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Outcomes of an Online Post Professional Doctorate Degree in Occupational Therapy

Joyce Salls, OTD, OTR/L¹
Ingrid Provident, Ed.D, OTR/L²
Cathy Dolhi, OTD, OTR/L, FAOTA¹

1. Associate Professor, Occupational Therapy Program, Chatham University, Pittsburgh, Pennsylvania
2. Assistant Professor, Occupational Therapy Program, Chatham University, Pittsburgh, Pennsylvania

United States

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ABSTRACT

Purpose: The purpose of this study was to determine outcomes of a post professional Occupational Therapy Doctorate (OTD) program on graduates' engagement in evidence-based practice, leadership, and scholarly activities one year post graduation. **Method:** Thirty graduates of a post professional OTD program completed an online survey addressing evidence-based practice skills, implementation of occupation and evidence-based programs, and participation in leadership and scholarly endeavors. **Results:** The majority of graduates reported confidence in their evidence-based practice skills and using evidence in clinical decision making. Over half of the respondents reported designing or revising occupation based programs, and all indicated that their OTD education improved their practice skills. Fifty-three percent reported assuming new leadership positions, with one third reporting engagement in scholarly activities since graduation. **Conclusion:** This research suggests post professional OTD programs have potential to develop practitioners grounded in occupation centered and evidence-based practice who can serve as professional leaders and mentors. Additionally, the results have implications for other allied health disciplines with post professional doctoral programs.

INTRODUCTION

The American Occupational Therapy Association's (AOTA) Centennial Vision includes evidence-based practice as an essential component to the advancement of our profession, visioning occupational therapy as a "powerful, widely recognized, science-driven, and evidence-based profession with a globally connected and diverse workforce meeting society's occupational needs."¹ The literature reveals that although practitioners report valuing evidence-based practice, few are incorporating evidence in clinical decision-making with lack of time, search skills, and critical analysis skills frequently cited as reasons.²⁻⁴ Online post professional clinical doctorate programs in occupational therapy with a curricular focus in evidence-based practice and the development of professional leadership competencies have the potential to advance these skills in students and subsequently inform and expand occupational therapy practice. In turn, this should contribute to the profession's realization of its Centennial Vision.

ONLINE EDUCATION

The terms distance education, online education, and e-learning are often used interchangeably in the literature, with online and e-learning implying the use of web based resources to deliver course content.⁵ For the purposes of this paper, the term "online" will be used to describe the post professional occupational therapy doctorate program. Online learning has gained popularity in the past several years, in part because it offers working professionals the opportunity to further their education while maintaining

their work and family responsibilities. With the ongoing development of technological supports and pedagogical methods to enhance online learning, students can be actively engaged in the learning process via a variety of methods such as asynchronous discussions, interactive power points, skype, wikis, and peer mentoring. Courses delivered in an asynchronous format allow students the flexibility to learn at their own pace, balance their home/work responsibilities, and engage with other students throughout the world. In a study by Mathena, post professional online occupational and physical therapy students reported satisfaction and enhanced learning in online courses.⁶ Key features identified for successful online courses include adequate faculty and student preparation for online instruction/learning, reliable technology, timely and effective communication, and the use of instructional methods that foster critical thinking and active learning.⁶⁻⁸ A review of the literature on online courses in health related fields indicate that regardless of the delivery method, student performance in online courses is similar to students in on the ground courses.⁵ The focus of much of the research, however, has been primarily on satisfaction and performance of students in individual online courses rather than online degree programs. In the field of occupational therapy, Richardson et al. investigated the outcomes of an online post professional master's degree in occupational therapy and reported positive outcomes with graduates indicating greater involvement in leadership and evidence-based practice skills.⁷ To date, no studies have been identified related to the outcomes of an online occupational therapy post professional doctoral program.

DESCRIPTION OF THE CLINICAL DOCTORATE

The post professional clinical doctorate degree is designed to prepare individuals already prepared for clinical practice with competencies above and beyond those expected of entry-level professionals.⁹ The clinical doctorate places emphasis on expanding the clinician's practice skills so that they become intelligent users of research publications and can apply research findings to evidence-based practice.⁹ In contrast, the research doctorate (e.g., Doctor of Philosophy [Ph.D.]) focuses on advancing research skills and preparing individuals for advanced scholarship and primary research. Individuals pursuing research doctorates complete ground level research and a dissertation that adds to the profession's body of knowledge. In comparison, those engaged in clinical doctorate programs commonly participate in advanced clinical training, specialty preparation, and evidence-based projects that serve to inform and expand clinical practice.

