THE PERCEPTIONS OF PHYSICAL THERAPISTS
AND PHYSICAL THERAPY STUDENTS TOWARD
DIRECT ACCESS TO PATIENTS IN OHIO

A Thesis
Presented in Partial Fulfillment of the
Requirements for the Degree Master of Science

by
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Without the support of the above individuals, this study would not have been possible.
VITA

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1977 . . . . . . . . . . B.S., The Ohio State University, Columbus, Ohio

1977-1978 . . . . . Staff Physical Therapist, O’Bleness Hospital, Athens, Ohio


1979-Present . . . . . Owner and Director, Fayette Physical Therapy, Inc., Washington C.H., Ohio

FIELDS OF STUDY

Major Field: Science

Studies in Allied Health Administration ( Frank Pierson, Faculty Advisor )
TABLE OF CONTENTS

ACKNOWLEDGEMENTS................................................................. ii
VITA................................................................................................. iii
LIST OF TABLES............................................................................. vi

CHAPTER

I. INTRODUCTION............................................................................. 1
   Significance of the Study......................................................... 1
   Purpose Statement................................................................. 3

II. REVIEW OF LITERATURE.......................................................... 5
    History of the Evolution of Direct Access............................... 5
    Opposition and Support of Direct Access............................... 8
    Quality of Physical Therapy Services................................... 10
    Public Opinion Studies......................................................... 13
    Physical Therapist and Student Studies................................. 13
    Malpractice Claims............................................................... 14
    Reimbursement...................................................................... 15
    Professional Behavior and Autonomy.................................... 16
    Summary of Literature Review............................................. 17

III. METHODOLOGY......................................................................... 19
    Design.................................................................................. 19
    Subjects................................................................................ 19
    Instrumentation..................................................................... 20
    Procedure............................................................................. 21
    Data Analysis....................................................................... 22

IV. RESULTS................................................................................ 24
    Introduction.......................................................................... 24
    Response Rate....................................................................... 24
    Demographics....................................................................... 24
    Perception Responses......................................................... 28

V. DISCUSSION AND CONCLUSION............................................... 36
    Demographics....................................................................... 36
    Research Question 1............................................................ 38
    Research Question 2............................................................ 39
LIST OF TABLES

Table                  Page
1. Years Of Practice   24
2. Sex                 25
3. Working Respondents 25
4. Employment Status   26
5. Primary Place Of Practice 26
6. Generalist Or Specialist 27
7. Members vs. Non-Members 27
8. Opinions            28
9. Opposed Direct Access 29
10. Recommended Experience 29
11. Critical Skills / Areas Of Knowledge 30
12. Opinion Score Variability For Therapists 31
13. Anticipated Effects Of Direct Access 32
14. Recommended Preparation Methods 33
15. Skills Required    34
CHAPTER I

Introduction

Significance Of The Study

The practice of physical therapy has undergone many changes through the years. Perhaps the movement toward autonomy, which many allied health practitioners see as the ultimate sign of professionalism, will have the greatest impact on the members of this profession. Autonomy has been defined as "independence for the individual in the work environment" (1). Increased autonomy is part of the development of professions and is not unique to physical therapy. Direct access is a form of autonomy but not the only factor associated with it.

Direct access is defined as the application of physical therapy evaluation and treatment independent of referral from other health practitioners. Legislation at the state level is required to enable physical therapists to practice without referral from specific practitioners. Legislation allowing direct access to patients would not mandate this style of practice. It would make the option of direct access available to physical therapists.

This thesis focuses on factors related to direct access; not factors such as ownership of physical therapy
practices or employment situations. Literature on autonomy which is not specific to direct access for physical therapy is cited in the following literature review when it serves to enhance one's understanding of the evolution of direct access in physical therapy and when it provides direction for the future of physical therapy.

When this manuscript was prepared, twenty-four states had laws permitting patients direct access to all physical therapy services (2) and eighteen others permitted physical therapy evaluation without physician referral (3). Ohio is one of several states in which physical therapists are now working to achieve direct access. Currently, Ohio statutes restrict the practice of physical therapy to practice only "upon the prescription of, or the referral of a patient by, a person who is licensed and registered in this state to practice medicine and surgery, dentistry, osteopathic medicine and surgery or podiatry" (4).

During the past several years, the leaders of the Ohio Chapter, Inc., American Physical Therapy Association (APTA) have held meetings in each Ohio district informing members about direct access and seeking feedback from the members (5). In a recent telephone interview with William Finissi, Legislative Agent for the Ohio Chapter, Inc., APTA, he stated, "We are confident from our communications
with Ohio physical therapists that direct access is strongly supported" (5).

Information about the perceptions of students and APTA members and non-member practitioners in Ohio is needed to confirm a shared vision for the future of this profession in Ohio and to develop a cooperative effort to achieve the goals of the membership of the Ohio Chapter, Inc., APTA. This information is also needed to assist educational programs in the review and possible revision of their curriculum.

**Purpose Statement**

The purpose of this study was to determine from the respondents their perceptions regarding direct access to patients.

This thesis addressed the following research questions through a survey distributed to 400 physical therapists in Ohio and 70 second year physical therapy students at The Ohio State University.

1. Do the respondents favor direct access in Ohio?
2. How important is the role of professional experience in determining which of Ohio's physical therapists the respondents favor being granted direct access privileges?
3. What skills and areas of knowledge are critical for a physical therapist in a direct access environment?
4. What relationships exist between the perceptions of the respondents and their demographic profiles?

5. What do the respondents anticipate the effects of direct access in Ohio to be?

6. What are the most strongly recommended methods of preparing oneself for direct access?

7. What curriculum changes might be needed as a result of direct access practice?

The results of this study will be distributed to the respondents who have requested access to them. They will also be submitted for publication in a physical therapy newsletter and/or journal. These findings may assist in meeting the goals of Ohio’s physical therapists. The study may also identify certain groups of clinicians who may require increased knowledge about the issue.

The results will also be valuable to educators in the preparation of physical therapists to practice in a direct access environment.
Chapter II

Review of Literature

History of the Evolution of Direct Access

In 1918, physical therapy was initiated in the United States through the establishment of the United States Army's reconstruction aides (6). These early physical therapists helped rehabilitate World War I soldiers. They were trained for short periods of time in hospitals and were required to follow the physician's orders precisely. By the early 1970's, physical therapists were licensed by all 50 states (7). In 1973, the House of Delegates (H of D) of the APTA endorsed the principles of initial evaluation without referral (6, 8). "In 1976, the 1973 principles were rescinded. In 1978 the H of D once again charged the Board of Directors to devise a plan for physical therapy practice independent of physician referral" (6).

In 1979, it became ethically permissible for physical therapists to provide evaluation and consultation without practitioner referral in those states where it was legally permissible (6). Also in 1979, a motion was passed by the
H of D which permitted treatment without referral, but with the proviso that a plan for implementation be approved by the H of D (6).

In 1980, an amendment was passed by the H of D that required a diagnosis before treatment could be given. The confusion and conflict in opinion concerning this issue prompted the appointment of task forces to develop position papers on the role of physical therapists in the diagnostic and referral processes (6). "In 1981, the House of Delegates adopted an amendment stating that a physical therapist may be the entry point for evaluation, treatment and prevention" (6).

California was the first state to obtain direct access privileges for physical therapists in 1968 (9, 23). Twenty-three additional states have legalized direct access making a total of 24 states allowing direct access in September 1989 (2). Eighteen other states permit physical therapists to evaluate patients without referral but not to initiate treatments (3).

In Ohio, physical therapy was placed under control of the Ohio State Medical Board in 1959 (10). During the mid-1970's, initial grassroots efforts were used to improve the laws governing physical therapists (10). In 1977, The Ohio Occupational Therapy - Physical Therapy Board was established (10). Also in 1977, the Ohio practice act was changed from allowing treatment only upon
the prescription of a physician to prescription of or referral by a physician (4). Through the mid-1980’s, Ohio physical therapists were not held in high political favor due to disagreement within their own ranks (5, 10). During 1985 and 1986, a period of "mending fences" took place between The Ohio Chapter, Inc., APTA and representatives of the Ohio Legislature (5). In 1987 and 1988, The Ohio Chapter, Inc., APTA Legislative Agent, William Finissi, was active regarding legislative issues such as who can perform and bill for physical therapy and continuing education requirements for physical therapists in Ohio (5). In 1989, direct access legislation was introduced to the Health and Retirement Committee of the Ohio House of Representatives as part of a chiropractic bill. This bill was passed in the House 68 - 28 and should be introduced in the Ohio Senate in 1990 (5).

At least ten more direct access bills were introduced to state legislatures in 1989 and this trend toward direct access for physical therapists still appears strong (11).

In some situations, it appeared that the "team approach" led to increased autonomy for physical therapists because physicians were able to observe their potential (12). Other health professionals feel that physical therapists have achieved increased autonomy due to the growth of professionalism in the field, their inclination towards professional independence from
physicians, competitiveness between providers of similar services and increasing technological sophistication (13, 14).

