have spent in taking riding lessons, and the number of years the instructors have been teaching THR. Data describing riding expertise were also gathered and is presented in rank order of frequency in Table 10.

Knowledge Scores

Table 11 presents total knowledge scores obtained from the knowledge section of the survey. Knowledge scores were calculated for each respondent by adding correct responses to the dichotomously scored items K1-6 and K10-16. A correct response received a value of 1, and an incorrect response or a blank response received a value of 0. A perfect score for this portion was 13.

Table 12 represents frequencies of correct responses for the dichotomously scored questions by item. Items K1-6 were True/False questions, and items K10-16 were multiple choice questions.

Questions K7-8 were not dichotomously scored. They were general awareness questions for the purpose of establishing knowledge levels, therefore, they did not receive any score. Frequency distribution of positive and negative responses for each of these questions is described
TABLE 10

Frequency Distribution For Instructor Demographic Variables II
(Variable of horsemastership)

<table>
<thead>
<tr>
<th>Riding Experience</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years Riding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>4</td>
<td>3.0</td>
</tr>
<tr>
<td>1-5</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>6-10</td>
<td>6</td>
<td>4.4</td>
</tr>
<tr>
<td>11-20</td>
<td>40</td>
<td>29.6</td>
</tr>
<tr>
<td>&gt;20</td>
<td>79</td>
<td>58.5</td>
</tr>
<tr>
<td>No Response</td>
<td>4</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years Lessons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>14</td>
<td>10.4</td>
</tr>
<tr>
<td>1-5</td>
<td>39</td>
<td>28.9</td>
</tr>
<tr>
<td>6-10</td>
<td>38</td>
<td>28.1</td>
</tr>
<tr>
<td>11-20</td>
<td>24</td>
<td>17.8</td>
</tr>
<tr>
<td>&gt;20</td>
<td>15</td>
<td>11.1</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Years Teaching THR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>13</td>
<td>9.6</td>
</tr>
<tr>
<td>1-5</td>
<td>66</td>
<td>48.9</td>
</tr>
<tr>
<td>6-10</td>
<td>40</td>
<td>29.6</td>
</tr>
<tr>
<td>&gt;10</td>
<td>14</td>
<td>10.4</td>
</tr>
<tr>
<td>No Response</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Riding Expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>74</td>
<td>54.8</td>
</tr>
<tr>
<td>Western</td>
<td>56</td>
<td>41.5</td>
</tr>
<tr>
<td>Hunter/Jumper</td>
<td>54</td>
<td>40.0</td>
</tr>
<tr>
<td>Dressage</td>
<td>45</td>
<td>33.3</td>
</tr>
<tr>
<td>Combined Training</td>
<td>26</td>
<td>19.3</td>
</tr>
<tr>
<td>Driving</td>
<td>16</td>
<td>11.9</td>
</tr>
<tr>
<td>Gymnastic Vaulting</td>
<td>5</td>
<td>3.7</td>
</tr>
</tbody>
</table>
TABLE 11
Frequency Distribution For Total Knowledge
scores of Dichotomously Scored Items

<table>
<thead>
<tr>
<th>Score (K1-6, K10-16)</th>
<th>% Correct</th>
<th>N</th>
<th>Frequency</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>38</td>
<td>1</td>
<td>.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>46</td>
<td>2</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>54</td>
<td>2</td>
<td>1.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>62</td>
<td>7</td>
<td>5.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>69</td>
<td>14</td>
<td>10.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>77</td>
<td>21</td>
<td>15.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>85</td>
<td>46</td>
<td>34.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>92</td>
<td>35</td>
<td>25.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>100</td>
<td>6</td>
<td>4.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10.6  1.8

TABLE 12
Frequency Distribution of Correct Responses
For Knowledge By Item*

<table>
<thead>
<tr>
<th>By Item</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>K1</td>
<td>132</td>
<td>97.8</td>
</tr>
<tr>
<td>K2</td>
<td>127</td>
<td>94.1</td>
</tr>
<tr>
<td>K3</td>
<td>114</td>
<td>84.4</td>
</tr>
<tr>
<td>K4</td>
<td>22</td>
<td>16.3</td>
</tr>
<tr>
<td>K5</td>
<td>108</td>
<td>80.0</td>
</tr>
<tr>
<td>K6</td>
<td>133</td>
<td>98.5</td>
</tr>
<tr>
<td>K10</td>
<td>131</td>
<td>97.0</td>
</tr>
<tr>
<td>K11</td>
<td>119</td>
<td>88.1</td>
</tr>
<tr>
<td>K12</td>
<td>81</td>
<td>60.0</td>
</tr>
<tr>
<td>K13</td>
<td>122</td>
<td>90.4</td>
</tr>
<tr>
<td>K14</td>
<td>109</td>
<td>80.7</td>
</tr>
<tr>
<td>K15</td>
<td>115</td>
<td>85.2</td>
</tr>
<tr>
<td>K16</td>
<td>114</td>
<td>84.4</td>
</tr>
</tbody>
</table>

*K1-K6 = True/False Items, K10-K16 = Multiple Choice Items
TABLE 13
Frequency Distribution of Awareness Questions
Concerning German THR Divisions

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>K7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>1</td>
<td>.7</td>
</tr>
<tr>
<td>Y</td>
<td>79</td>
<td>58.5</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>40.7</td>
</tr>
<tr>
<td>K8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>5</td>
<td>3.7</td>
</tr>
<tr>
<td>Y</td>
<td>52</td>
<td>38.5</td>
</tr>
<tr>
<td>N</td>
<td>78</td>
<td>57.8</td>
</tr>
</tbody>
</table>

TABLE 14
Frequency Distribution of Awareness Question
Concerning American THR Classifications
(Affirmative Responses)

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riding Therapy</td>
<td>125</td>
<td>92.6</td>
</tr>
<tr>
<td>Hippotherapy</td>
<td>113</td>
<td>83.7</td>
</tr>
<tr>
<td>Sports Riding</td>
<td>107</td>
<td>79.3</td>
</tr>
<tr>
<td>Remedial Riding</td>
<td>90</td>
<td>66.7</td>
</tr>
<tr>
<td>Developmental Vaulting</td>
<td>82</td>
<td>60.7</td>
</tr>
<tr>
<td>Sports Vaulting</td>
<td>70</td>
<td>51.9</td>
</tr>
<tr>
<td>Remedial Vaulting</td>
<td>64</td>
<td>47.4</td>
</tr>
</tbody>
</table>
in Table 13.

