

The Relationship Between Completion of Postprofessional Orthopedic Manual Physical Therapy Education and Core Values of Professionalism

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Purpose. Professionalism is defined by the American Physical Therapy Association using behavioral sample indicators representing 7 core values in its core document, Professionalism in Physical Therapy: Core Values (PCV). The purpose of this study was to examine the graduates' perceived effect of graduation from a university-based postprofessional certificate in Orthopedic Manual Physical Therapy (OMPT) on sample indicators representing the core values of accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility as well as their perception of recognition by others as providing excellence in physical therapy.

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The authors have a potentially relevant conflict of interest of general positive bias due to the primary authors' completion of the postgraduate program being researched in this study and the employment of coauthors in the institution in which the postgraduate program being researched is established.

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Methods: 178 graduates of the OMPT program participated in the study. An OMPT Graduate Survey developed for this study included 29 Likert items and one open ended question. Constructs were established to represent each core value as well as an additional construct representing recognition by others as providing excellence in physical therapy. Quantitative analysis included descriptive statistics. The constant comparative method was used for qualitative analysis.

Results: Six core value constructs and the recognition construct yielded a mean of 4 (agreement) or greater and social responsibility yielded a mean of 3.37 (neutral). Qualitative data revealed four themes: relationships with clients and others, knowledge/expanded understanding, skills/outcomes, and perception of self/personal growth.

Discussion: Graduates' perceptions of enhanced core values except social responsibility, increased recognition of excellence by others, and improved perception of self and personal growth could lead to overall enhancement of professionalism through increased opportunities for graduates to be influential to peers, institutions, the profession of physical therapy, health care and society. Strategies could be developed within post professional programs to further facilitate social responsibility into the profession of physical therapy.

Conclusion: The completion of a post professional program may contribute to development of the core values except social responsibility, an increased recognition by others as providing excellence in physical therapy, enhanced job satisfaction, increased confidence, and personal growth.

Key Words: Professionalism, Core values, Postprofessional education, Orthopedic manual physical therapy.

INTRODUCTION AND BACKGROUND

Professionalism in health care is important for all stakeholders, including health care providers, organizations, consumers, and third-party payers. To deliver high-quality care, all contributors must perform in a professional manner within their specific discipline and associated roles. Therefore, understanding the attributes and development of professionalism within health care are of critical importance.¹

In 2000, the American Physical Therapy Association (APTA) established a vision statement, Vision 2020, for physical therapy in which professionalism is stated as a key goal.^{2,3} In 2003, the APTA approved a consensus-based document, Professionalism in Physical Therapy: Core Values (PCV), which defined the attributes and behaviors that exemplify professionalism within physical therapy. This document was adopted as the core document on professionalism in physical therapy practice, education, and research.

The PCV includes seven defined core values with accompanying sample indicators (ie, behaviors) that exemplify professionalism: accountability, altruism, compassion, excellence, integrity, professional duty, and social responsibility. For the core value of accountability, a sample indicator is seeking continuous improvement in the quality of care.⁴ To facilitate the translation of the PCV into the education and practice of physical therapy, the APTA developed The Professionalism in Physical Therapy: Core Values Self-Assessment (CVSA). The CVSA uses the PCV and a 5-point Likert scale next to each sample indicator to identify the frequency with which each sample indicator is demonstrated.⁵

Through Vision 2020, the development of the PCV and the CVSA, the APTA has identified professionalism as an important skill within the profession. There is some support within the literature to suggest that undergoing postprofessional training in physical therapy can contribute to the development of behaviors related to the core values that define professionalism.⁶⁻⁸ The

purpose of this study was to examine graduates' perceived effect of graduation from a university-based postprofessional certificate in an orthopedic manual physical therapy program (OMPT) on sample indicators representing the core values of accountability, altruism, compassion/caring, excellence, integrity, professional duty, and social responsibility, as well as their perception of recognition by others as providing excellence in physical therapy.

REVIEW OF LITERATURE

The topic of professionalism in physical therapy has been explored by several authors. Guenther et al⁹ attempted to determine the self-assessed level of integration of professional core values among physical therapists (PTs). In their study, the CVSA was completed by 20 PTs with a mean of 11.9 years of experience. They found that the 3 most frequently demonstrated core values were compassion/caring, accountability, and integrity. Social responsibility was the least frequently demonstrated core value, especially for the sample indicators of political activism and community volunteerism. Dutton explored the core value of social responsibility by investigating PTs' attitudes toward and participation in community volunteerism using both an online survey and in-person interviews. Survey participants included 41 active physical therapy members of the APTA. In-person interviews were conducted with 6 PTs who did not participate in the online survey. Although 82% of the survey respondents reported that they had participated in volunteer activities within the last year, both survey respondents and interviewees did not associate volunteerism as a key characteristic of their professional role as a PT.¹¹

Participating in postprofessional education has been suggested, in the literature, as a potential avenue an individual may use to further develop professionalism.^{6,7} Smith et al⁶ studied the opinions of physical therapy residency graduates about the influence of residency training on their professional development and practice. Based on a survey of 98 residents from 1 postgraduate physical therapy residency program in orthopedics, the authors concluded that graduates perceived that their postgraduate training had a positive influence on their ability to examine thoroughly, treat effectively and efficiently, participate in effective clinical reasoning and decision making, and communicate with patients and the medical community. Participants also perceived that they received an increase

in patient referrals from peers and health care professionals.