Opposition and Support of Direct Access

The major opponents of direct access have been state medical societies, chiropractic organizations and hospital associations (14, 15, 16). Although there are some individual physicians who support direct access and some who oppose it (12, 17), the opposition to it by medical and chiropractic societies has been consistent (14). Frequently cited statements of opposition include that physical therapists: want to practice medicine; are not properly trained to establish a diagnosis; would over-utilize physical therapy rather than refer the patient for less expensive medical treatments thereby increasing the cost of health care; and would cause harm to patients if physician referral were not mandated (6, 17). These same arguments have also been used by medical and dental societies to thwart the efforts of nurse practitioners and dental hygienists to achieve more independent roles (18, 19). The APTA and certain individual physical therapists have responded to each of these fears by stressing the following: physical therapists possess high quality skills and competence; the role of the physical therapist is distinct and well defined, therefore does not encompass medical practice and
medical diagnosing; patients will be referred when appropriate; and many patients do not need to see a physician prior to receiving physical therapy (6, 20, 21).

Hospital associations, although sometimes against direct access, remained neutral during legislative presentations on the subject in Arizona in 1983 (6) and in Ohio in 1989 (5).

Studies by Ritchey, et al. (22) and Silva, et al. (23) indicated that physicians view physical therapists as lacking in higher level professional skills such as autonomy, decision making, and evaluative skills. Silva, et al. recommended upgrading entry level educational requirements and physical therapy research to help physical therapists work as true colleagues with physicians and gain autonomy through these methods (23). Ritchey, et al. also expressed the need for physical therapists to collaborate more in research and practice with physicians, but they believed greater professional autonomy is likely to be gained by role expansion rather than status enhancement mechanisms such as more stringent curriculum and license standards (22).

The research of Ritchey, et al. also showed that an expanding physical therapy role is not likely to stimulate "turf battles" with physicians (22). In their study, 70% of the physicians surveyed indicated that they have
requested a physical therapist to recommend a specific therapy.

Although many medical societies still oppose direct access legislation, obtaining grassroots support from a variety of local health professionals seems possible and this activity is strongly recommended by the APTA (6).

Jay Goodfarb, P.T., President of the Private Practice Section of the APTA, believes that business and industry want more than one point of entry for health care and he believes they will support the concept of direct access for physical therapists (24).

Quality of Physical Therapy Services

Physicians and chiropractors have argued that physical therapists may abuse their rights to direct access by falsely assuming medical and chiropractic roles. If this occurred, one would think liability claims would increase in states with direct access. Yet to date there has not been an increase in liability claims in states with direct access (12, 15).

Two studies supported the concept that direct access was a safe and effective approach for patient care. A study of first-contact non-physician care of low back patients was reported by Overman, Dickstein, Larson, and Rocky (25). In a monitored program, they studied the process and outcomes of the physical therapy management of 107 patients. The outcomes of the care provided was found
to be equal to or better than that provided by primary care internists. The patients managed by the physical therapists expressed greater satisfaction with several aspects of their care. In 1975, positive conclusions were reported about the ability of physical therapists to perform musculoskeletal screenings (26). Although these two studies seem to support direct access for physical therapy services, Durant, Lord and Domholdt noted that both studies employed treatment algorithms to assist the therapists in making decisions about whether to refer the patient to a physician and that both studies concluded that specialized training was needed to prepare the physical therapists for their expanded roles (9).

Singleton (8) and Bruckner (27) discussed the need for the more independently practicing physical therapists to consider ethical dilemmas and prepare to deal with them responsibly. Singleton also discussed the value of experience in preparing physical therapists for practice without physician referral and suggested that recent graduates should have to practice for a designated period of time under the supervision of another therapist prior to being licensed to practice without referral (8).

Sahrmann argued that the direct access issue highlights the need for physical therapists to establish and consistently use physical therapy diagnostic categories (20). She stressed that physical therapists
must only use diagnostic labels which they can confirm through their own examination methods to improve professional credibility. She defined a physical therapy diagnosis as, "...the term that names the primary dysfunction toward which the physical therapist directs treatment. The dysfunction is identified by the physical therapist based on information obtained from the history, signs, symptoms, examination, and tests the therapist performs or requests."

Rose accepted Sahrmann's definition of physical therapy diagnosis and elaborated on the roles, functions and limitations of a physical therapy diagnosis (28). He asserted that the absence of a generally accepted description of a physical therapy diagnosis misleads legislators and members of the health care community to believe that physical therapists want to diagnose disease in a manner similar to that used by physicians.

Slaughter, Brown, Gardner and Perritt reported on the development and evaluation of an analytical questioning model for teaching problem solving skills to physical therapy students (29). They acknowledged the existence of six studies since 1977 that addressed creative ways to teach problem solving skills to physical therapy students. The idea of objectively validating the effectiveness of such models was stressed as a method of assuring well trained clinicians in the future.
The July 1989 issue of *Physical Therapy* was devoted to articles which originated from the APTA Conference on Clinical Decision Making in Physical Therapy Practice, Education, and Research. Rose Sgarlat Myers and Steven J. Rose wrote, "The conference was the beginning of a process that will lead us into a more sophisticated and more responsible level of practice. What must follow for each of us is a more thoughtful incorporation of the content and process into our respective areas of education, practice, and research." (30)

**Public Opinion Studies**

Durant, Lord and Domholdt recently surveyed 361 patients from 25 different private out-patient clinics in Indiana (9). Results showed that 82.8% of the respondents favored direct access to physical therapy. Subjects who received more treatments were more likely to support direct access. Patients were more likely to state that they would use direct access for a recurring problem than for a new one.

A statewide survey by the Minnesota Chapter of the APTA in 1988 revealed that 57.2% of lay people polled supported direct access for physical therapy (9).

**Physical Therapist and Student Studies**

Barron, Hamouz and Porter randomly surveyed physical therapists in Indiana (31). They found that 65.5% supported direct access, 86.5% believed that direct access
would lead to increased malpractice insurance rates, 75.3% believed that physical therapists need more education to practice in direct access environments, and 21.2% believed that patients will be placed at greater health risks if direct access were to become a reality in Indiana.

LeMasters surveyed over two hundred physical therapy students enrolled in their final year of study from different areas of the United States (32). Her findings were: 85% believed that achieving direct access is vital to the development of the profession; 20% planned to concentrate their immediate job searches in direct access states; 53% planned to practice in a direct access state at a later date; and 37% believed new graduates are competent to practice in a direct access environment.

**Malpractice Claims**

Maginnis and Associates, one of the largest professional liability insurers for physical therapists, has indicated there has not been an increase in malpractice claims in states permitting direct access (15). However, not everyone regards this as conclusive evidence for projecting the future. Malpractice attorney, Donna Fraiche, has stated, "...professional liability lawsuits will rise in direct proportion to the increased independence of the profession" (33). William Finissi, Legislative Agent for the Ohio Chapter, Inc., APTA, has stated that physical
therapists' liability and malpractice insurance rates are certain to increase as therapists become more responsible and physicians become less responsible for physical therapists' actions (5).

Reimbursement

Reimbursement for services not prescribed by a physician is currently a problem facing several allied health professions including physical therapists (24, 34 35). Kenneth Davis, Director of Practice of the APTA, believes that a majority of states will need to adopt direct access legislation before Medicare and other third party payers will change from requiring a physician referral or prescription as the indicator for medical necessity (24). Caraher believes that insurance companies fear an increase in provider eligibility for reimbursement will increase utilization of services and an increase in costs (34). Based on their concerns of increased costs, The Blue Cross/Blue Shield Association opposed federal legislation which proposed to mandate coverage to certain non-physician providers (35).

In a 1988 interview, Senator Edward M. Kennedy stated, "where they (allied health professions) can demonstrate that direct patient billing results in good quality care at lower cost, I am confident that this will be accepted by businesses and insurers without the need for explicit federal mandates" (36).
Professional Behavior and Autonomy

Bruhn, in an essay on professionalism in allied health, discussed the need for the educational process to stress teaching students the basic tools they need to become professionals (37). He stated that, "Allied health students are rarely helped to compromise the ideal and real aspects of that profession and to formulate their own personal philosophy of professional service". Bruhn listed several current trends in allied health and presented the aspects of professional behavior he believed required greater emphasis in the future. He also recommended approaches to teach the desired professional behaviors.

Bruhn stated that the aspects of professional behavior requiring greater emphasis in the future due to increased responsibility for direct access patient management are interpersonal and team leadership skills, responsibility for legal rights, and accountability. Courses, seminars, and workshops on communication skills and seminars with lawyers and ethicists are the recommended approaches to teaching these aspects of professional behavior. Other current trends in allied health discussed were: increased emphasis on research, increased opportunities in consultation, increase in new occupations paralleling technological advances in diagnosis and treatment, increase in specialization in
some allied health professions, increase in non-
traditional and computer assisted modes of learning, and
increased standards for program accreditation.

Four modes of health care operation were discussed by
Grinnell (38). They were: collaboration by command,
collaboration by specialist division of labor, competitive
cold war, and collegial collaboration. Collegial
collaboration, also referred to as autonomous
interdependence, is the direction Grinnell believes allied
health professions must pursue if they are to achieve
greater autonomy. A 1988 study which examined the
relationships of physicians and nurse practitioners also
promoted collegial collaboration (39).

Summary of Literature Review

The review of the literature revealed significant
information about the development of physical therapy and
the obstacles to future development. Physical therapists
and their organizations were found to be actively paving
the way to the future through legislative, research,
educational and clinical channels.