Table 14 shows frequency data for Question K9 which was another general awareness question pertaining to the instructors' perceived familiarity with each of the American THR classifications. For each of the classifications checked by the respondents, a positive score was assigned. Data represents affirmative responses to this question.

**Attitude Scores**

Data for the attitude portion of the survey were analyzed by item as well as by attitude object. The five attitude objects were:

1) Hippotherapy--Items A1-3
2) Riding As Therapy--Items A4-6
3) THR Divisions--Items A7-9
4) THR Role Definitions--Items A10-12
5) THR Terminology--Items A13-15.

The response categories were scored with Strongly Disagree receiving a 1, Disagree receiving a 2, Agree receiving a 3 and Strongly Agree receiving a 4. Negatively written items were inverted prior to analysis in order to obtain consistent scores. Nonresponses to items were given a neutral value during the data analysis procedure. Mean score results for the attitude objects appear in Table 15. Table 16 presents frequency distribution and mean scores for the attitude section by item.
### TABLE 15

Mean Scores For Attitude Objects

Derived From Attitude Items A1-A15

<table>
<thead>
<tr>
<th>Attitude Object</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hippotherapy (A1-3)</td>
<td>3.46</td>
<td>.51</td>
</tr>
<tr>
<td>Riding As Therapy (A4-6)</td>
<td>2.34</td>
<td>.64</td>
</tr>
<tr>
<td>Divisions (A7-9)</td>
<td>2.90</td>
<td>.42</td>
</tr>
<tr>
<td>Role Definitions (A10-12)</td>
<td>3.23</td>
<td>.47</td>
</tr>
<tr>
<td>Terminology (A13-15)</td>
<td>3.34</td>
<td>.46</td>
</tr>
</tbody>
</table>

### TABLE 16

Frequency Distribution and Mean Scores

For Attitude By Item

<table>
<thead>
<tr>
<th>Item</th>
<th>* 1-2</th>
<th></th>
<th>* 3-4</th>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Frequency</td>
<td>N</td>
<td>Frequency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1</td>
<td>4</td>
<td>2.9</td>
<td>130</td>
<td>96.3</td>
<td>3.60</td>
<td>.58</td>
</tr>
<tr>
<td>A2</td>
<td>10</td>
<td>7.4</td>
<td>124</td>
<td>91.8</td>
<td>3.45</td>
<td>.66</td>
</tr>
<tr>
<td>A3</td>
<td>20</td>
<td>14.8</td>
<td>113</td>
<td>83.7</td>
<td>3.30</td>
<td>.84</td>
</tr>
<tr>
<td>A4</td>
<td>74</td>
<td>54.8</td>
<td>59</td>
<td>43.7</td>
<td>2.53</td>
<td>.89</td>
</tr>
<tr>
<td>A5</td>
<td>70</td>
<td>51.9</td>
<td>61</td>
<td>45.2</td>
<td>2.50</td>
<td>.91</td>
</tr>
<tr>
<td>A6</td>
<td>107</td>
<td>79.3</td>
<td>22</td>
<td>16.3</td>
<td>1.97</td>
<td>.74</td>
</tr>
<tr>
<td>A7</td>
<td>71</td>
<td>52.6</td>
<td>54</td>
<td>40.0</td>
<td>2.48</td>
<td>.79</td>
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*(1=Strongly Disagree, 2=Disagree, 3=Agree, 4=Strongly Agree)*
Summary

Data pertaining to the research objectives and questions described in Chapter I (page 7) are outlined numerically in Tables 4-16. Data pertaining to the study's methodology as described in Chapter III (pages 30, 33, 35) are outlined in Tables 1-3. For interpretation of all the data refer to Chapter V.
Chapter V
ANALYSIS AND INTERPRETATION OF THE RESULTS

Introduction

This chapter discusses interpretation of the data for each of the sections contained in the instrument (Knowledge/Attitude, PT involvement, program and instructor demographics). Implications for further research and conclusions based on this study are also described.

Instrument Validity, Reliability, Generalizability

The instrument developed for this descriptive research study was considered valid for content validity based on positive responses from 5 THR experts. Positive responses from 4 THR instructors in a field test indicated adequate face validity.

Out of 200 surveys mailed to subjects, information was obtained from 135. The resultant response rate was 67.5%, representing two thirds of the sample [Table 1]. The reliability coefficients for the knowledge and attitude sections of the survey were adequate with alpha's being .59 and .73 respectively [Table 2]. No differences existed between the early and late respondents for the attitude
section. Group differences were significant for knowledge at the .05 level but not by a critical amount (p=.04) [Table 3]. This difference may indicate that the late respondents had less knowledge in THR than the early respondents. This difference may also partially be a result of the data from the telephone respondents. Perhaps not having the instrument in front of them to read along with the interviewer affected their answers, although ample opportunity was given for the thought process in answering, and questions were repeated as often as needed. Most likely the difference is attributable to the variance in responses to the knowledge questions K3-5. See the discussion relating to K3 and K5 in Chapter III and see the frequency of correct responses for K4 [Table 12]. A discussion of K4 is presented later in this chapter.

This information supports a conclusion that the instrument was valid for content and face validity, and it was moderately high in its reliability coefficients. The lack of early/late group differences for the attitude section and the presence of a non-critical significant difference for the knowledge section suggests that the two groups were essentially equal in their responses. Therefore, the results of this study can be generalized to the nonrespondents of the sample. The use of random sampling for the sample population further supports generalizing the data to the target population.
Program Demographics

The program demographic section of the survey gathered information on the number of riders served per week of program operation, the months of program operation, the instruction format of the program and the types of riders' disabilities served by the program.

Program Size [Table 4]

Less than one quarter of the programs had either small numbers (1-10) or very large numbers (>50) of riders. Approximately two thirds of the programs had medium-large numbers (11-49) of riders per week.

