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Abstract

The purpose of this study was to compare the professional outcomes of two entry-level occupational therapy degrees: the Master of Science (MSOT) and occupational therapy doctorate (OTD). This was a quantitative, exploratory study using a survey method. An online survey was sent to graduates from one occupational therapy program with known email addresses (N = 711). The survey included items relating to professional outcomes, such as job title, salary, and engagement with evidence-based practice, leadership, research, and interprofessional practice. Descriptive statistics and Mann-Whitney U tests were used to describe and to compare groups. The survey yielded 208 responses eligible for analysis. The sample consisted of 146 MSOT graduates (70%) and 62 OTD graduates (30%). MSOT graduates were significantly more likely to be clinicians (z = -3.57, p < .05) and OTD graduates were significantly more likely to be educators (z = -4.24, p < .05). OTD graduates were significantly more likely to use evidence-based practice (z = -2.29, p < .05) and conduct research (z = -4.19, p < .05). There were no significant differences between the two groups in job titles, starting and current salaries, and perceived preparation for interprofessional coordination. These results contribute to understanding the impact of the two degrees for the profession, graduates, and future occupational therapy students.

Keywords

Education, master of science in occupational therapy, occupational therapy doctorate, survey

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Comparing Outcomes of Entry-Level Degrees from One Occupational Therapy Program

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ABSTRACT

The purpose of this study was to compare the professional outcomes of two entry-level occupational therapy degrees: the Master of Science (MSOT) and occupational therapy doctorate (OTD). This was a quantitative, exploratory study using a survey method. An online survey was sent to graduates from one occupational therapy program with known email addresses (N = 711). The survey included items relating to professional outcomes, such as job title, salary, and engagement with evidence-based practice, leadership, research, and interprofessional practice. Descriptive statistics and Mann-Whitney U tests were used to describe and to compare groups. The survey yielded 208 responses eligible for analysis. The sample consisted of 146 MSOT graduates (70%) and 62 OTD graduates (30%). MSOT graduates were significantly more likely to be clinicians (z = -3.57, p < .05) and OTD graduates were significantly more likely to be educators (z = -4.24, p < .05). OTD graduates were significantly more likely to use evidence-based practice (z = -2.29, p < .05) and conduct research (z = -4.19, p < .05). There were no significant differences between the two groups in job titles, starting and current salaries, and perceived preparation for interprofessional coordination. These results contribute to understanding the impact of the two degrees for the profession, graduates, and future occupational therapy students.

INTRODUCTION

In August 2017, the Accreditation Council for Occupational Therapy Education (ACOTE) announced that by July 1, 2027, the entry-level degree for occupational therapists would be at the doctoral level (ACOTE, 2017). As evidenced by the abeyance of the mandate until further investigation is complete (American Occupational Therapy Association [AOTA], 2018a), the question of whether this transition should occur ignited debate within the occupational therapy profession. While literature shows that debate over a

doctoral mandate has been a recurring theme in the profession, studies determining the impacts of such a change have not. The following literature review presents multiple perspectives on the matter. The lack of evidence supporting much of what has been debated is the foundation for the current study, which sought to compare the professional outcomes of entry-level occupational therapy degrees from one occupational therapy program.

LITERATURE REVIEW

In 2014, the AOTA Board of Directors recommended that the occupational therapy doctorate (OTD) become the single point of entry to the profession (AOTA, 2014). The organization's rationale included that two entry-level degrees was confusing to stakeholders; that occupational therapists must demonstrate professional autonomy to become leaders in healthcare; and that graduates of OTD programs possess the skills to implement evidence-based practice and address the complexity of healthcare including quality, costs, and the prevalence of chronic conditions. AOTA stated that increased curricular content was necessary to keep up with the expansion of occupational therapy in primary care, new specializations, and interprofessional practice. Additionally, AOTA cited the recommendation of the Future of Education Ad Hoc Task Group (AOTA, 2013), a committee formed to address issues in occupational therapy education, which determined that a move to the entry-level doctoral degree as the single point of entry would best position the profession to meet society's needs. Finally, perhaps one of the more contentious points in the literature, AOTA reasoned that there has been a trend towards clinical doctorates in other healthcare professions, and occupational therapy must remain on par (AOTA, 2014; Brown, Crabtree, Wells, & Mu, 2016).

Past and recent surveys alike have shown that the recommendation from AOTA was not representative of its constituents and the body of therapists who were not members of the organization. Dickerson and Trujillo (2009) conducted a survey to examine the perceptions held by "grassroots" occupational therapists of the doctoral degree. By "grassroots," the authors referred to therapists who were not associated with AOTA or with an educational program. Of the survey's 600 respondents, over 65% indicated that they did not support mandating the occupational therapy doctorate as the entry-level degree (Dickerson & Trujillo, 2009). Two more recent surveys captured clinician. educator, and student perceptions of mandating the entry-level doctorate for all occupational therapy students. The results of one survey, which reflected the opinions of participants from across the United States, found that 75% of participants (n = 276) agreed that the entry-level doctorate should be an option, but not a requirement (Lucas Molitor & Nissen, 2018). In May 2018, AOTA also conducted a survey of its members, obtaining over 7,400 responses. The majority of respondents (61%) were against the OTD mandate, 22% were in favor of the mandate, and 17% remained undecided (AOTA, 2018b).

Despite AOTA's recommendation, ACOTE decided in 2015 that the entry-level degree for occupational therapy would remain at two points of entry. The organization's decision was based on doubts regarding the preparedness of many academic

institutions to meet the OTD standards. ACOTE maintained that two points of entry would allow the profession to respond to the fluctuating healthcare needs of society. The organization also cited the dearth of information distinguishing the outcomes between master's and doctoral graduates (ACOTE, 2015).

A review of the literature showed that ACOTE's claim in 2015 was not unfounded: studies to illustrate outcomes between occupational therapists with master's and doctoral degrees were lacking, yet there was ample literature describing the arguments for and against a shift to the doctorate (AOTA, 2014; Brown et al., 2015; Brown et al., 2016; Case-Smith, Page, Darragh, Rybski, & Clearly, 2014; Dickerson & Trujillo, 2009; Griffiths & Padilla, 2006). One small study did seek to illuminate the outcomes of the first graduating class from an entry-level OTD program at Creighton University (Mu, Coppard, & Padilla, 2006). However, this study only considered OTD graduates, and therefore lacked comparison between the two degrees.