Perry et al⁸ explored the personal and professional impact of participating in a physical therapy postprofessional clinical master's program of manipulative therapy education. Using a focus group method, researchers interviewed 7 graduates. The results yielded 3 themes: professional (tolerance for ambiguity and increased clinical reasoning), career progression/development (recognition from others as more knowledgeable), and personal (improved self-worth and confidence in their clinical and personal lives). Although neither Smith nor Perry specifically linked their findings to the PCV and CVSA, results from their studies explored aspects of professionalism reflected within the core values and their potential relationship with postprofessional education.

METHODS

The OMPT program used in this study is a 2-year, 18-credit graduate certificate program designed to offer advanced graduate-level courses in orthopedics, including theoretical and clinical internship with an emphasis on differential diagnosis and manual therapy. The goals of the program are that the graduate demonstrates expertise in the physical therapy management of patients with complex orthopedic conditions, contributes to the body of orthopedic physical therapy knowledge through clinical research, actively disseminates this knowledge through presentation or writing, actively seeks to expand their professional knowledge, and appreciates the uniqueness of each individual patient and professional encounter.¹² These goals incorporate the APTA core values included in professionalism. For example, the OMPT Program goal, "The graduate will actively seek to expand his/her professional knowledge", captures the substance of the sample indicator excellence #9 engaging in acquisition of new knowledge throughout ones' professional career.

Subjects

Approval for this study was obtained from the Institutional Review Board of the sponsoring institution Oakland University (Appendix B, Supplemental Digital Content 2, <http://links.lww.com/JOPT/A53>). Participants were recruited from a list of 178 graduate emails available to the program coordinator. Initial contact was made with potential respondents through an informational prenotification email from the OMPT program coordinator with instructions to contact the primary researcher via email, if they were willing to participate in

the study. An email invitation with a link to the survey was then sent by the primary researcher to all potential respondents. The respondents clicked "agree," on the consent within the survey, before initiating the survey.

Survey Development

The CVSA was initially reviewed as a potential measurement instrument. However, due to the length of the CVSA (68 sample indicators), the degree of redundancy in language and content between the sample indicators, and the lack of established validity and reliability of the instrument, a new survey was needed, incorporating the content of the defined core values.^{9,13} The Tailored Design Method was used throughout the development and delivery of the new survey.¹¹

The first step in the development of the new survey was to address the issue of sample indicator redundancy and CVSA length. To accomplish this task, a Core Value Sample Indicator Cross Match Table (CMT) was developed (Table 1). Each individual sample indicator from the CVSA was examined for similarities in wording, language, and meaning. Then, using the CMT, each sample indicator was added to the table in the columns associated with other core values it could represent. For example, within the core value accountability, the sample indicator #1 reads "Responding to patient's/client's goals and needs" had similar language and meaning to the sample indicator #1 within altruism that reads "placing patient's/client's needs above the PT's." Accountability sample indicator #1 was cross-matched with altruism sample indicator #1, which allowed each of these sample indicators to represent both core values of altruism and accountability. This method was repeated for all 68 sample indicators to identify how the sample indicators were interrelated. Three content experts were consulted, and agreement was established regarding the CMT and the cross-match process. The background of the content experts included a mean of more than 24 years of experience in physical therapy education, routine teaching of core values within entry-level doctoral of Physical Therapy and postgraduate OMPT curriculum, and research experience with methodology utilized in this study.

Based on a review of the CMT, 25 survey items related to the core values were developed with the goal being to capture meaning of multiple sample indicators to have representations of all core values within the 25 items. Multiple revisions and consultation with the 3 content experts throughout each step of the development process occurred. Upon consensus of each survey item,

Table 1. Core Value Sample Indicator Cross Match Table

Sample Indicators	Ac	AI	C	E	I	P	S
Ac1. Responding to patients/clients goals and needs	Ac1	Ac1 (AI1, 5)	Ac1 (C5, 10)		Ac1 (I2)		
Ac2. Seeking and responding to feedback from multiple sources	Ac2			Ac2 (E3, 2)	Ac2 (I2)		
Ac3. Acknowledging and accepting consequences of his/her actions	Ac3				Ac3 (I3)		
Ac4. Assuming responsibility for learning and change	Ac4			Ac4 (E9)	Ac4 (I2)	Ac4 (P7)	
Ac5. Adhering to code of ethics, standards of practice, and policies/procedures that govern the conduct of professional activities	Ac5	Ac5 (AI1-5)	Ac5 (C1-11)	Ac5 (E1-11)	Ac5 (I1-12)	Ac5 (P1-7)	Ac5 (S1-12)
Ac6. Communicating accurately to others (payers, patients/clients, other health care providers) about professional actions	Ac6		Ac6 (C4)		Ac6 (I2)		
Ac7. Participating in the achievement of health goals of patients/clients and society	Ac7		Ac7 (C5)		Ac7 (I2)	Ac7 (P2)	Ac7 (S1, 3, 4, 8)
Ac8. Seeking continuous improvement in quality of care	Ac8			Ac8 (E8, 9)	Ac8 (I2)		
Ac9. Maintain membership in APTA and other organizations	Ac9				Ac9 (I2)	Ac9 (P4, 7)	
Ac10. Educating students in a manner that facilitates the pursuit of learning	Ac10			Ac10 (E10)	Ac10 (I2)	Ac10 (P5, 6, 7)	
AI1. Placing patient's/client's needs above the PTs	AI1 (Ac1, 5)	AI1	AI1 (C3, 10)		AI1 (I2)		
AI2. Providing pro-bono services	AI2 (Ac5)	AI2			AI2 (I2)		AI2 (S6)
AI3. Providing physical therapy services to underserved and underrepresented populations	AI3 (Ac5)	AI3			AI3 (I2)		AI3 (S6)
AI4. Providing patient/client services that go beyond expected standards of practice	AI4 (Ac5)	AI4		AI4 (E5)	AI4 (I2)		
AI5. Completing patient/client care and professional responsibility prior to personal needs	AI5 (Ac5)	AI5	AI5 (C3, 10)		AI5 (I2)		