Program Operation [Table 4]

The results for months of program operation were not surprising in that the winter months received the lowest frequency of operation. Horseback riding is typically an outdoor sport and therefore subject to the effects of cold weather. Roughly forty percent of the programs operated during December, January and February. The fact that even these programs operate in the winter is probably related to geographical location and the possible presence of indoor riding facilities. Two thirds of the programs operated during November and March likely due to the transitional nature of the seasons at those times of year. Over three quarters of the programs operated from April through
October. August had the lowest frequency of operation for the warm months. This may be accounted for by the fact that August is traditionally the hottest month of the summer (heat also impacts the ability to ride). Programs may break for the heat or break for the purposes of giving the horses a rest. In either case, more research needs to be done to determine why programs operate during the months they choose.

Program Format [Table 4]

The primary instruction format based on the three divisions of THR were nearly equally divided. Roughly one third of the respondents considered their programs' primary instruction format to be sport and another one third considered their format to be education. Medicine was identified as the primary format for only 20% of the programs. Non-response for this item was 8.9%. Instructors who left this question blank or checked more than one category were given a zero value for coding purposes. Some of these non-responses could have fallen into the medicine category if properly filled in, thereby raising the overall percentage. The other possibility to explain why medicine was lower is the level of therapists' involvement. Only one half of the programs with therapists had PT's providing direct service thereby qualifying those programs for a primarily medicine format. How much of the therapists'
involvement was geared toward direct service was not established. Further research would be needed to determine how much of the PT's involvement is focused on direct service, consulting and referring riders.

The information regarding other THR formats offered is much more interesting. Less than ten percent of the programs offered one instruction format only. Over three quarters of the programs offered more than one THR format. Nearly half of the programs offered all three formats. Approximately one fourth offered sport and education. Of the multiformat grouping, less than ten percent provided sport/medicine and education/medicine formats. It is not surprising that the most frequently offered formats were sport and education groupings as this is where THR instructors would naturally have the most expertise.

The fact that a strong majority of programs are offering multiple formats of instruction indicates the desire to serve the disabled population in more than one way. This result is highly desirable in that not all disabled people require the same type of intervention to positively impact their lifestyle.

Disabilities Served [Table 5]

More than one half of the programs identified the five most frequently named disabilities they served as cerebral palsy, mental retardation, learning disabilities,
developmental delay, and Down's syndrome. Emotional problems, head trauma, spina bifida, and autism were reported by approximately one quarter of the programs as being among the five most frequently served disabilities. Approximately ten percent or less of the programs reported visual impairment, hearing impairment, multiple sclerosis, stroke, paraplegia, amputation, muscular dystrophy, scoliosis, and the "other" category as being in the five most frequently served disability section. Refer to Chapter IV. for the disabilities identified in the "other" category.

This information directly impacts the potential for PT involvement. Four of these "top five" disabilities are traditionally served by physical therapists in other treatment settings, especially cerebral palsy. People with learning disabilities are not generally seen by PT's unless they would have an additional physical impairment. The fact that programs are seeing a large number of riders with physical disabilities supports the potential involvement of PT's in the THR setting. The fact that all of the physical disabilities listed in Table 5 are seen by PT's in other settings, and the fact that these same disabilities received some level of service from THR programs indicates that PT's could be involved with any THR program serving riders with physical disabilities.
Physical Therapist and Related Professional Involvement

PT Involvement

Table 6 confirms the fact that PT's were indeed involved in THR programs and their presence was highly desired. Three quarters of the instructors had a PT involved with their program. Of the 30 instructors that did not have one, 24 said they would like to have one. This brought the total number of instructors desiring PT to 129 or 95.6% of the sample. This represents an extremely high level of desire for PT involvement.

The six instructors who did not desire PT involvement had rider populations that would exclude the need for a PT. All six identified emotional problems as one of the top five disabilities served, four were working with learning disabled, three were working with the mentally retarded population and only one identified cerebral palsy in the top five. Unless the riders had a concomitant physical problem, riders with emotional problems, learning disabilities or mental retardation would not necessarily need input from a PT. The one instructor that identified cerebral palsy among the riders may not have felt a PT was needed. Only 21 riders were identified for this program, so perhaps there was only a few riders with Cerebral Palsy or the riders were minimally physically involved.
Roles of PT [Table 7]

The three areas identified for PT involvement were referral source, consultant, and direct service provider. Over two thirds of the programs reported a PT's involvement at the referral source and consultant levels. Half of the programs have a PT providing direct service, i.e., treatment. Of those PT's providing direct service, half are providing direct service with the assistance of the THR instructor. Very few PTs are providing treatment without an instructor's assistance (3.0%).

When queried as to how the instructors desired PT involvement, over three quarters of the instructors reported they wanted PT involvement at all three levels. In addition, twenty percent of the instructors identified other areas of involvement they desired from PT's. For the description of this area, refer to Chapter IV. It is important to note that the suggestions made were very applicable to PT's. Most of the suggestions were within the professional background of PT's, and a PT would not find it difficult to assist in these areas.

Other Professionals [Table 8]

Over three quarters of the instructors identified the involvement of related professionals. One half to two thirds of the instructors reported that special education teachers and OT's were involved with their programs.
Approximately one third of the instructors identified speech therapist involvement, and one quarter identified recreation therapists physicians and psychologists. Approximately twenty percent also identified other professions not listed for this survey question. For the discussions related to the other professionals identified refer to Chapter IV.

To determine how these related professionals were involved with the program was beyond the scope of this study. These professionals may be integral parts of the THR programs in terms of providing treatment and designing lesson plans where applicable, or they may be helping with the riding session in a volunteer capacity. In either case, further research would need to be done to determine the level and type of involvement each of these professions contributes to THR programs.

**Instructor Demographics**

Education [Table 9]

Instructor demographic variables included education levels, professional memberships, and horsemastership experience. Regarding general education, over three quarters of the instructors had a post-secondary education. Sixty-eight percent held a Bachelor's degree or higher. In addition, over three quarters of the instructors have participated in THR continuing education in the last five years.
Approximately half of the instructors provided specific information as to the types of continuing education courses they had attended. Over one third of the instructors reported that they had achieved certification in THR either from NARHA or from an approved certification center. This low level of certification may not accurately reflect the number of instructors in this sample who have certification. No specific questions relating to certification were asked, so some instructors may not have offered this information. One could assume that instructors would want to share this information, especially since they were freely writing in names of workshops they had attended. Also, achieving certification is quite an accomplishment, and one would assume that this accomplishment would be something of which the instructors would be proud and would want to share openly.

