Professional Socialization: Transition from the Classroom Setting to the Clinical Environment

Anna Katerina Tischenko-Osorno
University of Miami, anna@ptwellnesscenter.com

Follow this and additional works at: https://scholarlyrepository.miami.edu/oa_dissertations

Recommended Citation
https://scholarlyrepository.miami.edu/oa_dissertations/722

This Embargoed is brought to you for free and open access by the Electronic Theses and Dissertations at Scholarly Repository. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of Scholarly Repository. For more information, please contact repository.library@miami.edu.
PROFESSIONAL SOCIALIZATION: TRANSITION FROM THE CLASSROOM SETTING TO THE CLINICAL ENVIRONMENT

By

Anna Katerina Tischenko-Osorno

A DISSERTATION

Submitted to the Faculty of the University of Miami in partial fulfillment of the requirements for the degree of Doctor in Philosophy

Coral Gables, Florida

May 2012
A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy

PROFESSIONAL SOCIALIZATION: TRANSITION FROM THE CLASSROOM SETTING TO THE CLINICAL ENVIRONMENT

Anna Katerina Tischenko-Osorno

Approved:

Neva Kirk-Sanchez, P.T., Ph.D.
Associate Professor of the Department of Physical Therapy

Terri A. Scandura, Ph.D.
Dean of the Graduate School

Sherrill Hayes, P.T., Ph.D.
Professor and Chair of the Department of Physical Therapy

Helen Masin, P.T., Ph.D.
Associate Professor of the Department of Physical Therapy

Kathleen Curtis, P.T., Ph.D.
Dean of the College of Health
Health Sciences University of Texas at El Paso
Abstract of a dissertation at the University of Miami.

Dissertation supervised by Associate Professor Neva Kirk-Sanchez.
No. of pages in text. (260)

**Background and Purpose.** Entry-level physical therapy students go through a distinct period of professional socialization in which they acquire the specialized knowledge, psychomotor skills and professional behaviors essential for effective and efficient patient care. Physical therapists practitioners agree that professionalism is an essential component of this process of socialization to the successful practice of physical therapy in the 21st century. Academic faculty and clinical instructors agree that appropriate affective skills are more difficult to promote, assess and model than cognitive or psychomotor skills. Evidence suggests that underdevelopment of professional behaviors is often the reason why students struggle with the transition from the classroom setting to the clinical environment and that engaging students in affective learning experiences is one of the most challenging experiences academicians and clinical instructors face. This qualitative study explored the professional socialization process from the perspective of academic faculty, clinical faculty and the entry-level doctor of physical therapy (DPT) students and the teachings fostering the development of professional behaviors in entry-level physical therapy professional education. This qualitative study also explores the appropriateness of the Weidman, Twale, and Stein (2001) Socialization Framework conceptualizing the graduate and professional student socialization process as it applies to entry-level graduate physical therapy students. **Subjects.** The participants were eight
academic faculty and nine clinical faculty associated with the academic and clinical programs of the University of Miami Physical Therapy Department, as well as 12 entry-level DPT students enrolled in this educational program. **Methods.** Using a phenomenology approach, the investigator conducted single case study interviews with 3 participants and focus groups with the other participants. This consisted of asking questions to explore the current perceptions about the process of professional socialization and development of professional behaviors in entry-level DPT students, and the appropriateness of the Weidman et al framework to conceptualize the socialization process as it applies to physical therapy. The behavioral constructs of professional responsibility, interpersonal skills and communication skills were used as benchmarks of professionalism. Interviews and focus group sessions were audiotaped and transcribed by a professional transcriptionist. Each participant completed a survey to gather demographic data. Qualitative and quantitative methods were used to analyze the data. Triangulation of the data and other research strategies ensured trustworthiness of the data. **Results.** Quantitative data was used to describe the participants. Qualitative data analysis led to the emergence of 8 themes: 1) professional behaviors develop over time, 2) knowledge acquisition develops over time, 3) skills in the affective domain encompass qualities that are critical in primary care physical therapy, 4) from implicit to explicit approach to Physical therapy education, 5) professional appearance, 6) socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome), 7) internalization of professional role into one’s identity happens over time, and 8) personal, academic and clinical experiences play an important role in the process
of professional socialization. **Discussion and Conclusion.** The findings indicate that the process of professional socialization is vital for individuals pursuing physical therapy as a profession. The themes that emerged indicate that entry-level DPT students develop knowledge and professional behaviors over time. Engaging the entry-level DPT students in affective learning experiences focused around a set of expected skills and competencies is essential for effective patient care and the ability to practice as autonomous primary care practitioners. An explicit approach to education in the affective domain is essential when teaching today’s millennial students, and the modeling and teachings about professional appearance is an important aspect of professional practice. In addition, entry-level graduate DPT students go through a process of socialization parallel to the Weidman, Twale and Stein (2001) Socialization Framework conceptualizing graduate and professional student socialization in higher education and this model can be applied to facilitate physical therapist professional education and entry-level graduates’ preparedness for the professional working life.

**Key Words.** Professional Socialization, Education in the Affective Domain, Professionalism, Professional Behaviors, Responsibility, Communication Skills, Interpersonal Skills.

The Institutional Review Board of the University of Miami approved this study.
DEDICATION

I dedicate my dissertation work, hours of reflection and growth ……

to my mother Maria Corina,

to my father Willy Wasyl,

to my husband Don, and

to our family “baby guardian angel,” who we did not get to meet and who

fills our lives with joy, pride and love.
ACKNOWLEDGEMENT

The printed pages of this dissertation hold far more than the culmination of years of study and hours of reflection. These pages reflect the journey in which I have met many generous and inspiring people since the beginning of my professional career as a physical therapist. I would have never being able to finish my dissertation without the leadership of my committee members, help from friends and sustenance from my family and husband. The list of acknowledgement is long, but I cherish each contribution to my development as a physical therapist and scholar:

To my committee chair Dr. Neva Kirk-Sanchez, a gracious mentor - for her encouraging words, thoughtful criticism and time to thoroughly edit my drafts.

To the members of my committee:

Dr. Sherrill Hayes – for the invaluable lesson and reminders to “keeping all my ducks in a row”;

Dr. Helen Masin – for her constant support and encouragement in my quest to completion;

Dr. Kathleen A Curtis – who was generous with her expertise and precious time;

To Dr. Carol M Davis (honorary committee member) – For her patience, for her warmth and understanding, for helping me with the tone and discipline of my writing, for reminding me to stay connected with my energy sources and inner wisdom, and for teaching me grounding techniques;
To the faculty of the University of Miami Department of Physical Therapy, I extend my heartfelt gratitude for providing me with a tremendous graduate education;

To the support staff Jackie, Leslie, Maggie, Rick and Jean - for their abundant and invaluable assistance;

To the academic faculty members, the clinical instructors and the entry-level DPT students who participated in this study and were willing to share their experiences;

To my classmates Dr. Gregory Hartley, Dr. Frances Kistner and Dr. Larisa Reed Hoffman – whose accomplishments were a source of inspiration;

To my surrogate parents Brahamani & Andy Liebman and Pennie & Gary Abramson – whose love and support guided me even when I was miles away from my parents;

To my invaluable network of supportive, forgiving, generous and loving friends without whom I could not have survived the process – Ana Maria Lapadula, Maria Fernanda Rivera-Gonzalez, Manuela Hoyos, Cristel Luzardo-Brady, Christopher Brady, Daniela Marquina-Nutt, Julio Nutt, Mariana Garcia-Estrada and Alvaro Estrada;

To my niece Tatiana and my nephew Rafael – who have supported me throughout the process;

To my sisters Tatiana and Valentina – who have been my emotional anchors through the ups and downs of graduate school and my entire life;

To my daughters Isabella and Annabella – who are like flowers that are forever in bloom whose love was always present, and for inspiring and amazing me every day. My thesis is finished now and I’m coming home;
And to my husband (and best friend) Don – for his love, sacrifice, patience, joyfulness and perseverance throughout this journey, and without whom I could not have succeeded.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Figures</td>
<td>xiii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>xiv</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>I. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Problem and Purpose</td>
<td>5</td>
</tr>
<tr>
<td>Theoretical and Behavioral Constructs of this Study</td>
<td>6</td>
</tr>
<tr>
<td>REVIEW OF RELATED LITERATURE</td>
<td>9</td>
</tr>
<tr>
<td>Review of the Professional Socialization Literature in Physical Therapy</td>
<td>9</td>
</tr>
<tr>
<td>Professional Socialization Framework by Weidman et al</td>
<td>12</td>
</tr>
<tr>
<td>Translation of Professionalism into Professional Behaviors</td>
<td>15</td>
</tr>
<tr>
<td>Definition of Professionalism in Physical Therapy</td>
<td>16</td>
</tr>
<tr>
<td>Definition of Professional Behaviors in Physical Therapy</td>
<td>17</td>
</tr>
<tr>
<td>Professionalism in Physical Therapy and Vision 2020</td>
<td>18</td>
</tr>
<tr>
<td>Professionalism in Various Health Professions</td>
<td>20</td>
</tr>
<tr>
<td>Promoting Professionalism in Physical Therapy</td>
<td>22</td>
</tr>
<tr>
<td>Assessment of Professionalism and Professional Behaviors</td>
<td>23</td>
</tr>
<tr>
<td>Using the Normative Model of Physical Therapist Professional Education in Defining Professional Academic and Clinical Expectations</td>
<td>23</td>
</tr>
<tr>
<td>Using Physical Therapy Core Values to Assess and Promote</td>
<td></td>
</tr>
</tbody>
</table>
II. METHODOLOGY .......................................................... 59

The Single Case Interview Method ........................................ 60
The Focus Group Research .................................................. 61
Survey Methodology .......................................................... 62
Triangulation ........................................................................ 63
Design of the Study ............................................................. 66
Sampling Method ................................................................. 66
Sample Size ......................................................................... 68
The Moderator ....................................................................... 69
ATLAS.ti .............................................................................. 72
Phase 1. Single Case Study Interview Method ......................... 74

Interview Participants and Enrollment Procedure ................. 74
### Interview Questions Construction Procedure

76

### Interview Data Collection Procedure

78

### Interview Data Facts

80

### Interview Data Analysis

81

### Phase 2. Focus Group Method

86

### Focus Group Questions

86

### Focus Group Participants and Enrollment Procedure

86

### Focus Group Collection Procedure

89

### Focus Group Data Facts

92

### Focus Group Data Analysis

92

### Survey

93

### Survey Construction Procedure

93

### Survey Data Analysis

95

### Trustworthiness

95

### Summary

96

### III. PROFESSIONAL SOCIALIZATION: TRANSITION FROM THE CLASSROOM SETTING TO THE CLINICAL ENVIRONMENT

99

### Introduction and Review of Related Literature

101

### Purpose and Problem

105

### Theoretical and Behavioral Constructs of this Study

106

### Methods

108

### Design

108
IV. PROFESSIONAL SOCIALIZATION MODEL: APPLICATION OF HIGHER EDUCATION PROFESSIONAL SOCIALIZATION MODEL TO PHYSICAL THERAPY STUDENTS
### V. THE SUMMARY, FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendations for Future Research</td>
<td>177</td>
</tr>
<tr>
<td>Conclusion</td>
<td>178</td>
</tr>
<tr>
<td>The Summary</td>
<td>180</td>
</tr>
<tr>
<td>The Findings</td>
<td>185</td>
</tr>
<tr>
<td>Other Findings</td>
<td>190</td>
</tr>
<tr>
<td>The Discussion</td>
<td>196</td>
</tr>
<tr>
<td>Conclusion</td>
<td>204</td>
</tr>
<tr>
<td>Limitations</td>
<td>206</td>
</tr>
<tr>
<td>Tangible Recommendations for Academic and Clinical Programs</td>
<td>207</td>
</tr>
<tr>
<td>Tangible Recommendations for Entry-level Physical Therapy Students</td>
<td>209</td>
</tr>
<tr>
<td>Recommendations for Future Research</td>
<td>211</td>
</tr>
<tr>
<td>Closing Remarks</td>
<td>212</td>
</tr>
</tbody>
</table>

### WORKS CITED

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>214</td>
</tr>
</tbody>
</table>

### APPENDICES

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Taxonomy of Educational Objectives for Learning</td>
<td>226</td>
</tr>
<tr>
<td>B</td>
<td>Professionalism in Physical Therapy: Core Values</td>
<td>228</td>
</tr>
<tr>
<td>C</td>
<td>Previous Study (Tables and Results)</td>
<td>231</td>
</tr>
<tr>
<td>D</td>
<td>Study Documents Approved by IRB</td>
<td>232</td>
</tr>
<tr>
<td>E</td>
<td>ATLAS.ti Software Applications</td>
<td>259</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Theoretical and Behavioral Construct</td>
<td>8</td>
</tr>
<tr>
<td>1.2</td>
<td>The Weidman, Twale, Stein (2001) Socialization Framework</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Conceptualizing Graduate and Professional Student Socialization</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Rating Scale for Student’s Clinical Performance</td>
<td>40</td>
</tr>
<tr>
<td>2.1</td>
<td>Methodology Flow Chart</td>
<td>64</td>
</tr>
<tr>
<td>2.2</td>
<td>Application of ATLAS.ti</td>
<td>83</td>
</tr>
<tr>
<td>2.3</td>
<td>ATLAS.ti: Auto Coding Dialog Opened</td>
<td>83</td>
</tr>
<tr>
<td>4.1</td>
<td>The Schematic Representation of the Weidman et al Socialization</td>
<td>152</td>
</tr>
<tr>
<td></td>
<td>Framework</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Core Elements of the Weidman et al Socialization Model</td>
<td>153</td>
</tr>
<tr>
<td>4.3</td>
<td>Formal and Informal Aspect of the Weidman et al Socialization Model</td>
<td>154</td>
</tr>
<tr>
<td>4.4</td>
<td>Stages of Socialization</td>
<td>166</td>
</tr>
<tr>
<td>4.5</td>
<td>Internalization of Professional Role</td>
<td>170</td>
</tr>
<tr>
<td>4.6</td>
<td>Personal, Academic and Clinical Experiences Play an Important Role in</td>
<td>171</td>
</tr>
<tr>
<td></td>
<td>the Process of Professional Socialization</td>
<td></td>
</tr>
<tr>
<td>4.7</td>
<td>The Weidman, Twale, and Stein Socialization Model Conceptualizing</td>
<td>176</td>
</tr>
<tr>
<td></td>
<td>Graduate and Professional Student Socialization in Physical Therapy</td>
<td></td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.</td>
<td>Professional Socialization in Physical Therapy</td>
</tr>
<tr>
<td>1.3.</td>
<td>Definitions of Professional Behaviors Important to Physical Therapy Practice Listed in Rank Order</td>
</tr>
<tr>
<td>1.4.</td>
<td>Behavioral Criteria for Professional Behavior 5: Responsibility</td>
</tr>
<tr>
<td>1.5.</td>
<td>PT Clinical Performance Instrument Criteria (1997 vs. 2006)</td>
</tr>
<tr>
<td>1.7.</td>
<td>Clinical Performance Instrument: Anchor Definitions</td>
</tr>
<tr>
<td>1.8.</td>
<td>Professional Behavior Performance Criterion Sample Behaviors</td>
</tr>
<tr>
<td>1.9.</td>
<td>Accountability Performance Criterion Sample Behaviors</td>
</tr>
<tr>
<td>1.10.</td>
<td>Communication Performance Criterion Sample Behaviors</td>
</tr>
<tr>
<td>1.11.</td>
<td>Definition of Stages of Dreyfus Model of Skill Acquisition</td>
</tr>
<tr>
<td>1.12.</td>
<td>Pilot Study Survey Questions</td>
</tr>
<tr>
<td>1.13.</td>
<td>Pilot Study Focus Group Questions</td>
</tr>
<tr>
<td>1.14</td>
<td>Summary of Responses to Survey Questions 4 and 6</td>
</tr>
<tr>
<td>2.1.</td>
<td>Codes and Categories Used to Analyze Phase 1 Answering Purposes 1-3</td>
</tr>
<tr>
<td>2.2.</td>
<td>Codes and Categories Used to Analyze Phase 1 Answering Purpose 4</td>
</tr>
<tr>
<td>2.3.</td>
<td>Main Study Themes</td>
</tr>
<tr>
<td>2.4.</td>
<td>Survey Instrument</td>
</tr>
</tbody>
</table>
CHAPTER 1
INTRODUCTION

“The process of professional socialization is a process of growth, of becoming a professional person”
Carol M Davis, DPT, EdD, MS, FAPTA

Physical therapy professional education is designed to prepare students to develop cognitive, psychomotor and affective competence expected of the newly licensed physical therapist for entry into the practice of physical therapy. Engaging students in affective learning experiences is one of the most challenging experiences academicians and clinical instructors face. Academic faculty and clinical instructors agree that appropriate affective skills are more difficult to promote, assess and model than cognitive or psychomotor skills. Affective skills are abstract in nature and do not lend themselves to direct measures. Academicians and clinicians struggle with the relationship between the subjective, inner, abstract and the observable, objective aspects of professional behaviors.

A Normative Model of Physical Therapist Professional Education (The Normative Model) details the expectations and requirements of academic and clinical curricula regarding development of knowledge, psychomotor skills and professional behaviors deemed necessary for success in the practice of physical therapy. The Normative Model provides a guidance to educational programs on how to design classroom and clinical practice expectations using the Bloom (cognitive), Simpson (psychomotor) and Krathwohl (affective) taxonomies of educational objectives.
refer to Appendix A. Education in the cognitive domain focuses on acquisition of knowledge and it involves the development of intellectual and technical skills. This includes the recall and recognition of specific facts, procedures, and concepts that serve in the development of physical therapy technical skills. Education in the psychomotor domain includes the ability to physically move, coordinate movements and use motor skills specific to the task at hand. Psychomotor learning objectives focus on development of motor skills to be able not only to examine and evaluate movement disorders, but also to be able to perform the activities to practice as a physical therapist. Skills in the affective domain describe the way people respond emotionally to events, concepts, and the environment through values, feelings, motivations, and attitudes. Educational objectives in the affective domain target the recognition, observation, value and internalization of professional behaviors like responsibility, communication skills, interpersonal skills, commitment to learning, critical thinking, and stress management.

Physical therapy students entering the profession go through a distinct period of professional socialization. During this period, physical therapy students must attain a repertoire of cognitive, psychomotor and affective skills essential to practice as physical therapists. The acquisition, development and application of these skills are critical to students as they progress from being novice students in the classroom to the transition to the clinic, first as novice interns and then progressing over several years to expert practitioners. In physical therapy, the process of professional socialization has been formally explored in a variety of ways since the 1980’s. In 2009, Davis reported that the process of professional socialization is a clear concern among physical
therapy educators across the nation.\textsuperscript{4} The author reported that 98\% of physical therapy educators who completed a survey viewed professionalism as an essential component of physical therapy education and 89\% of these respondents expressed concerns about the professional behaviors of one or more of their entry-level students.\textsuperscript{4}

Professional education and socialization in physical therapy involves not only the development and evaluation of cognitive and psychomotor skills, but also a commitment to incorporating affective learning objectives in order to facilitate and objectively measure the development of professional behaviors within the foundational, behavioral and clinical science matrices of the curricula.\textsuperscript{1,15,16,38-41} Deficiencies in the cognitive or psychomotor domains are detected in the classroom as students must demonstrate a level of competency in order to progress in the curriculum.\textsuperscript{15,42} Cognitive and psychomotor skills can be assessed and measured in written examinations and practical testing. However, deficiencies in the affective domain are more elusive. The subjective nature of these affective skills does not lend themselves to direct measure.\textsuperscript{15,42} Academic and clinical faculty members agree that appropriate attitudes and professional behaviors in the affective domain are as important as competent clinical skills and essential for effective patient management.\textsuperscript{15,43-45} Underdevelopment of professional behaviors is often the reason why students struggle with the transition from the classroom to the clinic or even fail clinical internships. This makes the transition from the classroom setting to the clinical environment one of the most difficult experiences physical therapy students have during their professional training.\textsuperscript{12,13,15,16,24,42,45-47}

Academicians, clinical instructors and students must agree that education in the affective domain is essential in the process of professional socialization in physical
therapy.\textsuperscript{1,16} For education in the affective domain to be successful, academic faculty; clinical faculty and entry-level students must have concordant educational views to engage in affective learning. Education in the affective domain deserves a systematic approach similar to the one used for cognitive and psychomotor education.\textsuperscript{1,16}

Education in the affective domain has become an essential component of physical therapy academic and clinical education.\textsuperscript{9,14-16,39,48,49} Documents like The Normative Model (NM), Professionalism in Physical Therapy: Core Values (CV)\textsuperscript{50}, and the Professional Behaviors (PB) for the 21\textsuperscript{st} Century\textsuperscript{23}(formally known as the Generic abilities) identify and provide tools for teaching, developing and assessment of affective skills related to professionalism in physical therapy. The Normative Model offers a systematic approach to facilitate the development of affective skills using a taxonomy of educational objectives for affective learning. This model provides a framework for education in the affective domain to be successful. Please refer to Appendix A.

Even though entry-level DPT students are given the opportunity to develop awareness and acceptance of their own personal values and professional behaviors in the classroom and clinic, they sometimes appear to fail to understand and internalize the importance of the existing professional documents to engage in affective learning. Tsoumas reported that entry-level students sometimes fail to display the learned professional behaviors in the classroom and/or clinic and often act in ways that are incongruent with the profession.\textsuperscript{2}

The demands from society, the health care system, research and consumers to educate highly skilled health care professionals are increasing. Physical therapists go through a process of professional socialization in which they acquire the specialized
knowledge, psychomotor skills and professional behaviors essential for effective and efficient patient care. Physical therapy practitioners agree that professionalism is an essential component of this process of socialization to the successful practice of physical therapy in the 21st century.

**Problem and Purpose**

Concerns have been raised that the transition from the classroom to the clinic is one of the most challenging experiences faced by entry-level physical therapy students, and that engaging students in affective learning experiences is one of the most challenging experiences academicians and clinical instructors face. These challenges are often associated with entry-level students’ underdevelopment of professional behaviors and faculty’s difficulties dealing with the abstract nature of affective skills. Simultaneously, little is known about the perspectives of the academic faculty, clinical faculty and the entry-level students about the teachings fostering professionalism in entry-level physical therapy professional education. This qualitative study explored the professional socialization process from the perspective of academic faculty, clinical faculty and entry-level doctorate of physical therapy (DPT) students as evidenced by the development of professional behaviors of responsibility, communication skills and interpersonal skills.

**Purpose 1.** To explore the academic faculty, clinical faculty and the DPT student roles in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills in the entry-level DPT student.
Purpose 2. To describe the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to professional behaviors by the DPT student.

Purpose 3. To examine how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

Purpose 4. To explore the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it can be applied to physical therapy students.

Theoretical and Behavioral Constructs of this Study

The core values of accountability and compassion/caring are representative of the values of professionalism and professional behaviors of interest to this study and representative of the theoretical construct of professionalism. These core values were chosen as they define critical elements of professionalism in physical therapy practice, education and research. The sample indicators for these core values are concrete, observable and measurable and will be used as a guide in the process of exploring the process of professional socialization in DPT students.

The behavioral constructs of professional responsibility, interpersonal skills and communication skills were used in this study as a benchmark of professionalism for their relevance to the process of professional socialization and development of professional behaviors. In addition, these professional behaviors have been chosen to be the key measurable indicators for the above mentioned professional core values.
Physical therapy education is focused around a set of expected cognitive, psychomotor and affective outcomes or competencies. The profession has defined these professional behaviors and has delineated specific behavioral criteria for each developmental/performance level, thus providing tools to design affective learning objectives and to evaluate classroom and clinical experiences.\textsuperscript{1,23,50,51,68} According to Davis, the most frequent behaviors demonstrated by entry-level physical therapy students include tardiness, lack of responsibility and dress code violations.\textsuperscript{115} A review of the physical therapy literature reveals that physical therapy educators agree that clinical reasoning, integrity, oral communication, responsibility, honesty, accountability and compassion/caring are essential professional behaviors for physical therapist and they are encompassed by the core values of accountability and compassion/caring.\textsuperscript{15,16,23,39,115-118}

Therefore, the investigator will be asking questions related to the perception of academic faculty, clinical faculty and DPT students about their role in the DPT students’ development of appropriate professional behaviors (affective skills) that represent the core values of accountability and compassion / caring. Figure 1.1 summarizes the relationship of the theoretical construct of professional values represented by the Core Values and the measurable behavioral constructs represented by the specific professional behaviors of responsibility, interpersonal skills and communication skills.
Figure 1.1. Theoretical* and Behavioral** Construct

This study will also explore the Weidman et al framework conceptualizing the graduate and professional student socialization process and its application to the physical therapy profession. This framework describes the process of professional socialization in post-baccalaureate higher education. The model assumes that the process of socialization is non-linear and that it occurs through an interactive set of stages: anticipatory, formal, informal and personal. These four stages reflect different levels of understanding and commitment about the new professional roles for which the student must be prepared.

The results of this qualitative study may be helpful to physical therapy education programs by describing current perceptions about the process of professional socialization and development of professional behaviors through key indicators such as responsibility, interpersonal skills and communication skills from the perspective of academic faculty, clinical faculty and DPT students. Academic and clinical programs
may use this information to guide students during their professional socialization, engaging the student in the active recognition that acquisition of professional behaviors as novice students in the classroom and achievement of affective competence as a new graduate entering clinical practice is an important aspect of professional practice.

REVIEW OF RELATED LITERATURE

REVIEW OF PROFESSIONAL SOCIALIZATION LITERATURE IN PHYSICAL THERAPY

Professional socialization is described as a distinct period in which a professional acquires the specialized skills, knowledge and attitude of the profession. This process starts during academic preparation and continues throughout professional education. Professional education is a subset of higher education that prepares individuals to practice a profession such as law, medicine, ministry, or physical therapy.

The professional socialization process of a physical therapy student starts in the classroom and continues throughout the transition to the clinic first as a novice intern, and then progressing over several years to expert practitioner. Bower et al report that “this process is both direct and implied”. During this time of growth, academic faculty and clinical faculty try to explicitly teach the concepts of professional behaviors to physical therapy students by using evidence based documents like the Normative Model, Core Values, and CPI, but many students do not recognize the implicit teachings taking place through role modeling and mentorship that occurs in the classroom.
and/or clinic. \(^4,17,25,55,56\) Furthermore, even though the Normative Model provides a standard that physical therapy curricula be designed to develop mastery in the three educational domains, every physical therapy program is responsible for incorporating affective learning objectives into their curricula and/or course objectives in order to ensure that their entry-level students have opportunities to develop and demonstrate appropriate professional behaviors throughout the program. \(^12,15,16,39,42,57\)

According to Jacobson, studies looking at the process of professional socialization in physical therapy were limited prior to 1980. \(^5\) However, the process of professional education and professional socialization in physical therapy has been explicitly and formally explored in a variety of ways since 1980. \(^3,16,21,25,28,29,31,54,58\) Table 1.1 summarizes physical therapy literature related to the process of professional socialization.

### Table 1.1. Professional Socialization in Physical Therapy

<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>Study Title, Purpose &amp; Discussion</th>
</tr>
</thead>
</table>
| 1980 | Jacobson \(^7,5\) | *Role-model Concepts Before and After the Formal Professional Socialization Period.*  
- The purpose of this study was to answer two questions: 1. What picture of their occupational role model do students have before and after training? 2. Does the student’s concept of a role model change during the process of socialization?  
- The majority of students’ concepts about role models change very little during the period of socialization and that physical therapy role model was best described with personal characteristics |
| 2001 | Teschendorf et al \(^25\) | *Faculty Roles in Professional Socialization.*  
- Pilot project to obtain faculty perspectives on professional socialization of physical therapy students  
- Critical aspects of this paper are role model behaviors displayed by staff, addressing unwanted unprofessional behaviors and encouragement of student reflection |
| 2003 | Sellheim \(^35\) | *Educational factors influencing physical therapist student's approaches to learning.*  
- The critical conclusion of this study is the importance of providing students with the big picture early in the curriculum.  
- The students have to see the relevance of what are they are learning. |
| 2004 | Mostrom \(^26\) | *Professionalism in Physical Therapy: A reflection on ways of being in physical therapy education [editorial].*  
- The importance of how we are teaching concepts about professionalism and professional behaviors.  
- Who we are as teachers in relation to our students |
| 2005 | Meyer et al \(^27\) | *Finis Origire Pendent*’s: Enhancing later learning and professional socialization |
through an introductory DPT course.  
- The development of Doctor of Physical Therapy curriculum is discussed in this paper.  
- This paper reinforces the benefits of providing the big picture about the future profession discussed by Sellheim in 2003.

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
<th>Details</th>
</tr>
</thead>
</table>
| 2006 | Lindquist et al | Development pathways in learning to be a physiotherapist. | - The purpose of this study was to study students’ learning experiences and change in the process of their professional socialization.  
- In the results section the author reported four pathways of professional growth and pathways of learning: reflecting on practice, communication with others, performing skills and searching evidence. |
| 2009 | Salzman | Portraits of Persistence: Professional Development of Successful Directors of Clinical Education. | - The purpose of the study was to study the professional development of successful directors of clinical education (DCE).  
- Author concludes that the DCEs’ processes of professional development are both formal and informal. |
| 2009 | Davis | Teaching Professionalism: A Survey of Physical Therapy Educators. | - Examined the opinions of physical therapy faculty relative to teaching and fostering professionalism in entry-level physical therapy education  
- The three most common teaching methods include: generic abilities, small group discussion and related reading assignments  
- Professional socialization is clearly a concern among physical therapy faculty for a few students, however it appears that most students are making a smooth transition to professional socialization  
- There is a marked similarity in the efforts of medicine and physical therapy to foster professionalism. It is reflected in the similarity in the professions’ core values. |

Even though the process of professional socialization in physical therapy has been explored in a variety of ways, there is a continuous concern among physical therapy faculty about entry-level students’ demonstrating underdevelopment of professional behaviors during clinical internships. Also, little is known about the perspectives of the academic faculty, clinical faculty and the entry-level students about the teachings fostering professionalism in entry-level physical therapy education in the affective domain. This qualitative study is aimed at exploring the process of professional socialization in physical therapy by exploring the perspectives of academic faculty, clinical faculty and entry-level doctorate of physical therapy (DPT) students about 1) the process of professional socialization and development of professional skills as entry-level
students transition from the classroom to the clinic and 2) by exploring the appropriateness of the Weidman et al framework to conceptualize the graduate and professional student socialization process as it applies to physical therapy. This framework is described below.

**Professional Socialization Framework by Weidman et al**

This section describes the conceptual model developed by Weidman et al. This model addresses the professional role acquisition appropriate to the socialization processes of graduate and professional students. During the process of professional socialization, graduate and professional students ought to gain an advanced level of specialized knowledge, skills and values necessary for successful entry into a professional career.

The schematic representation of this graduate and professional student socialization framework is characterized by three interacting ovals. Please refer to figure 1.2.

**Figure 1.2. The Weidman, Twale, Stein (2001) Socialization Framework Conceptualizing Graduate and Professional Student Socialization**

Weidman et al describe 5 interacting dimensions of the model: at the center is the core socializing experience (academics, university) and surrounding the center are the other four dimensions (prospective student, professional communities, personal communities and novice professional practitioner. The core socializing experience is subdivided into normative context and social context (socializing process). The normative context includes the academic program and the peer climate. The socialization process includes the interaction, the integration and learning of skills necessary to professional practice. There are three elements of this core experience vital for the processes of socialization to result in specific types of outcomes. These elements are: knowledge acquisition, investment and involvement. The processes of socialization include interpersonal interaction, intrapersonal interaction and integration. For example the graduate and professional students must be able to interact with faculty and peers, must study and attend lectures, and finally, the student must be able to incorporate into the campus academic and social life. The desired outcomes of socialization are the acquisition of knowledge, skills and disposition, similar to the outcomes described by the physical therapy profession. The Weidman model emphasizes cognitive, psychomotor and affective outcomes to be vital in the process of professional socialization of the graduate and professional student.

The model assumes that the socialization process is non-linear and that it occurs through the dynamic interaction of the anticipatory, formal, informal and personal stages. The background characteristics, predispositions and anticipatory preparation shape the prospective student and influence the process of professional socialization as the
individual enters a professional educational program. During the collegiate experience, both academic and social context have formal and informal aspects. For example, the academic formal aspect includes the institutional mission, institutional quality, and curriculum. The informal academic context consists of the hidden curriculum or implicit teachings. Formal and social contexts include institutional size, residences and organizations.

The two main characteristics of this model are:  

1. The model is designed to explain the processes by which the effects of socialization occur, rather than what the effects might be.  
2. The model is primarily concerned with the non-cognitive (affective) socialization outcomes associated with values, personal goals and aspirations.

This model suggests that the novice graduate professional student goes through a process of professional socialization as follows:  

1. Graduates enter the graduate education program with values, beliefs, and attitudes about self and anticipated professional practice.  
2. Graduates are exposed to various socializing influences while pursuing a graduate degree, including normative pressure exerted by institutional culture through faculty and peers as well as by society, professional organizations, professional practice and personal reference groups.  
3. Graduates assess the salience of the various normative pressures for attaining personal and professional goals.
4. Graduates assume, change, or maintain those values, aspirations, identity and personal commitments that were held at the onset of their socializing experience.

This framework provides a model for academic programs to understand that graduate students go through a continuous process of socialization from admission through entry into a professional role that is under constant examination and modification, similar to the process described in this manuscript and reported by authors in the physical therapy literature.

TRANSLATION OF PROFESSIONALISM INTO PROFESSIONAL BEHAVIORS

**Profession** is defined as “a calling requiring specialized knowledge and often long and intensive academic preparation or a principal calling, vocation, or employment.” Furthermore, a profession is an occupation that requires extensive training and the study and mastery of knowledge, and usually has a professional association, ethical code and process of certification or licensing.

**Professionalism** is defined in Webster’s Dictionary as “the conduct, aims, or qualities that characterize or mark a profession or a professional person,” or the following of a profession (as physical therapy) for gain or employment. Sociologists have been known to define *professionalism* as “self-defined power elitism.” Sociological definitions of professionalism involving checklists of perceived or claimed characteristics like altruism, self-governance, esoteric knowledge, special skills, and ethical behavior.
Professional development often refers to “acquisition of skills required for maintaining a specific career path or to general skills offered through continuing education, including the more universal area of personal development.”

Lifelong learning and training to keep current with changing technology and practices in a profession are part of professional development. The promotion of professional development and growth is often monitored by the person or group responsible for professional development in the human resources departments of small and large corporations or institutions.

Definition of Professionalism in Physical Therapy

Swisher described a profession “as an occupation that is viewed by society as a profession on the basis of its characteristics, development, or power.” She suggests that individual professionalism is a reflection of internalized beliefs of an individual in regard to his/her profession as it relates to professional obligation, attributes, attitudes, values and roles. For this study, professionalism is defined as the ability to exhibit appropriate professional conduct and “to represent the profession effectively.”

This definition embraces the idea that professionalism reflects an implied contract among the profession, the individual professional, and society. Swisher reported that “the implicit social contract of professionalism serves both normative and descriptive functions by describing and prescribing roles, relationships, obligations, and behaviors.”

Furthermore Swisher et al report that professionalism in physical therapy is a blend of
autonomy, authority, agency and responsibility essential for physical therapists working in academics, clinical practice and research.\textsuperscript{7,62}

Physical therapy is a profession that strives to prepare highly skilled professionals providing services in the 21\textsuperscript{st} century.\textsuperscript{63-65} This requires physical therapists to be able to adapt to the increasing demands of the work environments, society and cultural shifts.\textsuperscript{23,66}

For example, the physical therapy profession has assumed the responsibility to grow and transition to a doctoring profession.\textsuperscript{65}

To reach the goal of preparing highly skilled physical therapists, it is necessary for the profession to have a clear vision for professional education. Therefore, physical therapy professional education in the 21\textsuperscript{st} century demands a wide spectrum of competencies and professional behaviors vital to professional practice.

**Definition of Professional Behaviors in Physical Therapy**

Professional behaviors are the attributes, characteristics, skills and generic abilities essential for both the clinical management and the patient care aspects of physical therapy. By defining, describing and explicitly articulating the professional behaviors/skills a graduate of a physical therapy program must demonstrate, the educational programs can integrate these skills into the curricula throughout the educational experience. Consequently, academic and clinical faculty can model these behaviors and provide the student with opportunities for leaning these skills in the classroom and clinic.\textsuperscript{23,67}

For this study, *professional behavior(s)* are defined as the actions and skills that reflect the attitudes, beliefs and values identified by the profession and required for
success in the profession. For example, critical thinking, communication, problem solving, interpersonal skills, responsibility, professionalism, use of constructive feedback, effective use of time and resources, stress management and commitment to learning are skills that reflect the values and expectations of the profession.23

In physical therapy, documents like The Normative Model1, Professionalism in Physical Therapy: Core Values50,68, the Professional Behaviors for 21st Century23, and the Clinical Performance Instrument51 define and describe the professional behaviors physical therapy graduates and practicing physical therapist ought to demonstrate for successful practice. These documents will be examined and described later in this chapter.

Professionalism in Physical Therapy and Vision 2020

Vision 2020, the vision statement adopted by the American Physical Therapy Association (APTA) for future practice of the profession in the year 2000, states that:65

By 2020, physical therapy will be provided by physical therapists who are doctors of physical therapy, recognized by consumers and other health care professionals as the practitioners of choice to whom consumers have direct access for the diagnosis of, interventions for, and prevention of impairments, functional limitations, and disabilities related to movement, function, and health.

During the 2003 APTA Presidential Address, Massey stated professionalism to be one of five key areas on which we must focus our efforts in order to reach Vision 2020.69
Physical therapy is a dynamic profession and has assumed the responsibility to grow and transition into a clinical doctoring profession. However, the physical therapy profession has lagged behind in its understanding that an increase in professional expectations requires professional growth.\textsuperscript{39}

This professional growth embraces cultural sensitivity, cultural competence, ability to communicate as equal colleagues with other health professionals, to communicate with therapeutic presence with patients, clients and their families, to assume control of the examination, diagnosis, treatment and discharge of patients with movement disorders, to demonstrate appropriate self-confidence, to demonstrate self-efficacy, and the ability to recognize and successfully resolve ethical dilemmas.\textsuperscript{39} Much of this professional growth is accomplished by educational programs incorporating affective learning experiences and evaluating the observable, objective components of professional behaviors demonstrated by the entry-level student in the classroom and clinic.

Historically, physical therapist professional education has favored a systematic approach teaching in the cognitive and psychomotor domains while underutilizing a similar approach for affective education.\textsuperscript{16,70} Thus, it is essential that physical therapy teaching methods are designed to develop competency in the three educational domains in order to guide doctor of physical therapy students through the process of professional socialization while enrolled in physical therapy academic programs and to help the profession attain the goals identified by Vision 2020.
Professionalism in Various Health Professions

Disciplines within and beyond the health professions are addressing issues related to professionalism and are demanding changes in professional education as it relates to the acquisition of affective skills.

Medical and healthcare literature has outlined the challenges the medical profession is facing in regards to professionalism. Cruess and Cruess reported that the challenge in medical education is to teach professionalism as a formal, discrete subject integrated in the medical curriculum. Shrank et al identified the need to improve role modeling, to provide better assessment of students’ behaviors, and to facilitate focused faculty development as vital tasks when fostering professionalism in medical graduates. Diaz et al reported medical professionalism to be a set of attitudes, values and conduct, and reported that professional medical providers place patients’ and society’s interests above their own. The concepts related to professionalism and development of professional behaviors reported in the medical literature are similar to those explored by authors in the physical therapy literature.

In nursing, the serious nursing shortage created by experienced nurses leaving the profession is amplified by low enrollment in nursing programs. In a study by Wynd, a random sample of 774 nurses completed the Professionalism Inventory Scale and results suggested that professionalism is an important component in the nursing profession. The author concluded that nurses that act professionally become role models, attracting young people to nursing as a viable career choice. The issues of professionalism, role modeling and professional practice in nursing are similar to those discussed regarding physical therapy throughout this manuscript.
In occupational therapy, a qualitative study to determine students’ perceptions about professional education concluded that the involvement of the students in the process of program evaluation was important in the process of meeting their learning needs in the area of professionalism.\textsuperscript{85} Scheerer reported that strong professional behaviors are crucial for occupational therapists to deliver effective and dynamic service in today’s environment.\textsuperscript{85} Likewise, and similar to physical therapy, occupational therapists have expanded on the concept of professionalism by identifying key professional behaviors inherent to the occupational therapy profession and adding them to the Occupational Therapy Code of Ethics.\textsuperscript{86,87}

The pharmacy literature stresses the obligation of educators to promote, develop and evaluate students’ knowledge and clinical skills, as well as professional behaviors.\textsuperscript{41} Brehm et al reported professionalism can be informally taught through modeling, but structured instruction can augment student’s values and behaviors related to professionalism.\textsuperscript{88}

Reviewing professionalism and the process of professional development in other health care professions helped delineate the issues of 1) underdevelopment of professional behaviors, 2) lack of professional awareness and 3) difficulty in assessing affective skills in clinical practice is not isolated to the physical therapy profession. As the demands from society, the health care system, research and consumers continue to increase, health care professionals must demonstrate the appropriate skills vital for professional practice. Therefore, all health care professions’ professional educational programs must explicitly and formally address education in the affective domain.
Promoting Professionalism in Physical Therapy

The value of professionalism and facilitation of professional behaviors in physical therapy has been discussed in a multitude of books, articles, and conference reports.\textsuperscript{7,12,13,15} Professionalism is an inner trait that is difficult to evaluate and objectively measure due to its subjective nature.

As mentioned, the physical therapy profession has published various consensus documents that have linked the professions’ attitudes, behaviors and beliefs about professionalism in successful clinical practice to help students, academicians and clinicians to facilitate the process of professional socialization. The professions’ attitudes are reflected in seven Core Values that were develop and disseminated by the APTA.\textsuperscript{50,68} The evidence based skills necessary for success in clinical care have been described by May et al in ten professional behaviors.\textsuperscript{23} The Normative Model\textsuperscript{11} published by the APTA Department of Education detail expected professional behaviors and objectives in the affective domain to be included in academic and clinical educational programs. Finally, Vision 2020\textsuperscript{65}, the vision statement of the APTA, states that professionalism is a key element in physical therapy practice. These documents provide physical therapists with tools to objectively teach, model and assess professional behaviors that reflect professionalism in physical therapy through measurable behavioral criteria.

The challenge in promoting professionalism in physical therapy in the 21\textsuperscript{st} century is twofold. On one hand, entry-level students may not recognize the critical importance of the professional behaviors described in these documents for affective competence until late in the educational program as they start clinical internships or even later as they enter
the workforce as novice practitioners. In addition, faculty report difficulty in assessing the development of affective skills in the classroom and clinic. Davis said this about the nature of facilitating appropriate behavior:

_Educators have long struggled with the relationship between the inner, subjective, and the observable, objective, aspects of the behavior. Developing guidelines for teaching affective behavior had been avoided for decades on the assumption that teachers cannot affect the inner motivations or basic personalities of students. But in educating for the professions, teachers must take responsibility not only for developing high levels of technical performance but for developing, at least, practitioners who adhere to appropriate affective and ethical standards._

Thus, the initiatives to promote affective education in physical therapist professional education represent the profession’s need to fulfill its obligation to have academic faculty and clinical instructors agree and reflect that affective education is important and to engage physical therapy students in affective learning.

