To the Graduate Council:

I am submitting herewith a dissertation written by Ray M. Patterson entitled "An Analysis of Perceived and Expected Roles of Physical Therapists." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Education, with a major in Educational Administration and Supervision.

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and recommend its acceptance:

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AN ANALYSIS OF PERCEIVED AND EXPECTED ROLES OF PHYSICAL THERAPISTS

A Dissertation

Presented for the

Doctor of Education

Degree

The University of Tennessee, Knoxville

Ray M. Patterson

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ABSTRACT

This field study explored relationships of the perceived (does) and the ideal (should) roles of the physical therapist as perceived by physicians, hospital administrators and physical therapist (PTs). The thrust of the study was to explore whatever conflicts might exist between bureaucratic and professional roles which physical therapists assume. Four null hypotheses postulated that there were no differences between and among respondent groups in their perceptions of and expectations for the physical therapist as expressed by responses to 74 questions, each with a does and a should component. These 74 questions were grouped into five clusters each representing some activity of the physical therapist.

The perceptions of (does) and expectations for (should) physical therapists' roles were obtained from 153 respondents from Texas by a questionnaire developed for this study. Respondent groups included physicians (N=33), hopsital administrators (N=45), chief (N=43) and staff (N=32) physical therapists.

The questionnaire was field tested by 64 senior physical therapy students. Instrument, as well as cluster, reliability coefficients were computed. Instrument reliability, using the split-half method, was estimated at above .95 and cluster reliability ranged from .50 to .96 with eight of ten ranging from .83 to .96. Clusters of items as well as single items were used in analysis. Chi-square procedures

were used for analysis of single items. A degree of consensus analysis was done for each single item which indicated significant differences. After respondent "scores" were generated for items and mean cluster computed, t-tests were utilized to analyze cluster differences, and differences between the does and should dimensions on the clusters.

Data supported the rejection of each general null hypothesis, indicating that there were differences in the respondent groups as to the role(s) of the physical therapist.

Smaller numbers of differences were found between hospital administrators and chief PTs may be more "bureaucratic" and more like hospital administrators in their perceptions of health care than are physicians and Pts.) The study indicated that the groups with the largest differences were physicians and chief physical therapists. Physicians and staff physical therapists had a relatively low number of differences.

Since role conflict does exist in the professional and bureaucratic roles of physical therapists, then less than optimal utilization of physical therapists occurs in our health-care system. Poor utilization and differences in perceived role have been postulated as a possible cause for turnover in allied health personnel. This study indicates that role conflicts do occur, and that these can be classified as professional-bureaucratic and professional-professional conflicts.

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CHAPTER I

I. INTRODUCTION AND BACKGROUND

> A student who has achieved well in all of his general education, professional skills courses and in his clinical training arrives on the scene for service. What happens? He has been taught how to accept responsibility, how to plan his laboratory or treatment program and what does he find? Too often he is in a position where his job seems related only to how well he takes orders and performs mechanical/technical skills. His educational experience has prepared him for assuming a role on a health care team he does not get to assume: what disenchants him even more is that not only do other members of the team appear unwilling to accept his potential for a higher level of performance, but to his dismay he finds that members of his own profession have learned to accept such a subordinate role.[1]

The allied helath professions are a group of health fields that have developed because of the need for a level of practitioner who could safely and effectively perform certain aspects of health care not requiring the long and expensive education of a "physician." The allied health fields which have appeared as a result of this need are themselves a divergent group whose educational preparation requirements can range from predominantly on-the-job training at one point on the continuum to academic doctoral-level preparation at another point. Examples of allied health professions include medical technology, physical therapy, and occupational therapy. Because of separate federal funding sources and certain other differences, nursing and pharmacy are not designated as allied health professions. Their educational preparation and job requirements, however, closely parallel the previously named fields.

The differences in training and education found in the various fields cause problems when allied health professions are considered as a group. With this much diversity, it is understandable that the physician (MD) might not be aware of the level of practice and/or expertise possessed by individuals within the different allied health professions. The economic advantages of training and/or educating a person to perform in an area of allied health care delivery may be lost if the role of that person is not understood by the MD. If the knowledge and/or skills of the person trained are not then utilized, the system may become "penny wise and pound foolish." Clearly there are savings to be achieved in health care by having some tasks performed by an assistant or some health professional at a different level of practice from the physicians.

> . . . Society requires of the physician an extremely long training period. Thus, after high school, the specialist physician has 14 years of training ranging from university through residency training before he has his specialty boards, making him somewhat older and more mature than individuals not having reached this age and having less training. By contrast, the Ph.D. in psychology generally will have six to nine years of education after high school, the speech therapists six years, the social worker six years and the occupational therapist and physical therapist four years.[2]

Light, in "Challenging Perceptions of the Health Team Members," says:

> . . . Even the American Medical Association only recently, finally gave up the ghost and reluctantly admitted that it will not be possible to produce the number of physicians required to deliver adequate care and service in the foreseeable future . . . . The health team concept may now have to be sharply focused. Physicians may have to share responsibilities rather than simply delegate duties."[3]

Dr. John Budd, President of American Medical Association (1977 to 1978), stated that medical schools have tried to alleviate the shortage (of medical practitioners in rural areas) by accepting more students from rural areas, hoping that they would eventually go back home to set up practice. He concluded, however, that this technique had not had much impact.

Ann Zimmerman, registered nurse and President of the American Nurses' Association (1976 to 1978), offered a different solution: "Doctors may not want to live there [rural areas] but there are plenty of nurse practitioners willing and able to practice in rural areas--if they were allowed to receive reimbursement privileges that doctors now enjoy."[4]

Nationwide, health personnel are exploring different avenues to allow persons to receive better health care. The avenues range from new systems of health care delivery to new types of health practitioners to career ladder concepts of education for various health professionals or assistants. Some examples of these efforts are:

1. The health maintenance organization (HMO)--a comprehensive program which provides and arranges for medical care for a fixed, prepaid fee. The emphasis is on keeping the population well rather than treating the sick.

2. The physician assistant--a type of practitioner who can dispense limited medication and see patients who are not critically ill.

3. The nurse practitioner--a nurse with advanced training who can see patients without a physician referral, establish treatment plans and dispense certain medications.

The field of physical therapy has also been examining the concept of practice without physician referral. Internationally, the Australian Physical Therapy Association was the first physical therapy professional association to endorse the concept which was subsequently approved in June, 1978 by the World Confederation of Physical Therapy. The American Physical Therapy Association (APTA) is a member of the World Confederation of Physical Therapy.

In the field of physical therapy, there are considerable differences in the degree of freedom with which one is allowed to practice. This freedom (or lack of it) ranges from physician orders which are very detailed in regard to the patient treatment, to orders for treatment which are very general in nature even to the point where the physical therapist may be the first person in the health care system to evaluate and treat the patient. (Examples of these types of orders appear later.)

A common saying heard among physical therapists is: "Once the physicians got to know me and what I could do, I was given a great deal more freedom to do what 'I' thought was the best for the patient." Is physical therapy perceived as a profession practiced by individuals who have professional characteristics or is it perceived as a technical field whose practitioners, except in rare instances, are regarded as merely technicians?

The 1977 Dictionary of Occupational Titles[5] lists physical therapy as a profession for the first time. If physical therapy is a profession, then this implies (at the very least) that: (1) there is a body of knowledge peculiar to the field, (2) the physical therapist is responsible for practicing the skills inherent within the body of knowledge, and (3) there are accepted modes of inquiry to extend that body of knowledge. (Chapter II of this study discusses more elements of a profession.)

Currently, physical therapy is a very sought after field among students. Nationally, there are (approximately) six students who apply for every one position available in physical therapy educational programs. Higher demand for the programs makes it easy to select well qualified students into the field. The first physical therapy class (N = 21) admitted to the University of Texas at San Antonio (Summer 1978) had a class grade point average (GPA) of 3.47 on a 4.0 scale. This GPA was obtained from classes taken during two years of academic work in courses that included:

1. Inorganic Chemistry - 8 semester hours
2. General College Physics - 8 semester hours
3. General Biology - 4 semester hours
4. Comparative Anatomy - 4 semester hours
5. English - 9 semester hours
6. Foreign Language - 9 semester hours
7. Sociology & Psychology - 6 semester hours
8. Mathematics - 3 semester hours
9. Fine Arts (Art or Music) - 6 semester hours

This list of courses is a generally standard pre-professional curriculum for physical therapists.

In the current health care structure there are two social systems that possibly limit the professionalism of physical therapists. First is the arena in which the physical therapist works. Most physical therapists are employed by hospitals where possibilities exist for conflict between the bureaucratic role of the therapist as a member of the hospital staff and the professional role of the physical therapist which has been developed in training and in practice. The hospital administrator, under pressure from insurance companies and from patients to stop rapidly rising health costs, wants to have each department run as efficiently as possible. The administrator becomes upset with the physical therapy department because patients are not leaving the hospital as soon as they should. As a result, insurance companies refuse to pay for what they consider to be excessive care.

The second area of role conflict lies in the realm of professional to professional relationships. The physical therapist as a health care professional is beset by role conflicts. The Physical Therapy Act[6] in the state of Texas (and most others) says that a physician must first see the patient and then order physical therapy if treatment is deemed necessary by the physician. Legally, the physician is the person responsible for the care of the patient. In actuality, there are many cases where patients are sent to a physical therapy department with orders of "evaluate and treat." In other

instances, physicians want complete control of a patient and may become incensed if the physical therapist even implies that she/he may know what would be an appropriate treatment. Two types of orders are possible--referrals with wide latitude to execute professional judgment, and highly explicit orders where any professional judgment on the part of the therapist is usurped by the physician.

Examples of the two types of orders are:

A. John Adams, 56 year old male
   1. Diagnosis - Rheumatoid arthritis, hips and knees
   2. Treatment - Physical therapy to regain walking
   3. Precautions - Moderately severe osteoporosis.

The second example:

B. John Adams, 56 year old male
   1. Diagnosis - Rheumatoid arthritis, hips and knees
   2. Treatment - a. hot packs to hips and knees for 20 minutes, followed by
      b. active assistive exercise to knees and ankle, followed by
      c. walking in parallel bars for 10 minutes.

The role of the therapist implied in Order "A" is that of professional. The physical therapist is being asked to utilize a body of knowledge that she/he possesses to evaluate a patient problem and then to set up a treatment program to correct the problem. Order "B" places the physical therapist in the role of technician. The

physician has decided what is wrong, what should be done, and for how long treatment should continue. The physical therapist is there only to carry out orders (and is probably overtrained and overpaid for this role). Even if a more appropriate treatment is indicated, the physican's order must be followed.

II. PROBLEM STATEMENT

Part of the problem leading to the purpose of this study derives from factors already mentioned in the prior section--what are alternative and appropriate ways to provide health care? How can health care delivery be reduced in cost and restructured to use the professional skills of allied health personnel?

Our health care delivery system has been called a "push-cart" system in the age of supermarkets. The federal government has placed a high priority on new ways to deliver health care as exemplified by the funding of educational programs for new levels of health care providers, and the funding of health maintenance organizations. In the current health care system, the physical therapist attempting to provide the best care possible faces at least two role conflicts. These two role conflicts are those of: (1) professional vs. professional and (2) professional responsibility vs. bureaucratic requirements.

Is the physical therapist viewed as a professional practicing the body of knowledge that is known and recognized by the field, or is the practice limited by outside factors? Are practitioners

disenchanted because they are not able to utilize the skills they possess? Are academic instructors acting as change agents, teaching students only the professional aspects of practice and not preparing them for the bureaucratic realities?

Since 1936, the American Physical Therapy Association (APTA) and the American Medical Association (AMA) have, through a collaborative arrangement, accredited educational programs in physical therapy. On January 1, 1977, the American Physical Therapy Association sought to break with that arrangement and is currently seeking the authority to accredit its own education programs.

The American Medical Association's refusal to adopt a new Essentials for an Education Program for the Physical Therapist[7] (the guideline for accreditation) that had been approved by the House of Delegates of the American Physical Therapy Association (APTA) was one cause of the break. The AMA was asking the APTA to continue to operate under Essentials[8] adopted in 1955. The APTA contended that the role of the physical therapist had changed and therefore the educational requirements for preparation programs needed to be changed.

If there are role conflicts, then the delivery of physical therapy services could be improved if the conflicts were resolved. Explication of the sources of role conflict could lead to improved instruction in preparation programs for physical therapists.

III. THE PURPOSE

Statement of the Purpose

The purpose of this study is to explore two possible sources

of role conflict within the physical therapy profession: conflict between two professional group role expectations and conflict between the professional and bureaucratic role expectations. Specifically, the purpose of the study is to identify areas of role conflict: (a) between physical therapists and physicians (an example of professional vs. professional role conflict), (b) between physical therapists and hospital administrators (an example of professional vs. bureaucratic role conflict, and (c) between chief and staff physical therapists (a combination of both types of role conflict). The study of roles will serve to identify and illuminate areas of actual and potential role conflict.

IV. THEORETICAL FRAMEWORK

Introduction

Although this study does not lend itself to experimentation and the classic pre/post analysis, it has been developed within a theoretic framework that provides structure and direction. The principle theoretic framework is role theory; secondary considerations are functional specialization and bureaucracy.

Role Theory

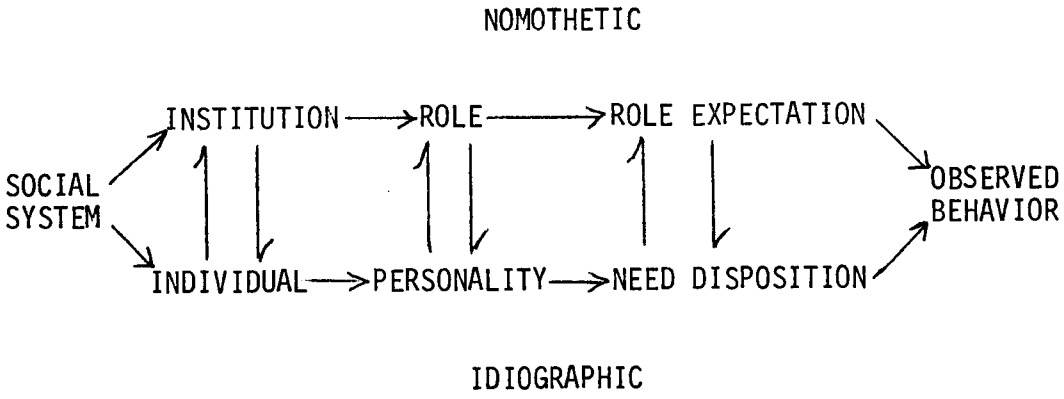
Role theroy has been used to study questions of the type proposed in the current investigation. It seems appropriate to use role theory as a guide and framework for this study.

Role theory as a vehicle for guiding research was proposed by Sarbin.[9] Using and building upon seminal work by Parsons (1951),[10]

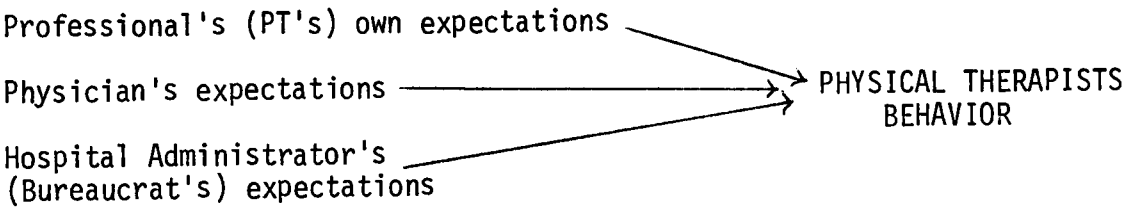
Getzels and Guba (1957)[11] synthesized and popularized a model for understanding and using role theory to help explain human behavior. Ideas from this model appear also in the works of Malinowski (1960)[12] and Kluckholn (1964).[13] This model was heuristic in nature, giving rise to hypotheses or questions based upon interactions among individuals, organizations and other factors.

Getzels and Guba's Social System model hypothesizes individual roles and institutional roles. The model suggests that an individual brings to the institution (i.e., formal location of the work station) certain expectations for doing the assigned job. Likewise, the institution has certain expectations as to how the job is to be performed. Additionally, others who interact with the individual and the institution have developed expectations for the performance of the particular role.

These clusters of expectations constitute the definition for the particular role. How well these expectations match is one deciding point as to how successfully an individual fills a position and how satisfied an individual is in performing the tasks associated with the position. Getzels and Guba used the following diagram to elucidate their model and to predict "observed behavior," the result of interaction of the nomothetic (or normative) and idiographic (or individual) axes:



The Getzels and Guba model is useful in helping conceptualize both the professional-bureaucracy conflict (partially an individual-institutional conflict and partly an individual-individual conflict) and the professional-professional conflict (basically a role-role conflict). For purposes of this study, the questions may be explored by comparisons of role expectations of the three focal groups for the role of the physical therapist.



Role expectations would govern behavior that could range from required behavior through accepted behavior all the way to prohibited behavior in each person's concept of the role. Based upon formulations of the Getzels-Guba model, some areas of conflict have been postulated for study:

1. The professional has a primary concern for quality while the bureaucratic or institutional role must stress at least enough quantity to keep the institution's operations fiscally sound.

2. The bureaucracy of a hospital includes a medical staff to determine matters of quality assessment. The physical therapist is judged for his professional competence by another type of professional.

3. In decision-making regarding physical therapy, the bureaucracy may make decisions regarding professional charges which may cause patients or clients to have a negative opinion about physical therapy.

Questions to Guide Study

This study has been guided by a series of research questions attempting to explore the perceived and/or expected roles of the physical therapist.

1. Do physical therapists (PTs) consider themselves as professionals who perform professional roles? Do physicians (MDs) consider PTs as professionals or as technicians simply carrying out preordained instructions?

2. Do physicians consider physical therapists capable of analyzing logically their knowledge and experiences for factual worth and practical application to patients?

3. Do hospital administrators perceive PTs as professionals or as technicians in relation to health care delivery when the PTs are part of the hospital staff?

4. Is there agreement between/among the physical therapist, the physician and the hospital administrator as to the actual and/or ideal roles of physical therapists?

5. In health care, consideration is given to the "team" approach to patient care. Do hospital administrators, physicians and

physical therapists believe that physical therapy care is the responsibility of the physical therapist (acting as a professional) or do they believe that physical therapy care is to be performed by technicians simply carrying out the orders of physicians?

Design

The study was a survey. Basically, it employed survey and field study approaches with the attendant strengths and limitations (Kerlinger, 1973).[14] A questionnaire designed (and field-tested) was mailed to persons randomly selected from the fields of physical therapy, medicine and hospital administration who practiced in the state of Texas.