Only one third of the instructors indicated they had attended a formal equine educational program through a university or college. This result is not surprising because the equine industry is a very expensive one. To attend a school in the profession is a very expensive undertaking. Also, many people involved in the horse industry grow up in the industry and achieve their knowledge from an experiential format.
Professional Membership [Table 9]

Over two thirds of the instructors indicated that they participated in professional organizations or groups. Over one half also indicated that they participated in one to three groups. This information is encouraging concerning professional status. Belonging to professional groups indicates a desire to remain abreast of the current trends and issues within a given profession. This characteristic of belonging to professional groups would be desirable in persons practicing a newly developing profession.

Horsemastership Data [Table 10]

Years Riding

Well over three quarters of the instructors had more than 11 years of riding experience. Over half had more than 20 years experience. Close to ten percent had less than ten years of riding experience. Over half of the instructors had more than one year but less than ten years invested in taking riding lessons. Almost one third of the instructors had more than 11 years invested in taking riding lessons. Only ten percent had spent less than one year taking riding lessons.

Years Teaching THR [Table 10]

Almost half of the instructors had 1-5 years experience teaching THR, and nearly one third had 6-10 years
experience. About ten percent of instructors had either less than one year or more than 10 years experience teaching THR.

Riding Expertise [Table 10]

The top three styles of riding chosen by instructors to represent their areas of expertise were English, Western, and Hunter/Jumper. Western and English are the two main types of riding so the fact that nearly half of the instructors claimed expertise in each is not surprising. Hunter/Jumper is usually more popular than Dressage which came in fourth at 33.3%. Less than twenty percent of the instructors identified the remaining areas of combined training, driving, and gymnastic vaulting as an area of expertise.

THR Knowledge

Total Knowledge Scores [Table 11]

Overall the instructor knowledge level of THR as measured by this instrument was just above average. With a mean score of 10.6 out of a possible 13, this translates to 82% of correct responses. A very small portion of instructors (4.44%) scored 54% correct or less. One quarter of the instructors scored between 64% and 77%. Just over two thirds of the instructors scored an 85% or higher.
Knowledge Scores By Item [Table 12]

The correct response percentages for each of eleven of the thirteen dichotomously scored items were very high to extremely high. Only two questions did not achieve high or extremely high correct response percentages. The first one was K4 (Hippotherapy is another division of therapeutic riding). Twenty-two respondents (16.3% of the sample) responded correctly to this question. Hippotherapy is not another division of THR, but it is a classification within the division of medicine. The low level of correct responses for this question may indicate confusion exists in either the terminology definitions of divisions and classification or that the THR instructors believe hippotherapy is truly a division separate from medicine. Instructor confusion regarding this terminology would not be surprising since THR literature is scarce. For this study only one reference was found outlining terminology.

The second question with lower correct response levels was K12 (Riding Therapy: a) occurs when a disabled person rides a horse; b) includes physical or psychological exercises as determined by the medical specialist involved; c) emphasizes rider control of the horse as its main goal). The correct response is b. Eighty-one subjects or 60% of the sample responded correctly. A majority of the subjects chose the correct answer, however, when compared to other response frequencies within Table 12, a minimum difference
of 20% exists. In addition, the percentage of respondents who said they were familiar with riding therapy (K9) was 92.6% [Table 14]. This represents a difference of 32.6% between those that perceive they are familiar with riding therapy and those that got the one dichotomous riding therapy question correct (60%). Further statistical studies would have to be performed to this data to determine if this difference is statistically significant. This difference in response frequencies may indicate the need for more clarification in what riding therapy entails. Since only one question was asked on riding therapy, clarification may be needed only in relation to the facets of riding therapy described in this question. Further research would be necessary to determine the knowledge levels of riding therapy in more detail.

In Chapter III, questions K3 and K5 were identified as possibly needing to be rewritten to improve the reliability coefficient for knowledge. K3 (Medicine is one division of therapeutic riding in America.) did not come up as a problem question on the second reliability study. If K5 (Hippotherapy is a term used by therapists who have therapeutic riding training in treating movement disorders.) were dropped, reliability would improve to .62. This means that if a subject answered a question incorrectly, it was likely to be K5. This lower reliability coefficient could indicate that K5 was a poorly written question or that
confusion existed in understanding hippotherapy as a THR term. It is important to note that 80% of the respondents answered K5 correctly. This high percentage would indicate that a majority of the sample interpreted the question correctly.

General Awareness Questions [Table 13]

The two questions concerning THR as it exists in Germany (K7, K8) had interesting results. Over half of the respondents were aware that Germany had many divisions and classifications under the heading of THR. Over one third of the respondents (38.5%) were aware that Germany's three main divisions were similar to America's divisions. This was surprising because America's divisions were initially based on Germany's. These results would indicate that roughly one half of THR instructors were aware of Germany's THR format. Whether the need to know these similarities is important or not is probably a matter of debate. Some would contend that knowing how another country is practicing the same field would be beneficial to developing the field in a different country. That way, mistakes may not be repeated or exciting ideas could be adopted. Others may contend that this is useless and may foster repetition instead of ingenuity. Since the future of a profession is ultimately decided by those practicing that profession, knowing how the practitioners feel about "borrowing" from another country's
perspective of their shared field would be very helpful. The results from these two questions can be viewed as a beginning toward the end of determining how American THR instructors want to use the information available to them from Germany. The moderate level of knowledge as described by the results of these two questions would indicate a possible need for education about Germany's model of THR.

The third general awareness question (K9) asked the subjects to check all of the classifications of American THR with which they were familiar [Table 14]. Response frequencies varied with each classification. The response frequency of riding therapy was highest at 92.6%, and its possible significance with its dichotomously scored counterpart was discussed above.