**ASSESSMENT OF PROFESSIONALISM AND PROFESSIONAL BEHAVIORS**

**Using the Normative Model of Physical Therapist Professional Education in Defining Professional Academic and Clinical Expectations**

_A Normative Model of Physical Therapist Professional Education: Version 2007_ is a consensus-based document developed by the American Physical Therapy Association to assist physical therapy educators in identifying the purpose, scope and content of professional education. This document details the expected competencies of both_
academic and clinical curricula, as well as describing professional behaviors required in order to properly prepare and assess physical therapy students. This normative model provides a clear vision of physical therapist professional education reflecting the values of the profession.

Currently the original *Normative Model of Physical Therapist Professional Education: Version 1997 (NM1997)* has had three revisions, in 2000, 2004 and 2007. The NMV1997 incorporated concepts from the Guide and was used by the APTA task force in the development of the original Clinical Performance Instrument (CPI) and The NMV2000 incorporated concepts from the CPI and was used by the APTA task force in the development of the CV. The latest version (NMV2007) incorporates concepts from The Guide (2nd Edition), the Generic abilities, the revised CPI and the CV. The interconnectedness and integration of these documents demonstrate how the profession has embraced the concepts of professionalism and development of professional behaviors in entry-level students as vital components of professional practice.

The normative model provides physical therapist professional education curricula with standards to develop competency in three educational domains: cognitive, psychomotor and affective. These standards, specifically the ones addressing affective competence, are of value to this study exploring the process of professional socialization as entry-level students prepare to achieve mastery of behaviors expected upon entry into the practice of physical therapy. This process of professional socialization for entry-level students starts in the classroom and continues throughout the transition to the clinic first
as a novice intern, and then progressing over several years to expert practitioner as mentioned previously.

The Normative Model delineates three essential elements for the physical therapist professional educational curriculum: practice expectations (classroom and clinic), foundational sciences and clinical sciences.

The practice expectations describe and define the behaviors, skills and knowledge of the graduate upon entry into the practice of physical therapy. These practice expectations are divided into professional, patient/client management and practice management expectations. Several of the practice expectations incorporate The Core Values. Within each practice expectation, educational outcomes, primary content, terminal behavioral objectives (TBOs), and instructional objectives (IOs) to be achieved in the classroom and clinic further describe each expectation. The foundational sciences and clinical science matrices provide a contextual framework for teaching content associated with the practice patterns. The clinical science matrix uses a system approach consistent with The Guide. Within both sciences, primary content, TBOs and IOs are also addressed.

The Model includes examples of TBOs that demonstrate what the student should be able to do once the primary content is completed. This is followed by examples of IOs that need to be accomplished in the classroom and in clinical practice. These objectives are written using the concepts from the taxonomy of educational objectives for learning in the cognitive, psychomotor and affective domains.¹ For example, within the professional practice expectation of accountability there are specific objectives addressing affective competence:¹
Educational outcome: The graduate acknowledges and accepts the consequences of his or her actions.

Primary Content: Mechanism for self-improvement

Example of a TBO: After the completion of the content, the student will be able to exhibit behaviors consistent with clinical facility and professional policy and procedures.

Example of an IO to be achieved in the classroom: The student will able to identify types of self-assessment mechanisms.

Example of an IO to be achieved in the clinic: The student will be able to demonstrate appropriate professional behaviors when carrying out clinical responsibilities.

The systematic approach of designing affective behavioral objectives, which emerges from the Krathwohl’s taxonomy, addresses the challenges that academicians, clinicians and students face when addressing affective learning experiences. By identifying and describing a specific skill, how students should demonstrate that skill and at what performance level students will be able to demonstrate the skill, the academic faculty and clinical instructors have observable and measurable criteria to evaluate students’ affective performances in the classroom and clinic.

Using Physical Therapy Core Values to Assess and Promote Professionalism in Physical Therapy

In 2002, eighteen licensed physical therapists were invited to participate in a consensus-based conference organized by the APTA Education Division as a response to Vision 2020. The APTA gathered this group to help define and describe professionalism
in physical therapy. The group reached consensus and identified seven core values the graduate of a physical therapy program ought to demonstrate with respect to professionalism. The seven Core Values identified are: accountability, altruism, compassion and caring, excellence, integrity, professional duty, and social responsibility.

In August 2003, the APTA task force assessed and adopted Professionalism in Physical Therapy: Core Values as a core document on professionalism in physical therapy practice, education and research. Please refer to Appendix B for details on description, definition and sample criteria for Professionalism in Physical Therapy: Core Values.

**Accountability** is “the active acceptance of responsibility for the diverse roles, obligations, and actions of the physical therapist.” This includes the areas of self-regulation and other behaviors that positively influence patient/client outcomes, the profession and the health needs of society. For example, in the area of accountability, the physical therapist demonstrates professionalism when responding effectively to patients, families and caregivers goals. In the area of education, a practitioner demonstrates accountability when educating patients in a way that facilitates their learning process.

**Altruism** is the primary regard for or devotion to the interests of patients and families and putting the patient’s/family’s needs ahead of the self-interest. For example, in the area of practicing altruism, the physical therapist demonstrates professionalism when putting the patient’s, family and other caregivers’ needs ahead of theirs. In the area of education, a practitioner demonstrates altruism when educating students,
patients/clients, community or other healthcare professionals beyond the expected standards of practice.

**Compassion** is the desire to identify with or sense something of another’s experience.** Caring** is defined by the concern, empathy and consideration for the needs and values of others.** For example, in the area of practicing compassion/caring the physical therapist understands an individual’s perspective and is an advocate for the patient’s/client’s needs. In the area of education, a practitioner demonstrates compassion/caring when empowering students, patients/clients, community or other healthcare professionals to achieve their highest level of knowledge, function, and lifestyle.

**Excellence** in physical therapy is characterized by using current knowledge, while understanding personal limits, integrating judgment and the client’s perspective, embracing advancement, challenging mediocrity, and working to develop new knowledge.** For example, in the area of practicing excellence, the physical therapist demonstrates the highest levels of knowledge and skill in all aspects of the profession. In the area of education, a practitioner demonstrates excellence when engaging in acquisition of new knowledge and lifelong learning.

**Integrity** is the possession of and committed adherence to high ethical principles and professional standards.** For example, in the area of practicing integrity, the physical therapist abides by the rules, regulations, and code of ethics of the establishment and the profession. In the area of education, a practitioner demonstrates integrity when recognizing his/her own limits and acting accordingly.
**Professional duty** is the commitment to meeting one’s obligations to provide effective physical therapy services to patients/clients, to serve the profession and positively impact the health of society. For example, in the area of practicing professional duty, the physical therapist facilitates his/her patients/clients to achieve their functional, health and wellness goals. In the area of education, a practitioner demonstrates professional duty by mentoring others.

**Social responsibility** is the promotion of mutual trust between the profession and the larger public that necessitates responding to societal needs for health and wellness. For example, in the area of practicing social responsibility, the physical therapist advocates for the health and wellness of the society. In the area of education, a practitioner demonstrates social responsibility by promoting cultural competence within the profession and the public at large.

The implementation of these core values, by teaching and modeling the sample indicators in practice, would enhance the physical therapists knowledge, attitudes and skills related to professionalism in multiple ways. These core values may serve as a framework to physical therapy students and practitioners in developing the proper professional attitudes, beliefs and values in the classroom and clinic.

*The Professionalism in Physical Therapy: Core Values Self-Assessment* tool was also developed by the APTA task force to help develop awareness of the seven core values and to serve as a self-assessment tool for physical therapy practitioners. Please refer to Appendix B for the Professionalism in Physical Therapy: Core Values Self-Assessment.
The physical therapy student and/or practitioner can use this self-assessment tool to evaluate the frequency at which he/she is demonstrating each sample indicator by using a scale from 1 to 5 where: 1= Never, 2= Rarely, 3= Occasionally, 4= Frequently, and 5= Always.

For analysis of results, the self-assessment instructions suggest that the practitioner may want to reflect on what sample indicators did he/she consistently score on the scale at the 4 or 5 levels; why did he/she rated herself/himself higher in frequency for demonstrating these sample behaviors; what sample indicators did he/she scored herself/himself at level 3 or below; why did he/she rated herself/himself lower in frequency for demonstrating these sample behaviors; on identifying, developing, and implementing approaches to strengthen the integration of the core values within her/his practice environment; establishing personal goals for increasing the frequency with which she/he demonstrates specific sample behaviors with specific core value(s); and conducting a periodic re-assessment of your core value behaviors to determine the degree to which your performance has changed in your professionalism maturation.

By being sincere with the responses and reflecting on the above mentioned questions the student or practitioner can have the opportunity to self-assess her/his personal learning, to identify her/his areas of strength and growth, and to assess her/his development in the professionalism maturation process.

Using the Professional Behaviors of the 21st Century to Promote, Identify and Assess Physical Therapy Professional Behaviors

May et al in 1995 described 10 specific generic abilities or professional behaviors, essential to success in the Physical Therapy Profession by conducting a Delphi
The authors described these generic abilities as aptitudes, characteristics or behaviors that are not explicitly part of the professional education core of knowledge and technical skills but are essential for successful professional practice. These ten essential professional behaviors were identified as: commitment to learning, interpersonal skills, communication skills, effective use of time and resources, use of constructive feedback, problem solving, professionalism, responsibility, critical thinking and stress management. These abilities have been used by many academic and clinical programs to facilitate development, measurement and assessment of professional behaviors of physical therapist students in the classroom and clinic.

In 2009, May et al concluded a twofold research project evaluating the original work started in 1991 to address the evolution of the profession, changes in healthcare, changes in the academy, changes in the landscape of physical therapy practice and considerations of generational differences in the profession. According to May et al, since the original study was conducted and completed, the physical therapy profession and professional educational programs had undergone significant changes in relation to managed care, expansion in the scope of physical therapy practice, increased patient direct access to physical therapists, evidenced-based practice, clinical specialization in physical therapy and the American Physical Therapy Association’s Vision 2020 supporting doctors of physical therapy. In addition, they reported that students of the ‘Millennial’ or ‘Y’ Generation are the graduates of 2004 and beyond, and will shape physical therapy practice in the 21st century.

Phase one of this research project was completed in 2008, in which May et al performed a survey to identify and rank order professional behaviors expected of the
newly licensed physical therapist upon employment. The survey participants included Center Coordinators of Clinical Education (CCCE’s) and Clinical Instructors (CI’s) from around the nation. Survey results revealed 10 statistically significant behaviors to be identical to the original 10 specific generic abilities, but the rank orders of the behaviors had changed. The authors did not specifically identify why the rank order of the behaviors changed, but the authors did mention that physical therapists function on a more autonomous level, the landscape of physical therapy practice has changed since 1995 and the impact on generational differences were considered in this research project.

Please refer to Table 1.2.

Table 1.2. Rank Order of Generic Abilities (1995) vs. Professional Behaviors (2009)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Commitment to learning</td>
<td>Critical Thinking</td>
</tr>
<tr>
<td>2</td>
<td>Interpersonal skills</td>
<td>Communication</td>
</tr>
<tr>
<td>3</td>
<td>Communication skills</td>
<td>Problem solving</td>
</tr>
<tr>
<td>4</td>
<td>Effective used of time and resources</td>
<td>Interpersonal skills</td>
</tr>
<tr>
<td>5</td>
<td>Use of constructive feedback</td>
<td>Responsibility</td>
</tr>
<tr>
<td>6</td>
<td>Problem solving</td>
<td>Professionalism</td>
</tr>
<tr>
<td>7</td>
<td>Professionalism</td>
<td>Use of constructive feedback</td>
</tr>
<tr>
<td>8</td>
<td>Responsibility</td>
<td>Effective used of time and resources</td>
</tr>
<tr>
<td>9</td>
<td>Critical Thinking</td>
<td>Stress management</td>
</tr>
<tr>
<td>10</td>
<td>Stress management</td>
<td>Commitment to learning</td>
</tr>
</tbody>
</table>


In 2009, 10 small work groups including Directors of Clinical Education (DCE), Academic Faculty, Clinical Coordinators of Clinical Education (CCCE) and clinical instructors from all regions of the nation wrote and revised the behavior definitions and behavioral criteria. Please refer to table 1.3 for the Professional Behaviors definitions and table 1.4 for the sample behaviors criteria for professional behavior 5: Responsibility.

The culmination of this research project resulted in the document title changing from Generic abilities to *Professional Behaviors*. The title of the document was
changed to: 1) differentiate it from the original generic abilities, and 2) reflect the intent of assessing professional behaviors deemed critical for professional growth and development in physical therapy education and practice.\textsuperscript{23}

**Table 1.3. Definitions of Professional Behaviors Important to Physical Therapy Practice Listed in Rank Order**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Professional Behaviors*</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Critical Thinking</td>
<td>The ability to question logically; identify, generate and evaluate elements of logical argument; recognize and differentiate facts, appropriate or faulty inferences, and assumptions; and distinguish relevant from irrelevant information. The ability to appropriately utilize, analyze and critically evaluate scientific evidence to develop a logical argument, and to identify and determine the impact on bias on the decision making process.</td>
</tr>
<tr>
<td>2</td>
<td>Communication</td>
<td>The ability to communicate effectively (i.e., verbal, non-verbal, reading, writing, and listening) for varied audiences and purposes.</td>
</tr>
<tr>
<td>3</td>
<td>Problem solving</td>
<td>The ability to recognize and define problems, analyze data, develop and implement solutions, and evaluate outcomes.</td>
</tr>
<tr>
<td>4</td>
<td>Interpersonal skills</td>
<td>The ability to interact effectively with patients, families, colleagues, other health care professionals, and the community in a culturally aware manner.</td>
</tr>
<tr>
<td>5</td>
<td>Responsibility</td>
<td>The ability to be accountable for the outcomes of personal and professional actions and to follow through on commitments that encompass the profession within the scope of work, community and social responsibility.</td>
</tr>
<tr>
<td>6</td>
<td>Professionalism</td>
<td>The ability to exhibit appropriate professional conduct and to represent the profession effectively while promoting the growth/development of the Physical Therapy profession.</td>
</tr>
<tr>
<td>7</td>
<td>Use of constructive feedback</td>
<td>The ability to seek out and identify quality sources of feedback, reflect on and integrate the feedback, and provide meaningful feedback to others.</td>
</tr>
<tr>
<td>8</td>
<td>Effective used of time and resources</td>
<td>The ability to manage time and resources effectively to obtain the maximum possible benefit.</td>
</tr>
<tr>
<td>9</td>
<td>Stress management</td>
<td>The ability to identify sources of stress and to develop and implement effective coping behaviors; this applies for: self, patient/clients and their families, members of the health care team and in work/life scenarios.</td>
</tr>
<tr>
<td>10</td>
<td>Commitment to learning</td>
<td>The ability to self-direct learning to include the identification of needs and sources of learning; and to continually seek and apply knowledge, behaviors and skills.</td>
</tr>
</tbody>
</table>


**Table 1.4. Behavioral Criteria for Professional Behavior 5: Responsibility***

<table>
<thead>
<tr>
<th>Beginning Level</th>
<th>Demonstrates punctuality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Provides a safe and secure environment for patients</td>
</tr>
<tr>
<td></td>
<td>Assumes responsibility for actions Follows through with commitments</td>
</tr>
<tr>
<td></td>
<td>Articulates limitations and readiness to learn</td>
</tr>
<tr>
<td></td>
<td>Abides by all policies of academic program and clinical facility</td>
</tr>
</tbody>
</table>
| **Intermediate level** | Displays awareness of and sensitivity to diverse populations  
Completes projects without prompting  
Delegates with team members, patients and families  
Provides evidenced-based patient care |
|------------------------|---------------------------------------------------------------------------------------------------|
| **Entry Level**        | Educates patients as consumers of health care services  
Encourages patient accountability  
Directs patients to other health care professionals as needed  
Acts as patient advocate  
Promotes evidence-based practice in health care settings  
Accepts responsibility for implementing solutions  
Demonstrates accountability for all decisions and behaviors in academic and clinical setting |
| **Post Entry Level**   | Recognizes role as a leader  
Encourages and displays leadership  
Facilitates program development and modification  
Promotes clinical training for students and co-workers  
Monitors and adapts to changes in the health care system  
Promotes services to the community |


These professional behaviors sample criteria have been used to provide academic faculty, clinical faculty and physical therapy students with a common language and systematic structure when assessing, modeling and teaching entry-level physical therapy students professional behaviors relevant to the physical therapy profession. For example, Masin has devised specific methods for promoting the development and assessment of professional behaviors using the descriptions and criteria of these behaviors in the classroom and during advisory sessions with students prior to and during students’ clinical internships.\(^{15}\)

Affective education involves the development of appropriate attitudes, values and beliefs on the part of the entry-level professional student. The identification, definition and sample behavioral criteria of these ten professional behaviors derived specifically for the physical therapy profession have become a critically important tool to the practice of physical therapy. Before 1995, the concepts of professionalism received less attention. Since the development of physical therapy doctoral education a greater emphasis have
been placed on the changing professional roles and the repertoire of professional behaviors essential for physical therapy students to be successful as physical therapists. Following is a description and discussion of how the concepts related to these professional behaviors have been integrated and adopted by the profession to engage educators, clinicians and students in affective educational experiences.

Using the Clinical Performance Instrument in Assessing Professionalism and Professional Behaviors

The Clinical Performance Instrument (CPI)\textsuperscript{51,92,92} was developed by the APTA Task Force to provide a uniform and consistent national instrument to assess and measure physical therapy and physical therapist assistant students’ performance during their clinical internships. The initial APTA Task force was established in November 1993 and started working on the development of the instrument in 1994.\textsuperscript{92} In the initial stages of the CPI development, the task force used the following three foundational assumptions: in which clinical competence are based on multiple behaviors deemed essential to the role of the PT, that the CPIs should be constructed to measure performance along a continuum from novice to entry-level at a minimum, and that the instrument must be responsive to the needs of both academic and clinical communities.\textsuperscript{92} In an effort to maintain consistency with documents and tools developed by the APTA, the task force used performance behaviors identified in the Normative Model, the Guide, as well as to the Generic abilities reported by May et al.\textsuperscript{12,92} The CPI task force conducted pilot studies and subsequent revisions of the instrument. In April 2002, the task force published the
results of the examination of the instrument’s basic properties, as well as the validity and reliability of the second and third drafts.\textsuperscript{92}

On July 15, 2008 the web-based CPI\textsuperscript{51} was launched to enhance user access, ease of completion, and data entry for students and clinical instructors. The web-based CPI is currently used as a center for communication between the ACCE/DCE, CCCE, CI and DPT student.\textsuperscript{51} It allows for increased access to data and makes retrieval of information quicker and easier for the academic programs.

In the web-based CPI, the original 24 performance criteria found in version 1997 were condensed down to 18 performance criteria with three sub- categories: professional practice (criteria 1-6), patient management (criteria 7-15), and practice management (criteria 16-18) in version 2006. Please refer to Table 1.5. These 18 criteria were described as the essential aspects of professional practice of a physical therapist performing at entry-level and by the end of the students’ clinical rotations they are expected to achieve entry-level performance or beyond entry-level performance rating for all 18 criteria.\textsuperscript{51}

The CPI is essential in the process of professional socialization in physical therapy as it is the instrument used to assess clinical competence. The CPI is used primarily to evaluate whether practitioners entering practice have demonstrated a core set of clinical skills which include cognitive, psychomotor and affective skills. The overall intent of this assessment tool is to facilitate academic faculty and clinical instructors to obtain a continuous and comprehensive perspective of students’ progress through the curriculum and competence to practice at entry-level.\textsuperscript{51} The items number 2, 3, 4, 5, 6,
Table 1.5. PT Clinical Performance Instrument Criteria (1997 vs. 2006)

<table>
<thead>
<tr>
<th></th>
<th>PT CPI Version 1997*</th>
<th></th>
<th>PT CPI Version 2006**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Practices in a safe manner that minimizes risk to patients, self, and others.</td>
<td>1</td>
<td>SAFETY: Practices in a safe manner that minimizes risk to patients, self, and others.</td>
</tr>
<tr>
<td>2</td>
<td>Presents self in a professional manner.</td>
<td>2</td>
<td>PROFESSIONAL BEHAVIOR: Demonstrates professional behavior in all situations.</td>
</tr>
<tr>
<td>3</td>
<td>Demonstrates professional behavior during interactions with others.</td>
<td>3</td>
<td>ACCOUNTABILITY: Practices in a manner consistent with established legal and professional standards and ethical guidelines.</td>
</tr>
<tr>
<td>4</td>
<td>Adheres to ethical practice standards.</td>
<td>4</td>
<td>COMMUNICATION: Communicates in ways that are congruent with situational needs.</td>
</tr>
<tr>
<td>5</td>
<td>Adheres to legal practice standards</td>
<td>5</td>
<td>DOCUMENTATION: Produces quality documentation in a timely manner to support delivery of physical therapy services</td>
</tr>
<tr>
<td>6</td>
<td>Communicates in ways that are congruent with situational needs.</td>
<td>7</td>
<td>CULTURAL COMPETENCE: Adapts delivery of physical therapy with consideration of patients’ differences, values, preferences and needs.</td>
</tr>
<tr>
<td>7</td>
<td>Produces documentation to support the delivery of physical therapy services.</td>
<td>8</td>
<td>CLINICAL REASONING: Applies current knowledge, theory, clinical judgment, and the patient’s values and perspective in patient management.</td>
</tr>
<tr>
<td>8</td>
<td>Adapts delivery of physical therapy care to reflect respect for and sensitivity to individual differences.</td>
<td>9</td>
<td>SCREENING: Determines with each patient encounter the patient’s need for further examination or consultation by a physical therapist or referral to another health care professional.</td>
</tr>
<tr>
<td>9</td>
<td>Applies principles of logic and scientific method to the practice of physical therapy.</td>
<td>10</td>
<td>EXAMINATION: Performs a physical therapy examination using evidence-based tests and measures.</td>
</tr>
<tr>
<td>10</td>
<td>Screens patients using procedures to determine the effectiveness of and need for physical therapy services.</td>
<td>11</td>
<td>EVALUATION: Evaluates data from the patient examination (history, systems review, and tests and measures) to make clinical judgments.</td>
</tr>
<tr>
<td>11</td>
<td>Performs a physical therapy examination.</td>
<td>12</td>
<td>DIAGNOSIS AND PROGNOSIS: Determines a diagnosis and prognosis that guides future patient management.</td>
</tr>
<tr>
<td>12</td>
<td>Evaluates clinical findings to arrive at a physical therapy diagnosis and outcomes of care.</td>
<td>13</td>
<td>PLAN OF CARE: Establishes a physical therapy plan of care that is safe, effective, patient-centered and evidence based.</td>
</tr>
<tr>
<td>13</td>
<td>Designs a physical therapy plan of care that integrates goals, treatment, outcomes, and discharge plan.</td>
<td>14</td>
<td>PROCEDURAL INTERVENTIONS: Performs physical therapy interventions in a technically competent manner.</td>
</tr>
<tr>
<td>14</td>
<td>Performs physical therapy interventions in a technically competent manner.</td>
<td>15</td>
<td>EDUCATIONAL INTERVENTIONS:</td>
</tr>
<tr>
<td>15</td>
<td>Educatse others (patients, family, caregivers,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

and 7 describe and embrace the essential aspects of professionalism and professional practice supporting the phenomenon under study. Please refer to Table 1.5.
staff, students, other health care providers) using relevant and effective teaching methods.  

<table>
<thead>
<tr>
<th>Staff, students, other health care providers</th>
<th>Educates others (patients, caregivers, staff, students, other health care providers, business and industry representatives, school systems) using relevant and effective teaching methods.</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>Provides consultation to individuals, businesses, schools, government agencies, or other organizations.</td>
</tr>
</tbody>
</table>
| 16  | Participates in activities assuring quality of service delivery.  

OUTCOME ASSESSMENT: Collects and analyzes data from selected outcome measures in a manner that supports accurate analysis of individual patient and group outcomes. |
| 19  | Manages resources (eg, time, space, equipment) to achieve goals of the practice setting.  

FINANCIAL RESOURCES: Participates in the financial management (budgeting, billing, and reimbursement, time, space, equipment, marketing, public relations) of the physical therapy services consistent with regulatory, legal and facility guidelines. |
| 20  | Incorporates an understanding of economic factors in the delivery of physical therapy services.  

DIRECTION AND SUPERVISION OF PERSONNEL: Directs and supervises personnel to meet patient’s goals and expected outcomes according to legal standards and ethical guidelines. |
| 21  | Utilizes support personnel according to legal and ethical guidelines.  

DIRECTION AND SUPERVISION OF PERSONNEL: Directs and supervises personnel to meet patient’s goals and expected outcomes according to legal standards and ethical guidelines. |
| 22  | Demonstrates that a PT has professional/social responsibilities beyond those defined by work expectations and job description.  

| 23  | Implements a self-directed plan for professional development and lifelong learning.  

| 24  | Addresses primary and secondary prevention, wellness, and health promotion needs of individuals, groups, and communities.  


Red flag items (numbered 1,2,3,4 and 7) are considered foundational elements in clinical practice. Red flag items warrants immediate attention, documentation and a telephone call to the ACCE/DCE.  


The CPI provides educational (academic and clinical) programs with a clinical rating instrument that has incorporated the values and vision of professional education providing a systematic and structured tool to ensure entry-level students achieve mastery in all educational domains. This instrument reflects the expectations of cognitive, psychomotor and affective skills an entry-level physical therapy student ought to demonstrate in order to graduate and enter the professional practice environment.
As students are evaluated in each of the performance criterion in the CPI the clinical instructor has to evaluate the student’s clinical performance based on the sample behaviors incorporating comments based on five performance dimensions (refer to table 1.6) and then mark the appropriate rating anchor (refer to table 1.7 and figure 1.3). Each performance dimension is used to guide student’s competence relative to the performance criteria and each rating anchor is used to identify proficiency of performance. The rating scale was designed to reflect a continuum of performance from “Beginning Performance” to “Beyond Entry-Level Performance”.

Table 1.6. Clinical Performance Instrument: Performance Dimensions*

<table>
<thead>
<tr>
<th>Performance Dimension</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision/guidance</td>
<td>Refers to the level and extent of assistance required by the student to achieve entry-level performance. As a student progresses through clinical education experiences*, the degree of supervision/guidance needed is expected to progress from 100% supervision to being capable of independent performance with consultation* and may vary with the complexity of the patient or environment.</td>
</tr>
<tr>
<td>Quality</td>
<td>Refers to the degree of knowledge and skill proficiency demonstrated. As a student progresses through clinical education experiences, quality should range from demonstration of limited skill to a skilled or highly skilled performance.</td>
</tr>
<tr>
<td>Complexity</td>
<td>Refers to the number of elements that must be considered relative to the patient*, task, and/or environment. As a student progresses through clinical education experiences, the level of complexity of tasks, patient management, and the environment should increase, with fewer elements being controlled by the CI.</td>
</tr>
<tr>
<td>Consistency</td>
<td>Refers to the frequency of occurrences of desired behaviors related to the performance criterion. As a student progresses through clinical education experiences, consistency of quality performance is expected to progress from infrequently to routinely.</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Refers to the ability to perform in a cost-effective and timely manner. As the student progresses through clinical education experiences, efficiency should progress from a high expenditure of time and effort to economical and timely performance.</td>
</tr>
</tbody>
</table>


Table 1.7. Clinical Performance Instrument: Anchor Definitions*

<table>
<thead>
<tr>
<th>Anchor</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning performance</td>
<td>A student who requires close clinical supervision 100% of the time managing patients with constant monitoring and feedback, even with patients with simple conditions. At this level, performance is inconsistent and clinical reasoning* is performed in an inefficient manner. Performance reflects little or no experience. The student does not carry a caseload.</td>
</tr>
</tbody>
</table>
## Advanced beginner performance
A student who requires clinical supervision 75% – 90% of the time managing patients with simple conditions, and 100% of the time managing patients with complex conditions. At this level, the student demonstrates consistency in developing proficiency with simple tasks (e.g., medical record review, goniometry, muscle testing, and simple interventions), but is unable to perform skilled examinations, interventions, and clinical reasoning skills. The student may begin to share a caseload with the clinical instructor.

## Intermediate performance
A student who requires clinical supervision less than 50% of the time managing patients with simple conditions, and 75% of the time managing patients with complex conditions. At this level, the student is proficient with simple tasks and is developing the ability to consistently perform skilled examinations, interventions, and clinical reasoning. The student is capable of maintaining 50% of a full-time physical therapist’s caseload.

## Advanced intermediate performance
A student who requires clinical supervision less than 25% of the time managing new patients or patients with complex conditions and is independent managing patients with simple conditions. At this level, the student is consistent and proficient in simple tasks and requires only occasional cueing for skilled examinations, interventions, and clinical reasoning. The student is capable of maintaining 75% of a full-time physical therapist’s caseload.

## Entry-level performance
A student who is capable of functioning without guidance or clinical supervision managing patients with simple or complex conditions. At this level, the student is consistently proficient and skilled in simple and complex tasks for skilled examinations, interventions, and clinical reasoning. Consults with others and resolves unfamiliar or ambiguous situations. The student is capable of maintaining 100% of a full-time physical therapist’s caseload in a cost effective manner.

## Beyond entry-level performance
A student who is capable of functioning without clinical supervision or guidance in managing patients with simple or highly complex conditions, and is able to function in unfamiliar or ambiguous situations. At this level, the student is consistently proficient at highly skilled examinations, interventions, and clinical reasoning, and is capable of serving as a consultant or resource for others. The student is capable of maintaining 100% of a full-time physical therapist’s caseload and seeks to assist others where needed. The student is capable of supervising others. The student willingly assumes a leadership role* for managing patients with more difficult or complex conditions.


---

**Figure 1.3. Rating Scale for Student’s Clinical Performance**


Because this instrument is used to evaluate knowledge, skills and attitudes, incorporation of the CPI as an assessment tool early in the didactic portion of the educational program prevent or minimize the underdevelopment of appropriate
professional behaviors. For example, the performance criterion number 2-7 addresses issues related to professionalism and professional affective competence. Each of these criteria is defined and sample behaviors are provided for faculty to use during students’ clinical performance evaluation. Please refer to table 1.8 to 1.10 for sample behaviors for professional behavior, accountability and communication items.

Table 1.8. Professional Behavior Performance Criterion Sample Behaviors

| a. Demonstrates initiative (eg, arrives well prepared, offers assistance, seeks learning opportunities) |
| b. Is punctual and dependable |
| c. Wears attire consistent with expectations of the practice setting. |
| d. Demonstrates integrity in all interactions |
| e. Exhibits caring, compassion, and empathy in providing services to patients. |
| f. Maintains productive working relationships with patients, families, CI, and others. |
| g. Demonstrates behaviors that contribute to a positive work environment. |
| h. Accepts feedback without defensiveness. |
| i. Manages conflict in constructive ways. |
| j. Manages patient privacy and modesty. |
| k. Values the dignity of patients as individuals. |
| l. Seeks feedback from clinical instructor related to clinical performance. |
| m. Provides effective feedback to CI related to clinical/teaching mentoring. |


Table 1.9. Accountability Performance Criterion Sample Behaviors

| b. Identifies, acknowledges, and accepts responsibility for actions and reports errors. |
| c. Takes steps to remedy errors in a timely manner. |
| d. Abides by policies and procedures of the practice setting. |
| e. Maintains patient confidentiality. |
| f. Adheres to legal practice standards including federal, state/providence, and institutional regulations related to patient care and fiscal management. |
| g. Identifies ethical or legal concerns and initiates action to address the concerns. |
| h. Displays generosity as evidence in the use of time and effort to meet patient needs. |
| i. Recognize the need for physical therapy services to underserved and under represented populations. |
| j. Strives to provide patient/client services that go beyond the expected standards of practice. |


Table 1.10. Communication Performance Criterion Sample Behaviors

| a. Communicates verbally and nonverbally, in a professional and timely manner. |
| b. Initiates communication in difficult situations. |
| c. Selects the most appropriate person(s) with whom to communicate. |
| d. Communicates respect for the roles and contributions of all participants in patient care. |
| e. Listens actively and attentively to understand what is being communicated by others. |
| f. Demonstrates professionally and technically correct written and verbal communication without jargon. |
g. Communicates using nonverbal messages that are consistent with intended message.

h. Engages in ongoing dialogue with professional peers or team members.

i. Interprets and responds to the nonverbal communication of others.

j. Evaluates effectiveness of his/her communication and modifies communication accordingly.

k. Seeks and responds to feedback from multiple sources in providing patient care.

l. Adjust style of communication based on target audience

m. Communicates with patient using language the patient can understand.


EXPERTS AS MODELS OF PROFESSIONALISM AND PROFESSIONAL BEHAVIORS

In the continuum of professional development, the progression from competent practice to expert practice develops over time, and involves a blending of clinical reasoning, decision making and moral skills beyond entry-level performance. During the initial process of professional socialization and professional education, entry-level students go through distinct periods of skill acquisition reflected in a continuum of professional development and proficiency of performance relative to identified performance criteria essential to entrance into professional practice.

Entry-level students enter the profession first as novice students and start the quest to acquire the necessary cognitive, psychomotor and affective skills of the profession. Within a few years they transition from novice to expert students in the classroom, but transition to the clinical setting as novice interns. This progression continues as entry-level students graduate and enter the workforce as novice practitioners and over time may develop as expert clinicians.

Rapid changes in the healthcare system and the increasing demand for effective and efficient patient management pressure physical therapists to reflect upon their base of knowledge, skills and attitudes to improve their practice and thus enhance patient outcomes. These changes force the profession of physical therapy to understand, define,
describe, and embrace the concepts related to expertise in physical therapy practice. The work by Jensen et al has shaped the current understanding of expertise in our profession.\textsuperscript{21,29,30,95,96} 

In order to further appreciate the importance of describing expertise in physical therapy as it relates to the facilitation of professionalism and the process of professional socialization of the entry-level student, \textit{The Dreyfus Model of Skill Acquisition} will be explored.

\textbf{The Dreyfus Model of Skill Acquisition}

Stuart Dreyfus, a mathematician and system analyst and Hubert Dreyfus, a philosopher, studied chess players and pilots and developed a model of skill acquisition in 1980.\textsuperscript{32,97,98} The Dreyfus model of skill acquisition is a model of how students acquire and develop skills through formal training and practice.\textsuperscript{32,97,98} The model proposes that a student passes through five distinct stages: novice, advanced beginner, competent, proficient, and expert.\textsuperscript{32,97,98} This model has been used in many fields, including physical therapy.\textsuperscript{21,30,96} Table 1.11 summarize the stages, definition and performance characteristics at each level of development according to the Dreyfus model for skill acquisition.
<table>
<thead>
<tr>
<th>Level</th>
<th>Stage</th>
<th>Characteristics</th>
<th>How knowledge etc. is treated</th>
<th>Recognition of relevance</th>
<th>How context is assessed</th>
<th>Decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Novice</td>
<td>Rigid Adherence to taught rules or plans</td>
<td>Without reference to context</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Little situation perception</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No discretionary judgment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Advanced Beginner</td>
<td>Guidelines for action based on attributes or aspects (aspects are global characteristics of situations recognizable only after some prior experience)</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Situational perception still limited</td>
<td></td>
<td></td>
<td></td>
<td>Analytically</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All attributes and aspects are treated separately and given equal importance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Competent</td>
<td>Coping with crowdedness</td>
<td></td>
<td></td>
<td></td>
<td>Rational</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Now sees actions at least partially in terms of longer-term goals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Conscious, deliberate planning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standardized and routinized procedures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Proficient</td>
<td>Sees situations holistically rather than in terms of aspects</td>
<td>In context</td>
<td></td>
<td>Present</td>
<td>Holistically</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sees what is most important in a situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perceives deviations from the normal pattern</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decision-making less labored</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Uses maxims for guidance, whose meanings vary according to the situation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Expert</td>
<td>No longer relies on rules, guidelines or maxims</td>
<td></td>
<td></td>
<td></td>
<td>Intuitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Intuitive grasp of situations based on deep tacit understanding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analytic approaches used only in novel situations or when problems occur</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vision of what is possible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The relevance of this model to expertise in physical therapy practice is that professional behaviors are skills that need to be acquired by the entry-level student in order to progress through the curriculum and achieve competence to practice at entry level. These affective skills are equally as important as the cognitive and psychomotor skills developed and mastered throughout professional training in the classroom and clinic. The definition and description of these distinct stages of skill acquisition help the student develop the ability to self-assess, self-correct and self-direct their own professional development in all domains. In addition, during the process of professional training the educators and clinical instructors can also use this model to promote, teach, model and evaluate professional behaviors in the classroom during didactic education and in the clinic during clinical internships.

**Describing Expertise in Physical Therapy Practice**

The development and practice of expert physical therapy has been described and studied for many decades. As previously mentioned, the work by Jensen and colleagues has shaped the profession’s current understanding of expertise.21,29,30,95,96 In 2000, Jensen et al identified knowledge, clinical reasoning, movement and virtues as qualities of expert practice in physical therapy.21 They defined and identified qualities of expert practice across 4 clinical specialties: geriatrics, neurology, orthopedics, and pediatrics.21 Guided by grounded theory, their study used a multiple case study research design and data was obtained through participant observation, interviews, review of documents and analysis of structured tasks. The authors reported behavioral
differences between novice practitioners and expert clinicians in the identified dimensions as follows:\textsuperscript{21}

1. \textit{Multidimensional Knowledge Base:} Although professional education was the initial source of knowledge, experts demonstrated motivation and commitment to continue learning. Expert clinicians used their knowledge to go beyond the patient care to understand the patient, their support system, and activities at work and home. In addition, the authors reported that a fundamental difference between experts and novices is the knowledge they bring to solving problems.\textsuperscript{21}

2. \textit{Clinical reasoning dimension:} Experts and novices showed different patterns of problem solving and clinical decision making skills. Expert clinicians demonstrated proficiency at self-monitoring, ability to engage in intensive listening, and centering one’s attention on the patient/family. Reflection was also identified as a critical element of the expert physical therapist.

3. \textit{Movement Dimension:} Proficiency in examination and evaluation of patients’ functional movements, as well as motor skills demonstrated by the expert physical therapist were characteristics of the movement dimension. In this dimension, Jensen et al reported the difference between a novice practitioner and an expert clinician as being able to identify functional movement disorders in their patients, demonstrate knowledge and skills in the use of touch, and position and moving in ways to facilitate the patient’s movement.\textsuperscript{21} Both these aspects of decision making and motor control reflect that the relationship between patient/family and clinician is an important element of expertise and professionalism.
4. *Professional Virtues dimension*: Virtues like integrity, respect, and willingness to put patient’s interests ahead of self, were evidence of professional virtues and expertise. The authors reported that expert physical therapy clinicians practice these virtues, in addition to being committed caring professionals.²¹

The knowledge base, clinical reasoning and the professional virtues dimensions reiterate the critical importance for entry-level students to acquire the professional behaviors vital for professional practice. In the knowledge base and clinical reasoning dimensions, experts demonstrated that they were truly compassionate practitioners. Expert physical therapists had the ability to identify their own values and were able to make clinical decisions without being afraid to be creative. These therapists welcomed challenges from their patients, and focused the attention on the patient first as a person thereby enhancing patient outcomes. In the professional virtue dimension, experts demonstrated personal traits and attributes consistent with those described in the Professional Behaviors of 21ˢᵗ Century at a post-entry performance level and the CPI’s professional practice criteria matching an anchor rating of beyond entry-level performance.

Doctor of Physical Therapy students may come from undergraduate backgrounds with rather loose constraints regarding their behaviors and a relative lack of socialization into their new profession. The identification of dimensions of expert practice like the ones reported by Jensen et al could be used by the academic and clinical faculty as a tool to facilitate physical therapy students’ professional socialization in their quest to acquire all of the skills expected in the transition from novice student in the classroom to competent entry-level performance during clinical internships.
Jensen et al suggested 3 strategies to be considered when teaching students:\textsuperscript{21}

1. Teaching students to value the patient as well as the clinical instructor as a source of knowledge.

2. Carefully listening to patients and understanding the meanings patients hold about health and illness.

3. Developing not only cognitive skills, but also the ability to keenly observe and skillfully use one’s hands and body to facilitate patients’ functional movement.

The conceptualization of expert practice, if modeled and practiced by academic and clinical faculty, could assist students in the acquisition of the appropriate professional behaviors required to attain entry-level performance. The dimensions and strategies identified by Jensen et al can be used by the academic faculty to facilitate acquisition of skills in all domains of practice during didactic preparation. These dimensions can also be used by clinical education faculty to identify expert clinicians in clinical sites encouraging them to become clinical instructors, mentors and role models for the next generation of practitioners. Finally, these dimensions and strategies can be used by clinical instructors to facilitate the transition of entry-level students from the academic setting into clinical practice.\textsuperscript{21,33,34,99}
PREVIOUS WORK (PILOT STUDY)

Completed at the University of Miami Department of Physical Therapy
Winter Semester 2009

A pilot study entitled, “Promoting Early Awareness of Professionalism in Physical Therapy: Understanding First Year Doctor of Physical Therapy (DPT) Students’ Knowledge, Attitudes, Values, and Beliefs Related to Professional Behaviors” was concluded in winter 2009. The purpose of this qualitative pilot study was to uncover the attitudes towards, values related to, and beliefs about what constitutes professional behaviors in first year Doctor of Physical Therapy (DPT) students.

A sample of convenience of first year Doctor of Physical Therapy (DPT) students was invited to participate in this pilot study. Informed consent was obtained from 35 students. All consented participants (n=35) completed a survey designed by the investigator to gather demographic data. Only seven out of the thirty five students consented to further participate in a focus group following completion of the survey. The focus group (n=7) discussion was designed to bring out nuances in attitudes, values, and beliefs about professional behaviors related to the physical therapy profession. The Institutional Review Board at the University of Miami approved this study. Lack of participation did not negatively impact a student’s academic standing. Qualitative and quantitative data were collected.

Quantitative data was gathered from the survey completed by all consented subjects (n=35). The survey gathered demographic and historical data from participants consisting of 12 questions. Please refer table 1.12. Descriptive statistics were calculated
to characterize the sample and their responses to survey questions. Quantitative data analysis was performed using SAS System for windows version 9.1.3.*

[Footnote: *SAS Institute Inc, 100 SAS Campus Drive, Cary, NC 27513-2414]

After all consented students had completed the survey, the focus group was held at the Plumer Building at the University of Miami Department of Physical Therapy. The focus group consisted of seven students (n=7) who consented to further participate in the study. The focus group questions were developed by the author to assess first year DPT students’ attitudes, values and beliefs about what constitutes professional behaviors (refer to table 1.13). The focus group participants’ responses were collected via audiotape recorder. This information was professionally transcribed into written format and analyzed using the development of supporting categories and themes. Qualitative data analysis began with open coding of written transcription by the investigator. Open coding is a means of reducing the data to a set of important categories. The coded data was reassembled into units of meaning. These categories, along with the quantitative data from the survey and participant observation records were used to identify themes representing the participants’ perceptions about the attitudes, values, and beliefs about what constitutes professional behaviors in first year Doctor of Physical Therapy (DPT) students and to uncover if the professional and students expectations match.