A similar debate ensued when the profession transitioned to an entry-level master's degree from a bachelor's degree. In 1987, researchers considered the possible repercussions of moving the entry-level degree from a bachelor's degree to a master's degree (Pierce, Jackson, Rogosky-Grassi, Thompson, & Menninger, 1987). The group expressed concerns regarding how increased time and expense of the master's degree would affect the applicant pool and whether adequate faculty and facilities were available. In the early 2000's, perceived advantages of shifting to the entry-level master's degree included gaining professional autonomy, contributing to evidence-based practice, and elevating the professional status of occupational therapy (Lall, Klein, & Brown, 2003). Lall et al. (2003) also acknowledged that outcome studies were needed to better understand how occupational therapists with varying degrees differ in professional productivity and contributions to evidence-based practice. However, in a review of the literature, no such outcome studies were found.

Proponents of the OTD, including AOTA, cite the increased scope and complexity of occupational therapy practice as urgent reasons to transition to the OTD (AOTA, 2014; Brown et al., 2015). Brown et al. (2015) argued that OTD graduates are equipped with more advanced skills in clinical reasoning, problem-solving, interprofessional coordination, evidence-based practice, and leadership abilities. Further, the skills of these graduates will facilitate the expansion of occupational therapy in emerging areas of practice (Brown et al., 2015). However, a literature search produced no studies indicating whether these desired outcomes were fulfilled.

A common theme in the literature supporting the OTD was the ability of its graduates to meet the demand to implement evidence-based practice. This point is reinforced in AOTA's Vision 2025 statement, which included that occupational therapy is "evidence-based, client centered, and cost-effective" (AOTA, 2017, p. 1). Case-Smith et al. (2014) also supported the position that the graduates of OTD programs are better prepared to implement evidence-based practice. The impact of these skills benefits the profession by preparing practitioners who can collect and analyze data and who can advocate for the profession by conveying the effectiveness of services to stakeholders (Case-Smith

et al., 2014). Whether doctoral graduates are better prepared to implement evidence-based practice than graduates with master's degrees remains unknown.

Scholars have cited a demand in the healthcare environment for effective interprofessional teams whose coordinated client goals will improve client outcomes and cost-efficiency (Case-Smith et al., 2014). Case-Smith et al. (2014) maintain that doctoral graduates will contribute to building a more coordinated healthcare system with their "enhanced understanding of systems and care management, and increased skills in identifying health issues that warrant referral" (Case-Smith et al., 2014, p. 59). Studies are needed to determine whether a graduate's degree does in fact impact interprofessional practice.

Proponents of the doctoral degree argue that the shift is important for increasing the stature of the profession and for remaining on par with other members of interprofessional teams (AOTA, 2014; Brown, Crabtree, Wells, & Mu, 2016). A survey of occupational therapy graduates showed that respondents hoped that increased stature could lead to larger salaries (Smith, 2007). Brown et al. (2015) argue that due to the hierarchical nature of the healthcare system, it is imperative that occupational therapists remain competitive with other healthcare professions that have raised entry-level standards to the doctoral level. In an analysis of the arguments in favor of and in opposition to the proposed degree shift in Canada, Brown et al. (2016) echoed this sentiment, stating that the "profession does not want to be left behind in comparison to its professional peers" (p. 309). Brown et al. (2016) acknowledge the counterargument that a shift to the doctoral degree represents "degree creep" – a term used to describe inflating the required degree to enter a profession (Austin & Ensom, 2008; Fraser & Naik, 2012; La Belle, 2004).

Those who oppose the shift to the OTD frequently point to the increased time and cost of the degree, which could create barriers to the profession for students from disadvantaged backgrounds (Brown et al., 2015). Brown et al. (2015) argue that educational trends indicate otherwise, drawing from evidence suggesting that college admissions continue to be on the rise (Snyder & Dillow, 2010). This is especially true in master's and doctoral degree programs (United States Census Bureau, 2013). Furthermore, the ratio of applicants to available spaces in occupational therapy programs has been higher for doctoral programs than master's programs (AOTA, 2014).

Those opposed to mandating the OTD have also argued that such a shift could decrease the demand for occupational therapists. Opponents maintain the likelihood that occupational therapists with doctoral degrees will expect higher salaries, which may lead to more employers hiring less-costly occupational therapy assistants (OTAs) and aides. Healthcare providers in other disciplines who have moved to the doctoral level have not negotiated higher compensation (Brown et al., 2015).

ACOTE (2015) expressed the concern that many institutions are not prepared to meet the standards for curricular, fieldwork, and experiential components of the doctoral degree program. Griffiths and Padilla (2006) conducted a survey to identify the factors that occupational therapy program directors were considering in the decision as to whether their programs would shift to doctoral status. Of the 111 respondents, 89 program directors indicated that "lack of prepared faculty," "lack of institutional support," and "institutional classification" were barriers to developing an entry-level doctoral program (Griffiths & Padilla, 2006, p. 545). Additionally, per ACOTE standards, doctoral granting programs will need instructors with a minimum of a doctoral degree (ACOTE, 2018; Brown et al., 2015).

While the decision to mandate the doctoral degree as the entry level point to the occupational therapy profession continues to be discussed by AOTA and ACOTE (AOTA, 2018a), this literature review showed that evidence describing degree outcomes is lacking. Therefore, the purpose of this exploratory study was to begin filling that void, uncovering the impact of and potential barriers to the entry-level doctoral degree by comparing the professional outcomes of Master of Science in Occupational Therapy (MSOT) and OTD graduates from one academic program.

METHOD

Study Design

This was a quantitative, exploratory study. Quantitative data were obtained through a survey method. The survey method allowed the ability to reach respondents across broad geographical regions and the flexibility for respondents to take the survey at a time of convenience (Portney & Watkins, 2015).