HISTORY OF THE CLINICAL DOCTORATE IN HEALTH PROFESSIONS

Clinical, or professional doctorate, programs were initially created by innovative universities in response to demands for sophisticated practice competencies in a variety of fields and were then validated within individual disciplines through strong, effective professional organizations. The emergence of the clinical doctorate degree can be traced to the fields of medicine, dentistry, psychology, and pharmacy. Both medicine and dentistry progressed to clinical doctorate degrees in the early 1900's following scrutiny related to clinical competence and quality of care.¹⁰ The Doctorate of Psychology evolved out of the profession's struggle to provide explanations for human behavior as well as viable clinical treatments for individuals to whom they provided services.¹⁰ In response to the complex responsibilities associated with the pharmacist-client interaction, the delivery of drug information, and new product development, pharmacy's clinical doctorate (PharmD) emerged as the entry-level degree into the profession in 1992.¹⁰

Similarly, clinical doctorates are currently offered in other healthcare professions, namely nursing, audiology, physical therapy, and occupational therapy. The nursing profession offers a wide variety of clinical doctorate degrees with goals ranging from preparing qualified faculty to increasing clinical skills or developing proficiency in specialized practice areas.¹⁰ Clinical doctorate programs for audiologists are offered at the post-baccalaureate and post-masters level.¹¹

In reaction to society's demand for more efficient and effective health care services, clinical doctorate degrees in physical therapy and occupational therapy materialized in the early 1990's. By virtue of the professional doctorate, both professions aimed to increase clinical competency, intensify the focus on evidence-based practice, and expand the research and leadership skills of faculty and practitioners. The clinical doctorate in physical therapy first emerged in 1993 and the American Physical Therapy Association (APTA) endorsed the clinical doctorate as the entry-level degree for physical therapy in June 2000. The Commission on Accreditation in Physical Therapy Education (CAPTE) will require all programs to offer the Doctorate of Physical Therapy (DPT) degree effective December 31, 2015. APTA's vision for 2020 is that all physical therapy services will be provided by doctors of physical therapy.¹²

HISTORY OF THE CLINICAL DOCTORATE IN OCCUPATIONAL THERAPY

The clinical doctorate is fairly new in the profession of occupational therapy. There has been debate in both academic and clinical/practice circles about the relative value of the Occupational Therapy Doctorate (OTD) over the master's degree.¹³ Currently, two distinctions of the OTD exist. Entry-level OTD programs admit students who do not have an occupational therapy degree, whereas the post professional OTD is designed for already credentialed occupational therapy practitioners who return to achieve a higher degree.

The first post professional clinical doctorate in occupational therapy was offered by Nova Southeastern University (Fort Lauderdale, Florida) in 1994. Creighton University (Omaha, Nebraska) began a post professional OTD program in 1995 and later initiated the first entry level OTD program in the United States in 1999.¹³

Despite the existence of seventeen post professional OTD programs in the United States at the time of this writing, there have been no published studies on the outcomes of post professional occupational therapy doctoral programs to date. The purpose of this study was to determine the outcomes of a post professional OTD program on graduates' engagement in evidence-based and occupation-based practice, leadership endeavors, and scholarly activities one year post graduation.

OTD PROGRAM

The post professional OTD program at this University is a 30-credit curriculum that can be completed in 16 months. Designed primarily for students who are employed full-time, the program is offered in an online format with two visits to campus. Students complete the program as a cohort, enrolling in two to three courses per semester. Online courses are linked, presented in sequence, and delivered asynchronously via a Web based platform. The curriculum is designed so that each course includes assignments and learning objectives that are strategically linked to the program outcomes. For example, in the first semester, students design their capstone question and perform a preliminary search of the evidence. In the next semester, students critically evaluate the literature, develop their implementation plan, and create evaluation methods to determine the effectiveness of the project. In the final semesters, students implement their project, evaluate the outcomes, present findings, and create personal leadership plans for their continued professional development. Although all students are enrolled in the same courses, the program is designed so that assignments within each course can be applied directly to the students' specific area of practice. It is anticipated that upon completion of the OTD Program, graduates will have developed the knowledge and skills to become evidence-based practitioners, advanced clinicians, and professional leaders.