Table 1.12. Pilot Study Survey Questions

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What is your current age in years?</td>
</tr>
<tr>
<td>2. What is your gender?</td>
</tr>
<tr>
<td>3. What is your Ethnicity?</td>
</tr>
<tr>
<td>4. In what geographical region did you grow up?</td>
</tr>
<tr>
<td>5. What was the area of your undergraduate studies prior to entering the University of Miami DPT program?</td>
</tr>
<tr>
<td>6. In what geographical region did you completed your undergraduate studies prior to entering the University of Miami DPT program?</td>
</tr>
<tr>
<td>7. What is the highest level of your studies prior to entering the University of Miami DPT program?</td>
</tr>
<tr>
<td>8. Were you a licensed PTA prior to entering the University of Miami DPT program?</td>
</tr>
<tr>
<td>9. Did you have another profession prior to entering the University of Miami DPT program?</td>
</tr>
</tbody>
</table>
10. Are you currently a member of the APTA?
11. Are you a student member of the APTA through the University of Miami DPT program?
12. Are you planning to retain the APTA membership after graduation?

Table 1.3. Pilot Study Focus Group Questions

<table>
<thead>
<tr>
<th></th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What does professionalism mean to you?</td>
</tr>
<tr>
<td>2</td>
<td>What does professionalism in physical therapy mean to you?</td>
</tr>
<tr>
<td>3</td>
<td>What is your knowledge related to professionalism and professional behaviors as it relates to physical therapy? Please be specific.</td>
</tr>
<tr>
<td>4</td>
<td>What are your attitudes related to professionalism and professional behavior as it relates to physical therapy? Please be specific.</td>
</tr>
<tr>
<td>5</td>
<td>What are your beliefs related to professionalism and professional behaviors as it relates to physical therapy? Please be specific.</td>
</tr>
<tr>
<td>6</td>
<td>What are the professional behaviors that are expected of you upon graduation as a Doctor of Physical Therapy— with a Doctor of Physical Therapy degree?</td>
</tr>
<tr>
<td>7</td>
<td>Do you think professionalism in physical therapy can be taught and learned? If so, how can professionalism in physical therapy be taught and learned? If not, why do you think professionalism in physical therapy cannot be taught or learned?</td>
</tr>
<tr>
<td>8</td>
<td>The results of a research published in the physical therapy journal identified “Inadequate knowledge and skills for communication and unprofessional behaviors are behaviors that cause clinical instructors to question the clinical competency of physical therapy students.” What does this mean to you?</td>
</tr>
<tr>
<td>9</td>
<td>Describe the differences to identify between an academic role model versus a clinical role model. Please provide specific descriptors in knowledge, attitude, and skills.</td>
</tr>
<tr>
<td>10</td>
<td>How could academic faculty or academic role model promote early professional development and socialization in the academic setting?</td>
</tr>
<tr>
<td>11</td>
<td>How could the clinical faculty or a clinical role model promote early professional development and socialization into a clinic setting?</td>
</tr>
<tr>
<td>12</td>
<td>Which specific aspects of professional development and professional socialization would help you to make a smooth transition from the classroom setting to the clinic?</td>
</tr>
<tr>
<td>13</td>
<td>Is there anything else you would like to share with me regarding professional development and socialization as a first year Doctor of Physical Therapy student? If yes, what would you like to share?</td>
</tr>
</tbody>
</table>

There were 35 consented participants (n=35), 13 were male (37%) and 22 female (63%). The average age was 23.43 and the range was 21-42 years old. Participants ethnicity was reported as Asian (3%), African American (6%), White (54%), Hispanic (25%) and other (12%). Students reported their undergraduate studies prior to entering the University of Miami DPT program as follows: science (14%), business (9%), liberal arts (6%), health sciences (45%), and pre-PT (26%). Please refer Table 1.14 for a summary of responses to survey questions 4 and 6.
Table 1.14 Summary of Responses to Survey Questions 4 and 6.

<table>
<thead>
<tr>
<th>US Region</th>
<th>States per region</th>
<th>In what geographical region did you grow up?</th>
<th>In what geographical region did you completed your undergraduate studies prior to entering the University of Miami DPT program?</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England</td>
<td>(NH, ME, MA, RI, CT, VT)</td>
<td>n=36* Percentage 22%</td>
<td>n=35 Percentage 29%</td>
</tr>
<tr>
<td>Eastern</td>
<td>(NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)</td>
<td>5 14%</td>
<td>2 6%</td>
</tr>
<tr>
<td>Southern</td>
<td>(AL, AR, FL, GA, KY, LA, MS, TN)</td>
<td>13 36%</td>
<td>17 49%</td>
</tr>
<tr>
<td>Midwest</td>
<td>(IL, IN, IA, MI, MO, OH, WI)</td>
<td>4 11%</td>
<td>2 6%</td>
</tr>
<tr>
<td>Southwest</td>
<td>(AZ, NM, OK, TX)</td>
<td>1 3%</td>
<td>1 3%</td>
</tr>
<tr>
<td>Mountain</td>
<td>(CO, ID, MT, UT, WY)</td>
<td>1 3%</td>
<td>1 3%</td>
</tr>
<tr>
<td>Western</td>
<td>(CA, OR, WA, AK, HW)</td>
<td>1 3%</td>
<td>1 3%</td>
</tr>
<tr>
<td>Outside of USA</td>
<td>(Please Specify)</td>
<td>3** 8%</td>
<td>1*** 3%</td>
</tr>
</tbody>
</table>

* n=36 – One student answered New England and Midwest
** Outside of USA – Cayman Island (n=1), Former USSR (n=1) and unspecified (n=1)
*** Outside of USA – The student did not specify the region

Seven (20%) of the participants responded having another profession and none of them reported being a physical therapist assistant prior to entering the DPT program.

Thirty three (94%) of the participants reported their highest level of education to be at bachelor’s level; one (3%) reported obtaining a master’s degree prior entering the University of Miami DPT program; and one (3%) student reported she will obtain her bachelor’s degree at the end of the first year in the DPT program.

All (100%) of participants reported being current members of the APTA. Thirty three (94%) of the participants reported being student members of the APTA through the University of Miami DPT program. In addition, thirty one (89%) of the participants reported that they plan to retain APTA membership after graduation, three (9%) participants are unsure and one participant did not respond.
Three main themes emerged from qualitative and quantitative data analysis:

1. *Affective behaviors can be taught and modeled by faculty:* The participants’ reflections indicate that the affective professional behaviors associated with interpersonal skills, communication skills, and accountability can be explicitly modeled and taught by the academic faculty in the classroom and later in the clinic by clinical faculty.

2. *Commitment to engage in affective learning:* Findings showed that this group of students values the ability to engage in a learning process of reflection in order to grow and develop as professionals.

3. *Need for a structured professional socialization process:* Participants reported the need of a more structured environment for professional socialization to be effective. For example, students suggested a structured mentorship program, and mandatory observation sessions on the days off.

This pilot study demonstrated that the values, attitudes and beliefs about constitutes professional behaviors in first year DPT students matched the behaviors identified by the profession in the Generic abilities (currently known as Professional Behaviors), the Core Values, the Normative Model and Vision 2020. These findings might indicate that the reports from the physical therapy literature about students in the clinic frequently demonstrating deficiencies in professional behaviors related to the affective domain might be associated with lack of explicit professional socialization process and/or difficulties in translating knowledge into behaviors (affective behaviors). It should be kept in mind that affective behaviors develop over time. In addition, current faculty believe in implicit understanding of what constitutes professional behaviors, but
current students need explicit instructions about appropriate, professional behaviors and how to demonstrate them.\textsuperscript{100} The participants reported that faculty should model and explicitly teach these behaviors and that the faculty should also take the responsibility to address students’ behaviors that are considered inappropriate or problematic.

The findings of this pilot study provided a foundation for this study by uncovering that students’ underdevelopment of professional behaviors (as reported in the literature) might be associated with difficulties in translating knowledge into behaviors and a lack of understanding about the process of professional socialization as it relates to the transition from the classroom setting to the clinical environment.

Limitations of this pilot study include: the small sample size, the limitation to only first year DPT students at one university, neither survey nor focus group questions were piloted to ensure content validity and issues of credibility and trustworthiness were not addressed.

Future research should include a larger sample size and include students from different years of the curricula. Also, inclusion of academic and clinical faculty may uncover the similarities and/or differences in perceptions about the development of professional behaviors, professional development and the process of professional socialization as a result from triangulating data provided from these three sources.

The tangible recommendations for future research are to:

1. Define and describe sampling method and sample size.
2. Include students from all graduating class levels, academic faculty and clinical faculty.
3. Enhance the quality of qualitative designs and data collection procedures.
4. Enhance the quality and credibility of qualitative analysis.

5. Utilize a tool(s) for qualitative data management and analysis.

The limitations of this pilot study and these five tangible recommendations were addressed in the development of this research project and will be discussed in chapter 2.

**SUMMARY**

Physical therapists are professionals who must use cognitive, psychomotor and affective skills essential for effective and efficient patient management. Several research studies have indicated that affective education involves the development of appropriate professional behaviors by the entry-level DPT student. Students first learn these professional behaviors in their physical therapy classes and must apply the behaviors with their faculty and peers. The process of professional socialization of the entry-level student progresses as students acquire beginning level performance skills in the classroom and progresses overtime to competent entry-level performance at the completion of clinical internships.

This process of professional socialization is described as a distinct period in which the professional acquires the specialized knowledge, skills and attitudes of the profession. The physical therapy professional education is designed to prepare students to develop, in the continuum of the curriculum, the didactic knowledge, psychomotor skills and professional behaviors expected of the newly licensed physical therapist for entry into the practice of physical therapy.
This chapter has explored and discussed published PT and APTA documents that have linked the professions’ attitudes, behaviors and beliefs about professionalism and professional behavior as follows:

The *Normative Model for Professional Education* details the expectations of academic and clinical curriculums as they relate to expectations of professional behaviors required to properly prepare and assess physical therapy professionals. This model offers terminal and instructional behavioral objectives addressing competency in all domains using the taxonomy of educational objectives for learning progressing from simple to complex levels of learning and addressing the challenges that academicians, clinicians and students face especially when addressing affective learning.

The *Professionalism in Physical Therapy Core Values* represents the theoretical construct of professionalism. The Core Value Self-Assessment Tool serves as a framework for entry-level DPT students and faculty to teach, promote and evaluate concepts about professionalism in the classroom and clinic. The self-assessment is measured using a psychometric scale by indicating the frequency in which the sample behavior is demonstrated where 1=Never to 5=Always.

The *Professional Behaviors of the 21st Century* identify, define and provide sample behavioral criteria of 10 professional behaviors derived specifically for the physical therapy profession which have become a critically important tool to the practice of physical therapy. Sample of behavioral criteria are designated into 4 levels progressing from beginning level to post-entry level.
The Clinical Performance Instrument is an instrument designed to obtain a comprehensive perspective of students’ progress through the curriculum and competence to practice as entry-level practitioners. Because this instrument is used to evaluate knowledge, skills and attitudes, it is also an essential tool in the holistic process of physical therapy professional socialization. The instrument measures DPT students’ proficiency in 18 behavioral criteria from beginning performance to beyond entry-level performance.

The dimensions and strategies linked to the development of Expertise in Physical Therapy can be used by the academic faculty to facilitate acquisition of skills in all domains of practice during didactic preparation, by clinical education faculty to identify potential clinical instructors, and by clinical instructors to facilitate the transition into clinical practice.

The relevance of The Dreyfus Model of Skill Acquisition to this study is that professional behaviors are skills that need to be acquired by the entry-level student in order to progress through the curriculum and achieve competence to practice at entry level. Finally, the concepts that define the transition from ‘novice to expert’ guide the development of professional responsibility and development beyond the educational programs.

Authors publishing in physical therapy and health related literature continue to report that professionalism is of great concern in clinical practice. The majority of students develop all necessary skills to enter the profession, but there are still a few entry-level students that continue to demonstrate underdevelopment of professional behaviors as they transition from the classroom setting to the clinical environment. This qualitative
study will explore the perceptions of academic faculty, clinical faculty and DPT students about the development of professional behaviors and the process of professional socialization. Chapter 2 will define and describe the methodology of this study. Chapter 3 will explore the process of professional socialization as entry-level DPT students transition from the classroom setting to the clinical environment. Chapter 4 will explore the Weidman et al framework conceptualizing graduate and professional student socialization process and how it can be applied to the physical therapy profession. Finally, the findings of this study will be discussed and summarized in chapter 5.
CHAPTER 2

METHODOLOGY

“Phenomenology therefore is a critical reflection on conscious experience, rather than subconscious motivation, and is designed to uncover the essential invariant features of that experience.”

Christina Goulding, Ph.D., B.A.

This study explores the current perceptions about the process of professional socialization and development of professional behaviors in entry-level physical therapy students as evidenced by the development of professional responsibility, interpersonal skills and communication skills. These concepts will be explored from the perspective of academic faculty, clinical faculty and entry-level DPT students. This study will also explore the Weidman et al framework which conceptualizes the graduate and professional student socialization process and its application to the physical therapy profession.

Physical therapy educational programs may use this information to guide students during their process of professional socialization. Academicians and clinical instructors have the responsibility to engage students in the active recognition that acquisition of professional behaviors as novice students in the classroom and achievement of affective competence as new graduates entering clinical practice is imperative for professional practice.

This study requires a methodology to facilitate the exploration of the perceptions of these three groups about 1) the process of professional socialization and development of professional behaviors as entry-level students transition from the classroom setting to the clinical environment and 2) the appropriateness of the Weidman et al framework to
conceptualize the physical therapy student professional socialization process. A combination of qualitative and quantitative research methods met these requirements.

This study is divided into two phases. The qualitative research method of single case study interview was used in phase 1 and focus group research design was used in phase 2. Individual interviews and focus group can be complementary research designs, and either can be used in a preliminary or follow-up capacity. In addition, the survey method was used to gather demographic data. The goal of combining the qualitative and quantitative methodology was to strengthen the outcomes of the research project.

The individual interview method was used in this study in a preliminary capacity to pilot the interview questions and the focus group research method served as the primary means of data collection. The survey methodology was used to gather demographic data, and characterize the sample of participants.

The Single Case Interview Method

Bogdan and Biklen reported that the interview strategy is used to gather descriptive data in a subject’s own words. The interview process allows the investigator to assess human behavior, attitudes and beliefs by asking open ended questions; enabling the interviewee to share a full range of experiences, perceptions and feelings about the topic of discussion.

The preliminary individual interviews help the investigator pilot the interview guides and questions. During the individual interviews the investigator is able to get a sense of how the participants think and talk about the phenomenon under study. For this reason, individual interview was the qualitative method of choice for phase 1.
Ten open ended interview questions were designed to explore the participant perceptions about the process of professional socialization in physical therapy. The first seven questions were designed to explore the process of socialization and development of professional behaviors through key indicators such as responsibility, interpersonal skills and communication skills of entry-level DPT students as they transition from the classroom setting to the clinical environment (purpose 1-3). Question number 6 was designed to specifically address DPT students’ perceptions about experiences that influenced their development of professional behaviors. Question 8 was designed to explore if the Weidman et al framework conceptualizing how the graduate and professional student socialization process applies to physical therapy (purpose 4) and finally, the last two questions invite participants to make comments about the questions asked.

**The Focus Group Research**

Focus group methodology is being used more than any other qualitative research technique as a method of presenting research data on a variety of subjects. Focus groups can serve different purposes. Focus groups can either supplement another primary method or be combined with other qualitative and quantitative methods. In this study, the investigator was seeking an in-depth understanding about professionalism and development of professional behaviors. The focus group design excels at providing in-depth understanding about a phenomenon. The hallmark of focus group design is in the explicit use of a group producing data and insights that would be less accessible without the interaction of the participants of the group. The focus group approach was used
in this study based on the philosophy that the dynamics of the group would generate valuable evidence supporting the phenomenon of interest.\textsuperscript{101,103,105}

Focus groups are group interviews in which the researcher takes the role of the moderator, and asks questions based on a specific topic(s). In contrast to single interviews, the group discussion generates qualitative data and provides direct evidence about similarities and differences in the participants’ opinions.\textsuperscript{101,103,106,107} Greenbaum reports that this happens for three reasons: 1) most people feel more comfortable talking about almost any subject when they are part of a group, 2) the interaction among the members of a group will result in the participants being more talkative due to the stimulation generated by the feelings of others in the group and 3) the group dynamics provide insights into how peer pressure plays a role in the degree of overall acceptance of a concept, product, or idea being presented.\textsuperscript{105} The focus group method was used as the primary means of data collection for this study.

**Survey Methodology**

Surveys are a way to gather data from a sample of individuals. A survey may focus on different topics. Since survey research is based on a sample of a population, the success of the investigation is dependent on the representation of the population of interest.\textsuperscript{104} For example a survey can explore, preferences of a candidate, health behaviors like exercise, and factual information about age.\textsuperscript{104} For this study, surveys were used to obtain important factual information about the academicians, clinical instructors, and DPT students. Information like age, ethnicity, years in academics, area of expertise, and years as a physical therapist were obtained in order to identify sample
The outline and design of the survey for this study will be discussed in detail later in this chapter.

**Triangulation**

According to several authors, the use of the combination of quantitative and qualitative methods designs, combined with the triangulation of the data collected, strengthens the total outcome of an investigation. Patton reported that triangulation strengthens a study by combining research methods. This could be achieved by combining methods or data, and/or by using both qualitative and quantitative approaches.

The term triangulation is taken from land surveying. Patton writes that, “knowing a single landmark only locates you somewhere along a line in a direction from the landmark, whereas with two landmarks (and your own position being the third point of the triangle) you can make bearings in two directions and locate yourself at their intersection.” As in a triangle, the balance and angle of the three connecting points promotes strength to the structure.

In research, the logic of triangulation is based on three premises as follows: no single method is ever sufficient to solve the problem, and every research should include multiple methods. A common misunderstanding about triangulation lies in the notion that different data sources and research methods lead to the same result, and that the goal of triangulating data is to test for consistency. Patton reports that inconsistencies should not be seen as weakening the structure during the triangulation process. In contrast
they should be viewed as an opportunity to better understand the phenomenon under study.\textsuperscript{104}

For this study, qualitative data analysis was combined and triangulation of the three sources of data (academic faculty, clinical faculty and DPT students) from individual interview and focus group data was completed. Descriptive statistics were used to characterize the sample. The codes and categories that emerged from the triangulation of phase 1 data were used to identify 1) themes representing the participants’ perceptions about the process of professional socialization in physical therapy and 2) any changes to the original interview questions and survey that needed to be considered. These initial codes, categories and themes served as groundwork for phase 2 data analysis.

The design, procedures and data analysis of qualitative and quantitative methods for phase 1 and 2 will be described and discussed in this chapter (Refer to figure 1.3).

**Figure 2.1. Methodology Flow Chart**
The subsequent chapters will address the results, conclusion and discussion of this study as follows:

**Chapter 3.** “Professional Socialization: transition from the classroom setting to the clinical environment”, will describe and discuss the themes that emerged as a result of analyzing the interview and focus group data addressing the process of socialization and development of professional behaviors. This will be accomplished through a focus on key indicators such as responsibility, interpersonal and communication skills as entry-level DPT students transition from the classroom setting to the clinical environment. This addresses purposes 1-3:

**Purpose 1.** To explore the academic faculty, clinical faculty and the DPT student roles in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills in the entry-level DPT student.

**Purpose 2.** To describe the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to professional behaviors by the DPT student.

**Purpose 3.** To examine how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

**Chapter 4.** “Professional Socialization: Application of higher education professional socialization model to physical therapy students”, will describe and discuss the themes that emerged as a result of analyzing the interview and focus
group data addressing whether the Weidman et al framework conceptualizing graduate and professional student socialization process applies to physical therapy. This addresses purpose 4:

**Purpose 4.** To explore the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it can be applied to physical therapy students.

**Chapter 5.** The in-depth understanding about the process of professional socialization in physical therapy as a result of the data analyzed and discussed in chapters 3 and 4 will be discussed in this chapter. In addition, tangible recommendations for educational programs, the limitations of this study, and implications for future research will be deliberated.

The Institutional Review Board of the University of Miami approved this study.

**DESIGN OF THE STUDY**

**SAMPLING METHOD**

Patton identifies purposeful sampling as one of the key distinguishing strategic themes of qualitative research. Qualitative sampling methods focus on relatively small samples, at times even single cases (n=1), selected purposefully. Typically, qualitative methods produce a wealth of detailed data permitting inquiry into selected issues in great depth. The key issue in selecting and making decisions about the appropriate sample is
to pick participants that would produce the most information and have the greatest impact on the phenomenon under study.\textsuperscript{104}

According to Morgan, there are three concerns when determining the type of participants to participate in focus groups.\textsuperscript{103} These trepidations are: sample concerns, homogeneity and segmentation, and strangers versus acquaintances.\textsuperscript{103} In qualitative research the goal of sampling is to go where the phenomenon is.\textsuperscript{103} The segmentation of the group ensured that the participants matched carefully.\textsuperscript{103} The composition of the group should ensure that the participants have something to say about the topic and feel comfortable saying it.\textsuperscript{103} For this study, the sample was divided into three groups: the academic faculty group, the clinical faculty group and the student group. Finally, the rule favor that the participants in a group should be strangers because acquaintances rely on the taken for granted assumptions that are precisely what the researcher is trying to explore.\textsuperscript{103}

For this study, a purposeful sampling method was used to identify and invite faculty associated with the academic and clinical programs of the University of Miami Physical Therapy Department, as well as first year, second year and third year DPT students enrolled in this educational program to participate in phase 1 (individual interview) or phase 2 (focus group) of this study. The specific sampling and enrollment procedures used in phase 1 and 2 will be described and discussed in this section.

The investigator involved the Director of Clinical Education (DCE) of the University of Miami Department of Physical Therapy to facilitate the identification of candidates that would yield the most information and the greatest impact about the entry-level DPT students’ process of professional socialization. The role of the DCE in the
sampling process was essential in order to identify clinical instructors and DPT students who demonstrate awareness about physical therapy professionalism and development of professional behaviors, therefore facilitating the exploration of the phenomenon under study.\textsuperscript{109}

According to the American Physical Therapy Association, the DCE is defined as the individual responsible for managing and coordinating the clinical education program at the academic institution.\textsuperscript{51} The DCE is also responsible for clinical faculty development, and also monitors the students’ performance in the clinical environment.\textsuperscript{51} The DCE is responsible for maintaining clinical sites information current.\textsuperscript{51}

In addition, only full-time and part-time academicians involved in the academic program of this institution were invited to participate in this study. Those faculty members involved in the advisory committee for this study were excluded. Fifteen academic faculty members met the inclusion criteria. The DCE was then involved in identifying the faculty member (n=1) to be invited to participate in the individual interview for phase 1 of this study.

**SAMPLE SIZE**

Qualitative research typically focuses in depth on relatively small samples, while quantitative inquiries which depend on larger samples selected randomly. Patton described the qualitative sample size rules as:\textsuperscript{104}

\textit{There are no rules for sample size in qualitative inquiry. Sample size depends on what you want to know, the purpose of the inquiry, what’s at stake, what will be}
useful, what will have credibility, and what can be done with available time and resources."104

According to the literature, the desirable size of a focus group is 6 to 10 people, a small enough group to give everyone an opportunity to express themselves and large enough to provide diversity.8,102,104,105

For this study, a total sample size of n=3 was desired for the preliminary phase of this study. For phase 2, the desired sample size for each focus group was as follows: academic faculty (n=6-10), clinical faculty (n=6-10) and DPT student group (n=6-12). The DPT student desired number was larger than that suggested in the literature because the investigator sought to ensure homogeneity and segmentation of the sample. The interview and focus group sampling and participant enrollment procedures will be discussed in detail later in this chapter.

THE MODERATOR

The moderator of an individual and group interview or focus group is much like the conductor of an orchestra.105 The moderator requires a clear direction, like the conductor of the orchestra, to be able to achieve the desired sound from the assembled instruments and musicians. This clear direction is important for the moderator to know where to go and how to get there.105

The role of the moderator is to elicit input from a participant or the assembled group that will achieve the objectives of the session established by the investigator in the case of this study.105 The moderator has the responsibility to gather as much relevant
information as participants have to offer. This is achieved by the moderator’s passive role, by the moderator being able to encourage participants to talk, and by using a few chosen words to engage the participants in a question-and-answer session. During group interviews, the moderator has the responsibility to ensure that everyone in the focus group session is included in the discussion. Finally, the moderator has the responsibility to ensure that the time available for each session is appropriate to achieve the established objective(s).

The characteristics of a good moderator include: a quick learner, a friendly leader, knowledgeable but not all knowing, excellent memory, a good listener, a facilitator not a performer, flexible, empathic, a big picture thinker, and a good writer. The moderator needs to be able to learn quickly in order to incorporate new material and vocabulary, to develop rapport with the participants, to be perceived as knowledgeable about the subject but not an expert, to recall key reflections and comments from participants to be able to cross reference, and to be a good listener.

Appropriate attire, gender issues and moderator continuity are some issues to be considered in the course of planning individual and/or group interviews. The moderator should dress in a way that will make the participants comfortable, but at the same time be an authority figure. According to Greenbaum, most of the time the gender of the moderator is not an issue when planning who will be the moderator of the session. The final issue to be considered is the continuity of the moderator if a series of sessions are planned. Greenbaum writes that it is best to maintain the same moderator because of 1) the nature of qualitative research, 2) the quality of the sessions improves as
the moderator gets familiarized with the material, and 3) by retaining the moderator, the investigator has consistency in the interpretation of the sessions.\textsuperscript{105}

Greenbaum reported that leading rather than guiding, being too knowledgeable, trying to be a comedian, being a poor listener, being too rigid with the moderator guide, not relating to the people in the group, being too naïve about the subject discussed, focusing on individuals rather than the group and alienating a group member are typical moderator concerns.\textsuperscript{105} All these can be avoided by having the moderator guide the flow of the discussion and by having the participants perceive the moderator as having no vested interest in the result of the session. The moderator could use humor to reduce participants’ tension, but needs to keep perspective.\textsuperscript{102,105} Furthermore, the moderator must avoid being too busy taking notes, allow for flexibility to maximize the session, try to create rapport with participants, and to use subtle techniques to control participants who become annoying or distracting in a group session.\textsuperscript{105}

For this study, the moderator is the primary investigator and will be referred in this manuscript as “the investigator”. The investigator became the conductor of this study. The investigator was responsible for developing and facilitating the process of this study. The investigator identified the criteria and objective of this study, studied all moderation techniques, reviewed the characteristics of a good moderator, established sample questions to help direct the flow of discussion and became familiarized with the typical moderator problems. The sample questions will be outlined in the interview construction section of this chapter.
**ATLAS.ti**

ATLAS.ti\textsuperscript{110} was the software used to complete qualitative data management and analysis for this study. ATLAS.ti is a powerful workbench for qualitative data analysis. ATLAS.ti has been the qualitative software of choice used by physical therapy researchers.\textsuperscript{45,111} ATLAS.ti offers a variety of tools that use a systematic approach to unstructured data and helps the researcher to explore the complex phenomena hidden in the data. The emphasis of ATLAS.ti is on qualitative analysis. The investigator was able to use the knowledge management component of the software to transform data into useful knowledge.\textsuperscript{110}

There are two principal modes of working with this software: the Textual Level and the Conceptual Level. At the textual level, the investigator was able to divide the written data from the interview and focus group sessions into primary documents (PDs). For example, the data obtain from the academic faculty interview in response to question number 1 during the first phase of this study was saved as \textit{PD1: Q1 Phase 1 AF.doc}. The other activities completed at the textual-level included open coding each PD, adding comments to respective passages and writing memos. These activities allowed the investigator to compare and contrast responses within data collected from a participant and between participants, as well as within a phase. Once phase 2 was completed, the investigator was also able to compare and contrast responses between phases, thus allowing for in-depth analysis utilizing the method of triangulation. The ability to compare and contrast segments leads to a higher-level of interpretive work and theory-building.\textsuperscript{110}
At the contextual level, ATLAS.ti software allows researchers to focus on model-building. This type of activity allowed the investigator to link codes to networks and graphically outline complex relations. These processes helped uncover other relations in the data that were not obvious before. All these procedures will be described in detailed in the data analysis procedure sections.

Another important aspect of ATLAS.ti is in the data and project management capabilities. ATLAS.ti program helped the investigator prepare the data and set-up the project before starting the textual-level work. For example, the investigator opened two hermeneutic units prior to uploading the PDs, one titled “Phase 1 Single Case Interview” and the other “Phase 2 Focus Group”. The hermeneutic unit is the project and the documents, codes, memos, and other files associated with the project. The project management piece of the software allowed the investigator to set up the project in the most efficient way, to maximize work productivity, to back up the project, and to migrate the project from the investigator’s laptop to desktop and vice versa.

The ATLAS.ti philosophy is best summarized by the acronym VISE which stands for Visualization, Integration, Serendipity, and Exploration. For example, this work bench allowed the investigator to visualize, plan and approach data analysis in a systematic way. The program allowed the integration of all pieces from whole to detail to whole. In this study this process was reflected by the segmentation of the data into PDs for open coding, the grouping of codes into categories and finally, the themes emerged from the categories. One of ATLAS.ti hallmark is in the serendipitous way of helping researchers to find or uncover ideas without having searched for it, adding breadth and depth to the phenomena under study. For example, the codes school, university, role
model and modeling were identified as a result of using the auto coding feature of this software during phase 1 data analysis. Finally, through an exploratory, yet systematic approach to the data, the investigator was able to analyze the data and to develop themes supporting the phenomenon under study.

PHASE 1. SINGLE CASE STUDY INTERVIEW METHOD

Interview Participants and Enrollment Procedure

One full-time or part-time academic faculty from the University of Miami Physical Therapy Department, one clinical faculty involved with this institution’s clinical education program and one graduate DPT student were contacted and invited to participate in an individual single case study interview. These three individuals were identified by the DCE based on her perception that these candidates would yield the most information and share their experiences thus adding in-depth knowledge of the phenomena of interest. An alternate participant was identified in case the participant was unable or unwilling to participate.

The DCE selected one out of the 15 possible academic faculty candidates, as well as an expert clinical faculty and a third year student not only based on her perception about these participants’ professional competency, but also because she perceived these three participants would be able to provide constructive feedback about the interview questions and the survey in this preliminary phase of the study. The alternative candidates were not contacted by the investigator because these three initial candidates agreed to participate in phase 1 when contacted by the investigator either via phone or in person.
Upon acceptance to participate, each participant received a letter as a formal invitation to participate in this study. This letter described the purpose of this study, invited them to participate in a single case study interview, and delineated the procedures of the study. Please refer to Appendix E for the phase 1 faculty letter and DPT student letter. In addition, each participant received a chart with the concepts of the “Professional Behaviors of the 21st Century” published by May et al (2009-2010) addressing the definition and sample behaviors of the three key professional behaviors of interest for this study, a copy of the Weidman, Twale and Stein (2001) socialization model conceptualizing the process of professional socialization and a copy of the interview questions (refer to Appendix E). These documents were provided to each participant to help refresh the concepts about professional behaviors, to familiarize the participant with the Weidman model and to familiarize the participant with the interview questions prior to the interview in order to facilitate the dialogue during the interview.

The investigator provided this additional information to each of the participants prior to their session based on the recommendations of an expert panel of qualitative researchers during a session at Combined Section Meeting of the APTA. They reported that in qualitative research the more information you can provide your potential participant ahead of time, the better that participant will be willing to share his/her own opinions and feelings about the topic. This strategy adds breadth and depth to the data.
**Interview Questions Construction Procedure**

Bogdan and Biklen described the interview strategy as a qualitative research method to gather descriptive data in subjects’ own words.\textsuperscript{102} The interview process, specifically the ethnographic interview, allow the investigator to assess human behavior, attitudes and beliefs by asking open ended questions which allows the interviewee to share a full range of experiences, perceptions and feelings about the topic of discussion.\textsuperscript{101,102,104} Ethnography is a qualitative method aimed at understanding and learning the notion of a culture, reflecting the knowledge and system of meaning of a group.\textsuperscript{102,104} Ethnographic data collection is often completed through participant observation, interviews, and questionnaires.\textsuperscript{102,104} For this study, the use of open ended questions during the interview process allowed participants to reflect on their knowledge base, and captured the perception of physical therapy professionals and entry-level physical therapy DPT students about their own process of professional socialization.

In this study, the individual interview method was used in the preliminary phase to pilot the interview questions and to ensure the questions 1) addressed this study main objective and purposes, 2) facilitated participants to share their full range of experiences, perceptions and feelings about the process of professional socialization in physical therapy, 3) gathered the data necessary to modify the original interview questions during the process of adapting these questions or developing new questions for phase 2 and 4) addressed matters related to quality and credibility of the research design.

Four guiding questions identified by the investigator helped with the construction of the interview questions. These guiding questions are based on the main objective of this study to explore the professional socialization process in physical therapy from the
perspective of academic faculty, clinical faculty and entry levels DPT students and are as follows:

1. What is the role of academic faculty, clinical faculty and entry-level DPT student in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills of entry-level DPT students?

2. What are the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to these professional behaviors?

3. From the perspective of academic faculty, clinical faculty and entry-level DPT student, how are professional behaviors taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment?

4. From the perspective of academic faculty, clinical faculty and entry-level DPT student, how does the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education apply to physical therapy?

Ten open ended questions were developed from these guiding questions (refer to Appendix D). The first three questions were developed to elicit participants’ responses addressing their role in the development of appropriate key professional behaviors. The following three questions were developed to study the reason why the literature reports a gap between the recognition of knowledge acquired in the classroom setting to the value and internalization about the development of professional behaviors in the clinic.
environment. One question was specifically designed to address how professional behaviors are explicitly versus implicitly taught, modeled and assessed in the classroom and clinic. Another question was designed to discuss if the Weidman model of conceptualizing graduate and professional student socialization in higher education applies to physical therapy. Finally, the last two questions invited participants to make comments about the topic of discussion and about the questions asked during the interview.

**Interview Data Collection Procedure**

The individual interviews were scheduled with each participant at a time and place that was convenient for the participant as follows: the academic faculty was interviewed at her work office; the clinical faculty requested to be interviewed during her lunch time at work due to her personal responsibilities before and after work; and the DPT student was interviewed at the investigator’s office. All interviews were completed with the door of the office closed to prevent interruptions. Both the participant and investigator were seated comfortably. According to Greenbaum, if the participant is seated comfortably he/she will be a more active participant during the interview process.¹⁰⁵

At the time of the interview, the investigator explained the process of the individual interview to each participant. The investigator reviewed the purpose of the study, referred back to the documents the participants received, and went over the informed consent form.
During the informed consent process, each participant was informed that the interview could last approximately 60-90 minutes, that the participant was allowed to skip any question he/she chooses not to answer, that participants may withdraw at any time, that all records obtained will be confidential and that every effort will be taken to protect the participants’ identities. Also as part of the informed consent process, participants were informed that participation was completely voluntary and that participation or non-participation in this study would not impact performance evaluation or promotion as an AF, will not jeopardize relationship with this institution’s clinical education as a CF, and will not jeopardize the standing or grades as a full time graduate DPT student. The investigator offered to answer any questions that the participant might have. Informed consent was obtained from each participant and each participant completed a demographic survey prior to the start of the interview.

Prior to the start of the interview, the investigator did a test to ensure that the tone and volume of their voices would be recorded by having them say “1, 2, 3, testing”, and that both the participant’s and investigator’s voice recorded clearly. In addition, the investigator made sure that the participant had access to the documents attached with the letter of invitation. The investigator turned on the audio tape device at this point and the interview process started. The investigator read the first question and the participant answered. Then the investigator read the second question and the participant answered, then the third question-and-answer and so on guiding the flow of the session. For example, at times the investigator would say “how did that make you feel?”, “is this what you said, ………..” or “as you said in question 1, about ……. in order to guide the flow of the session.
The participants’ responses to all ten questions were collected via audiotape recorder. The academic faculty session lasted 35 minutes 38 seconds, the clinical faculty session was 50 minutes 26 seconds and the DPT student session was 44 minutes 6 seconds. Each recording was downloaded into the investigators laptop. The files were then safely uploaded for E-scribe (A Division of Compu-Service) a federally approved transcription office, to transcribe each file into a written format. The verbal data obtained from these transcriptions was used for data analysis.

**Interview Data Facts**

ATLAS.ti\textsuperscript{110} has a tool termed “Word Cruncher”. This tool allows researchers to generate an analysis with a count of all words and frequency of each word within a PD and all PDs in a hermeneutic unit. A report can be generated and interfaced with Microsoft Excel. Phase 1 “Word Cruncher” resulted in a total of 1,675 words, total frequency of words 18,484 and 46,900 Microsoft Excel cells used. For example, the word communication was used a total of 51 times and 13 times in PD8: Phase 1 CF.doc., corresponding to the clinical faculty answer to interview question number 3 regarding communication skills.

The academic faculty transcription contained 563 lines and 5,287 words. The clinical faculty transcription had 825 lines and 8,357 words. Finally, the DPT student transcript had 941 lines and 6,470 words.
Interview Data Analysis

Quantitative data analysis of interview data was performed using ATLAS.ti\textsuperscript{110} software for windows version 6.1.1* Interview data analysis was an interactive ongoing process. It began the moment the investigator received the files from the audio recording transcriptions. Each file was electronically saved in a folder and titled Phase 1 AF original, Phase 1 CF original and finally, Phase 1 DPT original. These files were printed and kept in a secure location at the University of Miami Department of Physical Therapy as confidential records.

The investigator first read the three transcripts and highlighted words, phrases and sentences to identify broad, wide initial themes emerging from the data about the phenomenon under study. The three original digital files were then segmented into 28 primary documents (PDs). There are only 28 PDs since interview question number six was intended for the DPT student only. Each PD was electronically saved and identified by the question number, study phase, and the participant type. For example, PD1: Q1 Phase 1 AF.doc. The creation of the PDs allowed the investigator to start data and project management.

The phase 1 data was uploaded into ATLAS.ti and saved in a hermeneutic unit titled Phase 1 Single Case Interview. The investigator reviewed the highlighted words and phrases on the printed trail and began to identify codes. These codes were assigned to a category. This process was dynamic and non-limited to the codes initially identified by the investigator. At this point the investigator opened the Phase 1 hermeneutic and activated PD1, this allowed the investigator to start the open coding process.
In this study what the investigator describes as “categories” are referred to as “code” by ATLAS.ti technical terminology and “codes” are the “search expression”. The search expressions are the words or phrases that the investigator typed into the search field and the software used to open code the data. These words and phrases formed the desired categories.

Developing coding categories was a crucial step in data analysis. In qualitative research a coded piece is the smallest piece of analyzed data. During the coding process the investigator read through the data to identify certain words, phrases, pattern of behaviors, events and participant’s way of thinking that repeated and/or stood out. Simultaneously, the investigator used these words and phrases to create “new code” in ATLAS.ti and to “enter or select Search Expression” for the “Auto Coding Dialog”. For example, this process involved reading each single case study interview transcription line by line and highlighting phrases, sentences, and groups of sentences that contained a meaningful, distinct thought pertaining to the process of professional socialization and development of professional behaviors. Once all of the “Code” and “enter or select Search Expression” were set up in ATLAS.ti, the investigator was able to start the “Auto Coding dialog” coding all 28 PDs. Please refer to figures 2.2 and 2.3 for an outline of how these processes were approached using ATLAS.ti.
Figure 2.2. Application ATLAS.ti*

Step 1. Open ATLAS.ti Software

Step 2. Save Hermeneutic Units

Step 3. Phase 1 Single Case Interview

Step 4. Primary Document Hermeneutic opened (PD:1 Q1 Phase 1 AF.doc) opened

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany

Figure 2.3. ATLAS.ti: Auto Coding Dialog Opened

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany
After the coding process was completed, the investigator reassembled the coded data into larger units of meaning to create categories (process of categorizing the data or developing category systems).\textsuperscript{102,104} Refer to Table 2.1 and 2.2 for an outline of categories and codes used during Phase 1 data analysis.

### Table 2.1. Codes and Categories Used to Analyze Phase 1 Answering Purposes 1-3

<table>
<thead>
<tr>
<th>Category*</th>
<th>Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Behavior</td>
<td>Affective, responsibility(\infty), interpersonal skills(\infty), communication skills(\infty) and all other PB</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Punctual, punctuality, (\infty)responsibility, leader, leadership, patient advocate</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>Motivation, respect, respectful, built relationships, confidential</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>Open, constructive, verbal, non-verbal, written, electronic (email &amp; text)</td>
</tr>
<tr>
<td>Gap</td>
<td>Gap, knowledge, apply, application</td>
</tr>
<tr>
<td>Role Model</td>
<td>Implicit, explicit, role play, role model(\dagger), modeling(\dagger)</td>
</tr>
</tbody>
</table>

*Category = “Code” as defined in ATLAS.ti\textsuperscript{110}  
**Code = “enter or select Search Expression” as defined in ATLAS.ti\textsuperscript{110}  
\(\infty\)Codes that repeat in another category.  
\(\dagger\)Codes found as a result of the auto coding process, by serendipity.\textsuperscript{110}

### Table 2.2. Codes and Categories Used to Analyze Phase 1 Answering Purpose 4

<table>
<thead>
<tr>
<th>Category*</th>
<th>Code**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Socialization</td>
<td>Socio economic status (SES), aspiration, aptitude, personality(\infty), values, career preference</td>
</tr>
<tr>
<td>Model on Socialization</td>
<td>Professional socialization(\infty), family(\infty), personality(\infty), background, prior experience</td>
</tr>
<tr>
<td>Personal experience</td>
<td>Friends, family(\infty), former employers</td>
</tr>
<tr>
<td>Academic Experience</td>
<td>Physical therapy school, student(\infty), classmate, peer, classroom, school(\dagger), university(\dagger)</td>
</tr>
<tr>
<td>Clinical Experience</td>
<td>Intern, student(\infty), clinical instructor (CI), internship</td>
</tr>
</tbody>
</table>

*Category = “Code” as defined in ATLAS.ti\textsuperscript{110}  
**Code = “enter or select Search Expression” as defined in ATLAS.ti\textsuperscript{110}  
\(\infty\)Codes that repeat in another category.  
\(\dagger\)Codes found as a result of the auto coding process, by serendipity.\textsuperscript{110}

The next step was triangulation of the data from the three single case study interviews.\textsuperscript{8,104,108} The categories that emerged were used to identify (1) initial themes representing the academic faculty, clinical faculty and DPT student perspectives about the process of physical therapy professional socialization and (2) changes that may need to be considered from original interview questions during the process of developing focus group questions. Preliminary themes that emerged from phase 1 data analysis addressing purpose 1-3 are:
1. Professional behaviors develop over time.
2. Knowledge acquisition develops over time.
3. Skills in the affective domain encompass qualities that are critical in primary care physical therapy.
4. From implicit to explicit approach to Physical therapy education.
5. Professional appearance.

The themes emerged from phase 1 data addressing purpose 4 are:

1. Socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome).
2. Internalization of professional role into one’s identity happens over time.
3. Personal, academic and clinical experiences play an important role in the process of professional socialization.