Several other health professions were observed facing
many of the same challenges as physical therapy. The APTA
and its state chapters have established the goal of
obtaining direct access in all states. Thus far the goal
has been achieved in almost half the states within the
United States of America.
The opposition to direct access has been quite formidable, but so have been the proponents. A few studies were found which attempted to determine the safety and effectiveness of physical therapists in "direct access-like environments". Concerns about clinical decision making skills and other significant issues were found to have been dealt with recently by many clinical and academic leaders.

Several public opinion studies and physical therapist/physical therapy student studies have also provided insight into the issue of direct access.
Chapter III

Methodology

Research Design

This study was undertaken to obtain the perceptions toward direct access of 400 selected physical therapists and one group of 70 graduating physical therapy students in Ohio.

The study design was descriptive survey research. A survey was specifically designed to accumulate data necessary to answer the research questions.

Subjects

Seventy physical therapy students enrolled in the final quarter of study at The Ohio State University and a random sample of 400 licensed physical therapists in Ohio were chosen to participate in this study. The physical therapy students at The Ohio State University were chosen due to their relatively small number and their accessibility to the investigator during Spring Quarter 1989. Since these students would soon decide whether or not to support their professional organization, their perceptions about key issues such as direct access were considered to be extremely important.
Initially, a stratified random selection of 200 physical therapists who were current members of the Ohio Chapter of the APTA and 200 non-member physical therapists was planned as the subject base. This stratified sample was not possible to develop due to the unavailability of a list of APTA members.

**Instrumentation**

A three page questionnaire was developed to gather the perceptions the subjects had of direct access and to obtain demographic data about them. A sample of the questionnaire is found in Appendix A.

Prior to distribution of the questionnaire, it was pilot tested using ten practicing physical therapists. As a result of their recommendations, several modifications were made. None of these individuals were included in the final sample.

The questionnaire was designed to provide answers to the following research questions:

1. Do the respondents favor direct access in Ohio? (Question 26)

2. How important is the role of professional experience in determining which of Ohio's physical therapists the respondents favor being granted direct access privileges? (Questions 11, 22, 23)
3. What skills and areas of knowledge are critical for a physical therapist in a direct access environment? (Question 9)

4. What relationships exist between the perceptions of the respondents and their demographic profiles? (Questions 1 - 8, 11, 13 - 28).

5. What do the respondents anticipate the effects of direct access in Ohio to be? (Questions 13 - 21)

6. What are the most strongly recommended methods of preparing oneself for direct access? (Question 10)

7. What curriculum changes might be needed as a result of direct access practice? (Questions 9, 23)

Procedure

Questionnaires were personally distributed to the students during the final week of May, 1989. On June 12, 1989, a booklet consisting of a cover letter and questionnaire was mailed to the physical therapists randomly selected as subjects from a list of physical therapists licensed by the Ohio Occupational Therapy-Physical Therapy Board. Every fourth physical therapist with an Ohio mailing address was selected to participate in this study.

Upon receipt by the investigator, each questionnaire was number coded from 001 to 321 for data entry purposes. Data was tabulated and analyzed using the Statistical Package for Social Sciences (SPSS-X) software.
Data Analysis

Descriptive statistics, in the form of frequency tables, were used to analyze most of the data and answer research questions 1, 2, 3, 5, 6 and 7, as listed on pages 20-21 of this thesis. Mean values were reported as appropriate in Appendix B.

Reliability analysis and stepwise multiple linear regression was performed to answer research question 4, as listed on page 21 of this thesis. Reliability analysis was used to determine whether it was statistically justifiable to form a composite opinion scale from questionnaire questions 13 - 21. Questions 13 - 21 were designed to address the issue of perceptions of the effects of direct access. With all of the questions, except 17 and 20, a "strongly agree" response reflected a positive perception toward the effects of direct access. Since the opposite was the case with 17 and 20, the scoring for these questions was reversed. A "no opinion" response was recomputed making it equal to a neutral response prior to performing the reliability analysis (see Appendix C). A Cronbach’s Alpha value of .69 was reached. This reflected that questions 13 - 21 collectively addressed the intended issue. Although questions 22 - 28 also asked for perceptions, they addressed different issues than 13 - 21. Therefore, questions 22 - 28 were evaluated individually, not as a group.
The process of stepwise multiple linear regression was used to determine the relationships of demographics to perceptions. It was determined that regression analyses would provide more valuable information than crosstabulation analyses, after consultation with two individuals competent in statistical analyses.
Chapter IV

Results

Introduction

In Chapter 4, data will be presented. A discussion of this data will be presented in Chapter 5.

Response Rate

All of the 70 students (100%) returned completed questionnaires. Two hundred fifty-one physical therapists (63%) returned completed questionnaires. A total of 321 completed questionnaires were used in the data analysis.

Demographics

Table 1. Years of Practice

Table 1 reveals the professional experience of the respondents. Approximately 58% had greater than five years of professional experience.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1 year</td>
<td>85</td>
<td>26.5</td>
</tr>
<tr>
<td>1- 5 years</td>
<td>50</td>
<td>15.6</td>
</tr>
<tr>
<td>&gt; 5 years</td>
<td>186</td>
<td>57.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>321</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

(* Students included)
Table 2. Sex

Table 2 shows that the majority of the respondents were women. This was expected and is representative of Ohio's physical therapist population.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>244</td>
<td>76.0</td>
</tr>
<tr>
<td>Male</td>
<td>77</td>
<td>24.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>321</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(* Students included)

Table 3. Working Respondents

Table 3 presents the number and percentage of the respondents who were working in the profession at the time they completed the questionnaire.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working as Licensed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Therapists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>8.0</td>
</tr>
<tr>
<td>Yes</td>
<td>231</td>
<td>92.0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>251</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(* Students excluded)
Table 4. Employment Status

Of the 240 physical therapists who responded to the employment status question, Table 4 shows that 161 (67.1%) were employees.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee</td>
<td>161</td>
<td>67.1</td>
</tr>
<tr>
<td>Self-employed</td>
<td>51</td>
<td>21.2</td>
</tr>
<tr>
<td>Other</td>
<td>28</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>240</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

(* Students excluded)

Table 5. Primary Place of Practice

Table 5 reveals the primary place of practice of the respondents. Almost 40% of the respondents practice in a hospital. Seventy-one percent either selected hospital or out-patient facility as their primary place of practice.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>95</td>
<td>39.9</td>
</tr>
<tr>
<td>Nursing Home</td>
<td>16</td>
<td>6.7</td>
</tr>
<tr>
<td>Rehabilitation Center</td>
<td>15</td>
<td>6.3</td>
</tr>
<tr>
<td>Out-Patient Facility</td>
<td>74</td>
<td>31.1</td>
</tr>
<tr>
<td>PT or PTA Programs</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>Home Health Agency</td>
<td>10</td>
<td>4.2</td>
</tr>
<tr>
<td>School System</td>
<td>20</td>
<td>8.4</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>238</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

(* Students excluded)
Table 6. Generalist or Specialist?

Table 6 shows that slightly more than half of the respondents considered themselves generalists.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generalist</td>
<td>124</td>
<td>51.9</td>
</tr>
<tr>
<td>Specialist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geriatric</td>
<td>10</td>
<td>4.2</td>
</tr>
<tr>
<td>Pediatric</td>
<td>28</td>
<td>11.7</td>
</tr>
<tr>
<td>Orthopedic</td>
<td>42</td>
<td>17.6</td>
</tr>
<tr>
<td>Neurologic</td>
<td>16</td>
<td>6.7</td>
</tr>
<tr>
<td>Sports Medicine</td>
<td>8</td>
<td>3.3</td>
</tr>
<tr>
<td>Industrial Medicine</td>
<td>4</td>
<td>1.7</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>239</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

(* Students excluded)

Table 7. Members vs. Non-Members, Ohio Chapter, Inc., American Physical Therapy Association

Table 7 indicates that 173 of 250 respondents (69.2%) were members of the Ohio Chapter, Inc., APTA.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>173</td>
<td>69.2</td>
</tr>
<tr>
<td>Non-Member</td>
<td>77</td>
<td>30.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>250</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

(* Students excluded)
Perception Responses

Table 8. Opinions

Table 8 presents the respondents' opinions concerning direct access and the importance in determining to whom it should be granted. See Appendix B for raw data pertaining to opinions and demographics.