Participants

Participants for this study were graduates of the MSOT and entry-level OTD degree programs in occupational therapy at a Midwestern university that offered both degrees. Participants graduated from 2002 (the first year that both an MSOT and OTD were offered) through 2016. At this institution, MSOT and OTD students covered the same didactic coursework throughout their first two years of study, with one exception: OTD students took a proposal writing course. After two years of didactic coursework, MSOT students completed two, 12-week clinical fieldwork experiences before receiving a degree. OTD students completed one, 12-week clinical fieldwork experience before returning for their doctoral year of coursework. This academic year was followed by another 12-week clinical fieldwork experience and a 16-week doctoral experience before receiving a degree. To summarize, OTD students took a research proposal seminar course, a doctoral year of coursework, and a 16-week doctoral experience that was not part of the MSOT curriculum.

This study excluded post-professional students at this institution. This was due to the variation among occupational therapy programs where these graduates obtained their entry-level degree.

Instruments

The research team designed a survey instrument (see Appendix) consisting of closed-ended questions to obtain demographic information describing the sample and questions regarding degree choice and outcomes that would address the research question. Outcomes included financial burden, salary, business ownership, research and publications, awards and recognitions, teaching, evidence-based practice, leadership, involvement in professional organizations, and interprofessional coordination. These outcomes were chosen based on gaps in research identified through the literature review. The survey instrument consisted of a maximum of 39 questions. The variation in the number of questions depended upon participants' responses to certain questions. For instance, participants who indicated involvement in research or education received further questions pertaining to those areas.

A preliminary draft of the survey instrument was distributed to several occupational therapy educators for content review to ensure the content validity of the instrument (Portney & Watkins, 2015). Following the review, we modified the survey instrument to include questions asking the participants to identify the most significant reason for choosing their degree (as opposed to only asking for all of the reasons that participants chose their degree). Another modification was in response to reviewer suggestions to change questions whose response options consisted of "yes" and "no" to a Likert scale to capture a more nuanced response. Reviewers also suggested additional categories to include in the choices of responses, such as adding 'Occupational Therapy Instructor' to the list of possible job titles.

Procedures

We obtained approval from the university's institutional review board and distributed the survey to graduates via email in October 2017. The survey remained open for three weeks, and recipients received two reminders via email (at one and two weeks from initial distribution). Email addresses were obtained from the alumni and development office with program approval. Surveys were distributed to all the graduates with whom the alumni and development office has an email address on record. This consisted of 165 OTD graduates, 532 MSOT graduates, and 14 graduates with unknown degrees. Graduates received an email containing a link to the survey, which was administered via Qualtrics software (Qualtrics, Provo, UT).

Data Analysis

Data were analyzed using IBM Statistical Package for the Social Sciences (IBM Corp. Released 2015. IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.). Descriptive and frequency statistical analyses were used to describe the two groups. Mann-Whitney U tests were conducted to compare non-parametric data between the two groups.

RESULTS

Participant Characteristics

The survey was sent to 711 potential participants and yielded 217 responses (a 31% response rate). Seven respondents who graduated with the OTD for licensed occupational therapists and two respondents who did not state their degree were excluded from analysis (N = 208, after exclusion). From the remaining group, 70% (n = 146) were MSOT graduates and 30% (n = 62) were OTD graduates from this institution. The majority of participants identified as Caucasian (86%, n = 178) and female (90%, n = 188). All participant characteristics are described in Table 1.

Table 1

Participant Characteristics by Degree

Variable	MSOT	MSOT %	OTD	OTD %
Total	146	100	62	100
Gender				
Female	132	90	56	90
Male	12	8	4	6
No Response	2	1	2	3
Ethnicity				
Caucasian	130	89	48	77
Multiethnic	6	41	4	6
African American	3	21	5	8
No Response	3	2	1	2
East Asian	1	2	2	3
American Indian	1	<1		
Hispanic/Latino			1	2
Pacific Islander			1	2
South Asian	1	<1		
Other	1	<1		

Note. Multiethnic indicates respondent chose more than one option.

Degree Choice and Satisfaction

Degree satisfaction was high for both groups. MSOT and OTD graduates strongly agreed or agreed that they are satisfied with their choice of degree (96%, n = 137 and 93%, n = 57, respectively). Data regarding degree choice are described in Tables 2 and Table 3. The MSOT group cited not seeing the benefit of the OTD (53%, n = 76) and the additional cost of the OTD (29%, n = 41) as the primary reasons for not choosing the

OTD. The OTD group cited an interest in advanced practice (30%, n = 18) and an interest in teaching (26%, n = 16) as the top two most significant reasons for choosing the OTD. The majority of OTD graduates (62%, n = 38) strongly agreed or agreed that the increased cost of the OTD created a significant financial burden.

Table 2

Most Significant Reason for Choosing OTD

Reason/Interest	n = 61	%
Advanced Practice	18	30
Teaching	16	26
Research	10	16
Leadership	5	8
Program Development	5	8
Owning a Business	3	5
Other	3	5
Advocacy	1	2

Table 3

Most Significant Reason for Choosing MSOT

Reason	n = 143	%
Not Seeing the Benefit of the OTD	76	53
Additional Cost of the OTD	41	29
Increased Time of the OTD	14	10
Other	12	8

Employment

The participants in the MSOT and OTD groups had been occupational therapists for a mean of 6.7 (SD = 4.2) and 6.8 (SD = 3.7) years, respectively. Almost all participants were both licensed and registered occupational therapists (in the MSOT group, 97%, n = 139 were both licensed and registered, in the OTD group, 98%, n = 60 licensed and 95%, n = 58 were registered). In the MSOT group, 76% (n = 109) and 19% (n = 27) of participants were employed full-time and part-time in an occupational therapy or occupational therapy-related position, respectively. In the OTD group, 82% (n = 50) and 18% (n = 11) of participants were employed full-time and part-time in an occupational therapy or occupational therapy-related position, respectively.

Frequency data describing participants' primary roles in full and part-time occupational therapy or occupational therapy-related positions are described in Table 4. Mann-Whitney U tests were performed to compare whether differences existed between the two groups. MSOT graduates were significantly more likely to be clinicians than OTD graduates (z = -3.57, p < .05). OTD graduates were significantly more likely to be educators than MSOT graduates (z = -4.24, p < .05). There were no significant differences between the two groups in research and administrative positions.