The preliminary themes emerged from phase 1 data analysis served as groundwork for phase 2 data analysis and the meaning of these themes will be detailed in the result sections of Chapter 3 and 4 and discussed in Chapter 5. Phase 1 participants received a copy of the transcript of their interview and a table summarizing the codes, categories and themes emerged from data analysis. The investigator spoke either by phone or in person with each interviewee to obtain feedback about the phenomena of interest, the questions used during the individual interview process, and procedures for data collection. Interviewees reported that the interview questions were appropriate and enjoyed being part of the study. The academic faculty pointed out that in the survey the New York State needed to be moved to the Eastern region. As a result from this
feedback and the completion of phase 1 data analysis, the survey was modified and the interview questions were used as designed for phase 2.

[Footnote: *ATLAS.ti Scientific Software Development GmbH, Berlin, Germany]

**PHASE 2. FOCUS GROUP METHOD**

**Focus Group Questions**

The ten interview questions during the preliminary phase of this study were not modified and were used in phase 2 as detailed in the last section. Please refer to Appendix D.

**Focus Group Participants and Enrollment Procedure**

A purposeful sampling method was also used for Phase 2 of this study. A group of 14 full time academic faculty members from this institution, 26 clinical faculty members involved in this institution’s clinical education program and 21 graduate DPT students enrolled in this program were invited to participate in three focus groups accordingly. The identification and enrollment procedure was parallel to the one used by the investigator in phase 1. The clinical and student candidates were identified by the DCE of this institution and were selected based on their professional competency as perceived by the DCE to facilitate the expansion of the phenomenon under study. The academic candidates were the remaining 14 candidates meeting inclusion criteria as reported in phase 1.

Each clinical and student candidate was contacted by the investigator via email or phone. The academic candidates were formally invited by the investigator during a faculty meeting. Each candidate received a letter as a formal invitation to participate in
this study. This letter described the purpose of this study, invited them to participate in a focus group, and delineated the procedures of the study. Please refer to Appendix E for the phase 2 faculty letter and DPT student letter. As in phase 1, each participant received a chart with the concepts of the “Professional Behaviors of the 21st Century”, a copy of the Weidman, Twale and Stein (2001) socialization model conceptualizing the process of professional socialization and a copy of the focus group questions.

The desired size for each focus group was based on the recommendation in the literature as follows:

- Academic faculty (n=6-10)
- Clinical faculty (n=6-10)
- DPT student group (n=9-12, 3-4 from each graduate class)

The DPT student group desired size was larger than that recommended in the literature to ensure homogeneity and segmentation. The investigator invited equal number of candidates from first year, second year and third year students as it is easier to evaluate the data when the opinions and perceptions collected represent the distribution of the student population. Also, as reported by Greenbaum, the dynamics of the group could be affected if the group is not homogeneous; in this case this group only included current entry-level students. Equal representation is important during focus groups to be able to gather rich data from novice and expert faculty, as well as from entry-level DPT students completing a three year educational program about the process of professional socialization in physical therapy. A sample with novice and expert faculty, as well as with students from each graduating class is essential for the investigator to be able to explore the topic thoroughly and be able to capture how the faculty and students
perceived their own development associated to their process of professional socialization.  

The sampling procedures for each focus group will be detailed below and data collection procedures will be discussed in the next section.

**Academic Faculty Sample (n=7).** Twelve out of the fourteen academic faculty candidates accepted the invitation. Upon acceptance, the investigator arranged for a time and date that was most convenient for the group to conduct the focus group. Five faculty members could not participate due to teaching responsibilities. Informed consent was obtained from seven (n=7) academic faculty members.

**Clinical Faculty Sample (n=8).** Sixteen out of the twenty six candidates accepted the invitation to participate in this study. Upon acceptance, the investigator arranged for a time and date that was convenient for most of the candidates in the group. Nine clinical instructors agreed on a common time and day. Informed consent was obtained for eight (n=8) clinical instructors. One clinical faculty member contacted the investigator 30 minutes prior to the focus group time, that he was not going to be able to get out of work on time and unfortunately was not able to participate.

**DPT Student Sample (n=11).** Forty-one students were identified by the DCE as potential candidates to participate in this study (13 students out of 50 first year students, 14 students out of 52 second year students and 14 out of 46 third year students). A random number sample generator was used to randomly select 7 students from each
graduating class. Twenty one students, as mentioned, were formally invited to participate in this study. Twelve students accepted the invitation and eleven (n=11) consented to participate in the focus group. One student was not able to make to the focus group session at the last minute. The investigator considered that the match and representation of this group was appropriate. Literature in qualitative methodology, reported that a researcher may add to the sample as the study unfolds and that the study designed should be flexible. The investigator decided to complete the student focus group with 4 first year students, 3 second year students and another 4 from the 3rd year class.

Focus Group Data Collection Procedure

Each focus group session took place in the 5th floor conference room of the University of Miami Physical Therapy Department. Prior to the arrival of the participants, the investigator prepared the room: refreshments and snack were set up on a side table, chairs were arranged in circle close to the conference’s room window and copies of the supporting documents were placed in the middle of the circle. The investigator also checked the lighting and thermostat of the room.

Upon arrival, each participant received a folder with the informed consent, survey and a copy of supporting documents (copy of the chart with the concepts of the “Professional Behaviors of the 21st Century”, a copy of the Weidman socialization model conceptualizing the process of professional socialization and a copy of the focus group questions). The investigator explained the process of the focus group to all participants.
The investigator reviewed the purpose of the study, referred back to the documents the participants received, and went over the informed consent form.

During the informed consent process, participants were reminded that the focus group was estimated to last approximately 60-90 minutes, that participants were allowed to skip any question(s) he/she chooses not to answer, that participants may withdraw at any time, that all records obtained will be confidential and that every effort will be taken to protect the participants’ identity.

Also as part of the informed consent process, participants were reminded that participation is completely voluntary and that participation or non-participation in this study will not impact performance evaluation as an AF, will not jeopardize the relationship with this institution’s clinical education as a CF, and that student grades will not be jeopardized if a student decides not to participate. The investigator also offered to answer any questions that the participant might have.

Each participant was instructed to read and complete the informed consent and the survey. Each participant turned in these documents inside the folder. The investigator co-signed each consent form and verified that all pages in the survey were completed. Each folder was identified with a code. For example, “2-1-001” indicating phase 2, academic group and subject number 1.

The investigator then invited the participants to seat comfortably in the circle. The investigator sat in one of the chairs joining the circle and placed the audiotape recorder in the middle of the circle. A test of the audio recorder was completed to ensure that the tone and volume of participants’ voices would be recorded by having each participant say “participant number 1, participant number 2, and so on.” Both the participant’s and
investigator’s voice recorded clearly. Participants’ responses were collected via audio recording.

At this point, the investigator gave instructions and described how the focus group session was going to be completed. The investigator mentioned that she will read question number 1 and participants will respond one at a time going around the circle clock wise, then the investigator will ask question number 2 and participants will respond one a time around the circle in a counter clock wise direction, and so on. Participants were reminded not to interrupt another participant, but to feel free to make any additional comments once that participant had finished with her/his train of thought. The investigator answered questions or clarified the procedures as needed. The investigator turned on the audio tape recorder and the focus group session started.

The academic faculty session lasted 1 hour 06 minutes 55 seconds, the clinical faculty session was 2 hours 05 minutes 21 seconds and the DPT student session was 1 hour 08 minutes 33 seconds. During the SDPT group one student left after answering question number 7 due to having to take her graduation pictures and another student also left unexpectedly after everyone had completed answering question number 8.

The management of the audio recordings and transcription to a written format was parallel to the procedures completed in phase 1. Each recording was downloaded into the investigator’s laptop, and then uploaded for E-scribe to transcribe into a written format. The focus group written data obtained in these transcriptions was used for data analysis.
Focus Group Data Facts

Phase 2 “Word Cruncher” analyses resulted in a total of 2,678 words, total frequency of words 36,525 and 66,950 Microsoft Excel cells used. For example, the word communication was used a total of 84 times and 24 times in PD8: Phase 2 CF.doc.

The academic faculty transcription contained 976 lines and 9,117 words. The clinical faculty transcription had 2,006 lines and 19,154 words. Finally, the DPT student transcript had 1,313 lines and 12,394 words.

Focus Group Data Analysis

Similar qualitative data analysis procedures to those used in Phase 1 were used to analyze focus group transcripts. Focus group data analysis was also performed using ATLAS.ti. Each original transcript file were saved in a folder titled “Phase 2 Focus Group” and each file was titled Phase 2 AF original, Phase 2 CF original and Phase 2 DPT original accordingly. These files were printed and kept in a secure location at the University of Miami Department of Physical Therapy as confidential records.

[Footnote: *ATLAS.ti Scientific Software Development GmbH, Berlin, Germany]

Focus group transcripts were initially read by the investigator to identify broad, wide initial themes emerging from the data. The three original digital files were then segmented into 25 PDs. There were only 25 PDs, since none of the participants had comments at the end of the sessions and question number 10 was answered as “no”. Each PD was electronically saved and identified by the question number, study phase, and the participant type as completed in phase 1. For example, PD1: Q1 Phase 2 AF.doc. The creation of the PDs allowed the investigator to start the data and project management.
Each of these PDs were uploaded in a new hermeneutic unit titled “Phase 2 Focus Group” ATLAS.ti qualitative data management was then used to open code focus group transcripts using the codes emerged in phase 1 and the auto coding dialog.

After the coding process was completed, the investigator reassembled the coded data into larger units of meaning. The initial themes that emerged from the triangulation of phase 1 interview were revised once phase 1 interview data and phase 2 data were combined and triangulated. The final themes are summarized in Table 2.3 and will be described in detailed in the result sections of Chapter 3 and 4.

### Table 2.3. Main Study Themes

<table>
<thead>
<tr>
<th>Purpose 1-3 (Chapter 3)</th>
<th>Preliminary Themes</th>
<th>Main Study Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Professional behaviors develop over time.</td>
<td>1. Professional behaviors develop over time.</td>
</tr>
<tr>
<td></td>
<td>2. Knowledge acquisition develops over time.</td>
<td>2. Knowledge acquisition develops over time.</td>
</tr>
<tr>
<td></td>
<td>3. Skills in the affective domain encompass qualities that are critical in physical therapy.</td>
<td>3. Skills in the affective domain encompass qualities that are critical in primary care physical therapy.</td>
</tr>
<tr>
<td></td>
<td>4. From implicit to explicit approach to Physical therapy education.</td>
<td>4. From implicit to explicit approach to Physical therapy education.</td>
</tr>
<tr>
<td></td>
<td>5. Professional attire.</td>
<td>5. Professional appearance.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purpose 4 (Chapter 4)</th>
<th>Preliminary Themes</th>
<th>Main Study Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Stages of Socialization: background, Academic and outcome.</td>
<td>1. Socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome).</td>
</tr>
<tr>
<td></td>
<td>2. Role identification.</td>
<td>2. Internalization of professional role into one’s identity happens over time.</td>
</tr>
<tr>
<td></td>
<td>3. Experiences (personal, academic and clinical).</td>
<td>3. Personal, academic and clinical experiences play an important role in the process of professional socialization.</td>
</tr>
</tbody>
</table>

**SURVEY**

**Survey Construction Procedure**

Based on the information presented in previous study, three surveys were developed by the investigator to gather factual and demographic information from the academic faculty member(s), clinical instructor(s) and DPT student(s). Each survey
contained both open-ended and closed-ended questions. The survey instrument was piloted to ensure content validity prior to being used during phase 1. The piloting was completed by a recent DPT graduate, a clinical instructor who works with the investigator and an academician who is an advisor in this research project. Please refer to Table 2.4 for details on the questions and factual information gather in each of the surveys. Please refer to Appendix E for a copy of these surveys.

**Table 2.4. Survey Instrument**

<table>
<thead>
<tr>
<th>Student Survey Demographic data</th>
<th>Academic Faculty Survey Demographic data</th>
<th>Clinical Faculty Survey Demographic data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>1. Age</td>
<td>1. Age</td>
</tr>
<tr>
<td>2. Gender</td>
<td>2. Gender</td>
<td>2. Gender</td>
</tr>
<tr>
<td>3. Ethnicity</td>
<td>3. Ethnicity</td>
<td>3. Ethnicity</td>
</tr>
<tr>
<td>5. Area of undergraduate study prior entering the UM DPT program?</td>
<td>5. Geographical region where you completed entry-level PT degree?</td>
<td>5. Geographical region where you completed entry-level PT degree? Year</td>
</tr>
<tr>
<td>7. Highest earned academic degree?</td>
<td>7. Where you a licensed PTA prior to being a PT?</td>
<td>7. Where you a licensed PTA prior to being a PT?</td>
</tr>
<tr>
<td>8. Where you a licensed PTA prior to entering DPT program?</td>
<td>8. Did you have any other profession prior to becoming a PT?</td>
<td>8. Did you have any other profession prior to becoming a PT?</td>
</tr>
<tr>
<td>9. Did you have any other profession prior entering DPT program</td>
<td>9. How many years have you been a PT?</td>
<td>9. Are you a certified APTA specialist? Specify area of specialty</td>
</tr>
<tr>
<td>10. Are you currently a member of the APTA?</td>
<td>10. How many years have you been in academics?</td>
<td>10. How many years have you been a PT?</td>
</tr>
<tr>
<td>11. Are you planning to retain your APTA membership after graduation?</td>
<td>11. What is your current position?</td>
<td>11. Are you a certified clinical instructor?</td>
</tr>
<tr>
<td>12. Are you an APTA section member? If yes, please check all that apply.</td>
<td>12. Which is your area of specialty?</td>
<td>12. Are you a state certified clinical instructor?</td>
</tr>
<tr>
<td>15. Are you an APTA section member? If yes, please check all that apply</td>
<td>15. Are you an APTA section member? If yes, please check all that apply.</td>
<td>15. Which is your area of clinical practice?</td>
</tr>
<tr>
<td>16. Are you familiarized with the following PT and APTA documents?*</td>
<td>16. Are you familiarized with the following PT and APTA documents?*</td>
<td>16. Are you currently a member of the APTA?</td>
</tr>
</tbody>
</table>
Surveys Data Analysis

Data analysis consisted of descriptive methods. Descriptive statistics were calculated to characterize the sample using the data obtained from surveying all participants during phase 1 and 2 of this study. Mean, standard deviation and mode were calculated for age, years in practice, years as an academician, and years as a clinical instructor. Frequencies were calculated for gender, ethnicity, and all other factual information gathered from surveying all participants. The results from the quantitative data analysis will be detailed and discussed in chapters 3 and 4. Quantitative data analysis was performed using SAS System for windows version 9.1.3.**

[Footnote: **SAS Institute Inc, 100 SAS Campus Drive, Cary, NC 27513-2414]

The survey was modified as mentioned in phase 1 data analysis procedures moving New York from the New England to Eastern region. This modification was approved by IRB. During phase 2, a clinical faculty pointed out that the Geriatric Certified Specialist (GCS) category was omitted. If this survey is used in future studies the GCS specialty will need to be added to question number 14 in the academic faculty survey and to question number 9 in the clinical faculty survey.

TRUSTWORTHINESS

Any research needs credibility to be useful. A credible qualitative research strategy requires that the investigator adopts a neutral stance with regards to the phenomenon under study. The investigator used research strategies aimed at producing high quality data and analysis that was trustworthy, authentic, and balanced about the phenomenon under study, and fair to the people studied. In addition, the investigator
carefully reflected on, dealt with and reported potential sources of biases and errors given the nature of being the human instrument collecting the data.\textsuperscript{104} Therefore the investigator undertook a number of strategies aimed at enhancing the trustworthiness of this study. For example, these included piloting surveys, single case study interview questions, data analysis procedures and focus group questions, as well as triangulating data.\textsuperscript{104,108} All confidential documents were placed in a secure location at the University of Miami Physical Therapy Department.

**SUMMARY**

Qualitative and quantitative designs, data collection and data analysis procedures were described in this chapter. The procedures described in this chapter carefully addressed the design flaws and limitations of the previous study leading to this investigation.

This study was divided into two phases: a preliminary phase to pilot the survey and interview questions to ensure content validity and a phase 2 which used focus groups as the primary means of data collection. A larger sample was used and triangulation of data was completed within and between the data gathered from academicians, clinical instructors and entry-level DPT students who participated in phase 1 individual interview and phase 2 focus group of this study. ATLAS.ti, a qualitative data analysis software, was used during analysis of data obtained from these three sources to uncover themes, and the similarities and/or differences of perceptions about the process of professional socialization in physical therapy. Issues of credibility and trustworthiness were addressed.
For this study, the group interaction during the focus group sessions provided insights about the entry-level DPT student process of professional socialization and development of professional behaviors as perceived by novice and expert faculty associated with the academic education and clinical program of the University of Miami Physical Therapy Department, as well as by a mixed group of first year, second year and third year DPT students enrolled in this educational program. The individual interviews were completed as part of the preliminary phase of this study to pilot the interview questions and the survey. The phase 1 interviewees had an opportunity to provide feedback on the questions asked during the interview and the survey designed to collect participants’ demographic information.

Five main themes emerged from the triangulation and analysis of qualitative and quantitative data addressing the perceptions of the process of professional socialization and development of professional behaviors through key indicators such as responsibility, interpersonal skills and communication skills from the perspective of academic faculty, clinical faculty and DPT students:

1. Professional behaviors develop over time.
2. Knowledge acquisition develops over time.
3. Skills in the affective domain encompass qualities that are critical in primary care physical therapy.
4. From implicit to explicit approach to Physical therapy education.
5. Professional appearance.
Three main themes emerged from the data exploring if the Weidman et al framework conceptualizing graduate and professional student socialization process and its application to physical therapy:

1. Socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome).
2. Internalization of professional role into one’s identity happens over time.
3. Personal, academic and clinical experiences play an important role in the process of professional socialization.

The meaning of these themes will be detailed in the result sections of Chapter 3 and 4. Finally, the overall findings of this study will be discussed in Chapter 5.
CHAPTER 3

PROFESSIONAL SOCIALIZATION: TRANSITION FROM THE CLASSROOM SETTING TO THE CLINICAL ENVIRONMENT

“Professional Behavior is a constitutive of professional practice”
Margaret M Plack, PT, EdD

Background and Purpose. Entry-level physical therapy students go through a distinct period of professional socialization in which they acquire the specialized knowledge, psychomotor skills and professional behaviors essential for effective and efficient patient care. Physical therapy practitioners agree that professionalism is an essential component of this process of socialization to the successful practice of physical therapy in the 21st century. Academic faculty and clinical instructors agree that appropriate affective skills are more difficult to promote, assess and model than are cognitive or psychomotor skills. Evidence suggests that underdevelopment of professional behaviors is often the reason why students struggle with the transition from the classroom setting to the clinical environment and that engaging students in affective learning experiences is one of the most challenging experiences academicians and clinical instructors face. This qualitative study explored the professional socialization process from the perspective of academic faculty, clinical faculty and the entry-level doctor of physical therapy (DPT) students about the teachings fostering the development of professional behaviors in entry-level physical therapy professional education. Subjects. The participants were eight academic faculty and nine clinical faculty associated with the academic and clinical programs of the University of Miami Physical Therapy Department, as well as 12 entry-level DPT students enrolled in this educational program. Methods. Using a phenomenological
approach, the investigator conducted single case study interviews with 3 participants and 3 focus groups with the other participants. This consisted of asking questions to explore their perceptions about the process of professional socialization and development of professional behaviors in entry-level DPT students. The behavioral constructs of professional responsibility, interpersonal skills and communication skills were used as benchmarks of professionalism. Each interview and focus group session was audiotaped and transcribed by a professional transcriptionist. Each participant completed a survey to gather factual and demographic data. Qualitative and quantitative methods were used to analyze the data. Triangulation of the data and other research strategies ensured trustworthiness. **Results.** Quantitative analysis was used to characterize the sample. Qualitative data analysis led to the emergence of 5 themes: 1) professional behaviors develop over time, 2) knowledge acquisition develops over time, 3) skills in the affective domain encompass qualities that are critical in primary care physical therapy, 4) from implicit to explicit approach to Physical therapy education, and 5) professional appearance. **Discussion and Conclusion.** The findings indicate that the process of professional socialization is vital for individuals pursuing physical therapy as a profession. The themes that emerged indicate that entry-level DPT students develop knowledge and professional behaviors over time. In addition, academic and clinical faculty reported that engaging the entry-level DPT students in affective learning experiences focused around a set of expected skills and competencies is essential for effective patient care and the ability to practice as primary care practitioners. This explicit approach to education in the affective domain is essential when teaching today’s
millennial students. Finally, that the modeling and teachings about professional appearance are an important part of professional practice.

**Key Words.** Professional Socialization, Education in the Affective Domain, Professional Behaviors, Responsibility, Communication Skills, Interpersonal Skills.

The Institutional Review Board of the University of Miami approved this study.

**INTRODUCTION AND REVIEW OF RELATED LITERATURE**

Physical therapy professional education is designed to prepare students to develop cognitive, psychomotor and affective competence expected of the newly licensed physical therapist for entry into the practice of physical therapy.\textsuperscript{1-5} Engaging students in affective learning experiences is one of the most challenging tasks academicians and clinical instructors face. Affective skills are abstract in nature and are more difficult to measure directly. Academic faculty and clinical faculty members struggle with the dichotomy between the subjective, inner, abstract aspects versus the observable and objective aspects of professional behaviors.\textsuperscript{16} Academic faculty and clinical faculty members agree that appropriate affective skills are more difficult to promote, assess and model than are cognitive or psychomotor skills.\textsuperscript{6-16}

*A Normative Model of Physical Therapist Professional Education* (The Normative Model) details the expectations and requirements of academic and clinical curricula regarding development of knowledge, psychomotor skills and professional behaviors deemed necessary for success in the practice of physical therapy.\textsuperscript{1,17,18} The Normative Model provides a guidance to educational programs on how to design classroom and clinical practice expectations using the Bloom (cognitive), Simpson
(psychomotor) and Krathwohl (affective) taxonomies of educational objectives.\textsuperscript{1} Education in the cognitive domain focuses on acquisition of knowledge and it involves the development of intellectual and technical skills.\textsuperscript{19} This includes the recall and recognition of specific facts, procedures, and concepts that serve in the development of physical therapy technical skills.\textsuperscript{1} Education in the psychomotor domain includes the ability to physically move, coordinate movements and use motor skills specific to the task at hand.\textsuperscript{19} Psychomotor learning objectives focus on development of motor skills to be able not only to examine and evaluate movement disorders, but also to be able to perform the activities to practice as a physical therapist.\textsuperscript{1,20,21} Skills in the affective domain describe the way people respond emotionally to events, concepts, and the environment through values, feelings, motivations, and attitudes.\textsuperscript{22} Educational objectives in the affective domain target the recognition, observation, value and internalization of professional behaviors like responsibility, communication skills, interpersonal skills, commitment to learning, critical thinking, and stress management.\textsuperscript{1,23}

Physical therapy students entering the profession go through a distinct period of professional socialization.\textsuperscript{4,5,24-27} During this period, physical therapy students must attain a repertoire of cognitive, psychomotor and affective skills which are essential to the practice of physical therapy. The acquisition and development of knowledge, skills and values is critical for novice students to obtain proficiency in all domains of learning as they transition to the clinic.\textsuperscript{3,21,28-34} In physical therapy, the process of professional socialization has been formally explored in a variety of ways since the 1980’s.\textsuperscript{4,5,25-27,35-37} Table 1.1 summarizes the evolution of professional socialization literature in physical therapy. In 2009, Davis reported that the process of professional socialization is a clear
concern among physical therapy educators across the nation. The author reported that 98% of physical therapy educators who completed a survey viewed professionalism as an essential component of physical therapy education and 89% of these respondents expressed concerns about the professional behaviors of one or more of their entry-level students.

Professional education and socialization in physical therapy involves not only the development and evaluation of cognitive and psychomotor skills, but also a commitment to incorporate affective learning objectives throughout the curricula. Inclusion of explicit affective learning objectives in physical therapy curricula could facilitate the development of professional behaviors within the foundational, behavioral and clinical science matrices of the curricula. Deficiencies in the cognitive or psychomotor domains are detected in the classroom as students must demonstrate a level of competency in order to progress in the curriculum. Cognitive and psychomotor skills can be assessed and measured in written examinations and practical testing. Deficiencies in the affective domain are more elusive and the subjective natures of affective skills do not lend themselves easily to direct measure. The inclusion of affective learning objectives in the curricula not only guides the process of developing professional behaviors, but also provides objective measurable criteria for the assessment of affective competence. Academic and clinical faculty members agree that appropriate attitudes and professional behaviors in the affective domain are as important as are competence in clinical skills and are as essential for effective patient management. Underdevelopment of professional behaviors is often the reason why students struggle with the transition from the classroom to the clinic or even fail clinical internships. This
makes the transition from the classroom setting to the clinical environment one of the most difficult experiences physical therapy students have during their professional training.\textsuperscript{12,13,15,16,24,42,45-47}

Education in the affective domain has become an essential component of physical therapy academic and clinical education.\textsuperscript{9,14-16,39,48,49} For education in the affective domain to be successful a systematic approach similar to the one used for cognitive and psychomotor education should be established.\textsuperscript{1,16} Documents like The Normative Model (NM), Professionalism in Physical Therapy: Core Values (CV)\textsuperscript{50}, and the Professional Behaviors (PB) for the 21\textsuperscript{st} Century\textsuperscript{23} (formally known as the Generic abilities) identify and provide tools for teaching, developing and evaluating the skills related to professionalism in physical therapy. The Normative Model offers a systematic approach to facilitate the development of affective skills using the Krathwohl taxonomy of educational objectives for affective learning (Refer to Appendix A).\textsuperscript{1,22} This model provides a framework for education in the affective domain to be successful.

Tsoumas reported that entry-level students fail to display the learned professional behaviors in the classroom and/or clinic and act in ways that are incongruent with the profession.\textsuperscript{2} The physical therapy academic and clinical curriculum is focused around a set of expected competencies.\textsuperscript{1,51} The mastery of the concepts, skills and values associated with the professional practice is defined by the specific criteria that must be exhibited by the entry-level DPT student throughout the classroom and clinical experiences. Even though entry-level DPT students are given opportunities to develop awareness and acceptance of their own personal values and professional behaviors in the
classroom and clinic, they struggle to recognize and internalize the relevance of competency-based education.

The demands from society, the health care system, research and consumers to educate highly skilled health care professionals are increasing. Physical therapists go through a process of professional socialization in which they acquire the specialized knowledge, psychomotor skills and professional behaviors essential for effective and efficient patient care. Professionalism, and development of professional behaviors are key elements necessary for the successful entry into the physical therapy profession and to be able to practice as compassionate and caring practitioners in the 21st century.

**Problem and Purpose**

Concerns have been raised that the transition from the classroom to the clinic is one of the most challenging experiences faced by entry-level physical therapy students, and that engaging students in affective learning experiences is one of the most challenging tasks academicians and clinical instructors face. These challenges are often related to entry-level students’ underdevelopment of professional behaviors and faculty’s difficulties dealing with the abstract nature of affective skills. Simultaneously, little is known about the perspectives of the academic faculty, clinical faculty and the entry-level students about the strategies which foster professionalism in entry-level physical therapy professional education. This qualitative study explored the professional socialization process from the perspective of academic faculty, clinical faculty and entry-level doctorate of physical therapy (DPT) students as evidenced by the development of professional responsibility, communication skills and interpersonal skills.
**Purpose 1.** To explore the roles of the academic faculty, clinical faculty and the DPT student in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills in the entry-level DPT student.

**Purpose 2.** To describe the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to professional behaviors by the DPT student.

**Purpose 3.** To examine how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

**Theoretical and Behavioral Constructs of this Study**

The core values of accountability and compassion/caring are representative of the values of professionalism of interest to this study and representative of the theoretical construct of professionalism. These core values were chosen as they define critical elements of professionalism in physical therapy practice, education and research. The sample indicators for these core values are concrete, observable and measurable and will be used as a guide in the process of exploring the process of professional socialization in entry-level DPT students.

The behavioral constructs of professional responsibility, interpersonal skills and communication skills were used in this study as a benchmark of professionalism for their relevance to the process of professional socialization and development of professional
In addition, these professional behaviors have been chosen to be the key measurable indicators for the above mentioned professional core values.

Physical therapy education is focused around a set of expected cognitive, psychomotor and affective outcomes or competencies. The profession has defined these professional behaviors and has delineated specific behavioral criteria for each developmental/performance level, thus providing tools to design affective learning objectives and to evaluate classroom and clinical experiences. According to Davis, the most frequent behaviors demonstrated by entry-level physical therapy students include tardiness, lack of responsibility and dress code violations. A review of the physical therapy literature reveals that physical therapy educators agree that clinical reasoning, integrity, oral communication, responsibility, honesty, accountability and compassion/caring are essential professional behaviors for physical therapist and they are encompassed by the core values of accountability and compassion/caring.

The theoretical and behavioral constructs are summarized in Figure 1.1.

**Figure 1.1. Theoretical* and Behavioral** Construct

![Diagram](image-url)
METHODS

Design

A phenomenological approach was used to explore the current perceptions about the process of professional socialization and development of professional behaviors in entry-level physical therapy students as evidenced by the development of professional responsibility, interpersonal and communication skills. These concepts were explored from the perspectives of academic faculty, clinical faculty and entry-level DPT students. Phenomenology is grounded in philosophy. The goal of a phenomenological study is to describe and to understand the meaning of events from the participants’ perspectives. On way of gaining participants’ perspectives is by asking open-ended questions. Open-ended questions cannot be answered with a “yes” or “no, therefore the interviewee has the freedom to share a free range of experiences and opinions about the phenomenon of interest.

This study was divided into two phases. The qualitative research method of single case study interview was used in phase 1 and focus group research design was used in phase 2. The goal of combining the qualitative and quantitative methodologies was to strengthen the outcomes of the research project. The individual interview method was used in the preliminary phase of this study to pilot the interview questions and to ensure the questions 1) addressed the main objective and purposes of the study, 2) facilitated participants to share their full range of experiences, perceptions and feelings about the process of professional socialization in physical therapy, 3) gathered the data necessary to modify the original interview questions during the process of adapting these questions or developing new questions for phase 2 and 4) addressed matters related to quality and
credibility of the research design. The focus group research method served as the primary means of data collection. The survey methodology was used to gather demographic data, thus being able to characterize the sample of participants.\textsuperscript{104}

The individual and group interview processes allowed the investigator to assess human behavior, attitudes and beliefs by asking open ended questions. This enables the participant to share a full range of experiences, perceptions and feelings about the phenomenon of interest.\textsuperscript{103,104} During the individual interviews the investigator was able to explore how the participants thought and talked about the phenomenon under study.\textsuperscript{101}

The focus group approach was used in this study based on the philosophy that the dynamics of the group would generate valuable evidence supporting the phenomenon of interest.\textsuperscript{101,103,105} The hallmark of focus group design is in the explicit use of a group producing data and insights that would be less accessible without the interaction of the participants of the group, as the investigator needed an in-depth understanding about professionalism and development of professional behaviors.\textsuperscript{8,101,104}

Three questions were identified by the investigator to guide the interview. These guiding questions were:

1. What is the role of academic faculty, clinical faculty and entry-level DPT student in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills of entry-level DPT students?
2. What are the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to these professional behaviors?
3. From the perspective of academic faculty, clinical faculty and entry-level DPT student, how are professional behaviors taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment?

Nine open ended questions were developed from these guiding questions. The first three questions were developed to elicit participants’ responses addressing their role in the development of appropriate key professional behaviors. The following three questions were developed to study the reason why the literature reports a gap between the recognition of knowledge acquired in the classroom setting to the value and internalization of the development of professional behaviors in the clinic environment.

One question was specifically designed to address how professional behaviors are explicitly versus implicitly taught, modeled and assessed in the classroom and clinic.

Finally, the last two questions invited participants to make comments about the topic of discussion and about the questions asked during the interview. Please refer to Table 3.1.

Table 3.1. Interview Questions

<table>
<thead>
<tr>
<th>MAIN OBJECTIVE – Explore professional socialization process in physical therapy from the perspective of AF, CF and DPT student. Purpose 1. An exploration of academic faculty, clinical faculty and DPT students roles in the development of DPT students appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most people when they are asked about <strong>responsibility</strong> as a professional behavior think of skills like the ability of the student to demonstrate punctuality, to complete projects without prompting, to act as patient advocate, to facilitate program development and modification, and to recognize their role as a leader. Can you give an example of your role in the development of responsibility in DPT students?</td>
</tr>
<tr>
<td>2. Most people when they are asked about <strong>interpersonal skills</strong> as a professional behavior think of skills like: the students’ ability to demonstrate interest in patients as individuals, to maintain confidentiality in all interactions, to respect the role of others, and their ability to build partnerships. Can you give an example of your role in the development of interpersonal skills in DPT students?</td>
</tr>
<tr>
<td>3. Most people when they are asked about <strong>communication skills</strong> as a professional behavior think of skills like: the student ability to recognize impact of non-verbal communication in self and others, to utilize and to modify communication (verbal, non-verbal, written and electronic) to meet the needs of different audiences, and to maintain open and constructive communication. Can you give an example of your role in the development of communication skills in DPT students?</td>
</tr>
<tr>
<td>Purpose 2. Description of the sources and differences between knowledge and application of concepts</td>
</tr>
</tbody>
</table>
4. Have you observed a gap between the knowledge acquired by the DPT student in the classroom and the application of these professional behaviors (interpersonal skills, communication skills and responsibility) in the clinic environment? If so, why do you think there is a gap? For example: a. the student learns the importance of being on time, but is constantly late to class or the clinic or the patient’s treatment time; b. the student learns the impact of non-verbal communication, but does not observe the facial grimacing on a patient and is unable to adjust the course of treatment; and c. the student learns about the importance of maintaining interest in the patient / family but dismisses what the patient (child) has to say and only maintains focus to the mother.

5. Other than interpersonal skills, communication skills and responsibility, have you observed students who lack awareness and/or application of other affective professional behaviors? If so, which ones? [How did you recognize it? How did this make you feel? Did you attempt to address and/or correct the unwanted behavior? Why do you think it did or did not work?]

6. Can you give an example of an experience that influenced your development of professional behaviors? (Student Only)

Purpose 3. Examination of how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

7. Can you give an example of a time that you modeled, assessed or taught professional behaviors to DPT students? For example, always arrived to the classroom or clinic 10 minutes early and always was on time for appointments (implicit) or role play a physical therapist patient interaction addressing punctuality (explicit).

8. Is there anything else you would like to share about professional behaviors and their development as DPT students’ transition from the classroom setting to the clinic environment?

9. Do you have any comments about the questions that I have asked you today?

Thank you so much for your participation today. Your time and contribution to my research is valued and appreciated.

Participants

A purposeful sampling method was used to identify and invite 15 academicians associated with the academic program of the University of Miami Physical Therapy Department and 27 clinical instructors associated with the clinical program. A sample of 42 (first-, second- and third-year) entry-level DPT students enrolled in this educational program were invited to participate in this study. The Institutional Review Board at the University of Miami approved this study. Participation was voluntary. Lack of participation did not negatively impact an academician’s performance evaluation, clinical instructor’s relationship with the clinical education program of this institution nor a student’s academic standing.
The investigator involved the Director of Clinical Education (DCE) of the University of Miami Department of Physical Therapy to facilitate the identification of candidates that would yield the most information and have the greatest impact on the entry-level DPT students’ process of professional socialization. The role of the DCE in the sampling process was essential in order to identify clinical instructors and entry-level DPT students who demonstrated awareness about physical therapy professionalism and development of professional behaviors, therefore facilitating the exploration of the phenomenon under study.\textsuperscript{104,108,109}

Only full-time academicians involved in the academic program of this institution were invited to participate in this study. Those faculty members involved in the advisory committee for this study were excluded. Fifteen academic faculty members met the inclusion criteria. The DCE was then involved in identifying the faculty member (n=1) to be invited to participate in the individual interview for phase 1 of this study.

Each candidate was contacted via phone or email and all candidates received a letter as a formal invitation to participate in this study. Candidates received 1) a chart with the concepts of the “Professional Behaviors of the 21\textsuperscript{st} Century” published by May et al (2009-2010) which involved the definition and sample behaviors of the three key professional behaviors of interest for this study, and 2) a copy of the interview questions. These documents were provided to each participant to help refresh their knowledge of professional behaviors and to familiarize the participant with the interview questions prior to the interview in order to facilitate dialogue.
Single case study interview participants consisted of one full-time academic faculty from this institution, one clinical faculty involved with this institution’s clinical education program and one third year entry-level DPT student enrolled in this program.

Phase 2 focus group sampling procedures were as follows: 1) Twelve out of the fourteen academic faculty candidates accepted the invitation to participate in this study. Upon acceptance, the investigator arranged for a time and date that was most convenient for the group to conduct the focus group. Five faculty members could not participate due to teaching responsibilities. Informed consent was obtained from seven (n=7) academic faculty members. 2) Sixteen out of the twenty six clinical faculty candidates accepted the invitation to participate in this study. Nine clinical instructors agreed on a common time and day. Informed consent was obtained for eight (n=8) clinical instructors. One clinical faculty was not able to make to the focus group session at the last minute. 3) Forty-one students were identified by the DCE as potential candidates to participate in this study (13 students out of 50 first-year students, 14 students out of 52 second-year students and 14 out of 46 third-year students). A random number sample generator was used to randomly select 7 students from each graduating class. Twenty one students, as mentioned, were formally invited to participate in this study. Twelve students accepted the invitation and eleven (n=11) consented to participate in the focus group.

**Data Collection**

*Survey.* Each participant completed a survey prior to their individual interview or participation in the focus group. The survey instrument was pilot tested by a recent DPT graduate, a clinical instructor and an academician who is an advisor in this research
project to ensure content validity of the instrument. Additionally, phase 1 participants served as an additional source of preliminary testing. The investigator gathered all completed surveys for data analysis.

The survey contained both open-ended and closed-ended questions and was divided into five sections. The first section addressed participants’ age, gender, ethnicity, and geographical area where participant grew up. The second section inquired about the students’ undergraduate focus and the faculty members type of entry-level PT degree and highest degree held. The third section was specific to the faculty and contained question inquiring about years of experience, in academics, as clinical instructors, current position and about area of specialty. The fourth section addressed professional association membership as an important demonstration of professionalism and faculty certification as an APTA specialist. Finally, this section was also designed to assess participant familiarity with PT and APTA consensus- and evidenced-based documents establishing normative criteria for instruction of professionalism and affective competence.

**Single Case Study Interview.** All 3 participants were interviewed in an informal setting using a structured format. Each interview lasted 35-50 minutes. Each interview was audiotaped and transcribed into a written format by a professional transcriptionist in order to prepare for data analysis. The transcriptions were then made available for each participant to review. The investigator spoke either by phone or in person with each interviewee to obtain feedback about the phenomena of interest, the questions used during the individual interview process, and procedures for data collection. Consequently, the survey was modified and the interview questions were used without modification for phase 2.
**Focus Groups.** Three focus groups sessions were completed using a structured format. Participants sat in a circle and the investigator facilitated the flow of the group interview with a question-answer format. Each focus group session took place in the conference room of the University of Miami Physical Therapy Department. Interview questions were used to facilitate the participants in each group to share their perspectives about the DPT student process of socialization and development of professional behaviors. Each focus group session lasted 60 – 120 minutes. Each focus group session was audiotaped and transcribed into a written format by a professional transcriptionist to prepare for data analysis.

**Data Analysis**

**Quantitative Data Analysis Procedure.** Descriptive statistics (i.e., mean, standard deviations, frequencies and percentages) were calculated to characterize the sample. The data obtained from surveying all participants during phase 1 and 2 of this study was combined and triangulated. Quantitative data analysis was performed using SAS System for windows version 9.1.3.*

Three individuals participated in phase 1 and seven academic faculty (n=7), eight clinical faculty (n=8) and eleven entry-level DPT students (n=11) participated in phase 2 of this study. A total of 29 individuals participated in this study. The data obtained from phase 1 and 2 were combined by group.³⁸,¹⁰⁴,¹⁰⁸

The academicians included 3 females and 5 males who ranged in ages from 34 to 60 years of age; represented the White and Hispanic/Latino ethnicities; had an average of 25 years as physical therapists and an average of 15 years in academics. The clinicians
included 8 females and 1 male who ranged in ages from 29 to 46 years of age; represented the African American, White and Hispanic/Latino ethnicities; had an average of 12 years as physical therapists and an average of 10 years as clinical instructors. The entry-level DPT students included 9 females and 3 males who ranged in ages from 22 to 28 years of age; represented the White and Hispanic/Latino ethnicities; and 11 reported having a bachelor’s degree and 1 a master’s degree prior to entering an entry-level physical therapy professional educational program. Please refer to Tables 3.2 to 3.6.

Table 3.2. Subject Demographic Information (Part I)

<table>
<thead>
<tr>
<th>Reported in years</th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
<th>DPT student (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Range</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>Age</td>
<td>50 (9.54)</td>
<td>34 – 60</td>
<td>36 (6.65)</td>
</tr>
<tr>
<td>Years as a Physical Therapist</td>
<td>25 (10.88)</td>
<td>10 – 39</td>
<td>12 (7.08)</td>
</tr>
<tr>
<td>Years in academics</td>
<td>15 (13.29)</td>
<td>4.5 – 37</td>
<td>-</td>
</tr>
<tr>
<td>Years as a Clinical Instructor</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3.3. Subject Demographic Information (Part II)

<table>
<thead>
<tr>
<th></th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
<th>DPT student (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Frequency (Percentage)</td>
<td>Frequency (Percentage)</td>
<td>Frequency (Percentage)</td>
</tr>
<tr>
<td>Female</td>
<td>3 (37.50%)</td>
<td>8 (89%)</td>
<td>9 (75%)</td>
</tr>
<tr>
<td>Male</td>
<td>5 (62.50%)</td>
<td>1 (11%)</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (Not Hispanic)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographical where subject grew up</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New England</td>
<td>5 (63%)</td>
<td>1 (11%)</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>Eastern</td>
<td>2 (25%)</td>
<td>-</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>Southern</td>
<td>1 (12%)</td>
<td>7 (78%)</td>
<td>2 (17%)</td>
</tr>
<tr>
<td>Midwest</td>
<td>-</td>
<td>-</td>
<td>3 (25%)</td>
</tr>
<tr>
<td>Outside of the USA</td>
<td>-</td>
<td>1 (11%)</td>
<td>1 (8%)</td>
</tr>
<tr>
<td>Area of undergraduate Studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 3.4. Subject Demographic information (Part III)

<table>
<thead>
<tr>
<th>Current Position</th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency / Percentage</td>
<td>Frequency / Percentage</td>
</tr>
<tr>
<td>Instructor</td>
<td>2 (25%)</td>
<td>Junior Therapist 2 (22%)</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>4 (50%)</td>
<td>Senior therapist 4 (44%)</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>2 (25%)</td>
<td>Director 2 (22%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assistant Hospital Administrator 1 (12%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Area of Specialty</th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency / Percentage</td>
<td>Frequency / Percentage</td>
<td></td>
</tr>
<tr>
<td>Neurology</td>
<td>-</td>
<td>4 (44%)</td>
<td></td>
</tr>
<tr>
<td>Orthopedics</td>
<td>2 (25%)</td>
<td>1 (11%)</td>
<td></td>
</tr>
<tr>
<td>Pediatrics</td>
<td>1 (12.5%)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Sports</td>
<td>2 (25%)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Cardiopulmonary</td>
<td>1 (12.5%)</td>
<td>2 (22%)</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>1 (12.5%)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Wound Care</td>
<td>1 (12.5%)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Geriatrics</td>
<td>-</td>
<td>2 (22%)</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3.5. APTA Membership and Certified APTA Specialist

<table>
<thead>
<tr>
<th></th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
<th>DPT student (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency / Percentage</td>
<td>Frequency / Percentage</td>
<td>Frequency / Percentage</td>
</tr>
<tr>
<td>APTA Membership</td>
<td>8 (100%)</td>
<td>5 (56%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>DPT students planning to retain APTA membership</td>
<td>-</td>
<td>-</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>APTA Section Membership</td>
<td>8* (100%)</td>
<td>5† (56%)</td>
<td>0%</td>
</tr>
<tr>
<td>Certified APTA specialist</td>
<td>5** (63%)</td>
<td>2†† (22%)</td>
<td>-</td>
</tr>
</tbody>
</table>

*Members all sections except: Aquatic, Federal, Hand Rehabilitation and Women’s Health.