The design was ex post facto; there was no manipulation of variables. Variables were examined and related to major questions which guided the study.

Analysis Procedure

Analyses were made between/among groups of various items and on clustering of items using chi square; t-tests were used to analyze respondent group "scores" to item clusters. Arithmetic techniques were used to synthesize and compile demographic data.

Limitations

1. Data collection procedures necessitated a voluntary response from a questionnaire with its inherent limitations (e.g., possible lack of response and the inability to check responses given).[15]

2. Research design was ex post facto, with the attendant limitations inherent in that design (e.g.; lack of experimental rigor, controls, manipulation of variables, etc.).

3. Low response from the original random sample of physicians necessitated using a convenience sample to increase the respondents. The two groups were analyzed separately for arithmetic computations but combined for tests of significance after preliminary results revealed that both groups were similar in their responses.

Delimitations

1. The study was delimited to physical therapists, physicians and hospital administrators in only one state.

2. Items for inclusion for the survey instrument were taken from a Department of Labor Study of Physical Therapy Competencies and appropriately reworded questions from a previous study of Bureaucracy vs. Professionalism.[16]

Assumptions

1. The questions derived from Department of Labor questionnaire to analyze the task performed by physical therapist and the items adapted from the Corwin study constituted a valid questionnaire.

2. A selected group of health care professionals can differentiate between/among roles for physical therapists.

3. Respondents, each of whom held a license to practice a profession, were knowledgeable about the roles of their professions.

IV. DEFINITION OF TERMS

Allied health professions. Those health professions whose practitioners have training and responsibility for supporting, complimenting or supplementing the professional functions of physicians, dentists and other health professionals in the delivery of health care to patients.[17]

Bureaucratic role orientation. For purposes of this study, bureaucratic role orientation refers to a type of behavior rather than an administrative structure. The emphasis is on efficiency. This person is interested in highly standardized tasks.

Chief physical therapist. A physical therapist who has been appointed by the administration of a hospital to be administratively in charge of the physical therapy unit of the hospital. The chief physical therapist has a primary responsibility for the administration of the department but will probably have patient care responsibilities also. The chief is responsible for supervising the staff physical therapists.

Staff physical therapist. A physical therapist whose primary responsibility in the hospital is the delivery of patient care. Staff physical therapists are supervised by the chief physical therapist.

Hospital administrator. The person who is appointed by the Board of Directors of a hospital to be responsible for the overall running and planning of the hospital.

Physical therapy. The care of any bodily condition of any person by the use of heat, light, water, electricity and physical

massage, manipulations and active, passive and resistive exercise. Physical therapy also includes evaluating the patient by performing tests and/or measurements of neuromuscular, sensorimotor, musculoskeletal, cardiovascular, and respiratory functions as an aid to treatment; planning and implementing initial and subsequent treatment programs as the basis of approved test findings; delegating selective forms of treatment to supportive personnel with assumption of the responsibilities for the care of the patient and the continuing direction and supervision of the supportive personnel and the providing of consultative services for health, education and community agencies.[18]

Physician. A person licensed to practice medicine; doctor of medicine.

Professional role orientation. A system of behavior opposite to bureaucratic role orientation. The emphasis is on quality with an orientation toward less-standardized tasks.

Role. (a) actual--the role as it exists in practice, not just the possible role. It is the role that a person or group "feels" is being performed in accordance with expectations; (b) ideal--the role that, in terms of expectations of role definers, would be most desirable in the particular situation. This constitutes the "should" dimension of behavior in contrast to the "does" dimension of the actual role.

Role conflict. Those conflicts that occur when a role incumbent is required to conform simultaneously to a number of expectations which are mutually exclusive, contradictory, or inconsistent

so that adjustment to one set of requirements makes adjustment to the other set of requirements impossible or at least difficult.[19]

Technician. A person who is skilled in the technicalities of some subject. In this study, technician refers to a practitioner who knows the "how" of a procedure by not the "why."

V. ORGANIZATION OF STUDY

Chapter II includes an introductory section which describes the types and responsibilities of professions. The physical therapy profession is compared to the standard. There also is a discussion of what constitutes a bureaucracy. The remainder of Chapter II deals with how professional models and bureaucratic models of behavior come into conflict with each other. Chapter III describes the methodology used in this study. There is a discussion of ex post facto research. Also included are a description of how the instrument for this study was developed and the procedure used. Chapter IV is devoted to an analysis of the data compiled from the study. Chapter V is devoted to the summary of the research done in this study and has recommendations for future study.

CHAPTER II

REVIEW OF RELATED STUDIES

I. INTRODUCTION

Lewis White Beck[20] writing in "Professions, Ethics and Professional Ethics," has described the "prima facie" and the "qua duty" of professionals. "Prima facie" duty refers to those things which one would automatically assume ought to be done without a great deal of thought and without investigating the circumstances in great detail. "Qua duties" are those which a person performs because of a position occupied.

Beck says that these "prima facie" and "qua" duties often come into conflict with each other; when they do a problem arises which he terms "casuistry," the application of abstract principles to individual cases. Human life is much too complicated for abstract principles just to apply them without any "ifs," "ands," "buts," and "howevers," and the art of applying them properly to the individual case is "casuistry."

Beck then describes these five characteristics which are present in varying degrees in every social group commonly recognized as a profession:

1. Membership in a profession requires a special skill or learning, the standards of which are set by people who are already in the profession.

2. The primary orientation of members of a profession is toward the clients' interest or the interest of the whole profession itself.

3. Self control by members of the profession (colleague/control or peer control) is normally preferable and/or superior to legal control by outsiders.

4. The rewards of success in the professions are not primarily financial.

5. There are devices in every profession for reducing, or if not reducing at least hiding, inter-collegial competition.

Although a profession can be readily defined in ideal terms, in reality, things are rather different. Each succeeding decade sees movement farther and farther away from the "pure" or "ideal" description.

Three important trends in professional life have been taking place at a very rapid rate in the United States:

1. The movement from vocations to professions. In its transition, for example, nursing has developed a code of ethics appropriate to its new status as a profession.

2. New mechanisms of control of the in-group--techniques for reducing or hiding competition.

3. The movement from "free" to "bound" professions as further defined by Beck.

By "free" profession, Beck means something like law or medicine as it is practiced by an individual who is his/her own entrepreneur.

A lawyer for a large corporation or a doctor on the staff of a hospital or employed by a Health Maintenance Organization is not quite as free as she/he would be if she/he were in private practice.

"Bound" professions are those where there is an institutionalization of the profession. Law practiced by members of a government bureau would be described as a "bound" profession. Hospital medicine is also a "bound" profession.

Beck says, there are three changes which take place when professions change from free to bound. First, direct confrontation between the professional and the client decreases. Second, there may be loss of individual face-to-face responsibility for the client's interest. Third, and most painful of all, conflicts of duty can arise because of the professional's divided responsibilities to his/her client and to the institution which employs him/her (prima facie vs. qua duties or professional vs. bureaucratic responsibilities).

As an emerging member of the Allied Health Professions, the physical therapy profession is facing many challenges today both from within and from outside the organization. Several of these problems have been discussed on preceding pages--moving to a free from a bound profession, qua duty vs. prima facie duty, and some compromise with Beck's five characteristics of a profession. New concerns arising in the transition from technical trade to profession include: (1) making adjustments in the preparatory educational requirements, (2) assuming tasks previously performed by other health professionals (inherent with this is the conflict that occurs over who is responsible for what),

and (3) changes which are brought occur as a result of social, economic, political and educational changes.

The attempt by the American Physical Therapy Association (APTA) to break away from its collaborative arrangement with the American Medical Association (AMA) for the accreditation of physical therapy education programs was one of the visible signs of conflict concerning the role(s) of the physical therapist. Physical therapy as a profession, however, has not shown the same pattern that Beck has described in moving from a free to a bound profession. The opposite, in fact, has been the case, although there are physical therapists practicing in each category--and some in both.

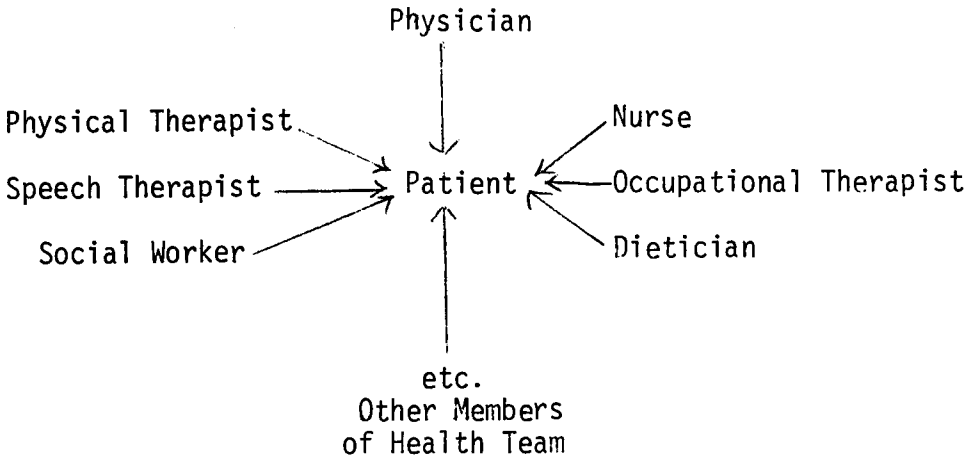
Physical therapy as a profession was organized in 1917 as a department of the Surgeon General's office called the Woman's Auxiliary Medical Aides. In 1918, the service was transferred to the Division of Physical Reconstruction and the title was changed to Reconstruction Aides.[21] Historically, physical therapists have been employed by institutions (hospitals). Today, however, there are enough physical therapists in private practice to necessitate a special section of the APTA for self employed professionals.

Friedmann[22] has written about the conflicts between Medicine and Physical Therapy. Historically, he says, society has given the physician the role and responsibility for evaluation, diagnosis and treatment of persons who are sick and disabled. Today the physician has both the moral and <u>legal</u> responsibility for so doing.

Health care, Friedmann says, should not be performed by a committee (a body of persons delegated to consider, investigate, or

report on some matter) but a team (including a number of associates, each subordinating personal prominence to the efficiency of the whole). Such a team must have a leader who calls the shots. Success is determined by the leader's capacity to assess accurately the potential of all the teammates, the difficulties presented and the proper delegation and timing of treatment. Because of the historical, moral, and legal requirements, the leader of this team must be a physician.

Carr[23] and Mase[24] argue that the patient-centered model is a more appropriate one than the team approach:



In this model the patient is responsible for his/her health care. The patient goes to the physician for a diagnosis; the physician can refer the patient to the proper health care practitioner for treatment. The appropriate practitioner then becomes the person responsible for making decisions regarding that particular aspect of patient care which is within his/her area of professional expertise.

It is the belief of some physical therapists that part of a <u>physical therapist's</u> job is to write the prescription for <u>physical therapy</u>. This, states Friedmann,[25] is in direct contradiction of legal

requirements which specify that only physicians may prescribe treatment for disease, pain, injury, or deformity. If physical therapy or nursing, as professions, fight for their right to prescribe treatment, they must also assume the responsibility for the effects of treatment. Friedmann believes that they are reluctant to do so and concludes that any person could write an intelligent prescription based upon a diagnosis made by someone else.

Peake writes, "The physician can no longer personally meet all of the expanded needs [of the patient] and must rely on various members of the health team, and their specific expertise."[26]

> . . . Role-oriented behavior by hospital personnel represents an important aspect of the context which surrounds patients. The extent of agreement and disagreement among members of the hospital family about various roles can affect hospital functioning and the delivery of health care.[27]

The lines have been drawn. There seems to be no clear consensus concerning the role of the physical therapist when this is viewed between professional groups. This disagreement between/among professions is termed a professional vs. professional conflict.

The second type of conflict examined in this study is that of professional vs. bureaucrat. Although no analysis of professional/bureaucrat role conflict has been made specifically with physical therapists, this conflict has been studied with nursing.

In a study of nursing role conflict Benne and Bennis[28] found that confusion and conflict about the role of the professional nurse reached peaks at several sensitive points. First was the conflict that occurred when the nurse became frustrated by the difference

between her image of "real" nursing and the functions she must assume in actual work situations. Second, the nurse-doctor relationship was often a tension area. Third, all too frequently promotion for the nurse meant conflict between her desire for a promotion and her professional and psychological need to give bedside patient care.

The nurse is actually required to perform five major roles:

1. Technical functions of nursing procedures,
2. Administrator in ordering supplies and keeping records,
3. Organizer--works in and maintains a complex organization replete with problems of hierarchy communication and control,
4. Teacher of other hospital personnel and patients, and
5. Informal involvement interacting with other colleagues.

Benne and Bennis[29] identified at least four forces determining the character of the nurse's role:

1. The official expectations that stem from the institution in which the nurse works.
2. The expectations of the nurse's immediate colleagues, subordinates and peers in the working situation.
3. Reference groups outside the nurse's immediate work situation.
4. The nurse's self expectations--her own role image of what a nurse should be and do.

Smith[30] has shown that a discrepancy between nurse role values promulgated by head nurses [bureaucratic] and those emphasized and rewarded by nurse faculty [professional] resulted in a conflict climate

for the nursing student. Corwin[31] in a study of the magnitude of [Bureaucratic-Professional] conflict reported by degree and diploma nurses after varying amounts of work experience found that nurses trained in collegiate programs expressed a higher intensity of conflict than did diploma nurses.

In a similar study, Kramer[32] drew the following conclusions:

1. The bureaucratic orientation of neophyte nurses increased with length of employment.

2. The increase in bureaucratic value orientation was related to a shift from a school or professional-centered model to a bureaucratic work-centered model.

3. Role deprivation was greater for subjects retaining instructor role models than for those who shifted to work-centered models.

II. THE DEVELOPMENT OF ROLE

Role theory has been useful in research on conflict, bureaucracy and staffing. As a working model, it seems to have started with Sarbin who saw the similarity of role in drama and in everyday life and the utility of role in helping explain and predict behavior--especially in organization and areas of conflict. Major elements of role theory have been defined as bases for studies of role conflict.

Roles have been defined by numerous authors. Several definitions are presented to help explain this concept.

> . . . Role is expected or recurrent behavior in a given situation.[33] Social role is a set of expectations oriented toward people who hold or occupy a certain "position" in a social system or group.[34]
>
> . . . Role is an organized pattern of behaviors in accordance with expectations of others. Social scientists often refer to patterns of expectations as a person's social position--his rights and duties in a particular interactional situation and his role as behavior appropriate to his position.[35]
>
> . . . If the goals and purposes of the institution are known, the task to achieve the goals may be specific, and these may be organized into roles. . . . Roles represent positions, offices, or statases within the institution. . . . Roles are institutional givens. . . . The behavior associated with a role may be thought of as lying along a continuum from required to prohibited. . . . Roles are complementary. . . . Roles are interdependent in that each role derives its meaning from other related roles in the institution.[36]

In physical therapy, the role(s) can be studied by utilizing the Getzels and Guba model. Since most physical therapists operate within an institution (hospital, clinic, or treatment center), the goals of the physical therapy department--and therefore the goals and roles of the physical therapist--are in keeping with and help to meet the goals of the institution (or at least there must be some degree of goals congruence). Certain tasks are required (e.g., treatment of patients) while others are prohibited (e.g., surgery), and the roles of various actors in the institution are complementary and interdependent. The physical therapist may teach a person how to transfer from a wheelchair to a bed (complementary to nursing care), while the physical therapist is interdependent upon nursing service to distribute medications to help relieve muscle spasm (interdependent).

Rules are established for appropriate role behaviors. Role performance has some degree of continuity with the notion of permanence

within the institution. If a role incumbent acts in an unacceptable manner, there are sanctions that can be applied to correct or punish the errant behavior.

> Role expectations imply futurity, or at least continuity, in the orientation of an incumbent to a position. Expectations imply sanctions. Behavior conforming to expectation will usually be rewarded (at least not punished). Expectations delimit both obligation and rights.[37]

III. BUREAUCRATIC VS. PROFESSIONAL ROLE CONFLICT

The Concept of Bureaucracy

The well run bureaucracy, according to Max Weber's ideals, would have the following characteristics:

1. A division of labor based on functional specialization.
2. A well defined hierarchy of authority.
3. A system of rules covering the rights and duties of employees.
4. A system of procedures for dealing with work situations.
5. Impersonality of interpersonal relations.
6. Selection and promotion based only on techinical competence.[38]

Blau[39] defines bureaucracy as a type of organization designed to accomplish large-scale administrative tasks by way of system coordination. He sees the bureaucratic structure as one previously intended to improve administrative efficiency.

The intent of this study was not to examine bureaucracy as a system of administration only. The study also examined bureaucracy and a bureaucratic system from a way of acting or how one looks at

one's work. (Is it organized and administered to primarily meet the demands of efficiency?)

Bureaucracy was considered as an organization governed by a set of principles or behaviors, rather than just as a type of organization. Corwin[40] has shown that nurses who had bureaucratic role orientations differed from nurses with professional role orientations as indicated in Figure 1:

Continuum	Bureaucratic Orientation	Professional Orientation
Degree of Standard	1. Highly standardized, simple routine task. 2. Skill based on practice. 3. Systematic exclusion of the client. 4. Emphasis on Records and Files to assure continuity.	1. Less standard task. 2. Skill based on a specialized body of knowledge. 3. Emphasis on the importance of unique problems of the client, as a person.
Degree of Autonomy Permitted	1. Use of abstract rules applicable to categorical situations.	1. Decision making and problem solving appropriate to unique situations.
Type of Relationship to the organizational goals.	1. Orientation to the specific task. 2. Stress is on efficiency. 3. Loyalty to the Organization.	1. Orientation to the client. 2. Stress is on service. 3. Loyalty to the professional standards and the client.

Figure 1. Bureaucratic-Professional Role Orientation Among Nurses.

The review of literature attempted to determine if the professional and bureaucratic roles of the physical therapist come into conflict and to identify related and supporting studies. Does the professional mode of behavior become ignored or diminished within an institutional bureaucratic structure? While a bureaucratic orientation which is highly standardized implies routine simple tasks, efficiency and quantity, the professional model would emphasize excellence or quality. "The emphasis in the professional model rests upon the relation of an individual to the system or organization . . . . (while) the bureaucratic model seems to stem from the relation of the individual to a specialized type of work."[41]

Merton's[42] analysis of the "bureaucratic personality" was that persons working within the confines of bureaucracy would assume bureaucratic attitudes because of their "trained incapacity" which emphasized a conformity to rules as a means of efficiency. The rules became the ends; persons developed the attitude of "it has to be done by the book."