Table 1. Core Value Sample Indicator Cross Match Table *continued*

Sample Indicators	Ac	AI	C	E	I	P	S
C1. Understanding the sociocultural, economic, and psychological influences on the individual's life in their environment	C1 (Ac5)		C1		C1 (I2)		C1 (S9)
C2. Understanding an individual's perspective	C2 (Ac5)		C2		C2 (I2)		
C3. Being an advocate for patient's/client's needs	C3 (Ac1, 5)	C3 (AI1, 5)	C3		C3 (I2)	C3 (P2)	
C4. Communicating effectively, both verbally and nonverbally, with others taking into consideration individual differences in learning styles, language, and cognitive abilities, etc	C4 (Ac5, 6)		C4		C4 (I2)	C4 (P2)	
C5. Designing patient/client programs/interventions that are congruent with patient/client needs	C5 (Ac1, 5, 7)		C5		C5 (I2)	C5 (P2)	
C6. Empowering patients/clients to achieve the highest level of function possible and to exercise self-determination in their care	C6 (Ac1, 5)		C6		C6 (I2)	C6 (P2)	
C7. Focusing on achieving the greatest well-being and the highest potential for a patient/client	C7 (Ac1, 5)		C7		C7 (I2)	C7 (P2)	
C8. Recognizing and refraining from acting on one's social, cultural, gender, and sexual biases	C8 (Ac5)		C8		C8 (I2, 9)		C8 (S2)
C9. Embracing the patient's/client's emotional and psychological aspects of care	C9 (Ac1, 5)		C9			C9 (I2)	
C10. Attending to the patient's/client's personal needs and comforts	C10 (Ac1, 5)	C10 (AI1)	C10			C10 (I2)	
C11. Demonstrating respect for others and considers others as unique and of value	C11 (Ac5)		C11		C11 (I2, 3)		C11 (S2)
E1. Demonstrating investment in the profession of physical therapy	E1 (Ac5)			E1	E1 (I2)	E1 (P7)	
E2. Internalizing the importance of using multiple sources of evidence to support professional practice and decisions	E2 (Ac5)			E2	E2 (I2)		

Table 1. Core Value Sample Indicator Cross Match Table *continued*

Sample Indicators	Ac	AI	C	E	I	P	S
E3. Participating in integrative and collaborative practice to promote high quality health and educational outcomes	E3 (Ac5)			E3	E3 (I2, 7, 8)		E3 (S11)
E4. Conveying intellectual humility in professional and personal situations	E4 (Ac5)			E4	E4 (I2, 8, 10)		
E5. Demonstrating high levels of knowledge and skill in all aspects of the profession	E5 (Ac5)	E5 (AI4)		E5	E5 (I2)		
E6. Using evidence consistently to support professional decisions	E6 (Ac5)			E6	E6 (I2)		
E7. Demonstrating tolerance for ambiguity	E7 (Ac5)			E7	E7 (I2)		
E8. Pursuing new evidence to expand knowledge	E8 (Ac5)			E8	E8 (I2)	E8 (P5)	
E9. Engaging in acquisition of new knowledge throughout one's professional career	E9 (Ac4, 5)			E9	E9 (I2)	E9 (P7)	
E10. Sharing one's knowledge with others	E10 (Ac10)			E10	E10 (I2)	E10 (P5, 6, 7)	
E11. Contributing to the development and shaping of excellence in all professional roles	E11 (Ac5, 8)			E11	E11 (I2)	E11 (P5, 6)	
I1. Abiding by the rules, regulations, and laws applicable to the profession	I1 (Ac5)				I1		
I2. Adhering to the highest standards of the profession (practice, ethics, reimbursement, Institutional review Board, honor code, etc.)	I2 (Ac1-10)	I2 (AI1-5)	I2 (C1-11)	I2 (E1-11)	I2	I2 (P1-7)	I2 (S1-12)
I3. Articulating and internalizing stated ideals and professional values	I3 (Ac5)	I3 (AI2)	I3 (C11)		I3		
I4. Using power (including avoidance of use of earned privilege) judiciously	I4 (Ac5)				I4		
I5. Resolving dilemmas with respect to a consistent set of core values	I5 (Ac5)				I5		
I6. Being trustworthy	I6 (Ac5)				I6		

Table 1. Core Value Sample Indicator Cross Match Table *continued*

Sample Indicators	Ac	AI	C	E	I	P	S
I7. Taking responsibility to be an integral part in the continuing management of patients/clients	I7 (Ac5, 6)			I7 (E3)	I7		
I8. Knowing one's limitations and acting accordingly	I8 (Ac5)			I8 (E3, 4)	I8	I8 (P3)	I8 (S11)
I9. Confronting harassment and bias among ourselves and others	I9 (Ac5)		I9 (C8)		I9		
I10. recognizing the limits of one's expertise and making referrals appropriately	I10 (Ac5)			I10 (E3, 4)	I10	I10 (P3)	I10 (S11)
I11. Choosing employment situations that are congruent with practice values and professional ethical standards	I11 (Ac5)				I11	I11 (p7)	
I12. Acting on the basis of professional values even when the results of the behavior may place oneself at risk.	I12 (Ac5)				I12		
P1. Demonstrating beneficence by providing optimal care	P1 (Ac5)	P1 (AI4)		P1 (E5)	P1 (I2)	P1	
P2. Facilitating each individual's achievement of goals for function, health, and wellness	P2 (Ac1, 5, 7)		P2 (C3, 4, 5, 6, 7)		P2 (I2)	P2	
P3. Preserving the safety, security and confidentiality of individuals in all professional contexts	P3 (Ac5)				P3 (I10, 8, 2)	P3	
P4. Involved in professional activities beyond the practice setting	P4 (Ac5, 9, 10)				P4 (I2)	P4	P4 (S1, 2, 3, 4, 5, 6, 7, 8)
P5. Promoting the profession of physical therapy	P5 (Ac5, 10)			P5 (E8, 10, 11)	P5 (I2)	P5	P5 (S1, 3, 6, 7)
P6. Mentoring others to realize their potential	P6 (Ac5, 10)			P6 (E10, 11)	P6 (I2)	P6	
P7. Taking pride in one's profession	P7 (Ac5, 9, 10)			P7 (E1, 10, 11)	P7 (I2, 11)	P7	P7 (S1, 3, 4, 5, 7)
S1. Advocating for the health and wellness needs of society including access to health care and physical therapy services	S1 (Ac5, 7)				S1 (I2)	S1 (P4, 5, 7)	S1
S2. Promoting cultural competence within the profession and the larger public	S2 (Ac5)		S2 (C8, 11)		S2 (I2)	S2 (P4)	S2