<table>
<thead>
<tr>
<th>Statements</th>
<th>All Respondents</th>
<th>Physical Therapists</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct access should be an option to physical therapists</td>
<td>Number 280 % 87.8</td>
<td>Number 214 % 85.9</td>
<td>Number 66 % 94.3</td>
</tr>
<tr>
<td>Physical therapists with more clinical experience are better than those with less clinical experience</td>
<td>221 69.7</td>
<td>171 69.2</td>
<td>50 71.4</td>
</tr>
<tr>
<td>I am qualified to practice in a direct access environment</td>
<td>195 61.7</td>
<td>183 74.4</td>
<td>12 17.1</td>
</tr>
</tbody>
</table>
Table 9. Opposed Direct Access

Shown in Table 9 are the number and percentage of respondents who opposed direct access. Three groups of respondents were viewed.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>APTA member LPT's opposing Direct Access</td>
<td>10</td>
<td>5.8</td>
</tr>
<tr>
<td>Non-member LPT's opposing Direct Access</td>
<td>8</td>
<td>10.4</td>
</tr>
<tr>
<td>Students opposing Direct Access</td>
<td>3</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Table 10. Recommended Experience

Table 10 indicates that over 62% of the respondents recommended two years or more of post-graduate experience prior to the granting of direct access privileges to physical therapists in Ohio.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 6 months</td>
<td>33</td>
<td>10.5</td>
</tr>
<tr>
<td>1 year</td>
<td>54</td>
<td>17.3</td>
</tr>
<tr>
<td>1 1/2 years</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>2 years</td>
<td>80</td>
<td>25.6</td>
</tr>
<tr>
<td>3 years</td>
<td>58</td>
<td>18.5</td>
</tr>
<tr>
<td>&gt; 3 years</td>
<td>58</td>
<td>18.5</td>
</tr>
<tr>
<td>Should Not Be Granted</td>
<td>20</td>
<td>6.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>313</td>
<td>100.0</td>
</tr>
</tbody>
</table>

(* Students included)
Table 11. Critical Skills / Areas Of Knowledge

The three skills or areas of knowledge the respondents believed to be most critical to a physical therapist in a direct access environment are shown in Table 11. When more than three choices were made, all were counted.

<table>
<thead>
<tr>
<th>Skills / Areas Of Knowledge</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation Skills</td>
<td>249</td>
<td>78.3</td>
</tr>
<tr>
<td>Clinical Decision Making Skills</td>
<td>243</td>
<td>76.4</td>
</tr>
<tr>
<td>Evaluation Knowledge</td>
<td>183</td>
<td>57.5</td>
</tr>
<tr>
<td>Treatment Session Skills</td>
<td>127</td>
<td>39.9</td>
</tr>
<tr>
<td>Knowledge Of How To Collaborate</td>
<td>67</td>
<td>21.1</td>
</tr>
<tr>
<td>With Other Health Care Practitioners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge Of Professional Ethics</td>
<td>37</td>
<td>11.6</td>
</tr>
<tr>
<td>Administrative/Managerial Skills</td>
<td>14</td>
<td>4.4</td>
</tr>
<tr>
<td>Business/Finance Skills</td>
<td>13</td>
<td>4.1</td>
</tr>
<tr>
<td>Business/Finance Knowledge</td>
<td>11</td>
<td>3.5</td>
</tr>
<tr>
<td>Administrative/Managerial Knowledge</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>Leadership Skills</td>
<td>8</td>
<td>2.5</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>2.2</td>
</tr>
</tbody>
</table>

(* Students included)
Table 12. Opinion Score Variability For Therapists

Table 12 shows the results of the stepwise multiple linear regression analyses. (See Appendix D for a description of demographic variables utilized and Appendix E for the summary of regression analyses.)

<table>
<thead>
<tr>
<th>Outcome Variable</th>
<th>Significant Independent Variables</th>
<th>Percent Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opinion Total (Questions 13 - 21).</td>
<td>Employment Status</td>
<td>3.0%</td>
</tr>
<tr>
<td>PT’s with more experience equal better practitioners.</td>
<td>Employment Location (hospital)</td>
<td>2.7%</td>
</tr>
<tr>
<td>I am qualified to practice in a direct access environment.</td>
<td>Years of Practice /</td>
<td>17.4%</td>
</tr>
<tr>
<td></td>
<td>Currently Working /</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employment Status /</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nursing home or Rehabilitation</td>
<td></td>
</tr>
<tr>
<td>center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would still practice on a &quot;referral only&quot; basis even if direct access was an option.</td>
<td>Employment Status</td>
<td>2.4%</td>
</tr>
<tr>
<td>I’d rather practice without physician referral even if direct access was an option.</td>
<td></td>
<td>0.0%</td>
</tr>
<tr>
<td>Direct access should be an option.</td>
<td>Employment Status</td>
<td>4.1%</td>
</tr>
<tr>
<td>A physical therapist in a direct access environment should be required by law to explain scope and limitations of physical therapy to all patients.</td>
<td>Employment Status</td>
<td>2.2%</td>
</tr>
<tr>
<td>Direct access laws should require that patients who have not improved within 30 days to be referred to a physician.</td>
<td>Employment Location / Educational Level</td>
<td>4.3%</td>
</tr>
</tbody>
</table>
Table 13. Anticipated Effects Of Direct Access

Table 13 reveals the respondents' anticipated effects of direct access in Ohio. The number and percentage of total respondents either strongly agreeing or agreeing with each possible effect is presented.

<table>
<thead>
<tr>
<th>Effects</th>
<th>Number Of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase patients' accessibility to physical therapy services.</td>
<td>298</td>
<td>93.1</td>
</tr>
<tr>
<td>Increase malpractice insurance rates for physical therapists.</td>
<td>274</td>
<td>85.9</td>
</tr>
<tr>
<td>Improve the image of physical therapists.</td>
<td>271</td>
<td>84.7</td>
</tr>
<tr>
<td>Make my job more satisfying.</td>
<td>217</td>
<td>68.9</td>
</tr>
<tr>
<td>Increase the incomes of physical therapists.</td>
<td>211</td>
<td>65.9</td>
</tr>
<tr>
<td>Increase the quality of physical therapy care.</td>
<td>175</td>
<td>54.9</td>
</tr>
<tr>
<td>Create professional problems for physical therapists.</td>
<td>156</td>
<td>49.1</td>
</tr>
<tr>
<td>Decrease the consumer cost of physical therapy services.</td>
<td>149</td>
<td>46.7</td>
</tr>
<tr>
<td>Improve physical therapist - physician relationships.</td>
<td>115</td>
<td>36.1</td>
</tr>
</tbody>
</table>

(* Students included)
Table 14. Recommended Preparation Methods

The respondents were asked, "If a physical therapist feels unprepared for practice in a direct access environment, which three methods of preparation would you most strongly recommend?". Table 14 provides the following information: recommended methods, number of respondents choosing each method, and the percentage of the respondents who selected each method. When more than three choices were made, all were counted.

<table>
<thead>
<tr>
<th>Methods</th>
<th>Number of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Therapy related continuing education courses</td>
<td>276</td>
<td>87.3</td>
</tr>
<tr>
<td>Continued work experience in a non-direct access environment</td>
<td>137</td>
<td>43.4</td>
</tr>
<tr>
<td>Advanced college or university degree(s) in physical therapy</td>
<td>124</td>
<td>39.2</td>
</tr>
<tr>
<td>Study groups</td>
<td>113</td>
<td>35.8</td>
</tr>
<tr>
<td>Practice in a teaching hospital</td>
<td>96</td>
<td>30.3</td>
</tr>
<tr>
<td>Self directed study</td>
<td>92</td>
<td>29.1</td>
</tr>
<tr>
<td>Advanced college or university degree(s) in other academic areas</td>
<td>30</td>
<td>9.5</td>
</tr>
<tr>
<td>Other</td>
<td>24</td>
<td>7.6</td>
</tr>
</tbody>
</table>

(* Students included)
Table 15. Skills Required.

The respondents were asked to mark the three skills or areas of knowledge which he/she considered the most critical to a physical therapist in a direct access environment, and indicate in the other column provided any of these three skills / areas of knowledge in which his/her entry level physical therapy program adequately prepared him/her. Reported by Table 15 are the frequencies of responses and the percentage of the respondents who believed they were adequately prepared for each skill / area of knowledge. Responses to part two of the question were counted only if the skill marked was also chosen as one of the three most critical skills indicated by the respondents.
<table>
<thead>
<tr>
<th>Skills / Area of Knowledge</th>
<th>N</th>
<th>N1</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment selection skills</td>
<td>126</td>
<td>81</td>
<td>64.3</td>
</tr>
<tr>
<td>Knowledge of professional ethics</td>
<td>37</td>
<td>22</td>
<td>59.6</td>
</tr>
<tr>
<td>Evaluation knowledge</td>
<td>183</td>
<td>95</td>
<td>51.9</td>
</tr>
<tr>
<td>Clinical decision making skills</td>
<td>243</td>
<td>104</td>
<td>42.8</td>
</tr>
<tr>
<td>Evaluation skills</td>
<td>249</td>
<td>103</td>
<td>41.4</td>
</tr>
<tr>
<td>Managerial / administrative knowledge</td>
<td>8</td>
<td>3</td>
<td>37.5</td>
</tr>
<tr>
<td>Knowledge how to collaborate with other health care practitioners</td>
<td>67</td>
<td>18</td>
<td>26.9</td>
</tr>
<tr>
<td>Leadership skills</td>
<td>8</td>
<td>2</td>
<td>25.0</td>
</tr>
<tr>
<td>Business / finance knowledge</td>
<td>11</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td>Managerial / administrative skills</td>
<td>14</td>
<td>1</td>
<td>7.1</td>
</tr>
<tr>
<td>Business / finance skills</td>
<td>13</td>
<td>0</td>
<td>.0</td>
</tr>
</tbody>
</table>

N = Number of responses indicating this area to be one of three most critical.
N1 = Number of responses indicating respondent adequately prepared in this area.