Specific program outcomes are as follows:

Graduates will:

1. Become self directed, evidence-based learners through the ability to access and critically evaluate the reliability of electronic databases and web resources.
2. Demonstrate the ability to access and critically evaluate literature related to occupational therapy.
3. Apply principles of evidence-based practice as a basis for clinical decision making in the student's work setting.
4. Demonstrate advanced knowledge of occupational therapy practice through the study and application of occupational science literature and occupation-based intervention.
5. Design, implement, and evaluate the effectiveness of innovative occupation-based programs in the student's chosen area of interest.
6. Develop the skills to become leaders in areas of professional practice, advocacy, education, and business.

METHODS

Participants

All graduates of the online post professional doctorate in occupational therapy in 2007 to 2010 were invited to participate, representing four cohorts of students. An online survey was sent via e-mail one year post graduation to each member of the respective cohorts. Data collection occurred from 2008 to 2011. Each cohort averaged 12 occupational therapists. Over the four years, 45 students graduated from the OTD program. Thirty surveys were returned, yielding a return rate of 67%. Students in the four cohorts ranged from 24 to 60 years of age, with a mean age of 42. Eighty-eight percent were female, and 12% were male. Years in practice ranged from 1 to 33 years with a mean of 15 years in the field. The majority (74%) reported their primary role as clinician, with 24% working primarily in academic settings. Geographically, the majority lived in the northeast (51%), 23% from the south, 13% from the Midwest and 8% from the western United States. Five percent were international students.

Instrumentation

A survey was developed by the OTD faculty to gather both quantitative and qualitative data from the participants and was converted by the University's Information Technology Support Staff to be administered through *Qualtrics* (www.qualtrics.com). The survey contained three sections with questions based on program outcomes. The first two sections consisted of questions using a likert scale with space allotted for additional comments. Section 1 included seven questions related to accessing and appraising resources, as well as implementing occupation and evidence-based practices. Section 2 contained nine questions related to the participants' level of engagement in leadership activities and scholarly work, with opportunities for comments for each question. The final section included two questions related to changes in employment status and an open ended question related to how participants' practice or work situation may have changed since receiving their doctoral degree.

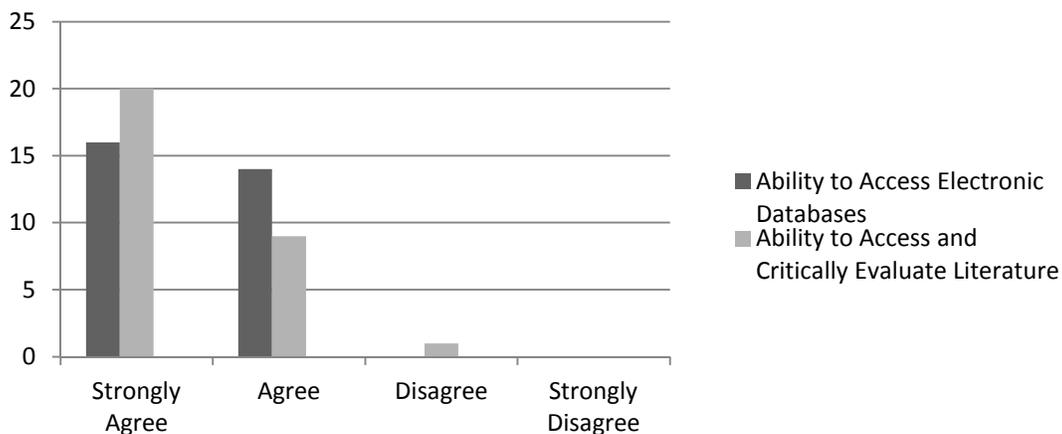
Approval for this project was granted by the University Institutional Review Board. The survey link was sent to the OTD program graduates via email by the University's Information Technology Support Staff. The email included a cover letter with instructions for completion. Reminder emails that included the original survey link were sent three times over a two month period. Completed surveys were returned by the participants through the *Qualtrics* system which compiles information and generates a report that includes descriptive statistics and all qualitative responses. The qualitative responses were then independently coded by OTD faculty and categorized into descriptive themes.

RESULTS

Evidence-Based Practice Skills

All graduates reported that they were confident in their ability to access electronic databases with 53% indicating that they strongly agreed with the statement, "I feel confident in my ability to access electronic databases and web resources." The remaining 47% agreed with that statement. A similar positive trend was revealed by the graduates with regard to their ability to access and critically evaluate literature with 97% rating their abilities in the "strongly agree" to "agree" range (see Table 1).