Table 4

Primary Role in an Occupational Therapy or OT-related Position

Role	MSOT	MSOT %	OTD	OTD %
	n = 135		<i>n</i> = 61	
Clinician	118*	87	40	66
Educator	3	2	12*	20
Administrator	3	2	1	2
Researcher	5	4	5	8
Other	6	4	3	5

Note. * Indicates results are significant, p < .05.

Participants were asked questions about their specific job titles within their occupational therapy or occupational therapy-related positions. Frequency data are described in Table 5. Mann-Whitney U tests showed no significant differences between the two groups with respect to the following clinical job titles: staff therapist, lead therapist, supervisor, and manager. Consistent with responses to when respondents were asked about their primary role in an occupational therapy or occupational therapy-related position, the OTD group was significantly more likely to have the job title of Occupational Therapy educator than the MSOT group (z = -3.35, p < .05).

Table 5

Job Titles in an Occupational Therapy or OT-Related Position by Degree

Job Title	MSOT	MSOT %	OTD	OTD %
	<i>n</i> = 134		<i>n</i> = 61	
Staff Therapist	94	70	35	57
Lead Therapist	14	10	10	16
Supervisor	8	6	1	2
Manager	5	4	4	7
Administrator	1	1		_
OT Educator	4	3	10*	16
Other	20	15	13	21

Note. * Indicates results are significant, p < .05.

Starting and Current Salaries

Frequency data regarding starting and current salaries for participants employed full-time in occupational therapy or occupational therapy-related positions are described in Table 6. Mann-Whitney U tests revealed no significant differences between the MSOT and OTD groups (employed full-time in occupational therapy or occupational therapy-related positions) for starting salary (z = -.319, p < .05) and current salary (z = -1.373, p < .05).

Table 6

Employed Full-Time MSOT and OTD Salaries

Salary Range	MSOT Starting Salary (%) n = 109	OTD Starting Salary (%) n = 50	MSOT Current Salary (%) n = 108	OTD Current Salary (%) n = 50
\$0-\$20,000	1 (<1)			
\$20,001- \$40,000	10 (9)	3 (6)	2 (2)	1 (2)
\$40,001-\$60,000	63 (58)	34 (68)	27 (25)	5 (10)
\$60,001-\$80,000	32 (29)	12 (24)	53 (49)	32 (64)
\$80,001- \$100,000	3 (3)	1 (2)	26 (24)	9 (18)
\$100,001 - \$120,000				2 (4)
Greater than \$120,000	_	_	_	1 (2)

Leadership

Three survey questions sought to discern whether differences exist between the two groups in terms of leadership positions or initiatives. In one question, participants were asked, "What type of leadership positions are you currently or have you previously held?" Participants could select all positions that applied from the following options: Board member of a community, state, or national organization; chairperson or active participant of a leadership team in your workplace; leadership position at state occupational therapy association or other occupational therapy professional organization; or other. The frequency of each group in at least one of these positions (yes), or none (no) is shown in Table 7. A Mann-Whitney U test was conducted to determine whether a significant difference exists between the MSOT and OTD groups in terms of participation in at least one leadership position versus none. The comparison showed that the OTD group was significantly more likely to hold at least one leadership position (z = -2.81, p < .05).

Participants who indicated that they were employed either full or part-time in an occupational therapy or occupational therapy-related position were also asked whether they owned their own business. A Mann-Whitney U test was performed to compare the two groups in terms of "yes" and "no" responses. The results of the Mann-Whitney U

test indicated that OTD respondents were significantly more likely to own their own business (z = -3.35, p < .05).

Table 7

Leadership

Leadership Involvement	MSOT		OTD	
	Yes (%)	No (%)	Yes (%)	No (%)
Business Ownership	4 (3)	130 (97)	10 (16)*	51 (84)
Leadership Position	37 (25)	109 (75)	28 (45)*	34 (55)

Note. MSOT: n=146 for Leadership Position, n=134 for Business Ownership; OTD: n=62 for Leadership Position, n=61 for Business Ownership. * Indicates results are significant, p < .05.

Mann-Whitney U tests were conducted to determine whether there were significant differences in AOTA involvement and leadership between the two groups. Frequency data are described in Table 8. There were no significant differences between the two groups in terms of AOTA membership, annual and specialty conference attendance, being coauthor of an AOTA book, serving as an AOTA committee member, or serving in an AOTA leadership position. On average, the OTD group was significantly more likely to be active in Special Interest Sections (SIS) (z = -2.88, p < .05) and coauthor an official document, statement, or position paper (z = -2.94, p < .05).

Table 8

AOTA Involvement

Involvement or Position	MSOT	MSOT %	OTD	OTD %
	<i>n</i> = 146		<i>n</i> = 61	
Active in SIS	2	1	6*	10
Attend annual conference or specialty conference	19	13	14	23
Coauthor official document, statement, or position paper	1	<1	5*	8
Coauthor of AOTA book	2	<1	1	2
Member	76	52	39	63
Not a member	65	45	22	36
Serve as a committee member	7	5	5	8
Serve in a leadership position	2	1	1	2
	_			

Note. * Indicates results are significant, p < .05.

Using Evidence-Based Practice

A Mann-Whitney U test was performed to compare how frequently the MSOT group and OTD group used evidence in practice (frequency data are described in Table 9). Using a Likert scale, participants selected always, often, occasionally, rarely, or none, to answer the question "to what extent do you use evidence in your practice?" The OTD graduates were more likely to report using evidence in practice more frequently than the MSOT graduates, and the results were significant (z = -2.29, p < .05).

Table 9

Frequency of Engaging in Evidence-Based Practice

Frequency	MSOT n = 141	MSOT %	OTD n = 60	OTD%
Always	32	23	23*	38
Often	83	59	30	50
Occasionally	23	16	7	12
Rarely	3	2		
None				

Note. * Indicates results are significant, p < .05.

Engaging in Scholarly Research

A greater portion of OTD graduates (48%, n = 29) reported having participated in scholarly research since graduation than MSOT graduates (19%, n = 27). A Mann-Whitney U test revealed that the results were significant (z = -4.19, p < .05).