Table 1. Core Value Sample Indicator Cross Match Table *continued*

Sample Indicators	Ac	Al	C	E	I	P	S
S3. Promoting social policy that effect function, health, and wellness needs of patients/clients	S3 (Ac5, 7)				S3 (I2)	S3 (P4, 5, 7)	S3
S4. Ensuring that existing social policy is in the best interest of the patient/client	S4 (Ac5, 7)				S4 (I2)	S4 (P4, 7)	S4
S5. Advocating for changes in laws, regulations, standards, and guidelines that affect physical therapy service provision	S5 (Ac5)				S5 (I2)	S5 (P4, 7)	S5
S6. Promoting community volunteerism	S6 (Ac5)	S6 (Al2, 3)			S6 (I2)	S6 (P4)	S6
S7. Participating in political activism	S7 (Ac5)				S7 (I2)	S7 (P4, 5, 7)	S7
S8. Participating in achievement of societal health goals	S8 (Ac5, 7)				S8 (I2)	S8 (P4)	S8
S9. 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	S9 (I2)		S9 (C1)		S9 (I2)		S9
S10. Providing leadership in the community					S10 (I2)		S10
S11. Participating in collaborative relationships with other health practitioners and the public at large				S11 (E3)	S11 (I2)		S11
S12. Ensuring the blending of social justice and economic efficiency of services					S12 (I2)		S12

Abbreviations: Ac = accountability; Al = altruism; C = compassion/caring; E = excellence; I = integrity; P = professional duty; PT= physical therapist; S = social responsibility.

the portion of the survey that was based on the core values was finalized. Four additional survey items were developed to explore the core value of excellence based on the respondents' perceptions that completion of the OMPT program had a positive influence on recognition that resulted in increased referrals or requests for consultations from peers, physicians, and patients/clients.

The final survey, OMPT Graduate Survey (Appendix A, Supplemental Digital Content 1, <http://links.lww.com/JOPTE/A52>), consisted of 8 demographic questions and 29 survey items, of which 25 represented the 7 core values and 4 represented recognition

from others, and 1 open-ended question. A 5-point Likert scale was used for all core value and recognition survey items: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. All survey items began with the phrase, "Because of the completion of Orthopedic Manual Physical Therapy..." The survey closed with 1 final open-ended question which read, "Please include any comments regarding your reflection on how completing the OMPT program has influenced your practice as a Physical Therapist."

To provide increased overall reliability, increased statistical versatility and better

representation of each core value being measured constructs were created.¹⁴ The CMT was utilized to assign each of the 25 survey items related to core values to all the core values they represented by matching to sample indicators in the CMT. This process led to the finalized content of each core value construct with the Core Value Constructs: Survey Items and Core Values (Sample Indicators) Table (Table 2). The 4 survey items related to being recognized as providing excellence in physical therapy were grouped together into a construct-labeled recognition. The result was 8 constructs, which were labeled accountability, altruism,

Table 2. Core Value Constructs: Survey Items and Core Values (Sample Indicators)

Survey Items	Core Value Constructs						
	Ac	Al	C	E	I	P	S
13	Ac6 ^a		C4 ^a			P2	
14	Ac6 ^a		C4 ^a			P2	
15	Ac6 ^a		C4 ^a			P2	
16		Al4		E5 ^a			
17		Al4		E5 ^a			
18		Al4		E5 ^a			
19		Al4		E5 ^a			
20		Al4		E5 ^a			
21		Al4		E5 ^a			
22		Al4		E5 ^a			
23				E2 ^a , E6			
24				E8 ^a		P5	
25	Ac4			E9 ^a		P7	
26				E3	I7, 8, I10 ^a	P3	S11
27	Ac5 ^a				I12, I2 ^a	P7	
28	Ac5 ^a				I12, I2 ^a	P7	
29					I11 ^a	P7	
30	Ac10 ^a			E10	I12	P5, 6, 7	
31	Ac10			E10, 11		P5, 7, P6 ^a	
32	Ac10			E10, 11		P4, 5, 7, P6 ^a	
33				E10, 11	I2	P4, 7, P5 ^a	S8
34	Ac9 ^a			E1		P4, 7	S3, 7, 8
35						P4, 7	S3, 4, 7, S5 ^a
36			C2 ^a				
37			C11 ^a		I3		S2

Abbreviations: Ac = accountability; Al = altruism; C = compassion/caring; E = excellence; I = integrity; I = likert type item; P = professional duty; S = social responsibility. ^aSurvey item most closely related to this sample indicator.

compassion/caring, excellence, integrity, professional duty, social responsibility, and recognition (Table 3).