**CCS, SCS, OCS and PCS
Table 3.6. Participants Reported Familiarity with the Following PT and APTA Documents

<table>
<thead>
<tr>
<th>Document</th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
<th>DPT student (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normative Model</td>
<td>8 (100%)</td>
<td>5 (56%)</td>
<td>8 (67%)</td>
</tr>
<tr>
<td>The Guide</td>
<td>8 (100%)</td>
<td>9 (100%)</td>
<td>11 (92%)</td>
</tr>
<tr>
<td>CPI</td>
<td>8 (100%)</td>
<td>8 (89%)</td>
<td>9 (75%)</td>
</tr>
<tr>
<td>APTA Minimal Clinical Skills</td>
<td>2 (25%)</td>
<td>5 (56%)</td>
<td>7 (59%)</td>
</tr>
<tr>
<td>Generic abilities</td>
<td>8 (100%)</td>
<td>8 (89%)</td>
<td>11 (92%)</td>
</tr>
<tr>
<td>Opportunity Favors the Prepared: A guide to facilitating Development of Professional Behavior</td>
<td>0 (0%)</td>
<td>1 (11%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Core Values</td>
<td>6 (75%)</td>
<td>7 (78%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>Core Values: Self-Assessment Tool</td>
<td>4 (50%)</td>
<td>6 (67%)</td>
<td>11 (92%)</td>
</tr>
</tbody>
</table>

**Qualitative Data Analysis Procedure.** The investigator first read each of the interview and focus groups transcripts line by line and identified broad, wide initial impressions that emerged from the data. Utilizing ATLAS.ti** data management program, the investigator began the open coding process for each transcript.**8,104,110 Developing codes and categories were crucial steps in data analysis.**102,104 In qualitative research a coded piece is the smallest piece of analyzed data.**102,104 During the coding process the investigator read through the data to identify certain words, phrases, pattern of behaviors and events pertaining to the development of professional behaviors. Each of these distinct thoughts was labeled with one or two word code (i.e., “Respect”).


The coded data was reassembled into larger units of meaning creating categories. The categories combined with the demographic data gathered from the surveys were triangulated. The codes and categories are summarized in Table 3.8.
Table 3.8. Main Codes and Categories that Emerged from Data Analysis

<table>
<thead>
<tr>
<th>Categories</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Behavior</td>
<td>Affective, responsibility*, interpersonal skills*, communication skills* and all other PB</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Punctual, punctuality, responsibility*, leader, leadership, patient advocate</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>Motivation, respect, respectful, built relationships, confidential</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>Open, constructive, verbal, non-verbal, written, electronic (email &amp; text)</td>
</tr>
<tr>
<td>Gap</td>
<td>Gap, knowledge, apply, application</td>
</tr>
<tr>
<td>Role Model</td>
<td>Implicit, explicit, role play, role model†, modeling†</td>
</tr>
</tbody>
</table>

*Codes that repeat in another category.
†Codes found as a result of the ATLAS.ti auto coding process, by serendipity.

The preliminary categories that emerged were used to identify 1) initial themes representing the academic faculty, clinical faculty and DPT student perspectives about the process of physical therapy professional socialization and 2) changes that may need to be considered from original interview questions during the process of developing focus group questions. The preliminary codes, categories and themes emerged from phase 1 data analysis served as groundwork for phase 2 data analysis. The preliminary themes were: 1) professional behaviors develop over time, 2) knowledge acquisition develops over time, 3) skills in the affective domain encompass qualities that are critical in physical therapy, 4) from implicit to explicit education, and 5) professional attire. Please refer to Table 3.9 for a comparison between the preliminary and main themes. Phase 1 and phase 2 data were combined and triangulated. These techniques were aimed at producing high-quality data and at strengthening the total outcome of this research.

Table 3.9. Preliminary and Main Themes Emerged from Data Analysis

<table>
<thead>
<tr>
<th>Preliminary Themes</th>
<th>Main Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional behaviors develop over time.</td>
<td>Professional behaviors develop over time.</td>
</tr>
<tr>
<td>Knowledge acquisition develops over time.</td>
<td>Knowledge acquisition develops over time.</td>
</tr>
<tr>
<td>Skills in the affective domain encompass qualities that are critical in physical therapy.</td>
<td>Skills in the affective domain encompass qualities that are critical in primary care physical therapy.</td>
</tr>
<tr>
<td>From implicit to explicit education.</td>
<td>From implicit to explicit approach to Physical Therapy education.</td>
</tr>
<tr>
<td>Professional attire</td>
<td>Professional appearance.</td>
</tr>
</tbody>
</table>
**Credibility and Trustworthiness.** Any research needs credibility to be useful.\(^8,^{104}\) A credible qualitative research strategy requires that the investigator adopts a neutral stance with regards to the phenomenon under study. The investigator used research strategies aimed at producing high quality data and analysis that was trustworthy, authentic, and balanced about the phenomenon under study, and fair to the people studied. In addition, the investigator acknowledged being the human instrument collecting the data, and carefully reflected on, dealt with and reported potential sources of biases and errors.\(^{104}\) Therefore the investigator undertook a number of strategies aimed at enhancing the trustworthiness of this study. These included piloting surveys, single case study interview questions, data analysis procedures and focus group questions, as well as triangulating data.\(^{104,108}\) All confidential documents were placed in a secure location at the University of Miami Physical Therapy Department.

**RESULTS**

Five main themes emerged from the qualitative and quantitative data analyses:

1. Professional behaviors develop over time.
2. Knowledge acquisition develops over time.
3. Skills in the affective domain encompass qualities that are critical in primary care physical therapy.
4. From implicit to explicit approach to Physical Therapy education.
5. Professional appearance.
Themes

Professional behaviors develop over time. The participants’ perceptions on the process of entry-level DPT students professional socialization is that professional behaviors can develop and develop over time. Academic and clinical faculties stated that the majority of the students are able to develop the appropriate affective skills over the course of their professional training. However, faculty reported that entry-level DPT students struggled with concepts of professionalism. The assumption was that with time and practice students would be able to demonstrate appropriate professional behaviors.

Academic and clinical faculty members shared situations in which they found students having difficulty understanding the critical importance of acquiring the specialized professional behaviors like responsibility, interpersonal skills, and communication skills essential for effective and efficient patient care.

AF Subject 3 (>15 years in academics)
I have an online component, which includes an online exam. They are given a syllabus that tells them when they have to complete the online quizzes, by what time. They’re responsible for doing that on their own. I have discovered that this particular exercise has at times identified people who had other problems in the curriculum because out of a class of 50, maybe one or two of them wouldn’t be able to do that. So I think that is a way of dealing with the issue of responsibility.

CF Subject 2 (>15 years as a clinical instructor)
So I want to impress upon them that what they communicate to a patient and the back and forth communication that takes place can very much effect the healing process and very much effect the therapeutic process, and sometimes can make or break the therapeutic process........ Now having said that, just like I said in the last topic, this isn’t a large part of their physical therapy education. Again, they’re largely educated and trained in skills and techniques. So I still want to concentrate on those skills and techniques, but like the interpersonal stuff I’ll start to layer in the importance of this communication, rewarding them positively when I see that they communicate in a particularly therapeutic way, and then developing problem skills and action plans, and you know, kind of adding in, you
know, communication through the rest of the therapeutic processes for the rest of their internship.

According to the academic faculty, students have great difficulty recognizing and internalizing the importance of communication skills, how communication can occur (i.e., verbal, non-verbal, written and electronic), and finally, that communication can occur between individuals, within an individual or in a group of individuals.

AF Subject 1 (5-15 years in academics)
Communication skills are key in our ability to be physical therapists, and hopefully right from the first day of class I’ll explain to them the importance of verbal communication and how they perform it. I don’t want them to rely on today’s mechanisms. A lot of people in today’s generation will use texting and e-mails, and don’t think that it’s important to have face to face communication, and I think that they need to understand it’s important not only in the classroom, but when they get out in the clinic.

AF Subject 8 (>15 years in academics)
I create a conflict situation because this generation is into texting and e-mailing, and my era was into personal communication and telephone. So I find there’s a real paradox in how they want to communicate versus how I want to communicate, and to top that off, I believe in questioning the students because I believe the higher level knowledge is when you can verbalize it. To write it on a test I believe is easier than to speak it, and I call on people especially when they’re not concentrating or observing. Finally, I feel it’s very frustrating, very stressful, but that to me is crucial in communication because in real life you will be asked questions and you’re expected to have answers, I’ll not text it nor e-mail it.

The DPT student participants shared experiences reflecting how the entry-level graduate transitions from recognizing to accepting to internalizing the value of developing appropriate professional behaviors throughout the continuum of academic and clinical experiences.

DPT Student Subject 7 (first year Student)
Being new to the program I’m just trying to learn how to balance school work with also being mature inside and outside the classroom.

DPT Student Subject 12 (second year student)
Going along with kind of what participant ten [a second year student] was saying, we kind of have a responsibility for our own education at this point. Nobody told us that we had to go to PT school. We chose this and being in the clinic for the first time now I’m kind of realizing like you get out of it what you put in, so if I was late every day I probably won’t get the same experiences and stuff like that. So when I’m responsible I get the most out of my education.

DPT Student Subject 1 (third year student)  
It’s kind of scary how much we communicate using texting, and you definitely lose the context. You get a message and you don’t really know what they mean by that, and it can create all sorts of miscommunications and problems, probably more than we need. I think using the computer you’re a little more impulsive. You don’t have to really think about what you’re writing versus when you’re writing it’s slower. It’s a slower process. You can say, “Oh, do I really want to say that?” and you have to think twice. It’s written in pen. With a computer you can just backspace and kind of word vomit, if you will, on the computer. So I think I would think about it more if it was written than if it were typed. I would just be more impulsive.

Except for one first-year student, all participants reported that there is a gap between the knowledge and skills acquired in the classroom and the application of these concepts, skills and behaviors in the clinical environment. Academicians attribute this gap to the lack of mature learning skills, the inability to problem solve, the difficulty of interpreting knowledge, the lack of listening skills, undergraduate learning strategies not being effective in graduate school, and as students advance in the program, to the lack of synthesis and application of all the information obtained throughout the curriculum. Clinical instructors attribute this gap to the lack of experience, the lack of awareness, students’ inability to engage and value the affective learning experiences until late in the program or after graduation, a faculty-student mismatch of professional and performance expectations, the lack of exposure to the clinical environment throughout the course of classroom training, and that educational programs are based in the development and mastery of technique and skill. Finally, the students attributed the gap to the classroom’s controlled environment, the classroom experiences are completely different to the clinic
experiences, the lab sessions are completely different than the clinical environment and that the student handbook’s code of conduct is not reinforced throughout the course of the professional training.

**Knowledge acquisition develops over time.** In the focus group of clinical instructors, one participant stressed the importance of providing students with a structured, simple and logical learning environment. She described how she engages her students in effective and efficient learning experiences. These strategies were corroborated by a peer during the focus group. Relevant comments of this interaction included the following:

CF Subject 2 (>15 years as a clinical instructor)
*When I take a student I really try to make a conscious shift in the way that I practice, and it’s weird because I’m still practicing. ………. Left to my own devices I will succumb to this really beautiful flow of treatment, you know, and the structure is there in my mind and it’s on paper, but we’re just flowing from one week to the next and sometimes we go forward and then they go a little bit back a little bit, and then we go off on a tangent over here, and you know, we’re just kind of grooving with the groove of therapy in order to get from A to Z, and as an experienced clinician I don’t think that you realize how much you’re just kind of flowing and grooving with your patient. ………. but students aren’t going to know what the heck your flow and groove is, so when I take a student I have to like consciously the Friday before the Monday that this student, I have to like sit down with myself and say like, okay, that flow and groove stuff, you’re going to stop that, and it’s all going to be A, B, C and 1, 2, 3. ………. So we’re doing it extrinsically always as, you know, homework practicing and whatever, and I’m trying to model intrinsically as well, as well as all of these other behaviors as well, but I would say that that’s probably the greatest shift that I make as a clinician from when I have a student to when I don’t have a student.*

CF Subject 7 (>15 years as a clinical instructor)
*What you’re describing as the flow and the groove is what Jensen and others have described as expertise, and it’s because you as an expert who’s been practicing for X years have to make a conscious decision to novice practice when you have a brand new student, and that’s exactly what I think you just described.*

CF Subject 2 (>15 years as a clinical instructor)
*Thank you. And in addition to that when I talk to students I always talk about, you know, the way that the brain works with patients and the way that our brain works, and our brain looks at details and it looks at big pictures………. I want you to write down the details. I want you to write down the big picture, and I want
you to show me how we’re going to go from the details to the big picture, and I want you to show me how we’re going to go from the big picture to the details. So again, just you know, again kind of bringing it down to not less of a quality of treatment, still the quality is there for the patient, but more of a novice model that can be, you know, a good learning experience for the student.

Both academic and clinical faculty demonstrated motivation and commitment to continue learning. Two out of nine clinical faculty members and all nine academic faculty members pursued post-professional training. Please refer to Table 3.5. In addition, the shared experiences of the academic and clinical faculties reflect a range of experiences and knowledge obtained throughout the collective years of being a physical therapist combined with the years involved in the academic or clinical educational programs. For these participants, the motivation and commitment to continue learning is consistent with the works of Dreyfus\textsuperscript{32}, Jensen\textsuperscript{30}, and Benner\textsuperscript{98} on how acquisition and development of skills happens through formal training and practice.

\textit{Skills in the affective domain encompass qualities that are critical in primary care physical therapy.} The academic and clinical faculty reported that affective skills are imperative in order to practice as primary care and autonomous practitioners. The faculty reported that carrying a sense of professional responsibility, taking a leadership role, being a patient’s advocate, having the ability to problem solve, and having the ability to interpret knowledge are skills that encompass qualities critical in primary care physical therapy.

\textbf{AF Subject (<5 years in academics)}

\textit{I find this is a huge problem, especially the ability to problem solve and interpret knowledge. They’re very able to typically recite back what you’ve given them in the notes, but to actually apply the knowledge and utilize it seems to be very difficult. The way you ask test questions, if you don’t ask it directly the way you put it on the Power Point it seems to be a big problem. In lab, you know, they can}
all recite what the five cardinal signs of inflammation are, but then when you ask them to tell the difference between an acute patient and a proliferative patient, they can’t go back and say, well, they can say day one to three is acute, three to 20 could be proliferative, but they can’t take and say, well, the cardinal signs are gone and make that change, and so that’s trying to get them to make that switch is extremely difficult, and we try to do it in lab, but I don’t know how successful we are until they actually get in some patients.

CF Subject 7 (>15 years as a clinical instructor)
So in my mind responsibility is, there are two types here one is responsibility as an intern, which to me is sort of like responsibility of an employee, you show up on time. Then there’s professional responsibility, and that’s a different kind of responsibility beyond just showing up on time and making sure you’re in the dress code, and that’s harder I think to teach. One issue or one concern I have with some of the DPT students, because we have all been involved in educating a lot of them, when they get into the clinic this issue of responsibility also carries over and I think bleeds over a little bit into the autonomous practice carrying a sense of responsibility as a professional and behaving more like an autonomous professional and less like a technician who’s willing just to take someone’s orders, and stepping up to the plate to be the leader.

Academicians and clinical instructors reported having difficulties engaging students in affective learning experiences. Faculty agreed that appropriate affective skills are more difficult to promote, assess and model than cognitive or psychomotor skills.

These challenges were validated by a student completing his first internship:

DPT Student Subject 11 (second year student)
Having been through the first year of education in the classroom and now having gone to the clinic, I think it’s now our role to take it upon ourselves to internally be responsible as a class rather than relying on the teachers and the rules, so I think it’s important that we take it, like I said, upon ourselves to kind of check each other and make sure we are being punctual and are stepping up into leadership roles when necessary and promoting responsibility ourselves rather than relying on the teachers essentially.

From implicit to explicit approach to Physical Therapy education. All academic faculty members described how their approach to physical therapy education incorporates systematic and explicit approaches. A faculty member shared that the curriculum in this institution is design to develop entry-level skills in all domains of learning.
AF Subject 1 (5 to 10 years in academics)
They’re given a contract, which is a syllabus when they first get in. They’re given what they’re going to be graded on, the objectives of the course, and responsibility to me is whether or not they abide by what they’re given and not try to take shortcuts or get out of things.

AF Subject 8 (>15 years in academics)
Basically I lead by example. I’m always on time. I’m very organized and the classroom has a very structured flow to it.

Clinical faculty members reported that most educational strategies used in the clinic continue to be more implicit than explicit. All nine clinical instructors reported that they demonstrate punctuality, commitment to learning, work ethic, and taking initiative as implicit behaviors that associate to professional practice.

Only three out of the nine clinical faculty members reported using role playing with students who demonstrate lack of or underdevelopment of appropriate affective skills. On the contrary, all of the academic faculty members reported using role modeling as an explicit approach to engage students in affective and efficient learning experiences in the classroom.

AF Subject 2 (5 to 10 years in academics)
I use a lot of video clips of therapists interacting with patients, and then when they do their lab experience with patients a lot of times will demonstrate first, or if they’re struggling with something I’ll intervene, model a different way, different approach and then ask them what they thought about it, how was it different than what they were doing, and let them try to figure out what, you know, come up with an answer.

AF Subject 3 (>15 years in academics)
I also very explicitly on the topic of cell phones on the first day announce that I have an I-Phone that I love dearly, but that out of respect for them I have not brought it to class with me, and I would expect the same respect in return, and it seems to work.

Three students shared experiences stressing the positive impact that academicians and clinical instructors have when explicit instructions and expectations are provided in
the classroom and clinic. Two students also shared that an attribute of the academic faculty members of this program, is involvement in clinical practice. One student reported that when academicians incorporate real-life examples during lecture and labs, students are more apt to engage in the learning process. All students reported that they are more interested in learning when the material has immediate relevance.

**Subject first year DPT Student**

*As a first year I haven’t experienced clinical yet, but I like the fact that our professors use a lot of real-world examples based on their own experiences. Almost all our professors currently work in clinics, so they have a lot of knowledge they share with us in how they relate to their patients.*

This manuscript explored the evolution and significance of evidenced-based documents in the promotion, development and evaluation of professional behaviors critical for affective competence. The survey analyses assessing participants’ familiarity with PT and APTA documents establishing criteria for physical therapy education revealed a low number of clinical instructors and DPT students being familiarized with PT and APTA documents. Please refer Table 3.7. Two academic faculty members (25%) reported being familiar with the APTA minimal required skills, none are familiar with Opportunity Favors the Prepared, 75% were familiar with the Core Values and finally, only four academicians (50%) were familiar with the Core Values self-assessment. This is disturbing finding as these documents focus around a set of expected outcomes that must be exhibited by the entry-level DPT students prior to professional practice and educators may use these documents to effect change in a student having difficulty learning or demonstrating appropriate professional behaviors. According to Masin, teaching and modeling the expected affective outcomes helps physical therapy students to recognize and value the importance of developing the established professional
behaviors.\textsuperscript{15} Therefore, as academic and clinical faculty become familiarized with the PT and APTA documents it would be easier to assess and model professionalism and professional behaviors.

**Table 3.6. Participants Reported Familiarity with the Following PT and APTA Documents**

<table>
<thead>
<tr>
<th></th>
<th>Academic Faculty (n=8) Frequency / Percentage</th>
<th>Clinical Faculty (n=9) Frequency / Percentage</th>
<th>DPT student (n=12) Frequency / Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normative Model</td>
<td>8 (100%)</td>
<td>5 (56%)</td>
<td>8 (67%)</td>
</tr>
<tr>
<td>The Guide</td>
<td>8 (100%)</td>
<td>9 (100%)</td>
<td>11 (92%)</td>
</tr>
<tr>
<td>CPI</td>
<td>8 (100%)</td>
<td>8 (89%)</td>
<td>9 (75%)</td>
</tr>
<tr>
<td>APTA Minimal Clinical Skills</td>
<td>2 (25%)</td>
<td>5 (56%)</td>
<td>7 (59%)</td>
</tr>
<tr>
<td>Generic abilities</td>
<td>8 (100%)</td>
<td>8 (89%)</td>
<td>11 (92%)</td>
</tr>
<tr>
<td>Opportunity Favors the Prepared</td>
<td>0 (0%)</td>
<td>1 (11%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Core Values</td>
<td>6 (75%)</td>
<td>7 (78%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>Core Values: Self-Assessment Tool</td>
<td>4 (50%)</td>
<td>6 (67%)</td>
<td>11 (92%)</td>
</tr>
</tbody>
</table>

**Professional appearance.** The DPT student participants reported that requiring a dress code and professional presence in the classroom would prepare them for the clinic experiences. As mentioned, students shared their frustration about the lack of reinforcement of the students’ handbook policy and procedures throughout the course of academic and clinical experiences.

Subject first year DPT Student
*I do treat this like a more professional environment, and I’m sure people who haven’t had that experience will eventually realize it as well.*

Subject second year DPT Student
*I think there’s a very big gap between knowledge and application. I think the problem is that professional behavior isn’t really something that you can practice just by having knowledge. It’s not didactic. It’s something you have to practice and it has to become routine for you day in and day out, and not that it’s problematic, but we happen to go to school at the University of Miami in sunny Florida, and it’s pretty laid back here, and a lot of the things that we talked about and are educated in in terms of our professional behaviors aren’t necessarily expected of us on a day in and day out basis, and therefore, those of us that don’t*
hold our self to those expectations every day don’t practice them every day, and then when we get in a situation where it’s necessary we fall back into bad habits, and so in order for them to come quicker and to close the gap it’s important to hold yourself to those expectations and practice every day.

Subject third year DPT Student
I hate to say this because I love wearing my sweats to school, but honestly I’ve gone to Catholic school so I had uniform much of my life. I honestly think it would change the attitude during classes. I don’t know, me if particularly if I’m in sweats I tend to slouch more and just be sloppy versus when you’re in nicer clothes your posture’s even better, like everything. You’re more alert. So maybe, I hate to say it, maybe it would help in some instances. I think it’s actually really interesting to think about just because I think it’s really interesting the part about the dress code. Now that I think about it, I think it would help because you’re just in at totally different mindset.

Subject third year DPT Student
Overall just to encourage professors to remind students to treat every lab or every practical as if you were in the clinic like from top to bottom, the way you dress, the way you talk, the way you act, your eye contact, everything because you have to start practicing not only your physical and manual skills, but also your affective and personal skills.

Five out of the eight academic faculties indicated that dressing appropriately and following dress code as a strategic way to facilitate the mastery of professional behaviors.

All academicians reported that modeling proper professional practice is crucial in the academic setting and clinical environment. In addition, all academicians reported representing proper professional appearance shows that you have insight about what your profession is.

AF Subject 4 (4.5 years in academics)
I always try to model, so I do when I’m lecturing come in shirt and tie. I’m always there early, although in labs as participant seven was indicating, I typically wear a polo shirt because that’s typically what in the clinic that I grew up working in that’s what we wore is polo shirts. So I mean there is a variety of what’s acceptable and what’s not acceptable, and I’ve had some issues with our dress code, but I try to be consistent with it.

AF Subject 5 (8 years in academics)
I do a lot of observations in the acute care setting where I set up observations at hospitals to observe room care or acute care in the ICU, and so I may have to tell
them about proper attire, dressing, and you know, if they don’t wear the proper attire they can’t go into the clinic. So it’s their responsibility to dress appropriately and act appropriately as if they’re, you know, physical therapists in a clinic.

AF Subject 8 (34 years in academics)
I also dress the role that I feel they should be. I believe a lot of the faculty dress like in polo shirts. To me that does not symbolize a professional, a medical professional. I wear a shirt and tie. So I try to model what I expect them to model. Now, I don’t know how that works in the clinic since I believe many of the faculty counter model what I model, so I feel the students are getting a paradox of what the model they’re trying to be. So how does it make me feel? I’m frustrated not so much for the students, but for the profession because I’m not sure our profession is clear on what our role model image is actually to be.

DISCUSSION

The findings indicate that the process of professional socialization is vital for individuals pursuing physical therapy as a profession. The themes that emerged from data analyses indicate 1) that entry-level DPT students develop knowledge and professional behaviors over time, 2) that education focused around a set of expected affective skills and competencies is critical in primary care physical therapy, 3) that today’s entry-level students need an explicit approach to physical therapy education and finally, 4) that professional appearance as part of professional practice.

These findings show that even though the process of professional socialization in physical therapy has been explored in a variety of ways, there is a continuing concern about entry-level DPT students’ underdevelopment of professional behaviors as they transition from the classroom setting to the clinical environment. The findings also showed that academic faculty and clinical instructors struggle with fostering, teaching and evaluating the development of affective skills.
Knowledge Acquisition and Professional Behaviors Develop Over Time

In physical therapy, knowledge acquisition is relevant in two ways, entry-level DPT students must acquire not only sufficient cognitive knowledge and psychomotor skills to become effective practitioners, but they must also acquire appropriate professional behaviors and affective competence to be able to fulfill the demands of the profession. According to the literature reviewed, there is a predictable sequence in the development of cognitive and psychomotor skills, which historically is not applied to professional education in the affective domain. The assumptions have been that physical therapy professional education includes learning experiences in the cognitive, psychomotor and affective domains and that “learning how to act as a professional” will take place throughout the continuum of academic and clinical experiences. But, today’s entry-level novice students are just entering adulthood and their attitudes, values and character development may not be at a professional level.

The graduate entry-level DPT students beginning their physical therapist professional training are just entering a mature learning age. This is significant because a student is normally classified as a mature student at age 25 and according to the Center for Postsecondary and Economic Success, 36% of undergraduate students are age 25 or over. The average age of the graduate entry-level DPT students involved in this study was 25 (range 22-28), where 9 out of 12 DPT students entered physical therapy professional training prior to a mature learning age. In addition, according to the Knowles’ theory, there are six beliefs on why adults engage and embrace learning:

1. Adults need to know the purpose for learning something.
2. Experience provides the basis of learning experiences.
3. Adults need to be involved in the planning and evaluation of educational experiences.

4. Adults are more interested in learning matters having immediate relevance.

5. Adult learning is problem-centered rather than content oriented.

6. Adults respond better to internal versus external motivators.

These six beliefs are similar to the six essential elements to facilitate mastery of professional behaviors presented by May et al. The six elements and the significance of these elements as it relates to this study are as follows:

1. **Sharing Expectations** that are clear, explicit and public. Specific to the academic setting, academic faculty must design and implement affective behavioral objectives and classroom experiences that are clear, explicit and public. In the clinical environment, clinical instructors are encouraged to do the same. Specific to the DPT students, sharing their expectations about the professional academic and clinical programs allows the students and faculty to discuss the similarities and differences. Consequently, both faculty and students have similar experiences, are able to engage in affective learning and are able to embrace the socialization processes (interaction, integrating and learning).

2. **Providing Opportunities to practice and learn expected behaviors.** Providing academic and clinical experiences to practice allows the student to develop the necessary skills and appropriate behaviors thorough formal and informal training and practice.
3. **Ongoing Assessment** by a teacher or supervisor, by a peer and by oneself. A number of PT and APTA documents linked to the profession’s attitudes, behaviors and beliefs about professionalism and professional behavior in successful clinical practice have been identified, and may be used as assessment tools as they provide measurable, concrete and objective behavioral criteria. But some of the faculty members and students are unfamiliar with these documents.

4. **Providing Feedback** when coaching, guiding and consulting. By providing consistent and constructive feedback, the academic and clinical faculty members assist students to understand, to engage and to value (implicit and explicit) affective education. The DPT students must learn that feedback facilitates professional growth.

5. **Structuring Growth** through remediation and enhancement of performance. Both the concepts and performance criteria in the evidenced-based documents about affective competence and the set of processes involved in the process of professional socialization result in specific types of outcomes. In physical therapy, the desired outcome is affective entry-level performance essential for entry into the profession.

6. **Improving Consequences** if expected behaviors are not learned and demonstrated consistently at the required level or proficiency. In order to effect change in a student having difficulties with affective competence, the underdevelopment of professional behaviors must be explicitly addressed. Explicit behavioral criteria and timely feedback help the entry-level physical
therapy student to self-assess, self-correct and self-direct their process of professional socialization and development.12 In planning any teaching-learning, mentoring or advising activities, implicit versus explicit behavioral criteria should be considered. The use of explicit criteria allows students to have clear guidelines about instructor’s expectations and reflects in realistic classroom and clinical learning experiences.

Foord-May et al suggested the use of these elements to enhance the academic and clinical processes of promoting, modeling and assessing the development of professional behaviors.24 Participants agreed that professional socialization and development of professional behaviors happened throughout the continuum of academic and clinical learning experiences. The perceptions of the academic and clinical faculty supported the review of literature reporting that the process of professional socialization of the entry-level DPT student progresses as students acquire beginning level performance skills in the classroom and progresses over time to competent entry-level performance at the completion of clinical internships. In physical therapy, this is an indication that knowledge acquisition and development of professional behaviors occurs over the course of professional education.

Noting that the individuals entering the physical therapy programs may not be at a mature learning age, it is imperative for educators to recognize that the teaching and learning strategies should transition from teacher-directed to student-directed. This allows the novice, immature entry-level student to progress to a competent, mature graduate throughout the continuum of academic and clinical experiences.122 For example, in physical therapy practice a practitioner treating a 6 month old baby will not try to teach
nor force this individual to walk. This therapist will work on trunk control, righting reactions, head control and developmental sequence preparing this individual to acquire the appropriate motor skills leading to the ability to walk. The same is true for some of the entry-level DPT students. They must first acquire knowledge about what are the appropriate and accepted professional behaviors and then accept, display, and internalize these skills. Both faculty and students must be aware that this learning process can be a slow and often uncomfortable. In addition, faculty and students must have similar educational beliefs for affective learning to be successful.16

The process of professional development requires total immersion of the academic faculty, clinical instructors and entry-level DPT students.3,5,52 Participants agreed that professional socialization and development of professional behaviors happened throughout the continuum of academic and clinical learning experiences. The academic and clinical faculty supported the concurred that the process of professional socialization of the entry-level DPT student is initiated as students acquire beginning level performance skills in the classroom and progresses over time to competent entry-level performance at the completion of clinical internships.51

The challenge all the participants of this study faced with facilitating, promoting or developing professional behaviors was determining what the appropriate behaviors are and how to objectively assess them. Despite the efforts of the physical therapy profession to link the profession’s attitudes, behaviors and beliefs about professionalism in PT and APTA documents, the results of this study suggest that academicians and clinical instructors are not familiar with all the published PT and APTA documents available to enhance academic and clinical education. These documents establish normative criteria
for instruction of professionalism and affective competence. These documents also define what the appropriate behavior is and delineates specific behavioral criteria for each developmental/performance level. These documents serve as a teaching tool to facilitate the design of affective learning objectives, as well as an evaluation tool to assess affective competence in classroom and clinical experiences.

The results of this study also suggest that not all entry-level DPT students are able to immediately recognize and value the critical importance of the expected outcomes and specific behavioral criteria that characterize student affective competence. The first year DPT students reported that the ability to manage time to complete all school work and the ability to identify how to act professionally inside and outside of the classroom to be a barrier for transforming the knowledge learned into something useful. All the second year DPT students reported valuing and accepting the relevance of affective competence as they complete their first internship. Most of the third year DPT students shared experiences reflecting their ability to internalize the critical importance of affective competence as they culminate their academic training and prepare to start three 8-week clinical internships. This is an indication that, in physical therapy, knowledge acquisition and professional behaviors develop over the course of professional education.

Creating opportunities to engage entry-level DPT students in affective learning experiences facilitates not only the ability to generalize from one context to another, to integrate information from different sources, to apply knowledge and skills in the practice setting, and to synthesize cognitive, affective, and psychomotor skills. It also facilitates effective interaction with clients, families, the community and other professionals. Academicians involved with this study reported difficulties engaging students in affective
learning experiences early in the professional educational program. The academic faculty reported that students are overwhelmed with the responsibility of being in a professional program and are not able to recognize the value of education in the affective domain. The undergraduate learning strategies of memorizing and recalling material taught is no longer appropriate for the graduate professional preparation. Academic faculty reported having to constantly reinforce new strategies involving comparing and contrasting technical knowledge, creating and designing appropriate movement strategies and valuing and internalizing affective skills.1,19,20,22 The clinical instructors reported difficulties in facilitating students to self-assess their performance and to value the contributions from patients, family and peers.15 The DPT student participants reported similar difficulties as those identified by the academic faculty and clinical instructors, but they did not share why the difficulty exists. For these participants, the value and importance of affective competence was recognized when they were given access to the practice environment as reported by second- and third-year DPT students.

**Skills in the Affective Domain Encompass Qualities that are Critical in Primary Care Physical Therapy**

A primary health care provider has been described as a professional who is accountable for addressing personal health care needs and acts as the principal point of consultation for patients.123 A primary care practitioner must possess a wide breadth of knowledge to be the first point of contact for a person with an undiagnosed health concern as well as to provide routine care, preventative care and health education. According to Vision 2020, doctors of physical therapy would be the recognized practitioner of choice for the diagnosis of, interventions for and prevention of movement
related disorders. For decades, the military was the only context in which the physical therapists worked as primary care practitioners. As the profession moves towards Vision 2020, DPT curricula are designed to promote the primary care model for the physical therapist.

The role of physical therapist as primary care practitioners has been evolving rapidly and affective competence is critical in primary care physical therapy. Effective communication, effective patient education, identification and resolution of conflicts, empathy, compassion and assertiveness have been identified as skills necessary for the physical therapist to practice as primary care practitioners. The findings of this study indicate that engaging the entry-level DPT students in affective learning experiences which focuses around a set of expected skills and competencies is essential for effective patient care and the ability to practice as primary care practitioners.

From Implicit to Explicit Approach to Physical Therapy Education

The faculty participants of this study shared their concerns about entry-level DPT students not being aware of the hidden teachings and modeling that underlie faculty professional practice. Both physical therapy needs that reflect the changing landscape of physical therapy practice and representation of different generational groups in the classroom, the clinic and in general society. May et al reported that the graduates of the classes that will influence and shape clinical practice in the 21st Century are Millennials and Generation Y students. Plack et al reported that 4 generations (Traditionalists, Baby Boomers, Generation X and Millennials) may be working and learning in the classroom and clinic together. These findings are significant because
the understanding of the traits, characteristics and motivating factors of these various
generational cohorts impact the teaching-learning processes in physical
therapy.\textsuperscript{100,100,120,121,126} Goulet report that affective learning objectives and outcomes need
to be explicit, defined, assessed and threaded throughout the curriculum.\textsuperscript{42}

In physical therapy documents like The Normative Model, The Guide to PT
practice, the CPI, the APTA minimal clinical skills, the Professional Behaviors (formerly
known as the Generic abilities), the Opportunity Favors the Prepared, the Core Values
and the Core Values Self-Assessment tool identify and provide tools for teaching,
mastery and assessment of affective skills related to professionalism in physical therapy
education. These documents focus around a set of expected outcomes and behavioral
criteria that must be exhibited by the entry-level DPT students prior to professional
practice. Faculty members value the learning, teaching and evaluating models delineated
in these documents as essential to successful integration of guidelines and norms into
academic and clinical experiences; as well as to support the concepts about managing the
genations, the learning preferences of the mature adult, and the implementation of
elements to enhance the development of professional behaviors.\textsuperscript{42, 46,120,126}

**Professional Appearance**

The participants in all three groups reported that appearance and professional
demeanor always count. For educators, proper professional demeanor is a key attribute
determining affective competence. Projecting a professional appearance and making a
great first impression is important to patients and others that rely on physical therapists.
Academic and clinical faculty agreed that physical therapists should dress in a way that
projects an image that assures and comforts patients and their families, as well as colleagues and others that might be visiting the academic or clinical institutions.

Appropriate affective skills are considered necessary for adequate performance as physical therapist.\textsuperscript{51} Therefore, presenting with the adequate professional appearance would impact the students’ level of performance in the classroom setting and clinical environment. Professional appearance is inclusive of dress code, attire, and behaviors. In the healthcare setting, professional clothing and dress code identify an individual’s role in the healthcare team. Nonetheless, each individual must assume the responsibility of his or her own professional appearance, the same as he or she assumes the responsibility to be at work on time. This would put professionalism and patient satisfaction at the center of patient-clinician encounter and reinforce the elements of therapeutic presence that has always been an important aspect of physical therapy as a healing profession. The healthcare professions should continue the effort to develop compassionate practitioners who display integrity, confidence, communicate to establish rapport, communicate effectively, and show moral courage.\textsuperscript{16,117,127}

**Limitations**

There are a number of limitations to this study. First, the use of a purposive sample limits the transferability of the results. The students and academic faculty who are participating in this study all came from the same institution. The academicians involved in this study have worked in this institution together for many years. In regards to the clinical faculty, some maybe strangers to each other, but all have been involved with this institution’s clinical education program. Finally, the findings speak to the experiences of
the entry-level DPT students, academicians and clinical instructors associated with one physical therapist educational program, and while their perceptions may be similar to others, they cannot be generalized.

**Future Research**

In future studies, consideration should be given to include subjects from various programs across the nation and to explicitly address generational differences. Using individual interviews or focus groups, it may be helpful to continue this study of the process of professional socialization to identify and address potential barriers in making the entry-level DPT (Millennial) students’ transition from the classroom setting to the clinical environment a smooth one. Future research could examine the differences in perception of effective and ineffective (academic and clinical) affective learning experiences based on the student-educator interaction. By examining the effective and ineffective affective learning experiences, academicians and clinical instructors may be able to design and foster learning experiences that not only are effective but address the generational needs of the Millennials or Generation Y students. In addition, future research could explore models conceptualizing the graduate and professional student professional socialization processes, in order to further understand the process of professional socialization of the entry-level graduate DPT student. Finally, future research could explore the effectiveness of familiarizing faculty and students with the documents that delineate the expected affective competencies that should be exhibited by the students upon entry into the profession and how the application of these documents may facilitate mastery of professional behaviors in the classroom and clinic.
CONCLUSION

This study was designed to evaluate the process of professional socialization and development of professional behaviors critical for affective competence. Specifically, this qualitative study explored the professional socialization process from the perspective of academic faculty, clinical faculty and entry-level doctorate of physical therapy (DPT) students as evidenced by the development of professional responsibility, communication and interpersonal skills. These three groups were chosen as they are the stakeholders involved in the course of physical therapist professional education.

The results of this qualitative study may prove to be helpful to academicians, clinical instructors and entry-level DPT students by describing current perceptions about the process of professional socialization in physical therapy. Academic and clinical programs may use this information to guide entry-level DPT students during their professional socialization, engaging the student in the active recognition that acquisition of professional behaviors as novice students in the classroom and achievement of affective competence as a new graduate entering clinical practice is imperative to professional practice. The academic institutions are uniquely positioned to facilitate the process of professional socialization. In the classroom, academicians can provide a variety of opportunities like role modeling, case scenarios, and role playing to explicitly promote, teach and evaluate affective competence. In the clinic, the clinical faculty can provide the necessary training, mentorship and guidance to clinical instructors to develop the necessary skills to effectively and efficiently identify, assess, and address students presenting inappropriate or underdeveloped professional behaviors.
The importance of affective learning experiences must be recognized and valued by the faculty and the entry-level DPT student. Entry-level DPT students must 1) understand that he/she enters the program with a set of values, beliefs and attitudes about self and the entering profession that will transform throughout the processes of professional socialization during classroom and clinical experiences, 2) engage in affective learning experiences, 3) value the implicit teaching fostering professionalism, and 4) understand the motivating factors of various generational cohorts in the classroom, clinic and the workplace.

The results of this study have significant implications for designing and engaging entry-level graduate DPT students in academic and clinical affective learning experiences, as well as for developing effective strategies to facilitate the development of appropriate behaviors. But, this is insufficient if academicians and clinical instructors do not address and impose consequences if the expected behaviors are not being displayed. This can be facilitated by incorporating the established PT and APTA documents establishing normative criteria for physical therapy education.

The process of professional socialization is vital in the development of professional values. Acquisition, aptitude and competence of specialized knowledge, skills and professional behaviors allow the entry-level DPT student to enter the profession as entry-level practitioners. It is anticipated that if students engage in affective learning experiences, the concerns about students’ underdevelopment of professional behaviors will be minimized and the students will be able to make a smooth transition from the classroom setting to the clinical environment.
Professionalism is a key component in the process of professional socialization, internalization of a professional role and development of competent professional behaviors. This manuscript has uncovered themes that reflect the beliefs held by the academic and clinical faculty. Academic faculty and clinical instructors agree that appropriate affective skills are more difficult to promote, and these challenges can be minimized if educators incorporate the PT and APTA documents establishing normative criteria for affective competence, and that affective competence is critical in primary care physical therapy. The literature review revealed that the underdevelopment of professional behaviors is often the reason why students struggle with the transition from the classroom setting to the clinical environment. The encouraging news is that the findings of that the knowledge acquisition and development of professional behaviors happens over time. To facilitate this process, affective learning in physical therapy education should shift from implicit to explicit. This explicit approach to education in the affective domain, is essential when teaching today’s Millennial students, who will influence and shape clinical practice in the 21st Century.
CHAPTER 4

PROFESSIONAL SOCIALIZATION MODEL: APPLICATION OF HIGHER EDUCATION PROFESSIONAL SOCIALIZATION MODEL TO PHYSICAL THERAPY STUDENTS

“Socialization of graduate and professional students should be thought of as a process of mutual exchange rather than as something done to students by faculty.”

John C. Weidman, Ph.D.