Reissman[43] in "A Study of Role Conception in a Bureaucracy" identified four types of bureaucrats on the basis of how the professional ends were related to the bureaucratic means and the respondent's perception of his role. The "functional bureaucrat" was oriented towards groups outside the employing bureaucracy and was especially concerned with securing recognition from professional peers elsewhere; they associated with their professional peers rather than their bureaucracy. The "specialist bureaucrats" identified primarily with

the people with whom they worked and were procedurally conservative. They were the persons who were unaware of differences between bureaucratic and professional roles. "Service bureaucrats" were oriented to bureaucracy but sought recognition from groups outside the bureaucracy as well and, therefore, were oriented to both the bureaucratic means and the professional ends. The "job bureaucrats" were persons who used professional skills as entrance requirements into bureaucratic jobs. They sought departmental recognition and technical confidence as their primary source of satisfaction. They southt material rewards from the job and accepted the structure of the bureaucracy as it existed.

Gouldner[44] found the following differences in the characteristics of two groups he classified as "Cosmopolitans and Locals." Cosmopolitans tended to be:

1. Low on loyalty to the employing organization.
2. High on commitment to specialized role skills.
3. Likely to use an outer reference group orientation.

Locals tended to be:

1. High on loyalty to the employing organization.
2. Low on commitment to specialized role skills.
3. Likely to use an inner reference group orientation.

Similarities between Gouldner's and Reisman's conceptualization are apparent.

In a study of a factory, "The General Gypsum Company," Gouldner[45] discussed one type of "experts" and their plight. These

experts never had the confidence of the company's highest authorities and were well removed from the power structure. These "experts" were not given the "real promotions" because they weren't recognized as "company men."

Dalton[46] in an investigation that relates to "The General Gypsum Company" study of Gouldner, studied "Conflict Between Staff and Line Managerial Officers." The staff persons were "specialists" called to aid industry toward the goal of greater production and efficiency. These specialists were of many kinds and possessed much expertise, including chemists, statisticians, accountants and a great variety of engineers. The "staff" persons' responsibilities were to apply their specialized knowledges in problem areas, and to advise those officers who made up the "line" organization and have authority over production. The unsophisticated staff officer's initial contacts with the shifting, covert, expedient arrangements between members of staff and line usually produced a severe shock:

> The staff officer had entered industry prepared to engage in logical, well formulated relations with members of the managerial hierarchy, and to carry out precise, methodical functions for which his training had equipped him. Now he learned that: (1) his freedom to function was snared in a web of informal commitments, (2) his academic speciality [on which he learned for support in his new position] was often not relevant for carrying out his formal assignments, and that (3) the important thing to do was to learn who the informally powerful line officers were and what ideas they would welcome which at the same time would be acceptable to his superiors.

Like Dalton's "staff" officers, physical therapists and other allied health practitioners enter into practice with professional knowledge of their chosen fields. They have been educated as though they were

going to practice in a free profession. In most instances, they have not been prepared to function under the bureaucratic expectations of the bound professions.

Hall[47] pointed out that appointments of physicians to positions within hospital structures were not made because of their excellence as physicians. Beyond the basic proficiency, it was their personal characteristics which were important in their advancement in the bureaucracy; however, it was not personal characteristic per se, but the degree to which they could be adapted to the institution (COMPANY MEN). If this was true of physicians, it is probable that the same general condition would hold true for physical therapists.

This belief was given support at a recent meeting of chiefs of physical therapy departments (February, 1978). Chiefs are physical therapists who operate as the head persons in the physical therapy departments. When asked the question, "What is the problem which most concerns you with your staff?," an overwhelming number said, "It is the new graduates who come out of school and want to change the way we do things." The professional model holds that "change" is inevitable and necessary while the bureaucratic model would try to keep things as they are. Were these chiefs of physical therapy showing professional or bureaucratic behavior? Were they performing as "line" or "staff"? Did their statement reflect the position of persons in a free or in a bound profession?

Utilizing the Herzberg Motivation-Hygiene theory, Barnes and Crutchfield[48] studied job satisfaction-dissatisfaction of private

physical therapy practitioners and organizational [chief] physical therapists. Both groups experienced periods of unhappiness as a result of policies in their organization; organizational therapists were more likely to become unhappy over policies of the organization and over relationships with peers and subordinates, whereas private practitioners were more unhappy because of working conditions--mainly the long hours associated with the job. Many of the (organizational) therapists reported that the hospital administrators never talked to them about the quality of care rendered to patients; discussion always seemed to center around the patient census in the department. A typical story concerned an administrator who insisted that all therapists be on the premises promptly at eight o'clock and depart at five o'clock. Because physical therapists are exempt from the wage-hour laws, and because each therapist should continue to work until all patients have been properly attended, this restriction was considered demeaning.

Inadequate income was not considered to be significantly dissatisfying to either group. In a typical comment, however, a chief said that he missed being totally involved in patient care, but that the salary differential between department heads and staff therapists made his job worthwhile. Responsibility was mentioned in positive sequences by 96 percent of the private practitioners in the sample. Responsibility was also found to be a significant motivator for the organizational therapist. This would seem to disagree with Friedmann.[49] Perhaps if the institutional [bound] practitioner were

allowed to experience some of the rewards of the private [free] practitioner, there would be less discontent with institutional policies of the organization. Perhaps if individuals were given individual recognition this would help. Currently most institutions have a salary scale that escalates in proportion to the years of practice. Excellence is not recognized, only years of service. Why not let physical therapists work the hours that are necessary for treating patients? If they happen to finish early, why should they be required to sit and "stare at the walls"?

Corwin[50] found three major conflicts between the bureaucratic model and the professional model. Those three conflicts were in the areas of:

1. Degree of standardization of tasks and procedures.
2. Degree of authority permitted.
3. Relationship to organizational means and goals, that is, efficiency vs. standards.

> As each member of the team has striven to improve his status, he has encountered an increase in conflict with other members of the medical team. As each specialty group has striven to expand its territory into regions of different responsibility they have had to abandon the direct patient care for which they were originally trained. Once a higher position is achieved, either through education or experience, the individual's role as a therapist diminishes to a minimum while other roles increase in importance.[51]

To achieve reward and recognition within the bureaucratic structure of a hospital, the professional is given a new position as chief. What are some of the problems associated with this practice? Schroeder[52] wrote of academic faculty who, because of their previous

work, have been promoted to the position of department chairman:

> . . . The faculty desire decreased leadership behavior from the chairperson, deans demand the opposite. Further, both groups commonly place weight on the chairperson to interpret departmental needs as a strictly consonant with institutional goals and priorities. Thus, the chairperson finds himself in an unenviable position.

Although Selker and Vogt[53] wrote the following about department chairmen of schools of allied health education, the same would seem to hold true for persons promoted to department chairman in hospitals:

> . . . Background of the allied health chairperson is often predominantly in the clinical professional areas, and few chairpersons have extensive experience in academic [administration] prior to their appointment. As a result, academic planning is primarily oriented to preparing the professional clinicians needed by the health care system. The planning and development needed to respond to internal university demands have often been neglected.

A 1974[54] study of role analysis of 1,198 departmental chairpersons at state universities focused on three major roles: academic, administrative and leadership. The majority surveyed indicated that the academic portion of their role was the most enjoyable, and the administrative portion the least enjoyable.

Corwin[55] commented on bureaucratic and professional roles: "Bureaucratic and professional concepts of role, jointly held, prevent adequate fulfillment of either role." Do physical therapists, when having to assume both of these roles, still maintain their professionalization or do they become a part of the bureaucracy?

IV. PROFESSIONAL VS. PROFESSIONAL CONFLICTS

This section can be introduced with a quote from Benne and Bennis:[56]

> Many doctors seem to be unaware of this move of nursing toward professionalization or, if aware of it, to ignore it in their working relationship with nurses. Certainly one earmark of a professional is the possession of areas for the exercise of independent judgment within his work life. The function of professional education is to prepare the person to exercise such required judgment, but many doctors still expect nurses to behave only as obedient extensions of their own professional judgment.

A historical review would be one approach to tracing the development of the field of physical therapy to professional status. However, in this study the same purpose can be served by a comparative review of the original "Code of Ethics and Discipline" adopted by the APTA (then the American Physiotherapy Association) in 1935 and the "Code of Ethics" adopted in 1977.

THE AMERICAN PHYSIOTHERAPY ASSOCIATION

Code of Ethics and Discipline

(Adopted at A.P.A. Convention, Atlantic City, June 1935)

I. PROFESSIONAL PRACTICE

a. Diagnosing, stating the prognosis of a case, and prescribing treatment shall be entirely the responsibility of the physician. Any assumption of this responsibility by one of our members shall be considered unethical.

b. The patient shall be referred back to the physician for periodical examinations.

c. A member shall not attempt to criticize the physician or dictate technique or procedure.

II. ADVERTISING

a. Members shall not procure patients by means of solicitors, agents, circulars, displays, or advertisements inserted in commercial periodicals.

b. Announcements in medical journals or business cards, not stating fees, are permissible. A statement that the work is medically supervised should appear on the announcement.

c. A member may use the term "Physiotherapist" or "Physical Therapist" on an office door.

III. BEHAVIOR

a. Members shall not indulge, before patients, in criticism of doctors, co-workers, or predecessors who have handled the case.

b. It is well to bear in mind that our reputation as individuals and a group depends upon professional accomplishments and upon adherence to the standards of our organization.

IV. DISCIPLINE

a. Charges and evidence against offenders will be weighed and acted upon by the Executive Committee.

AMERICAN PHYSICAL THERAPY ASSOCIATION

Code of Ethics

(Adopted by the House of Delegates, June 1977)

PREAMBLE

The physical therapist member of the American Physical Therapy Association accepts this Code of Ethics as the basis for the practice of his profession. Individually and collectively, these members of the Association are responsible for promoting and maintaining the highest ethical standards.

There shall always be a Guide for Professional Conduct to assist in the interpretation of the Code of Ethics. This guide, taking reference from the code, shall be subject to monitoring and timely revision by the Association's Judicial Committee.

This Code of Ethics and the Guide for Professional Conduct shall be binding on the physical therapist members.

PRINCIPLE 1

The physical therapist should respect the dignity of each individual with whom he is associated in the practice of his profession.

PRINCIPLE 2

The physical therapist should comply with the law and Association policies governing the practice of physical therapy.

PRINCIPLE 3

The physical therapist should accept responsibility for the exercise of professional judgment.

PRINCIPLE 4

The physical therapist should maintain optimal standards of professional practice.

PRINCIPLE 5

The physical therapist should respect the confidences imparted to him in the course of his professional activities.

PRINCIPLE 6

The physical therapist should seek reasonable, deserved, and fiscally sound renumeration for his/her services.

PRINCIPLE 7

The physical therapist should provide accurate information to the consumer about the profession and the services provided.

PRINCIPLE 8

The physical therapist should not engage in any form of self-aggrandizement.

PRINCIPLE 9

The physical therapist should accept responsibility for reporting alleged incompetence, illegal activities, and/or unethical conduct to the appropriate authority.

PRINCIPLE 10

The physical therapist should so conduct himself in all of his affairs as to avoid discredit to the Association and to the profession.

PRINCIPLE 11

The physical therapist should give his/her loyalty and support to the American Physical Therapy Association in its efforts to attain its objectives.[38]

Even a brief review of the two codes will show a philosophical difference between Item I, Professional Practice in the 1935 code and Principles 3 and 4 of the 1977 code. Historically, recall that on January 1, 1976, the APTA had already declared an end to the APTA/AMA collaborative agreement for the accreditation of physical therapy educational program.

In 1966, Lowell Coggeshall[58] listed twelve emerging trends which would affect health care:

1. Scientific advancement.
2. Population increase and frequent change of locale.
3. Increased health expectation of the public.
4. Increased effective demand for health care.
5. Increased specialization in medical practice.
6. Increased use of technological advances and equipment.
7. Increased institutionalization of health care.
8. Increased use of the team approach to health care.
9. Need for increasing numbers of physicians.
10. Need for increasing numbers of other health personnel
11. Expanded role of government.
12. Rising cost of health care.

Trends 3, 4, 5, 7, 8, 10, and 12 all have bearing upon this study and literature review. Note that there is a change in terminology with the trends. "Medical care" has become "health care," a term with far-reaching implication for all of the fields previously referred to as "medically related" but not "health related" professions, including physical therapy. One would wonder why it was necessary to separate trends 9 and 10.

Worthingham[59] says of trend 8:

> The concept of the team with which physical therapists are most familiar is the conference in which those members of the health profession taking part in the care of a particular patient meet together to review his program. The leader of the team is usually a physician and not infrequently physical therapy information is presented by a physician.

As part of a study of basic physical therapy education, Worthingham[60] studied the request for physical therapy services. The study was done with the clinical education facilities of the various physical therapy education programs across the nation. Some findings of the Worthingham study were significant and related to this study.

1. Diagnosis--of the requests for physical therapy services--25 percent had a general diagnosis, 45 percent had a specific diagnosis while 31 percent had no diagnosis.

2. Request for evaluation--17 percent of the requests for services asked for an opinion from the physical therapist.

3. Specific treatment items:

    a. 43 percent contained objectives for treatment.

    b. 22 percent listed precautions.

c. 90 percent of the requests included the area to be treated.

d. 81 percent specified the type of treatment.

e. 31 percent included the frequency of treatment.

4. The physical therapist's judgment was sought. Physicians specifically desired that the type of treatment be determined by the physical therapist in 13 percent of the requests.

5. Seventy-six percent of the government-nonfederal facilities reported that physical therapists made the decision concerning treatment procedures "always" or "usually."

6. Eighteen percent of the physical therapists never carried out requests without modification.

7. Almost one-fourth of the respondents (23 percent) indicated that patients were never treated on standing orders; 12 percent were always treated on standing orders, 22 percent usually, and 42 percent occasionally.

8. Many (percent not given) physical therapists thought that the physical therapist was best qualified to determine the treatment if the diagnosis precautions, contraindications and the objectives for treatment were available from the referring physician (in contradiction to Friedmann[61]).

Worthingham[62] concluded:

> Although it would appear that many physicians do not realize the education of physical therapists prepares them to assume a function in patient evaluation and treatment planning, this may be the fault of the physical therapists themselves who have not presented their role in the area effectively.

Hogue[63] wrote:

> Physical therapists, including educators, have sought security by attacking the medical profession, especially physiatrists (physician who specializes in physical medicine and rehabilitation). I have heard therapists say that physiatrists have held back our educational program and profession more than anyone else. I do not agree with this belief. The major factor that has prevented more growth and development in our profession has been ourselves. [We have seen the enemy, and his is us. Pogo.] To think that no serious conflicts or genuine differences exist between physical therapists and physicians would be naive; however, we no longer need the security which comes from making others our scapegoat for our inadequacies.

Johnson[64] in a discussion of the future of physical therapy education said:

> The future of education and practice are inextrically bound together. At this time, we have the opportunity to shape the practice of the future and the education of today's students. If physical therapy is to have a role in health care, we must move quickly to demonstrate the unique contributions we can make. . . . The physical therapist of tomorrow will move from the traditional settings of the hospital and treatment center into settings where physical therapy services are not available now. In these environments, the role of the physical therapist will take on new and different dimensions. . . . If the educational opportunities we provide do prepare the physical therapist to function independently within his range of competence, to exercise judgement, and to accept responsibility for his actions and decisions, the result we be an articulate, well-educated, committed physical therapist. The expanded role of the physical therapist will be demonstrated effectively by such individuals through the delivery of superior service. Recognition of the role by the public and our college will follow naturally.

In separate major studies of physical therapy education Pascascio[65] and Worthingham[66] concluded that serious consideration should be given to providing the initial professional preparation for physical therapists at the graduate level.

Parris[67] argued that the only way to allow for and meet the needs for the clinical practice of physical therapy, was through a

system of clinical specialty boards which would necessitate physical therapists receiving advanced clinical training in some specialty area. This conclusion was based primarily on the expanding role of the physical therapist.

James and Stuart[68] conducted a study at two army hospitals to evaluate the feasibility of using physical therapists as primary "screeners" for patients complaining of low back pain. Several factors were considered in assessing the quality of care rendered in the screening clinic: (1) fourteen orthopedic physicians assigned to the two army posts were asked for their evaluations, (2) patient reviews, chart reviews and procedural reviews were conducted throughout the study, (3) prestudy and poststudy interviews were conducted with each orthopod by the authors, and (4) the degrees of patient satisfaction and acceptance, were evaluated.

Some of the findings of the study were:

1. The orthopedist found no significant errors of omission or commission by physical therapists or those patients referred to the orthopedic clinic.

2. None of the orthopods received any significant complaints from any of the back patients referred to them from the physical therapy clinic.

3. The physical therapy clinic showed significantly lower mean time total back patient treatment times expended than did other clinics, probably because the physical therapy clinic showed a markedly lower mean patient waiting time.

4. The average patient saved from 33 to 44 minutes by being evaluated initially by the physical therapist instead of waiting to be seen in the other clinics.

5. All 50 patients randomly queried on their satisfaction with the care they had received in the physical therapy clinic were satisfied. . . . The result indicated that the collected sample data represented the true population data at a significance level of .001, certainly a high degree of acceptance.

6. Interviews were conducted with Commanders, the Chiefs of Professional Service, the Chiefs of the Department of Clinics and the Chief of Radiology at both test sites. All of these professional persons believed that the physical therapist had demonstrated the capacity to provide quality medical care in the screening throughout the study and that the program should be established on a permanent basis.

There certainly is disagreement as to what the professional role of the physical therapist is and what it is expected to be in the future. Friedmann says physical therapists are not willing to accept the responsibility for their actions while James and Stuart say the physical therapist is capable of expanding their current role and expanding it with a high degree of sophistication. These two conflicting opinions give an indication of the role conflict.

The literature review indicates that in other fields there are conflicts that exist in the bureaucrat vs. professional roles of other professionals. There are also examples of professional vs. professional role conflict.

It has been shown also that in other professional groups these conflicts can be determined by studying the perceived vs. actual components of role.

This study was done to determine if the previously mentioned conflicts occur in the physical therapy profession. Are there professional/bureaucratic role conflicts and are there professional/professional conflicts? Do physical therapists perceive their field as professional in nature while in actual practice it is viewed as, and treated as, a technical field?

CHAPTER III

METHODOLOGY

I. INTRODUCTION

This study was designed to collect and analyze perceptions and expectations about the role(s) of the physical therapist. Roles were studied with respect to: (1) intergroup consensus of perceptions (the does dimension) and of expectations (the should dimension) and (2) intragroup consensus between does/should dimensions on selected items and groups of items representing samples of bureaucratic and professional behavior usually required of physical therapists.