Procedures

The survey was pilot tested on three subjects who were not OMPT graduates. The primary

researcher conducted interview as the ease of use of the survey, and minor grammatical changes were made. Time spent to complete the survey was between 13 and 17 minutes. No technical problems relating to the survey were identified. SurveyMonkey.com was used for all data collection.

Table 3. Survey Construct Items

Construct	No. of Items (Total 29)
Accountability	10
Altruism	7
Compassion/caring	5
Excellence	16
Integrity	7
Professional duty	15
Social responsibility	4
Recognition	4

Data Analysis

Quantitative analysis included descriptive statistics to assess the characteristics of respondents, such as the mode, mean, and standard deviation (SD) of individual items, and the mean and SD of each construct. SPSS version 21 was used for all statistical analysis. For qualitative analysis, the constant comparative method was used. All written responses to the one open-ended question

were coded to identify key words. Key words that shared similar meaning were grouped into concepts. Concepts that were closely related were grouped together, and themes emerged.¹⁵

The quantitative and qualitative data were compared and contrasted. The key words and concepts within the comments had some similarities to the language and concepts within the core values. The PCV and the CMT were referenced, and the constructs that were represented within each theme that emerged from the qualitative data were identified. For example, the comment, “The most valuable skills I learned were related to being a critical thinker,” from the qualitative data was most related to the core values of excellence in sample indicator #5 and the core value of altruism in sample indicator #4.

RESULTS

Respondent Description

Of the 178 potential respondents, 118 gave permission and completed the survey, resulting in a response rate of 63%. Fifty-two percent of the respondents were female, 48% were male, and 91% were White (non-Hispanic). Ninety-three percent of the respondents practice in

PT-owned, private-owned, or health system outpatient facilities. Seventy-three percent of respondents spend 81–100% of time in direct patient care, and 98% reported orthopedics as their primary clinical focus.

Quantitative

The results of all the individual items representing core values are presented in Tables 4–6 with the mode, mean, and SD. Fifteen items yielded a mode of 5 (strongly agree), 8 items yielded a mode of 4 (agree), and 2 items yielded a mode of 3 (neutral). The 4 individual items representing recognition from others as providing excellence in physical therapy are presented in Table 7. These items yielded an overall agreement or strong agreement that the completion of the OMPT program had a positive influence on recognition by peers, physicians, patients, and medical professionals. The means of the Likert items are included within Tables 4–7 to show how individual items influenced each construct.¹⁶

The mean and SD of each construct are presented in Figure 1. Cronbach’s alpha was used as a measure of construct reliability. A value of greater than or equal to 0.7 is commonly acceptable within the literature.¹⁴

Initial analysis revealed that Cronbach’s alpha was 0.7 or greater for all constructs except social responsibility. Examination of the Cronbach’s alpha output revealed that the removal of item #26 would result in the acceptable Cronbach’s alpha of 0.7, with 4 items remaining within the construct of social responsibility. Item #26 was retained within the constructs of integrity, excellence, and professional duty because Cronbach’s alpha was 0.7 or greater without the item removal, indicating that item #26 was more representative of these constructs. The result was 8 internally consistent constructs (Table 8).

Qualitative

The results of the qualitative analysis of the open-ended question, regarding how the program completion influenced overall practice, revealed 4 themes: relationships with clients and others, knowledge/expanded understanding, skill/outcomes, and perception of self/personal growth (Figure 2).

Relationships with Clients and Others. The comments within this theme emphasized an improved ability to communicate, enhanced relationships with clients, and increased

Table 4. Survey Items Core Values: Mode 5

OMPT Survey Items Core Values	Mode	Mean ± SD
13. I have improved my ability to communicate effectively with my patient/client population regarding the physical therapy management of their impairments/disabilities/condition	5.0	4.59 ± 0.56
14. I have improved my ability to communicate effectively with other health care professionals regarding the physical therapy management of patient/client impairments/disabilities/conditions	5.0	4.54 ± 0.53
16. I have a higher level of knowledge and skill to perform examinations and evaluations	5.0	4.85 ± 0.36
17. I have a higher level of knowledge and skill to perform critical thinking throughout examination, evaluation, and treatment procedures	5.0	4.81 ± 0.39
18. I have a higher level of knowledge and skill to maximize efficiency with all patient care tasks	5.0	4.64 ± 0.56
19. I am more effective with treatment procedures	5.0	4.74 ± 0.46
20. I have improved my ability to function as a primary care provider	5.0	4.57 ± 0.66
21. I have improved my ability to manage complex orthopedic patients	5.0	4.75 ± 0.44
22. I am more accurate when providing a patient prognosis	5.0	4.58 ± 0.56
25. I have pursued further higher education at the University level (MS, tDPT, DScPT, PhD)	5.0	3.52 ± 1.39
26. I have improved my ability to recognize the limits of my expertise and efficiently refer patients to appropriate health care providers, medical specialties and or services	5.0	4.56 ± 0.53
27. I adhere to a higher ethical standard in billing for skilled services	5.0	4.19 ± 0.94
28. I retain responsibility for the delivery of the clinical skills taught within the OMPT program without allowing the delegation of the delivery of these skills by support staff	5.0	4.55 ± 0.75
29. I maintain employment situations that are congruent with practice values and professional ethical standards	5.0	4.60 ± 0.64
30. I have increased my participation in mentoring students as a clinical instructor	5.0	3.75 ± 1.12

Abbreviations: OMPT= Orthopedic Manual Physical Therapy; MS=Master of Science; tDPT=transitional Doctor of Physical Therapy; DScPT=Doctor of Science in Physical Therapy; PhD=Doctor of Philosophy.