Background and Purpose. This qualitative study explores the appropriateness of the Weidman, Twale, and Stein (2001) Socialization Framework conceptualizing the graduate and professional student socialization process as it applies to entry-level graduate physical therapy students. Professional socialization is described as a distinct period in which a professional acquires the specialized skills, knowledge and attitude of the profession. Even though the process of professional socialization in physical therapy has been explored in a variety of ways, there is a continuing concern among physical therapy faculty about entry-level students demonstrating underdevelopment of professional behaviors during clinical internships. Subjects. The participants were eight academic faculty and nine clinical faculty associated with the academic and clinical programs of the University of Miami Physical Therapy Department, as well as 12 entry-level DPT students enrolled in this educational program. Methods. Using a phenomenology approach, the investigator conducted single case study interviews and focus groups asking questions to explore the current perceptions about the appropriateness of the Weidman et al framework to conceptualize the graduate and professional student socialization process as it applies to physical therapy. Interviews and focus group sessions were audiotaped and transcribed by a professional.
transcriptionist. Each participant completed a survey to gather demographic data. Qualitative and quantitative methods were used to analyze the data. Triangulation of the data and research strategies ensured trustworthiness. **Results.** Quantitative data was used to describe the participants. Qualitative data analysis led to the emergence of 3 themes: 1) socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome); 2) internalization of professional role into one’s identity happens over time, and 3) personal, academic and clinical experiences play an important role in the process of professional socialization. **Discussion and Conclusion.** The findings indicate that the process of professional socialization is vital for individuals pursuing physical therapy as a profession. The themes which emerged indicate that entry-level graduate DPT students go through a process of socialization parallel to the Weidman, Twale and Stein (2001) Socialization Framework conceptualizing graduate and professional student socialization in higher education. This model can be applied to facilitate physical therapist professional education and entry-level graduates’ preparedness for the professional working life.

**Key Words.** Professional Socialization, Professionalism, Professional Behaviors.

The Institutional Review Board of the University of Miami approved this study.

**INTRODUCTION & REVIEW OF RELATED LITERATURE**

Professional socialization is described as a distinct period in which a professional acquires the specialized skills, knowledge and attitudes of the profession.³ This process
starts during academic preparation and continues throughout professional education, thus preparing individuals to practice a profession such as law, medicine, ministry, or physical therapy.\textsuperscript{3,5,52,53,115}

The professional socialization process of an entry-level physical therapy student starts in the classroom and continues throughout the transition to the clinic first as a novice intern, and then progressing over several years to expert practitioner.\textsuperscript{21,28-30,33,34} During this time of growth, academic faculty and clinical faculty attempt to explicitly teach the concepts, skills and professional behaviors to physical therapy students, but many students do not recognize the implicit teachings take place through role modeling and mentorship that occurs in the classroom and/or clinic.\textsuperscript{4,17,25,55,56} According to A Normative Model for physical therapist professional education, professional education and socialization in physical therapy involves not only the development and evaluation of cognitive and psychomotor skills, but also a commitment to incorporating affective learning objectives in order to facilitate and objectively measure the development of professional behaviors within the foundational, behavioral and clinical science matrices of the curricula.\textsuperscript{1,15,16,38-41}

Despite the efforts of the profession to explore the process of professional socialization in physical therapy, there is a continuing concern among educators about entry-level students demonstrating underdevelopment of professional behaviors during clinical internships. Deficiencies in the cognitive or psychomotor domains are detected in the classroom as students must demonstrate a level of competency in order to progress in the curriculum.\textsuperscript{15,42} Deficiencies in the affective domain are more elusive and are more difficult to measure.\textsuperscript{15,42} Academic and clinical faculty members agree that appropriate
attitudes and professional behaviors in the affective domain are as important as competent clinical skills and essential for effective patient management.\textsuperscript{15,43-45}

Underdevelopment of professional behaviors is often the reason why the most challenging experiences that students faced during their training is the transition from the classroom to the clinic.\textsuperscript{12,13,15,16,24,42,45-47}

The process of professional education and professional socialization in physical therapy has been explicitly and formally explored in a variety of ways since 1980.\textsuperscript{3,5,16,21,25,28,29,31,54,58} Table 1.1 summarizes the review of professional socialization literature in physical therapy. A preliminary study completed by this author, exploring the process of socialization in physical therapy, lead to the exploration of socialization models and their appropriateness to institutional mechanisms and/or individual processes by which entry-level graduate physical therapy students are socialized to the norms of the profession.

Several researchers have explored and studied the process of undergraduate and graduate professional socialization. Please refer to Table 4.1.

**Table 4.1. Socialization Frameworks***

<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1976</td>
<td>Bragg</td>
<td><strong>The Bragg Framework.</strong> This framework assumes that student and educational expected outcomes are similar.</td>
</tr>
<tr>
<td>1986</td>
<td>Stark et al</td>
<td><strong>The Stark, Lowther, Hagerty, and Orczyk Framework.</strong> Socialization of the graduate and professional programs encompassing cognitive and affective components.</td>
</tr>
<tr>
<td>1989</td>
<td>Weidman et al</td>
<td><strong>The Weidman Undergraduate Socialization Framework.</strong> Incorporates literature on college impact, student characteristics, environmental press, interpersonal processes and impacts of dimensions of higher education (formal and informal).</td>
</tr>
<tr>
<td>1990</td>
<td>Weidman</td>
<td><strong>The Stein and Weidman Graduate Socialization Framework.</strong> Uses a fundamental structural-functional perspective for explaining graduate students socialization.</td>
</tr>
<tr>
<td>2001</td>
<td>Weidman et al</td>
<td><strong>The Weidman, Twale, and Stein Graduate Socialization Framework.</strong> The original work was modified and expanded. This more flexible and interactive model incorporates stages of socialization described by Thornton and Nardi.</td>
</tr>
</tbody>
</table>
In 2001, Weidman et al undertook a comprehensive review of literature related to
the graduate and professional socialization in higher education and published a model
categorizing graduate and professional student socialization. The Weidman,
Twale and Stein (2001) Socialization Framework (the Weidman et al socialization
type) conceptualizing graduate and professional student socialization in higher
education assumes that:

1. Socialization in graduate schools refers to the process by which individuals
   gain the knowledge, skills and values necessary to the successful entry to the
   chosen profession.

2. In order to understand socialization into a professional area, the model must
   address the curricular (knowledge and skills) and normative (investment and
   involvement) expectations of the professional role being pursued.

3. Stages identified in the model reflect the understanding and commitment to
   the professional roles.

4. Socialization occurs through an interactive set of stages rather than in a linear
   configuration.

This model addresses the professional role acquisition appropriate to the
socialization processes of graduate and professional students. During the process of
professional socialization, graduate and professional students ought to gain an advanced
level of specialized knowledge, skills and values necessary for successful entry into a
professional career.
The schematic representation of this graduate and professional student socialization framework is characterized by three interacting ovals. Please refer to figure 1.2.

Weidman et al\textsuperscript{52} describe 5 interacting dimensions of the model: at the center is the core socializing experience (academics, university) and surrounding the center are the other four dimensions (prospective student, professional communities, personal communities and novice professional practitioner). Please refer to Figure 4.1.

The core socializing experience is subdivided into educational context (institutional culture) and social context (socializing process). The institutional culture includes the academic program and the peer climate. The socialization process includes the interaction, the integration and learning of skills necessary to professional practice.

There are three core elements associated with the process of socialization. These core elements are: knowledge acquisition, investment and involvement. The processes of socialization include interpersonal interaction, intrapersonal interaction and integration.

For example the graduate and professional students must be able to interact with faculty and peers, must study and attend lectures, and finally, the student must be able to incorporate self into the campus academic and social life. The desired outcomes of socialization are the acquisition of knowledge, skills and disposition, similar to the outcomes agreed upon by the physical therapy profession. Please refer to Figure 4.2.
The model assumes that the socialization process is non-linear and that it occurs through the dynamic interaction of the anticipatory, formal, informal and personal stages. The background characteristics, predispositions and anticipatory preparation shape the prospective student and influence the processes of professional socialization as the individual enters a professional educational program. During the collegiate experience, both academic and social context have formal and informal aspects. For example, the academic formal aspect includes the institutional mission, institutional quality, and curriculum. The informal academic context consists of the hidden curriculum or implicit teachings. Formal social contexts include institutional size, residences and organizations, while the informal social context reflects each student’s peer group. Please refer to Figure 4.3.
Figure 4.3. Formal and Informal Aspect of the Weidman et al Socialization Model

The two main characteristics of this model are:

1. The model is designed to explain the processes through which the effects of socialization occur, rather than what the effects might be.

2. The model is primarily concerned with the non-cognitive (affective) socialization outcomes associated with values, personal goals and aspirations.

This model suggests that the novice graduate professional student goes through a process of professional socialization as follows:

1. Graduates enter the graduate education program with values, beliefs, and attitudes about self and anticipated professional practice.
2. Graduates are exposed to various socializing influences while pursuing a graduate degree, including academic pressure exerted by institutional culture through faculty and peers as well as by society, professional organizations, professional practice and personal reference groups.

3. Graduates assess the salience of the various normative pressures for attaining personal and professional goals.

4. Graduates assume, change, or maintain those values, aspirations, identity and personal commitments that were held at the onset of their socializing experience.

In addition, the Weidman et al. socialization model emphasizes cognitive, psychomotor and affective outcomes to be vital in the process of professional socialization. The ultimate outcome from this model is in the novice professional practitioner who has been transformed to the expectations of the profession in respect to self-image, attitudes and critical thinking.

The theoretical construct of the Weidman et al. socialization model reviewed is consistent with the description of the components, characteristics, goals and outcomes reported in the physical therapy literature. In physical therapy, curricula are design to develop mastery in the cognitive, psychomotor and affective domains. PT and APTA documents delineate the processes for physical therapy professional education and reflect the profession’ attitudes, behaviors and beliefs about professionalism and professional behavior in successful clinical practice.

The Weidman et al. socialization model provides a model for academic programs to understand that graduate students go through a continuing process of socialization
from admission through entry into a professional role that is under constant examination and modification, similar to the process described by authors in the physical therapy literature.

**Problem and Purpose**

Although the process of professional socialization in physical therapy has been explored in a variety of ways, there is a continuing concern among physical therapy faculty about 1) entry-level students demonstrating underdevelopment of professional behaviors during clinical internships and 2) that engaging entry-level students in affective learning experiences is one of the most challenging experiences academicians and clinical instructors face. Therefore the investigator was seeking an in-depth understanding about the appropriateness of the Weidman et al Socialization model to the physical therapy profession.

Professional education and socialization in physical therapy involves not only the development and evaluation of cognitive and psychomotor skills, but also a commitment to incorporate affective learning objectives throughout the curricula. However, little is known about what influences individuals to become physical therapists and what influences professionalism and professional socialization of these individuals as they become physical therapists. This qualitative study explores the appropriateness of the Weidman, Twale, and Stein (2001) Socialization framework conceptualizing the graduate and professional student socialization process in higher education as it applies to physical therapy.

The Weidman model brings new theory to the physical therapy literature that may explain why and ways the core elements of socialization may have instrumental effects
on the professional socialization of physical therapists. For example, this kind of model might drive students and practitioners to effectively seek mentors, to use professional peer groups more resourcefully, and to seek post-professional specialty training.

METHODS

Design

A phenomenology approach was used to explore the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it applies to the physical therapy profession. This model was explored from the perspectives of academic faculty, clinical faculty and entry-level DPT students. Phenomenology is a general method of analysis, associated with the attempt to understand the meaning of events and observations in a particular situation. The name phenomenology has been derived from phenomenon, which is any event that is observable and measurable. In qualitative research the researcher goes directly to the setting in which the phenomenon exists.

This study was divided into two phases. The single case study interview method was used in phase 1 and focus group research design was used in phase 2. The individual interview method was used in the preliminary phase of this study to pilot the interview questions. The focus group method served as the primary means of data collection. The survey methodology was used to gather demographic data and used to characterize the sample. The purpose for combining the qualitative and quantitative methodologies was to strengthen the total outcomes of the research project.
The individual interview and focus groups processes allowed the investigator to assess human behavior, attitudes and beliefs by asking open ended questions allowing interviewees to share a full range of experiences, perceptions and feelings about the application of the socialization model to the physical therapy profession.\textsuperscript{103,104} During the individual interviews the investigator was able to explore how the participants felt about and interpreted the components of the model and its application to physical therapist professional education.\textsuperscript{101} The investigator was seeking an in-depth understanding about the appropriateness of the Weidman et al Socialization model to the physical therapy profession. The focus group design excels at providing in-depth understanding about a phenomenon.\textsuperscript{101} The hallmark of focus group design is in the explicit use of a group of people to produce data and insights that would be less accessible without the interaction of the participants of the group.\textsuperscript{8,101,104,105} The focus group approach was used in this study based on the philosophy that the dynamics of the group would generate valuable evidence supporting the phenomenon of interest.\textsuperscript{101,103,105}

Three guiding questions were identified by the investigator to facilitate the interview process and provide the richest data possible:

1. From the perspective of academic faculty, clinical faculty and DPT students, how does the Weidman, Twale and Stein (2001) socialization framework conceptualizing graduate and professional student socialization in higher education apply to physical therapy?

2. What are the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to professional responsibility, interpersonal skills and communication skills?
3. From the perspective of academic faculty, clinical faculty and entry-level DPT student, how are professional behaviors taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment?

Seven open ended questions were developed from these guiding questions. Please refer to Table 4.2.

<table>
<thead>
<tr>
<th>Table 4.2. Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose of this study.</strong></td>
</tr>
<tr>
<td>Exploration of the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it applies to physical therapy students.</td>
</tr>
<tr>
<td>1. Some researchers also attribute professional socialization to other influences in a students’ life, such as students’ background, relationships with professional communities, family/ friends, and/or employers and academic program, peer climate. What observations can you share that might validate any of these influences as particularly important sources of professional socialization for the DPT student?</td>
</tr>
<tr>
<td>2. Have you observed a gap between the knowledge acquired by the DPT student in the classroom and the application of these professional behaviors (interpersonal skills, communication skills and responsibility) in the clinic environment? If so, why do you think there is a gap? For example: a. the student learns the importance of being on time, but is constantly late to class or the clinic or the patient’s treatment time; b. the student learns the impact of non-verbal communication, but does not observe the facial grimacing on a patient and is unable to adjust the course of treatment; and c. the student learns about the importance of maintaining interest in the patient/family but dismisses what the patient (child) has to say and only maintains focus to the mother.</td>
</tr>
<tr>
<td>3. Other than interpersonal skills, communication skills and responsibility, have you observed students who lack awareness and/or application of other affective professional behaviors? If so, which ones? [How did you recognize it? How did this make you feel? Did you attempt to address and/or correct the unwanted behavior? Why do you think it did or did not work?]</td>
</tr>
<tr>
<td>4. Can you give an example of an experience that influenced your development of professional behaviors? (Student Only)</td>
</tr>
<tr>
<td>5. Can you give an example of a time that you modeled, assessed or taught professional behaviors to DPT students? For example, For example, always arrived to the classroom or clinic 10 minutes early and always on time for appointments (implicit) or role play a physical therapist-patient interaction addressing punctuality (explicit).</td>
</tr>
<tr>
<td>6. Is there anything else you would like to share about professional behaviors and their development as DPT students’ transition from the classroom setting to the clinic environment?</td>
</tr>
<tr>
<td>7. Do you have any comments about the questions that I have asked you today?</td>
</tr>
</tbody>
</table>

**Thank you so much for your participation today.**

**Your time and contribution to my research is valued and appreciated.**

**Participants**

A purposeful sampling method was used to identify and invite 15 academicians associated with the academic program of the University of Miami Physical Therapy
Department and 27 clinical instructors associated with the clinical program. A sample of 42 (first-, second- and third-year) entry-level DPT students enrolled in this educational program were invited to participate in this study. The Institutional Review Board at the University of Miami approved this study. Participation was voluntary. Lack of participation did not negatively impact an academician’s performance evaluation, clinical instructor’s relationship with the clinical education program of this institution nor a student’s academic standing.

The investigator involved the Director of Clinical Education (DCE) of the University of Miami Department of Physical Therapy to facilitate the identification of candidates that would yield the most information and the greatest impact about the entry-level DPT students’ process of professional socialization. The role of the DCE in the sampling process was essential in order to identify clinical instructors and entry-level DPT students who demonstrated awareness of physical therapy professionalism and development of professional behaviors, therefore facilitating the exploration of the phenomenon under study.104,108,109

Only full-time academicians involved in the academic program of this institution were invited to participate in this study. Those faculty members involved in the advisory committee for this study were excluded. Fifteen academic faculty members met the inclusion criteria. The DCE was then involved in identifying the faculty member (n=1) to be invited to participate in the individual interview for phase 1 of this study.

Each potential participant was contacted via phone or email and all received a letter as a formal invitation to participate in this study. Candidates received a chart with the concepts of the “Professional Behaviors of the 21st Century” published by May et al
(2009-2010) addressing the definition and sample behaviors of the three key professional behaviors of interest for this study, a copy of the Weidman, Twale, and Stein (2001) Socialization Framework and a copy of the interview questions. These documents were provided to each participant to help summarize the concepts about professional behaviors and to familiarize the participant with the interview questions prior to the interview in order to facilitate dialogue.

Single case study interview participants consisted of one full-time academic faculty from this institution, one clinical faculty involved with this institution’s clinical education program and one third year entry-level DPT student enrolled in this program.

Phase 2 focus group sampling procedures were as follows: 1) Twelve out of the fourteen academic faculty candidates accepted the invitation to participate in this study. Upon acceptance, the investigator arranged for a time and date that was most convenient for the group to conduct the focus group. Five faculty members could not participate due to teaching responsibilities. Informed consent was obtained from seven (n=7) academic faculty members. 2) Sixteen out of the twenty six candidates accepted the invitation to participate in this study. Nine clinical instructors agreed on a common time and day. Informed consent was obtain for eight (n=8) clinical instructors. One clinical faculty was not able to make to the focus group session at the last minute. 3) Forty-one students were identified by the DCE as potential candidates to participate in this study (13 students out of 50 first-year students, 14 students out of 52 second-year students and 14 out of 46 third-year students). A random number sample generator was used to randomly select 7 students from each graduating class.114 Twenty one students, as mentioned, were formally
invited to participate in this study. Twelve students accepted the invitation and eleven (n=11) were consented to participate in the focus group.

Data Collection

Survey. Each participant completed a survey prior to their individual interview or participation in the focus group. The survey contained both open-ended and closed-ended questions. The survey instrument was piloted to ensure content validity. The investigator gathered all completed surveys for data analysis. Please refer to Table 3.2.

Single Case Study Interview. All 3 participants were interviewed in an informal setting using a structured format. Each interview lasted 35-50 minutes. Each interview was audiotaped and transcribed into a written format by a professional transcriptionist for data analysis. The transcriptions were then made available for each participant to review. The investigator spoke either by phone or in person with each interviewee to obtain feedback about the phenomena of interest, the questions used during the individual interview process, and procedures for data collection. Consequently, the survey was modified and the interview questions were used as designed for phase 2.

Focus Groups. Three focus groups sessions were completed using a structured format. Participants sat in a circle and the investigator facilitated the flow of the group interview with a question-answer format. Each focus group session took place in the conference room of the University of Miami Physical Therapy Department. Interview questions were used to facilitate the participants in each group to share their perspectives about the DPT student process of socialization and development of professional behaviors. Each focus
group session lasted 60 – 120 minutes. Each focus group session was audiotaped and transcribed into a written format by a professional transcriptionist for data analysis.

**Data Analysis**

**Quantitative Data Analysis Procedure.** Descriptive statistics (i.e., mean, standard deviations, frequencies and percentages) were calculated to characterize the sample. The data obtained from surveying all participants during phase 1 and 2 of this study was combined and triangulated. Quantitative data analysis was performed using SAS System for windows version 9.1.3.*

[Footnote: *SAS Institute Inc, 100 SAS Campus Drive, Cary, NC 27513-2414]

Three individuals participated in phase 1 and seven academic faculty (n=7), eight clinical faculty (n=8) and eleven entry-level DPT students (n=11) participated in phase 2 of this study. The data obtained from phase 1 and 2 was combined and analyzed using the triangulation method.8,104,108

The academicians included 3 females and 5 males who ranged in ages from 34 to 60 years of age; represented the White and Hispanic/Latino ethnicities; had an average of 25 years as physical therapists and an average of 15 years in academics. The clinicians included 8 females and 1 male who ranged in ages from 29 to 46 years of age; represented the African American, White and Hispanic/Latino ethnicities; had an average of 12 years as physical therapists and an average of 10 years as clinical instructors. The entry-level DPT students included 9 females and 3 males who ranged in ages from 22 to 28 years of age; represented the White and Hispanic/Latino ethnicities; and 11 reported having a bachelor’s degree and 1 a master’s degree prior to entering PT school. Please refer to Tables 3.3 to 3.6.
**Qualitative Data Analysis Procedure.** The investigator first read each of the interview and focus groups transcripts line by line and identified broad, wide initial impressions that emerged from the data. Utilizing ATLAS.ti** data management program, the investigator began the open coding process for each transcript.\(^8,104,110\) Developing codes and categories were crucial steps in data analysis. In qualitative research a coded piece is the smallest piece of analyzed data.\(^102,104\) During the coding process the investigator read through the data to identify certain words, phrases, pattern of behaviors and events pertaining to the development of professional behaviors. Each of these distinct thoughts were labeled with one or two word code (ie., “Aspiration”). The coded data was reassembled into larger units of meaning creating categories. Please refer to Table 4.3. These categories along with the data the quantitative data gathered from the surveys were triangulated to identify themes representing the participants’ perceptions about the process of professional socialization and development of professional behaviors.\(^8,104,108\)

<table>
<thead>
<tr>
<th>Categories</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Socialization</td>
<td>SES, Aspiration, Aptitude, personality*, values, career preference</td>
</tr>
<tr>
<td>MODEL socialization</td>
<td>Professional socialization*, family*, personality*, background, prior experience</td>
</tr>
<tr>
<td>Academic Experience</td>
<td>PT school, classroom(^1), student*, classmate, peer, school(^1), university(^1)</td>
</tr>
<tr>
<td>Clinical Experience</td>
<td>Intern, student*, CI, clinical instructor, internship</td>
</tr>
<tr>
<td>Personal Experience</td>
<td>Family*, friends, former employers</td>
</tr>
</tbody>
</table>

*Codes that repeat in another category.
\(^1\)Codes found as a result of the ATLAS.ti auto coding process, by serendipity.\(^110\)

The preliminary codes, categories and themes emerged from phase 1 data analysis served as groundwork for phase 2 data analysis. The preliminary themes were: stages of socialization (background, academic and outcome), role identification and experiences (personal, academic and clinical). Please refer to Table 4.4 for a comparison between the
preliminary and main themes. Phase 1 and phase 2 data were combined and triangulated. These techniques were aimed at producing high-quality data.\textsuperscript{8,104,108}


Table 4.4. Preliminary and Main Themes Emerged from Data Analysis

<table>
<thead>
<tr>
<th>Preliminary Themes</th>
<th>Main Study Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stages of socialization: background, academic (formal and informal) and outcome.</td>
<td>Socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome).</td>
</tr>
<tr>
<td>Role identification.</td>
<td>Internalization of professional role into one’s identity happens over time.</td>
</tr>
<tr>
<td>Experiences: personal, academic and clinical.</td>
<td>Personal, academic and clinical experiences play an important role in the process of professional socialization.</td>
</tr>
</tbody>
</table>

\textit{Credibility and Trustworthiness}. Any research needs credibility to be useful.\textsuperscript{8,104} A credible qualitative research strategy requires that the investigator adopt a neutral stance with regards to the subject under study. The investigator used research strategies aimed at producing high quality data. Data analysis was trustworthy, authentic, balanced and fair to the people studied. The investigator reflected on, dealt with and reported potential sources of biases and errors given the nature of being the human instrument collecting the data.\textsuperscript{104} The investigator undertook a number of strategies aimed at enhancing the trustworthiness of this study. For example, the investigator piloted the surveys, and single case study interview questions. The triangulation method was used to strengthen the overall outcome of the research.\textsuperscript{104,108} All confidential documents were placed in a secure location at the University of Miami Physical Therapy Department.
RESULTS

Three main themes emerged from the single case study interview qualitative data analysis:

1. Socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (background), academic stage (formal and informal) and personal stage (outcome).
2. Internalization of professional role into one’s identity happens over time.
3. Personal, academic and clinical experiences play an important role in the process of professional socialization.

Themes

Stages of Socialization. Participants agreed that the process of socialization of the entry-level graduate DPT student happens throughout the individual’s career and as they move into the different roles associated with different stages of life. Please refer to Figure 4.4.

Figure 4.4. Stages of Socialization.
Participants shared that prospective students’ personalities, upbringing, background and the past relationships with their families, peers and other professionals influence their process of socialization. One academic faculty shared that these experiences shape the students’ lives prior to entering the physical therapy graduate program.

AF Subject 1 (5 to 15 years in academics)
So in terms of personality in a physical therapist, I kind of think that there is a physical therapy personality. . . . . . Sometimes I’m in contact with high school students, and I can tell which ones would make good physical therapists even though they may not have the intention to go in that profession. . . . . . PT’s are usually more friendly, more outgoing, more interested in people, . . . . . . they are more apt to not have personal space issues, and are just more generally interested in the common welfare of people, and I think that that is part of what goes into the personality of hopefully someone that chooses this profession, and all of those things then are developed into the professional behaviors.

AF Subject 2 (5 to 15 years in academics)
I think that the outside influences can effect – can bias how they come into the program, but our job as professionals are to make them physical therapists or function as physical therapists in our community at a certain standard, and I, it makes it more difficult when people’s background or past experience kind of conflicts with it.

AF Subject 5 (5 to 15 years in academics)
I think, and that’s why we do the interview process when we interview prospective students. When they submit their whole application we’re looking for certain things, how many hours have they had in the community, what they’re – we ask them questions about what their previous job experiences are I think because we obviously know that those pieces will impact them as a student, but then there’s a lot of pieces that we don’t know about, and then we find out later on that, “Oh well, this was in my history or this, I’ve been very close with has, made me think this way.” So I mean there’s no doubt there’s outside influences definitely effect what they see in the process of learning about being physical therapists, and if they’ve had the same upbringing as we provide – want to provide the students in here, then obviously they’re going to progress a lot quicker than those students that have had a much different background.
CF Subject 1 (5 to 15 years as a clinical instructor)

*That probably comes from the student’s background and their own upbringing. I don’t know that it’s something that’s not being taught at the school. I just think it’s a student’s personality. Sometimes there are things that we see that seem to be out of our control, and again, I think it pertains to the student’s background, how they grew up, their relationships with their parents, relationships with their peers at school.*

CF Subject 4 (5 to 15 years in academics)

*People who excel right away it’s just their upbringing, the way they were taught at home. I see this basic like etiquette. I mean the way you should treat your patients should be basic knowledge, but unfortunately it’s not really in our society. So I think it’s a huge problem when people don’t have it because to me it’s something that should be born with, within you like you were rooted in that and your whole life that’s always expected of you the way you treat people.*

Subject third year DPT Student

*One that really sticks out for me personally is the background – background and family. I guess more so I’m thinking background as family. So that has had a huge influence on my skills inside and outside the classroom. Like I mentioned earlier, the responsibility I had to take on and the affective behavior that I have learned from my parents.*

The university (classroom and clinical) experience was described by the academicians and clinical instructors as the fundamental experience in the professional socialization process of the entry-level graduate DPT student.

CF Subject 7 (> 15 years as a clinical instructor)

*I like the model conceptually. I think that it could apply to PT school. I think one of the most important things in here, and what I did was circle and star is university is right in the middle, right at the core of where all of these circles overlap.*

All the educators shared that entry-level DPT students are exposed to an explicit curriculum (formal) and implicit (informal) learning experiences focused around a set of behavioral outcomes. Three students reported that they learn better when the professors give explicit instructions in the classroom and specific expectations are delineated during clinical internships.
AF Subject 1 (5 to 15 years in academics)
If I look at this interaction, and I probably stated it already, but I think the most
important part of professional socialization comes from the students’ observation
of us as a faculty as a whole.

AF Subject 7 (5 to 15 years in academics)
I’m in a unique experience where I can see the UM graduates or the UM interns
while they’re doing their rotations at UM Hospital. I always want to make sure
that they go the extra mile for the patient if that’s what they need. So implicitly I
do it with my patient care and then explicitly if the student’s not doing what they
need to do for that patient in terms of the amount of work to put in for that visit,
and I’ll address it verbally with them.

CF Subject 1 (> 15 years as a clinical instructor)
Masters into DPT because the curriculums did change. I know that they changed
and they’re constantly changing and evolving because they get a lot of feedback
from us, so I don’t know overall when exactly we started noticing it, but I know
that the last – I can honestly say that the last three or four years we’ve had some
phenomenal students. I think you made me more aware of the fact that we
probably need to have a little bit more – we just need to have more structure.

Finally, one academic faculty shared his experience with regards to students’
goals and potential outcomes.

AF Subject 7 (5 to 15 years in academics)
I think one of the big things that I’ve seen during interviews in terms of who’s
likely going to be a successful student if they come to our program are those that
come with a specific goal in mind in terms of why they’re going to physical
therapy school versus someone who just chose it as a career versus a profession.
So I definitely I think those applicants that come in with some sort of life
experience that’s led them into the profession seem to do better and are more
inclined to be more dedicated to the profession versus those who chose this as a
career.

Internalize Professional Role. Four out of seven academic faculty members pointed out
the importance that students develop a professional identity that is congruent with the
attitudes, values and beliefs of the physical therapy profession. Please refer to Figure 4.5.
Academic faculty and clinical instructors raised concerns about students’ difficulties in recognizing, accepting and valuing the implicit teachings taking place through role modeling and mentorship that occurs in the classroom and/or clinic associated with professional practice. Professional association membership is a reflection of professionalism.

AF Subject 1 (5-15 years in academics)
In our program, the students all join the APTA. She pays for them so that they know that this is an important professional behavior to model after you graduate…………… Hopefully they get to go to at least conference while they’re here. While they’re at that conference they’ll get to see that there’s an alumni party where UM alums come back because they go to this professional event, and hopefully they model that later.

These findings reflect the ability to exhibit professional behaviors like commitment to learning (knowledge acquisition), effective use of time and resources (investment) and professional duty (involvement), associated with the development of a professional role.
Experiences. All academic faculty and clinical instructors agreed that personal, academic and clinical experiences take the students to higher levels of personal and professional maturity. Please refer to Figure 4.6.

Relevant comments included the following:

AF Subject 1 (5-15 years in academics)
*So by seeing what we do as academic professionals, they’ll realize that’s what it’s like to be a professional physical therapist.*

CF Subject 1 (>15 years as a clinical instructor)
*I think that comes again from – personally from his upbringing probably, relationships that he has personal relationships with friends, personal relationships. There is a huge difference with the kinds of personalities that we get in terms of those that have already had that life experience versus the ones that don’t have that life experience.*

Figure 4.6. Personal, Academic and Clinical Experiences Play an Important Role in the Process of Professional Socialization.

All the participants shared that the combination of academic and clinical experiences throughout the curriculum is vital and ensures mastery of cognitive, skills and attitudes associated with professional practice.
Subject third year DPT student

In terms of in school the professors I feel enjoy what they do so they’re always in a good mood. They’re very enthusiastic about what they teach, which is being a role model because you want to be like that with your patients……..I think I was a lot more serious in the clinic. Well, in the clinic you are facing not only a superior that is always keeping tabs on you, but also you’re in general public with patients that could be all sorts of – all sorts of emotional states.

On the contrary, a clinical instructor shared that the academic and clinical experiences in most physical therapy curricula are not balanced. All participants reported that there is a gap and students have difficulty translating knowledge acquired in the classroom and being able to apply it in the clinical practice. One clinical instructor reported the gap between the knowledge acquired in the classroom and the student’s ability to apply this knowledge in the clinic due to lack of exposure to clinical environments early in the curriculum.

CF Subject 2 (>15 years as a clinical instructor)

I would hypothesize that the gap exists for a couple of different reasons. One is a lack of small amounts of – lack of introduction of small amounts of exposure to the clinical environment throughout the course of their classroom training. Instead, their classroom training is largely classroom training and then all of a sudden they go a hundred percent to the clinic, and that’s a huge jump…… So it’s really hard for students to shift gears, no pun intended, from that environment to the other environment.

DISCUSSION

The purpose of this study was to explore the appropriateness of the Weidman, Twale, and Stein (2001) socialization framework to conceptualize the graduate and professional student socialization process as it applies to entry-level graduate physical therapy students. The findings of this study indicate that entry-level graduate DPT students go through a distinct period and process of professional socialization. Participants reported that during the course of professional training, DPT students acquire the knowledge, skills and attitudes necessary for the successful entry into the physical
therapy profession. The findings also indicate that there is a parallel subconscious process whereby entry-level DPT students internalize behavioral norms, form a sense of identity and commit to become a physical therapist. This shows that a transformation and a commitment to become a professional occurs through the process of professional socialization. Embracing professionalism and exhibiting appropriate professional behaviors are considered essential components in the process of professional socialization toward the successful entry into the physical therapy profession.65

The critical aspects of Weidman Professional Socialization Model as it applies to the entry-level graduate DPT student are the background and disposition of the prospective student, the core socialization experience centered in the academic program and the identification of a professional role. These critical aspects involve the development of commitments in physical therapy programs to design application and admissions processes to the professional program that allows the physical therapy education faculty to screen, interview and select prospective students into the program, to design curricula to develop mastery in three educational domains (cognitive, psychomotor and affective) and to engage students in affective learning skills in the classroom and clinic to facilitate their transition from the academic/institutional culture to the clinical environment. Professional education is clearly meant to prepare highly skilled individuals, but this will not be successful if individuals do not engage in learning.16

According to Weidman et al, learning is a significant component of the process of professional socialization.52 The author reported that the student-faculty relationship is also critical to the socialization process and the student’s success.52 The choice or assignment of faculty advisor allows the novice, immature entry-level student to progress
to a competent, mature graduate throughout the continuum of academic and clinical experiences.52,122

Academic faculty and clinical instructors who participated in this study reported that professional education and socialization in physical therapy involves not only the development and evaluation of cognitive and psychomotor skills, but also a commitment to incorporate affective learning objectives throughout the curricula. However, these participants reported having difficulties engaging entry-level DPT students in affective learning experiences. In addition, understanding what influences professionalism, the development of professional behaviors and the process of professional socialization in these students. The overall perceptions of the academic faculty, clinical instructors and entry-level DPT students about professionalism, development of professional behaviors and the process of professional socialization are consistent with the findings of authors in the physical therapy literature.1,3,4,7,9,12,15,16,21,24,30,50,51,68,96,115,118,124,125

An important outcome of the process of professional socialization identified by the academic faculty and clinical instructors is an evolving professional identity.62 The identification and internalization of professional identity or role requires not only learning the cognitive/technical and psychomotor skills required for efficient patient care, but also attitudes, values and norms necessary for affective competence.

The Weidman et al Socialization Model describes the process of professional socialization as being dynamic, ongoing and without a definitive beginning and end.52 This process includes interpersonal interaction, intrapersonal interaction and integration. The participants of this study all shared personal and professional experiences reflecting the personal (intrapersonal and interpersonal), academic and clinical relationships that
have influenced their professional development. In the case of the academic and clinical faculty, they expressed how these relationships continue to influence their professional growth, commitment to learning, integrity, professional duty and social responsibility. In addition, the process of professional socialization would be incomplete in the absence of positive role models.25,26

These findings suggest that consideration and further study of professional socialization models like the Weidman, Twale and Stein (2001) socialization model may assist in improving physical therapist professional education and graduates’ preparedness for the professional working life.

As mentioned, the theoretical constructs of the Weidman et al socialization model reviewed is consistent with the description of the components, characteristics, goals and outcomes reported in the physical therapy literature. In physical therapy, curricula are designed to develop mastery in the cognitive, psychomotor and affective domains. In physical therapy, consensus- and evidence-based documents delineate the processes for physical therapist professional education and reflect the profession’s attitudes, behaviors and beliefs about professionalism and professional behavior in successful clinical practice.1,3,4,7,9,12,15,16,21,24,30,50,51,68,96,115,118,124,125

The Weidman et al socialization model provides a model for academic programs to understand that graduate students go through a continuing process of socialization. This process is similar to the process described by authors in the physical therapy literature. The physical therapy curricula are designed to address the cognitive, psychomotor and affective domains, therefore addressing the model’s knowledge acquisition stage. In addition, during physical therapy training the prospective novice
entry-level student at the end of the professional training becomes a novice physical therapy practitioner. Finally, this model accounts for the involvement and investment of the graduate student to transition from the classroom setting to the clinical environment.

Figure 4.7 is a schematization of the similarity of the process of professional socialization described by Weidman et al and by authors in the physical therapy literature, thus making this model appropriate in conceptualizing graduate and professional student socialization in physical therapy.

Figure 4.7. The Weidman, Twale, and Stein Socialization Model Conceptualizing Graduate and Professional Student Socialization in Physical Therapy.
Limitations

There are a number of limitations to this study. First, the use of a purposive sample limits the transferability of the results. The identification of this limitation may be influenced by the demographic composition of the participants: the students and academic faculty who are participating in this study all came from the same institution, the academicians involved in this study have worked in this institution together for many years and the clinical faculty, although some maybe strangers to each other, have been involved with this institution’s clinical education program. Finally, the perceptions of the entry-level DPT students, academicians and clinical instructors about the application of the Weidman et al socialization model to the physical therapy profession cannot be generalized beyond this institution.

Recommendations for Future Research

Consideration should be given to further explore and validate the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization and its application to the physical therapy profession. Additionally, exploration of the interaction of the elements of this model might provide valuable information for educators and students. For example, 1) how novice students acquire knowledge to develop proficiency and entry-level performance during clinical internships, 2) how and why students commit to the development of a professional role, 3) why students do not commit and leave the profession, and 4) how students and faculty get involved in activities to facilitate the process of professional socialization. Future research also might include designing and testing admission policies and procedures that
seek to identify the ideal prospective student, thus identifying if students’ background and dispositions are congruent with the outcomes desired by the profession.

**CONCLUSION**

In summary, models like the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization should be considered when academic and clinical physical therapy education curricula is designed. The Weidman et al socialization framework and A Normative Model for physical therapist professional education both emphasize cognitive, psychomotor and affective outcomes to be vital in the process of professional socialization of the graduate and professional student.

It is essential that the academic programs work with the profession to maintain and improve graduate standards while responding to the demands from society, the health care system, research, and consumers to educate highly skilled primary care practitioners. The Weidman et al socialization model is appropriate in conceptualizing the process of professional socialization of the entry-level graduate physical therapy student. As mentioned, Weidman model brings new theory to the physical therapy literature and it can be applied specifically to guide students and practitioners to effectively seek mentors, to use professional peer groups more resourcefully, and to seek post-professional specialty training. The process of professional socialization is vital in the development of professional values. Acquisition, aptitude and competence of specialized knowledge,
skills and professional behaviors allow the entry-level DPT student to enter the profession as entry-level practitioners.

It is anticipated that the application of a socialization model like the Weidman, Twale, and Stein (2001) Socialization Framework will enhance professional practice and enable the profession to prepare doctorates of physical therapy who are not only autonomous, but are able to provide primary care as compassionate and caring practitioners and who encompass the professional commitment.
CHAPTER 5

THE SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

THE SUMMARY

This study was designed to examine the process of professional socialization and development of professional behaviors critical for affective competence. Specifically, this qualitative study explored the professional socialization process from the perspective of academic faculty, clinical faculty and entry-level doctorate of physical therapy (DPT) students as evidenced by the development of professional responsibility, communication and interpersonal skills. This addressed purposes 1-3:

**Purpose 1.** To explore the academic faculty, clinical faculty and the DPT student roles in the development of appropriate professional behaviors such as responsibility, interpersonal skills, and communication skills in the entry-level DPT student.

**Purpose 2.** To describe the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to professional behaviors by the DPT student.

**Purpose 3.** To examine how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

This study also explored the appropriateness of the Weidman, Twale and Stein Socialization Model conceptualizing graduate and professional student socialization to
institutional culture and/or individual processes by which entry-level graduate DPT students are socialized to the norms of the profession. This addressed purpose 4:

**Purpose 4.** To explore the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it applies to physical therapy students.

The process of professional socialization in physical therapy is of concern among educators across the nation. Even though the process of professional socialization in physical therapy has been explored in a variety of ways, there is a continuous interest among physical therapy faculty about: 1) entry-level students’ underdevelopment of professional behaviors during clinical internships, 2) transition from the classroom to the clinic being one of the most challenging experiences faced by entry-level graduate physical therapy students, and 3) difficulties faced by academicians and clinical instructors to engage entry-level graduate students in affective learning experiences.

Embracing professionalism and exhibiting appropriate professional behaviors are considered essential components in the process of professional socialization as graduates move toward successful entry into the physical therapy profession. Simultaneously, learning is a significant component of this process. In physical therapy, entry-level graduate students entering the profession go through a distinct period of professional socialization. During this period, they must attain a repertoire of knowledge, skills and behaviors essential to practice as physical therapists. The acquisition, development and application of these skills is critical to students as they progress from being novice students in the classroom to the transition to the clinic, first as a novice interns and then progressing over several years to expert practitioners. Physical therapist professional
education is designed to develop mastery in the cognitive, psychomotor and affective educational domains and it is focused on facilitating the novice, immature entry-level graduate student to progress to a competent, mature graduate throughout the continuum of academic and clinical experiences. Specifically, the process of professional socialization of the entry-level graduate physical therapy student begins as students acquire beginning level performance skills in the classroom and progresses over time to competent entry-level performance at the completion of clinical internships.

Development of physical therapy professional socialization was explored because of its relevance to the future practice of the profession. The physical therapy profession and professional educational programs have undergone significant changes in relation to managed care, expansion in the scope of physical therapy practice, increased patient direct access to physical therapists, evidenced-based practice, and clinical specialization in physical therapy. Physical therapy is a dynamic profession and has assumed the responsibility to grow and transition into a doctoring profession, “where physical therapists are recognized as the practitioners of choice for the diagnosis of, interventions for, and prevention of movement dysfunctions.”

Professionalism was identified as a key element for the clinical doctorate of physical therapy graduates, to practice as autonomous primary care practitioners.

This study examined the process of professional socialization of entry-level DPT students from the perspective of academic faculty, clinical faculty and entry-level DPT students. A purposeful sampling method was used to identify faculty associated with the academic and clinical programs of the University of Miami Physical Therapy Department, as well as first year, second year and third year DPT students enrolled in this
educational program. A total 29 individuals participated in this study: 8 academic faculty, 9 clinical instructors and 11 entry-level DPT students (4 first-, 3 second- and 4 third-year students).

The phenomenon of interest was explored through the use of qualitative and quantitative designs. This study was divided into two phases: a preliminary single interview phase with the purpose to pilot the survey and interview questions to ensure content validity and a second phase using focus group design as the primary means of data collection. The interview and focus group sessions were audiotaped and transcribed by a professional transcriptionist. Each participant completed a survey to gather factual and demographic data.

Four guiding questions identified by the investigator helped with the construction of 10 open ended interview questions. These guiding questions were as follows:

1. What is the role of academic faculty, clinical faculty and entry-level DPT student in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills of entry-level DPT students?

2. What are the sources and differences between knowledge (recognition) and application (value, internalization) of concepts related to these professional behaviors?

3. From the perspective of academic faculty, clinical faculty and entry-level DPT student, how are professional behaviors taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment?
From the perspective of academic faculty, clinical faculty and entry-level DPT student, how does the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education apply to physical therapy?