(* Students included)
Chapter V

Discussion and Conclusion

Demographics

Three hundred twenty-one individuals participated in this study. Seventy respondents were graduating physical therapy students and 251 were licensed physical therapists.

Approximately 58% of the respondents had more than five years of professional experience. Fifty (15.6%) respondents had 1 - 5 years of professional experience; while 85 (26.5%) had 0 - 1 year of professional experience. Seventy of the 85 respondents with 0 - 1 year of professional experience were students.

Most of the respondents were female (76%). This was expected and is representative of Ohio's physical therapist population. A 1987 study of randomly selected physical therapists in Indiana also reported a female to male ratio of 76% - 24% (31).

Two hundred thirty-one (92%) of the responding physical therapists were working in the profession at the time the questionnaire was completed. One hundred sixty-one therapists (67.1%) considered themselves employees and
fifty-one (21.2%) considered themselves self-employed. Most of the remaining respondents were a combination of the above two categories.

Seventy-one percent of the physical therapists primarily worked in either a hospital or an out-patient facility. Refer to Appendix B for remaining data on employment locations.

More than half (51.9%) of the therapists responding considered themselves generalists. The most popular physical therapy specialties were orthopedics and pediatrics.

Over sixty-nine percent of the physical therapists participating in this study were members of the Ohio Chapter, Inc., APTA. The statewide percentage of physical therapists who are members of the Ohio Chapter, Inc., APTA is considerably less than 69%. Despite the randomization of the sample used in this study, perhaps more than a representative number of members were selected as respondents. Maybe members of the Ohio Chapter, Inc., APTA have been socialized toward participation in research and therefore they were more likely to participate in this study. Also possible was that members of the Ohio Chapter, Inc., APTA may have possessed more knowledge about direct access and thus were more interested in a study about it.
Research Question 1: Do the respondents favor direct access in Ohio?

A majority of the respondents (87.8%) favored the option of direct access in Ohio. A larger percentage of students (94.3%) responded positively to this question than did licensed physical therapists (85.9%). Very few respondents (6.6%) disagreed that direct access should be an option to physical therapists while only 5.6% were neutral or had no opinion on the subject. The number of those opposing direct access was small. Only 10.4% of the non-members of the Ohio Chapter, Inc., APTA, 5.8% of the members of the Ohio Chapter, Inc., APTA, and 4.3% of the students opposed direct access. Students and Ohio Chapter, Inc., APTA members may have been socialized to support direct access more than non-member therapists. The APTA publications regularly feature literature in support of direct access (2, 3, 4, 6, 7, 8, 9, 13). Physical therapy programs, even in non-direct access states must prepare students for direct access as some states permit therapists to use the option of direct access immediately after graduation and licensure. The use of the word "option" was hypothesized to be essential to an understanding of the concept of direct access for the participants in this study. The accuracy of this hypothesis appears verified by the overwhelming support of the concept of direct access even though 21.8% of the
respondents felt they would choose to practice on a "by referral only" basis even if direct access was an option. **Research Question 2:** How important is the role of professional experience in determining which of Ohio’s physical therapists the respondents favor being granted direct access privileges?

Most respondents (69.7%) agreed that physical therapists with more clinical experience are better practitioners than those with less clinical experience. Fewer students felt qualified to practice in a direct access environment (17.1%) than did licensed physical therapists (74.4%). The students were surveyed prior to the completion of a twelve week, 40 hour per week clinical experience. More of them may have felt qualified to practice in a direct access environment after this clinical experience. LeMasters (1988) reported that 37% of two hundred final year physical therapy students from different areas of the United States believed new graduates are competent to practice in a direct access environment (32).

An implication that experience is considered important in the preparation of physical therapists for direct access was the data that only 10.5% of the respondents favored a law granting direct access privileges to physical therapists with less than one year of experience. The most frequent choice for practice with
direct access was after two years of experience (25.6%). Although the specific content of the legislation was not accessible to most therapists, this response may have been influenced by the fact that legislation was introduced in Ohio near the time the questionnaires were distributed. This legislation proposed granting direct access to physical therapists who had completed two years of clinical experience.

Research Question 3: What skills and areas of knowledge are critical for a physical therapist in a direct access environment?

The most frequent responses to this question were: evaluation skills (chosen by 78.3% of the respondents), clinical decision making skills (76.4%), evaluation knowledge (57.5%), and treatment selection skills (39.9%). Other items selected by greater than 10% of the respondents were: knowledge of how to collaborate with other health care practitioners (21.1%) and knowledge of professional ethics (11.6%). The same five most frequent responses were made by students (see Appendix F). This consensus helps validate the perceived significance of these skills and areas of knowledge for successful direct access physical therapy practice.

Current literature stressed the importance of physical therapists upgrading clinical competences,
ethical knowledge, and collegial collaboration abilities (8, 9, 25, 26, 27, 38). The participants in this study and the scholars in physical therapy and other allied health professions agreed that the above skills and areas of knowledge are important to the successful movement of physical therapy toward a more independent level of practice.

Research Question 4: What relationships exist between the perceptions of the respondents and their demographic profiles?

Respondents within the demographic categories previously reported did not answer the questions significantly different than the general population of participants. The data represented individual responses not a group response as physical therapists. Table 10 revealed that demographic variables only explained small percentages of the variance in opinions, 0% to 17.4% for the opinions analyzed. However, employment status surfaced as a significant independent variable five times. In all five cases, employees were determined to have less positive opinions toward direct access than non-employees. Appendix G reports the multiple regression predictions for employees and non-employees. Perhaps non-employees, who are primarily self-employed, may be more knowledgeable about direct access, may perceive they have more to gain by it, may be less risk averse than employees or may
compose a majority of the leadership of the organization(s) which support direct access. Any of these reasons could explain this disparity in perceptions. Only one self-employed respondent of the 51 surveyed disagreed that direct access should be an option to Ohio’s physical therapists.

**Research Question 5:** What do the respondents anticipate the effects of direct access in Ohio to be?

The respondents strongly expect direct access to increase the patients’ accessibility to physical therapy services (93.1%). They also anticipate an increase in medical liability insurance rates to result (85.9%). This expectation is almost identical to the results of the Barron, Hamouz and Porter study from Indiana in which 86.5% of the physical therapists surveyed expected direct access to lead to increased insurance premiums (31).

The vast majority of the respondents believed that direct access would improve the image of physical therapists (84.7%), many others (68.9%) felt that it would make their jobs more satisfying, and 54.9% thought it would improve the quality physical therapy care. Almost one-half (49.1%) of the participants expected direct access to create professional problems for physical therapists, while only 36.1% expected it to improve physical therapist-physician relationships.
While this study verifies that physical therapists in Ohio and a selected group of physical therapy students support direct access, it also seems to reveal a hesitancy of many to assume the potential risk of increased liability insurance costs and potentially poorer relationships with the physicians they currently rely on for referrals and share information with regularly.

Although no evidence was found to indicate direct access has led to increased liability claims, many therapists and legal experts believed it would lead to increased liability lawsuits and insurance premiums (5, 31, 33).

Research Question 6: What are the most strongly recommended methods of preparing oneself for direct access?

The most recommended methods to prepare therapists for direct access were: physical therapy related continuing education courses (chosen by 87.3% of the respondents), continued work experience in a non-direct access environment (43.4%), advanced college or university degree(s) in physical therapy (39.2%), and study groups (35.8%). Although most of the respondents (61.7%) felt prepared for direct access, this information may be helpful to the others who may someday choose to practice
in a direct access setting. All of these leading four suggestions are easily available to Ohio's physical therapists.

Many 2 - 3 day continuing education courses for the evaluation and management of various disorders are regularly advertised in professional physical therapy publications (40, 41). Therapists needing further information about the evaluation and management of specific disorders may achieve their goals through attending these courses.

Continued work experience in a non-direct access environment may provide therapists with the friendship, personal and professional guidance which can foster growth toward independence (8).

Study groups can be designed to provide members with both practical experience and conceptual knowledge. This investigator agrees with the respondents that study groups could help prepare a physical therapist for direct access, especially since the content and time of each meeting can be determined to meet the needs of the members. A limitation of study groups may be the unavailability of experts on the topics needing presented.

When reading the July 1989 issue of Physical Therapy, which was devoted to the topic of Clinical Decision Making, it became apparent that most of the contributing authors on the subject were university faculty members.
This investigator suggests that the optimum method of developing strong clinical decision making skills would be to pursue a graduate degree emphasizing a conceptual approach to clinical decision analysis.

This presentation of potential uses of the four most recommended methods to prepare physical therapists for direct access is intended to provide some insight and stimulate thought on other benefits and limitations of each method. The participants in this study recommended these methods but were not asked when they would use each method.

Research Question 7: What curriculum changes might be needed as a result of direct access practice?