Professional Recognitions

To understand how both groups engaged in professional activities and received recognition for achievement, participants were asked to indicate the following: receiving federal or private grants, professional awards and other professional recognitions; publishing in peer-reviewed journals, other professional publications, books and book chapters, and invited publications; presenting peer-reviewed paper and poster presentations, invited presentations and invited keynotes.

A greater percentage of OTD graduates (84%, n = 52) indicated engagement with one or more of these professional activities compared to MSOT graduates (68%, n = 99). A Mann-Whitney U test showed that this result is significant (z = -2.370, p < .05).

Preparedness for Interprofessional Teamwork

To compare the two groups based on preparation for working with members of an interprofessional team, participants indicated their agreement with the following statement on a Likert scale: "My OT education prepared me to work with other members of an interprofessional team." The majority of respondents in each group strongly agreed or agreed with the statement (MSOT: 79%, n = 112; OTD: 83%, n = 50). A Mann-Whitney U test was conducted to compare the two groups and the results were not significant.

DISCUSSION

ACOTE's decision to eliminate the master's degree has ignited debate within the profession. There is an abundance of literature describing opinions supporting and opposing a shift to the doctoral degree, yet a literature review yielded no studies comparing the professional outcomes of graduates from both master's and doctoral degree programs. The purpose of this study was to compare the professional outcomes of master's and doctoral graduates from one occupational therapy program. The results contribute to filling the gap in evidence regarding the impact of mandating the OTD and the potential barriers that a mandate could have to the profession, graduates, and future students.

Degree Choice, Satisfaction, and Salaries

The majority of MSOT graduates attributed their decision to pursue the MSOT to not seeing the benefit of the OTD. This could be due to a lack of dissemination of information about the OTD. Furthermore, MSOT graduates may not have seen a benefit to the OTD as a result of the paucity of evidence clearly defining differences between the two degrees. This is supported by the current study's literature review, which yielded no studies comparing master's and doctoral degrees. This study contributes to understanding the two degrees, which impacts future occupational therapy students.

The OTD group cited interests in advanced practice and teaching as the two most significant reasons for choosing the OTD. This finding is consistent with results from a recent survey that found a significant relationship between choosing the entry-level doctorate with an interest in teaching and experience with advanced practice (Lucas Molitor & Nissen, 2018). Further inquiry is needed to determine whether the OTD is a facilitator for individuals pursuing advanced practice areas. The interest in teaching is consistent with the outcomes of this study, which showed that significantly more OTD graduates were employed as educators in occupational therapy programs. There is the possibility that students who became educators pursued the OTD for that reason since occupational therapy educators must have a doctoral level degree to teach in a doctoral-level program. A majority of faculty teaching in a master's program must have a doctoral degree (ACOTE, 2018).

A portion of MSOT graduates (29%, n = 41) cited the additional cost of the OTD as a reason for not pursuing that degree. The survey showed that this concern is not unfounded – over half of OTD graduates strongly agreed or agreed that the OTD created a significant financial burden. This was consistent with criticisms in the literature claiming that the increased time and cost of the OTD would create a barrier to the profession for individuals from disadvantaged backgrounds (Brown et al., 2015). The increased cost of the OTD may not have been the only factor contributing to financial burden in this sample. OTD graduates lose a year of salary and once the graduates are employed, survey outcomes showed no significant differences in starting or current salaries between the MSOT and OTD groups. However, financial burden aside, both MSOT and OTD groups reported high rates of satisfaction with their degree choice. Information regarding salary and financial burden can benefit future occupational therapy students by making them more informed consumers. Occupational therapy

programs may want to take preemptive measures to ensure that the diversity of students is not diminished by the increased time and cost of the OTD. The burden of student debt may extend beyond the impact on graduates. The possibility should be considered that graduates with increased debts may be forced to place more weight on salary while seeking employment, which may leave some populations of clients underserved.

Increased debt as a result of a transition to a doctoral degree has been discussed within the physical therapy profession. Koria (2017) found that one educator from a doctorate of physical therapy (DPT) program reported that conversations with recent graduates revealed that debt was affecting their career choices. The educator explained that recent graduates are more likely to accept jobs based on salary instead of location or setting, which can lead to decreased job satisfaction and professional development (Koria, 2017).

Employment

Given the overall high rate of satisfaction with degree choice, it is not surprising that nearly all respondents, regardless of degree, were licensed and registered occupational therapists. As stated above, MSOT graduates are more likely to become clinicians (87%) and OTD graduates are more likely to become educators (20%, n = 12). OTD graduates becoming educators is consistent with results regarding degree choice, where 26% (n = 16) of OTD graduates cited teaching as their primary reason for pursuing their degree. Further investigation could highlight what aspects of the OTD curriculum facilitated the transition from student to educator, and why some individuals who indicated having an interest in teaching have not yet pursued careers as educators. It is possible that newer graduates are seeking clinical experience first. With the exception of being an occupational therapy educator, there were no significant differences between groups in terms of their job titles in occupational therapy or occupational therapy-related positions. However, it should be noted that the analysis did not control for years of experience in the relationship between degree and job titles. Given that these job titles are hierarchical, the implication is that OTD graduates did not obtain higher positions than MSOT graduates. This may be a factor contributing to the lack of significant differences between starting and current salaries for the two groups.

Leadership

Compared to the MSOT group, OTD graduates were significantly more likely to hold at least one leadership position and to own a business. Owning a business may not be considered a traditional leadership position by some. However, owning a business takes initiative to lead and illustrates the ability of the profession to stand on its own, rather than rely upon association to another entity.

These results are promising for those who cite the increased leadership abilities of OTD graduates (Brown et al., 2015) as reasons for moving to the OTD as the single point of entry to the profession. Indirectly, these results may also be favorable to those who support the degree shift for elevating the stature of the profession (AOTA, 2014; Brown et al., 2016), since leadership could translate to greater visibility and advocating power.

However, AOTA is the primary organization for promoting advocacy within the profession and these results showed involvement and leadership from MSOT graduates, as well.