For this study, the group interaction during the focus group sessions provided insights about the entry-level DPT student process of professional socialization and development of professional behaviors as perceived by novice and expert faculty associated with the academic education and clinical programs of the University of Miami Physical Therapy Department, as well as by DPT students enrolled in this educational program. The individual interviews were completed as part of the preliminary phase and the phase 1 interviewees had an opportunity to provide feedback on the questions asked during the interview and the survey designed to collect participants’ demographic information.

Qualitative and quantitative methods were used to analyze the data. Quantitative data obtained from the surveys was used to characterize the sample. Qualitative data obtained from the interview and focus group transcriptions was coded and the data was reassembled into larger units of meaning creating categories. ATLAS.ti data management program was used during data analyses to uncover the similarities and/or differences of perceptions, among academic faculty, clinical instructors and entry-level DPT students, about the process of professional socialization in physical therapy. Triangulation of data was completed within and between the data gathered from academicians, clinical instructors and entry-level DPT students who participated in phase 1 individual interviews and phase 2 focus groups of this study. The codes and categories that emerged
from the triangulation of phase 1 data were used to identify: 1) themes representing the
participants’ perceptions about the process of professional socialization in physical
therapy and 2) any changes to the original interview questions and survey that needed to
be considered. As a result of the feedback obtained and the completion of phase 1 data
analysis, the survey was modified and the interview questions were used without
modification for phase 2. The phase 1 preliminary codes, categories and themes served as
groundwork for phase 2 data analysis. Triangulation of the data and research strategies
ensured trustworthiness.

THE FINDINGS

Five main themes emerged from the triangulation and data analyses of qualitative
and quantitative data addressing the perceptions about the process of professional
socialization and development of professional behaviors through key indicators such as
responsibility, interpersonal skills and communication skills from the perspective of
academic faculty, clinical faculty and DPT students (addressing Purpose 1-3):

1. Professional behaviors develop over time.
2. Knowledge acquisition develops over time.
3. Skills in the affective domain encompass qualities that are critical in primary
care physical therapy.
4. From implicit to explicit approach to Physical Therapy education.
5. Professional appearance.
Three main themes emerged from the data exploring if the Weidman et al framework conceptualizing graduate and professional student socialization process was applicable to physical therapy (addressing Purpose 4):

1. Socialization is a developmental process based on overlapping stages of identity and commitment: anticipatory stage (or background), academic stage (or formal and informal) and personal stage (or outcome).
2. Internalization of professional role into one’s identity happens over time.
3. Personal, academic and clinical experiences play an important role in the process of professional socialization.

**Professional Behaviors Develop Over Time.**

1. Participants’ perceived that professional behaviors can and do develop over time.
2. According to the academicians and clinical instructors, the students have difficulty understanding the critical importance of acquiring the specialized professional behaviors like responsibility, interpersonal skills, and communication skills.
3. The participants reflected that students go through a transformation process where students transition from recognizing to accepting to internalizing the value of developing appropriate professional behaviors throughout the continuum of academic and clinical experiences.
4. All participants reported that a gap exists between the knowledge and skills acquired in the classroom and the application of these concepts, skills and behaviors in the clinical environment.

Knowledge Acquisition Develops Over Time.

1. Participants’ reflections supported the concept that educators must provide entry-level graduate DPT students with a structured, simple and logical learning environment.

2. Both academic and clinical faculty demonstrated motivation and commitment to continue learning.

3. All participants agreed that acquisition and development of skills happens through formal training and practice.

Skills in the Affective Domain Encompass Qualities that are Critical in Primary Care Physical Therapy.

1. The academic and clinical faculty reported that affective skills are imperative to practice as primary care and autonomous practitioners.

2. Academicians and clinical instructors reported having difficulties engaging students in affective learning experiences. Faculty agreed that appropriate affective skills are more difficult to promote, assess and model than cognitive or psychomotor skills.

From Implicit to Explicit Approach to Physical Therapy Education.

1. All academic faculty members described how their approach to physical therapy education incorporates systematic and explicit approaches.

2. According to an academic faculty and a clinical instructor, the entry-level DPT curriculum at the University of Miami Department of Physical Therapy
is designed to develop entry-level skills in all three domains of learning: cognitive, psychomotor and affective.

3. Clinical faculty members reported that most educational strategies used in the clinic continue to be more implicit than explicit.

4. Students stressed the positive impact that academicians and clinical instructors have when explicit instructions and expectations are provided in the classroom and clinic.

**Professional Appearance.**

1. The DPT student participants reported that requiring a dress code and professional presence in the classroom would prepare them for the clinic experiences.

2. Students shared their frustration about the lack of reinforcement of the Student Handbook’s policy and procedures throughout the course of academic and clinical experiences.

3. Academicians indicated that dressing appropriately and following a dress code is a strategic way to facilitate the mastery of professional behaviors.

4. Academicians reported that professional appearance shows that you have insight into your profession.

*Socialization is a Developmental Process Based on Overlapping Stages of Identity and Commitment: Anticipatory Stage (Background), Academic Stage (Formal and Informal) and Personal Stage (Outcome).*

1. Academicians and clinical instructors agreed that the process of socialization of the entry-level graduate DPT student happens throughout an individual’s
career as they move into the different roles associated with different stages of life.

2. All participants agreed that the prospective students’ personality, upbringing, background and the past relationships with their families, peers and other professionals influence their process of socialization.

3. Academicians and clinical instructors described the university experience as the fundamental experience in the professional socialization process of the entry-level graduate DPT student.

4. Academicians and clinical instructors agreed that the entry-level DPT students are exposed to an explicit curriculum (formal) and implicit (informal) learning experiences focused around a set of behavioral outcomes.

5. Academicians reported that students’ goals guide the individual processes of professional socialization leading to the desire outcomes.

**Internalization of Professional Role into One’s Identity Happens Over Time.**

1. Four out of seven academic faculty members pointed out the importance for students to develop a professional identity that is congruent with the attitudes, values and beliefs of the physical therapy profession.

2. Academic faculty and clinical instructors raised concerns about students not being able to embrace professional growth due to not being ready to recognize, accept or value the responsibilities associated with professional practice.
Personal, Academic and Clinical Experiences Play an Important Role in the Process of Professional Socialization.

1. All academic faculty and clinical instructors agreed that personal, academic and clinical experiences take the students to higher levels of personal and professional maturity.

2. All the participants shared that the combination of academic and clinical experiences throughout the curriculum is vital and ensures mastery of knowledge, skills and attitudes associated with professional practice.

3. All participants reported that there is a gap between the knowledge acquired in the classroom about professionalism and the professional behaviors demonstrated in the clinic. All participants reported entry-level DPT students having difficulties translating knowledge of professionalism acquired in the classroom to application in clinical practice.

OTHER FINDINGS

The demographic data collected at the time of the study generated interesting findings, even though they were not specifically addressed in the research questions. The findings related to quantitative data analyses are as follows:

Generational Differences.

1. The average age in years of the entry-level DPT students in this study was 25 (range 22-28). All DPT students who participated in this study are members of the generation cohort termed the Millennial Generation or Generation Y. The DPT students who participated in this study were born between 1983 and 1989.
2. The Academic faculty participants’ average age in years was academicians 50 (range 34-60). Six out of eight (75%) of the academic faculty that participated in this study are members of the Baby Boomer generation and two are members of the Generation X.

3. The average age in years of the clinical instructors was 36 (range 29-46). Seven out of nine (78%) of the clinical instructors that participated in this study are members of the Generation X and two are Millennials.

4. In total, 6 out of 29 participants (21%) were members of the Baby Boomer generation, 8 participants (31%) were members of the Generation X and 14 participants (48%) were Millennials.

These findings are significant because the understanding of the traits, characteristics and motivating factors of these various generational cohorts impact the teaching-learning processes in physical therapy. Goulet reported that affective learning objectives and outcomes need to be explicit, defined, assessed and woven throughout the curriculum.

In addition, May et al reported that the Millennials or Generation Y students are the graduates of the classes that will influence and shape clinical practice in the 21st Century, and Plack et al reported that 4 generations (Traditionalists, Baby Boomers, Generation X and Millennials) may be working and learning in the classroom and clinic together. For example, traditionalists expect a personal touch of handwritten communication versus generation X individuals keep written information to a minimum, thus an academic traditionalist faculty should not expect a long written report from the generation X student or a generation X student should not expect the traditionalist patient
to understand and be compliant with a shorthanded typed home exercise program. Please refer to Table 5.1 for a summary on the definitions, characteristics and generational values. Therefore, physical therapy student and faculty members need to reflect upon the changing landscape of physical therapy practice and representation of different generational groups in the classroom, the clinic and in general society.23,115,118

Table 5.1. Defining the Generations

<table>
<thead>
<tr>
<th>Generation</th>
<th>Born between</th>
<th>Characteristics</th>
<th>Preferences, beliefs and values</th>
<th>Trait</th>
</tr>
</thead>
</table>
| Traditionalist   | 1900 – 1945  | The 75 million Traditionalists include corporate CEOs, company founders, board members, managers, and skilled veterans. Actually made up of two generations with similar values, they are the creators of many of our cultures and traditions. | ● Always provide consistent service. Policies and regulations must exist for a purpose. Enforce them equally to everyone. Make them feel special by remembering their names.  
● Thank them with personal handwritten notes. Form letters are not acceptable with this generation. They want and expect the personal touch.  
● Be patient with them. Give them plenty of time to make a decision.  
● Traditionalists tend to be conservative financially. | ● Disciplined  
● Patriotic  
● Fiscally conservative  
● Strong appreciation for top-down hierarchies  
*Key trait* - Loyalty |
| Baby Boomers     | 1946 – 1964  | The 80 million Baby Boomer are gradually taking over the reins of American business. The largest generation ever to enter the American workforce, they have been hugely influential in fueling the red hot economics of the 1990s and designing many of corporate America’s human resource policies. As they continue to strive to achieve, they are questioning whether it’s really possible to have it all. | ● Treat them as individuals, not just as another patient. Make them feel special.  
● Be solution oriented. If you cannot fix or correct something, be honest and offer alternatives.  
● Do not tell Boomers what they can do. Ask them what they want done or accomplished.  
● Boomers ask for evidence of quality and expertise. | ● Idealistic  
● Competitive  
● Ambitious  
*Key trait* - Optimism |
| Generation X     | 1965 –       | Some of the 46 million                                                          | ● Treat them as equals                                                                         | ● Independent                              |
1981  | Generation Xers are climbing the corporate ladder while others are starting 70% of all new businesses. Though their number is smaller than that of their predecessors, they have pushed hard to make their presence known, to carve out an identity separate from Boomers, and to challenge traditional ways of doing business. Possibly the most misunderstood generation in the workplace today, Generation X also may be its best kept secret.

| Millennials | These are the 76 million of the next great baby boom. Various known as the Echo Boom, Generation Y, the Baby Buster, or Generation Next, they have been closely watched by everyone from principals of bulging public schools to toy and blue jean manufactures to college admissions officers.

| 1982 - 2000 | ● Unlike their parents from Generation X or Boomers, these young people like to spend money.
● Appeal to their technical savvy. Most of these young people have been around computers since they were born.
● Be flexible or create alternatives for them. They have been forced to learn flexibility of an early age and want to work and deal with people who are also flexible.

- Techno-literate
- Entrepreneurial

* Key trait – Skepticism

**Key trait - Realistic


**Experience.**

1. The academic faculty average years as physical therapists were 25 years (range 10-39) and for clinical instructors, was 12 years (range 3-20).

2. The average years in academics were 15 years (range 4.5 – 37).

3. The average years as clinical instructor were 10 years (range 2-19).
Although years of experience do not correlate with expertise in physical therapy, it is important to note that the average years as physical therapist, years in academics and years as clinical instructors, the academic faculty members and clinical instructors were greater than 10.\textsuperscript{21,30}

\textit{The Adult Learner.}

Nine out of Twelve DPT students entered physical therapy professional training prior to a mature learning age. A mature learner is a student that is at least 25+ years of age.\textsuperscript{119} Noting that the individuals entering the physical therapy programs may not be at a mature learning age, it is imperative for educators to recognize that the teaching and learning strategies should transition from teacher-directed to student-directed.\textsuperscript{125} For example, having students present projects about a particular pathology, evaluation procedure or treatment technique, versus having the academic faculty always lecture and cover the entire material set in the syllabus. This allows the novice, immature entry-level student to progress to a competent, mature graduate throughout the continuum of academic and clinical experiences.\textsuperscript{122}

\textit{Commitment to Learning.}

Commitment to learning is one of the ten identified professional behaviors by May et al as essential for professional practice.\textsuperscript{23} Both academic and clinical faculties demonstrated motivation and commitment to continue learning. Two out of nine clinical faculty and all nine academic faculty members pursued post-professional training.

In addition, five of the academicians (63\%) and two of clinical instructors (22\%) reported having The American Board of Physical Therapy Specialties (ABPTS). The ABPTS certifies individuals who demonstrate advanced knowledge and clinical skills in
physical therapy specialty areas. The participants of this study reported having a board-certification in the following areas: Cardiovascular and Pulmonary (n=1), Geriatrics (n=1), Sports (n=3), Pediatrics (1) and Orthopedics (1). This demonstrates that the participants of this study value commitment to lifelong learning.

**APTA Membership.**

Professional association membership is representative of professionalism. The findings of this study revealed that 100% of the academic faculty members are members and section members of the APTA, and that 56% of clinical instructors are members of the APTA and all of these participants reported being a section member of the APTA. In addition, 100% of the DPT students are planning to retain APTA membership upon graduation.

Professional membership may not be among the top priorities, given the number of professional, personal and financial responsibilities physical therapist have. However, lack of participation may cause the practitioner to miss out on the numerous benefits that APTA membership offers. For example, exclusive online resources, networking opportunities, free and discounted publications, legislation support, competitive intelligence, marketing, benefits, business applications, seminars, conferences, and, most important education.

**Consensus- and Evidence-Based Strategies for Physical Therapy Education in the Affective Domain.**

This manuscript explored the evolution and significance of PT and APTA documents in the promotion, development and evaluation of professional behaviors critical for affective competence. These documents offer an array of behavioral and performance criteria to assess affective competence. Survey analysis revealed low
frequencies of clinical instructors and DPT students reporting familiarity with PT and APTA documents as summarized in Table 3.7. The academic faculty reported not being familiar with the PT and APTA documents like APTA minimal required skills, “Opportunity Favors the Prepared”, and the Core Values self-assessment. This is a disturbing finding as these documents focus around a set of expected outcomes that must be exhibited by the entry-level DPT students prior to professional practice and educators can use these documents to effect change in a student having difficulty learning or demonstrating appropriate professional behaviors.

Table 3.6. Participants Reported Familiarity with the Following PT and APTA Documents

<table>
<thead>
<tr>
<th></th>
<th>Academic Faculty (n=8)</th>
<th>Clinical Faculty (n=9)</th>
<th>DPT student (n=12)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency / Percentage</td>
<td>Frequency / Percentage</td>
<td>Frequency / Percentage</td>
</tr>
<tr>
<td>Normative Model</td>
<td>8 (100%)</td>
<td>5 (56%)</td>
<td>8 (67%)</td>
</tr>
<tr>
<td>The Guide</td>
<td>8 (100%)</td>
<td>9 (100%)</td>
<td>11 (92%)</td>
</tr>
<tr>
<td>CPI</td>
<td>8 (100%)</td>
<td>8 (89%)</td>
<td>9 (75%)</td>
</tr>
<tr>
<td>APTA Minimal Clinical Skills</td>
<td>2 (25%)</td>
<td>5 (56%)</td>
<td>7 (59%)</td>
</tr>
<tr>
<td>Generic abilities</td>
<td>8 (100%)</td>
<td>8 (89%)</td>
<td>11 (92%)</td>
</tr>
<tr>
<td>Opportunity Favors the Prepared</td>
<td>0 (0%)</td>
<td>1 (11%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Core Values</td>
<td>6 (75%)</td>
<td>7 (78%)</td>
<td>12 (100%)</td>
</tr>
<tr>
<td>Core Values: Self-Assessment Tool</td>
<td>4 (50%)</td>
<td>6 (67%)</td>
<td>11 (92%)</td>
</tr>
</tbody>
</table>

THE DISCUSSION

The findings of this study indicate that the process of professional socialization is vital for individuals pursuing physical therapy as a profession. Participants reported that during the course of professional training, DPT students acquire the knowledge, skills and attitudes necessary for the successful entry into the physical therapy profession. The findings also indicate that there is a parallel subconscious process whereby entry-level DPT students internalize behavioral norms, form a sense of identity and commit to
becoming a physical therapist. This shows that a transformation and a commitment to becoming a professional occur through the process of professional socialization.

The themes that emerged from data analyses indicate that entry-level DPT students develop knowledge and professional behaviors over time, that education focused around a set of expected affective skills and competencies is critical in primary care physical therapy, that today’s Millennial students need an explicit approach to physical therapy education and that professional appearance constitutes professional practice. In addition, the findings indicate that the critical components of the Weidman, Twale and Stein Socialization Model apply to the entry-level graduate DPT student. These critical aspects are the background and disposition of the prospective student, the core socialization experience centered in the academic program and the identification of a professional role.

The overall findings regarding the process of professional socialization in physical therapy support the concerns held by faculty about entry-level DPT students’ underdevelopment of professional behaviors as they transition from the classroom setting to the clinical environment.\cite{12,16} Findings also indicated that academic faculty and clinical instructors struggle with fostering, teaching and evaluating the development of affective skills, and that skills in the affective domain encompass qualities that are critical in primary care physical therapy as reported in the literature.\cite{39,89,124}

The finding that knowledge acquisition and professional behaviors develop over time, is relevant in two ways: 1) entry-level DPT students must acquire sufficient cognitive knowledge and psychomotor skills to become effective practitioners and 2) entry-level DPT students must acquire appropriate professional behaviors and affective
competence to be able to fulfill the demands of the profession. According to the literature reviewed there is a predictable sequence in the development of cognitive and psychomotor skills, which historically is not applied to professional education in the affective domain.\textsuperscript{32,96,98} The assumptions have been that physical therapy professional education includes learning experiences in the cognitive, psychomotor and affective domains and that “learning how to act as a professional” will take place throughout the continuum of academic and clinical experiences.\textsuperscript{15,23} But, today’s entry-level novice students are just entering adulthood and their attitudes, values and character development may not be at a professional level.\textsuperscript{15} May et al suggested six elements to facilitate mastery of professional behaviors.\textsuperscript{24,46} The six elements and the significance of these elements as it relates to this study are as follows:\textsuperscript{24,46}

1. \textit{Sharing Expectations that are clear, explicit and public.} Specific to the academic setting, academic faculty must design and implement affective behavioral objectives and classroom experiences that are clear, explicit and public. In the clinical environment, clinical instructors are encouraged to do the same. Specific to the DPT students, sharing their expectations about the professional academic and clinical programs allows the students and faculty to discuss the similarities and differences. Consequently, both faculty and students have similar experiences, are able to engage in affective learning and are able to embrace the socialization processes (interaction, integrating and learning).

2. \textit{Providing Opportunities to practice and learn expected behaviors.} Providing academic and clinical experiences to practice allows the student to develop the
necessary skills and appropriate behaviors thorough formal and informal training and practice.

3. **Ongoing Assessment** by a teacher or supervisor, by a peer and by oneself. A number of PT and APTA documents linked to the profession’s attitudes, behaviors and beliefs about professionalism and professional behavior in successful clinical practice have been identified, and may be used as assessment tools as they provide measurable, concrete and objective behavioral criteria. But some of the faculty members and students are unfamiliar with these documents.

4. **Providing Feedback** when coaching, guiding and consulting. By providing consistent and constructive feedback, the academic and clinical faculty facilitate students’ to understand, engage and value (implicit and explicit) education in the affective domain. The DPT students must learn that feedback facilitates professional growth.

5. **Structuring Growth** through remediation and enhancement of performance.
   
   Both the concepts and performance criteria in the evidenced-based documents about affective competence and the set of processes involved in the process of professional socialization result in specific types of outcomes. In physical therapy, the desired outcome is affective entry-level performance essential for entry into the profession.

6. **Improving Consequences** if expected behaviors are not learned and demonstrated consistently at the required level or proficiency. In order to effect change in a student having difficulties with affective competence, the
underdevelopment of professional behaviors must be explicitly addressed. Explicit behavioral criteria and timely feedback help the entry-level physical therapy student to self-assess, self-correct and self-direct their process of professional socialization and development.\textsuperscript{12} In planning any teaching-learning, mentoring or advising activities, implicit versus explicit behavioral criteria should be considered. The use of explicit criteria allows students to have clear guidelines about instructor’s expectations and reflects in realistic classroom and clinical learning experiences.

Participants agreed that professional socialization and development of professional behaviors happened throughout the continuum of academic and clinical learning experiences. The perceptions of the academic and clinical faculty supported the review of literature reporting that the process of professional socialization of the entry-level DPT student progresses as students acquire beginning level performance skills in the classroom and progresses over time to competent entry-level performance at the completion of clinical internships. In physical therapy, this is an indication that knowledge acquisition and development of professional behaviors occurs over the course of professional education.

The findings of this study relating to the theme, \textit{skills in the affective domain encompass qualities that are critical in primary care physical therapy}, indicate that engaging the entry-level DPT students in affective learning experiences focused around a set of expected skills and competencies is essential for effective patient care and the ability to practice as primary care practitioners. The following affective competencies have been identified as skills necessary for physical therapist to practice as primary care
practitioners: effective communication, effective patient education, conflict resolution, empathy, compassion and assertiveness.\(^{39,124}\)

According to Vision 2020, doctors of physical therapy will be the recognized practitioner of choice for the diagnosis of, interventions for and prevention of movement related disorders.\(^{64,65,69}\) As the profession moves toward the Vision 2020, DPT curricula must be designed to promote the primary care model for physical therapists. The role of the physical therapist as primary care practitioner has been evolving rapidly and affective competence is critical in primary care physical therapy.

The overall perception of the academic faculty and clinical instructors about the physical therapy education is that curricula should focus around a set of explicit expected outcomes and behavioral criteria that must be exhibited by the entry-level DPT students prior to professional practice. Therefore, physical therapy education should transition from an implicit to an explicit academic and clinical teaching model. The faculty participants of this study shared their concerns about entry-level DPT students not being aware of the hidden teachings and modeling that underlie the faculty professional practice.\(^{5,55,96,131,132}\)

Physical therapy professional education documents such as The Normative Model, The Guide to PT Practice, the CPI, the APTA Minimal Clinical Skills, the Professional Behaviors (formerly known as the Generic abilities), the Opportunity Favors the Prepared, the Core Values and the Core Values Self-Assessment tool identify and provide tools for teaching, mastery and assessment of affective skills related to professionalism in physical therapy. These documents provide clear explicit guidelines to design learning objectives for affective classroom and clinical learning experiences and
outcomes. The findings of this study indicate that academic faculty members, as well as clinical instructors are not as familiar as DPT students with all PT and APTA documents to establish normative criteria for education in the affective domain, while the entry-level DPT student reported higher frequency of familiarity.

The findings related to appearance and professional demeanor indicate that projecting a professional appearance and making a great first impression is important to patients, caregivers and allied health practitioners. Professional appearance should be considered an essential behavioral outcome that should be exhibited by the entry-level DPT student in the classroom and the clinic.

Appropriate affective skills are necessary for adequate performance as a physical therapist. The ultimate outcome from physical therapist professional education is the development of a professional who has been implicitly and explicitly transformed with respect to self-image, attitudes, and thinking processes.

The findings generated by exploring the appropriateness of the Weidman, Twale, and Stein Socialization framework, indicate that entry-level graduate DPT students go through parallel stages of socialization described in higher education models. The critical aspects of this framework are the background and disposition of the prospective student, the core socialization experience centered in the academic program, and the identification of a professional role.

Participants reported that during the course of academic training (formal and informal), DPT students acquire the knowledge, skills and attitudes necessary for the successful entry into the physical therapy profession and that these skills are influenced by the entry-level DPT student’s personality, upbringing, background (pre-professional
experience) and the past relationships with their families, peers and other professionals. Professional education is clearly meant to prepare highly skilled individuals, but this will not occur if individuals do not engage in learning or there is not total immersion of the academic faculty, clinical instructors and entry-level DPT students in the process of professional socialization.\textsuperscript{3,5,52}

An important outcome of the process of professional socialization identified by the academic faculty and clinical instructors is an evolving professional identity.\textsuperscript{62} The identification and internalization of professional identity or role requires not only learning the cognitive/technical and psychomotor skills required for efficient patient care, but also attitudes, values and norms necessary for affective competence. The identification with and commitment to, a professional role are not developed completely during the period of formal professional preparation, but rather continue to evolve after novices begin professional practice.

The process of professional socialization is dynamic, ongoing and without a definitive beginning and end.\textsuperscript{52} This process includes interpersonal interaction, intrapersonal interaction, and integration. The participants of this study all shared personal and professional experiences reflecting the personal (intrapersonal and interpersonal), academic and clinical relationships that have influenced their professional development.

These findings suggest that consideration of professional socialization models like the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization and explicit education in the affective domain may
assist in improving physical therapist professional education and graduates’ preparedness for the professional working life.

CONCLUSION

The results of this qualitative study prove to be helpful to academic and clinical education by describing current perceptions about the process of professional socialization in physical therapy. Academic and clinical programs may use this information to guide entry-level DPT students during their professional socialization by engaging the student in the active recognition that acquisition of professional behaviors as novice students in the classroom and implementation of these professional behaviors as a new graduate entering clinical practice is imperative to professional practice as primary care practitioners. The academic institutions are uniquely positioned to facilitate the process of entry-level DPT students’ professional socialization. In the classroom, academicians can provide a variety of opportunities like role modeling, case scenarios, and role playing to explicitly promote, teach and evaluate affective competence. In the clinic, the academic faculty can provide the necessary training, mentorship and guidance to clinical instructors to develop the necessary skills to effectively and efficiently identify, assess, and address students presenting inappropriate or underdeveloped professional behaviors.

The results of this study have significant implications for designing and engaging entry-level graduate DPT students in academic and clinical affective learning experiences, as well as for developing effective strategies to facilitate the acquisition of appropriate professional behaviors. However, this is insufficient if academicians and
clinician instructors do not address and impose consequences if the expected behaviors are not learned or are underdeveloped.

The process of professional socialization is also vital in the development of professional values. Reflection is the master key to affective competence. Integrating the concept specific behavioral criteria from PT and APTA documents linking the profession’s attitudes, behaviors and beliefs about professionalism enhances the development of professional behaviors throughout academic training and clinical practice.

Models like the Weidman, Twale and Stein (2001) socialization model should be considered when professional academic and clinical education curricula are designed. There are a number of advantages to this framework and the findings of this study suggest that this framework may be applicable to the process of professional socialization of the entry-level graduate physical therapy student.

The Weidman, Twale, and Stein Socialization Framework conceptualizing graduate and professional student socialization in higher education suggests that socialization into a profession is conceived of as a series of processes. The series of processes whereby the novice entry-level graduate physical therapist socializes into the profession include: 1) the prospective student enters with a set of values, beliefs and attitudes about self and the entering profession, 2) during the professional training the student is exposed to classroom experiences, clinical experiences, normative pressures from faculty, peers and society, 3) the student experiences a silent struggle to meet personal and professional goals, and 4) a subconscious transformation of values, aspirations, internalization of professional role and commitment to the profession occurs.
The Weidman, Twale, and Stein Socialization Framework emphasize cognitive, psychomotor and affective outcomes to be vital in the process of professional socialization of the graduate and professional student. This unique approach, as well as Weidman’s perspective of analyzing the socialization processes from both the institutional and individual levels conceptualizes the process of professional socialization of the entry-level graduate physical therapy student. It is essential that the academic programs work with the profession to maintain and improve graduate standards while responding to the demands from society, the health care system, research, and consumers to educate highly skilled primary care practitioners.

LIMITATIONS

There are a number of limitations to this study

1. The use of a purposive sample limits the transferability of the results.

2. The participants were acquaintances. The students and academic faculty who are participating in this study all came from the same institution. The academicians involved in this study have worked in this institution together for many years. With regard to the clinical faculty, some may be strangers to each other, but all have been involved with this institution’s clinical education program.

3. The academic faculty and DPT student participants were related to only one professional education institution.

4. The perceptions of the entry-level DPT students, academicians and clinical instructors about the application of the Weidman socialization model to the
physical therapy profession cannot be generalized beyond these academic and clinical institutions.

TANGIBLE RECOMMENDATIONS FOR ACADEMIC AND CLINICAL PROGRAMS

For the academic and clinical programs, this author suggests:

1. Development of training seminars to:
   a. Help the academic and clinical faculty to develop the skills to design explicit affective learning objectives and experiences into the core curricula and clinical matrices reflecting the profession’s attitudes, behaviors and beliefs about professionalism and professional behavior in physical therapy.
   b. Familiarize the academic and clinical faculty with the PT and APTA documents linking the profession’s attitudes, behaviors and beliefs about professionalism and professional behavior in successful clinical practice.
   c. Teach the academic and clinical faculty how these evidenced-based documents and their performance expectations could be used to effect change in a student having difficulty learning or demonstrating appropriate professional behaviors in the academic setting and/or clinical environment.

2. Adoption of the six essential elements to facilitate mastery of professional behaviors presented by May et al in a manuscript titled *Opportunity Favors the Prepared: A guide to Facilitating the Development of Behavior*. These elements suggest that the faculty 1) shares the expectations, 2) provides the
opportunity for practice, 3) performs ongoing assessments, 4) provides constructive feedback, 5) structures growth and 6) implements consequences if the student is having difficulty learning or is not demonstrating appropriate behaviors.

3. Establishment of guidelines for professional appearance. These guidelines are designed to help promote a positive, professional image for fellow students, colleagues, superiors and consumers in the classroom setting and clinical environment. These guidelines should be followed by the academic staff as well as the students when participating in academic and/or clinical experiences.

4. Faculty to become familiar with the traits and characteristics of the novice, immature learner. The faculty should guide the novice student through the learning process to progress to a competent, mature graduate throughout the continuum of academic and clinical experiences. KC – this sentence is not easy to understand.

Specific to the academic setting, this author recommends:

1. The utilization and reinforcement of norms, rules and guidelines in the student manual handbook. Specific to the academic setting, this author suggests having an established review committee to address and implement consequences if the expected knowledge, skills and professional behaviors are not learned or are underdeveloped.

2. To understand the motivating factors of various generational cohorts in the classroom and the workplace. The academic faculty must learn what
motivates the various generational cohorts, and how to recruit and retain them.
Also, the academic faculty should learn how to motivate and manage a multi-
generational work force and student body.

3. The development and implementation of explicit affective learning objectives
in the professional curriculum.

Specific to the clinical environment, this author recommends:

1. Facilitating an understanding of the motivating factors of various generational
cohorts in the clinic and the workplace. The clinical faculty must learn what
motivates the various generational cohorts to understand how the different
generations (students and patients) approach learning and how effective
strategies differ among the generations.

2. Implementation and improvement of consequences if a student has not learned
or is not demonstrating the expected professional behavior consistently at the
required level or proficiency. Significant concerns in the clinic warrant
immediate attention, documentation, and a telephone call to the academic
program. Therefore, explicitly defining, describing and measuring the clinical
or internship expectations.

TANGIBLE RECOMMENDATIONS FOR ENTRY-LEVEL PHYSICAL
THERAPIST STUDENTS

The author recommends that the entry-level physical therapy students try to:

1. Understand the traits and characteristics of the all generational groups and
compare similarities and differences with his/her own personal traits and
characteristics.
2. Understand the motivating factors of various generational cohorts in the classroom, clinic and the workplace. The entry-level student must learn what motivates the various generational cohorts to understand how the different generations (academic faculty, clinical instructor, students and patients) approach learning and how effective strategies differ among the generations.

3. Understand that the entry-level graduate student enters the program with a set of values, beliefs and attitudes about self and the entering profession that will transform throughout the processes of professional socialization during classroom and clinical experiences.

4. Engage in affective learning experiences and to value the implicit teachings fostering professionalism.

5. Recognize, and over time internalize, the professional behaviors critical for affective competence.

6. Become familiarized with the PT and APTA consensus- and evidence-based documents that link the profession’s attitudes, behaviors and beliefs about professionalism and professional behavior in successful clinical practice.

7. Abide by the professional dress code in the academic setting and clinical environment.

A final global suggestion is for the physical therapy profession to adopt the Weidman, Twale and Stein model conceptualizing graduate and professional student socialization. Specific to the academic setting, this model can help in the recruiting and admission processes by clearly noting the influence of the anticipatory stage.
(predisposition and background) in the process of socialization. In addition, this model provides guidance to the academic and social formal and informal aspects of the professional training, and validates the concepts delineated in the Normative Model of physical therapist professional education. Specific to the clinical setting, this model highlights the relationship between the professional communities, personal communities and the institution (academic program). Finally, this model guides and motivates the novice student to engage in ongoing learning process that involves 1) acquisition of knowledge, skills and values, 2) involvement, engagement and investment of normative contexts and socialization processes and 3) commitment to identify a professional role (outcome).

**RECOMMENDATIONS FOR FUTURE RESEARCH**

Several recommendations for further research are submitted. The first recommendation is that future research should include academicians, clinical instructors and entry-level DPT students from various programs across the nation.

The second recommendation is that further study needs to explicitly address generational differences. An additional, challenge in defining professionalism is the disparate values, beliefs, attitudes and behaviors held by different generations in the classroom, the clinic and in general society. Part of the shift in these attitudes and values seem to be associated with incongruence in the generations and the characteristics/traits, as well as learning styles that are associated with each generation. 100,126,133-136

A third recommendation of this study is that future research needs to be conducted to examine the differences in perception of effective and ineffective (academic
and clinical) affective learning experiences based on the student-educator interaction. By examining the effective and ineffective affective learning experiences, academicians and clinical instructors may be able to design and foster learning experiences that not only are effective but address the generational needs of the Millennials or Generation Y students.

A fourth recommendation is that a case study and interview research could be done to assess the effectiveness of familiarizing faculty and students with the PT and APTA documents linking the physical therapy profession’s attitudes, behaviors and beliefs about professionalism.

Finally, consideration should be given to further explore and validate the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization and its application to the physical therapy profession. Additionally, exploration of the interaction of the elements of this model might provide valuable information for educators and students. Future research also might include designing and testing preparatory and recruitment phases that seek to identify the ideal prospective student.

**CLOSING REMARKS**

It is hoped that by following these recommendations academic and clinical programs will be able to engage entry-level DPT students in affective learning experiences, that students will be able to make a smooth transition from the classroom setting to the clinical environment, and that the concerns about students’ underdevelopment of professional behaviors will be minimized.
It is also hoped that the physical therapy profession adopts a socialization model, like the Weidman, Twale, and Stein (2001) Socialization Framework as the profession continues its quest to prepare doctors of physical therapy who are not only autonomous, but are able to provide primary care as compassionate and caring practitioners.
WORKS CITED


44. Davis CM. What is empathy, and can empathy be taught? *Phys Ther.* 1990;70(11):707-711.


53. Weidman JC, Stein EL. *The professional socialization of graduate students in educational administration.* Pittsburgh, PA: Paper presented at the Annual Meeting of the University Council for Education Administration (October 26-28); 1990.


112. American Physical Therapy Association Combined Sections Meeting. Developing and/or refining your interviewing skills as a qualitative researcher and comprehensive data analysis in qualitative research: Making sense of the data. . 2011.


123. Boissonnault WG. Primary care for the physical therapist: Examination and triage. 2nd ed. St. Louis, MI: Saunders, an imprint of Elsevier Inc; 2011.


129. Page GM. Review of professional socialization as a mechanism to improve graduate outcomes. 13th Pacific-Rim Real Estate Society Conference Fremantle, Western Australia. 2007.


APPENDICES

APPENDIX A. Taxonomy of Educational Objectives for Learning.
APPENDIX B. Professionalism in Physical Therapy: Core Values.
APPENDIX C. Previous Study (Tables and Results).
APPENDIX D. Study Documents Approved by IRB.
APPENDIX E. ATLAS.ti Software Applications.
APPENDIX A

Taxonomy of Educational Objectives for Learning

Bloom Taxonomy: Cognitive Domain*

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Comprehension</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple</td>
<td>Compute</td>
<td>Calculate</td>
<td>Analyze</td>
<td>Arrange</td>
<td>Appraise</td>
</tr>
<tr>
<td>Simple</td>
<td>Describe</td>
<td>Demonstrate</td>
<td>Appraise</td>
<td>Assemble</td>
<td>Assess</td>
</tr>
<tr>
<td>Simple</td>
<td>Discuss</td>
<td>Dramatize</td>
<td>Collect</td>
<td>Evaluate</td>
<td>Choose</td>
</tr>
<tr>
<td>Simple</td>
<td>Explain</td>
<td>Employ</td>
<td>Compare</td>
<td>Create</td>
<td>Design</td>
</tr>
<tr>
<td>Simple</td>
<td>Express</td>
<td>Examine</td>
<td>Debate</td>
<td>Formulate</td>
<td>Measure</td>
</tr>
<tr>
<td>Simple</td>
<td>Identify</td>
<td>Illustrate</td>
<td>Diagram</td>
<td>Integrate</td>
<td>Rank</td>
</tr>
<tr>
<td>Simple</td>
<td>Locate</td>
<td>Operate</td>
<td>Differentiate</td>
<td>Manage</td>
<td>Revise</td>
</tr>
<tr>
<td>Simple</td>
<td>Report</td>
<td>Practice</td>
<td>Examine</td>
<td>Organize</td>
<td>Score</td>
</tr>
<tr>
<td>Simple</td>
<td>Restate</td>
<td>Schedule</td>
<td>Inventory</td>
<td>Plan</td>
<td>Select</td>
</tr>
<tr>
<td>Simple</td>
<td>Review</td>
<td>Sketch</td>
<td>Question</td>
<td>Prescribe</td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Tell</td>
<td>Solve</td>
<td>Test</td>
<td>Propose</td>
<td></td>
</tr>
<tr>
<td>Complex</td>
<td>Translate</td>
<td>Use</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Simpson Taxonomy: Psychomotor Domain*

<table>
<thead>
<tr>
<th>Perception</th>
<th>Guided Response</th>
<th>Complex Overt Response</th>
<th>Adaptation</th>
<th>Origination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple</td>
<td>Set</td>
<td>Adjust</td>
<td>Adapt</td>
<td>Construct</td>
</tr>
<tr>
<td>Simple</td>
<td>Adjust</td>
<td>Calibrate</td>
<td>Build</td>
<td>Create</td>
</tr>
<tr>
<td>Simple</td>
<td>Approach</td>
<td>Coordinate</td>
<td>Demonstrate</td>
<td>Design</td>
</tr>
<tr>
<td>Simple</td>
<td>Determine</td>
<td>Illustrate</td>
<td>Maintain</td>
<td>Supply</td>
</tr>
<tr>
<td>Simple</td>
<td>Discover</td>
<td>Indicate</td>
<td>Operate</td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Manipulate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Mix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Set-up</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Imitate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Inject</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Place</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Duplicate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Locate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Discover</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Approach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Determine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Adjust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Calibrate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Coordinate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Illustrate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Indicate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Operate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Mix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Set-up</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Imitate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Inject</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Place</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Duplicate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Locate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Approach</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Determine</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Adjust</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Calibrate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Coordinate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Illustrate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Indicate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Operate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Mix</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Set-up</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Imitate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple</td>
<td>Inject</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


**Krathwohl Taxonomy: Affective Domain***

<table>
<thead>
<tr>
<th>Simple</th>
<th>Responding</th>
<th>Valuing</th>
<th>Organization</th>
<th>Characterization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving</td>
<td>Behave</td>
<td>Accept</td>
<td>Codify</td>
<td>Complex</td>
</tr>
<tr>
<td>Accept</td>
<td>Complete</td>
<td>Balance</td>
<td>Verify</td>
<td></td>
</tr>
<tr>
<td>Attend</td>
<td>Comply</td>
<td>Believe</td>
<td>Internalize</td>
<td></td>
</tr>
<tr>
<td>Develop</td>
<td>Cooperate</td>
<td>Defend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Realize</td>
<td>Discuss</td>
<td>Devote</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive</td>
<td>Examine</td>
<td>Influence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognize</td>
<td>Obey</td>
<td>Prefer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reply</td>
<td>Observe</td>
<td>Pursue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Respond</td>
<td>Seek</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Value</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

APPENDIX B

Professionalism in Physical Therapy: Core Values

<table>
<thead>
<tr>
<th>Core Value</th>
<th>Definition*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Accountability</td>
<td>Accountability is active acceptance of the responsibility for the diverse roles, obligations, and actions of the physical therapist including self-regulation and other behaviors that positively influence patient/client outcomes, the profession and the health needs of society.</td>
</tr>
<tr>
<td>2. Altruism</td>
<td>The primary regard for or devotion to the interest of patients/clients, thus assuming the fiduciary responsibility of placing the needs of the patient/clients ahead of the physical therapist's self-interest.</td>
</tr>
</tbody>
</table>
| 3. Compassion / Caring | *Compassion* is the desire to identify with or sense something of another's experience; a precursor of caring.  
*Caring* is the concern, empathy, and consideration for the needs and values of others. Examples of compassion: Understanding the social-cultural, psychological, and economic influences on an individual's life in their environment. Being an advocate for patients'/clients' needs. |
| 4. Excellence       | Physical therapy practice that consistently uses current knowledge and theory while understanding personal limits, integrates judgment and the patient/client perspective, embraces advancement, challenges mediocrity, and works toward development of new knowledge. |
| 5. Integrity        | Steadfast adherence to high ethical principles or professional standards, truthfulness, fairness, doing what you say you will do, and "speaking forth about why you do what you do." |
| 6. Professional Duty | The commitment to meeting one's obligations to provide effective physical therapy services to individual patient/clients, to serve the profession, and to positively influence the health of society. |
| 7. Social Responsibility | The promotion of a mutual trust between the profession and the larger public that necessitates responding to societal needs for health and wellness. |


Sample Indicators of Professionalism in Physical Therapy: Core Values

<table>
<thead>
<tr>
<th>Core Value</th>
<th>Sample Indicators*</th>
</tr>
</thead>
</table>
| 1. Accountability | 1. Responding to patient’s/client’s goals and needs.  
2. Seeking and responding to feedback from multiple sources.  
3. Acknowledging and accepting consequences of his/her actions.  
4. Assuming responsibility for learning and change.  
5. Adhering to code of ethics, standards of practice, and policies/procedures that govern the conduct of professional activities.  
6. Communicating accurately to others (payers, patients/clients, other health care providers) about professional actions.  
7. Participating in the achievement of health goals of patients/clients and society.  
8. Seeking continuous improvement in quality of care.  
9. Maintaining membership in APTA and other organizations.  
10. Educating students in a manner that facilitates the pursuit of learning. |
### 2. Altruism

1. Placing patient’s/client’s needs above the physical therapists.
2. Providing pro-bono services.
3. Providing physical therapy services to underserved and underrepresented populations.
4. Providing patient/client services that go beyond expected standards of practice.
5. Completing patient/client care and professional responsibility prior to personal needs.