Greater than 50% of the respondents felt adequately prepared by their entry level physical therapy program in the following areas: treatment selection skills (64.3%), knowledge of professional ethics (59.5%), and evaluation knowledge (51.9%). Fewer than 50% of the respondents felt adequately prepared by their entry level program in these areas: clinical decision making skills (42.8%), evaluation skills (41.4%), administrative/managerial knowledge (37.5%), knowledge how to collaborate with other health care practitioners (26.9%), leadership skills (25%), and administrative/managerial skills, business/finance knowledge, business/finance skills each with less than 10%.
The two skills considered most critical for a physical therapist to be able to function adequately in a direct access environment were evaluation skills and clinical decision making skills. Less than 50% of the respondents who selected these as most critical felt adequately prepared in them by their undergraduate physical therapy program. Clinical decision making skills is a topic which the current physical therapy literature recognizes as critical. Educators are now seeking improvements in the teaching methods for them (29, 30), and this study substantiated a perceived need for this to be continued. Perhaps, curriculum changes should also be made in the development of evaluation skills, due to the high consensus on their significance and the relatively low percentage of respondents feeling adequately prepared in them. An emphasis on small group problem solving discussions about patient evaluation and treatment is recommended by this investigator.

Only a small number of respondents viewed how to collaborate with others, administrative/managerial knowledge, administrative/managerial skills, business/finance knowledge, business/finance skills, and leadership skills as one of the three most critical needs for a physical therapist in a direct access environment. Yet, educators may want to look closely at their
curriculum in these areas due to the extremely low percentages of those who felt adequately prepared in them.

Current literature recommended more collaboration in practice and in research between physical therapists and physicians (22, 23, 38). This investigator suggests that more emphasis be made to promote collegialism between these professions at the undergraduate level and even more so at the graduate level. Joint research projects between physical therapy students and medical students, seminars for orthopedic residents and physical therapists on sports injuries, and social receptions organized by the educational faculty and administrators may facilitate a greater spirit of collegialism and eventually better patient care.

The students who participated in this study felt adequately prepared by their physical therapy program more frequently than did their therapist counterparts in 9 of the 11 skills and areas of knowledge reeported in Table 15 and Appendix F. This could be an indication that the educational system is more adequately preparing physical therapy students for direct access than it did in the past.
Conclusion

The primary intent of this study was to obtain information from physical therapy students and physical therapists in Ohio of their perceptions about direct access.

Perceptions and demographic profiles of the respondents were identified through the use of descriptive survey research. This data was analyzed for the purpose of addressing seven research questions.

Overwhelming support was found to exist in favor of direct access among students and physical therapists who were members as well as non-members of the Ohio Chapter, Inc., APTA.

Professional experience was considered an essential prerequisite in the preparation of physical therapists for direct access. The data revealed a significant difference in the feeling of preparedness for direct access between the students and licensed physical therapists surveyed. About 75% of the therapists and 17.1% of the students felt qualified to practice in a direct access environment.

Several respondents wrote on their questionnaires, "Just how good must we be to be qualified for direct access?" and "Do doctors know everything the day they begin practice?". These questions prompted this investigator to critically contemplate his own career of twelve years and question, "Just what do we expect of
ourselves?", and "What do others expect of us?". Certainly, we must apply ourselves conscientiously while students to become knowledgeable and competent about our chosen profession. Certainly, we must endeavor to increase our competences through the years. Certainly, educators must endeavor to provide information and learning experiences pertinent to the roles which therapists may be expected to fulfill. We should not expect perfection, yet to remain in demand by the public, physical therapists must not expect less of themselves than those who benefit from their services expect.

The respondents indicated that the key skills and areas of knowledge a physical therapist in a direct access environment must possess are evaluation skills, clinical decision making skills, evaluation knowledge, treatment selection skills, knowledge of how to collaborate with other health care practitioners, and knowledge of professional ethics. Relatively few respondents felt adequately prepared in clinical decision making (42.8%) and evaluation skills (41.4%) by their entry-level physical therapy program.

If at some point in time physical therapists agree that experience is the best teacher of certain skills, such as clinical decision making and evaluation skills; then perhaps a 40% - 50% positive response rate to the question, "Did your entry-level program adequately prepare
you in these skills?", would be considered an indication of satisfactory preparation for therapists to function in a direct access environment.

Physical therapy related continuing education courses was chosen twice as frequently as any other recommended method of preparing oneself for direct access. Courses on a wide range of topics are regularly available to physical therapists. Many individual speakers and organizations sponsor in-service tapes and lecture series on an on-going basis. These would be excellent sources to contact for the therapist who feels unprepared for direct access. For time purposes, continuing education courses are the most practical way to gain information. Yet, the short term nature of these courses may limit the scope and content of the topics presented.

Statistically, the opinions revealed about direct access did not follow any specific demographic patterns. However, therapists who were employed by an organization were found to be less positive about direct access than therapists who were self-employed. The reasons for this may be that therapists who are primarily self-employed may be more knowledgeable about direct access, may perceive they have more to gain by it, may be less risk averse than employed therapists or may compose a majority of the leadership of the organization(s) which support direct access. Any of these reasons could explain this disparity
in perceptions. Educating all of Ohio’s physical therapists who are employees about the potential benefits of direct access is recommended. If the Ohio Chapter, Inc., APTA would place some extra emphasis on educating all of Ohio’s licensed physical therapists who are employees about the potential benefits of direct access, perhaps support for the organization would increase. A short brochure or newsletter could be mailed to each licensed physical therapist in Ohio.

Several positive and negative effects of direct access were anticipated by the respondents. Almost all the respondents believed that direct access would increase the patients’ accessibility to physical therapy services (93.1%). Most respondents felt that direct access would: improve the image of physical therapists (84.7%), make his/her job more satisfying (68.9%), increase the incomes of physical therapists (65.9%), and increase the quality of physical therapy care (54.9%). Slightly greater than 49% of the respondents expected direct access to create professional problems for physical therapists and 46.7% expected it to lead to a decrease in the cost of physical therapy services.

Very few respondents expected direct access to improve physical therapist - physician relationships (36.1%). This becomes especially significant since many
allied health scholars have stressed the need for more collaboration between these two professions (13, 22, 37, 38).

Most physical therapists and physical therapy students in Ohio anticipated medical liability insurance rates to increase as a result of direct access (85.9%). No evidence was found to indicate direct access has caused increased insurance premiums. When more information about the effects of direct access on medical liability premiums is available to the APTA, this investigator recommends that it be distributed immediately to all physical therapists who are members of this organization. If this information continues to be positive, it will help allay the fears which many physical therapists share about this issue. Even if it is not positive, it will permit rational cost versus benefit assessments to be determined by physical therapists.

The cost of professional liability insurance for physical therapists in Ohio is a small percentage of the expense of operating a practice. If Ohio’s therapists realize the affordability of this coverage, are kept abreast of future developments regarding the effects of direct access on liability insurance premiums, and are knowledgeable about the potential benefits of direct access, their belief that direct access would lead to
increased professional liability insurance premiums should not be a deterrent to participating in direct access if it was an option.

If another researcher were to replicate this study at a later date, the following revisions in the questionnaire would be suggested: add more categories for years of practice to give more information about the number of respondents with 5 - 10 years and 10 - 15 years of experience, divide Number 9 into two separate questions, and add a question asking, "What type of professional problems do you feel direct access might create for physical therapists?".

Limitations

The following limitations and potential limitations to this study have been identified:

1) Seventy second year physical therapy students from one educational program and 400 randomly selected physical therapists in Ohio at a specified point in time were surveyed. The results of this study are not generalizable beyond these limitations.

2) Legislation regarding direct access was introduced in Ohio near the time the questionnaire was distributed and may have influenced the responses of some of the participants.

3) Since the students had no professional experience, the number of respondents with 0 - 1 year of
professional experience was higher than is representative of the physical therapist population in Ohio. These persons may have a different perception of direct access.

4) Perceptions were requested. These perceptions represent how the participants viewed direct access and did not include any facts about direct access.

5) Therapists employed in a private practice were assumed to have considered themselves employees. There is no certainty they responded in this manner.

**Suggestions For Further Studies**

The following studies are suggested:

1) A longitudinal study of the students participating in this study asking the same questions.

2) A study investigating patient satisfaction with the quality, availability and cost of physical therapy services.

3) A study investigating third party payor satisfaction with the quality, availability and cost of physical therapy services.

4) A study of the job satisfaction of therapists in direct access states versus therapists in states without direct access.

5) A survey of the major professional liability insurance
carriers for physical therapists showing the effects of direct access on professional liability premiums.

6) A survey of the major professional liability insurance carriers for physical therapists showing the effects of direct access on the number of lawsuits against therapists.

7) A study questioning why some physical therapists would choose to practice "by referral only" if direct access was an option.

8) A study to determine the changes in physical therapy curricula to prepare graduates for direct access.
REFERENCES


4. Ohio Revised Code, 4755.48 (F).

5. Finissi, William, Legislative Agent, Ohio Chapter, Inc., APTA. Telephone Interview. October 10, 1989, 2:10 p.m. to 2:30 p.m.


APPENDICES
APPENDIX A

QUESTIONNAIRE AND COVER LETTER
STEVEN E. EASTER, P.T.
Post Office Box 204
Washington C.H., Ohio 43160

June 12, 1989

Dear Colleague:

Direct access for physical therapists has become a key issue in recent years. Direct access refers to physical therapy evaluation and treatment independent of referral from other health care professionals. Legislation allowing this would not mandate this style of practice. It would simply make the option of direct access available to physical therapists. Direct access certainly has the potential for great impact on us individually, our profession and our society as a whole. For these reasons, I have developed the following questionnaire as an integral part of my Master's thesis at The Ohio State University.