Over three quarters of instructors claimed familiarity with hippotherapy and sports riding. The frequencies reported for familiarity were closely related to frequencies for the dichotomously scored questions for these areas [Table 12]. Roughly two thirds of instructors identified remedial riding and developmental vaulting as familiar terms, yet the dichotomously scored questions for these classifications (K14-15) yielded higher frequencies for correct responses [Table 12]. This difference could indicate that the subjects did not feel as familiar with these two classifications, yet they were able to answer the more specific questions. This difference could also mean
that some subjects were able to guess or deduce the correct answers to the dichotomous questions but were not entirely comfortable with the concepts of developmental vaulting and remedial riding without any further clarification. Further research would be needed to see if the differences described above are significant and whether or not a correlation exists between the familiarity level and knowledge levels of these two classifications.

Half of the respondents were familiar with the classifications of remedial vaulting and sports vaulting. Since only half of the respondents felt familiar with these two areas further education is indicated. No specific dichotomous questions were asked on these areas because they were newly defined classifications and were probably not well-known. Further statistical analysis would need to be done to all of the classifications to determine if a statistical significance existed between the frequencies of familiarity and their associated dichotomously scored questions.

**THR Attitudes**

Five attitude objects relating to THR were developed, each object having a cognitive, affective and behavioral item written for it. By examining each attitude item as well as each attitude object, the following conclusions can be made.
Hippotherapy

THR instructors had a definite positive attitude with items A1-A3. The mean scores for A1 and A2 were 3.6 and 3.45 respectively [Table 16]. Even with the standard deviation reported for each, the low end of the attitude remains positive. The mean for A3 was 3.3 with a standard deviation of .84. This is a positive score, however, at the low end of the range the score would be 2.46. This is a neutral score. Overall, the attitude for A3 would be positive, but some THR instructors may feel neutral on this item.

Items A1-A3 made up the attitude object of hippotherapy [Table 15]. The mean score for this object was 3.46 with a standard deviation of .51. As a group of items, the overall feeling is positive, even at the low end of the range. This result is somewhat desirable, in that the instructors feel hippotherapy is a specialized use of the horse. However, the fact they responded positively to A2 (Riding instructors can be the sole providers of Hippotherapy services) and A3 (I use the term hippotherapy to describe what I do as a riding instructor.) raises some concerns. The knowledge levels assessed that instructors have above average knowledge of what hippotherapy is by definition. The fact that they feel they can be the sole providers of hippotherapy services directly contradicts the fact that hippotherapy is a specialized treatment using the horse by
PT's and OT's (K10, K11). These results support the observation made in Chapter II that some instructors are associating their instruction techniques with providing therapy.

The positive attitude toward A3 could be based on the fact that many instructors are working with PTs in their program. The instructors may be freely associating the PTs presence (even in a consultant capacity) with their program's provision of hippotherapy services, or they may be making the generalization that they are providing hippotherapy when they assist the therapist. In either case, these associations need further exploration to determine whether the instructors do indeed feel that what they do in an instruction mode is also considered treatment. If THR instructors do feel what they do in an instruction mode is also treatment, then further education in the area of what hippotherapy is and why it is a treatment is definitely indicated.

Riding As Therapy

The overall attitudes toward the second attitude object of riding as therapy also supports the possibility there may be some confusion as to what physical therapy using horses entails. The mean for the attitude object (A4-A6) was 2.34 with a standard deviation of .64 [Table 15]. This mean is essentially negative approaching neutrality in value.
However, if you employ the standard deviation, responses could vary from a truly negative response to a truly positive response. By examining each item of this object, the results indicate a mean of neutrality for two of the items ($A_4 = 2.53$, $A_5 = 2.50$) [Table 16]. The neutral mean results from the responses being equally divided between negative and positive responses. These results would indicate that there are as many instructors who feel the act of riding is physical therapy for disabled riders as those who feel it is not. This result is not entirely desirable but understandable. The physical therapy profession constantly faces lack of understanding regarding the scope of its practice.

The final item for this object had a negative value ($A_6 = 1.97$) where 79.6% of the respondents replied negatively ($A_6$. I associate my riding instruction techniques with providing therapy.) [Table 16]. This result is desirable in that the instructors appear to agree that their instruction techniques are not physical therapy. The fact that this item scored negatively where the earlier item ($A_3$. I use the term hippotherapy to describe what I do as a riding instructor) scored positively is important. This further supports the need for clarification of what physical therapy is in the general sense as well as what it is in the horse related sense.
THR Divisions

The third attitude object was THR Divisions (A7-A9). The overall mean of the object was nearly positive (2.90), but employing the standard deviation, responses could range from neutral to truly positive [Table 15]. By examining each item, it was evident that the degree of positiveness improved with each item. For the first item (A7. Sport, Education and Medicine are the only 3 divisions of therapeutic riding.) the mean was neutral at 2.48 [Table 16]. However, the responses were fairly equally divided between negative and positive responses. This split in attitude may be indicative of confusion between the number and types of THR divisions, or it may mean that instructors feel there should be more or less divisions in THR.

The mean for the second item (A8. Riding instructors are the primary service providers in all divisions of therapeutic riding) was closer to positive at 2.83 [Table 16]. The responses were divided by a 70% to 30% split positive to negative. This would indicate that a high majority of instructors view themselves as the primary service providers in all divisions of THR including medicine. This attitude would exclude other professionals who would be integral to the THR process, especially when providing treatment, i.e., PT's, OT's and psychologists. The thirty percent of the instructors who do not see themselves as the primary service provider may be taking into account
that therapists would be the primary service providers when hippotherapy is practiced.

The third item (A9. I would work with professionals from all therapeutic riding divisions to deliver therapeutic riding services.) was truly positive with a mean of 3.42 [Table 16]. Nearly all the subjects agreed with this statement. This result is desirable in that instructors appear to be willing to work with other professionals to deliver THR services.

Further research in the area of THR divisions should focus on determining if instructors need clarification on the existing divisions or whether they believe there should be more or less divisions. The fact that very few subjects responded correctly on the knowledge question K4 (Hippotherapy is another division of therapeutic riding [False]) supports the need for clarification of division definitions [Table 12]. In addition, research on instructors' attitudes toward service delivery should be explored especially in relation to those therapists providing hippotherapy services.