Data collection was achieved through the use of a questionnaire. The questionnaire was mailed to individuals practicing physical therapy, medicine and hospital administration in the state of Texas. Questions were designed to obtain from the sample population perceptions and expectations about the role(s) of the physical therapist.

Design

This field study employed ex post facto research design with the accompanying advantages and limitations described by Kerlinger.[69] The limitations of this type of research include: (1) inability to manipulate independent variables, (2) lack of power to randomize, and (3) risk of improper interpretation. The advantage of ex post facto research lies in the fact that many research problems in the social

sciences and education do not lend themselves to experimental inquiry. (A more complete discussion of ex post facto research can be found in Kerlinger's work.)

The study was a survey which met the requirements for both field studies and survey research as described by Kerlinger:[70] "Field studies are ex post facto scientific inquires aimed at discovering the relations and interactions among sociological, psychological and educational variables in real social structures."

Field studies as described by Kerlinger are strong in realism, significance, strength of variables, theory orientation and heuristic quality. A major weakness, however, is their lack of precision in the measurement of field variables. Other weaknesses of field studies are feasibility, cost, sampling and time.[71]

Survey research is that branch of social scientific investigation which studies large and small populations (or universes) through the selection of samples chosen from the population. The samples are then studied to discover the relative incidence, distribution, and interrelations of sociological and psychological variables. Characteristically, through the use of survey research a great deal of information can be gained from a large population, but it is demanding both in terms of time and money.[72]

II. INSTRUMENT DEVELOPMENT

One task in this study was to design, field test, and eventually use for data collection an instrument to obtain respondents'

perceptions (the does dimension) of and expectations (the should dimension) for physical therapists' roles. Instrument development proceeded according to the following plan:

1. In 1973 the U. S. Department of Labor developed a questionnaire containing tasks that were performed by physical therapists. This questionnaire was sent to physical therapists randomly selected from the membership of the American Physical Therapy Association (APTA). Respondents were asked to check any of the tasks that they performed at their facility.

2. In 1976 the APTA appointed a three member task force ("panel of experts") to develop a process document for the Essentials for Accreditation. In December of 1976 the task force met in Washington, D.C., to draft a proposed list of treatment and evaluation skills to be used as a competency manual to supplement the Essentials.

In preparing the draft, the task force began with data from the Department of Labor study and applied the following criteria for initial establishment of the level of skill requirements: procedures used frequently or occasionally by a total of 50 percent or more respondents were assigned to Level 1, procedures used frequently or occasionally by 20-49 percent were assigned to Level 2, and procedures used frequently or occasionally by 0-19 percent were assigned to Level 3.

The Task Force then reviewed and discussed the list generated by these criteria and took the following action: the skill requirement level of several procedures was raised in the belief that changes in

practice since the Department of Labor study warranted the assignment of a higher level, some procedures were reworded or regrouped to increase clarity and thoroughness, several procedures which appeared to be duplicative or were not felt to be physical therapy procedures were eliminated, and several other procedures felt to be in use but not included in the Department of Labor study were added.

3. This new document was mailed to 25 physical therapists (both educators and practitioners) located throughout the United States. A five region pattern (Western, Central, Southern, Northeastern and Southeastern) was employed for equitable distribution. These physical therapists, recognized as experts, were asked to review the document for clarity and validity and to make comments.

4. From the document developed by the task force and reviewed by the enlarged panel of 25 experts, certain items were selected as questions for this study. To be selected for inclusion in the study, an item had to have been cited as being performed by at least 80 percent of the respondents completing the Department of Labor questionnaire. Those items are questions 1-59 of the questionnaire.

5. These first 59 questions were divided into four clusters. The number of questions in each cluster approximates the ratios of inclusion of items of that type which appeared in corresponding clusters in the Department of Labor survey. Questions have been clustered as described below:

Cluster	Question Number
I	1-17
II	18-30
III	31-45
IV	46-59

a. Cluster I contains items related to preparing patients for treatment.

b. Cluster II contains items related to the implementation of patient treatment.

c. Cluster III contains items related to special procedures administered or taught to patients.

d. Cluster IV contains items related to patient support activities.

5. The remaining items appearing in the questionnaire for this analysis were selected from Corwin's[73] study of professionalism and bureaucracy. Because Corwin's instrument was designed for use with teachers, appropriate changes were made to reflect the needs of physical therapists. Only items with a reliability of .80 and above were chosen for use in this study. These questions (60-74) constitute Cluster V. Questions 60, 66 and 68-72 relate to a bureaucratic orientation; questions 61-65, 67 and 73-74 relate to a professional orientation.

6. This draft instrument consisting of 74 items was field tested for reliability and clarity. Groups of second-year physical therapy students from three physical therapy schools (two in a southwestern state; one in a midwestern state) were asked to complete the questionnaire and make editorial comments (N = 64). Respondents were asked to react to questions first on the basis of <u>does</u> a physical therapist perform certain functions and then on the basis of <u>should</u> a physical therapist perform certain functions. The response to

each question was to be noted in one of five Likert-type categories: Almost Always, Frequently, Occasionally, Seldom and Almost Never.

7. The field test draft was refined as a result of respondent feedback. Most of the resulting changes were made for the sake of clarity and ease of response.

8. The final instrument resulting from this process consisted of a personal data section and 74 questions each with a does-should component. The 74 items were distributed into five clusters as described above.[74]

Reliability

Data obtained from student responses during the field test were tabulated and frequency distributions were plotted. Reliability was estimated by split-half procedures using the Pearson correlation coefficient test. The reliability coefficient was computed by comparing the odd-numbered "does" questions with the even-numbered "does" questions and by comparing the odd-numbered "should" questions with the even-numbered "should" questions. This procedure was followed also to establish the reliability of the questions in each cluster. Cluster reliability is as follows:

Cluster Items	does(odd) vs. does(even)	should(odd) vs. should(even)
Cluster I (1-17)	.88	.96
Cluster II (18-30)	.94	.83
Cluster III (31-45)	.92	.93
Cluster IV (46-59)	.91	.87
Cluster V (60-74)	.50	.55
Instrument Reliability	.97	.97

Validity

The instrument used for this study has the following types of validity:[75]

1. Content--the degree to which questionnaire items sample the behaviors about which conclusions are to be drawn.

2. Construct--the degree to which theretical claims and supports of the questionnaire are substantiated both logically and empirically.

3. Criterion--the relationship between scores on this questionnaire and scores or performance on similar variables used as criterion.

4. Face--the degree to which an instrument appears to measure or describe what it purports to measure or describe.

The instrument has these four types of validity because of the way it was developed (i.e., choosing items from an existing instrument developed by the Department of Labor, review by a task force of experts, review by a panel of 25 physical therapy practitioners and educators, and field testing).

III. PROCEDURE

The Location

Physical therapists, physicians, and hospital administrators from the state of Texas comprised the population for this study. The pilot test was conducted with senior-level physical therapy students from Texas and Minnesota.

Selection of the Sample

The sample selection involved two separate processes. The original plan (which constituted the first process) did not produce adequate respondents in every category for purposes of the study.[76] A second process was then implemented to increase the number of respondents.

The Original Process

One hundred fifty representatives from each of three survey groups (physical therapists, physicians and hospital administrators) were chosen by random selection. The physical therapists and physicians were chosen from practitioners licensed by the state of Texas. The hospital administrators were chosen from hospitals identified in the 1977 membership directory of the American Hospital Association as having physical therapy departments. The original mailing included an introductory letter, an informed consent form, the questionnaire and a stamped return envelope. After six weeks, questionnaires were returned as follows:

Survey Group	Returns	Usable Returns	Percent Usable
Physicians	30	14	46
Hospital Administrators	29	21	70
Physical Therapists	53	48	90

Some forms came back incomplete and/or with such comments as "retired," "no longer in practice," "no longer employed," or "deceased."

Although some usable responses were incomplete, they were considered usable because respondents had been instructed to leave an item blank if they had insufficient information upon which to base a response. Because of steps to retain anonymity, a follow-up mailing to the original sample was not feasible. (There was no way to determine who had responded.) A second process was employed to increase the number of usable responses.

The Second Process

The survey questionnaire was mailed to 100 additional hospital administrators. Since hospitals which had physical therapy departments included approximately 295 hospital administrators, the instrument was finally sent to 250 of the 295, or approximately 85 percent of the total population. The instrument was also mailed to an additional 50 physical therapists who were also randomly selected from the previous pool of persons licensed in the state of Texas.

A slightly altered introductory letter accompanied the second mailing. Since the only difference in the first and second groups of hospital administrators and physical therapists was the cover letter they received, no attempt was made to distinguish between the groups.

For the physicians, the staff of a clinical speciality of medicine (one that works closely with physical therapists) at the University of Texas Health Science Center at San Antonio was used to increase the physician respondents (n = 19). Since this was a specialty of medicine rather than a random selection of all physicians as the

first respondents were, a coding step was utilized to keep their responses separate from those of respondents from the first mailing.

The final (combined) responses were:

Survey Group	Total Responses	Usable Return	Percent Usable
Physician (1)	30	14	46
Physician (2)	19	19	100
Hospital Administrator	68	45	66
Physical Therapist (Chief)	47	43	91
Physical Therapist (Staff)	38	32	84
TOTAL		N = 153	

IV. DATA ANALYSIS PROCEDURE

Questionnaire data were key punched for computer use and cross-checked for conversion accuracy. Frequency distributions were obtained as one procedure for checking the accuracy of data handling and as an aid to making decisions on response categories for Chi-square tests. Manual review of frequency data identified items that received unusual responses. Single frequency distributions aided in compiling demographic data.

For scoring purposes persons who gave a (1) response on the five point Likert scale were given a value of (1), or a value of (2) if the respondent had included a (2) response. This procedure was followed for all 74 questions (both does and should).

Chi-square was used to determine the agreement between the different groups on each of the 74 (does and should) items. The

respondent groups were originally assigned numbers as follows:

Group	Group Designation
Physicians (1)	1
Physicians (2)	2
Hospital Administrators	3
Physical Theapists (Chief)	4
Physical Therapists (Staff)	5

Using Chi-square, the groups were compared in the following manner:

1 vs 2	2 vs 4	(1, 2) vs 4
1 vs 3	2 vs 5	(1, 2) vs 5
1 vs 4	3 vs 4	(3, 4) vs 5
2 vs 5	3 vs 5	(1, 2, 3) vs 4
2 vs 3	(1, 2) vs 3	(1, 2, 3) vs (4, 5)

Two t-tests were used to compare the clusters in the does and should dimensions. One test included zero responses; the second did not. Comparisons on both t-tests were made as shown below:

1 vs 2	2 vs 3	2 vs 5
1 vs 3	2 vs 4	4 vs 5
1 vs 4	2 vs 5	
1 vs 5	3 vs 4	

The t-test was also used to determine the degree of agreement within groups and between sets of the does and the should questions. All groups were analyzed for this information; e.g. group 1 does responses compared to group 1 should responses.

To obtain "scores" for t-test the numbers of response categories (as shown on the instrument, Appendix A) were summed for individuals by clusters. Principal analysis in the study was the non-parametric Chi-square; t-tests were used to analyze cluster data.

CHAPTER IV

ANALYSIS OF DATA

I. INTRODUCTION

This field study utilized role theory to analyze perceived and actual roles of physical therapists. Two dimensions of role conflict were examined: professional vs. professional role conflicts and professional vs. bureaucratic role conflicts.

Respondents from the fields of medicine, hospital administration and physical therapy gave their perceptions to the actual or does role and to the ideal or should role of the physical therapist. The perceptions were obtained by survey responses to an instrument containing 74 questions which related to the responsibilities of the physical therapist and a personal data sheet.[77] All 74 questions had a does and a should component.

Null hypotheses were developed and tested. Chi-square was the primary analysis technique; t-tests were used for cluster data. The .05 level of significance was accepted.

H_o1: There are no differences between physical therapists and other groups analyzed regarding the role(s) of the physical therapist.

H_o2: There are no differences between physicians and physical therapists on questions regarding the role(s) of the physical therapist which would indicate a professional vs. professional role conflict.

$H_0$3: There are no differences between hospital administrators and physical therapists on questions regarding the role(s) of the physical therapist which would indicate a professional vs. bureaucratic role conflict.

$H_0$4: There are no differences among respondent groups on questions regarding the role(s) of the physical therapist.

II. DATA ANALYSIS PLAN

The Chi-square was used to analyze the responses of the different groups. Each of the questions was studied on two dimensions (does and should) and group responses were compared with each other.[78]

Each individual item (whether does or should) that was shown to have significant differences when compared between groups was further analyzed to determine the degree of consensus. This determination was made by comparing the sum of the percentages for each cell in the Chi-square table.

The t-test was also performed for each group and between groups. The first t-test that was done included all zero responses that had occurred (the instructions were: "If you don't have sufficient information to answer, please leave the question blank"). A second t-test was performed which did not include zero responses.

III. DESCRIPTION OF INSTRUMENT

The instrument consisted of 74 questions. Each question called for a does and a should response for a total of 148 possible responses

from each respondent. The questions were divided into five clusters:

1. Cluster 1 (questions 1-17) related to preparing patients for treatment.

2. Cluster 2 (questions 18-30) related to implementation of patient treatment.

3. Cluster 3 (questions 31-45) related to special procedures administered or taught to patients.

4. Cluster 4 (questions 46-59) related to patient support activities.

5. Cluster 5 (questions 60-74) related to bureaucratic and professional concepts of practice.

IV. DISCUSSION OF SAMPLE: DEMOGRAPHIC DATA

The physician and hospital administrator samples were primarily male dominant, while the physical therapy sample was primarily female. The chief physical therapists, however, had a much larger percent of males than did the staff physical therapists (39.5 percent vs. 9.4 percent).

Although hospital administrators had a higher mean "years in their field" than did the chief physical therapists (16.3 years vs. 13.3 years), they had changed positions more frequently (4.7 years vs. 5.8 years). This was a surprising find. The complete demographic data are presented as Figure 2.

I. Profession of Respondents		II. Sex of Respondents		
		M	F	No Response
1) Physican (Group 1)	14	14	0	0
2) Physician (Group 2)	19	16	2	1
3) Hospital Administrator	45	38	3	4
4) Physical Therapist (Chief)	43	17	26	0
5) Physical Therapist (Staff)	32	3	29	0

N = 152

III. NUMBER OF YEARS IN FIELD	MINIMUM	MAXIMUM	MEAN	MEDIAN
1) Physician (Group 1)	6.0	45.0	24.9	23.5
2) Physician (Group 2)	1.0	38.0	12.5	9.6
3) Hospital Administrator	1.0	39.0	16.3	14.4
4) Physical Therapist (Chief)	1.0	32.0	13.3	12.0
5) Physical Therapist (Staff)	1.0	26.0	6.1	4.7

IV. NUMBER OF YEARS IN PRESENT POSITION	MINIMUM	MAXIMUM	MEAN	MEDIAN
1) Physician (Group 1)	1.0	28.0	15.0	15.0
2) Physician (Group 2)	1.0	38.0	5.2	2.2
3) Hospital Administrator	1.0	19.0	4.7	3.6
4) Physical Therapist (Chief)	1.0	24.0	5.8	3.8
5) Physical Therapist (Staff)	1.0	25.0	3.2	1.9

Figure 2. Demographic Description of Respondents.

V. GROUPS USED IN ANALYSIS

Because of the low rate of return in the original physician sample and subsequent use of a convenience sample (as previously discussed in Chapter III), there originally were two groups of physicians. After the preliminary frequency distribution, Chi-square and t-tests were reviewed and few differences were found between these two groups, it was decided that they should be regrouped into one category.

Since the two physician populations had been obtained by different processes, there was a concern as to whether they could be treated statistically as one group or whether they must be treated separately. When Group 1 was compared with Group 2 by Chi-square for the 148 questions (See Appendix A), a total of 11 questions had significant differences ($p < .05$). Four of the differences were in the does dimension and seven in the should dimension. Since approximately eight differences should appear due to chance, the two groups considered were essentially one community and combined for all significance tests. This was supported by the t-test without zero responses. In that test for the differences in cluster agreement, of ten possible disagreements (five does and five should), only one was found to be significant (see Appendix B). The groups were treated separately for descriptive purposes and when arithmetic procedures were used.

General Explanation of the Tables

Tables I, II, III, IV, and V are Chi-square analysis showing differences between groups on individual items. The numbers at the top of the tables correspond to questions in the instrument. The does aspect of each question is represented by D. The should aspect of each question is represented by S. Questions which showed significant differences among groups, as analyzed, are indicated by X. Questions in which significant differences were indicated but at least one cell showed a zero response (in a 3 x 2 table) are indicated by 0. A question mark (?) indicates that analysis could not be performed on a 2 x 2 table because of a zero cell. The numbers at the bottom of the tables represent the total number of groups which when compared disagreed significantly (.05) on the indicated item. The numbers in the sub-total column represent the total number of questions in each dimension on which there was disagreement among comparison groups.

Tables have been prepared showing Chi-square analysis by questions within clusters. The total number of questions reflecting significant disagreements among study groups is presented in Table V.

Both Chi-square analyses of individual items and t-test of clusters show that the responses of physicians in both Group I and Group 2 are essentially the same. This suggests that their responses can be collapsed and treated as a single response set. Thus, the five groups have been redesignated:

TABLE I

CHI-SQUARE ANALYSIS SHOWING DIFFERENCES BETWEEN GROUPS ON INDIVIDUAL ITEMS FOR CLUSTER I

GROUP	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15		16		17		Sub-Total	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S
1 vs 2		x													x						0						?								1	1
1 vs 3	x												0						x												0		x		2	1
1 vs 4	x												0	x			0																x		2	1
1 vs 5	0		x										0																						1	0
2 vs 3	x	x			x							x	x	x	x	x	x			x	x				x	x					x	x			8	7
2 vs 4	x	x											x	x	x	x	0				x												x		5	3
2 vs 5	x				x								x	x																					3	1
3 vs 4															x																				0	1
3 vs 5					x	x	x					x			x	x	x		x			x		x				x				x	x		7	6
4 vs 5					x						x					x	x															x	x		4	2
1, 2 vs 3	x				x				x			x	x	x	x	x	x			x						x			x		x	x	x		9	6
1, 2 vs 4	x	x											x	x	x	x	x				x												x		6	3
1, 2 vs 5	x				x								x	x																					3	1
3, 4 vs 5					x	x					x	x			x	x																	x	x		4	4
1, 2, 3 vs 4	x												x	x		x	x																		3	2
1, 2, 3 vs 4, 5	x												x	x									x				x								3	2
TOTALS	10	4	1	0	7	2	1	0	1	0	2	4	8	9	7	8	7	0	1	3	3	1	0	2	1	2	2	0	1	0	2	5	8	0	61	41

(X) Significant at the .05 level.