We feel that a survey of Ohio's practicing physical therapists will provide our leaders and educators with invaluable information. All returned questionnaires will be treated confidentially. Please open this leaflet, complete the questionnaire (this will take about 8 minutes), and return it in the enclosed self-addressed stamped envelope at your earliest convenient time. Please do this by June 29, 1989.

Your response to this survey is critical. The more responses we receive, the better this survey will represent the opinions and concerns of our profession.

Thank you for your cooperation.

Sincerely,

[Signature]
Steven E. Easter, P.T.
Master's Candidate

[Signature]
Frank Plerson, P.T., M.S.
Graduate Committee Chairman
Direct Access Information Survey

Please read each question carefully then answer by marking an (x) on the appropriate line(s).

1. How many years have you practiced physical therapy?
   a. ____ 0-1 year
   b. ____ Greater than 1 year, but less 3 years
   c. ____ 3-5 years
   d. ____ Greater than 5 years

2. Which best describes the highest educational level you have achieved?
   a. ____ Current P.T. student
   b. ____ AS
   c. ____ Post baccalaureate certificate in P.T.
   d. ____ Some graduate study, but no Master's Degree
   e. ____ Graduate degree (master's or doctorate)

3. What is your sex?
   a. ____ Female
   b. ____ Male

4. Are you currently working as a physical therapist?
   a. ____ No
   b. ____ Yes

5. What is your current employment status?
   a. ____ Employee
   b. ____ Self-Employed
   c. ____ Other (please specify) _____________________

6. Where is your primary place of practice?
   a. ____ Hospital
   b. ____ Nursing Home
   c. ____ Rehabilitation Center
   d. ____ Non-PT owned Outpatient Facility
   e. ____ PT owned Outpatient Facility
   f. ____ Physical Therapist or Assistant Program
   g. ____ Home Health Agency
   h. ____ School System
   i. ____ Other (please specify) _____________________

7. I consider myself a:
   a. ____ Generalist
   b. ____ Specialist
   If a specialist, which one(s):
   A. ____ geriatric disorders
   B. ____ pediatric disorders
   C. ____ orthopedic disorders
   D. ____ neurologic disorders
   E. ____ sports medicine
   F. ____ industrial medicine
   G. ____ other (please specify) _____________________
8. Where best describes the location of your practice?
   a. _____ Rural (greater than 10 miles from city of 100,000 plus)
   b. _____ Urban (within city of 100,000 plus)
   c. _____ Suburban (less than or equal to 10 miles from city of 100,000 plus)

9. On the left, mark the three skills or areas of knowledge which you consider the most critical to a physical therapist in a direct access environment. On the right, mark any of these three skills/areas of knowledge in which your entry level PT program adequately prepared you.

   Most critical
   a. _____ Clinical decision making skills
   b. _____ Treatment selection skills
   c. _____ Knowledge of professional ethics
   d. _____ Evaluative knowledge
   e. _____ Evaluative skills
   f. _____ Knowledge how to collaborate with other health care practitioners
   g. _____ Administrative/managerial knowledge
   h. _____ Administrative/managerial skills
   i. _____ Business and finance knowledge
   j. _____ Business and finance skills
   k. _____ Leadership skills
   l. _____ Other (please specify)
   m. _____ Other (please specify)

10. If a physical therapist feels unprepared for practice in a direct access environment, which three methods of preparation would you most strongly recommend?

   a. _____ PT related continuing education courses
   b. _____ Advanced college or university degree(s) in PT
   c. _____ Advanced college or university degree(s) in other academic areas
   d. _____ Study groups
   e. _____ Continued work experience in a non direct access environment
   f. _____ Practice in a teaching hospital
   g. _____ Self directed study, including non-degree graduate coursework
   h. _____ Other (please specify)
   i. _____ Other (please specify)

11. Direct access privileges should be granted to Ohio's physical therapists with professional experience of:

   a. _____ 0 months
   b. _____ 6 months
   c. _____ 1 year
   d. _____ 18 months
   e. _____ 2 years
   f. _____ 3 years
   g. _____ Greater than 3 years
   h. _____ Should not be granted

12. Are you a member of the Ohio Chapter of the American Physical Therapy Association?

   a. _____ No
   b. _____ Yes
Please circle your response to each of the following statements:

In my opinion direct access would:

13. decrease the consumer cost of PT services
1 2 3 4 5 6

14. increase the quality of PT care
1 2 3 4 5 6

15. improve PT-physician relationships
1 2 3 4 5 6

16. increase the incomes of PT’s
1 2 3 4 5 6

17. increase malpractice insurance rates for PT’s
1 2 3 4 5 6

18. improve the image of PT’s
1 2 3 4 5 6

19. increase the patients’ accessibility to PT services
1 2 3 4 5 6

20. create professional problems for PT’s
1 2 3 4 5 6

21. make my job more satisfying
1 2 3 4 5 6

In my opinion:

22. PT’s with more clinical experience are better practitioners than those with less clinical experience
1 2 3 4 5 6

23. I am qualified to practice in a direct access environment
1 2 3 4 5 6

24. I would still practice on a "by referral only" basis even if direct access was an option
1 2 3 4 5 6

25. I would rather practice without physician referral if direct access was an option
1 2 3 4 5 6

26. Direct access should be an option to PT’s
1 2 3 4 5 6

27. A PT in a direct access environment should be required by law to explain the scope and limitations of the practice of physical therapy to every patient
1 2 3 4 5 6

28. Direct access laws should require that patients who haven’t improved within 30 days of the initial physical therapy treatment must be referred to a physician or other qualified health care professional
1 2 3 4 5 6

Thank you very much for completing this questionnaire. Please return this questionnaire in the self-addressed stamped envelope.
APPENDIX B

RAW DATA
Please read each question carefully then answer by marking an (x) on the appropriate line(s).

1. How many years have you practiced physical therapy?
   a. 85 0-1 year
   b. 70 Greater than 1 year, but less 3 years
   c. 30 3-5 years
   d. 186 Greater than 5 years

2. Which best describes the highest educational level you have achieved?
   a. 70 Current P.T. student
   b. 123 BS
   c. 19 Post baccalaureate certificate in P.T.
   d. 45 Some graduate study, but no Master's Degree
   e. 45 Graduate degree (Master's or Doctorate)

3. What is your sex?
   a. 244 Female
   b. 77 Male

4. Are you currently working as a physical therapist?
   a. 20 No
   b. 231 Yes

5. What is your current employment status?
   a. 161 Employee
   b. 51 Self-Employed
   c. 28 Other (please specify) ____________

6. Where is your primary place of practice?
   a. 95 Hospital
   b. 16 Nursing Home
   c. 15 Rehabilitation Center
   d. 30 Non-PT owned Outpatient Facility
   e. 44 PT owned Outpatient Facility
   f. 1 Physical Therapist or Assistant Program
   g. 10 Home Health Agency
   h. 20 School System
   i. 7 Other (please specify) ____________

7. I consider myself a:
   a. 124 Generalist
   b. 4 Specialist

If a specialist, which one(s):
   A. 10 Geriatric disorders
   B. 28 Pediatric disorders
   C. 42 Orthopedic disorders
   D. 15 Neurologic disorders
   E. 8 Sports Medicine
   F. 4 Industrial Medicine
   G. 7 Other (please specify) ____________
8. Where best describes the location of your practice?
   a. 52. Rural (greater than 10 miles from city of
       100,000 plus)
   b. 122. Urban (within city of 100,000 plus)
   c. 60. Suburban (less than or equal to 10 miles from
city of 100,000 plus)

9. On the left, mark the three skills or areas of knowledge which you
   consider the most critical to a physical therapist in a direct
   access environment. On the right, mark any of these three skills/
   areas of knowledge in which your entry level PT program adequately
   prepared you.

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<th>Skill</th>
<th>Adequately Prepared</th>
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<td>104</td>
</tr>
<tr>
<td>b. Treatment selection skills</td>
<td>81</td>
</tr>
<tr>
<td>c. Knowledge of professional ethics</td>
<td>72</td>
</tr>
<tr>
<td>d. Evaluative knowledge</td>
<td>95</td>
</tr>
<tr>
<td>e. Evaluative skills</td>
<td>103</td>
</tr>
<tr>
<td>f. Knowledge how to collaborate with other</td>
<td></td>
</tr>
<tr>
<td>health care practitioners</td>
<td></td>
</tr>
<tr>
<td>g. Administrative/managerial knowledge</td>
<td></td>
</tr>
<tr>
<td>h. Administrative/managerial skills</td>
<td></td>
</tr>
<tr>
<td>i. Business and finance knowledge</td>
<td></td>
</tr>
<tr>
<td>j. Business and finance skills</td>
<td></td>
</tr>
<tr>
<td>k. Leadership skills</td>
<td></td>
</tr>
<tr>
<td>l. Other (please specify)</td>
<td></td>
</tr>
<tr>
<td>m. Other (please specify)</td>
<td></td>
</tr>
</tbody>
</table>

10. If a physical therapist feels unprepared for practice in a direct
    access environment, which three methods of preparation would you
    most strongly recommend?
    a. 276. PT related continuing education courses
    b. 124. Advanced college or university degree(s) in PT
    c. 30. Advanced college or university degree(s) in other
            academic areas
    d. 113. Study groups
    e. 137. Continued work experience in a non direct access
            environment
    f. 95. Practica in a teaching hospital
    g. 92. Self directed study, including non-degree graduate
            coursework
    h. 24. Other (please specify)
    i. Other (please specify)