THR Role Definitions and THR Terminology

The final two attitude objects of THR Role Definitions and THR Terminology had truly positive responses with means of 3.23 and 3.34 [Table 15]. Even with employing the standard deviations, both objects remained very close to
positive at the low end of deviation. Examining each item revealed that a very high percentage of subjects responded positively to each of the remaining six items [Table 16]. These results indicated that THR instructors supported further definition of roles and using established terminology for their profession. This attitude is very desirable in a developing profession. It indicates the willingness to accept change, which is always a challenging obstacle. Further research in the area of role delineations and terminology should focus on knowledge and attitudes related toward THR definitions and terminology as they are being developed.

Conclusions

To answer the research questions described for this study (Chapter I), the following conclusions can be made. The instrument used was valid and reliable making conclusions legitimate for this population.

A profile of American THR programs would include the following. Programs are likely to be medium-large in size, operating mostly during the months of April to October. The instruction format is likely to be sport or education with a possibility of having more than one format taught. The rider population is probably made up of people with physical disabilities such as cerebral palsy, developmental delay, and Down's syndrome.
American THR programs have a high percentage of physical therapists involved at some level of service delivery. Room for improvement in this area is desired by THR instructors. Other professional groups are likely to be involved, especially special education teachers and occupational therapists.

American THR instructors are likely to have been educated beyond high school and have participated in THR continuing education in the last five years. It is possible that the instructor of a given program has received THR certification or has attended a formal equine educational program at a university or college. Instructors are likely to be members of professional groups, with more than 11 years of riding experience and with 1-10 years spent in taking riding lessons. It is also likely that the instructor of a given program has been teaching THR between 1-10 years. The riding expertise of instructors is fairly well divided between English pleasure, Western pleasure, Hunter/Jumper, and Dressage.

THR instructor knowledge levels, as measured by this instrument, were above average. Further education is needed in clarifying the definitions of division/classification and how hippotherapy relates to the division of medicine as a classification. More education is probably needed in defining riding therapy, developmental vaulting, remedial riding, remedial vaulting, and sports vaulting. Knowledge
levels regarding German THR were fair; whether more knowledge is needed here is up for debate.

THR instructor attitudes toward THR roles and terminology were extremely positive. Instructors would support further role delineations within the field, as well as use standardized terminology. Attitudes toward hippotherapy and instruction may need changing if further research indicates that instructors do truly feel that their instruction techniques are hippotherapy. In addition, instructors may feel that the act of riding is physical therapy, and if so, further education to enlighten instructors on physical therapy in general would be indicated.

At the present time, the climate for professional growth in American THR is favorable, as described by THR instructors attitudes toward role delineation and use of standardized terminology. Physical Therapists who would be interested in becoming involved with a THR program would be readily welcomed, and could expect to be involved in all three levels of service delivery (referral source, consultant and direct service). More research is needed in THR to determine knowledge levels of other facets of THR, as well as to monitor the ongoing changes of the professional status of this group.
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APPENDIX A

VAULTING SURCINGLE DIAGRAMS
APPENDIX B

SAMPLE SURVEY
KNOWLEDGE QUESTIONS

The following questions relate to therapeutic riding and terminology. Circle the correct answer for each of the questions or statements.

1. Sport is one division of the therapeutic riding field in America.
   TRUE FALSE

2. Education is not a division of American therapeutic riding.
   TRUE FALSE

3. Medicine is one division of the therapeutic riding field in America.
   TRUE FALSE

4. Hippotherapy is another division of therapeutic riding.
   TRUE FALSE

5. Hippotherapy is a term used by therapists who have therapeutic riding training in treating movement disorders.
   TRUE FALSE

6. Hippotherapy literally means "treatment with the help of the horse."
   TRUE FALSE

7. Are you aware that in German therapeutic riding, there are many divisions and classifications under the heading of therapeutic riding?
   YES NO

8. Did you know that Germany's three main divisions of therapeutic riding are similar to America's classifications?
   YES NO

9. The following are terms associated with therapeutic riding. Check those categories with which you are familiar.
   - HIPPOTHERAPY
   - DEVELOPMENTAL VAULTING
   - RIDING THERAPY
   - REMEDIAL RIDING
   - REMEDIAL VAULTING
   - SPORTS RIDING
   - SPORTS VAULTING

   The following questions relate to the terms listed in question 9. Circle the letter of the best answer.

10. Hippotherapy
    a) is defined as a specialized form of physical and/or occupational therapy using the horse as a therapy tool.
    b) does not require special training to perform.
    c) is a component of the sport division of therapeutic riding.

11. Hippotherapy
    a) includes any therapeutic side effects of riding a horse.
    b) can be provided by a therapeutic riding instructor.
    c) is recognized by NARHA as a specialized use of the horse by physical and/or occupational therapists.

12. Riding Therapy
    a) occurs when a disabled person rides a horse.
    b) includes physical or psychological exercises as determined by the medical specialist involved.
    c) emphasizes rider control of the horse as its main goal.

13. Hippotherapy
    a) always uses saddles and bridles for its equipment needs.
    b) is a medical treatment.
    c) emphasizes rider control of the horse.

14. Developmental vaulting
    a) is a classification of the Sport division of therapeutic riding.
    b) is typically performed at the trot and canter.
    c) encourages accomplishment of challenging postures on horseback as well as movement exploration.
15. Remedial Riding
   a) involves the teaching of adapted riding to the level of the disabled rider's ability.
   b) is part of the sports division of therapeutic riding.
   c) does not involve goals other than learning riding skills.

16. Sports Riding
   a) emphasizes rider control of the horse.
   b) can include any equine activity other than Hippotherapy.
   c) provides a recreational outlet for the handicapped population.
   d) includes all of the above.