Evidence-Based Practice and Scholarly Research

OTD graduates used evidence in practice significantly more than MSOT graduates did, which was consistent with claims in the literature that OTD graduates are more prepared to implement evidence-based practice (AOTA, 2014; Brown, et al., 2015, Case-Smith et al., 2014). Promoting evidence-based practice has been a major initiative within AOTA, which hosts a wealth of resources aimed at conducting and disseminating research, practice guidelines, and information for grants and fellowships, among other resources (AOTA, 2018c). AOTA also highlights evidence-based practice as a key component for Vision 2025 (AOTA, 2017). As Case-Smith et al. (2014) pointed out, these skills are beneficial to the profession as evidence-based practice can help communicate the effectiveness of services to stakeholders.

In addition to incorporating evidence into practice, the results also support that OTD graduates were more engaged in research. Results from this study showed that OTD graduates were significantly more likely to have been a member of an investigative research team since graduation. The engagement of OTD graduates in conducting research was not a common theme identified in the literature. However, this result could support the mission that has been echoed by advocates of the degree shift for making the profession more evidence-based and visible to both society and to other healthcare professions.

Professional Recognitions

OTD graduates were significantly more likely to have been involved in professional activities or receive professional recognitions. Receiving federal and private grants augments research efforts and publishing and presenting support the dissemination of research. These activities align with initiatives to promote leadership, evidence-based practice, and research within the profession and support the perspective of advocates for the degree shift.

Preparedness for Interprofessional Teamwork

A recurring theme in the literature was that the OTD would better prepare graduates for work as a member of interprofessional teams and elevate the status of occupational therapists on interprofessional teams (AOTA, 2014; Brown et al., 2015; Brown et al., 2016; Case-Smith et al., 2014). Since the current study was based on self-report, the survey question measured respondents' perceived preparation for working with members of an interprofessional team. There were no significant differences between the two groups. This could be attributed to the program's curriculum design, which includes interprofessional education for students in both the MSOT and OTD coursework.

Limitations

This study has limitations. First, the results cannot be generalized to the entire population of MSOT and OTD graduates from all schools as the sample was limited to graduates from one program. Differences between curricula, faculty, and institutions present a variety of factors that could confound the results. Potentially confounding factors in this study include features of the institution, and the occupational therapy program, including those values and experiences of its faculty. The personal career aspirations of the program's graduates were also a confounding factor in this study. For instance, there may be students who entered the program with ambitions to pursue leadership or research-oriented careers. An example of this is the result that OTD graduates were more likely to be educators. This was consistent with the result showing that an interest in teaching was one of the two primary reasons that OTD graduates selected that degree. In addition, the question about years practiced was not operationally defined and therefore could have affected the results of that question. Other biases may come from where the participants worked. For example, the region where people work can affect aspects like job title and salary.

An argument could be made for creating an entire study to investigate any single outcome addressed in this study. However, the purpose of this exploratory study was to scratch the surface of a topic that has not undergone much previous study to determine what differences may exist between the two entry-level degrees. There were outcomes, such as evidence-based practice and interprofessional coordination that were addressed by only one or two questions in this survey. While the results are a valuable starting point for understanding the differences between the two degrees, further studies would be needed to determine the extent of these differences.

Future Research

The sample for this study came from one occupational therapy program. Future research could evaluate professional outcomes of master's and doctoral level students in various programs, however, few programs exist that offer both degrees. Studies could compare master's and doctoral prepared students from different programs, with the caveat that variation among curriculum designs may influence results.

Implications for Occupational Therapy Educators

Degree satisfaction is an important takeaway from this study for occupational therapy educators. The majority of graduates from both degrees were pleased with their degree choice, implying that both groups feel prepared to work in their current roles. Graduates of the OTD program are more likely to engage in evidence-based practice and leadership, which are reasons supporting the transition to the OTD. However, additional research is needed to support this. Cost is a factor limiting some MSOT graduates from pursuing the OTD, and it is a concern for OTD graduates as well. Educational administrators should explore options for students to obtain the knowledge and skill needed, while at the same time making it affordable.

CONCLUSION

The purpose of this research was to compare professional outcomes of MSOT and OTD graduates from one academic program offering both degrees. This study sought to reveal any discernible differences between MSOT and OTD graduates, and contribute to the body of knowledge about the impact of entry-level degrees on the profession, graduates, and future occupational therapy students. Survey data revealed that some differences exist between the two groups, such as leadership, use of evidence-based practice, and research. No significant differences were found between the two groups in starting and current salaries, job titles, and self-perceived preparation for interprofessional practice. This study has limitations that should be considered in interpreting the results, and opportunities exist for furthering this line of research. The results of this study have implications for the profession, graduates, and future occupational therapy students.

References

- Accreditation Council for Occupational Therapy Education. (2015, August). *ACOTE's* statement on the entry-level degree for the OT and OTA. Retrieved from http://www.aota.org/Education-Careers/Accreditation/acote-entry-leveldegrees.aspx
- Accreditation Council for Occupational Therapy Education. (2017, August). *ACOTE*2017 Mandate and FAQ. Retrieved from https://www.aota.org/Education-Careers/Accreditation/acote-doctoral-mandate-2027.aspx
- Accreditation Council for Occupational Therapy Education. (2018, September).

 Standards and Interpretive Guide. Retrieved from

 https://www.aota.org/~/media/Corporate/Files/EducationCareers/Accredit/Standards-Interpretive-Guide.pdf
- American Occupational Therapy Association. (2013). Future of Education Ad Hoc report. Bethesda, MD: Author.
- American Occupational Therapy Association. (2014). AOTA Board of Directors position statement on entry-level degree for the occupational therapist. *OT Practice*, *19*(10), 18–21. Retrieved from http://www.aota.org/AboutAOTA/Get-Involved/BOD/OTD-Statement.aspx
- American Occupational Therapy Association. (2017). Vision 2025. *American Journal of Occupational Therapy*, 71, 7103420010. https://doi.org/10.5014/ajot.2017.713002
- American Occupational Therapy Association (2018a). AOTA and ACOTE Entry Level Education Update. Retrieved from: https://www.aota.org/AboutAOTA/Get-Involved/BOD/News/2018/AOTA-ACOTE-Entry-Level-Education-Update.aspx
- American Occupational Therapy Association. (2018b). AOTA Member Survey Results: ACOTE Educational Requirements. Retrieved from https://www.aota.org/AboutAOTA/Get-Involved/BOD/News/2018/OTD-mandate-survey-results-summary.aspx
- American Occupational Therapy Association. (2018c). Evidence-Based Practice & Research. Retrieved from: https://www.aota.org/Practice/Researchers.aspx