11. Direct access privileges should be granted to Ohio’s physical
    therapists with professional experience of:
    a. 29. 0 months
    b. 4. 6 months
    c. 54. 1 year
    d. 10. 18 months
    e. 80. 2 years
    f. 58. 3 years
    g. 58. Greater than 3 years
    h. 20. Should not be granted

12. Are you a member of the Ohio Chapter of the American Physical
    Therapy Association?
    a. 77. No
    b. 173. Yes
Please circle your response to each of the following statements:

In my opinion direct access would:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Mean</th>
</tr>
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<tr>
<td>13. decrease the consumer cost of PT services</td>
<td>41</td>
<td>106</td>
<td>70</td>
<td>77</td>
<td>13</td>
<td>10</td>
</tr>
<tr>
<td>14. increase the quality of PT care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>15. improve PT-physician relationships</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>53</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>16. increase the incomes of PT's</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>17. increase malpractice insurance rates for PT's</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>18. improve the image of PT's</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>19. increase the patients' accessibility to PT services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>20. create professional problems for PT's</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>21. make my job more satisfying</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

In my opinion:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. PT's with more clinical experience are better practitioners than those with less clinical experience</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>23. I am qualified to practice in a direct access environment</td>
<td>61</td>
<td>140</td>
<td>48</td>
<td>36</td>
<td>9</td>
<td>3</td>
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<tr>
<td>24. I would still practice on a &quot;by referral only&quot; basis even if direct access was an option</td>
<td>70</td>
<td>125</td>
<td>44</td>
<td>55</td>
<td>20</td>
<td>2</td>
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<tr>
<td>25. I would rather practice without physician referral if direct access was an option</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>26. Direct access should be an option to PT's</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>27. A PT in a direct access environment should be required by law to explain the scope and limitations of the practice of physical therapy to every patient</td>
<td>133</td>
<td>147</td>
<td>16</td>
<td>17</td>
<td>4</td>
<td>2</td>
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<tr>
<td>28. Direct access laws should require that patients who haven't improved within 30 days of the initial physical therapy treatment must be referred to a physician or other qualified health care professional</td>
<td>71</td>
<td>144</td>
<td>47</td>
<td>59</td>
<td>15</td>
<td>3</td>
</tr>
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</table>

Thank you very much for completing this questionnaire. Please return this questionnaire in the self-addressed stamped envelope.
APPENDIX C

REVISED VALUES FOR QUESTIONS 13 - 21
APPENDIX C

REVISED VALUES

In my opinion, direct access would:

13. decrease the consumer cost of physical therapy services.  
    1  2  3  4  5
14. increase the quality of physical therapy services.  
    1  2  3  4  5
15. improve physical therapy-physician relationships.  
    1  2  3  4  5
16. increase the incomes of the physical therapists.  
    1  2  3  4  5
17. increase malpractice insurance rates for physical therapists.  
    5  4  3  2  1
18. improve the image of physical therapists.  
    1  2  3  4  5
19. increase the patients’ accessibility to physical therapy services.  
    1  2  3  4  5
20. create professional problems for physical therapists.  
    5  4  3  2  1
21. make my job more satisfying.  
    1  2  3  4  5
APPENDIX D

DEMOGRAPHIC VARIABLES AND VALUES
## APPENDIX D

### DEMOGRAPHIC VARIABLES AND VALUES

1) **Years of Practice**
   - 0 - 1 year  
   - 1- 5 years  
   - Greater than 5 years  
   
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<td>3</td>
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2) **Educational Level**
   - Student  
   - BS  
   - Certificate or Some Graduate Study  
   - Graduate Degree  
   
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3) **Sex**
   - Female  
   - Male  
   
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4) **Currently Working**
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   - Yes  
   
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5) **Employment Status**
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   - Self-employed/ Other/Both  
   
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6) **Specialty**
   - Generalist  
   - Specialist  
   
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7) **Location**
   - Rural  
   - Urban  
   - Suburban  
   
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<td>2</td>
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<td>1.75</td>
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8) **Employment Location**
   - Hospital  
   - Nursing Home and Rehabilitation Center  
   - Outpatient Facility  
   - Other  
   
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APPENDIX E

SUMMARY OF REGRESSION ANALYSES
## APPENDIX E

### SUMMARY OF REGRESSION ANALYSES

#### Summary Of Regression Analysis For ITEMS 13 - 21, "Opinion Total"

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<th>Coefficient</th>
<th>Incremental R²</th>
<th>Cumulative R²</th>
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<td>Constant</td>
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#### Summary Of Regression Analysis For ITEM 23, "Qualified To Practice"

<table>
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<th>Cumulative R²</th>
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<td>7.1%</td>
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<td>Employment Status</td>
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<td>4.9%</td>
<td>16.0%</td>
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<td>Nursing Home/Rehabilitation Center</td>
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<td>Constant</td>
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</tbody>
</table>

#### Summary Of Regression Analysis For ITEM 24, "Practice By Referral Only"

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Incremental R²</th>
<th>Cumulative R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Status</td>
<td>-.355</td>
<td>2.4%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Constant</td>
<td>3.697</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Summary Of Regression Analysis For ITEM 25, "Practice Without Referral"

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Incremental R²</th>
<th>Cumulative R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>----</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Summary Of Regression Analysis For ITEM 26, "Direct Access - Option"

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Incremental R²</th>
<th>Cumulative R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Status</td>
<td>.365</td>
<td>4.1%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Constant</td>
<td>1.566</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary Of Regression Analysis For ITEM 27, "Explain Limitation"

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Incremental R²</th>
<th>Cumulative R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Status</td>
<td>-.360</td>
<td>2.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Constant</td>
<td>2.645</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary Of Regression Analysis For ITEM 28, "Must Be Referred"

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Coefficient</th>
<th>Incremental R²</th>
<th>Cumulative R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment Location</td>
<td>.069</td>
<td>2.7%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Educational Level</td>
<td>.213</td>
<td>1.6%</td>
<td>4.3%</td>
</tr>
<tr>
<td>Constant</td>
<td>1.693</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX F

SKILLS REQUIRED

(STUDENT RESPONSES)
**APPENDIX F**

**SKILLS REQUIRED**  
**STUDENT RESPONSES**

<table>
<thead>
<tr>
<th>Skill</th>
<th>N</th>
<th>N1</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical decision making skills</td>
<td>57</td>
<td>35</td>
<td>61.4</td>
</tr>
<tr>
<td>Treatment selection skills</td>
<td>29</td>
<td>20</td>
<td>69.0</td>
</tr>
<tr>
<td>Knowledge of professional ethics</td>
<td>4</td>
<td>3</td>
<td>75.0</td>
</tr>
<tr>
<td>Evaluation knowledge</td>
<td>49</td>
<td>33</td>
<td>67.3</td>
</tr>
<tr>
<td>Evaluation skills</td>
<td>49</td>
<td>26</td>
<td>53.1</td>
</tr>
<tr>
<td>Knowledge how to collaborate with other health care practitioners</td>
<td>12</td>
<td>5</td>
<td>41.7</td>
</tr>
<tr>
<td>Administrative/managerial knowledge</td>
<td>4</td>
<td>3</td>
<td>75.0</td>
</tr>
<tr>
<td>Administrative/managerial skills</td>
<td>3</td>
<td>1</td>
<td>33.3</td>
</tr>
<tr>
<td>Business/finance skills</td>
<td>6</td>
<td>0</td>
<td>00.0</td>
</tr>
<tr>
<td>Business/finance knowledge</td>
<td>4</td>
<td>0</td>
<td>00.0</td>
</tr>
<tr>
<td>Leadership skills</td>
<td>4</td>
<td>2</td>
<td>50.0</td>
</tr>
</tbody>
</table>

\[N = \text{Number of responses indicating this area to be one of three most critical.}\]

\[N1 = \text{Number of responses indicating respondent adequately prepared in this area.}\]
APPENDIX G

PREDICTED OPINION SCORES
APPENDIX G
PREDICTED OPINION SCORES

Composite Opinion Total from Questions 13 – 21

<table>
<thead>
<tr>
<th></th>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>2.52</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>2.71</td>
<td></td>
</tr>
</tbody>
</table>

* I am qualified to practice in a direct access environment.

<table>
<thead>
<tr>
<th></th>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>1.64</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>2.02</td>
<td></td>
</tr>
</tbody>
</table>

I'd still practice on a "referral only" basis even if direct access was an option.

<table>
<thead>
<tr>
<th></th>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>3.70</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>3.34</td>
<td></td>
</tr>
</tbody>
</table>

Direct access should be an option.

<table>
<thead>
<tr>
<th></th>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>1.56</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>1.93</td>
<td></td>
</tr>
</tbody>
</table>

Favor laws requiring physical therapists to explain scope of limitations to every patient.

<table>
<thead>
<tr>
<th></th>
<th>Others</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Others</td>
<td>2.28</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>2.64</td>
<td></td>
</tr>
</tbody>
</table>

* Figures also represent respondent who had 5+ years of experience and who was currently working.

(Scores correspond to Likert scale.)