ATTITUDE QUESTIONS
The following statements relate to your opinions about therapeutic horseback riding. Indicate how much you agree or disagree with each item by circling the appropriate response category at the right of each item. The response categories are as follows:

SD = Strongly Disagree
D = Disagree
A = Agree
SA = Strongly Agree

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<th>Strongly Agree</th>
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</table>

1. Hippotherapy is a specialized use of the horse in therapeutic riding.
   SD D A SA

2. Riding instructors can be the sole providers of Hippotherapy services.
   SD D A SA

3. I use the term hippotherapy to describe what I do as a riding instructor.
   SD D A SA

4. Riding horses constitutes Physical Therapy, if the rider's physical abilities improve.
   SD D A SA

5. In general, riding horses is Physical Therapy for all disabled riders.
   SD D A SA

6. I associate my riding instruction techniques with providing therapy.
   SD D A SA

7. Sport, Education and Medicine are the only 3 divisions of therapeutic riding.
   SD D A SA

8. Riding instructors are the primary service providers in all divisions of therapeutic riding.
   SD D A SA

9. I would work with professionals from all therapeutic riding divisions to deliver therapeutic riding services.
   SD D A SA

10. Some professionals in therapeutic riding are trying to further define existing classifications.
    SD D A SA

Please turn the page........
11. Expanding definitions of therapeutic riding roles is a good idea. 
   SD    D    A    SA

12. I support defining roles of therapeutic riding professionals. 
   SD    D    A    SA

13. Standardized terminology is a characteristic of any profession. 
   SD    D    A    SA

14. Establishing standard terminology would help therapeutic riding become more professional. 
   SD    D    A    SA

15. I would use NARHA supported terminology. 
   SD    D    A    SA

ROLE OF PROFESSIONALS QUESTIONS

The following questions relate to physical therapists and other professionals that may assist you in your therapeutic riding program. Please mark the blanks as appropriate.

1. Do you have physical therapists involved directly or indirectly with your program?
   a. YES_____ proceed to c.
      NO _____ proceed to b.
   b. If you do not have a physical therapist involved with your program, would you like to have one?
      YES____ skip to question 2.
      NO _____ skip to question 3.
   c. Check the areas that describe how the physical therapist(s) is involved with your program.
      YES _____ NO
      Provides consulting services, such as mounting techniques, precautions, evaluations, exercises, and equipment needs.
      YES _____ NO
      Provides direct service: therapist provides hands-on treatment or supervises the riding session. If checked yes, proceed to d. If checked no, proceed to 2. (on next page).
   d. Does the physical therapist(s) provide direct service with or without your assistance?
      With____
      Without____ Proceed to 2._____
2. If you have or would like to have a physical therapist involved with your program, how would you like the therapist to be involved? Check all that apply.

____ Referral source for riders.

____ Consultant: evaluates riders' physical needs; suggests mounting techniques, exercises, equipment needs; provides volunteer training.

____ Direct service provider: physical therapist works as an integral part with your program to provide Physical Therapy on horseback.

____ Other, please specify: ________________________________

3. Do you have other professionals involved with your program?

a. ___ NO proceed to Program Demographics section below.

   ___ YES proceed to b.

b. Check all the professionals that are involved with your program.

   ____ Special Education Teachers
   ____ Psychologist
   ____ Speech Therapist
   ____ Other, please specify: ________________________________

   ____ Physician
   ____ Occupational Therapist
   ____ Recreation Therapist

PROGRAM DEMOGRAPHIC QUESTIONS

The following questions relate to your therapeutic riding program. Directions are provided for each question.

1. Check the category that indicates the approximate number of riders participating each week that your program is in operation.
   ____ 10 and under
   ____ 11-49
   ____ 50 or more
   (if you know the exact number enter that number here)

2. Check all of the months that indicate the time of year your program is in operation.

   WINTER       SPRING       SUMMER       FALL
   ____ DEC.    ____ MAR.     ____ JUNE     ____ SEPT.
   ____ JAN.    ____ APR.     ____ JULY     ____ OCT.
   ____ FEB.    ____ MAY      ____ AUG.     ____ NOV.

3. Of all the disabilities listed, rank the top five types of disabled riders your program most often serves. A number 1 means the most frequent type of rider seen; a number 5 meaning the least frequent type of rider seen. Realizing many riders have more than one disability, indicate the primary disability. For example: a rider may have cerebral palsy and mental retardation. The primary disability or diagnosis would then be cerebral palsy. Be sure you only have five disabilities ranked.

   ____ Cerebral Palsy
   ____ Stroke
   ____ Developmental Delay
   ____ Learning Disabilities
   ____ Down's Syndrome
   ____ Other, please specify: ________________________________

   ____ Spina Bifida
   ____ Paraplegia
   ____ Scoliosis
   ____ Multiple
   ____ Muscular
   ____ Sclerosis
   ____ Dystrophy
   ____ Amputation
   ____ Mental
   ____ Retardation

   ____ Deafness
   ____ Sclerosis
   ____ Dystrophy
   ____ Trauma
   ____ Emotional
   ____ Blindness
   ____ Head
   ____ Trauma
   ____ Problems

Please turn the page....
4. a. Check the one category that best describes your program's form of instruction and the primary goals of your instruction.

___SPORT: teaching of equestrian activities emphasizing rider control of the horse and rider independence in the chosen equestrian activity.

GOALS: to improve quality of life for the rider, to provide a form of recreation, leisure, and competition for the handicapped population.

___EDUCATION: teaching of equestrian activities as they relate to educational goals and emphasizing educational skill acquisition through the chosen equestrian activity.

GOALS: to improve cognitive, behavioral, psychological or physical abilities in the rider.

___MEDICINE: the horse is used as a therapy tool by physical/occupational therapists or psychologists to effect specific physical or psychological changes in the rider.

GOALS: to improve the rider's physical or psychological function as measured by a specific treatment plan.

b. If your program provides more than one form of instruction, please mark each category of therapeutic horseback riding your program provides.

___SPORT        ___EDUCATION        ___MEDICINE

1. Check the highest degree of general education you have achieved.

___Less than high school

___High school diploma or equivalency (GED)

___Associate, two year junior college degree

___Bachelor's degree

___Master's degree

___Doctorate degree

___Professional degree (MD, DDS, DVM, etc.)

___Other, please specify:

2. Have you participated in therapeutic horseback riding continuing education eg. seminars, instructor certification courses?

a. ___NO skip to question 3.

___YES proceed to part b.

b. Please list the titles or topics of the seminars you have attended in the last five years:

__________________________________________________________

3. Have you had formal equine training, that is attended a school or college with course work pertaining to the equine industry?

a. ___NO skip to question 4. (on next page)

___YES proceed to b.

b. Please list the school or college and the type of course work completed.

__________________________________________________________
4. Do you belong to any professional equine organizations or groups?
   YES  ____  NO
   If yes, list memberships here: ____________________________

5. How many years have you been riding? Check one.
   ____ Less than one year
   ____ 1 year to 5 years
   ____ 6 years to 10 years
   ____ 11 years to 20 years
   ____ More than 20 years.