Table 5. Survey Items Core Values: Mode 4

OMPT Survey Items Core Values	Mode	Mean ± SD
15. I have improved my ability to communicate effectively with third party payers regarding management of patient/client impairments/disabilities/conditions	4.0	4.03 ± 0.81
23. I actively apply the concept of evidence based practice. (the integration of clinical expertise, patient values, and the best research evidence into the decision making process for patient care	4.0	4.35 ± 0.67
24. I have increased my participation of pursuing new evidence through critical inquiry. (Including but not limited to (1) using valid and reliable outcome measures, (2) participating in research projects, (3) conducting research, (4) contributing to data pools for future research	4.0	3.73 ± 0.95
31. I have increased my participation in mentoring others through staff education in clinical setting	4.0	4.07 ± 0.89
32. I have increased my participation in teaching at a University or Community College setting	4.0	3.19 ± 1.33
35. I have increased my advocacy for physical therapy by participation in activities to promote legislature regarding physical therapy	4.0	2.98 ± 1.11
36. I have increased my ability to understand individual patient/client, peer and other professional's perspectives	4.0	4.18 ± 0.68
37. I have increased my appreciation and respect for the uniqueness of each individual patient/client and professional encounter	4.0	4.31 ± 0.70

Table 6. Survey Items Core Values: Mode 3

OMPT Survey Items Core Values	Mode	Mean ± SD
33. I have increased my promotion of the profession of physical therapy through community education at the local, state, or national level	3.0	3.17 ± 1.14
34. I have increased my participation and/or membership in professional organizations	3.0	2.95 ± 1.07

Table 7. Survey Items Recognition

OMPT Survey Items Recognition	Mode	Mean ± SD
9. I have been recognized by my peers as providing excellence in physical therapy practice as demonstrated by an increase in patient referrals from peers	4.0	4.28 ± 0.74
10. I have been recognized by physicians and physicians' support staff as providing excellence in physical therapy practice as demonstrated by an increase in patient referrals from physicians	4.0	4.08 ± 0.86
11. I have been recognized by patients/clients as providing excellence in physical therapy practice as demonstrated by an increase in referrals from patient/client sources	5.0	4.52 ± 0.65
12. I have been recognized by medical professionals as providing excellence in physical therapy practice as demonstrated by requests for consultations on patients/clients	4.0	4.19 ± 0.75

respect and recognition from others. Examples of comments included the following:

- “My treatment has become more patient centered, addressing their specific goals.”
- “I feel confident acting as a mentor to others (student—post grads).”

- “It has given me the confidence to share my beliefs and findings with peers.”
- “I have received more professional respect from my peers.”
- “My patients constantly sing my praise.”

- “The program gave me more success in interaction with doctors and staff.”
- “It has enabled me to be recognized by my peers and patients as well as their families as expert of movement science and manual therapy.”

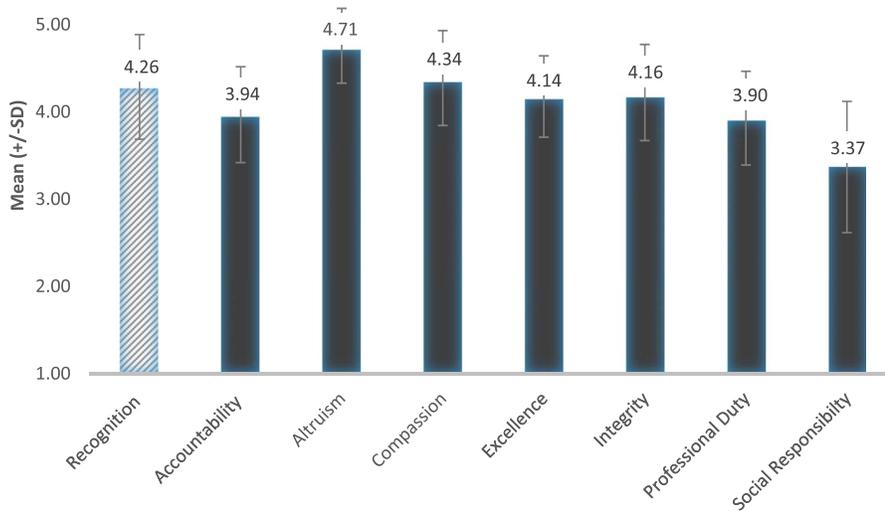
Knowledge/Expanded Understanding. The comments within this theme included improvement in critical thinking, developing a deeper understanding of integrating knowledge and skill for overall patient management. Examples of comments included the following:

- “The higher level analysis and problem solving skills learned in the OMPT program have been vital to my success as an orthopedic specialist.”
- “I feel the OMPT program enhanced my technical skills and critical thinking.”
- “...raised my level of understanding orthopedic pathology and definitely about spine.”
- “The most valuable skills that I learned during the program were related to being a critical thinker.”
- “My treatments are very efficient and effective because of my ability to diagnose the correct cause of pain or movement impairments.”

Skill/Outcomes. The comments within this theme were specific to effective execution of the skills learned and ability to manage complex patients. Examples of comments included the following:

- “It has given me the confidence in myself because of my skills to treat many types of patients from simple to complex.”
- “I have been very comfortable with complex cases that may have not had prior success in PT [physical therapy].”

Figure 1. Construct means



- “OMPT certification has helped me evaluate and treat patients more efficiently.”
- “Improved clinical examination skills and accuracy of delivery of treatment.”