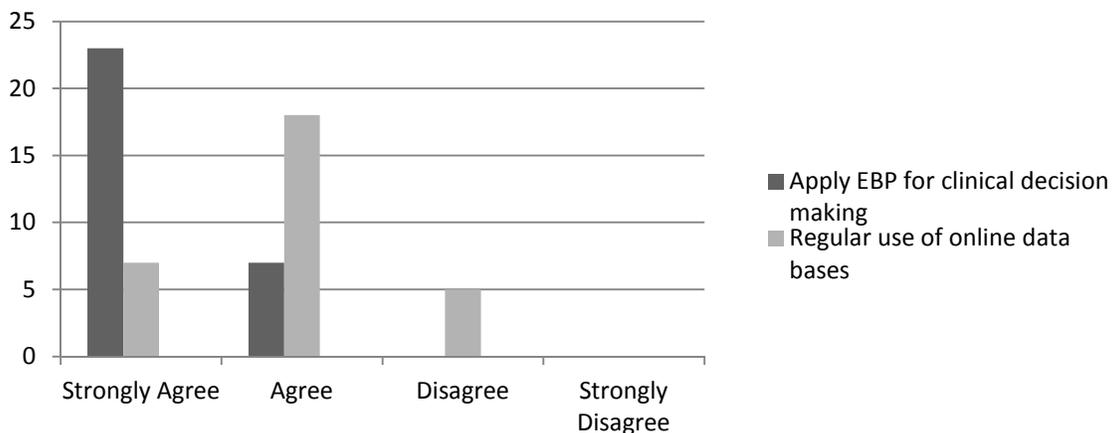
Table 1. Evidence-Based Practice Skills



Evidence-Based Practice Application

Although graduates reported having the ability to access and appraise literature, it was important to ascertain if the participants were utilizing these skills in their everyday practice. Across all four cohorts, 100% of graduates reported using evidence for clinical decision making and 83% responded that they were regularly using online databases in their clinical or educational practice (see Table 2). Several of the graduates commented on continuing to expand upon their evidence-based capstone project beyond graduation and one graduate reported adding evidence-based assignments to the fieldwork program for upcoming occupational therapy graduate students.

Table 2. Evidence-Based Practice Application



Occupation Based Programming

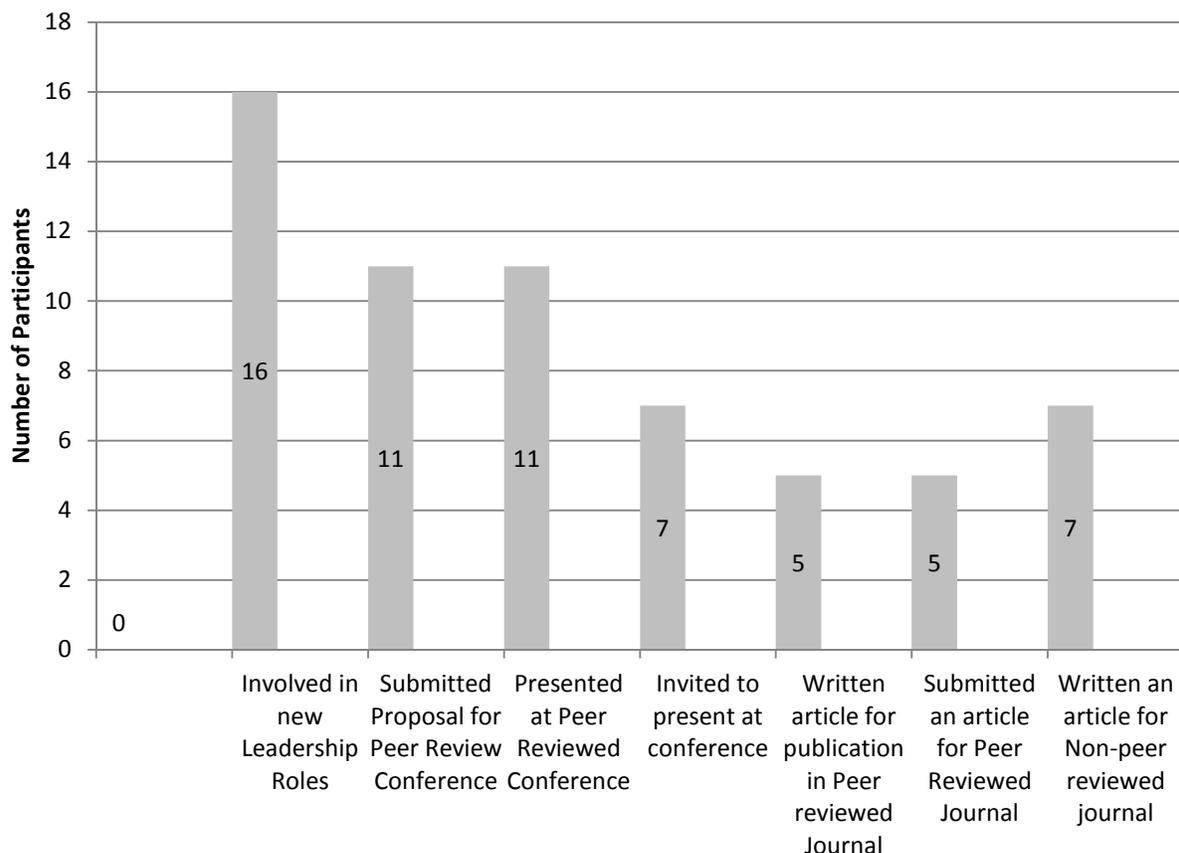
All of the OTD graduates reported that they possessed the ability to design occupation based programs. The majority (73%) felt strongly that they had learned these skills. When asked if they used occupation based programming skills to develop new programs in their work setting since graduation, 50% of the graduates reported affirmatively. In addition, a slightly greater percentage (63%) reported revising programs for improved use of occupation in their respective settings. For those not reporting occupation based program development or revision, lack of time seemed to be the pervasive comment by those who shared explanatory remarks.