6. Of years riding, how many were spent in learning riding techniques, that is time spent
   with a trainer or taking lessons? Check one.
   ____ Less than one year
   ____ 1 year to 5 years
   ____ 6 years to 10 years
   ____ 11 years to 20 years
   ____ More than 20 years.

7. How many years have you been actively teaching therapeutic horseback riding?
   Check one.
   ____ Less than one year
   ____ 1 year to 5 years
   ____ 6 years to 10 years
   ____ More than 10 years

8. Check the appropriate horse related background(s) that describe the areas in which
   you have the most experience.
   ____ Western Pleasure  ____ Hunter/Jumper
   ____ English Pleasure  ____ Combined Training
   ____ Dressage  ____ Driving
   ____ Gymnastic Vaulting

THANK YOU FOR YOUR TIME AND HONESTY IN COMPLETING THIS SURVEY!

Close the booklet, fold it, and return it in the enclosed post-paid envelope. Thanks again!
APPENDIX C

POSTCARD AND COVER LETTERS
Hi!

Your therapeutic horseback riding program has been selected to participate in a scientific study. Your program's name was randomly selected from NARHA's current mailing list. An explanation of the study will accompany the questionnaire which should be arriving in the next day or so. Please have your top therapeutic riding instructor complete the survey. No names will be requested to insure confidentiality. If the survey arrives after the deadline, please return it anyway. I look forward to hearing from you soon.

Trish Curatti, PT
Physical Therapist
Hello!

I am a physical therapist in graduate school at the Ohio State University. I am interested in studying therapeutic horseback riding because I have been involved with a small riding program for the past five years.

In order to attract more much-deserved attention to riding programs, I would like to describe riding programs as they exist in America today. The enclosed survey will ask you questions about your specific program characteristics as well as ask you questions about therapeutic riding and your attitudes toward it. Completing the survey should take about 20 minutes.

Your responses are very important because results will give the therapeutic riding community an idea of how therapeutic riding is practiced in this country, what you think of therapeutic riding, and what, if any, educational efforts are needed. Your responses will be completely confidential. I have no way of knowing who you are, only what riding program you are currently associated with.

I have received NARHA support for this survey and will be publishing the results in the NARHA NEWS. By completing and returning the questionnaire, I will know you are interested in promoting scientific research and in being an integral part of scientific data collection in this exciting field of service delivery.

A postpaid return envelope is enclosed for your convenience. Please mail the completed questionnaire by ________.

Cordially yours,

Trish Curatti, PT
Physical Therapist

Bill Scobbi
Executive Director
NARHA
January 29, 1991

Dear:

Enclosed is a mail survey instrument that has been developed for use in a study of therapeutic horseback riding. The survey will assess therapeutic riding instructors' knowledge and attitudes of therapeutic riding as well as describe their programs' characteristics. This instrument will be sent to the chief therapeutic riding instructors of NARHA registered programs. The survey is designed to collect information on the following variables: demographics, and knowledge/attitude toward therapeutic riding terminology and classifications, specifically Hippotherapy.

Before I can use this instrument, I need to check its validity for this study. I have sent the instrument to several experts in the area of therapeutic riding for this purpose. I am requesting your assistance as an expert in the field of therapeutic riding in determining the validity of the instrument in the following ways:

--content and face validity: does the instrument appear to be measuring knowledge/attitudes toward Hippotherapy and therapeutic riding classifications/terminology? Are the knowledge questions accurate?

--item clarity/wording: is the reading level appropriate, are questions/statements clear, is the wording accurate? Are there any typographical errors?

--appearance: is the instrument easy to follow? Any comments you may have can be penciled in directly on the instrument.

Your response to this request is needed by February 14, 1991. Please return the instrument with your comments in the enclosed, stamped envelope.

Your input to this project is greatly appreciated. Thank you!

Sincerely yours,

Trish Curatti, PT
Physical Therapist
January 29, 1991

Greetings!

Enclosed is a mail survey instrument that has been developed for use in a study of therapeutic horseback riding. The survey will assess therapeutic riding instructors' knowledge and attitudes of therapeutic riding as well as describe their programs' characteristics. This instrument will be sent to the chief therapeutic riding instructors of NARHA certified programs. This is why I am writing you today.

Before I can use this instrument, I need to check its validity for this study by conducting a field test. I have sent the instrument to several chief therapeutic riding instructors for their input. I am requesting your assistance as a therapeutic riding instructor to review and comment on the enclosed survey.

Please look at the following areas as you complete the survey (you may write your comments directly on the survey).

--wording clarity: are the questions and statements clear?
--appearance: is the survey easy to follow?
--length: how long did it take you to complete the survey?
--difficulty: are the knowledge questions too easy, too hard or just the right level of difficulty?

Your response to this request is needed by February 14, 1991. Please return the survey in the enclosed post-paid envelope. The number on the survey and envelope identify your program only. Please do not sign your name to assure confidentiality. Your input on this project is greatly appreciated. Thank you!

Sincerely yours,

Trish Curatti, PT
Physical Therapist
Hi!

It's me again. I am writing to remind you to send in the survey you received in August pertaining to therapeutic riding. I've found that many of the people that have responded so far received the survey after the return deadline. If this is the case with you, and you thought it was too late to return the survey, let me assure you it's never too late!

Anticipating that you have filed my survey in the "round file", I have enclosed another survey and a post-paid return envelope for your convenience. To get an adequate representation of what the current therapeutic riding community knows and feels about therapeutic riding, your responses on this instrument are extremely important. Won't you please take a 20 minute break from your hectic schedule to complete the survey?

Perhaps you mailed the first survey some time ago or just recently. As of this mailing's postmarked date, I have not received a survey from your program. Hopefully the mail gnomes will allow this survey to arrive in a more timely manner. Remember, your responses are completely confidential; I have no way of knowing who you are, only the name of your program.

I really appreciate you taking the time to complete this second survey. NARHA is very interested in the results so they can use the information to develop programs--a second benefit you'll receive in addition to the knowledge that you will have advanced the scientific data base available on therapeutic horseback riding.

Very truly yours,

Trish Curatti
Physical Therapist