Perception of Self/Personal Growth. The comments within this theme were directed at how the respondent felt regarding gratitude for the teaching, being committed to lifelong learning, overall confidence, being more fulfilled and satisfied, and experiencing overall personal growth. Examples of comments included the following:

- “I am very grateful for what the program gave me and the dedicated individuals that taught and mentored me.”
- “I would not be nearly as successful as a practitioner or as fulfilled in my career without the teachings and learnings of the OMPT program.”
- “I am more confident overall.”

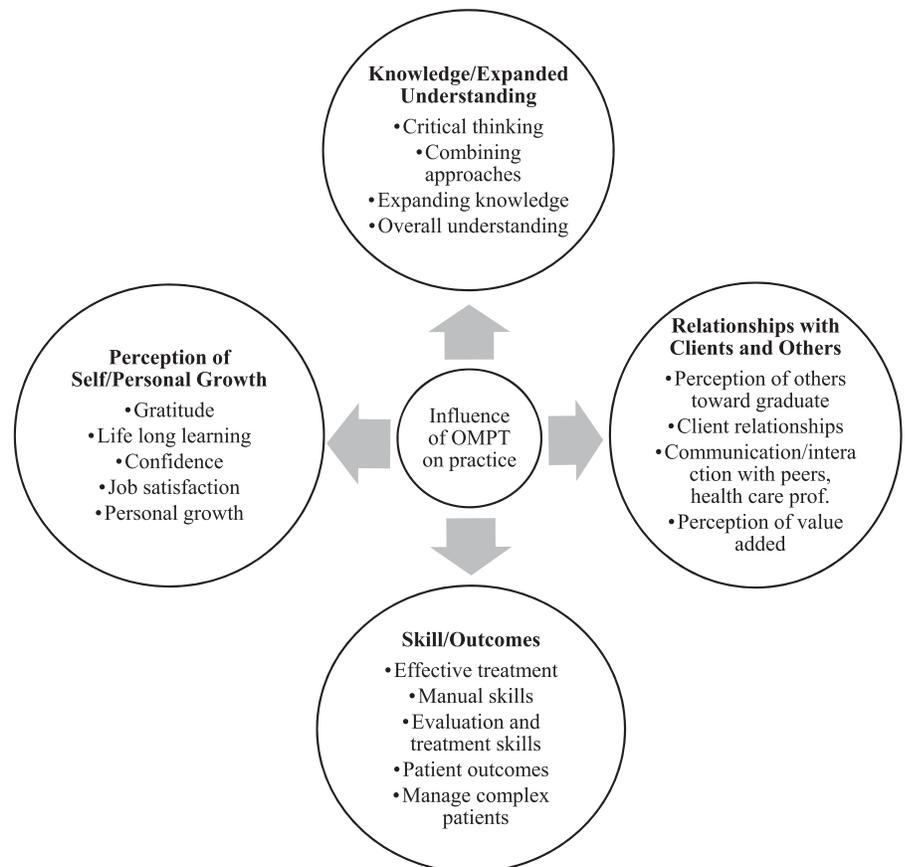
Table 8. Construct Cronbach’s Alpha

Construct	Cronbach’s Alpha
Recognition	0.8
Accountability	0.7
Altruism	0.9
Compassion	0.8
Excellence	0.8
Integrity	0.7
Professional duty	0.8
Social responsibility ^a	0.7

^aSocial responsibility: the deletion of item 26 from original construct increased Cronbach’s alpha to 0.700.

- “Taking part in the OMPT Program has significantly increased my job satisfaction due to the gained ability to exercise better tools for better outcomes.”
- “I enjoy what I do more than I ever thought I would.”
- “The OMPT program has changed my life.”

Figure 2. Qualitative themes



- “OMPT has been essential in my development as a physical therapist and the continued evolution of the practice of OMPT continues to shape me as I am always learning new things and/or attempting to create new learning opportunities for myself.”

Quantitative and Qualitative Comparison

The comments and themes that emerged were consistent with the quantitative results. All the core values were represented except social responsibility (Table 9). The fourth theme of perception of self/personal growth stood out as being independent of the core values. These comments had to do with how the person felt and not observable behaviors. These comments centered around personal growth, increased confidence, and enhanced job satisfaction.

DISCUSSION

The purpose of this study was to examine the graduates’ perceived effect of graduation from a university-based postprofessional certificate in OMPT on sample indicators representing the core values of accountability, altruism, compassion/caring, excellence, integrity,

Table 9. Quantitative Qualitative Comparison

Quantitative Constructs	Qualitative Themes
Accountability, excellence, altruism	Knowledge/expanded understanding
Accountability, compassion, professional duty, integrity, recognition	Relationships with clients/others
Accountability, excellence, altruism	Skills/outcomes
	Perception of self/personal growth
Social responsibility	

professional duty, and social responsibility as well as their perception of recognition by others as providing excellence in physical therapy. Respondents in this study primarily worked in outpatient settings, spent most of their time in patient care, and had a clinical focus in orthopedics. Quantitative results indicated an overall agreement that completion of the OMPT program led to an increase in the sample indicators representing the core values of accountability, altruism, compassion/caring, excellence, integrity, professional duty, and the additional construct of recognition by others as providing excellence in physical therapy. Within the construct of social responsibility, there was a neutral response. Qualitative analysis revealed 4 themes: relationships with clients and others, knowledge/expanded understanding, skill/outcomes, and perception of self/personal growth. Quantitative and qualitative comparison was consistent, except for social responsibility, which was only seen in the quantitative results, and perception of self/personal growth, which was only seen in the qualitative results.