(0) One cell with zero cell.

(?) Analysis not possible.

TABLE II

CHI-SQUARE ANALYSIS SHOWING DIFFERENCES BETWEEN GROUPS ON INDIVIDUAL ITEMS FOR CLUSTER II

GROUP	18		19		20		21		22		23		24		25		26		27		28		29		30										Sub-Total	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S
1 vs 2											x		0				?				?														1	0
1 vs 3							x																		0										1	0
1 vs 4															0	0	0	x	x	x															1	2
1 vs 5															0	0	0								0										0	0
2 vs 3	x	0							x	x			x				x			x	0	x	x	x	x										6	4
2 vs 4		0											0		x			x		x	0	x	x	x	x	x									3	5
2 vs 5		0								x			0		x	x			x																1	3
3 vs 4															x			x	x	x		x													1	4
3 vs 5		x							x							x	x	x			x	x	x	x	x										5	5
4 vs 5																		x		x	x	x	x	x	x	x									4	4
1, 2 vs 3	x					x	x		x	x										x	x	x	x	x	x										6	5
1, 2 vs 4													x		x	x		x	x	x	x	x	x	x	x	x									6	6
1, 2 vs 5		x											x		x	x									x										3	2
3, 4 vs 5		x							x						x		x			x	x	x	x	x	x	x									5	6
1, 2, 3 vs 4															x	x		x	x	x	x	x	x	x		x									4	6
1, 2, 3 vs 4, 5		x											x		x	x		x	x	x															3	4
TOTALS	2	4	0	0	0	1	2	0	4	3	1	0	4	0	8	6	3	8	6	10	6	9	8	8	8	5										

(X) Significant at the .05 level.

(O) One cell with zero cell.

(?) Analysis not possible.

TABLE III

CHI-SQUARE ANALYSIS SHOWING DIFFERENCES BETWEEN GROUPS ON INDIVIDUAL ITEMS FOR CLUSTER III

GROUP	31		32		33		34		35		36		37		38		39		40		41		42		43		44		45						Sub-Total	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S
1 vs 2		x		x			?										?	?											0						0	2
1 vs 3															x												x	0	x	x						3	1
1 vs 4			x										x		0												x	0		x						3	1
1 vs 5		x	x		0				x						0										x		0	0	0	0					3	1
2 vs 3	0	x		x	x		x				x		x						x	x	x							0	x	x					7	4
2 vs 4	0		x	x				0				x	x	x		0												0	0	0					2	3
2 vs 5			x				0						x	x			0								x		0	0	0	0					3	1
3 vs 4			x		x			x																				x	x						3	2
3 vs 5		x		x	x			x	x																	x	x		x						4	4
4 vs 5	x	x			x	x		x																											2	3
1, 2 vs 3				x									x							x	x						x	x	x	x					4	4
1, 2 vs 4	x		x					x					x	x	x	x		x									x		x						6	4
1, 2 vs 5			x		x								x	x	x										x		x	x	x	x					7	3
3, 4 vs 5		x		x		x		x	x											x															1	5
1, 2, 3 vs 4	x		x		0			x					x	x														0	x						4	2
1, 2, 3 vs 4, 5			x		x			x					x	x	x												x	x	x	x					6	4
TOTALS	3	6	9	6	6	2	1	7	3	0	1	1	9	6	4	1	0	1	1	3	2	0	0	0	3	1	7	4	9	6					58	44

(X) Significant at the .05 level.

(0) One cell with zero cell.

(?) Analysis not possible.

TABLE IV

CHI-SQUARE ANALYSIS SHOWING DIFFERENCES BETWEEN GROUPS ON INDIVIDUAL ITEMS FOR CLUSTER IV

GROUP	46		47		48		49		50		51		52		53		54		55		56		57		58		59								Sub-Total	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S
1 vs 2																			0								x								1	0
1 vs 3															x																				1	0
1 vs 4	0								x						x				0																2	0
1 vs 5	0														x												x								2	0
2 vs 3																			x								x								2	0
2 vs 4	0																x										x								2	0
2 vs 5	0																0																		0	0
3 vs 4																																			0	0
3 vs 5																									x										0	1
4 vs 5																x			x						x										1	2
1, 2 vs 3	x																																		1	0
1, 2 vs 4	x							x			x				x		x																		4	1
1, 2 vs 5	x														x																				2	0
3, 4 vs 5			x													x			x								x								3	1
1, 2, 3 vs 4	x							x																											1	1
1, 2, 3 vs 4, 5	x							x			x																								2	1
TOTALS	5	0	1	0	0	0	0	3	1	0	2	0	0	0	5	2	2	0	3	0	0	0	0	0	0	3	4	0							24	7

(X) Significant at the .05 level.

(0) One cell with zero cell.

(?) Analysis not possible.

TABLE V

CHI-SQUARE ANALYSIS SHOWING DIFFERENCES BETWEEN GROUPS ON INDIVIDUAL ITEMS FOR CLUSTER V

GROUP	60		61		62		63		64		65		66		67		68		69		70		71		72		73		74						Sub-Total		TOTAL	
	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S
1 vs 2				?			0			x	x	x				x				?	?	x				?									1	4	4	7
1 vs 3					x	0		x																											1	1	8	3
1 vs 4					0	0	0	0											x		0				x				x						3	0	11	4
1 vs 5					0	0	0	0									0		0	0	0	0	x	0	x	0			x	0					3	0	9	1
2 vs 3			x					x		x	x	x	0	x	x	x												x	x					4	6	27	21
2 vs 4			x	0	x			x		x	x	x	x	x	x	x	x	x	x		x						x	x	x					9	8	21	19
2 vs 5			x	0	x	x		x		x		x	0	0			0	0	0	0		x	0		0				x	x					4	5	11	10
3 vs 4								x	x	x						x			x		x													3	3	7	10
3 vs 5								x	x						x			x	x	x	x		x		x									5	5	21	21
4 vs 5										x	x	x			x	x	x	x			x			x											4	5	15	16
1, 2 vs 3			x		x			x				x	x	x	x						x								x	x				6	4	26	19
1, 2 vs 4					x	x		x		x	x	x	x	x	x	x	x	x	x	x	x			x			x	x	x					8	11	30	25
1, 2 vs 5			x	x	x			x					x	x					x	x	x	x		x	x					x	x			7	8	22	14
3, 4 vs 5								x		x		x		x	x	x	x	0	x		x			0	x	0								5	5	18	21
1, 2, 3 vs 4					x	x	x	x	x	x	x	x		x		x	x	x	x	x		x			x					x	x			8	9	20	20
1, 2, 3 vs 4, 5					x	x	x	x	x	x				x					x	x	x	x		x	x	x	x				x	x			8	9	22	20
TOTALS	0	0	5	1	8	4	2	12	5	9	6	9	4	8	7	8	5	7	9	4	10	1	4	6	5	3	0	2	10	8					79	83	272	231

(X) Significant at the .05 level.

(O) One cell with zero cell.

(?) Analysis not possible.

GROUP	GROUP NUMBER	N
Physicians (1 + 2)	1	33
Hospital Administrators	2	45
Physical Therapists (Chief)	3	43
Physical Therapists (Staff)	4	32
	TOTAL	N = 153

VI. ANALYSES RELATING TO NULL HYPOTHESES

Respondents were classified into groups (1-4) according to their professions. Responses from individuals in each of five categories (does) and five categories (should) were the basis for analyses to test for differences between groups. Principal analyses were made using Chi-square.

Figure 3 is a typical format from the Chi-square analysis. This format is for question 1, the does dimension. Here the combined physicians and hospital administrators (N=71) are compared with the combined physical therapists (Groups 1 + 2 vs 3 + 4).

The Chi-Square Analysis

A review of frequency tables showed a necessity for collapsing responses to avoid zero cells in the Chi-square analysis. The five-point Likert-type scale (Almost Always, Frequently, Occasionally, Seldom and Almost Never) was reduced to Almost Always (positive), Frequently (neutral), and Occasionally, Seldom, and Never (considered negative)--producing a 3 x 2 Chi-square table for most analyses.

Count Row Pct Col Pct Tot Pct	QD1 Almost Always 1.	Frequently 2.	Occasionally Seldom Never 3.	
1.	44 62.0 42.3 30.6	15 21.1 55.6 10.4	12 16.9 92.3 8.3	71 49.3
2.	60 82.2 57.7 41.7	12 16.4 44.4 8.3	1 1.4 7.7 0.7	73 50.7
Column	104	27	13	144
Total	72.2	18.8	9.0	100.0

Figure 3. A Typical Chi-Square Format.

For purposes of analysis, does and should dimensions of the 74 questions, or a total of 148 questions, were considered. Questions were kept in their clusters when analyzed and reported. The clusters dealt essentially with the following topics:

Cluster	Content/Topic
I	Preparing patients for treatment
II	Implementation of patient treatment
III	Special procedures administered/taught to patients
IV	Patient support activities
V	Bureaucratic/professional concepts of practice

Analyses were made for each null hypothesis. A summary of analyses for H_o1 - H_o3 and a summary of data in Tables I, II, III, IV, V, pages 65-69, and Tables VI and VII provided the basis for discussion of H_o4.

H_o1: There are no differences between physical therapists and other groups analyzed regarding the role(s) of the physical therapist.

Responses from each group were compared on the 74 items (does and should), or a total of 148 items. A compilation of all the individual Chi-square analyses appears in Table VI.

Table VI is a reduction of Chi-square tables for analysis of individual items between groups shown, and a compilation of the significant results ($p < .05$) for the groups compared. For example, for Groups 1 vs. 2 (physicians vs. hospital administrators) there were 15 disagreements in the first cluster, nine questions on the does dimension and six on the should. This pattern continues across the

TABLE VI

SUMMARY OF CHI-SQUARE TABLES FOR INDIVIDUAL ANALYSIS BETWEEN GROUPS

GROUP	CLUSTER I D	I S	II D	II S	III D	III S	IV D	IV S	V D	V S	TOTAL	PERCENT DISAGREEMENT (OF 148)	RANKING
1. 1 vs 2	9	6	6	5	4	4	1	0	6	4	45	30.4	2
2. 1 vs 3	6	3	6	6	6	4	4	1	8	11	55	37.2	1
3. 1 vs 4	3	1	3	2	7	3	2	0	7	8	36	24.3	4
4. 2 vs 3	0	1	1	4	3	2	0	0	3	3	17	11.5	6
5. 2 vs 4	7	6	5	5	4	4	0	1	5	5	42	28.4	3
6. 3 vs 4	4	2	4	4	2	3	1	2	4	5	31	20.9	5
TOTAL	29	19	25	26	26	20	8	4	33	36	226		
Combined Groups													
7. 2 + 3 vs 4	4	4	5	6	1	5	3	1	5	5	39	26.4	3
8. 1 + 2 vs 3	3	2	4	6	4	2	1	1	8	9	40	27.0	2
9. 1 + 2 vs 3 + 4	3	2	3	4	6	4	2	1	8	9	42	28.4	1

TABLE VII

SUMMARY OF QUESTIONS BY CLUSTER THAT WERE FOUND TO HAVE SIGNIFICANT DIFFERENCES IN CHI-SQUARE ANALYSES

CLUSTER	NUMBER OF QUESTIONS IN CLUSTER	NUMBER OF QUESTIONS WITHOUT CONFLICT	NUMBER OF QUESTIONS WITH CONFLICT	PERCENT OF QUESTIONS WITH CONFLICT
I	34	7	27	79
II	26	6	20	77
III	30	5	25	83
IV	28	11	17	40
V	30	3	27	90
TOTAL	148	32	116	78

remaining clusters. A total of 45 questions had significant differences ($P< .05$). These 45 questions were 30.4 percent of the total questions (N=148), and this group showed the second highest disagreement (among comparisons made).

The largest proportion of disagreement (37.2 percent) appeard when physicians were compared with chief physical therapists (Group 1 vs 3). The second largest disagreement (30.4 percent) was between the physicians and the hospital administrators (Group 1 vs. 2). Physicians and staff physical therapists (Group 1 vs. 4) disagreed on 24.3 percent of the questions with 71 percent of their disagreement appearing in Clusters III and V (the sections dealing with special procedures and professional vs. bureaucratic roles). H_o1 was rejected.

H_o2: There are no differences between physicians and physical therapists on questions regarding the role(s) of the physical therapist which would indicate a professional vs. professional role conflict.

The highest level of disagreement was found to exist when Groups 1 and 3 were compared. Of the 148 questions, 55 (37 percent) were shown to have significant differences ($P< .05$). There was a large number of disagreements in all clusters with the lowest number appearing in Cluster IV. In Cluster V there were eight questions relating to professionalism. Of the 16 possible responses (8 does and 8 should), eleven responses (68 percent) were found to have significant differences. Four of the differences appeared on does questions while 7 appeared on the should questions (7 of 8).

When the physicians were compared with staff physical therapists (1 vs. 4), a total of 36 questions had significant differences (24 percent). Cluster III (related to special procedures) and Cluster V (related to professionalism and bureaucracy) had the largest number of differences--ten and 15, respectively. These two clusters accounted for 69 percent of the disagreement between these two groups. In Cluster V, of the 15 significant differences, six of a possible 16 responses (38 percent) relating to professionalism showed significant differences. Three appeared in the does dimension and three in the should.

Both physical therapy groups had significant differences on the following questions: (1) 62 does, (2) 63 should, (3) 65 should, (4) 67 does, (5) 74 does, and (6) 74 should. Question 74 was the only professionally related question in which the physical therapist chiefs and staffs disagreed with the physicians on both the does and the should dimensions.

Because of the number of significant differences which exist between Groups 1 vs. 3 and 1 vs. 4, $H_0 2$ was rejected. There were significant differences between physicians and physical therapists on questions regarding the role(s) of the physical therapist which indicate a professional vs. professional role conflict.

$H_0 3$: There are no differences between hospital administrators and physical therapists on questions regarding the role(s) of the physical therapist which would indicate a professional vs. bureaucratic role conflict.

When the hospital administrators were compared with chief

therapists (2 vs. 3), a total of 17 questions (11.5 percent) had significant differences. In Cluster I only 1 of 32 questions indicated significance, and Cluster IV contained no questions with significant differences; Clusters III and IV each had 5, while Cluster V had 6. Of the 14 questions in Cluster V which dealt with professional and bureaucratic issues, only two questions were found to have significant differences. Both of these differences were on the does dimension. There were zero disagreements between these two groups on the should dimension of the bureaucratic questions. When the two questions were compared for percentage consensus, there was no real disagreement. Question 69 (does) had a low-low consensus, while question 70 (does), had high-high consensus. The other four disagreements, which were professionally related questions, also had a high-high consensus. (See Appendix C.) Consensus is discussed in detail in the next section of this chapter.

When hospital administrators were compared with staff physical therapists (2 vs. 4), 42 questions (28 percent) were found to show significant differences. The largest number of conflicts was identified in Cluster I (13) and Cluster V (10). Cluster IV only had one question which showed significance. In Cluster I (patient preparation) only the physician vs. hospital administrator analysis showed a higher number of disagreements (15). In Cluster I, physicians vs. chief physical therapists (1 vs. 3) showed nine disagreements, while physicians vs. staff physical therapists (1 vs. 4) had four disagreements.

Of the 14 questions relating to bureaucracy in Cluster V, there were 7 differences (50 percent). Three disagreements were on the does

dimension and 4 were on the should dimension; within the 16 professional questions, there were 3 disagreements. There were more bureaucratic but less professional role conflicts between the hospital administrators and staff physical therapists than between hospital administrators and chief physical therapists.

Between physical therapists (3 vs. 4) there was a total of 31 disagreements. Nine of these came in Cluster V (29 percent). There were five disagreements on professional questions and four on bureaucratic questions. More significant differences seemed to exist between staff physical therapists and hospital administrators than between chief physical therapists and hospital administrators. Due to the number of differences which existed, $H_0 3$ was rejected. There were significant differences between hospital administrators and physical therapists on questions regarding the role(s) of the physical therapist which would indicate a professional vs. bureaucratic role conflict.

$H_0 4$: There are no differences among respondent groups on questions regarding the role(s) of the physical therapists.

Using responses to $H_0 1$, $H_0 2$, and $H_0 3$ as shown in Tables VI-VII, pages 73-74, it was clear that there were differences between the respondent groups. These differences are further demonstrated below the dotted line in Table VI, page 73 where respondent groups have been combined for further comparison. The analysis of hospital administrators and chief physical therapists (Groups 2 + 3 vs. Group 4) showed persons with administrative responsibilities vs. practitioners. Other analyses showed physicians and hospital administrators (Groups 1 + 2 vs. 4)

vs. staff physical therapists (practitioners) and other respondents (Groups 1 + 2) vs. physical therapists (Groups 3 + 4).

All of these analyses indicated relatively high levels of disagreement, but the physicians and hospital administrators vs. all physical therapists showed the most disagreements among the three multi-group comparisons.

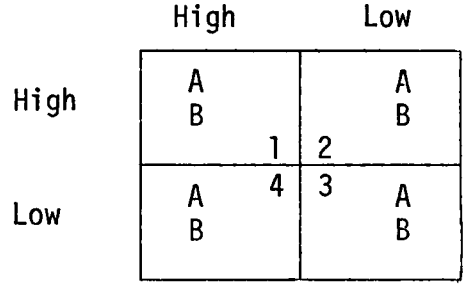
Collapsing the data from Tables I, II, III, IV, and V (pages 65-69) provides the summary shown in Table VII, page 74. This summary combines the numbers of disagreements among single item comparisons between groups. Of the 148 questions, 116 (78 percent) show some conflict among groups. Cluster V which dealt most with bureaucratic--professional issues showed the most conflict. Based on the data, $H_0 4$ is rejected.

Consensus

Items that produced significant differences between groups were reviewed in detail to determine where and what kind of differences existed. An arithmetic technique of "consensus" was used. Consensus was the sum of the percents of the contiguous responses that produced the highest total. The collapsing of the five-point (Almost Always, Frequently, Occasionally, Seldom, Almost Never) Likert-type responses into three cells resulted in a 3 x 2 Chi-square table (Almost Always, Frequently, and a combination of three remaining responses). There was an a priori determination made to total the percentages of Cells 1 and 2 into one category for consensus and to use the collapsed Cell 3 as another. The sum of the first two cells was designated as a high

or generally positive response, while the third cell was considered a low or generally negative response. If the sum of the responses in Cells 1 and 2 was 51 percent or more, the response for that group was determined to be high. If the sum of the response in Cell 3 was 51 percent or more, the response was designated as low.