### 3. Compassion/Caring

1. Understanding the socio-cultural, economic, and psychological influences on the individual’s life in their environment.
2. Understanding an individual’s perspective.
3. Being an advocate for patient’s/client’s needs.
4. Communicating effectively, both verbally and non-verbally, with others taking into consideration individual differences in learning styles, language, and cognitive abilities, etc.
5. Designing patient/client programs/interventions that are congruent with patient/client needs.
6. Empowering patients/clients to achieve the highest level of function possible and to exercise self-determination in their care.
7. Focusing on achieving the greatest well-being and the highest potential for a patient/client.
8. Recognizing and refraining from acting on one’s social, cultural, gender, and sexual biases.
10. Attending to the patient’s/client’s personal needs and comforts.
11. Demonstrating respect for others and considers others as unique and of value.

### 4. Excellence

1. Demonstrating investment in the profession of physical therapy.
2. Internalizing the importance of using multiple sources of evidence to support professional practice and decisions.
3. Participating in integrative and collaborative practice to promote high quality health and educational outcomes.
4. Conveying intellectual humility in professional and personal situations.
5. Demonstrating high levels of knowledge and skill in all aspects of the profession.
6. Using evidence consistently to support professional decisions.
7. Demonstrating a tolerance for ambiguity.
8. Pursuing new evidence to expand knowledge.
9. Engaging in acquisition of new knowledge throughout one’s professional career.
10. Sharing one’s knowledge with others.
11. Contributing to the development and shaping of excellence in all professional roles.

### 5. Integrity

1. Abiding by the rules, regulations, and laws applicable to the profession.
2. Adhering to the highest standards of the profession (practice, ethics, reimbursement, Institutional Review Board [IRB], honor code, etc).
3. Articulating and internalizing stated ideals and professional values.
4. Using power (including avoidance of use of unearned privilege) judiciously.
5. Resolving dilemmas with respect to a consistent set of core values.
7. Taking responsibility to be an integral part in the continuing management of patients/clients.
8. Knowing one’s limitations and acting accordingly.
9. Confronting harassment and bias among ourselves and others.
10. Recognizing the limits of one’s expertise and making referrals appropriately.
11. Choosing employment situations that are congruent with practice values and professional ethical standards.
12. Acting on the basis of professional values even when the results of the behavior may place oneself at risk.
| **6. Professional Duty** | 1. Demonstrating beneficence by providing “optimal care”.
2. Facilitating each individual’s achievement of goals for function, health, and wellness.
3. Preserving the safety, security and confidentiality of individuals in all professional contexts.
4. Involved in professional activities beyond the practice setting.
5. Promoting the profession of physical therapy.
6. Mentoring others to realize their potential.
7. Taking pride in one’s profession. |
| **7. Social Responsibility** | 1. Advocating for the health and wellness needs of society including access to health care and physical therapy services.
2. Promoting cultural competence within the profession and the larger public.
3. Promoting social policy that effect function, health, and wellness needs of patients/clients.
4. Ensuring that existing social policy is in the best interest of the patient/client.
5. Advocating for changes in laws, regulations, standards, and guidelines that affect physical therapist service provision.
6. Promoting community volunteerism.
7. Participating in political activism.
8. Participating in achievement of societal health goals.
9. Understanding of current community wide, nationwide and worldwide issues and how they impact society’s health and well-being and the delivery of physical therapy.
10. Providing leadership in the community.
11. Participating in collaborative relationships with other health practitioners and the public at large.
12. Ensuring the blending of social justice and economic efficiency of services. |

**APPENDIX C**

Previous Study (Tables and Results)

### Summary of Responses to Survey Questions 4 and 6

<table>
<thead>
<tr>
<th>US Region</th>
<th>States per region</th>
<th>In what geographical region did you grow up?</th>
<th>In what geographical region did you completed your undergraduate studies prior to entering the University of Miami DPT program?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=36* Percentage</td>
<td>n=35 Percentage</td>
<td></td>
</tr>
<tr>
<td>New England</td>
<td>(NH, ME, MA, RI, CT, VT)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td>(NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)</td>
<td>8  22%</td>
<td>10  29%</td>
</tr>
<tr>
<td>Southern</td>
<td>(AL, AR, FL, GA, KY, LA, MS, TN)</td>
<td>5  14%</td>
<td>2   6%</td>
</tr>
<tr>
<td>Midwest</td>
<td>(IL, IN, IA, MI, MO, OH, WI)</td>
<td>13  36%</td>
<td>17  49%</td>
</tr>
<tr>
<td>Southwest</td>
<td>(AZ, NM, OK, TX)</td>
<td>4   11%</td>
<td>2   6%</td>
</tr>
<tr>
<td>Mountain</td>
<td>(CO, ID, MT, UT, WY)</td>
<td>1   3%</td>
<td>1   3%</td>
</tr>
<tr>
<td>Western</td>
<td>(CA, OR, WA, AK, HW)</td>
<td>1   3%</td>
<td>1   3%</td>
</tr>
<tr>
<td>Outside of USA (Please Specify)</td>
<td>3**  8%</td>
<td>1***  3%</td>
<td></td>
</tr>
</tbody>
</table>

* n=36 – One student answered New England and Midwest

** Outside of USA – Cayman Island (n=1), Former USSR (n=1) and unspecified (n=1)

*** Outside of USA – The student did not specify the region
APPENDIX D

STUDY DOCUMENTS

Approved by the Internal Reviewed Board at the University of Miami
Dear Physical Therapy Faculty:

You are invited to participate in a qualitative research study exploring the professional socialization process of doctorate of physical therapy (DPT) students. The research study is titled “Professional Socialization: Transition from the classroom setting to the clinical environment”. This study is being conducted as part of my doctoral dissertation in the Doctoral Program at the University of Miami under the supervision of Neva Kirk-Sanchez, PT, PhD.

The purpose of my dissertation is to explore the professional socialization process from the perspective of the academic faculty, clinical faculty and doctorate of physical therapy (DPT) students. You are invited to participate in a single case study interview. I will be asking you questions about your role in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills; and why there is a gap between the knowledge acquired in the classroom setting to the application of these professional behaviors in the clinic environment. In addition, you will be asked to complete a survey gathering demographic data. The survey and single case study interview will be conducted in the conference room located on the 5th floor of the Department of Physical Therapy at the Coral Gables Campus or a location of your convenience. Completion of the survey and single case study interview will take approximately 60 to 90 minutes. Your responses will be collected via audiotape recorder. This information will be transcribed into written format and analyzed.

To assure confidentiality, you will not be identified by your name. No one will be identifiable in any written reports or publications. All data will be kept in a secure file and project staff, my advisor or I will have access to the data while I complete my dissertation. Once I complete my dissertation, all data files will be destroyed. Participation in this study is completely voluntary.

Attached you will find a copy of the “Professional Behaviors of the 21st Century” published by May et al (2009-2010) addressing the definition and sample behaviors of professional behaviors of interest for this study and the Weidman, Twale and Stein (2001) socialization model conceptualizing the process of professional socialization to facilitate our discussion.

I hope that you can assist me in this exciting endeavor. Please do not hesitate to contact me if you have any questions in regards to the research and/or procedures at office 305.284.4535 or mobile 305.775.9114.

Sincerely,

Anna Katerina Tischenko, PT, PhD Candidate
University of Miami - Miller School of Medicine Department of Physical Therapy
PhD Candidate
5915 Ponce de Leon Boulevard - 5th Floor - Coral Gables, Fl 33146
Office 305.284.4535 - Fax 305.284.6128
a.tischenko@umiami.edu
Dear Doctor of Physical Therapy Student:

You are invited to participate in a qualitative research study exploring the professional socialization process of doctorate of physical therapy (DPT) students. The research study is titled “Professional Socialization: Transition from the classroom setting to the clinical environment”. This study is being conducted as part of my doctoral dissertation in the Doctoral Program at the University of Miami under the supervision of Neva Kirk-Sanchez, PT, PhD.

The purpose of my dissertation is to explore the professional socialization process from the perspective of the academic faculty, clinical faculty and doctorate of physical therapy (DPT) students. You are invited to participate in a single case study interview. I will be asking you questions about your role in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills; and why there is a gap between the knowledge you acquired in the classroom setting to the application of these professional behaviors in the clinic environment. In addition, you will be asked to complete a survey gathering demographic data. The survey and single case study interview will be conducted in the conference room located on the 5th floor of the Department of Physical Therapy at the Coral Gables Campus or a location of your convenience. The completion of the survey and single case study interview will take approximately 60 to 90 minutes. Your responses will be collected via audiotape recorder. This information will be transcribed into written format and analyzed.

To assure confidentiality, you will not be identified by your name. No one will be identifiable in any written reports or publications. All data will be kept in a secure file and project staff, my advisor or I will have access to the data while I complete my dissertation. Once I complete my dissertation, all data files will be destroyed. Participation in this study is completely voluntary.

Attached you will find a copy of the “Professional Behaviors of the 21st Century” published by May et al (2009-2010) addressing the definition and sample behaviors of professional behaviors of interest for this study and the Weidman, Twale and Stein (2001) socialization model conceptualizing the process of professional socialization to facilitate our discussion.

I hope that you can assist me in this exciting endeavor. Please do not hesitate to contact me if you have any questions in regards to the research and/or procedures at office 305.284.4535 or mobile 305.775.9114.

Sincerely,

Anna Katerina Tischenko, PT, PhD Candidate
University of Miami - Miller School of Medicine Department of Physical Therapy PhD Candidate
5915 Ponce de Leon Boulevard - 5th Floor - Coral Gables, Fl 33146
Office 305.284.4535 - Fax 305.284.6128
a.tischenko@umiami.edu
PROFESSIONAL COMMUNITIES
Practitioners
Associations

UNIVERSITY
Institutional Culture
Academic Program
Peer Climate

Socialization Process
Interaction
Integrating Learning

Knowledge Acquisition
Investment, Involvement

NOVICE PROFESSIONAL PRACTITIONERS
[Commitment]
[identity]

PERSONAL COMMUNITIES
Family / Friends
Employers

PROSPECTIVE STUDENT
Background
Predispositions

PHASE 1 INTERVIEW QUESTIONS

Title of Research: Professional Socialization: Transition from the classroom setting to the clinical environment.

Ppal Investigator: Anna Katerina Tischenko, PT
Co-ppal investigator: Neva Kirk-Sanchez, PT, PhD
Department: Physical Therapy, Miller School of Medicine
Telephone number: 305.284.4535
Fax: 305.284.6493

MAIN OBJECTIVE – Explore professional socialization process in physical therapy from the perspective of AF, CF and DPT student.

Purpose # 1 – An exploration of academic faculty, clinical faculty and DPT students’ role in the development of DPT students appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills.

1. Most people when they are asked about responsibility as a professional behavior think of skills like the ability of the student to demonstrate punctuality, to complete projects without prompting, to act as patient advocate, to facilitate program development and modification, and to recognize their role as a leader. Can you give an example of your role in the development of responsibility in DPT students?

2. Most people when they are asked about interpersonal skills as a professional behavior think of skills like: the students’ ability to demonstrate interest in patients as individuals, to maintain confidentiality in all interactions, to respect the role of others, and their ability to build partnerships. Can you give an example of your role in the development of interpersonal skills in DPT students?

3. Most people when they are asked about communication skills as a professional behavior think of skills like: the student ability to recognize impact of non-verbal communication in self and others, to utilize and to modify communication (verbal, non-verbal, written and electronic) to meet the needs of different audiences, and to maintain open and constructive communication. Can you give an example of your role in the development of communication skills in DPT students?

Purpose # 2 – Description of the sources and differences between knowledge and application of concepts related to these professional behaviors by the DPT student.

4. Have you observed a gap between the knowledge acquired by the DPT student in the classroom and the application of these professional behaviors (interpersonal skills, communication skills and responsibility) in the clinic environment? If so, why do you think there is a gap?

For example –

a. The student learns the importance of being on time, but is constantly late to class or the clinic or the patient’s treatment time.

b. The student learns the impact of non-verbal communication, but does not observe the facial grimacing on a patient and is unable to adjust the course of treatment.

c. The student learns about the importance of maintaining interest in the patient / family but dismisses what the patient (child) has to say and only maintains focus to the mother.
5. Other than interpersonal skills, communication skills and responsibility, have you observed students who lack awareness and/or application of other affective professional behaviors? If so, which ones?
   a. How did you recognize it?
   b. How did this make you feel?
   c. Did you attempt to address and/or correct the unwanted behavior?
   d. Why do you think it did or did not work?

6. STUDENT - Can you give an example of an experience that influenced your development of professional behaviors?

   Purpose #3 – Examination of how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

7. Can you give an example of a time that you modeled, assessed or taught professional behaviors to DPT students? For example,
   ❖ Implicit – always arrived to the classroom or clinic 10 minutes early and always was on time for appointments.
   ❖ Explicit – role play a PT/patient interaction addressing punctuality.

   Purpose #4 – Exploration of the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it applies to physical therapy students.

8. Some researchers also attribute professional socialization to other influences in a students’ life, such as students’ background, relationships with professional communities, family/friends, and/or employers and academic program, peer climate. What observations can you share that might validate any of these influences as particularly important sources of professional socialization for the DPT student?

9. Is there anything else you would like to share about professional behaviors and their development as DPT students’ transition from the classroom setting to the clinic environment?

10. Do you have any comments about the questions that I have asked you today?

    Thank you so much for your participation today.
    Your time and contribution to my research is valued and appreciated.
INFORMED CONSENT FOR PARTICIPANTS IN RESEARCH ACTIVITIES

Title of Research: *Professional Socialization: Transition from the classroom setting to the clinical environment.*

Ppal Investigator: Neva Kirk-Sanchez, PT, PhD

Co-ppal investigator: Anna Katerina Tischenko, PT

Department: Physical Therapy, Miller School of Medicine

Telephone number: 305.284.4535

Fax: 305.284.6493

Purpose of This Research Study

You are being asked to participate in this qualitative research study, to assist the investigator in exploring the professional socialization process from the perspective of academic faculty (AF), clinical faculty (CF) and doctorate of physical therapy (DPT) students.

This will be accomplished by:

1. An exploration of academic faculty, clinical faculty and DPT students’ role in the development of DPT students appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills.
2. Description of the sources and differences between knowledge and application of concepts related to these professional behaviors by the DPT student.
3. Examination of how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.
4. Exploration of the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it applies to physical therapy students.

What Will Be Done/Procedures

Phase 1 – Single case study interview (SCSI)

As a full time or part time academic faculty at the University of Miami Department of Physical Therapy, clinical faculty involved in the clinical education of the University of Miami Department of Physical Therapy program or graduate student in the DPT program at the University of Miami, you will be asked to participate in a qualitative study consisting of completing a survey and a single case study interview. The survey and single case study interview will be completed in the conference room located on the 5th floor of the Department of Physical Therapy at the Coral Gables Campus. The survey and single case study interview will take approximately 60 to 90 minutes. The interview will be audio taped.

Phase 2 – Focus Group (FG)

As a full time or part time academic faculty at the University of Miami Department of Physical Therapy, clinical faculty involved in the clinical education of the University of Miami Department of Physical Therapy program or graduate student in the DPT program at the University of Miami, you will be asked to participate in a qualitative study consisting of completing a survey and taking part in a focus group. The survey and focus group will be conducted in the conference room located on the 5th floor of the Department of Physical Therapy at the Coral Gables Campus. The survey and single case study interview will take approximately 60 to 90 minutes. The focus group will be audio taped.

Possible Benefits
No direct benefit can be promised to you. However, the results of this study will enable the researcher to learn more about how to promote professionalism and development of professional behaviors in physical therapy.

Possible Risks and Discomforts
We do not anticipate any risks or discomfort to you from taking part in this study. Participants will be allowed to skip any questions they choose not to answer. Participants may withdraw at any time. If you take part in the focus group, we will emphasize to all participants that comments made during the session should be kept confidential; however, it is possible that participants may repeat comments outside of the interview or group at some time in the future. Therefore, we encourage you to be as honest and open as possible, keeping in mind our limitations in fully protecting confidentiality. No questions will be directed to you individually, but instead will be posed to the group. You may choose to respond or refrain at any point during the discussion.

Confidentiality of Records
Every effort will be taken to protect your identity as a participant in this study. You will not be identified in any report or publication of this study or its results. Your name will not appear on any transcripts; instead, you will be given a code number or indirect identifier. The list which matches names and code numbers will be kept in a locked file cabinet. After the single case study interview and focus group tapes have been transcribed, the tapes will be destroyed, and the list of names and numbers will also be destroyed. Your survey records will be locked in a file cabinet in the Department of Physical Therapy. Only the investigators will have access to these records. The investigators and their assistants will consider your records confidential to the extent permitted by law. The U.S Department of Health and Human Services (DHHS) may request to review and obtain copies of your records. Your records may also be reviewed for audit purposes by authorized University or other agents who will be bound by the same provisions of confidentiality.

CONTACT INFORMATION:
The Co-Investigator, Anna Katerina Tischenko, PT and the Principal Investigator, Neva Kirk-Sanchez, PT, PhD, are responsible for this research study, and will answer any questions you may have regarding participation in this study. If you have questions about your rights as a research subject you may contact Human Subjects Research Office at the University of Miami, at (305) 243-3195.

Voluntary Participation with Right of Refusal
Participation in this study is completely voluntary. You are free to withdraw consent for participation in this study at any time. Participation or non-participation in this study will not impact your performance evaluation or promotion as an academic faculty; will not jeopardize your relationship with this institutions clinical education as a clinical faculty; or grades as a full time graduate student in the DPT program at the University of Miami.

Signature for Consent
I have reviewed the above provisions of this consent form and I agree to be a research subject in this study and be audio taped during the interview or focus group. A copy of this consent will be provided to you for your records.

________________________________________
Signature of Research Participant  Date

________________________________________
Signature of Person Obtaining Consent  Date

Co-Principal Investigator
Anna Katerina Tischenko, PT, PhD Candidate
University of Miami Department of Physical Therapy
Day Telephone 305.284.4535
Night Telephone 305.775.9114

Principal Investigator
Neva Kirk-Sanchez, PT, PhD, Associate Professor
University of Miami Department of Physical Therapy
Day Telephone 305.284.4535
Night Telephone 305.785-0365
Title of Research: Professional Socialization: Transition from the classroom setting to the clinical environment.

Ppal Investigator: Anna Katerina Tischenko, PT
Co-ppal Investigator: Neva Kirk-Sanchez, PT, PhD
Department: Physical Therapy, Miller School of Medicine
Telephone number: 305.284.4535
Fax: 305.284.6493

ACADEMIC FACULTY SURVEY

The return of this completed survey constitutes your informed consent to act as a participant in this research. Please answer each of the following questions to the best of your abilities.

What is your current age in years?

What is your gender?
1 Female
2 Male

What is your Ethnicity?
1 American Indian or Alaskan Native
2 Asian
3 African American (Not Hispanic)
4 White (Not Hispanic)
5 Hispanic / Latino
6 Pacific Islander or Native Hawaiian
7 Other

In what geographical region did you grow up?
1 New England (NH, ME, MA, RI, CT, VT)
2 Eastern (NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)
3 Southern (AL, AR, FL, GA, KY, LA, MS, TN)
4 Midwest (IL, IN, IA, MI, MO, OH, WI)
5 Great Plains (KS, ND, SD, NE)
6 Southwest (AZ, NM, OK, TX)
7 Mountain (CO, ID, MT, UT, WY)
8 Western (CA, OR, WA, AK, HW)
9 Outside of USA (Please Specify)

In what geographical region did you complete your studies related to your PT degree?
1. New England (NH, ME, MA, RI, CT, VT)
2. Eastern (NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)
3. Southern (AL, AR, FL, GA, KY, LA, MS, TN)
4. Midwest (IL, IN, IA, MI, MO, OH, WI)
5. Great Plains (KS, ND, SD, NE)
6. Southwest (AZ, NM, OK, TX)
7. Mountain (CO, ID, MT, UT, WY)
8. Western (CA, OR, WA, AK, HW)
9. Outside of USA (Please Specify)

Please indicate the ENTRY-LEVEL PHYSICAL THERAPY DEGREE that you hold

1. Bachelor’s (BS/BS)
2. Master’s (MS / MPT / MSPT)
3. DPT
4. Other
   Please specify the area
   Year of Graduation
   Educational Program

Please indicate the HIGHEST degree that you hold

1. Bachelor’s (BS/BS)
2. Master’s (MS / MPT / MSPT)
3. DPT
4. PhD, EdD, ScD
5. Other
   Please specify the area
   Year of Graduation
   Educational Program

Were you a licensed PTA prior to becoming a PT?

1. No
2. Yes
   How many Years?
   Which State where you licensed?

Did you have or practice another profession prior to becoming a physical therapist?

1. No
2. Yes
   How many Years?
   Which profession?

How many years have you been a PT?

How many years have you been in academics?

What is your current position?

1. Lecturer
2. Instructor
<table>
<thead>
<tr>
<th>3</th>
<th>Adjunct Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>5</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>6</td>
<td>Professor</td>
</tr>
<tr>
<td>7</td>
<td>Professor Emeritus</td>
</tr>
<tr>
<td>8</td>
<td>Chair</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
</tr>
</tbody>
</table>

**Which is your area of specialty?**

<table>
<thead>
<tr>
<th>1</th>
<th>Clinical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Neurological Rehab</td>
</tr>
<tr>
<td>3</td>
<td>Orthopedics</td>
</tr>
<tr>
<td>4</td>
<td>Pediatrics</td>
</tr>
<tr>
<td>5</td>
<td>Sports</td>
</tr>
<tr>
<td>6</td>
<td>Cardiopulmonary</td>
</tr>
<tr>
<td>7</td>
<td>Research</td>
</tr>
<tr>
<td>8</td>
<td>Administration</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
</tr>
</tbody>
</table>

**Are you currently a member of the APTA?**

<table>
<thead>
<tr>
<th>1</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

If no, why not? ___________________________________

**Are you a certified APTA specialist?**

<table>
<thead>
<tr>
<th>1</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

How many Years?__________________  
Which area? (i.e.; OCS, GCS, etc) ________________

**Are you currently a member of any of the APTA sections?**

<table>
<thead>
<tr>
<th>1</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Please check all that apply  
1. Acute Care  
2. Aquatic  
3. Cardiovascular and pulmonary  
4. Clinical Electro and wound  
5. Education  
6. Federal  
7. Geriatrics  
8. Hand Rehabilitation  
9. Health and Policy Administration  
10. Home health  
11. Neurology  
12. Oncology  
13. Orthopedics  
14. Pediatrics  
15. Private Practice  
16. Research  
17. Sports  
18. Women’s Health

**Are you familiar with the following PT and APTA documents?**
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
<td>The Normative Model</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>The Guide to PT Practice</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Clinical Performance Instrument (CPI)</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>APTA minimal clinical skills</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Generic abilities</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Opportunity Favors the Prepared</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Professionalism in PT: Core Values</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Professionalism in PT: Core Values Self-Assessment</td>
</tr>
</tbody>
</table>

Thank you for your participation. Please return the survey in the enclosed envelope.
SURVEY. Clinical Faculty

eProst ID: 20110325
Version: Approved
Approval Date: 8/26/2011

Title of Research: PROFESSIONAL SOCIALIZATION: Transition from the classroom setting to the clinical environment.

Ppal Investigator: Anna Katerina Tischenko, PT
Co-ppal Investigator: Neva Kirk-Sanchez, PT, PhD
Department: Physical Therapy, Miller School of Medicine
Telephone number: 305.284.4535
Fax: 305.284.6493

CLINICAL FACULTY SURVEY

The return of this completed survey constitutes your informed consent to act as a participant in this research. Please answer each of the following questions to the best of your abilities.

What is your current age in years?

What is your gender?

1 Female
2 Male

What is your Ethnicity?

1 American Indian or Alaskan Native
2 Asian
3 African American (Not Hispanic)
4 White (Not Hispanic)
5 Hispanic / Latino
6 Pacific Islander or Native Hawaiian
7 Other

In what geographical region did you grow up?

1 New England (NH, ME, MA, RI, CT, VT)
2 Eastern (NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)
3 Southern (AL, AR, FL, GA, KY, LA, MS, TN)
4 Midwest (IL, IN, IA, MI, MO, OH, WI)
5 Great Plains (KS, ND, SD, NE)
6 Southwest (AZ, NM, OK, TX)
7 Mountain (CO, ID, MT, UT, WY)
8 Western (CA, OR, WA, AK, HW)
9 Outside of USA (Please Specify)

In what geographical region did you complete your studies related to your PT degree?
1 New England (NH, ME, MA, RI, CT, VT)
2 Eastern (NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)
3 Southern (AL, AR, FL, GA, KY, LA, MS, TN)
4 Midwest (IL, IN, IA, MI, MO, OH, WI)
5 Great Plains (KS, ND, SD, NE)
6 Southwest (AZ, NM, OK, TX)
7 Mountain (CO, ID, MT, UT, WY)
8 Western (CA, OR, WA, AK, HW)
9 Outside of USA (Please Specify)______________________________

Please indicate the ENTRY-LEVEL PHYSICAL THERAPY DEGREE that you hold

1 Bachelor’s (BS/BS)
2 Master’s (MS / MPT / MSPT)
3 DPT
4 Other Please specify the area_____________

Please indicate the HIGHEST degree that you hold

1 Bachelor’s (BS/BS)
2 Master’s (MS / MPT / MSPT)
3 DPT
4 PhD, EdD, ScD
5 Other Please specify the area_____________

Were you a licensed PTA prior becoming a PT?

1 No
2 Yes How many Years?________________________

Did you have or practice another profession prior to becoming a physical therapist?

1 No
2 Yes How many Years?________________________

How many years have you been a PT?

________________________

How many years have you been a clinical instructor?

________________________

Are you the CCCE at your facility?

1 No
2 Yes How many Years?________________________
Are you a certified clinical instructor?

1  No
2  Yes  How many Years?____________________________

Are you a state certified clinical instructor?

1  No
2  Yes  How many Years?____________________________

Are you an APTA credentialed clinical instructor?

1  No
2  Yes  How many Years?____________________________

What is your current position?

1  Junior Therapist
2  Senior Therapist
3  Researcher
4  Manager
5  Director
9  Other  (Please Specify) _________________________

Which is your area of specialty?

1  Clinical Education
2  Neurological Rehab
3  Orthopedics
4  Pediatrics
5  Sports
6  Cardiopulmonary
7  Research
8  Administration
9  Other  (Please Specify) _________________________

Are you currently a member of the APTA?

1  No
2  Yes  If no, why not? ______________________________

Are you a certified APTA specialist?

1  No
2  Yes  How many Years?____________________________
       Which area? (i.e.; OCS, GCS, etc) ________________

Are you currently a member of any of the APTA sections?

1  No
2  Yes  Please check all that apply

1  Acute Care
2  Aquatic
3  Cardiovascular and pulmonary
Are you familiar with the following PT and APTA documents?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>The Normative Model</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>The Guide to PT Practice</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Clinical Performance Instrument (CPI)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>APTA minimal clinical skills</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Generic abilities</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Opportunity Favors the Prepared</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Professionalism in PT: Core Values</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Professionalism in PT: Core Values Self-Assessment</td>
</tr>
</tbody>
</table>

Thank you for your participation. Please return the survey in the enclosed envelope.
DPT STUDENT SURVEY

The return of this completed survey constitutes your informed consent to act as a participant in this research. Please answer each of the following questions to the best of your abilities.

What is your current age in years?

What is your gender?

1  Female
2  Male

What is your Ethnicity? Check one

1  American Indian or Alaskan Native
2  Asian
3  African American (Not Hispanic)
4  White (Not Hispanic)
5  Hispanic / Latino
6  Pacific Islander or Native Hawaiian
7  Other

In what geographical region did you grow up?

1  New England (NH, ME, MA, RI, CT, VT)
2  Eastern (NY, NJ, PA, DC, DE, MD, VA, WV, SC, NC)
3  Southern (AL, AR, FL, GA, KY, LA, MS, TN)
4  Midwest (IL, IN, IA, MI, MO, OH, WI)
5  Great Plains (KS, ND, SD, NE)
6  Southwest (AZ, NM, OK, TX)
7  Mountain (CO, ID, MT, UT, WY)
8  Western (CA, OR, WA, AK, HW)
9  Outside of USA (Please Specify)__________________________________________
What was the area of your undergraduate studies prior to entering the University of Miami DPT Program?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Science</td>
</tr>
<tr>
<td>2</td>
<td>Business</td>
</tr>
<tr>
<td>3</td>
<td>Liberal Arts</td>
</tr>
<tr>
<td>4</td>
<td>Nursing</td>
</tr>
<tr>
<td>5</td>
<td>Health Sciences</td>
</tr>
<tr>
<td>6</td>
<td>Pre-PT</td>
</tr>
<tr>
<td>7</td>
<td>Pre-Medicine</td>
</tr>
<tr>
<td>8</td>
<td>Other</td>
</tr>
</tbody>
</table>

In what geographical region did you complete your undergraduate studies prior to entering the University of Miami DPT Program?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New England</td>
</tr>
<tr>
<td>2</td>
<td>Eastern</td>
</tr>
<tr>
<td>3</td>
<td>Southern</td>
</tr>
<tr>
<td>4</td>
<td>Midwest</td>
</tr>
<tr>
<td>5</td>
<td>Great Plains</td>
</tr>
<tr>
<td>6</td>
<td>Southwest</td>
</tr>
<tr>
<td>7</td>
<td>Mountain</td>
</tr>
<tr>
<td>8</td>
<td>Western</td>
</tr>
<tr>
<td>9</td>
<td>Outside of USA</td>
</tr>
</tbody>
</table>

What is your highest level of study prior to entering the University of Miami DPT Program?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bachelor’s</td>
</tr>
<tr>
<td>2</td>
<td>Master’s</td>
</tr>
</tbody>
</table>

Were you a licensed PTA prior to entering the University of Miami DPT Program?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Did you have or practice another profession prior to entering the University of Miami DPT Program?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are you currently a member of the APTA?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Are you planning to retain the APTA membership after graduation?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Are you currently a member of any of the APTA sections?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>No</th>
<th>2</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Please check all that apply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>Acute Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>Cardiovascular and pulmonary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td>Clinical Electro and wound</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td>Federal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td>Geriatrics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Hand Rehabilitation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Health and Policy Administration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>Home health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>Neurology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Oncology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>Orthopedics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>Pediatrics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Private Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td></td>
<td>Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td></td>
<td>Sports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td></td>
<td>Women’s Health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are you familiar with the following PT and APTA documents?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
<td>The Normative Model</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>The Guide to PT Practice</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Clinical Performance Instrument (CPI)</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>APTA minimal clinical skills</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Generic abilities</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Opportunity Favors the Prepared</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Professionalism in PT: Core Values</td>
</tr>
<tr>
<td>No</td>
<td>Yes</td>
<td>Professionalism in PT: Core Values Self-Assessment</td>
</tr>
</tbody>
</table>

Thank you for your participation. Please return the survey in the enclosed envelope.
PHASE 1. Amendment 20110325-01

UNIVERSITY OF MIAMI

September 2, 2011

Neva Kirk-Sanchez, Ph.D.
University of Miami
Department of Physical Therapy
Medical Campus, Locator Code: 2480
Plumer Building, Room 5th floor
Miami, FL 33136

HSRO STUDY NUMBER: 20110325
STUDY TITLE: Professional Socialization: Transition from the classroom setting to the clinical environment.
IRB ACTION DATE: 8/26/2011
STUDY APPROVAL EXPIRES: 5/10/2014
FWA #: FWA00002247
SPONSOR NAME: There are no items to display

On 8/26/2011, an IRB Chair approved the following items under the expedited review process.

APPROVAL INCLUDES:

Amendment (20110325-01)

- Modification of survey to update geographical location.

Research Materials (English Versions Only)

- Academic Faculty Survey
- Clinical Faculty Survey
- SDPT Survey

NOTE: Translations of IRB approved study documents, including informed consent documents, into languages other than English must be submitted to HSRO for approval prior to use.
A request to continue this study must be submitted to the HSRO at least **45 days** before IRB approval expires. If this study does not receive continuing IRB approval prior to expiration, all research activities must cease, and it may be officially suspended or terminated.

Sincerely,

[This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature]

Amanda Coltes-Rojas, MPH, CIP
Director
Regulatory Affairs & Educational Initiatives

/cc: IRB File

Anna Tischenko
Neva Kirk-Sanchez
PHASE 1. Amendment 2

September 6, 2011

Neva Kirk-Sanchez, Ph.D.
University of Miami
Department of Physical Therapy
Medical Campus, Locator Code: 2480
Plumer Building, Room 5th floor
Miami, FL 33136

HSRO STUDY NUMBER: 20110325
STUDY TITLE: Professional Socialization: Transition from the classroom setting to the clinical environment.

IRB ADMINISTRATIVE DESIGNEE ACTION DATE: 9/6/2011
STUDY APPROVAL EXPIRES: 5/10/2014
SPONSOR NAME: There are no items to display
FWA #: FWA00002247

On 9/6/2011, an IRB Administrative-Designee approved the following informational amendment:

APPROVAL INCLUDES:

- Amendment (20110325-02)
  - Clarification that Phase 2 questions will not differ from previously IRB-approved Phase 1 questions.

NOTE: Translations of IRB approved study documents, including informed consent documents, into languages other than English must be submitted to HSRO for approval prior to use.

A request to continue this study must be submitted to the HSRO at least 45 days before IRB approval expires. If this study does not receive continuing IRB approval prior to expiration, all research activities must cease, and it may be officially suspended or terminated.
Sincerely,

[This is a representation of an electronic record that was signed electronically and this page is the manifestation of the electronic signature]

Amanda Coltes-Rojas, MPH, CIP
Director
Regulatory Affairs & Educational Initiatives

/cc

cc: IRB File

Anna Tischenko
Neva Kirk-Sanchez
Dear Physical Therapy Faculty:

You are invited to participate in a qualitative research study exploring the professional socialization process of doctorate of physical therapy (DPT) students. The research study is titled "Professional Socialization: Transition from the classroom setting to the clinical environment". This study is being conducted as part of my doctoral dissertation in the Doctoral Program at the University of Miami under the supervision of Neva Kirk-Sanchez, PT, PhD.

The purpose of my dissertation is to explore the professional socialization process from the perspective of the academic faculty, clinical faculty and doctorate of physical therapy (DPT) students. You are invited to participate in a focus group. I will be asking the participants of the group questions about their role in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills; and why there is a gap between the knowledge acquired in the classroom setting to the application of these professional behaviors in the clinic environment. In addition, you will be asked to complete a survey gathering demographic data. The survey and focus group will be conducted in the conference room located on the 5th floor of the Department of Physical Therapy at the Coral Gables Campus. Completion of the survey and focus group will take approximately 60 to 90 minutes. Your responses will be collected via audiotape recorder. This information will be transcribed into written format and analyzed.

To assure confidentiality, you will not be identified by your name. No one will be identifiable in any written reports or publications. All data will be kept in a secure file and project staff, my advisor or I will have access to the data while I complete my dissertation. Once I complete my dissertation, all data files will be destroyed. Participation in this study is completely voluntary.

Attached you will find a copy of the “Professional Behaviors of the 21st Century” published by May et al (2009-2010) addressing the definition and sample behaviors of professional behaviors of interest for this study and the Weidman, Twale and Stein (2001) socialization model conceptualizing the process of professional socialization to facilitate our discussion.

I hope that you can assist me in this exciting endeavor. Please do not hesitate to contact me if you have any questions in regards to the research and/or procedures at office 305.284.4535 or mobile 305.775.9114.

Sincerely,

Anna Katerina Tischenko, PT, PhD Candidate
University of Miami - Miller School of Medicine Department of Physical Therapy
PhD Candidate
5915 Ponce de Leon Boulevard - 5th Floor - Coral Gables, Fl 33146
Office 305.284.4535 - Fax 305.284.6128
a.tischenko@umiami.edu
Dear Doctor of Physical Therapy Student:

You are invited to participate in a qualitative research study exploring the professional socialization process of doctorate of physical therapy (DPT) students. The research study is titled “Professional Socialization: Transition from the classroom setting to the clinical environment”. This study is being conducted as part of my doctoral dissertation in the Doctoral Program at the University of Miami under the supervision of Neva Kirk-Sanchez, PT, PhD.

The purpose of my dissertation is to explore the professional socialization process from the perspective of the academic faculty, clinical faculty and doctorate of physical therapy (DPT) students. You are invited to participate in a focus group. I will be asking the participants of the group questions about their role in the development of appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills; and why there is a gap between the knowledge they acquired in the classroom setting to the application of these professional behaviors in the clinic environment. In addition, you will be asked to complete a survey gathering demographic data. The survey and focus group will be conducted in the conference room located on the 5th floor of the Department of Physical Therapy at the Coral Gables Campus. Completion of the survey and focus group will take approximately 60 to 90 minutes. Your responses will be collected via audiotape recorder. This information will be transcribed into written format and analyzed.

To assure confidentiality, you will not be identified by your name. No one will be identifiable in any written reports or publications. All data will be kept in a secure file and project staff, my advisor or I will have access to the data while I complete my dissertation. Once I complete my dissertation, all data files will be destroyed. Participation in this study is completely voluntary.

Attached you will find a copy of the “Professional Behaviors of the 21st Century” published by May et al (2009-2010) addressing the definition and sample behaviors of professional behaviors of interest for this study and the Weidman, Twale and Stein (2001) socialization model conceptualizing the process of professional socialization to facilitate our discussion.

I hope that you can assist me in this exciting endeavor. Please do not hesitate to contact me if you have any questions in regards to the research and/or procedures at office 305.284.4535 or mobile 305.775.9114.

Sincerely,

Anna Katerina Tischenko, PT, PhD Candidate
University of Miami - Miller School of Medicine Department of Physical Therapy
PhD Candidate
5915 Ponce de Leon Boulevard - 5th Floor - Coral Gables, Fl 33146
Office 305.284.4535 - Fax 305.284.6128
a.tischenko@umiami.edu
PHASE 2. FOCUS GROUP QUESTIONS

Title of Research: Professional Socialization: Transition from the classroom setting to the clinical environment.

Principal Investigator: Anna Katerina Tischenko, PT
Co-Investigator: Neva Kirk-Sanchez, PT, PhD
Department: Physical Therapy, Miller School of Medicine
Telephone number: 305.284.4535
Fax: 305.284.6493

PHASE 2
Focus Group – Questions
(No changes from Single Case Study Interview questions)

MAIN OBJECTIVE – Explore professional socialization process in physical therapy from the perspective of AF, CF and DPT student.

Purpose # 1 – An exploration of academic faculty, clinical faculty and DPT students’ role in the development of DPT students appropriate professional behaviors such as, responsibility, interpersonal skills and communication skills.

11. Most people when they are asked about responsibility as a professional behavior think of skills like the ability of the student to demonstrate punctuality, to complete projects without prompting, to act as patient advocate, to facilitate program development and modification, and to recognize their role as a leader. Can you give an example of your role in the development of responsibility in DPT students?

12. Most people when they are asked about interpersonal skills as a professional behavior think of skills like: the students’ ability to demonstrate interest in patients as individuals, to maintain confidentiality in all interactions, to respect the role of others, and their ability to build partnerships. Can you give an example of your role in the development of interpersonal skills in DPT students?

13. Most people when they are asked about communication skills as a professional behavior think of skills like: the student ability to recognize impact of non-verbal communication in self and others, to utilize and to modify communication (verbal, non-verbal, written and electronic) to meet the needs of different audiences, and to maintain open and constructive communication. Can you give an example of your role in the development of communication skills in DPT students?

Purpose # 2 – Description of the sources and differences between knowledge and application of concepts related to these professional behaviors by the DPT student.

14. Have you observed a gap between the knowledge acquired by the DPT student in the classroom and the application of these professional behaviors (interpersonal skills, communication skills and responsibility) in the clinic environment? If so, why do you think there is a gap?

For example –

a. The student learns the importance of being on time, but is constantly late to class or the clinic or the patient’s treatment time.

b. The student learns the impact of non-verbal communication, but does not observe the facial grimacing on a patient and is unable to adjust the course of treatment.

c. The student learns about the importance of maintaining interest in the patient / family but dismisses what the patient (child) has to say and only maintains focus to the mother.
15. Other than interpersonal skills, communication skills and responsibility, have you observed students who lack awareness and/or application of other affective professional behaviors? If so, which ones?
   e. How did you recognize it?
   f. How did this make you feel?
   g. Did you attempt to address and/or correct the unwanted behavior?
   h. Why do you think it did or did not work?

16. STUDENT - Can you give an example of an experience that influenced your development of professional behaviors?

Purpose #3 – Examination of how professional behaviors are explicitly vs. implicitly taught, modeled and assessed by academic faculty in the academic setting and clinical faculty in the clinical environment.

17. Can you give an example of a time that you modeled, assessed or taught professional behaviors to DPT students? For example,
   ▶ Implicit – always arrived to the classroom or clinic 10 minutes early and always was on time for appointments.
   ▶ Explicit – role play a PT / patient interaction addressing punctuality.

Purpose #4 – Exploration of the Weidman, Twale and Stein (2001) socialization model conceptualizing graduate and professional student socialization in higher education and how it applies to physical therapy students.

18. Some researchers also attribute professional socialization to other influences in a students’ life, such as students’ background, relationships with professional communities, family/ friends, and/or employers and academic program, peer climate. What observations can you share that might validate any of these influences as particularly important sources of professional socialization for the DPT student?

19. Is there anything else you would like to share about professional behaviors and their development as DPT students’ transition from the classroom setting to the clinic environment?

20. Do you have any comments about the questions that I have asked you today?

   Thank you so much for your participation today.
   Your time and contribution to my research is valued and appreciated.
APPENDIX E

ATLAS.ti SOFTWARE APPLICATIONS

New Hermeneutic Unit Opening Page

![New Hermeneutic Unit Opening Page](image1)

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany

Saved Hermeneutic Units and their Backups

![Saved Hermeneutic Units and their Backups](image2)

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany

Phase 1 Single Case Interview Hermeneutic Opened

![Phase 1 Single Case Interview Hermeneutic Opened](image3)

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany
Primary Document (PD:1 Q1 Phase 1 AF.doc) Opened

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany

Auto Coding Dialog Opened

* Adapted from ATLAS.ti Scientific Software Development GmbH, Berlin, Germany
VITA

Anna Katerina Tischenko-Osorno was born in Caracas, Venezuela, on July 9, 1973. Her parents are Willy Wasyl Tischenko and Maria Corina Egaña de Tischenko. She received her elementary and secondary education at Colegio Los Campitos in Caracas, Venezuela. She received a post-secondary education at The Masters School in Dobbs Ferry, New York. In 1991, she entered the Bouvé College of Health Sciences of Northeastern University from which she was graduated with a BS in Physical Therapy with Summa Cum Laude Honors in June 1996. After graduation she moved to Miami, Florida and she was employed as a physical therapist in Jackson Memorial Hospital. In 2002, she started working at a private outpatient facility and in late 2003, she opened her own company Physical Therapy and Wellness Center, Inc. In August 2004 she was admitted to the Graduate School of the University of Miami, where she was granted a Ph.D. degree in May 2012. During this time she got married to Donald Osorno, became the mother of two “Bellas”, Isabella and Annabella, and is expecting her third child.

Permanent Address: 5178 North West 103rd Avenue. Miami, Florida 33178