- Austin, Z., & Ensom, M. H. H. (2008). Education of pharmacists in Canada. *American Journal of Pharmaceutical Education*, 78(6), 128. https://doi.org/10.5688/aj7206128
- Brown, T., Crabtree, J. L., Mu, K., & Wells, J. (2015). The next paradigm shift in occupational therapy education: The move to the entry-level clinical doctorate. *American Journal of Occupational Therapy, 69,*1-6. https://doi.org/10.5014/ajot.2015.016527
- Brown, T., Crabtree, J. L., Wells, J., & Mu, K. (2016). The entry-level occupational therapy clinical doctorate: The next education wave of change in Canada? *Canadian Journal of Occupational Therapy*, 0008417416656206. https://doi.org/10.1177/0008417416656206
- Case-Smith, J., Page, S. J., Darragh, A., Rybski, M., & Clearly, D. (2014). The professional occupational therapy doctoral degree: Why do it? *American Journal of Occupational Therapy, 68,* 355-360. https://doi.org/10.5014/ajot.2014.008805
- Dickerson, A. E., & Trujillo, L. (2009). Practitioners' perceptions of the occupational therapy clinical doctorate. *Journal of Allied Health*, *38*(1), 47-53.
- Fraser, A. B., & Naik, V. N. (2012). The Royal College diploma program: Credential creep or value added? *Canadian Journal of Anesthesia, 59,* 827–832. https://doi.org/10.1007/s12630-012-9751-3
- Griffiths, Y., & Padilla, R. (2006). National status of the entry-level doctorate in occupational therapy (OTD). *American Journal of Occupational Therapy*, *60*(5), 540-550. https://doi.org/10.5014/ajot.60.5.540
- Koria, K. (2017). Financial literacy and the new DPT grad. Retrieved from: http://www.apta.org/PTinMotion/2017/2/Feature/FinancialLiteracy/
- La Belle, T. J. (2004). Credential inflation and the professional doctorate in California higher education. Research & Occasional Paper Series: CSHE.1.04, University of California, Berkeley. Retrieved from http://www.cshe.berkeley.edu/sites/default/files/shared/publications/docs/ROP.Labelle.1.04_0.pdf
- Lall, A., Klein, J., & Brown, G. T. (2003). Changing times: Trials and tribulations of the move to Master's entry-level education in Canada. *Canadian Journal of Occupational Therapy*, 70(3), 152-162. https://doi.org/10.1177/000841740307000304
- Lucas Molitor, W. M., & Nissen, R. (2018). Clinician, educator, and student perceptions of entry-level academic degree requirements in occupational therapy education. *Journal of Occupational Therapy Education*, 2(1). https://doi.org/10.26681/jote.2018.020102
- Mu, K., Coppard, B., & Padilla, R. (2006). Graduate outcomes of first entry-level occupational therapy doctoral program in the United States. *Special Interest Section Quarterly: Education, 16*(1), 1-4. Retrieved from http://www.aota.org/~/media/Corporate/Files/Secure/Publications/SIS-Quarterly-Newsletters/ED/EDSISMar06.pdf
- Pierce, D., Jackson, J., Rogosky-Grassi, M., Thompson, M. E., & Menninger, B. (1987). The possible effects of a change to Master's entry level in occupational therapy. *American Journal of Occupational Therapy*, *41*(10), 658-666. https://doi.org/10.5014/ajot.41.10.658

- Portney, L. G., & Watkins, M. P. (2015). Foundations of clinical research: Applications to practice (3rd ed.). Philadelphia, PA: F. A. Davis Company.
- Qualtrics [Computer software]. (2017). Provo, UT: Qualtrics.
- Smith, D. L. (2007). Perceptions by practicing occupational therapists of the clinical doctorate in occupational therapy. *Journal of Allied Health*, *36*(3), 137-140.
- U.S. Census Bureau. (2013). Census Bureau reports fast growth in Ph.D.s and master's degree holders. Retrieved from
 - https://www.census.gov/newsroom/releases/archives/education/cb13-13.html
- Snyder, T.D., and Dillow, S.A. (2010). *Digest of education statistics 2009* (NCES 2010-013). National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Washington, DC.

Appendix

Cor	nparing Outcomes in Occupational Therapy Survey Instrument
	multi-entry allowed single-entry
Plea	ase indicate your OT degree from Washington University. Select all that apply. MSOT Entry-level OTD Post-professional OTD
If P MS Did o	play This Question: lease indicate your OT degree from Washington University. Select all that apply. = OT you obtain a post-professional doctorate in occupational therapy from any program? Yes No
	w many years have you been an occupational therapist? licate # of years)
With	h which gender do you most identify? Select all that apply. Female Male Transgender female (MTF) Transgender male (FTM) Non-Binary/Gender Non-Conforming Prefer not to answer
Wh	ich of the following best describes you? Select all that apply. American Indian/Native American Black/African American Caribbean East Asian Hispanic/Latino Pacific Islander South Asian White/Caucasian Other

If P	play This Question: Please indicate your OT degree from Washington University. Select all that apply. =
	by did you choose the MSOT degree rather than the OTD? Select all that apply. Did not see benefit of OTD Increased cost of OTD Increased time of OTD Other
If P MS Sel o o	play This Question: Please indicate your OT degree from Washington University. Select all that apply. = SOT ect the most significant reason for choosing the MSOT degree rather than the OTD Did not see benefit of OTD Increased cost of OTD Increased time of OTD
O Displication If P Ent Wh	Other
If P	Interest in advocacy Other

Rate how strongly you agree with the following statement: I am satisfied with my choice of degree.