The consensus between groups was called high or low and could be either positive (or in favor of the item) or negative (or against the item). That is, even though there was significant difference when tested by Chi-square, most of the responses could have been in the same cell. When this happened, consensus between groups was either high or low. When one group's responses clustered high and the other group's clustered low, consensus was high-low or low-high. This is shown below:



A = group
B = group
1, 2, 3, 4 refers to quadrants or cells.

In Cell 1, both groups clustered responses at the high end (Almost Always); in Cell 3 both groups clustered responses at the low end (the collapsed cell of Occasionally, Seldom, Almost Never). Although there were differences, the majority of both groups agreed, in effect. In Cells 2 and 4 groups split their consensus; one group in the cell was high and the other was low. These items have more potential for conflict. This pattern of response is repeated for the does and for the should dimensions of each item. This produces the following categories:

(1) High - High - Does
(2) Low - Low - Does
(3) High - High - Should
(4) Low - Low - Should
(5) High - Low - Does
(6) Low - High - Does
(7) High - Low - Should
(8) Low - High - Should

Appendix C shows the distribution of the consensus items.

In Figure 3, page 71, since the sume of the percentage of Cells 1 and 2 equals 83.1 percent (62.0 + 21.1) which is more than 51 percent, this question is considered to have a high degree of consensus among physicians and hospital administrators. The percentage total for Cells 1 and 2 on the second line equals 98.6 percent (82.2 + 16.4) which also is more than 51 percent. Therefore, the question also shows high consensus among chief and staff physical therapists. The consensus for the two groups on question one (does) is therefore a high-high consensus. It, therefore, is not considered as having a significant consensus difference.

Table VIII provides a summary of the consensus analysis. It is separated into the five clusters for both does and should. The numbers under (q) represent the corresponding question number that had a Chi-square difference and also had a significant consensus difference. The numbers under (#) represent the number of groups (of a possible eight) that had consensus differences to the corresponding question under (q). The (N) equals the total number of significant consensus differences which exist for each cluster.

Table VIII also indicates that the major disagreement (N=26) regarding physical therapist does exist in Cluster II (patient

TABLE VIII

SUMMARY OF CONSENSUS ANALYSIS SHOWING QUESTIONS (q) WHERE DIFFERENCES OCCURRED AND NUMBER (#) OF GROUPS (OF EIGHT) THAT DIFFERS*

CLUSTER (DOES)										CLUSTER (SHOULD)									
I		II		III		IV		V		I		II		III		IV		V	
q	#	q	#	q	#	q	#	q	#	q	#	q	#	q	#	q	#	q	#
3	3	18	1	31	3	51	2	61	2	12	1	18	1	31	2	49	2	62	3
4	1	21	1	32	3	53	2	62	4	16	1	25	4	34	4	58	2	63	4
6	2	22	1	37	1	58	1	68	1			26	3	37	3			64	4
7	1	24	2	42	1			69	3			27	3					68	5
8	1	25	5	43	1			71	2			28	2					69	1
9	1	26	3	45	3			72	2			30	3					71	5
10	1	28	6					74	2									73	1
12	1	29	1															74	3
14	2	30	6																
16	1																		
N = 14		N = 26		N = 12		N = 5		N = 16		N = 2		N = 16		N = 9		N = 4		N = 23	

*See Appendix C for details. See also Table IX for differences by groups.

treatment). Cluster V (bureaucratic/professional) had the second highest number of disagreements (N=16). On the should dimension, the two clusters still hold the highest differences but their positions are reversed. The greatest number of differences (N=23) regarding what the physical therapist should do lies in Cluster V. Cluster II has 16 differences.

When the groups are analyzed for their major consensus differences the same pattern as the Chi-square indicated item analysis continues. The most consensus difference (N=23) exists between groups 1 vs. 3 (physicians vs. chief physical therapists) while groups 2 vs. 3 (hospital administrators vs. chief physical therapists) demonstrate the least number of consensus differences (N=2).

Table IX shows a summary of the consensus analyses indicating what kind of consensus differences existed among groups. Most disagreements occured when physician groups were used.

Frequency Distribution

An a priori determination was made that any question which at least 25 percent of the population could not (or did not) answer was important. This decision was made because of the directive: "If you do not have sufficient information to answer the question, leave it blank." Thus, any item left blank by 4 physicians (group 1) or 12 hospital administrators, for example, was singled out for further analysis. Since no tests of significance were involved, the original five groups were used for this analysis. The coputation of 25 percent for each group is as follows:

TABLE IX

SUMMARY OF CONSENSUS ANALYSIS SHOWING THE HIGH/LOW AND LOW/HIGH CONSENSUS DIFFERENCES BY GROUPS COMPARED

GROUPS COMPARED	GROUP DIFFERENCES (DOES) HIGH/LOW	GROUP DIFFERENCES (DOES) LOW/HIGH	GROUP DIFFERENCES (SHOULD) HIGH/LOW	GROUP DIFFERENCES (SHOULD) LOW/HIGH	DIFFERENCES BY GROUP
1 vs 2	16	0	4	0	20
1 vs 3	8	3	9	3	23
1 vs 4	9	4	7	2	22
2 vs 3	0	2	0	0	2
2 vs 4	1	8	3	6	18
3 vs 4	2	3	1	7	13
(2 ,3) vs 4	1	3	2	6	12
(1, 2) vs (3, 4)	2	6	6	5	19
					N = 129

GROUP	TOTAL N	25 PERCENT
Physician (1)	14	3.5 or 4
Physician (2)	19	4.7 or 5
Hospital Administrator	45	11.2 or 12
Physical Therapist (Chief)	43	10.7 or 11
Physicial Therapist (Staff)	32	8.0

It is apparent from frequency distributions (Tables X, XI, and XII) that physicians (Group 1) and hospital administrators (Group 3) felt least confident or least qualified in giving their impressions of the roles of physical therapists. Physicians in Group 1 were consistent in their lack of responses throughout all five clusters in both the does and the should dimensions. They were somewhat more sure of what the physical therapist does than what she/he should be doing. Hospital administrators, on the other hand, were able to answer the questions on the first three clusters but were unsure on Cluster IV and V on both the does and the should dimensions.

Does/Should Differences Within Groups

Although not a major objective of the study, some comparison of single group does and should responses seemed useful. Only cluster data were used for this comparison; t-test were used primarily for reasons of parsimony. Table XIII shows the comparisons by group by cluster, reports the significance (.05), and shows the means which indicate which portion of the cluster (does or should) received the more favorable response (the lower the mean, the more favorable the response).

The analysis shows, for example, that physicians want physical therapists to do less in Cluster II (patient treatment); this pattern

TABLE X

DISTRIBUTION OF ITEMS (BY CLUSTERS) THAT TWENTY-FIVE OR MORE PERCENT OF RESPONDENT GROUPS LEFT BLANK ON THE QUESTIONNAIRE DOES

DOES	PHYSICIAN (1) N = 14 (4 OR MORE) CLUSTERS I - V					PHYSICIAN (2) N = 19 (5 OR MORE) CLUSTERS I - V					HOSPITAL ADMINISTRATORS N = 45 (12 OR MORE) CLUSTERS I - V				
	1-17	18-30	31-45	46-59	60-74	1-17	18-30	31-45	46-59	60-74	1-17	18-30	31-45	46-59	60-74
	1	18	31	47	60			33		70	3	21	39	46	60
	2	19	32	48	61			34		71	9	23	40	47	61
	3	20	33	49	62			36			11		41	48	62
	4	21	34	50	63						17		42	49	63
	5	22	35	51	66								43	50	65
	6	23	36	52	67									51	66
	7	24	37	53	68									52	67
	8	25	38	54	69									53	68
	9	26	40	57	70									54	69
	10	27	42	58	71									55	70
	11	28	44		72									56	71
	12	29			73									57	73
	13	30			74									58	
	14													59	
	15														
	16														
	17														
TOTAL	17	13	11	10	13	0	0	3	0	2	4	2	5	14	12

An item was entered if 25 or more percent of the respondent group did not answer that item. For example, if four or more physicians in group 1 (N=14) did not respond, the item was entered in the chart.

TABLE XI

DISTRIBUTION OF ITEMS (BY CLUSTERS) THAT TWENTY-FIVE OR MORE PERCENT OF RESPONDENT GROUPS LEFT BLANK ON THE QUESTIONNAIRE SHOULD

	PHYSICIAN (1) N = 14 (4 OR MORE) CLUSTERS I - V					PHYSICIAN (2) N = 19 (5 OR MORE) CLUSTERS I - V					HOSPITAL ADMINISTRATORS N = 45 (12 OR MORE) CLUSTERS I - V				
	1-17	18-30	31-45	46-59	60-74	1-17	18-30	31-45	46-59	60-74	1-17	18-30	31-45	46-59	60-74
SHOULD	1 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	18 19 20 21 22 23 24 25 26 27 28 29 30	31 32 33 34 35 36 37 40 41 42 43 44	46 47 48 49 50 51 52 57	62 63 68 69 70 71 72 74			34 36			4 10 14	22	38 40 41 42 43 44	47 48 49 50 51 52 53 54 55 56 57 59	60 61 62 63 65 66 67 68 69 70 71 72 73 74
TOTAL	16	13	12	8	8	0	0	2	0	0	3	1	6	12	14

An item was entered if 25 or more percent of the respondent group did not answer that item. For example, if four or more physicians in group 1 (N=14) did not respond, the item was entered in the chart.

TABLE XII

DISTRIBUTION OF ITEMS (BY CLUSTERS) THAT TWENTY-FIVE OR MORE PERCENT OF RESPONDENT GROUPS LEFT BLANK ON THE QUESTIONNAIRE (SHOULD AND DOES)

	CHIEF PHYSICIAL THERAPISTS N= 43 (11 OR MORE) CLUSTERS L-V						STAFF PHYSICAL THERAPISTS N = 32 (8 OR MORE) CLUSTERS 1 - V				
	1-17	18-30	31-45	46-59	60-74		1-17	18-30	31-45	46-59	60-74
DOES						DOES					
TOTAL	0	0	0	0	0		0	0	0	0	0
SHOULD			33 34	51 58	68 69 70 71	SHOULD			33		70
TOTAL	0	0	2	2	4		0	0	1	0	1

TABLE XIII

WITHIN-GROUP T-TEST ANALYSES OF DOES AND SHOULD AGREEMENT USING CLUSTER DATA

		I				II				III				IV				V				Total Diff.
		x	S.D.	t value	t	x	S.D.	t value	t	x	S.D.	t value	t	x	S.D.	t value	t	x	S.D.	t value	t	
Physicians N=33	D	2.392	.70	1.09	NS	2.523	.64	-3.83	*	2.238	.60	0.13	NS	1.889	.68	-1.95	NS	2.036	.46	-6.64	*	2
	S	2.332	.63			2.770	.73			2.230	.53			2.017	.70			2.706	.71			
Hospital Administrators N=45	D	1.950	.67	-1.23	NS	2.044	.77	-4.70	*	1.818	.59	-2.69	*	1.789	.85	-3.93	*	1.938	.60	-5.47	*	4
	S	2.001	.63			2.336	.73			2.049	.56			2.021	.90			2.338	.71			
Physical Therapists (Chief) N=43	D	2.070	.56	-2.93	*	1.875	.58	-2.72	*	1.928	.47	-1.33	NS	1.844	.64	-4.34	*	1.740	.45	-3.82	*	5
	S	2.198	.62			2.012	.58			1.997	.40			2.072	.73			2.043	.40			
Physical Therapist (Staff) N=32	D	2.218	.52	-3.22	*	2.260	.64	-2.04	*	1.928	.31	-1.60	*	1.801	.59	-6.97	*	2.060	.42	-6.10	*	5
	S	2.362	.54			2.375	.60			2.021	.29			2.042	.58			2.437	.46			
Total Diff.					2				4				3				3				4	

*Significant at .05 level.

holds true for the other groups for Cluster II as well. This would seem to indicate that all groups perceived the physical therapists as spending too much time in the area of patient treatment. Cluster V is the other cluster in which all groups have significant differences in the does and should dimensions.

Chief therapists indicated significant differences existing in four clusters and the staff showed differences in all five. In each of the clusters the mean score was higher for the should than for the does. (The lower the mean, the more often it is or should be done.) This indicates that in every phase of phsyical therapy practice examined by this study, the physical therapists themselves believe that they should be doing less than they currently were.

The analysis of Table XIII, page 89 indicates that the physical therapist's role is even more confusing than perviously thought. Each of the questions from 1-59 (Clusters I-IV) were questions which physical therapists in the Department of Labor study had indicated as being done by at least 50 percent of the physical therapist population surveyed. In this study, physical therapists indicated that they did, indeed, perform these tasks but in every cluster indicated that they should be done less often. Several questions could be raised as to the reason for these differences:

1. Are patients being "overtreated" therefore raising the cost of health care?

2. Do physical therapists really have a role that they can agree to or is the profession so diversified that there is difficulty in gaining an agreement on roles?

3. Does physical therapy have a special skill or learning which sets it apart as a profession?

4. What are the tasks physical therapists think the physical therapists should be doing?

Analysis of Tables XII and XIII, pages 88-89 showed mixed results. It was expected that the physical therapists would have supported (given a reasonably low mean score) the activities they performed in practice and seemingly should have thought they were important enough to be performed more often than they currently were.

When the does/should differences were analyzed within groups by clusters, the analysis indicated that, indeed, all of the groups had significant differences in at least two of the five clusters. The chief physical therapists had significant differences in four clusters while the staff therapist had significant differences in all five.

VII. SUMMARY

The results of this field study suggest that there were significant differences which existed between the respondent groups in the perceptions of (does) and expectations for (should) the role of physical therapist. This suggestion was a result of single question analysis and analysis of five separate clusters dealing with: (1) the preparation of patients for treatment, (2) implementation of patient treatment, (3) special procedures administered or taught to patients, (4) patient support activities, and (5) professional/ bureaucratic activities of the physical therapist. The results

of all analyses indicated that there were significant differences between/among all groups analyzed on each of the five clusters.

The data supported the rejection of each of the general null hypotheses. Data also revealed some groups which tended to agree. Excluding the separate physician groups (1, 2) which were considered as one community, the hospital administrators and chief physical therapists (2 vs. 3) had the greater extent of agreement regarding the physical therapist role than any of the other groups. The largest number of significant differences appeared when physicians were compared with chief physical therapists (1 vs. 3).

There were more disagreements for total groups on the does dimension than on the should dimension. This would indicate that the total groups analyzed had more agreement as to what the physical therapist should be doing than to what the therapist actually did.

An analysis of the degree of consensus showed the same pattern as the Chi-square analysis. The groups with the highest differences in consensus were physicians and chief physical therapists (1 vs. 3) while hospital administrators and chief physical therapists had only two questions (of a possible 148) in which there were consensus differences.

CHAPTER V

DISCUSSION OF RESULTS

I. INTRODUCTION

The purpose of this field study was to assess respondent perceptions of, and expectations for, the role of the physical therapist. This study was ex post facto in design in that it was an attempt to seek information about existing perceptions of the role(s) of the physical therapist. This study, like most field studies, sacrificed depth for breadth. There were numerous other variables which affect the role(s) of the physical therapist which were not reviewed.

The physical therapy profession is classified as a member of the "Allied Health" professions. These are all specialized health professions which were created because of the need to have different types of health-care workers who could work with, and assist the physician. These allied health professionals are generally bound professionals in that they function primarily within the confines of a bureaucratic structure (hospitals).

The physical therapist has, in the eyes of the United States Department of Labor, recently achieved "professional" status. However, due to the environment in which the physical therapist works, there are numerous roles she/he is expected to play. Because she/he is

employed by a bureaucratic organization, there are role conflicts which develop (bureaucratic vs. professional).

Physical therapists are also responsible for attending to the rehabilitative needs of patients who have been referred to them by a physician. Since physicians are primarily free professionals and only use the hospitals as places to treat their patients, they are not really bound to, or responsible to, the hospital as an employer.

One requirement of professional groups is that they have a body of knowledge which is theirs alone. Physical therapy as a profession should be no exception. Physicians on the other hand are traditionally and legally responsible for all patient care. This creates a professional vs. professional role conflict.

The physical therapist's role was studied from the point of view of the (1) physicians, (2) the hospital administrators, (3) the chief, and (4) the staff physical therapist. Respondent groups used for comparison in this study were physicians and physical therapists licensed to practice their respective professions by the State of Texas. The hospital administrators were chosen from the Texas hospitals who had physical therapy departments and were listed in the 1977 membership directory of the American Hospital Association.

A review of the literature substantiated role analysis theory as a means of exploring areas of role conflict. The Getzels' and Guba model for role conflict was the model utilized for this study. The literature suggested that in other health care professions there were professional vs. professional as well as professional vs. bureaucratic

role conflicts. The nursing field was the primary field where these conflicts had previously been studied. The literature regarding physical therapists suggested that these same conflicts may exist. Actions taken by the American Physical Therapy Association, such as their stand on accreditation,suggested that the field was ready to assume professional responsibilities. Articles by physicians suggested physical therapists were not ready to, or capable of,assuming such responsibilities.

Respondent perceptions of the actual and expectation for the ideal dimensions of the physical therapists' role(s) were obtained through responses to a questionnaire which was mailed to the respondents. Because of a small number of returns, a second mailing was sent to hospital administrators and physical therapists. It was determined that personally administering the questionnaire to a select group of medical faculty from the University of Texas at San Antonio Health Science Center would be a more advantageous method of gaining physician responses. When the physicians group (N=14), which had mailed back the questionnaire was compared, by Chi-square, with the faculty group (N=19), no significant differences were found to exist. They were therefore regarded as one community of physicians (N=33).

The questionnaire consisted of 74 questions each with a does and a should dimension. All questions were taken from previous instruments for which the reliability had been determined, and developed to assume validity.

II. PERCEPTIONS OF THE PHYSICAL THERAPIST ROLE

When hospital administrators and chief physical therapists were compared by Chi-square, only 17 differences were found to exist (N=148). Of these 17, only two questions were found to have important consensus differences. This was the smallest number of differences between groups. This analysis showed even less differences than when chief physical therapists were compared with staff physical therapists. Chief and staff physical therapists had a total of 31 differences or almost twice as many as when administrators were compared with chiefs. The largest number of differences was found to exist between physicians and chief physical therapists (N=55). The second largest number of conflicts existed between physicians and hospital administrators (N=45). Of the six analyses done for group differences, the physicians had three of the top four largest number of differences (first, second, and fourth).