The findings in this study are similar to the literature regarding participating in post-professional education as a means to further develop professionalism. Like Smith et al, the current study found that graduates of a post-professional OMPT program perceived that the program completion positively influenced clinical skills and expertise, critical thinking and clinical reasoning, communicating with patients and the medical community, and led to an increase in referrals from peers and other health professionals. Similar to Perry et al, in relation to core values, respondents in this study perceived that OMPT program completion had a positive influence on them professionally, related to examination and treatment skills, to clinical reasoning, to the ability to manage complex patients, and to enhanced recognition from others as providing excellence in physical therapy practice. The qualitative findings in this study within the theme “perception of self/personal growth” were perceived positive effects of completion of the OMPT postgraduate

education that were in addition to the perceived enhancement of behaviors related to the core values of accountability, altruism, compassion/caring, excellence, integrity, and professional duty. Respondents indicated that completion of the program enhanced their personal growth, increased confidence, and enhanced job satisfaction, which included interest in continuing to invest in lifelong learning within the profession, increased enjoyment with work, and overall fulfillment in career, which were consistent with the findings of Perry et al. These perceptions could result in reduced practitioner burnout, retention of experienced therapists, and engaged employees, which can have a positive effect on the culture of the health care system and the community they are serving.

Findings from this study revealed new aspects of the perceived influence of graduate program completion that were not reflected in other studies. These aspects support the perception that completion of the postprofessional program positively influenced participants to maintain ethical employment, retain responsibility for skills, recognize limits of expertise and efficiently refer, and adhere to ethical billing practices. These items directly capture aspects of the core values within the PCV document of accountability, integrity, professional duty, and excellence. Graduates, who purposefully choose to be employed in environments that strive for high ethical standards, could influence the elevation of overall professionalism. The positive influence, on retaining responsibility for delivery of the clinical skills learned within the OMPT program, could lead to consumers receiving the most skilled care. Recognizing the limits of expertise, efficiently identifying a need for further medical management, and referring to the most appropriate provider could result in less time and resources expended by the provider, the third-party payer, and the medical institution. The combined results of being perceived by others as experts in providing physical therapy, with the overall perception of an increase in behaviors related to core values could result in increased opportunities for respondents to be

influential within a peer group, an institution, the profession, the health care team, and society.

The construct of social responsibility that included 4 items related to community education, membership and participation in professional organizations, promoting legislature, and increasing the appreciation and respect for the uniqueness of each individual patient and professional encounter yielded a neutral response overall. Although Guenther et al, investigated self-assessed core values of PTs unrelated to postgraduate education, the findings of this study are analogous, with the construct of social responsibility yielding an overall lower score and the constructs of compassion/caring, accountability, and integrity yielding higher scores. The specific items within the social responsibility construct most analogous to political activism (which scored low in the study of Guenther et al) was promoting legislature regarding physical therapy. The item most analogous with volunteerism (which scored low in the study of Guenther et al) was related to participation in community education. Similar to the results of Guenther et al, in the current study, these 2 items scored lower and pulled the overall construct score down. Perhaps, the finding of lower scoring items related to social responsibility in the current study is not representative of the perceived influence of completion of the OMPT program. This finding is consistent with the interpretation of Guenther et al and Dutton et al regarding their findings that social responsibility is not consistently identified by PTs as part of their professional role and not fully integrated into the profession of physical therapy. Strategies to further integrate behaviors related to social responsibility could include curricular changes that explicitly state related goals include service learning activities and provide positive role modeling of social responsibility; integrating social responsibility into the mission statements of medical institutions and physical therapy departments; providing support for participation in political activism; and identifying and providing community volunteer activities. Dutton et al provided evidence for facilitating factors to volunteerism that include, among others, creating volunteer opportunities that provide socialization and identifying causes that participants can personally identify with. Barriers to volunteering included restricted time and difficulty identifying appropriate opportunities.¹¹ These facilitating factors and barriers could be addressed within the work place and within entry-level education curriculum to integrate social responsibility within the profession of physical therapy.

When comparing OMPT program goals to the results of this study, there was compatibility in both individual items and constructs that related to all OMPT program goals. Although the construct mean of social responsibility was neutral, the individual survey item related to appreciating and respecting the uniqueness of each individual patient and professional encounter (which was within the social responsibility construct) yielded agreement, indicating that the specific OMPT goal is being met. This finding also shows that respondents perceived that this specific behavior related to social responsibility was enhanced by the completion of OMPT.

Limitations and Future Research

One limitation of this study was that the survey items were framed with positive wording, which may have biased respondents. The respondents may have had a positive bias toward the OMPT program. There is lack of validity and reliability testing of the OMPT Graduate Survey used in this study. The orthopedic focus, the graduate certificate structure, and the use of a single program limits the generalizability of the findings.

The development of a valid and reliable instrument to measure professionalism is needed and could include validity and reliability testing of the existing CVSA or the OMPT Graduate Survey used in this study. Validating an instrument could have extensive application within the field of physical therapy and enhance the understanding of the domain of professionalism within many settings: doctoral level physical therapy education, postprofessional education, and clinical settings within all specialties. Further exploration of the domain of professionalism is imperative to further develop strategies within these settings to promote and further integrate all aspects of professionalism.

CONCLUSIONS

The further development of professionalism within health care is critical to improve the quality of care and meet the needs of society.¹ To continue to enhance the impact of PTs on society as a profession, methods to increase and enhance professionalism must be identified.

The results of this study suggest that completion of a postprofessional program may contribute to the development of the core values. The results also suggest that there is an increased recognition by others of providing excellence in physical therapy. In addition, there appears to be an added value that includes enhanced job satisfaction, confidence, and personal growth. The core value of social responsibility does not appear to be influenced by the completion of the OMPT program. The findings lend support that, in addition to developing skills and increasing knowledge, a postprofessional OMPT program can contribute to the further development of professionalism.

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