- o Strongly agree
- o Agree
- o Neither agree nor disagree
- o Disagree
- o Strongly disagree

Display This Question:

If Rate how strongly you agree with the following statement: I am satisfied with my choice of degree. = Disagree

Or Rate how strongly you agree with the following statement: I am satisfied with my choice of degree. = Strongly disagree

Why were you not satisfied with your degree choice? Select all that apply.

Degree was a barrier to career opportunities
Degree was too costly
Degree took too much time
Degree did not lead to expected career opportunities
Degree did not lead to desired salary
Other

Display This Question:

If Please indicate your OT degree from Washington University. Select all that apply. = Entry-level OTD

Rate your level of agreement with the following statement: The OTD opened career opportunities that would not have been possible with the MSOT.

- o Strongly agree
- o Agree
- o Neither agree nor disagree
- o Disagree
- o Strongly disagree

Display This Question:

If Please indicate your OT degree from Washington University. Select all that apply. = Entry-level OTD

Rate your level of agreement with the following statement: The increased time and cost of the OTD created a significant financial burden?

- o Strongly agree
- o Agree
- Neither agree nor disagree
- o Disagree
- o Strongly disagree

Which statement best describes your experience with the NBCOT certification exam?

- o Successful after 1 attempt
- o Successful after 2 attempts
- o Successful after 3 or more attempts
- o I did not take the NBCOT exam
- o I did not pass the NBCOT exam

In v	what area of practice were you first employed as an occupational therapist? (Select
all t	that apply.)
	Children and youth
	Health and wellness
	Mental health
	Productive aging
	Rehabilitation and disability
	Work and industry

What was your starting salary?

Other

- o \$0 \$20,000
- o \$20,001 to \$40,000
- o \$40,001 to \$60,000
- o \$60,001 to \$80,000
- o \$80,001 to \$100,000
- o \$100,001 to \$120,000
- o Greater than \$120,000

Are you currently a licensed occupational therapist?

- o Yes
- o No

Are you currently a registered occupational therapist?

- o Yes
- o No

Select which answer best describes you.

- o Employed full-time in OT or OT-related position
- o Employed part-time in OT or OT-related position
- o Not employed in OT or OT-related position

Display This Question:

If Select which answer best describes you. = Employed full-time in OT or OT-related position

Or Select which answer best describes you. = Employed part-time in OT or OT-related position

What is your current area of practice? (Select all that apply)

- o Children and youth
- o Health and wellness
- o Mental health
- o Productive aging
- o Rehabilitation and disability
- o Work and industry
- o Other

Display This Question:

If Select which answer best describes you. = Employed full-time in OT or OT-related position

Or Select which answer best describes you. = Employed part-time in OT or OT-related position

What is your current salary?

- o \$0 \$20,000
- o \$20,001 to \$40,000
- o \$40,001 to \$60,000
- o \$60,001 to \$80,000
- o \$80,001 to \$100,000
- o \$100,001 to \$120,000
- o Greater than \$120,000

Display This Question:

If Select which answer best describes you. = Employed full-time in OT or OT-related position

Or Select which answer best describes you. = Employed part-time in OT or OT-related position

Do you own your own business?

- o Yes
- o No

Display This Question:
If Select which answer best describes you. = Employed full-time in OT or OT-related
position
Or Select which answer best describes you. = Employed part-time in OT or OT-related
position
What is your current job title? Select all that apply
□ Staff therapist
□ Lead therapist
□ Supervisor
□ Manager
□ Administrator
□ OT school instructor
□ Other
Dianley This Overtion
Display This Question:
If Select which answer best describes you. = Employed full-time in OT or OT-related
position Or Solvet which arrayar heat describes your Franciscod part time in OT or OT relates
Or Select which answer best describes you. = Employed part-time in OT or OT-related
position Which of the following rates heat describes your current primary rate in OT related
Which of the following roles best describes your current primary role in OT-related
position? o Clinician
o Researcher
o Educator
o Administrator
o Other
Display This Question:
If Which of the following roles best describes your current primary role in OT-related
position? = Educator
Which type of OT program have you taught in? Select all that apply.
□ OT Assistant
□ Entry-level
□ Post-professional
□ PhD

If W pos Wha	colay This Question: /hich of the following roles best describes your current primary role in OT-related ition? = Educator at is/was your title as an academic educator? Select all that apply. Lab instructor Adjunct Instructor Lecturer Assistant professor Associate professor Full professor Other
If W pos Hov o o o	colay This Question: /hich of the following roles best describes your current primary role in OT-related ition? = Educator v many years have you been an academic educator? 0-5 6-10 10-15 15 or more
sinc o	re you been involved in scholarly research as a member of the investigative team be graduating from WUOT? Yes No
If Hasino	polay This Question: ave you been involved in scholarly research as a member of the investigative team be graduation = Yes at have your research roles been? Select all that apply. Principal investigator Co-principal investigator Investigator Research assistant Research coordinator Statistician or methodologist Consultant Data collection Interventionist Other

	ct and indicate the number of the following you have completed since graduation WUOT.
	Federal grants
Have o \ o \	
If Ha	lay This Question: live you served as a clinical fieldwork instructor? = Yes le last year, how many students have you had? Level I Level II Doctoral experience/Capstone/Apprenticeship mentor
o	what extent do you use evidence in your practice? Always Often Occasionally Rarely None
prac	cate the ways in which you engage with literature to bring current evidence into your tice. Select all that apply. Read OT magazines Read OT scholarly journals Do research on current areas of practice Attend journal clubs Attend continuing education events Not Applicable Other

Ind	icate your involvement in AOTA. Select all that apply. Member Not a member Active in SIS Attend annual conference or AOTA specialty conference Coauthor official document, statement or position paper Coauthor of AOTA book Serve as a committee member Serve in a leadership position
Are o o	you a Fellow of AOTA (FAOTA)? Yes No
Are	e you a member of your state OT association? Select all that apply. Member Not a member Active involvement in committee Leadership position
	nat type of leadership positions are you currently or have you previously held? Select that apply. Board member of a community, state, or national organization Chairperson or active participant of a leadership team in your workplace Leadership position at state OT association or other OT professional organization Other
	ase rate your agreement with the following statement: My OT education prepared to work with other members of an interprofessional team. Strongly disagree Disagree Neither agree nor disagree Agree

o Strongly agree