Although the hospital administrators and chief physical therapists had the fewest differences, hospital administrators and staff physical therapists had the third highest number of differences (N=42). The physicians and staff physical therapists had the fourth highest number of differences (N=36).

This study indicated that there were both bureaucratic (less for the chief than the staff) and professional (less for the staff than for the chief) role conflicts existing in the field of physical therapy. These differences were shown to exist in perceptions of both the actual

(does) and the expected or ideal (should) aspects of physical therapist role(s).

The demographic data seemed to reflect these conflicts. The mean years in the field for the staff physical therapist was the lowest (6.1 years) while the physicians (group 1) had 24.9 years followed by hospital administrators with 16.3 years. Staff physical therapists have also been in their present positions the fewest number of years. It could be argued that since the staff physical therapists were primarily females,that marriage and moving where husband moves were reflected by these two figures. This study gave support to Perry's quotation (page 1) that people tend to leave the field because of dissatisfaction encountered with their role when they enter practice.

A significant finding was that males occupied 39.5 percent of the chief physical therapists population while males comprised only 9.4 percent of the staff respondents. "Why" has to be the obvious question? Do females use marriage as an "acceptable" excuse to leave while males try to seek job satisfaction as chiefs, a position which really reflects an administrative image? (Chiefs had most difference when compared with physicians, and next to the lowest number of differences when compared with staff. Chiefs had the lowest number of differences when compared with administrators.)

III. SUGGESTIONS FOR FUTURE STUDY

Several parts of this study could be improved by altering the study design. One suggestion would be to interview the respondents

rather than using a questionnaire. As previously noted there is a seemingly never ending pile of paperwork required of health professionals. The respondents might respond better to an interview than they did to a questionnaire.

The group of physicians surveyed at the Health Science Center had a signifficantly smaller number of questions left blank than did the physicians randomly selected. This could be a more logical group to analyze because they are more aware of the role(s) of the physical therapists.

There are more health professionals who interact on the role(s) of the physical therapist. As this study was being completed, other analyses were considered which might help give a clearer picture. Some of these were:

1. The comparison of the responses between nurses and physical therapists.

2. The comparison of responses between occupational therapists and physical therapists.

3. The comparison of responses of physical therapists by the number of years they had been in practice.

4. The comparison of responses of physical therapists in large and small hospital settings.

5. The comparison of responses of physical therapists who are employed by hospitals and those who are in private practice.

6. The comparison of responses of physical therapists in practice with those in educational settings.

There were significant differences found to exist even within the physical therapy population. Chief physical therapists had almost one-half as many individual question differences with the hospital administrators than they did with the staff physical therapists. This raises some questions which need to be explored further.

1. Did the chief physical therapists already operate from a bureaucratic model as staff, were good "company people," and therefore promoted or

2. Did they assume their bureaucratic model of behavior (and forsake their professional model) after they were promoted?

This study indicates that professional/professional and professional/bureaucratic conflicts do indeed exist. It may be necessary for physical therapists, as bound professionals, to have to learn to exist with these conflicts. Perhaps the importance of this study will be that it will help physical therapists to keep the two dimensions of their role conflict in perspective. If their bureaucartic role is necessary, it should be maintained as a secondary one to the professional role.

IV. SUMMARY OF FINDINGS

The purpose of this study was to explore two possible role conflicts which were thought to exist within the physical therapy profession: conflicts between two professional group role expectations and conflicts between the professional and the bureaucratic role expectations.

Responses to Questions Guiding Study

The questions guiding this study appear in Chapter I, pages 13 and 14. Rather than repeating the questions, they have been combined and answered in narrative form.

Physicians were found to have the highest level of disagreement concerning the role of the physical therapists. The highest number of differences on items was between physicians and chief physical therapists; staff physical therapists and physicians had the fourth highest number of differences. One conclusion from this is that the chief physical therapist (acting as administrator) does more to contribute to the professional/professional role conflict than does the staff therapist.

Physical therapists do perceive of themselves as professionals capable of providing quality health care. This issue is clearly addressed by question 74 of the questionnaire. Physical therapists believe that "the ultimate authority over a patient's physical therapy treatment should lie with the professional physical therapists."

Physicians, on the other hand, still perceive of physical therapists as extensions of themselves. The physician is responsible totally for patient care and the role of the physical therapist is to follow directions. Physicians do not seem to be aware of the degree of professionalization physical therapists state (and believe) that they have achieved. Physical therapy is still considered, by physicians, as a technical field which happens to have a few exceptional practitioners.

There were significant differences in role perceptions when physicians and hospital administrators were compared with physical

therapists. The consensus analysis indicated that overall the groups had 22 questions in which there was consensus agreement and 19 questions in which there were consensus differences.

V. CONCLUSIONS

Since significant differences were found between and among responses of all groups as to the role(s) of the physical therapist, it is probable that the education and training of the physical therapist are not being utilized to the highest level by others on the health-care team. This, of course, can contribute to a higher price tag for health care. Even though there are conflicts concerning their current role(s), the physical therapists do indicate that they are willing to accept (and the literature shows them capable of) an expanded health care role. With the cost of health care constantly a concern, every possible (but safe) measure should be taken to achieve the highest potential for each dollar spent. Quality health care for a fair fee is a common problem in most areas of society. Health care delivery is not one where persons should strive to maintain their "kingdoms." Clear understandings of the roles of all health-care professionals is needed, and if achieved, some improvements in health care and costs should result.

Hospital administrators seem to be more aware of the professional status of physical therapists than are physicians. Hospital administrators are willing to give much more authority to the physical therapist than are physicians. Since a primary job of the hospital

administrator is to get maximal utilization of manpower and facilities, this may contribute to their support of the physical therapist. Since the physician has traditionally been responsible for the patient, and since relying more upon the physical therapist could be seen by some as a diminuation of power, it is understandable that physicians do not want to relinquish responsibility to physical therapists. This difference is a manifestation of the role conflicts found in this study.

Nationwide, other physician extenders (e.g., physican assistant and nurse practitioner) have received little support from physician groups. Is it truly ethical for physician to "hold on" so tenaciously to the control of health-care delivery? If a qualified practitioner can be educated and trained at a lower cost than physicians, then their reimbursements should logically be less than those of physicians. Patients should be allowed this savings.

If physical therapists are not allowed to exercise their knowledge and to practice the skills they have studied and worked hard to attain then the gloomy picture which Perry (Chapter 1, page 1) has depicted will not change. We shall continue to lose excellent health-care practitioners and the cost of health care will continue to rise.

Is it possible that chief physical therapists have "given up" the practice and assumed a bureaucratic orientation due to their conflicts with physicians? If this is true it could mean that our health-care services are being deprived of the finest practitioners. This results not only in an increase in the cost of health-care delivery, but it also means that we are delivering these services with a less-qualified practitioner.

One explanation for the differences in role expectations found in this study could be the educational process of health-care personnel. After health-care students have completed their pre-professioanl courses and have entered into professional studies they become isolated. Because of the characteristic differences in educational needs of the various health professions, most of the academic courses are designed for usually only one and seldom more than two or three professional groups (e.g., there are anatomy courses for physical therapists, anatomy courses for nurses, anatomy courses for physicians). The clinical phase of education is generally spent trying to transfer cognitive information to psycho-motor skills. Little time is left for interaction, on a professional level, with other health-care students. Each student enters into practice fully versed in his/her own field but knowing very little about the capabilities of their other "team" members. Perhaps less role conflict (and therefore improved utilization) would result from integrated learning experiences. Programs such as "Kentucky January,"[79] which allow students to spend time in an interdisciplinary clinical field work experience would,help solve the dilemma.

Before physical therapists and the other allied health professionals can work as members of a team, respect for and accountability for each field's expertise must be given and expected. After we have spent many years and dollars to educate high-level practitioners, these services must not be lost. Future similar research should include the change process and how we can implement changes in our health care system.

In summary, physical therapists believe that they have the potential for functioning as professionals, recognizing the rights and responsibilities inherent with that status. Hospital administrators are willing to support this professionalization while physicians still perceive physical therapists as technicians.

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77. See Appendix "A" for the instrument.

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APPENDIXES

APPENDIX A

THE QUESTIONNAIRE INSTRUMENT

PERSONAL DATA

I.	Profession in which you currently practice:	
	a) Medicine _____	1
	b) Hospital Administration _____	2
	c) Physical Therapy:	
	Chief _____	3
	Staff _____	4
II.	Sex M_____ F_____	5,6
III.	Number of years in field _____	7,8
IV.	How many years have you been in your present position? _____	9,10

INSTRUCTIONS: Read each statement in the left hand column and circle one number in each of the two right hand columns to indicate your perception of the question regarding the physical therapist. If you do not have sufficient information to answer, please leave the question blank. DISREGARD NUMBERS AFTER "SHOULD" COLUMN.

CODE:
1 - Almost always
2 - Frequently
3 - Occasionally
4 - Seldom
5 - Almost never

The Appropriate Role for the PT:	DOES	SHOULD	
1. Obtains and reviews patient's history	1 2 3 4 5	1 2 3 4 5	11,12
2. Performs gross evaluation	1 2 3 4 5	1 2 3 4 5	13,14
Tests, measures or evaluates the following:			
3. Joint range of motion	1 2 3 4 5	1 2 3 4 5	15,16
4. Muscle function: Strength (Manual muscle test)	1 2 3 4 5	1 2 3 4 5	17, 18
5. Tactile sensory status	1 2 3 4 5	1 2 3 4 5	19,20
6. Proprioceptive sensory status	1 2 3 4 5	1 2 3 4 5	21,22
7. Perceptual sensory status	1 2 3 4 5	1 2 3 4 5	23,24
8. Functional capacity	1 2 3 4 5	1 2 3 4 5	25,26
9. Breathing patterns and vital capacity	1 2 3 4 5	1 2 3 4 5	27,28
10. Cardiovascular and cardiorespiratory endurance	1 2 3 4 5	1 2 3 4 5	29,30
11. Neuro-developmental status	1 2 3 4 5	1 2 3 4 5	31,32
12. Postural alignment	1 2 3 4 5	1 2 3 4 5	33,34
13. Analyzes and interprets evaluative data	1 2 3 4 5	1 2 3 4 5	35,36
Is responsible for designing a plan of care including the following:			
14. Treatment objectives	1 2 3 4 5	1 2 3 4 5	37,38
15. Treatment methods (modalities and procedures)	1 2 3 4 5	1 2 3 4 5	39,40
16. Periodic re-evaluation/revision	1 2 3 4 5	1 2 3 4 5	41,42
17. Treatment outcome assessment	1 2 3 4 5	1 2 3 4 5	43,44

CODE: 1 - Almost always
2 - Frequently
3 - Occasionally
4 - Seldom
5 - Almost never

Treatment Implementation

Administers, applies or instructs in the use of:

		DOES	SHOULD	
18.	Ultraviolet light	1 2 3 4 5	1 2 3 4 5	45,46
19.	Intermittent compression (Jobst)	1 2 3 4 5	1 2 3 4 5	47,48
20.	Mechanical traction	1 2 3 4 5	1 2 3 4 5	49,50
21.	Short wave diathermy	1 2 3 4 5	1 2 3 4 5	51,52
22.	Microwave diathermy	1 2 3 4 5	1 2 3 4 5	53,54
23.	Ultrasound	1 2 3 4 5	1 2 3 4 5	55,56
24.	Infra-red heat	1 2 3 4 5	1 2 3 4 5	57,58
25.	Hydrotherapy	1 2 3 4 5	1 2 3 4 5	59,60
26.	Whirlpool	1 2 3 4 5	1 2 3 4 5	61,62
27.	Contrast baths	1 2 3 4 5	1 2 3 4 5	63,64
28.	Respiratory intermittent positive pressure breathing mechanism	1 2 3 4 5	1 2 3 4 5	65,66
29.	Ice massage	1 2 3 4 5	1 2 3 4 5	67,68
30.	Electrical stimulation	1 2 3 4 5	1 2 3 4 5	69,70
Procedures				
31.	Administers exercises and functional activities for cardio and/or pulmonary patients	1 2 3 4 5	1 2 3 4 5	71,72
Administers/applies or instructs in:				
32.	Neuromuscular developmental techniques	1 2 3 4 5	1 2 3 4 5	73,74
33.	Posture and body mechanisms	1 2 3 4 5	1 2 3 4 5	75,76
34.	Pre and postnatal exercise	1 2 3 4 5	1 2 3 4 5	77,78
35.	Coordination exercises	1 2 3 4 5	1 2 3 4 5	79,80
36.	Relaxation exercises	1 2 3 4 5	1 2 3 4 5	81,82
37.	Superficial and/or deep massage	1 2 3 4 5	1 2 3 4 5	83,84

CODE: 1 - Almost always
2 - Frequently
3 - Occasionally
4 - Seldom
5 - Almost never

		DOES	SHOULD	
	Instructs, assists, safeguards patient in function activities including:			
38.	Pre-ambulation activities	1 2 3 4 5	1 2 3 4 5	85,86
39.	Transfer techniques	1 2 3 4 5	1 2 3 4 5	87,88
40.	Activities of daily living	1 2 3 4 5	1 2 3 4 5	89,90
41.	Use and care of orthotics and prosthetics devices	1 2 3 4 5	1 2 3 4 5	91,92
	Special Procedures: administers, applies or instructs in:			
42.	Postural drainage	1 2 3 4 5	1 2 3 4 5	93,94
43.	Manipulation techniques to peripheral and axial joints	1 2 3 4 5	1 2 3 4 5	95,96
44.	Body positioning	1 2 3 4 5	1 2 3 4 5	97,98
45.	Stump wrapping	1 2 3 4 5	1 2 3 4 5	99,100
	Patient support activities:			
46.	Molds splints and finger cast	1 2 3 4 5	1 2 3 4 5	101,102
47.	Adjusts supportive/assistive devices	1 2 3 4 5	1 2 3 4 5	103,104
48.	Bandages minor skin lesions	1 2 3 4 5	1 2 3 4 5	105,106
49.	Performs debridement on wounds and burns	1 2 3 4 5	1 2 3 4 5	107,108
50.	Dresses severe wounds and burns	1 2 3 4 5	1 2 3 4 5	109,110
51.	Wraps stumps for shaping	1 2 3 4 5	1 2 3 4 5	111,112
52.	Prescribes home equipment	1 2 3 4 5	1 2 3 4 5	113,114
53.	Instructs nursing, domicilliary, home personnel and teachers in follow-up care of discharged patients	1 2 3 4 5	1 2 3 4 5	115,116
54.	Plans and develops departmental programs, policies and procedures	1 2 3 4 5	1 2 3 4 5	117,118
55.	Develops departmental budget	1 2 3 4 5	1 2 3 4 5	119,120
56.	Determines and arranges staffing for PT service	1 2 3 4 5	1 2 3 4 5	121,122

CODE:
1 - Almost always
2 - Frequently
3 - Occasionally
4 - Seldom
5 - Almost never

		DOES	SHOULD	
71.	The hospital has a manual of rules and regulations which are actually followed.....	1 2 3 4 5	1 2 3 4 5	151,152
72.	The hospital strictly enforces rules stating when the therapist arrives for and departs from work.....	1 2 3 4 5	1 2 3 4 5	153,154
73.	The physical therapist is able to make his own decision regarding physical therapy when problems arise during treatment.....	1 2 3 4 5	1 2 3 4 5	155,156
74.	The ultimate authority over a patient's physical therapy treatment lies with the professional physical therapist.....	1 2 3 4 5	1 2 3 4 5	157,158

APPENDIX B

SUMMARY OF T-TESTS BETWEEN GROUPS

TABLE XIV

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUPS 1 AND 2 (PHYSICIANS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	1	2.187	.75	-1.21	NS	2.145	.85	-1.09	NS
	2	2.518	.66			2.448	.45		
II	1	2.665	.89	0.66	NS	2.762	.97	-0.04	NS
	2	2.453	.51			2.775	.61		
III	1	1.965	.74	-2.20	*	2.078	.67	-1.32	NS
	2	2.441	.39			2.343	.38		
IV	1	1.703	.70	-1.22	NS	1.968	.83	-0.71	NS
	2	2.013	.66			2.195	.92		
V	1	1.981	.62	-0.48	NS	2.591	.99	-.85	NS
	2	2.074	.33			2.858	.55		
TOTAL SIGNI-FICANT					1				0

* = Signifcant at .05 level.

TABLE XV

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 1 (PHYSICIANS) VS. GROUP 3 (HOSPITAL ADMINISTRATORS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	1	2.187	.75	1.04	NS	2.145	.85	0.53	NS
	3	1.929	.68			2.001	.64		
II	1	2.665	.89	1.95	NS	2.762	.97	1.24	NS
	3	2.045	.77			2.336	.73		
III	1	1.965	.74	0.68	NS	2.078	.67	0.15	NS
	3	1.819	.59			2.049	.57		
IV	1	1.703	.70	-0.15	NS	1.968	.83	-0.19	NS
	3	1.739	.84			2.021	.91		
V	1	1.981	.62	0.26	NS	2.591	.99	0.69	*
	3	1.926	.68			2.374	.75		
TOTAL SIGNI-FICANT					0				1

* = Signifcant at .05 level.

TABLE XVI

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 1 (PHYSICIANS) VS. GROUP 4 (PHYSICAL THERAPY CHIEFS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	1	1.187	.75	0.48	NS	2.145	.85	-0.20	NS
	4	2.071	.57			2.198	.62		
II	1	2.665	.89	2.56	*	2.762	.97	3.09	*
	4	1.878	.58			2.013	.58		
III	1	1.966	.74	0.21	NS	2.078	.67	0.55	NS
	4	1.929	.47			1.997	.40		
IV	1	1.703	.70	-0.62	NS	1.968	.83	-0.51	NS
	4	1.845	.65			2.106	.75		
V	1	1.981	.62	1.24	NS	2.591	.99	2.61	*
	4	1.740	.46			2.068	.43		
TOTAL SIGNI-FICANT					1				2

* = Signifcant at .05 level.