Engagement in Leadership Activities and Scholarly Work

One hundred percent of the graduates reported that their OTD education improved their skills as a clinician, educator, researcher, and/or administrator. Interestingly however, only 53% (n=16) reported that they were involved in new leadership roles since completing the OTD program. Those who reported assuming new leadership positions identified a variety of roles such as state occupational therapy association president, member of a state central conference committee, and program director within a University. Some graduates reported that although they had not assumed new leadership positions they felt more confident in their existing roles.

Table 3 illustrates that less than half of the graduates reported participating in scholarly activities one year post completion of the OTD program. Approximately one-third of the respondents reported having submitted a peer-reviewed proposal for professional presentation. Submission of written work for scholarly publication (peer reviewed or non-peer reviewed) was reported at even lower percentages. Questions related to proposal submissions and presentations at peer reviewed conferences revealed that only 36% of graduates submitted and presented at a peer reviewed conference one year post graduation. Written scholarly work in the form of publications revealed that 17% submitted an article to a peer reviewed journal, while 23% had written an article for a non-peer reviewed publication.

Table 3. Engagement in Leadership Activities and Scholarly Work



Employment and Practice Changes

Twenty percent (n=6) of the program graduates reported that they received a promotion due to their OTD education, while a larger percentage, 46%, reported receiving a salary increase as a result of attaining the OTD degree. The additional comments section of the survey that asked "how your practice or work situation may have changed since receiving your doctorate" resulted in many narrative comments. Themes within the comments revealed graduates feeling more confident in their roles and having renewed interest in the profession. Many shared that it was a professional growth experience and wanting to pass on the enthusiasm to colleagues.

Two poignant comments are shared here as illustrations of the graduates' experience:

"To date, I have found my doctorate to be important to my career in enhancing my practice and expanding my view of practice possibilities but there has not been a specific quantifiable benefit in terms of promotion or salary. I value the education I received greatly, but, frankly, my overall perception is that the OTD degree doesn't seem to carry a high value among those in the OT community or the OT academic community. Many OT clinicians have asked me why I would go through the expense and time of getting this degree since there are no tangible benefits."

"I can actually say my whole way of thinking has changed since I began the OTD Program. I am an educator and a practitioner and now I have a different perspective on both OT education and my clinical practice. I am more interested in evidence and in using evidence to support program development in my clinic site. I am more interested in how I can use program outcomes to support current programs as well as program revisions. I am interested in seeing how occupational therapy practice can affect different clinical populations and in moving OT practice forward into new and innovative areas. I have changed my perspective on the role of OT in health care and community. I have over 20 years of practice behind me but I can say I have a whole different and new perspective thanks to the OTD experience. It was the best (and busiest) 18 months of my life. I am so happy that I pursued the degree."