TABLE XVII

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 1 (PHYSICIANS) VS. GROUP 5 (PHYSICAL THERAPY STAFF) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	1	2.187	.75	-0.13	NS	2.145	.85	-0.79	NS
	5	2.219	.53			2.363	.54		
II	1	2.665	.89	1.27	NS	2.762	.97	1.46	NS
	5	2.260	.65			2.376	.60		
III	1	1.965	.74	0.23	NS	2.078	.67	0.40	NS
	5	1.929	.31			2.022	.30		
IV	1	1.703	.70	-0.32	NS	1.968	.83	-0.29	NS
	5	1.775	.60			2.043	.59		
V	1	1.981	.62	-0.41	NS	2.591	.99	0.69	NS
	5	2.061	.43			2.437	.46		
TOTAL SIGNI-FICANT					0				0

TABLE XVIII

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 2 (PHYSICIANS) VS. GROUP 3 (HOSPITAL ADMINISTRATORS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	2	2.518	.66	3.12	*	2.448	.45	2.71	*
	3	1.929	.68			2.001	.64		
II	2	2.453	.51	2.06	*	2.775	.61	2.24	*
	3	2.045	.77			2.336	.73		
III	2	2.441	.39	4.20	*	2.343	.38	2.06	*
	3	1.819	.59			2.049	.57		
IV	2	2.013	.66	1.22	NS	2.195	.92	0.66	NS
	3	1.739	.84			2.022	.91		
V	2	2.074	.32	1.08	NS	2.858	.55	2.48	*
	3	1.929	.68			2.374	.75		
TOTAL SIGNI-FICANT					3				4

* = Signifcant at .05 level.

TABLE XIX

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 2 (PHYSICIANS) VS. GROUP 4 (CHIEF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	2	2.518	.66	2.68	*	2.448	.45	1.54	NS
	4	2.071	.57			2.198	.62		
II	2	2.453	.51	3.66	*	2.775	.61	4.60	*
	4	1.876	.58			2.013	.58		
III	2	2.441	.39	4.12	*	2.343	.38	3.17	*
	4	1.929	.47			1.998	.40		
IV	2	2.013	.66	0.90	NS	2.195	.92	0.39	NS
	4	1.845	.65			2.106	.75		
V	2	2.074	.33	2.79	*	2.858	.55	5.97	*
	4	1.740	.46			2.068	.43		
TOTAL SIGNI-FICANT					4				3

* = Signifcant at .05 level.

TABLE XX

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 2 (PHYSICIANS) VS. GROUP 5 (STAFF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	2	2.518	.66	1.74	NS	2.448	.45	0.56	NS
	5	2.219	.53			2.363	.55		
II	2	2.453	.51	1.08	NS	2.775	.61	2.23	*
	5	2.260	.65			2.376	.60		
III	2	2.441	.39	5.12	*	2.343	.38	3.34	*
	5	1.929	.31			2.022	.30		
IV	2	2.013	.66	1.29	NS	2.195	.92	0.64	NS
	5	1.775	.60			2.043	.59		
V	2	2.074	.33	0.11	NS	2.858	.55	2.91	*
	5	2.061	.43			2.437	.46		
TOTAL SIGNI-FICANT					1				3

* = Signifcant at .05 level.

TABLE XXI

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 3 (HOSPITAL ADMINISTRATORS) VS. GROUP 4 (CHIEF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	3	1.929	.68	-1.06	NS	2.001	.64	-1.46	NS
	4	2.071	.57			2.196	.62		
II	3	2.045	.77	1.15	NS	2.336	.73	2.27	*
	4	1.876	.58			2.013	.58		
III	3	1.819	.59	-0.96	NS	2.049	.57	0.50	NS
	4	1.929	.47			1.997	.40		
IV	3	1.739	.84	-0.61	NS	2.022	.91	-0.43	NS
	4	1.845	.65			2.106	.75		
V	3	1.926	.68	1.38	NS	2.374	.75	2.16	*
	4	1.740	.46			2.068	.43		
TOTAL SIGNI-FICANT					0				2

* = Signifcant at .05 level.

TABLE XXII

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 3 (HOSPITAL ADMINISTRATORS) VS. GROUP 5 (STAFF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	3	1.929	.68	-1.99	*	2.001	.64	-2.57	*
	5	2.219	.53			2.363	.55		
II	3	2.045	.77	-1.26	NS	2.336	.73	-0.24	NS
	5	2.260	.65			2.376	.60		
III	3	1.819	.59	-1.06	NS	2.049	.57	0.27	NS
	5	1.929	.31			2.022	.30		
IV	3	1.739	.84	-0.20	NS	2.022	.91	-0.11	NS
	5	1.775	.60			2.043	.59		
V	3	1.926	.68	-0.98	NS	2.374	.75	-0.42	NS
	5	2.061	.43			2.437	.46		
TOTAL SIGNI-FICANT					1				1

* = Signifcant at .05 level.

TABLE XXIII

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUP 4 (CHIEF PHYSICAL THERAPISTS) VS. GROUP 5 (STAFF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	4	2.071	.57	-1.14	NS	2.198	.62	-1.18	NS
	5	2.219	.53			2.363	.55		
II	4	1.876	.58	-2.68	*	2.013	.58	-2.61	*
	5	2.260	.65			2.376	.60		
III	4	1.929	.47	-0.00	NS	1.997	.40	-.30	NS
	5	1.929	.31			2.022	.30		
IV	4	1.845	.65	0.46	NS	2.106	.75	0.38	NS
	5	1.775	.60			2.043	.59		
V	4	1.740	.46	-2.99	*	2.068	.43	-3.45	NS
	5	2.061	.43			2.437	.46		
TOTAL SIGNI-FICANT					2				1

* = Signifcant at .05 level.

TABLE XXIV

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUPS 1, 2 (PHYSICIANS) VS. GROUP 3 (HOSPITAL ADMINISTRATORS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES x	DOES S.D.	DOES t-VALUE	DOES t	SHOULD x	SHOULD S.D.	SHOULD t-VALUE	SHOULD t
I	1, 2	2.392	.70	2.82	*	2.333	.64	2.18	*
	3	1.929	.68			2.001	.64		
II	1, 2	2.524	.65	2.68	*	2.771	.73	2.42	*
	3	2.045	.77			2.336	.73		
III	1, 2	2.239	.60	3.07	*	2.231	.53	1.43	*
	3	1.819	.59			2.049	.57		
IV	1, 2	1.889	.68	0.79	NS	2.107	.88	0.39	NS
	3	1.739	.84			2.022	.91		
V	1, 2	2.037	.46	0.78	NS	2.755	.75	2.08	*
	3	1.926	.68			2.374	.75		
TOTAL SIGNI-FICANT					3				3

* = Signifcant at .05 level.

TABLE XXV

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUPS 1, 2 (PHYSICIANS) VS. GROUP 4 (CHIEF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES				SHOULD			
		x	S.D.	t-VALUE	t	x	S.D.	t-VALUE	t
I	1, 2	2.392	.70	2.15	*	2.333	.64	0.89	NS
	4	2.071	.57			2.198	.62		
II	1, 2	2.524	.65	4.34	*	2.771	.73	4.80	*
	4	1.876	.58			2.013	.58		
III	1, 2	2.239	.60	2.51	*	2.231	.53	2.18	*
	4	1.929	.47			1.997	.40		
IV	1, 2	1.889	.68	0.27	NS	2.107	.88	0.01	NS
	4	1.845	.65			2.106	.75		
V	1, 2	2.037	.46	2.66	*	2.755	.75	4.80	*
	4	1.740	.46			2.068	.43		
TOTAL SIGNI-FICANT					4				3

* = Signifcant at .05 level.

TABLE XXVI

A T-TEST COMPARISON, BY CLUSTER, BETWEEN GROUPS 1, 2 (PHYSICIANS) VS. GROUP 5 (STAFF PHYSICAL THERAPISTS) OF DOES AND SHOULD AGREEMENT

CLUSTER		DOES x	DOES S.D.	DOES t-VALUE	DOES t	SHOULD x	SHOULD S.D.	SHOULD t-VALUE	SHOULD t
I	1, 2	2.392	.70	1.09	NS	2.333	.64	-0.20	NS
	5	2.219	.53			2.363	.55		
II	1, 2	2.524	.65	1.54	NS	2.771	.73	2.26	*
	5	2.260	.65			2.376	.60		
III	1, 2	2.239	.60	2.61	*	2.231	.53	1.96	NS
	5	1.929	.31			2.022	.30		
IV	1, 2	1.889	.68	0.69	NS	2.107	.88	0.34	NS
	5	1.775	.60			2.043	.59		
V	1, 2	2.037	.46	-0.21	NS	2.755	.75	2.00	*
	5	2.061	.43			2.437	.46		
TOTAL SIGNI-FICANT					1				2

* = Signifcant at .05 level.

APPENDIX C

SUMMARY OF DISTRIBUTION OF THE DEGREES OF CONSENSUS

Appendix C is a summary of the distribution of the "degree of consensus" which was found to exist on questions indicating significance by Chi-square.

Eight consensus categories were available (4 does and 4 should). The categories are:

1. High-High-Does
2. Low-Low-Does
3. High-High-Should
4. Low-Low-Should
5. High-Low-Does
6. Low-High-Does
7. High-Low-Should
8. Low-High-Should

Question numbers appearing in categories 5, 6, 7 and 8 were those which were considered to have significant consensus differences.

The groups which are being analyzed can be found in the upper left hand corner. The Roman numerals above the does and should correspond to the appropriate cluster from the questionnaire. The number under the Roman numerals corresponds to the question from the questionnaire.

TABLE XXVII

DEGREE OF CONSENSUS FOR GROUP 1 VS. GROUP 2

(1) vs (2) GROUP		HIGH										LOW									
		DOES					SHOULD					DOES					SHOULD				
		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
HIGH	DOES	1 15	21	41 44	46	66 67 70 74 N=10						3 7 8 9 16 17	18 22 28 29 30	37 42 45		61 62 N=16					
	SHOULD						6 7 8 10 13	20 22 28 29	32 40 44 45		65 66 N=15						16	27			63 74 N=4
LOW	DOES					N=0						5				N=1					
	SHOULD										N=0										N=0

TABLE XXVIII

DEGREE OF CONSENSUS FOR GROUP 1 VS. GROUP 3

(1) vs (3) GROUP		HIGH										LOW									
		DOES					SHOULD					DOES					SHOULD				
		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
HIGH	DOES	1 7 8 9 11 17	27 29 30	37 38 44	46 54	65 66 67 68 70 N=19							24 25 28	31 45	53	62 74 N=8					
	SHOULD						1 7 8	28 29		44 45	64 66 67 69 71 N=12							25 26 27 30	34 37		62 63 74 N=9
LOW	DOES			32	51	69 N=3										N=0					
	SHOULD									49	68 73 N=13										N=0

TABLE XXIX

DEGREE OF CONSENSUS FOR GROUP 1 VS. GROUP 4

(1+2) vs (3+4) GROUP		HIGH										LOW									
		DOES					SHOULD					DOES					SHOULD				
		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
HIGH	DOES	1 7	24 27	33 37 38 44 45	46	63 64 70 74 N=14							25			62 N=2					
HIGH	SHOULD						7 18	27	44 45		64 66 N=7							25 26	37		62 63 64 N=6
LOW	DOES	14		32	51	69 71 72 N=6										N=0					
LOW	SHOULD						12		34	49	68 71 N=5										72 N=1

TABLE XXX

DEGREE OF CONSENSUS FOR GROUP 2 VS. GROUP 3

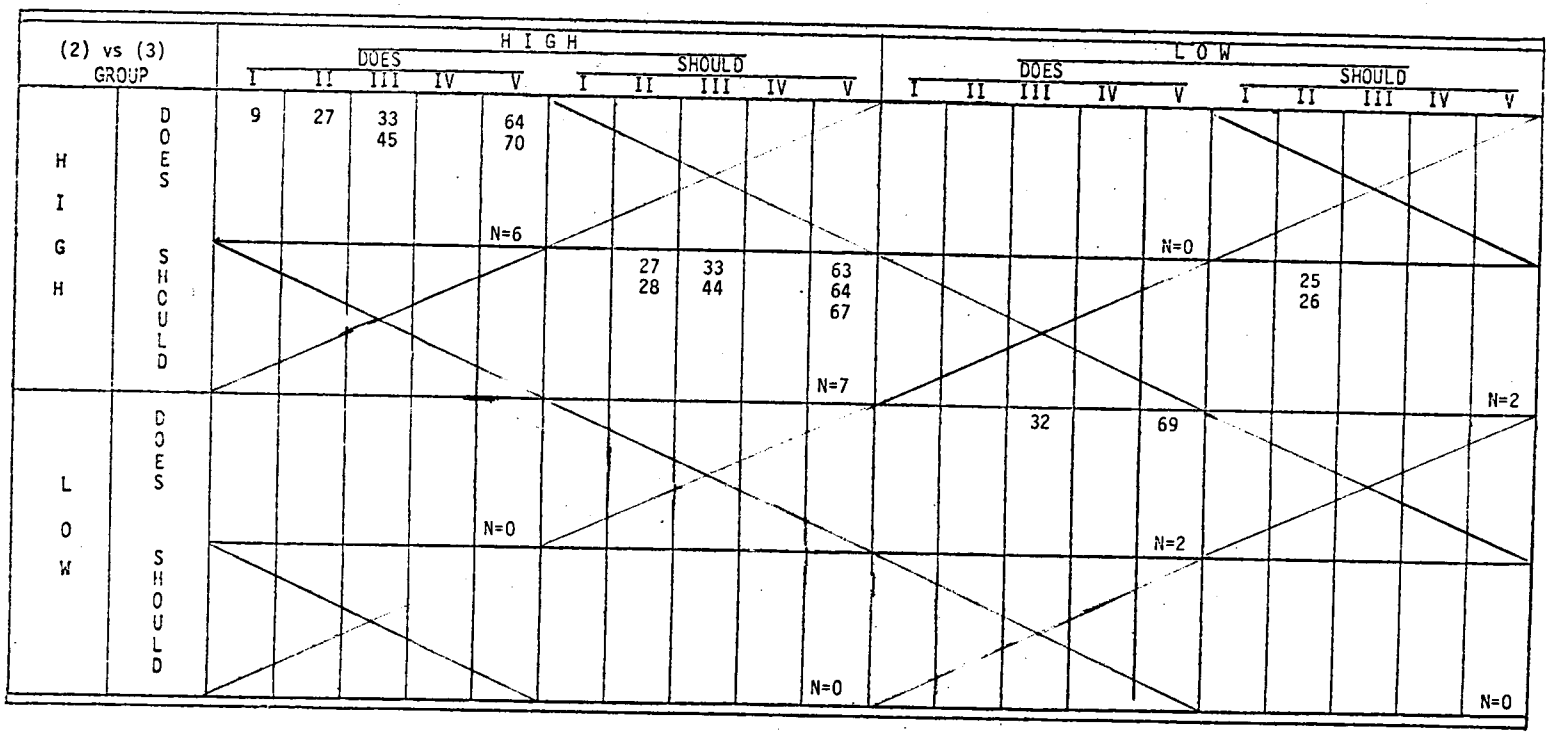


TABLE XXXI

DEGREE OF CONSENSUS FOR GROUPS 2 + 3 VS. GROUP 4

(2+3) vs (4) GROUP		HIGH										LOW									
		DOES					SHOULD					DOES					SHOULD				
		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
HIGH	DOES	3 8 17	26 29	35	47 55	67 68 69 70 N=12						6				N=1					
	SHOULD						3 6 8 16 18	27 29	32 40	53	63 64 65 66 67 N=15							25		58	N=2
LOW	DOES		22 28 30			N=3										N=0					
	SHOULD							28 30	31 34		68 71 N=6								33		72 N=2

TABLE XXXII

DEGREE OF CONSENSUS FOR GROUP 2 VS. GROUP 4

(2) vs (4) GROUP		HIGH DOES I	HIGH DOES II	HIGH DOES III	HIGH DOES IV	HIGH DOES V	HIGH SHOULD I	HIGH SHOULD II	HIGH SHOULD III	HIGH SHOULD IV	HIGH SHOULD V	LOW DOES I	LOW DOES II	LOW DOES III	LOW DOES IV	LOW DOES V	LOW SHOULD I	LOW SHOULD II	LOW SHOULD III	LOW SHOULD IV	LOW SHOULD V
HIGH	DOES	3 8 9 17	29	33 35 44 45		64 67 70 N=12							26			N=1					
	SHOULD						3 6 8 11 16	18 29	32 43		63 69 N=11							25 26		58	N=3
LOW	DOES	4 10 14	22 28 30			69 72 N=8										N=0					
	SHOULD						12	28	31 34		68 71 N=6										72 N=1

TABLE XXXIII

DEGREE OF CONSENSUS FOR GROUP 3 VS. GROUP 4

(3) vs (4) GROUP		HIGH										LOW									
		DOES					SHOULD					DOES					SHOULD				
		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
HIGH	DOES	9 17	27 29	33	35	65 67 68 70 N=10						3 6				N=2					
	SHOULD						8 16	29		53	64 65 67 N=7									58	N=1
LOW	DOES		28 30 31			N=3										N=0					
	SHOULD							27 28 30	31 34		68 71 N=7								33		N=1

TABLE XXXIV

DEGREE OF CONSENSUS FOR GROUPS 1 + 2 VS. GROUPS 3 + 4

(1) vs (4) GROUP		HIGH										LOW									
		DOES					SHOULD					DOES					SHOULD				
		I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V	I	II	III	IV	V
HIGH	DOES	1 7		33 37 38 44	46	66 70 N=9						3	24 25	43 45	53	61 62 74 N=9					
	SHOULD						7		45		66 69 N=4							18 25 26	37		62 63 64 N=7
LOW	DOES		30	32		69 71 N=4										N=0					
	SHOULD										68 71 N=2										72 N=1

VITA

Ray M. Patterson was born April 19, 1941, in Jackson, Mississippi. He lived in Mendenhall, Mississippi until the age of 12. In 1953, his family moved to Florence, Mississippi. He completed high school there. He received a certificate in Physical Therapy from Hermann Hospital, Houston, Texas, in 1963.

He practiced physical therapy in Jackson, Mississippi until 1966 when he returned to the University of Southern Mississippi to complete the requirements for a B.S. degree (Physical Education). The Masters of Education was awarded from U.S.M. in 1967.

From 1967 to 1968, he was the Executive Director of the Sanders' School for Cerebral Palsy in Jackson, Mississippi. From 1968 to 1972, he was Assistant Director of the School of Physical Therapy at The University of Tennessee in Memphis. During this time he was enrolled at the University of Tennessee, Memphis Graduate Education Center.

In 1972, he began doctoral studies in Educational Administration and Supervision at The University of Tennessee in Knoxville. He was the recipient of a scholarship from the American Physical Therapy Association. He left Knoxville in 1974 to establish a B.S. program in physical therapy at the College of St. Scholastica in Duluth, Minnesota. In 1976, he moved to the University of Texas at San Antonio to again direct the beginning of another new B.S. program in physical therapy.