DISCUSSION

The purpose of this study was to investigate the outcomes of a post professional occupational therapy doctoral program, on graduates' involvement in evidence and occupation based practice, leadership endeavors, and scholarly activities. Results of this study suggest that post professional OTD programs have the potential to enhance these skills in practitioners and prepare them to practice from an occupation and evidence-based perspective. In this online program, the cohort model, which allows for peer-support within an adult learning environment, may have contributed to successful program outcomes. In addition, the prescribed course of study combined with an opportunity to implement individually tailored capstone projects in the students' work setting may be related to positive program outcomes.

Contrary to previous research, which found that few practitioners were using evidence for clinical decision making, this study suggests that providing post professional training in accessing and critiquing the literature may lead to increased utilization of the evidence in daily practice.²⁻⁴ A major barrier to implementation cited in previous studies was lack of time.¹⁴⁻¹⁶ This was not the case in this study, which suggests that providing working practitioners with the skills to efficiently search and appraise literature during their OTD education promotes the development of evidence-based habit patterns. These newly established habits and skills can minimize "time" as a barrier to evidence-based practice, without negatively impacting productivity standards. With regard to the occupation based practice outcome measures, 63% of graduates reported having designed or revised programs to be more occupation based. For those that identified issues related to using occupation in the workplace, "time" continued to be reported as a major barrier. It is unclear however, whether these occupation based questions had equal relevance to all graduates, as 24% of the respondents were academicians who may not have responded in the affirmative based on their primary role as educator.

Despite the relatively short period of time since the completion of their OTD program (one year), approximately one-half of the participants reported assuming new leadership roles. This undertaking of leadership responsibilities may be related to enhanced self confidence, a newly acquired skill set, a renewed professional commitment, a greater appreciation of one's potential to impact occupational needs of individuals, populations, and communities, or a combination of these and/or other factors. This influx of doctorally prepared leaders can help to strengthen the cadre of occupational therapy practitioners who are poised to contribute to the realization of the profession's Centennial Vision and Strategic Goals and Objectives.¹⁷

Although all of the graduates completed a capstone project (including written work and a professional poster) that could have been transformed into a scholarly product, fewer than 50% of the participants in this study reported scholarly achievements one year post graduation from the OTD program. The lack of production of scholarly work may be due, in part, to the short time frame post degree completion as well as the time frames associated with manuscript preparation, submission, and acceptance as well as the timing of conference proposal submissions and acceptances. It would be remiss not to consider the potential of the graduates taking some "down time" from the rigor of the academic program prior to pursuing professional presentation or publication. Finally, in addition to having gained the skills from their OTD education, those who did publish or present in a scholarly venue may have done so as a requirement of their academic responsibilities (i.e., tenure, promotion, renewable term).

LIMITATIONS AND OPPORTUNITIES FOR FUTURE STUDY

The study's small sample size and the restriction of the participants to one specific university's occupational therapy post professional doctorate program limit the generalizability of the outcomes to other programs. The lack of a control group or a pre/post assessment design makes it impossible to determine the degree to which the respondents were influenced by the completion of the occupational therapy doctorate program. However, participants' responses related to evidence-based practice, occupation-based practice, and leadership and scholarly activities are suggestive of a positive program impact.

The limitations of this project provide an opportunity for additional study on this topic. Ongoing data collection will increase the sample size, and future studies should ensure the collection of pre-coursework information related to program outcomes. In addition, future data collection should separate responses by years in practice and primary work setting to determine if there are differences in outcomes realized by level of experience and/or academicians versus clinicians. Finally, further inquiry should consider outcome information collected at two years post completion of the occupational therapy doctorate program to provide additional time for the pursuit of leadership roles and scholarship and to assess ongoing evidence and occupation based initiatives in the workplace.

In addition, inquiry related to the outcomes of the professional doctorate degree compared to other doctorates (i.e., Ph. D., Ed. D., Sc.D) is a potential area of study. A comparison of the relative contributions of doctorally prepared leaders within various professions (i.e., OT, PT, Nursing, Psychology) may provide insight into the differentiating features of doctoral education programs.

CONCLUSIONS

This study provides preliminary data related to the achievement of outcomes in an online post professional OTD program. The majority of participants in this survey indicated a high level of confidence in their evidence-based skills, engagement in occupation and evidence-based practice in their worksites, and participation in new leadership positions since graduation. Few respondents reported engagement in scholarly endeavors one year post degree conferral, however this may be due to the short time frame since graduation. This research suggests that post professional OTD programs may be instrumental in developing occupation centered and evidence-based practitioners who can serve as leaders and mentors for the profession. Additionally, the results of this study may have implications for other allied health disciplines with post professional doctoral programs that focus on developing health care professionals with advanced practice skills.

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